



*A New Approach to First Responder  
Communications*

# Sentry MDU System

**Mobile Device QuickStart Guide**  
*Ver. 20221101*



# **Important**



**This “Quick Start” guide is NOT a substitute for the *SentryMDU Mobile Device User Guide*.**

**If you think you can “figure things out on your own” you are wrong. This is a very comprehensive piece of software with dozens of features. You have never seen anything like it.**

**Since this application will work on most any Android device, and device capability varies by manufacturer, it is important that you configure YOUR device correctly to get the optimum performance and best User experience.**



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# Executive Summary

Sentry MDU (Multi-Data Unit) is a commercial grade, Mobile Device / Client-Server based system that provides real-time video streaming integrated with GPS location tracking and remote access / control. The system was designed to be a communications tool for First Responders (Police, Fire, Rescue), Security and Industrial Applications. **As commercial software, the App has no advertising and we do not gather and sell your information.**

**Important Note:** This is advanced commercial software with features that allow remote access to mobile devices (in your Security Domain) anywhere in the world. Since the App contains features that allow use as remote Wildlife TrailCams, Police Body Cams, Vehicle Dash Cams, Surveillance and GPS Tracking ... the App does NOT conform to Google Play Store Policy (they do not allow apps that can be used for unattended remote surveillance). Therefore, **the SentryMDU App is NOT available on Google Play. You must download the App from our website.**

This software turns a standard smartphone into a versatile multi-purpose device. The SentryMDU App is a next generation 5G / 4G-LTE / Wifi enabled communications platform that includes the following features:

1. 5G / 4G-LTE body-worn camera solution for Law Enforcement
2. Live-streaming "dash cam" for a vehicle (live-stream & record)
3. Sports camera, real-time video streaming of events
4. Object Recognition (A.I. Engine) detects people, animals, objects
5. GPS tracking features using satellite image overlays
6. Create "bookmarks" for ready access to Users, places, online resources
7. Notification "alerts" as users move in-out of specified areas (geo-fence)
8. Monitor live audio/video and GPS tracks of multiple devices simultaneously
9. Remote access and control capability via mobile device or desktop
10. Mobile-to-Mobile data transfer between devices
11. Receive live-stream Police radio traffic, Webcast TV, Radio, Custom URLs
12. Global satellite coverage for GPS/GLONASS applications
13. Attach documents, pictures and video to locations and points-of-interest
14. Access Wikipedia data references within displayed map locations
15. Extensive security domain feature set for segregating user access rights
16. Data encryption features for secure communications between devices
17. Includes "standalone" capability for use during natural disaster incidents
18. Built-in communication features include text, live-chat, video-phone, email
19. Customized video recording with time-lapse, motion detection, frame rate
20. Remotely monitor environmental sensors on a mobile device, trigger alerts

A key feature of the Sentry MDU System is the use of high resolution satellite images to locate landmarks, streets, houses and User locations via GPS overlays.

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# Notes

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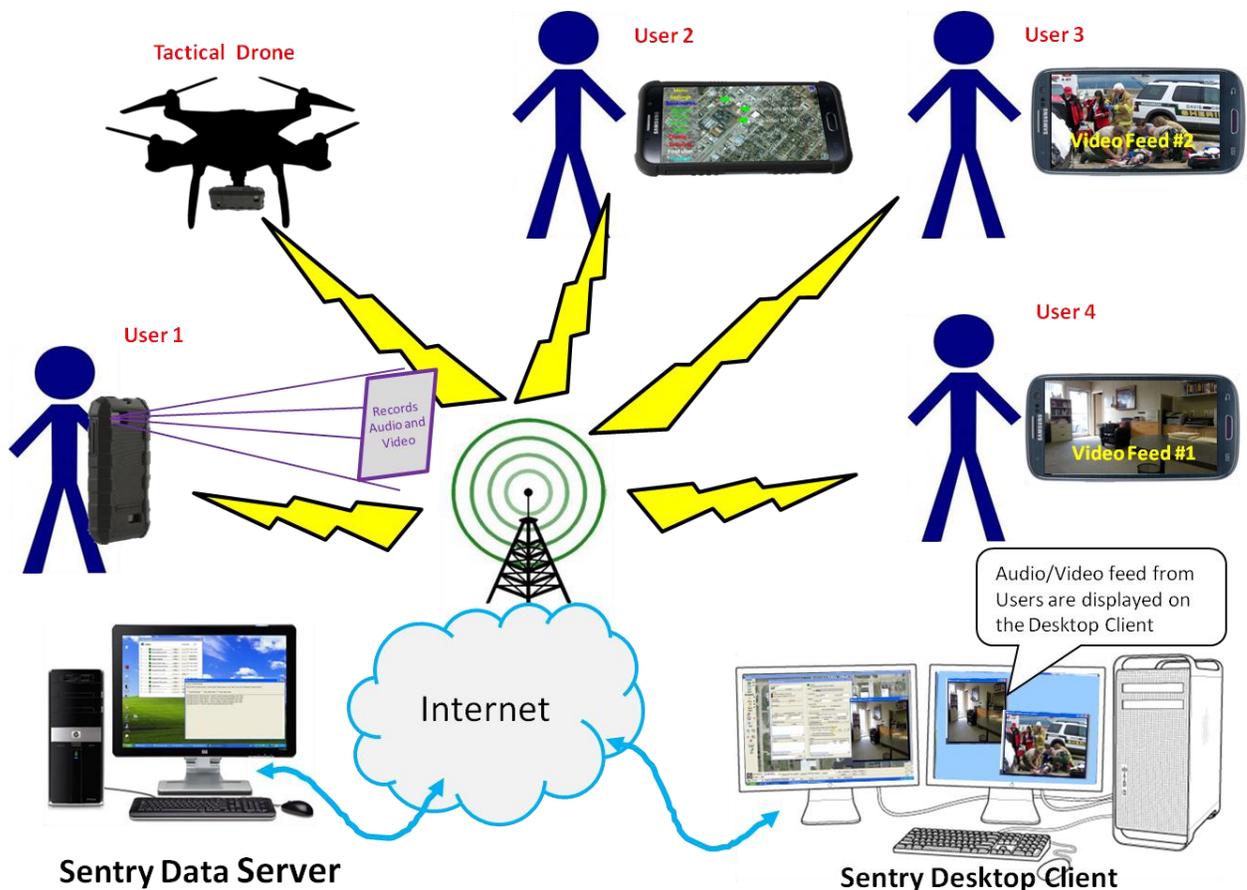
# 1. Introduction

## 1.1. Description of the Sentry MDU Application

The Sentry MDU (Multi-Data Unit) is a system that enables real-time communications, object recognition (A.I. Feature), video monitoring and GPS tracking of people, places and things. This software turns a standard smartphone into a versatile multi-purpose device.

For emergency personnel (Police, Fire, EMT's) the Sentry MDU system can become a "dash camera" for the car, or a next generation 4G-LTE body-worn camera solution that provides real-time video transmission, GPS tracking, automated data upload, and remote access and control capability. Data encryption capability ensures that your communications remain secure.

Further applications allow mounting the devices on UAV / Drones to provide live-stream video to multiple remote observers via cellular networks. This can provide situational and tactical awareness to multiple groups simultaneously over a wide area.



## **1.2. Project Background and Current Status**

Originally conceived in 2012 as a tool for K9 equipped Search & Rescue Teams, the project has further expanded to all forms of First Responders (Police, Fire, Rescue, EMT), private sector use and the general public (via GPS location tracking).

The SentryMDU App is released as Open Source software (GPL - 3.0 License). We encourage a Developer Community to suggest modifications to improve the software.

The product is in continuous development and improvement. We appreciate your comments and feedback. We strive to be responsive to your needs. Feel free to contact us with suggested improvements and features that you would like to see added to the current design.

### **1.3. Anticipated applications for the Sentry MDU System**

The Sentry MDU System is designed as a three component system incorporating a Mobile device, a Desktop Client and a Data Server. Although normally connected to the internet, this configuration can allow for “standalone” operation (Mobile Command Center, internal WiFi LAN) in the event of natural disasters (tornado/earthquake/tsunami) or when internet connectivity may not be available.

The following are a few of the anticipated uses:

- Law Enforcement (Police, Sheriff, Constable, Highway Patrol, etc.)
- Fire Fighters (City and Volunteer)
- Emergency Management Organizations (City/County/Region)
- Object Recognition Features (people, cars, animals, objects)
- Private and Industrial Security
- Search & Rescue Organizations (Professional and Volunteer)
- Emergency Medical Response (EMT's, Ambulance Drivers)
- Game Wardens, Corps of Engineers, State & National Park Rangers
- School Security, Transportation and Classroom Monitoring
- Neighborhood Watch Groups
- Assisting the elderly and individuals with mental or physical disability
- Tactical and surveillance Drones / UAV's
- Public Works and Construction Projects
- Sports and Outdoor activities (live stream sport events as they happen)
- Critter Cams, Trail Cams and Wildlife Monitoring
- Solar Panel “Birdhouse” Enclosures (for remote locations without power)
- And more .....

Each Sentry MDU System installation (server instance) is scalable to ten-of-thousands of Users. The system is currently ONLY available in the English language, but is planned as an international release. Other languages will be added as resources are available.

## **1.4. Digi-Lumen Technologies, Bartlesville, Oklahoma, USA**

Digi-Lumen Technologies, LLC is located in Bartlesville, Oklahoma, USA.  
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## 2. Technology Employed

### 2.1. The Sentry MDU System Technology

The Sentry MDU System is a 3 tier communications and GPS tracking system that is optimized to run on either Cellular or WiFi networks (when coverage is available). In areas of no cellular coverage, the Sentry MDU device may be configured to operate in “standalone” mode. The Sentry MDU System is typically referred to as a Client-Server implementation.

The system incorporates three distinct layers of technology

1. A portable (or mobile) platform which is typically a **smartphone** (cell phone) or Tablet device.
2. A **Desktop Computer** that runs a software “Client” that provides a gateway to the central Data Server (in some configurations, this computer is optional).
3. A high performance **Data Server** that provides the primary internet connection, mapping capability and secure data storage.

The hardware components within the three layers are as follows:

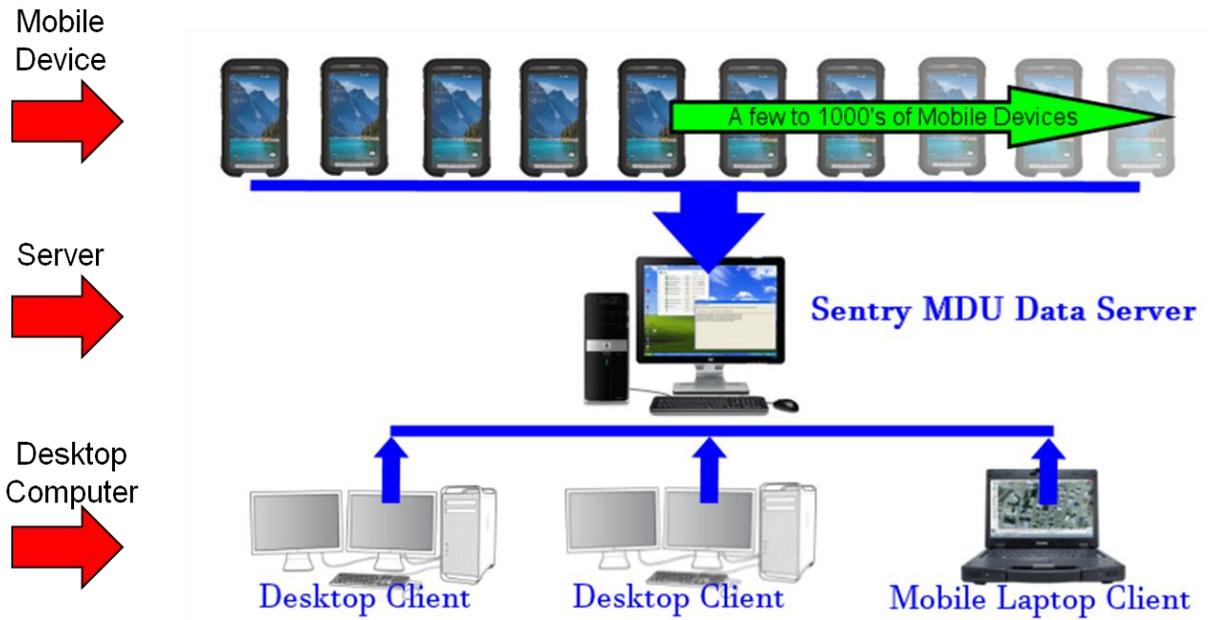
1. Mobile Device - Cell phones, Tablets or other devices that use the Android operating system.
2. Desktop Computer - (or laptop) running the Microsoft Windows operating system (Win 10, 11).
3. Data Server - Typically this should be a high performance, secure, rack mount server with 24/7/365 reliability. The Server will run the Microsoft Windows operating system and should be configured with redundant data storage, redundant power supplies, operating on a UPS system and administered by the local IT Department.

Sentry MDU System software provided by Digi-Lumen Technologies:

1. For Mobile Device - Sentry MDU smartphone App, available on the DLT Website.
2. For Desktop Client - Sentry MDU client application (Users may elect to have one or more SentryMDU Manager Desktop Clients).
3. For Data Server - Sentry MDU Server Application (only one Data Server license is required per organization).

The **Data Server** component of the Sentry MDU System is scalable to tens-of-thousands of users. The primary limitation for large users will be the available internet bandwidth that the Customer has purchased from their internet provider and the policy guidelines that the organization has established on “when” real-time audio/video should be streamed from a remote device to other users on the network.

The following picture shows a typical **NETWORK CONFIGURATION** of a Sentry MDU installation.



Some of the operational features of the SentryMDU System are summarized as follows:

- All registered Users on the system are identified via Username/Password

Each server “instance” is configured for a specific User community (security domains) and number of Users.
- Each SentryMDU Data Server is scalable to thousands of users each.

A typical Licensed Server organization will use a single Data Server, several Desktop Clients (2 – 5) and many mobile devices (50 – 1000). The Sentry MDU Data Server would be located in a Customer’s premises and administered by their IT Department.
- Standalone capability

Although the system generally requires an internet connection, the system can be configured for “standalone” operation. This would apply to situations where Mobile Command Centers would be used during major events (natural disasters) where internet access may not be available.
- Managing remote device locations via GPS coordinates

The location of each Mobile Device on the system is tracked and monitored via the SentryMDU System. The GPS location of each device can be monitored and displayed on both the SentryMDU Desktop Client as well as other Mobile Devices on the system.

## 2.2. The Sentry MDU App (Android App)

The Sentry MDU System starts with a cell phone (smartphone) or Tablet device. The only requirement of the Sentry System is that the mobile device uses Android OS Version 7.1+.

It may be downloaded for FREE from the **DLT Website** ([www.digi-lumen.com](http://www.digi-lumen.com)).

**Important Note:** This is advanced commercial software with features that allow remote access to mobile devices (in your Security Domain) anywhere in the world. Since the App contains features that allow use as remote Wildlife CritterCams, Police Body Cams, Vehicle Dash Cams, Surveillance and GPS Tracking ... the App does NOT conform to Google Play Store Policy (they do not allow apps that can be used for unattended remote surveillance). Therefore, **the SentryMDU App is NOT available on Google Play. You must download the App from our website.**



### 2.3. The Sentry MDU Manager – Desktop Client

The Sentry MDU Manager is a MS Windows based desktop Client that provides a “portal” into the Sentry MDU Data Server. From the desktop client a User can perform the administrative tasks that are necessary for the Sentry MDU System. **The desktop client is only available to those organizations that operate a “Licensed” Data Server.**

These tasks may include the following:

- Monitor the GPS location of all Users on Satellite or Map views.
- Set security domains and user access permissions (Root User)
- Add and delete Users
- Monitor all remote devices
- Set up and administer geo-fence features and associated alarm settings
- Turn on-off audio/video feeds from remote devices
- Adjust operating parameters for remote devices (video framerate, bitrate, GPS interval read times, device sensors, etc.)
- More ....

An organization would typically have several Desktop Clients.



Sentry Manager,  
Desktop Client can  
display "live"  
audio & video  
from field Officers



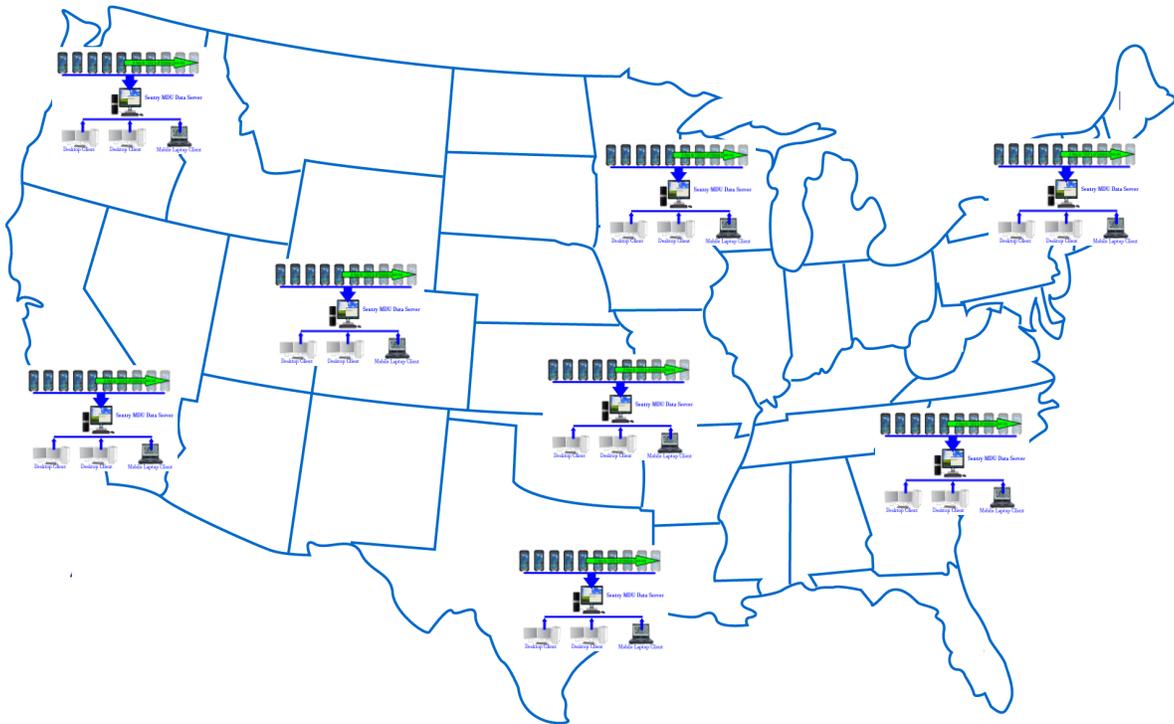
## 2.4. The Sentry MDU Data Server

The Sentry MDU Data Server is a MS Windows based Server. The Server manages all security functions for all Users (specific instance) on the system, manages data streaming between devices and is used to perform the administrative tasks that are necessary for the Sentry MDU System (for a specific Customer).

The following conditions apply:

- DLT licenses the Sentry Data Server software to a Customer.
- Each Sentry MDU System installation requires a Data Server “instance”.
- Customers may choose to provide their own hardware and OS software.
- Some Customers will operate on a “shared” server provided by DLT.
- The Server maintains all Security Domains and user access permissions.
- Primary repository and interface for data storage (audio/video images).
- Auxiliary “cloud” based storage is available with automated upload/access.

The map below simply illustrates that each Sentry MDU System installation will require the 3-tier network configuration shown previously.



## 2.5. Handling of Image/Map tiles by the Sentry MDU Application

The Sentry MDU App uses licensed content for the satellite images and maps used in the application. As part of our contract with the satellite image provider we maintain a running total of the image data that is used by our software (see Section 8.13 for details).

Unlike “online” map providers that require an internet connection to provide map tiles, the SentryMDU System is designed such that map images may be “cached” on the mobile device so that the GPS tracking features, relative to points-of-interest and current location can be made available even if a network connection is NOT available (interrupted or in standalone mode).

Map images are handled in the following manner:

- The first time a user views a satellite/map area on the mobile device, the system will retrieve all map tiles associated with that area.
- These images are now “cached” on the local mobile device such that they are readily available in the event the network connection is interrupted.
- The Sentry MDU System has application in Mobile Command Centers and other isolated situations where internet connectivity may not be available. In these cases, by special arrangement, a subset of map images for the anticipated target area would be retrieved and stored on the Data Server (and/or mobile device) prior to deployment (additional contract required with Satellite image provider).
- Usage statistics of map tile images is reported to the Sentry MDU Data Server on a periodic basis to maintain a running total of usage, by user.
- The Sentry MDU App user license allows for a significant usage of map tiles on a monthly basis (depending on the license/subscription type). In the unlikely event a User exceeds the designated threshold for their user “class” they may be required to upgrade their account if they wish to continue with high usage rates.

The satellite/map images are intellectual property owned by the satellite provider under license to DLT. Any use not associated with the Sentry MDU System will require written permission from both DLT and the Satellite Provider. Contact DLT technical support for more information.



## 3. Installation of the Sentry MDU Mobile App

### 3.1. System requirements and compatibility

#### Hardware:

The SentryMDU System starts with a cell phone (smartphone) or Tablet device. Obviously, newer cell phones will have higher performance than older devices. Since the SentryMDU Application can process and stream multiple threads of audio/video, it is recommended to get the highest performance device your budget will allow. Generally, higher end devices have better CPU's, better cameras, more memory (both RAM and Storage), more accurate sensors (GPS, accelerometers, etc.) and better WiFi and Cellular radios.

In practical terms, **most any Android cell phone or tablet manufactured within the last few years should work just fine.** It should also be mentioned that if a mobile device is to be used exclusively in an area served via a WiFi network (ie in an office building or manufacturing facility), it is not necessary that the smartphone be equipped with a SIM card for Cellular access. WiFi only capability is acceptable. This allows a variety of Tablets and "extra" older model cell phones to be re-utilized as a SentryMDU mobile device.

Also note that other Android devices such as "wearable" mobile devices (watches) also work. However, they do have very small screens and do not match the performance of smartphones ... but they do work.

#### Software:

The mobile App for the SentryMDU System is designed and has been tested on Android devices with the following Android operating systems:

- Android 7.1
- Android 8.0
- Android 9.0
- Android 10.0
- Android 11.0
- Android 12.0

This means that most any Android cell phone or tablet manufactured within the last few years should work just fine.

The SentryMDU App does NOT run on Apple devices (iPhone, iPad, etc.).





# Important



## **App Blockers:**

Some of the later generation Android mobile devices MAY come pre-installed with security software called “App Blockers”. This software is designed to protect you from fraudsters and hackers, which is a good thing. However, in some cases, the default settings of the App Blocker will also block any App Software that is not delivered from the Google Play Store repository.

App Blocker software may allow an App from “Unknown Sources” (not the Google Play Store) to be installed, but it will disable it, so it will not run when selected by a User.

**You should determine if your mobile device HAS an App Blocker installed. If so, you will need to make “changes” in your settings after you have installed the SentryMDU App.**

## **App Blocker software may get on your device from the following 5 sources:**

1. As a standard feature of the Android OS installed on your device
2. Pre-installed from the mobile device manufacturer (ie Samsung, LG, Xiaomi, etc)
3. Pre-installed from your Cell Phone Carrier (ie AT&T, Verizon, Vodaphone, etc.)
4. Third-Party Apps that you download and install yourself
5. Android OS update that includes App Blocker features (ie a system upgrade)

After installing the SentryMDU App on your device ... if everything works fine, then you probably do NOT have any App Blocker software on your device. However, if it does not work, then this will be ONE of the things to check.

Further, if things are working fine ... and you do an Android OS update (ie upgrade from Android ver 9 to Android ver 12) and suddenly things are NOT working, then most likely the Android Update included an App Blocker feature.

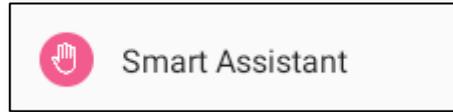
## **How to change the settings of an App Blocker**

In this example, we will illustrate how to change the settings of App Blocker software to allow the SentryMDU App to function as designed.

In this scenario, we are using an **Atom Unihertz** mini cell phone that came pre-installed with Android ver 8.0. Everything worked fine ... until one day we got a notification that we could do a “software OS upgrade” from Android ver8 to Android ver9. After the “upgrade”, the SentryMDU App when launched, would run for about 30 seconds and then “stop”. What happened?

We discovered that the new OS upgrade included a “Smart Assistant” feature that has an App Blocker component. If you have an App Blocker feature on your device it may be called by a different name and under a different section of your “Settings”.

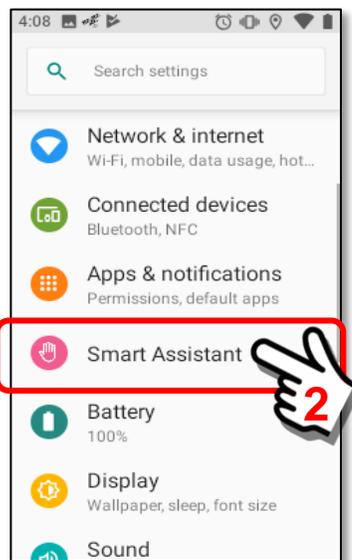
For this example, we will show the **Smart Assistant** and how to disable the App Blocker feature for the SentryMDU App.



Start at the screen panel and locate the “Settings” Icon.

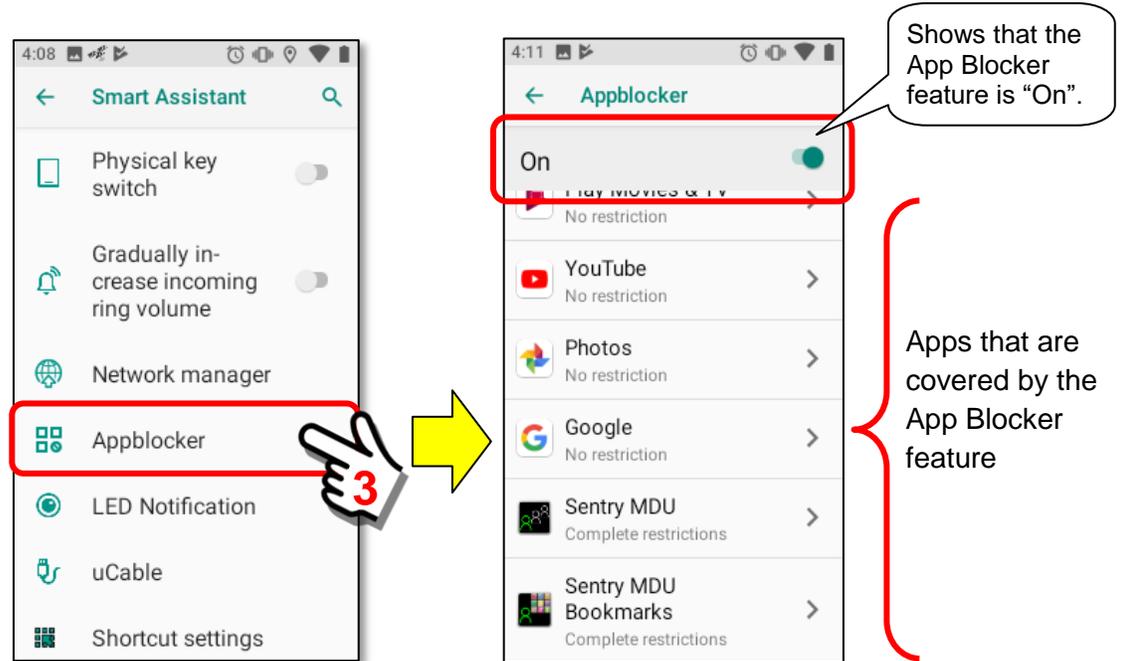


Select the **Smart Assistant** category from the Settings List.

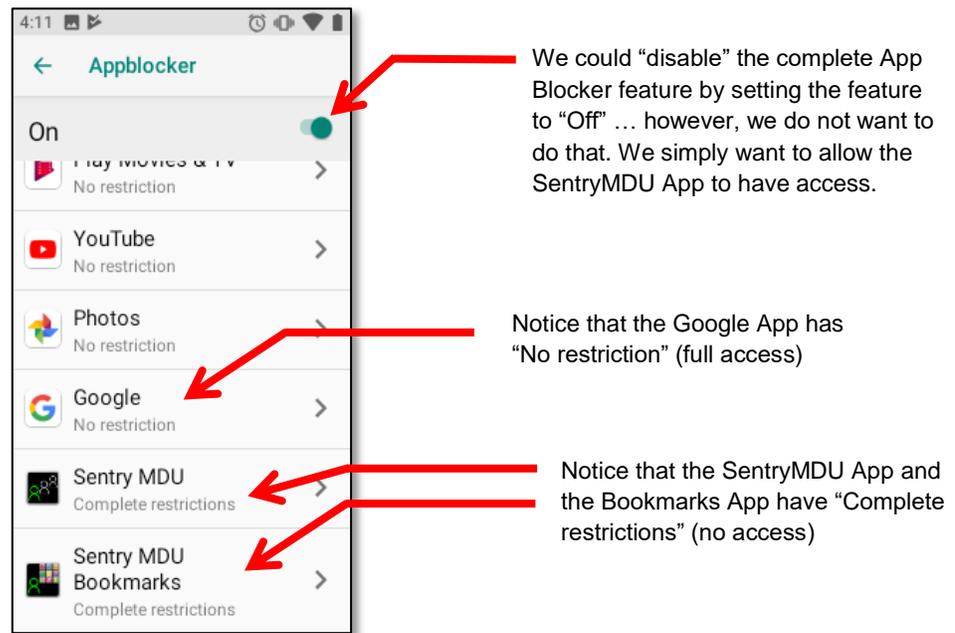


For this device, the **Smart Assistant** contains the App Blocker feature.  
On your device it may be under a different category.

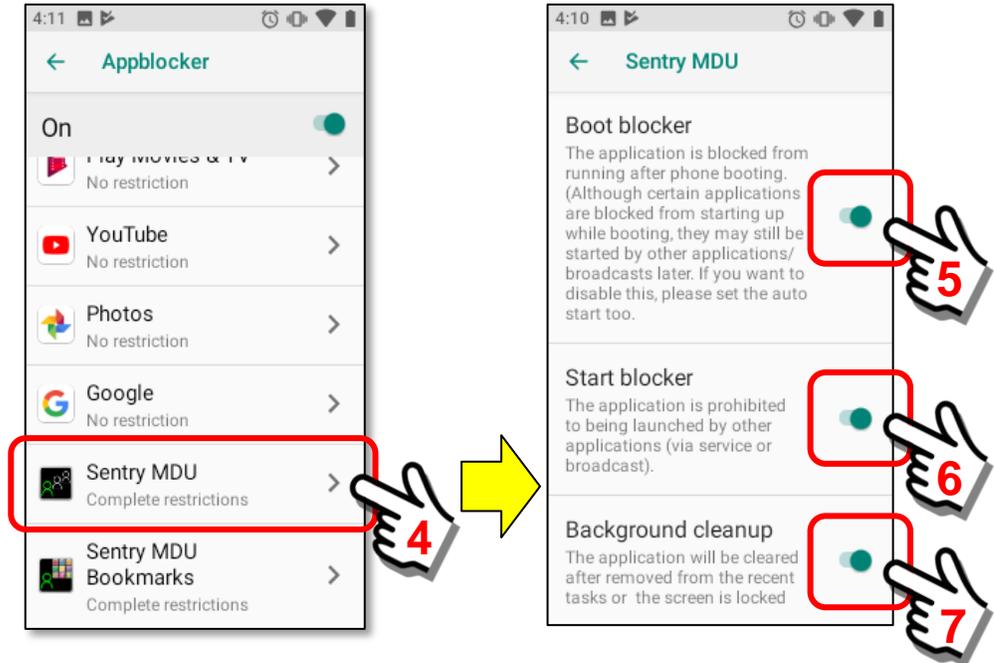
Under the **Smart Assistant** category, we find the App Blocker section. Click on the **App Blocker** button.



Review the **App Blocker** feature and the restrictions on covered Apps.

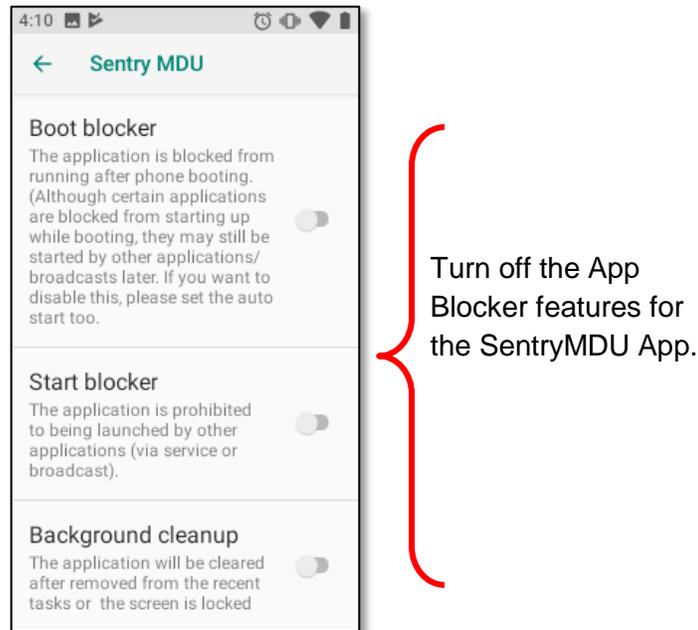


Click on the SentryMDU App button to change the App Blocker settings.

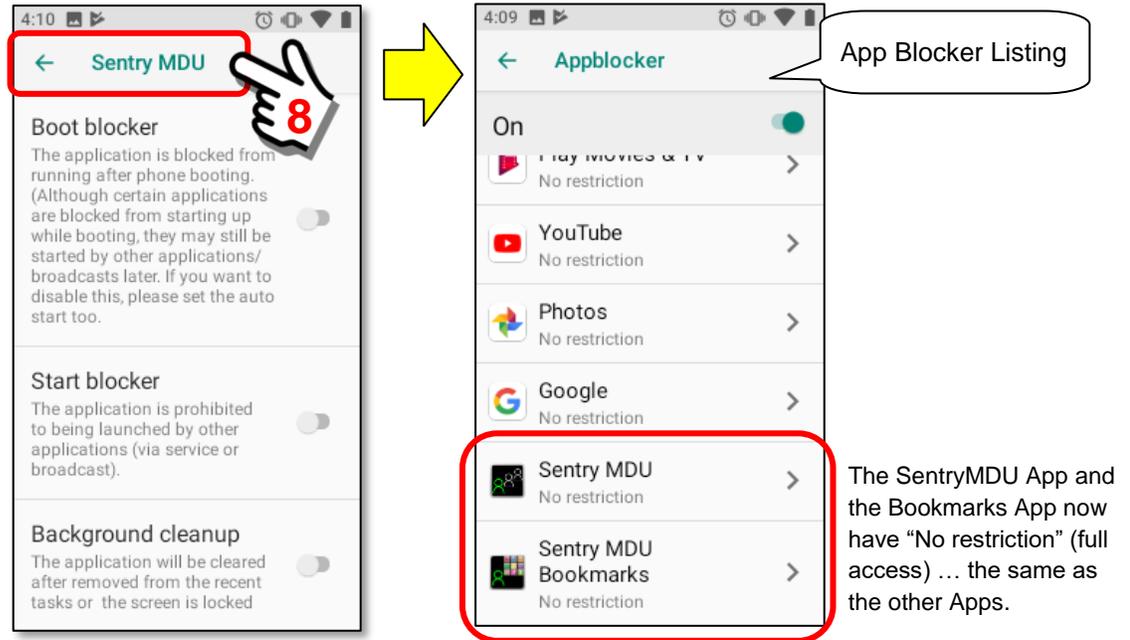


Set the **Boot Blocker**, **Start Blocker** and **Background cleanup** to “Off” by swiping the “slider” control with your finger.

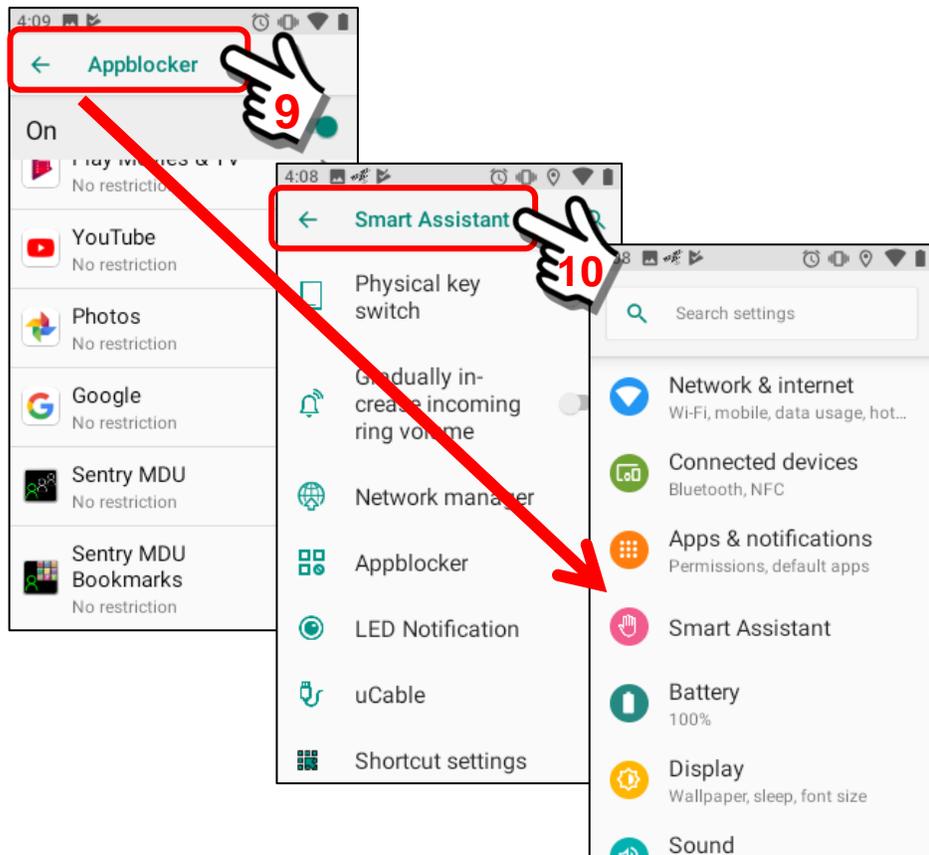
The SentryMDU Panel should now look as follows:



Click on the SentryMDU heading button to return to the App Blocker menu.



At the App Blocker Listing Menu, notice that now there are “No Restriction” on the SentryMDU App on this mobile device. We can now navigate back out of the **Smart Assistant** feature group. This should allow the SentryMDU App to work as designed.



### 3.2. Where to get the SentryMDU Mobile App

#### Access to the Download Server:

The SentryMDU App is available via a “link” on the DLT Website or directly from a DLT SentryMDU Administrative Server. **The app is free to download and use.** You will have to cycle through a few screens and then you will be directed to a secure “download”.

**Important Note:** This is advanced commercial software with features that allow remote access to mobile devices (in your Security Domain) anywhere in the world. SINCE the App contains features that allow use as remote Wildlife TrailCam/CritterCam, Police Body Cams, Vehicle Dash Cams, Surveillance and GPS Tracking ... the App does NOT conform to Google Play Store Policy (they do not allow apps that can be used for unattended remote surveillance). Therefore, **the SentryMDU App is NOT available on Google Play. You must download the App from our website.**

On your mobile device, proceed to one of the following Websites.

DLT Website:

<https://www.digi-lumen.com>

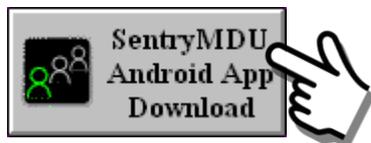


DLT SentryMDU Administrative Server:

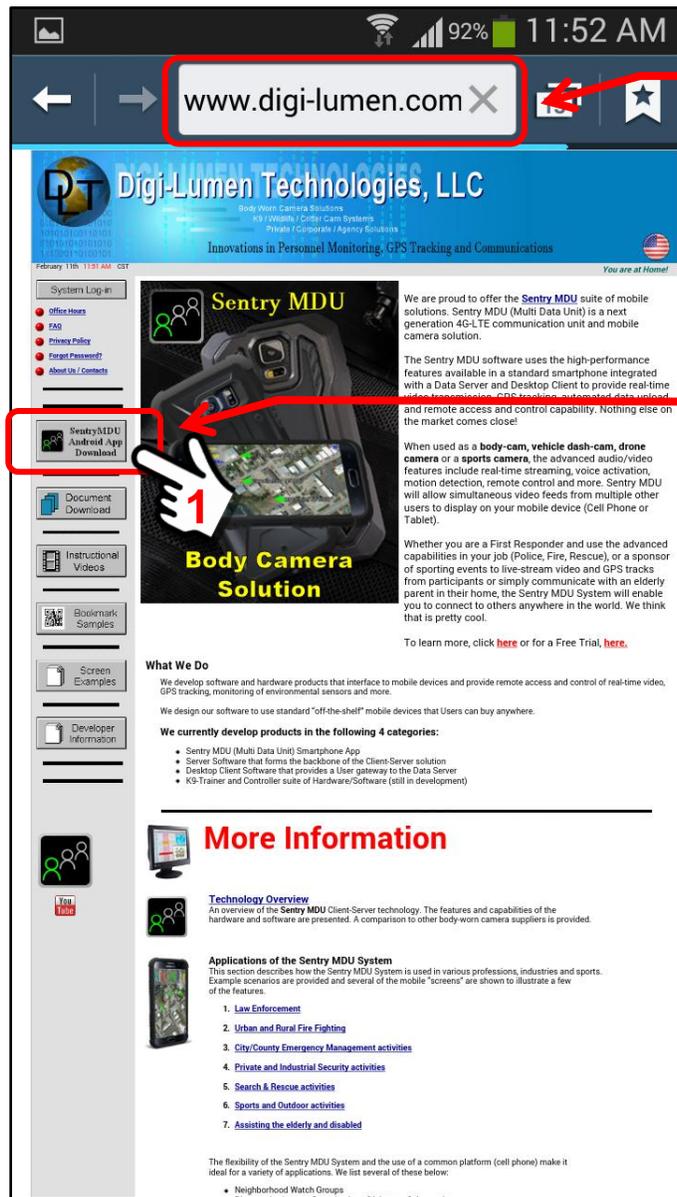
<https://sentrymdu01.sentrymdu.com>



When you reach the website, look for the Button below. It will be on the left-side vertical menu. Click on the Button and follow the directions.



In this example, we will start at the DLT Website to begin the process of downloading the SentryMDU mobile app.



DLT Website

SentryMDU App Download Button



Screen of Mobile Device

Clicking on the SentryMDU Android App Button will open another screen on the DLT Website.



The DLT website will open another screen panel that outlines the process for transferring to the Administrative Server website where the SentryMDU App download file resides.



Text that explains “why” the SentryMDU App is NOT listed on Google Play and the process steps to download the App to your Mobile Device.

Button to re-direct the User to the “secure” Administrative Server Website

Click on the “Continue to Download Site” Button.  
Your Internet Browser will now be re-directed to the secure website of the SentryMDU Administrative Server.

<https://sentrymdu01.sentrymdu.com>



DLT SentryMDU Administrative Server “secure” website

Screen of Mobile Device

In this example, we are now at the **SentryMDU Administrative Server** website panel. As we did on the DLT Website, now click on the SentryMDU Android App Download Button again on this website.



Screen of Mobile Device

SentryMDU App Download Button

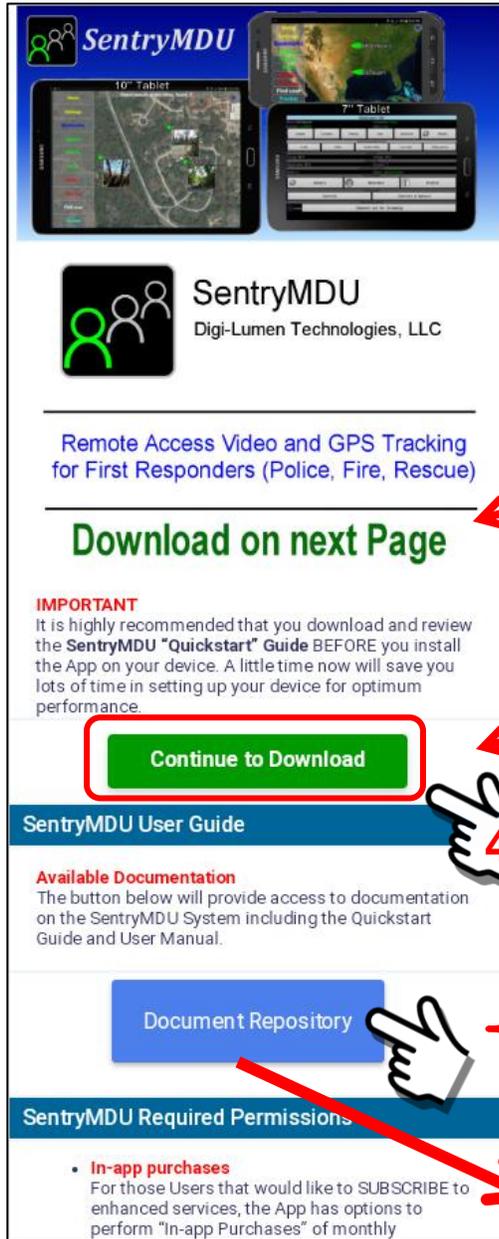


The screens in the preceding steps have all been sized for browsing on a desktop computer. When used on a mobile device, the text would appear very small and you would need to “zoom in” to read it.

The text on the following screens will be much larger and should be easy to read on a mobile device.



When you click on the **SentryMDU Android App Download** Button, you will see a screen panel which shows the PERMISSIONS that the App will use.

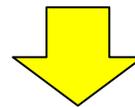


**Screen of Mobile Device**

Message that the final download step is on the next page.

When you click to continue you agree and understand that the App will be using the permissions explained below

Access to Document Repository to download the SentryMDU QuickStart Guide and Mobile Device User Guide



Text that explains "why" the SentryMDU App needs the permissions and how they are used.

Review the **Access Rights and Permissions** of the SentryMDU App on your mobile device.

**Important Note:** Since this is commercial software, we do NOT capture information from your device and sell it to others or use your information for marketing purposes. We are not an advertising platform like the BIG Search Engines and Social Media Giants. We think it is “creepy” and an “invasion of privacy” for these companies to extract data from a person’s device, monitor their location, send them Ads or Notifications when they walk into a store ... and more. They do this under the pretence of helping to “improve a user’s experience”. We disagree. We think it is wrong.

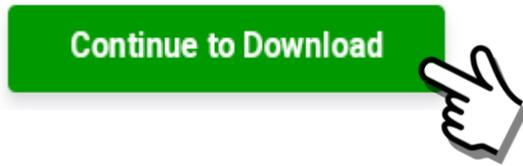
The App Permissions we need for the SentryMDU System are explained below. Please read. You will need to agree with this before the App will install.

### SentryMDU Required Permissions

- In-app purchases**  
For those Users that would like to SUBSCRIBE to enhanced services, the App has options to perform “In-app Purchases” of monthly subscriptions. These are optional.
- Location**  
The SentryMDU System uses the GPS and location features of the mobile device to provide location data to the Data Server and other users within your security domain. This is an important feature for First Responders (Police, Fire, Rescue) so others in your group (Security Domain) can know where you are in times of emergency. Users have the option to “turn off” GPS tracking if desired.
- Phone**  
The SentryMDU App allows a User to place calls from within the app communications panels. It simply launches the Android native phone app.
- Photos/Media/Files**  
The SentryMDU App allows a User to send pictures, videos and other media files to other users within your Security Domain. This is why it has access to the file system where you store pictures. In addition, the app can take pictures and video.
- Camera**  
As a User of the SentryMDU System, you can access the camera on one of your devices remotely from another SentryMDU device. This allows you to use devices as Critter Cams, remote surveillance cameras, vehicle dash cameras and more. You may use the device as a Motion Detection camera or for Object Recognition to trigger “alerts” when it identifies people, animals, vehicles, etc. You may turn off this feature if desired.
- Microphone**  
Since the App can monitor and record both audio and video, it needs access to the Microphone on the device.
- Wi-Fi Connection Information**  
The SentryMDU App can operate with both Wi-Fi and Cellular networks. For this reason it needs Wi-Fi information from your mobile device.

Text that explains “why” the SentryMDU App needs the permissions and how they are used.

Click on the “Continue to Download” Button.



Another screen will pop-up on the mobile device. This is the screen where you will finally “download” the SentryMDU App to your device.

This screen will provide a Feature Summary.

When you are ready to download, click the **Download SentryMDU App** Button.



**SentryMDU**  
Digi-Lumen Technologies, LLC

Remote Access Video and GPS Tracking for First Responders (Police, Fire, Rescue)

**Mobile App Download**  
This software turns a standard smartphone into a versatile multi-purpose device. The SentryMDU App is a next generation 4G-LTE / Wifi enabled platform that includes the following features:

**Download SentryMDU App**

**Summary of SentryMDU Features**

- 4G-LTE body-worn camera solution for Law Enforcement
- Live-streaming “dash cam” for a vehicle (live-stream & record)
- Sports camera, real-time video streaming of events
- Aerial Drone camera, live-stream video to many users via cellular networks
- GPS tracking features using satellite image overlays
- Create “bookmarks” for ready access to Users, places, online resources
- Notification “alerts” as users move in-out of specified areas (geo-fence)
- Monitor live audio/video and GPS tracks of multiple devices simultaneously
- Remote access and control capability via mobile device or desktop
- Mobile-to-Mobile data transfer between devices
- Receive live-stream Police radio traffic, Webcast TV Radio, Custom URLs

Click here to begin the download process.

**Feature Summary**

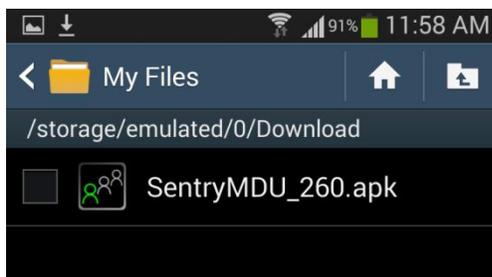
The file will download to the **Download Folder** on your mobile device.

As the file begins to download, you may monitor the progress by observing the “download” icon in the notification bar (your phone may be different). The file is a 58MB file. It may take from a few seconds, to a minute or more, depending on the speed of your internet connection.



**Download progress shown on the Notification Bar**

Once the file has completed downloading, navigate to the “Download Folder” on your mobile device. You should see a file similar to the following:



**SentryMDU\_260.apk**

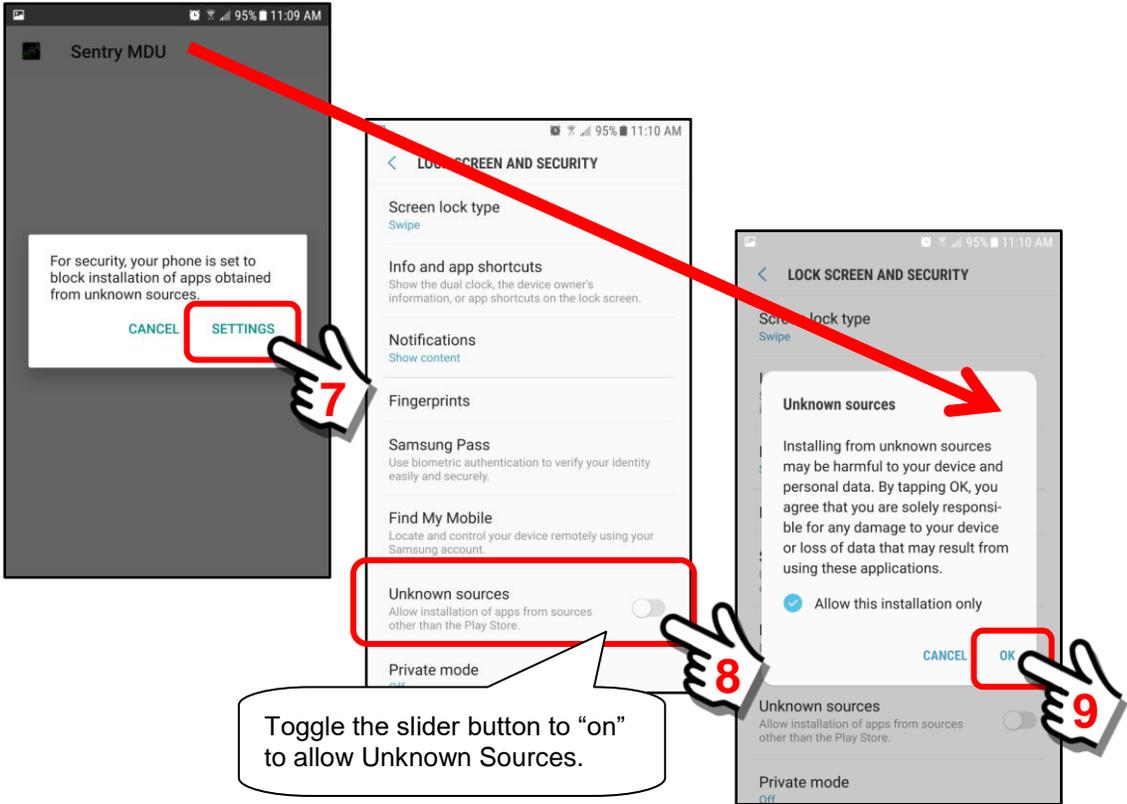
This is the “Release Version” number of the SentryMDU App

When installed, the app will be identified as **SentryMDU.apk** (Android Application File). The next step is to INSTALL the app on the mobile device (for now it has only been downloaded).

Click on the app NAME in the Download Folder.

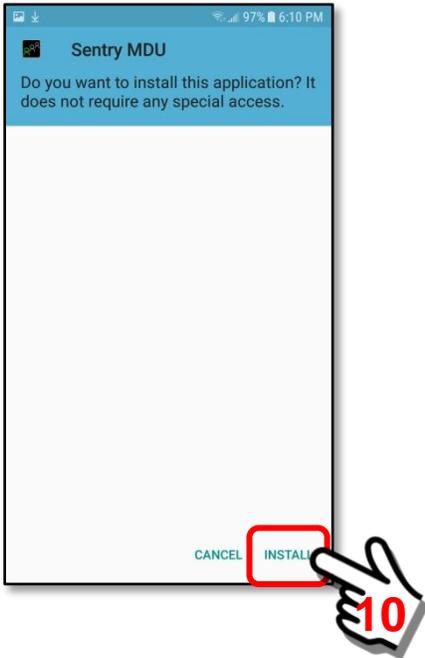


The SentryMDU App will now begin installation. Since the SentryMDU App is NOT downloaded from the Google Play Store, it is considered an “Unknown Source” by Google since they don’t know about it. Depending on your device “settings” you may have “Unknown Sources” blocked. If this is the case, you will need to adjust your settings to allow the SentryMDU App to install.



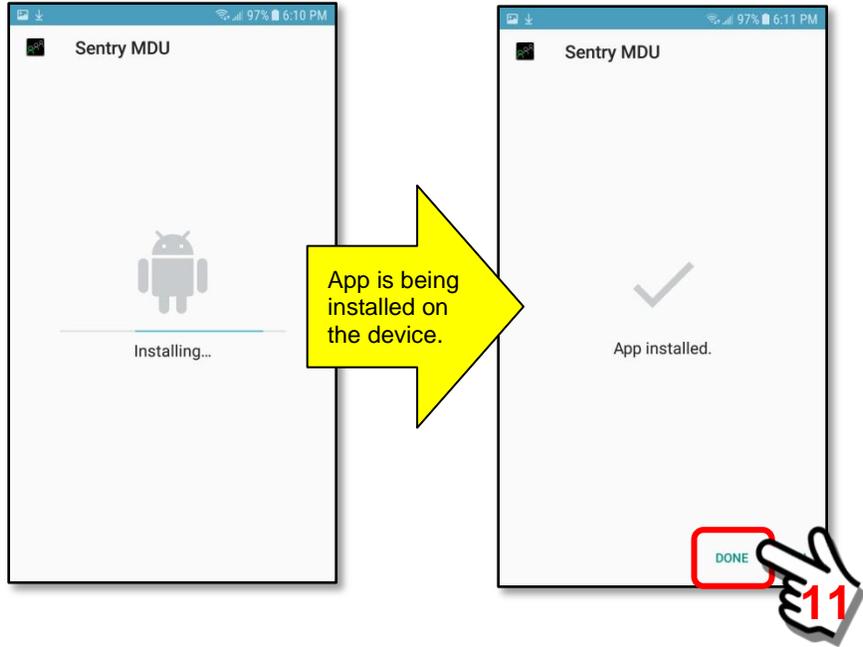
You will get a “scary looking message” from Android about Unknown Sources. Click the “OK” Button when you are ready to continue.

You will be presented with an INSTALL screen. Click the “Install” Button to continue with installation.



As the SentryMDU App is being installed you will see an installation screen similar to the following. This may take anywhere from 5 seconds to 60 seconds.

Click “Done” when the installation is complete.



The SentryMDU app is now installed on your device. You will still need to “launch” the app, accept a License Agreement and configure the device for your particular application. See **Section 3.5 or 3.7** for details.

To fully utilize the software and interact with other users, you must register and become a member of a Security Domain (User Group). **Registration is free.** This can be a group you create (ie your family, friends, civic org) or an existing entity that you may work with (Police, Fire, Rescue, Company XYZ). A “group” can be as small as two devices or as large as tens-of-thousands.

If you are a member of an Organization that has a licensed SentryMDU Server, you simply install the App, register an account username, enter your organization License Key information and you are ready to go (see **Section 3.7** for details).

If you do NOT belong to a group with a licensed SentryMDU Server, you have 4 options:

1. Do nothing and remain an Anonymous User (No satellite imagery and reduced feature set since you are not part of a group Security Domain).
2. Register a Username but do NOT purchase a subscription. Maps will be OpenStreetMaps Data and not satellite imagery. No data storage or streaming.
3. Purchase a monthly In-App Subscription to use one of OUR servers.
4. License a server instance of your own (Contact us for details).

For those that purchase an In-App Subscription, we offer three (3) subscription levels based on usage ... from a casual user ... to a commercial level user. Some features that require access to a Licensed Server, via the **SentryMDU Manager Desktop Client**, are NOT available to Subscription Users (since you are not operating your own server).

For those that want full control over all aspects of the SentryMDU System we recommend licensing the SentryMDU Server and Desktop Client. You may chose to provide and host your own hardware, contract with third-party hosting, or utilize/manage “cloud” based resources. In those cases, we simply license you the software. Contact us for details.

## Important Note:

The SentryMDU App is “advertiser” free.

No ads or annoying notifications.

Your Security Profile (selected by you/organization) determines who can see you, your device and the level of access they have to monitor your device.

**We do NOT collect information from your device, contact lists, phone numbers, location, etc.** Most “free” Apps are free because they make their money by providing/selling the information they get from YOUR mobile device to others and advertisers. We do not do that. **We do NOT collect data about you and provide it to others.**

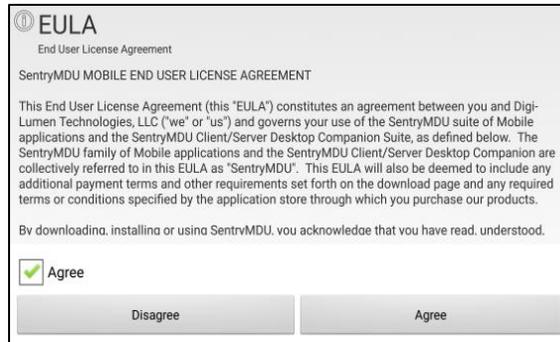
**The SentryMDU System is a very sophisticated piece of software. Take a few minutes to understand what it can do.**

### 3.3. The EULA (End User License Agreement)

#### Sentry MDU Application:

The SentryMDU Application requires that all users agree to a EULA (End User License Agreement) in order to use the software.

As part of the installation process, a User must agree to the EULA or the installation process is aborted. A screen similar to the one shown below will be displayed on the Mobile Device. Please read this carefully.



Essentially, this EULA says that you agree not to “hack” the software, you will not use it for illegal purposes, you will respect the privacy of others, you will respect the intellectual property of others, you understand/agree that the software may contain “bugs” and we do not warrant it for any particular purpose. If you have a problem with this EULA then please do not use the SentryMDU Application.

Users that license the SentryMDU Data Server and Sentry Manager Desktop Client will have additional documents as part of the licensing process.

#### Open Source Software:

The SentryMDU App is released as “Open Source” software licensed under GNU General Public License, Version 3 (GPL-3.0). The full text of this license is available via a “link” in the **About Section** of the Main Map Screen “Menu” Button.

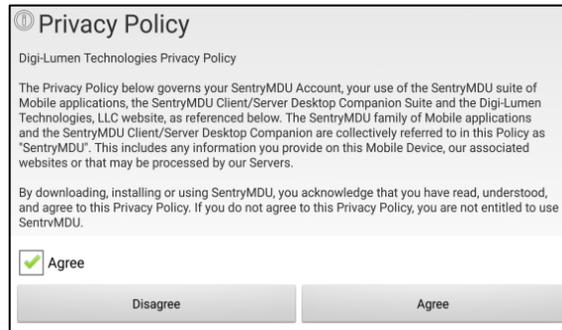


### 3.4. The SentryMDU Privacy Policy

#### Sentry MDU Application:

The SentryMDU Application requires that all users agree that you have reviewed our Privacy Policy in order to use the software.

As part of the installation process, a User must agree to the Privacy Policy or the installation process is aborted. A screen similar to the one shown below will be displayed on the Mobile Device. Please read this carefully.



Essentially, this Privacy Policy describes what information we collect and how that information is used. We do NOT rent or sell user information to anyone. It is only provided to others if required under legal process. If you have a problem with this **Privacy Policy** then please do not use the SentryMDU Application.

Users that license the SentryMDU Data Server and Sentry Manager Desktop Client will have additional documents as part of the licensing process.

### 3.5. Registration Process (General Registration)

#### Registration Overview:

The SentryMDU installation and registration is straight forward. **Registration is FREE and does not obligate you to spend any money.** A User will perform the following steps:

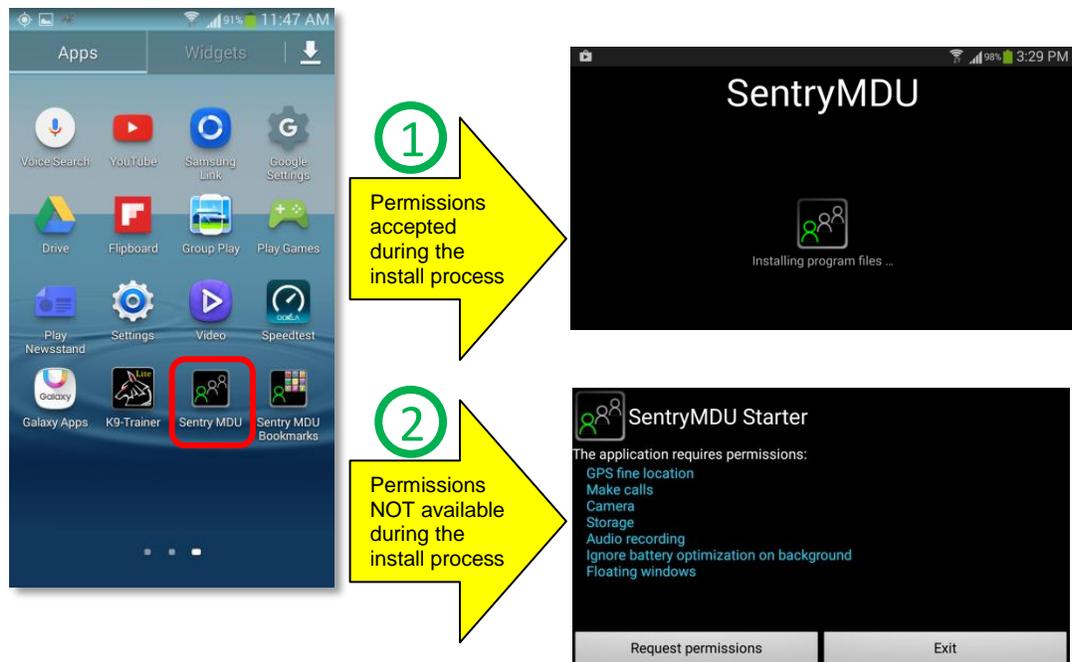
- 1) Go to the DLT or SentryMDU website and download the App.
- 2) Select to “Install” the SentryMDU App on your device.
- 3) If presented, accept required Access Permissions.
- 4) After the App is installed, return to your screen menu items and locate the SentryMDU Icon.
- 5) Launch the SentryMDU App on your device.
- 6) If App Permissions were not available and “Accepted” during the install process, review and accept them now.
- 7) Agree to the EULA (End User License Agreement).
- 8) Agree to the Privacy Policy.
- 9) The SentryMDU App will now install on your device.
- 10) Complete registration with a Username and Password

**Important Note:** If you are part of a Licensed Group, your registration steps are a little bit different. Please refer to **Section 3.7** for details.

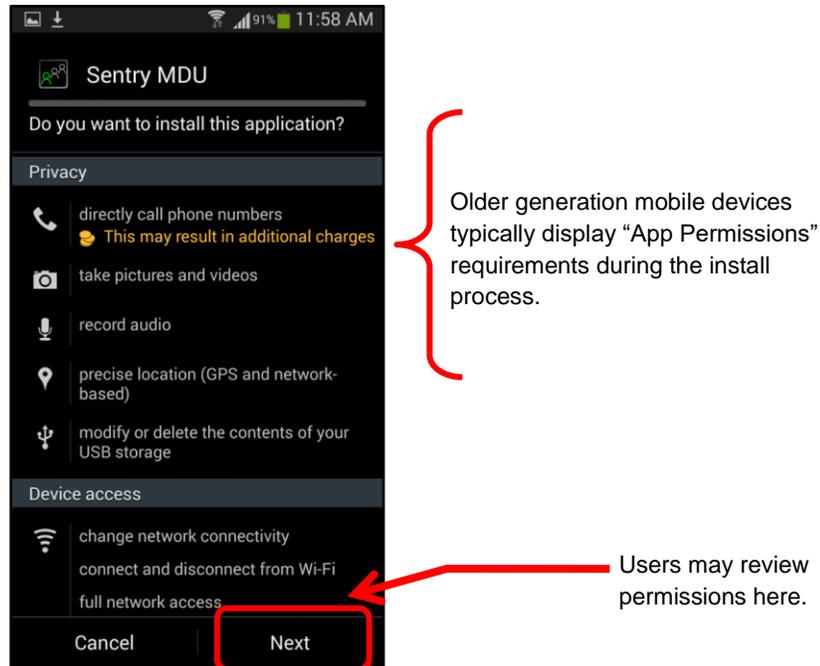
#### Review of App Installation Steps:

Once the SentryMDU App is downloaded and installed on your device, the system will install two (2) SentryMDU icons on your Apps Panel.

Click the SentryMDU Icon to launch the App for the “first time” and begin the installation process. The system may display one of two different panels as shown below.



Over the last several years the evolution of the Android Operating System has placed increased emphasis on security and privacy. This evolution affects the way User Permissions are handled on a device. For example, older model cell phones may display the “permission” settings for an App as part of the installation process, as shown below.



Depending on the Manufacturer, Model and installed Android version of your device, the way that App Permissions are handled may be different. If you are not shown (and do not “Accept”) the App permissions at the “install” level then the SentryMDU app installation process will include a set of screens that cycle through the permission requirements for this App when you first “launch” the App.

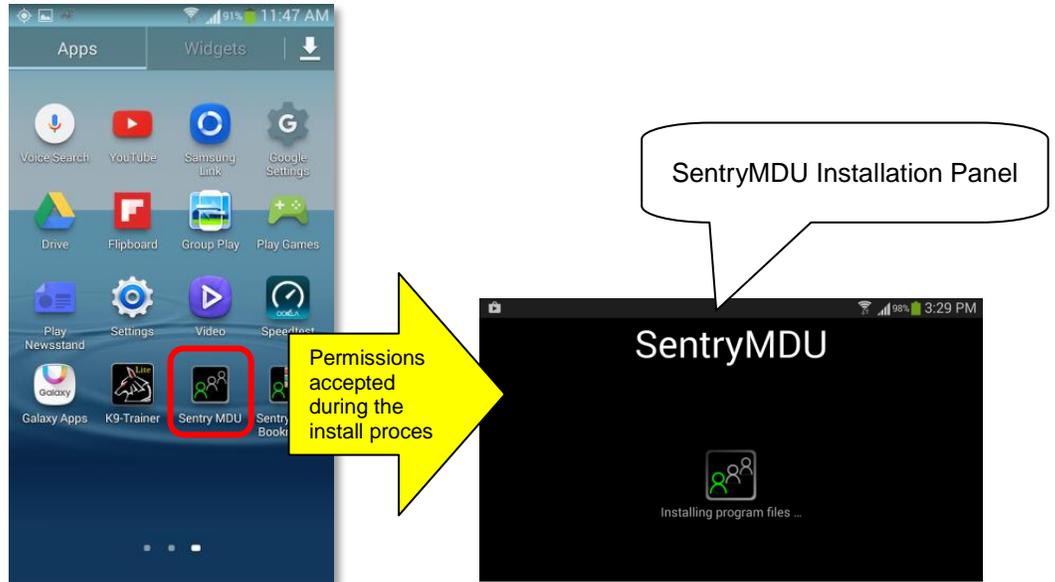
**Important Note:** For the SentryMDU App to function properly, ALL required permissions MUST BE ACCEPTED. You can not select some and not others. We use the “All or Nothing” approach. The SentryMDU App will not install until all necessary permissions are satisfied.

For example, assume you are going to use the “Motion Detection” features of the App to monitor a remote mobile device using the Camera as a remote surveillance camera. The system would need “network” permissions (Cellular or WiFi), “Camera” (to send video), “Microphone” (to monitor audio), “Location/GPS” (where is it), “Notification” (to notify you that a motion detection event had occurred) and so on.

For a full listing of the access required by the SentryMDU System, review the “Permissions” section for the App on the DLT or SentryMDU website.

### Scenario #1: Permissions approved during App installation

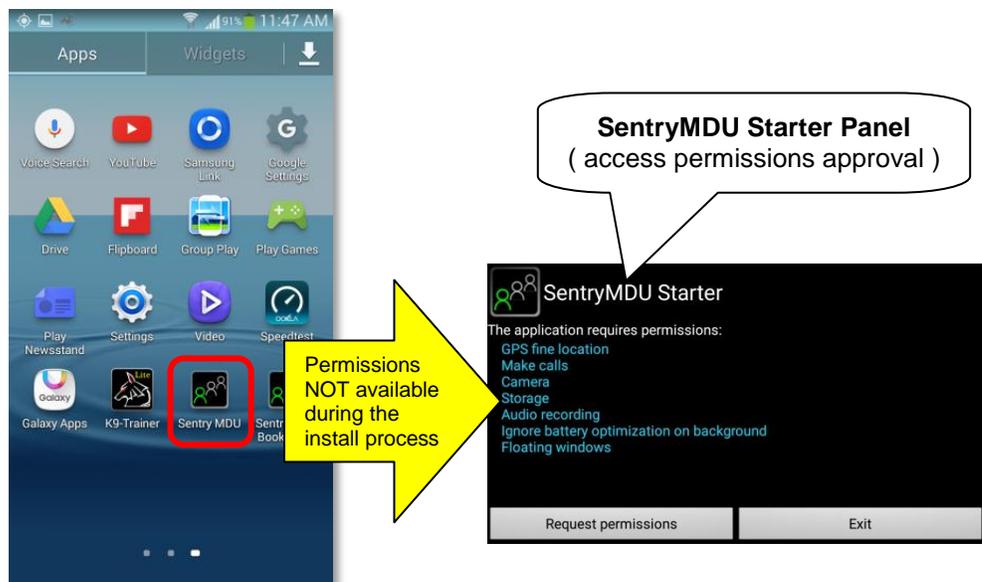
If you are using a device where the permissions list was presented when you installed the App (as shown in previous picture) ... when you launch the App for the first time, you will jump directly to the **SentryMDU Installation Panel**.



**Important Note:** Depending on the age and Android version of your mobile device, the time period for installing the program files may vary from 5 seconds ... up to 5 minutes. For example, a Samsung S22 smartphone only takes a few seconds, where an older Samsung S9 may take several minutes. **Be patient.**

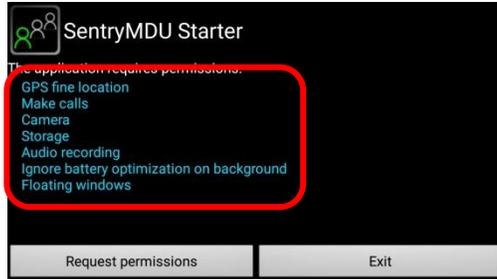
### Scenario #2: Permissions NOT accepted during the install process

If you are using a device where the permissions list was NOT presented when you installed the App ... then you will be presented with a **SentryMDU Starter Screen** where the required permissions will be presented to you ... and you will need to "approve" them one-by-one. The SentryMDU Installation Panel will be displayed AFTER the permissions are approved.



**1. The SentryMDU Starter Screen**

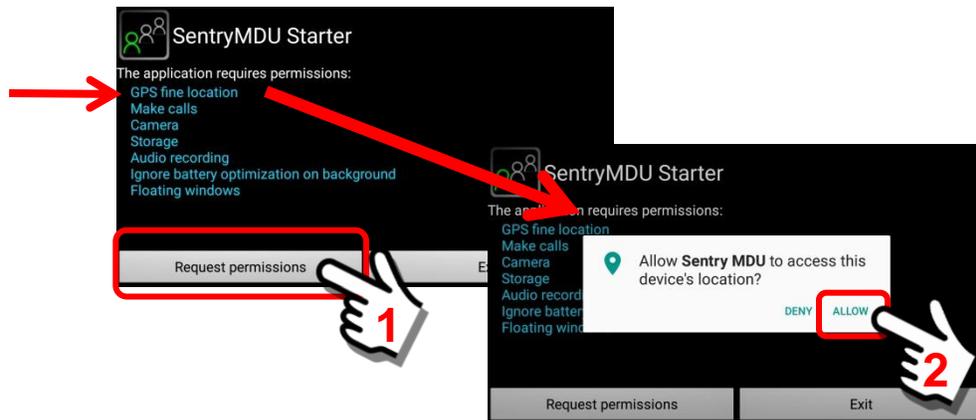
If the App Permissions are NOT set during installation, they MUST be set before SentryMDU program files are installed. The SentryMDU Starter Panel is a feature that will ensure that the required permissions are set.



The SentryMDU System will NOT install unless all permissions on the list are approved.

**2. The “GPS fine location” permission setting.**

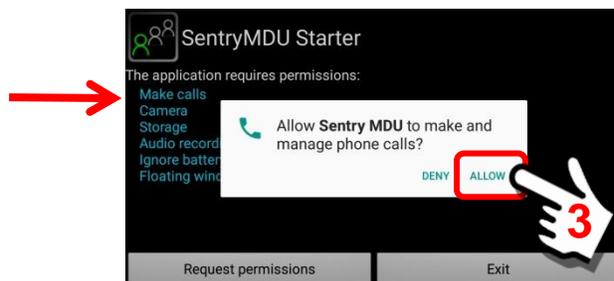
Click the “Request permissions” Button to begin the review process.



**3. The “Make Calls” permission setting.**

As you select and click the “ALLOW” Option on each permissions panel, the screen will advance to the next permission option.

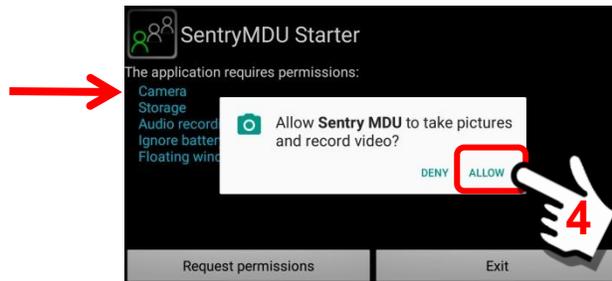
Click “Allow” on the Make Calls Panel (make and manage phone calls).



**4. The “Camera” permission setting.**

As you select and click the “ALLOW” Option on each permissions panel, the screen will advance to the next permission option.

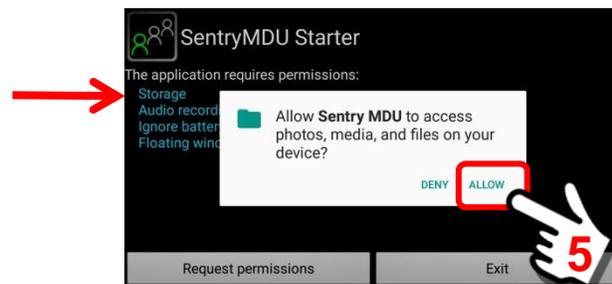
Click “Allow” on the Camera Panel (take pictures and record video).



**5. The “Storage” permission setting.**

As you select and click the “ALLOW” Option on each permissions panel, the screen will advance to the next permission option.

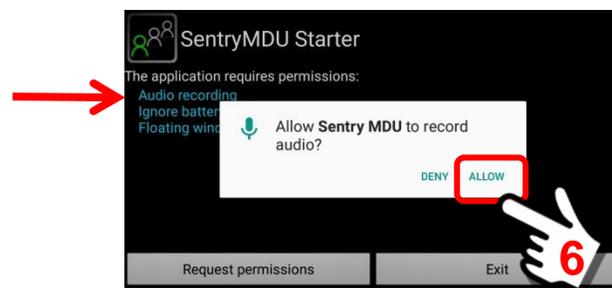
Click “Allow” on the Storage Panel (access photos, media and files).



**6. The “Audio Recording” permission setting.**

As you select and click the “ALLOW” Option on each permissions panel, the screen will advance to the next permission option.

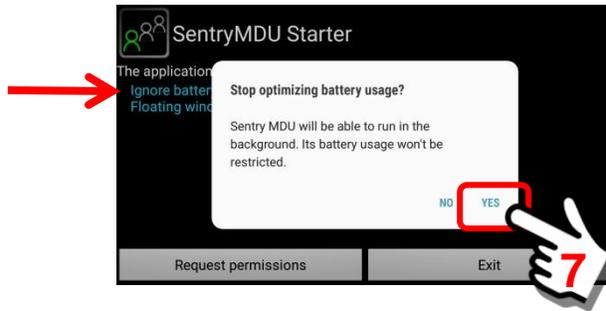
Click “Allow” on the Audio Recording Panel (to record audio).



**7. The “Battery Optimization” permission setting.**

As you select and click the “ALLOW” Option on each permissions panel, the screen will advance to the next permission option.

Click “Allow” on the Battery Optimization Panel.



The Battery Optimization “permission” may (or may not) be available on your device. This is a relatively “new” feature of the Android operating system that puts some Apps to “sleep” when not used for long periods of time. The objective is to reduce battery drain when the device is in hibernation or standby mode.

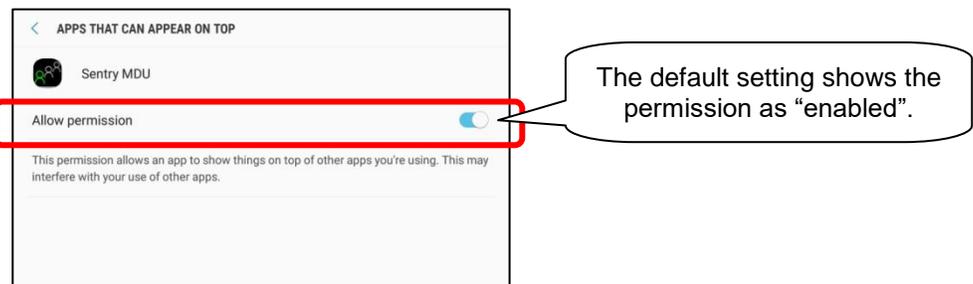
In order for the SentryMDU App to continue receiving notifications and to report GPS location, it is necessary that this optimization feature be “turned off” for the SentryMDU App. We are giving permission that the SentryMDU App can still operate, even when the device is in “standby mode”.

**8. The “Floating Window” permission setting.**

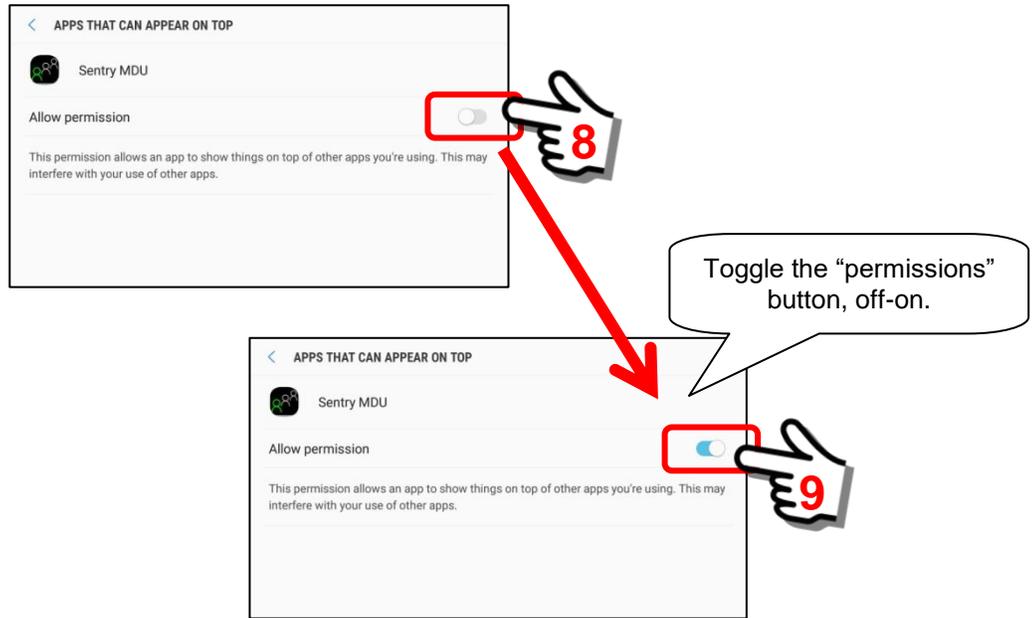
The final permissions setting is to allow the SentryMDU App to create re-sizable “Floating Windows” that will display on top of the display screens of other Apps. This requires a unique approval process.

When the “Floating Window” item is reached ... the system will retrieve the permission panel from the mobile device (not from within the SentryMDU code). If you want to learn about Floating Windows, see **Section 9.13**.

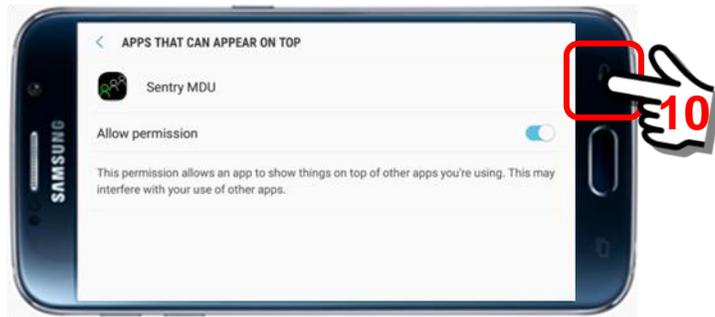
The example shown below is from a smartphone running Android Ver7. Yours may look a bit different. As you can see below, when displayed, it appears that the permission is already set to “Allow permission”.



However, for the SentryMDU App to access the permissions “setting” you must **toggle the permissions setting “off – on”**. This will force the device to recognize SentryMDU as an authorized App.



When finished, click the “Back” Button. The system will now display the SentryMDU Program Installation Panel and continue with installation.



Permissions are now complete.

## Review of Registration Steps:

The following screens will be displayed during the installation and registration process.

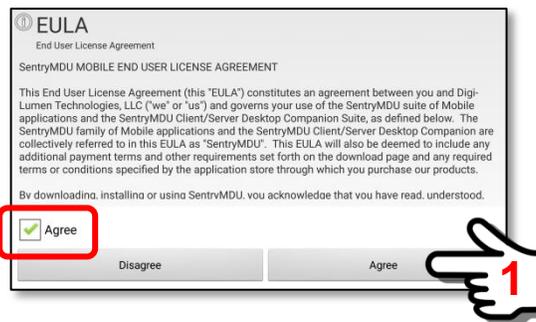
The **SentryMDU Program Installation Panel** will be displayed while the App is being configured and the file structure created.



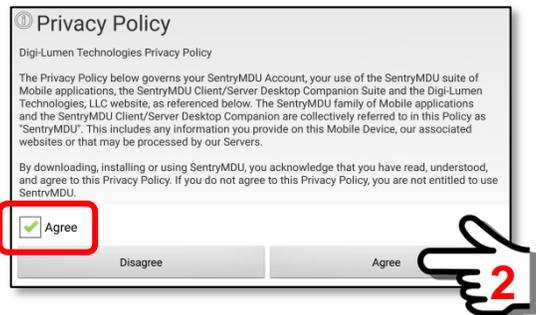
**Important Note:** Depending on the age and Android version of your mobile device, the time period for installing the program files may vary from 5 seconds ... up to 5 minutes.

For example, a Samsung S22 smartphone only takes a few seconds, where an older Samsung S9 may take several minutes. **Be patient.**

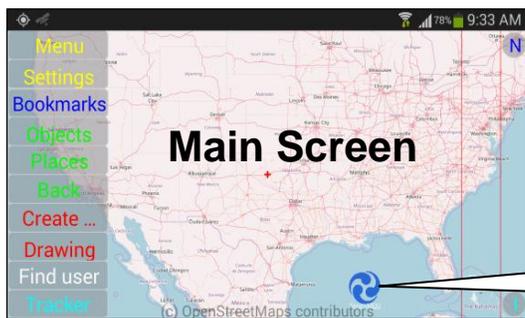
## Accept the End User License Agreement (EULA)



## Accept the Privacy Policy

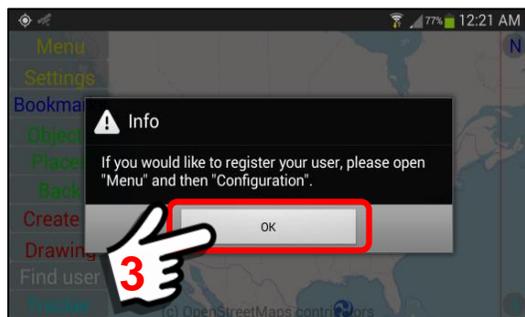


Once the SentryMDU program files have been installed and the EULA executed, a Main Menu screen will be displayed. This is the SentryMDU Main Screen. The “default” map image will be a Road Map View of the North American Continent (USA, Canada, Mexico).

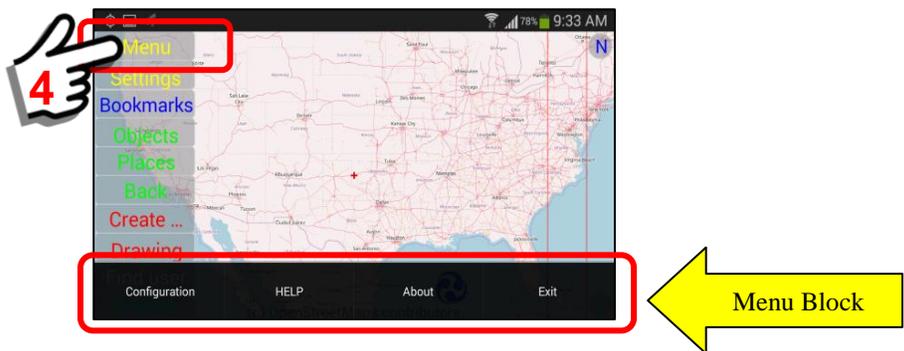


Link to SentryMDU Reference Materials. See **Section 8.4.2**

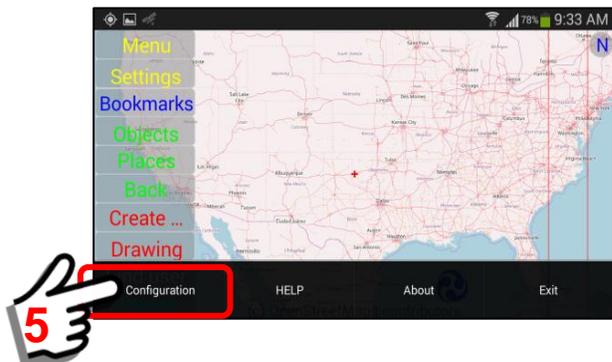
A pop-up message will remind you to continue with device Configuration.



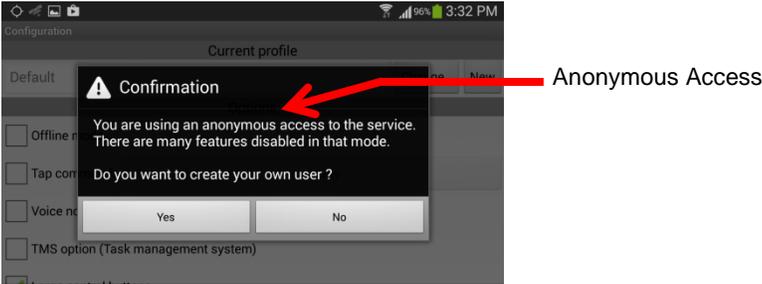
To continue with the registration process, click on the MENU button in the upper left hand side of the screen. A Menu block will now appear at the bottom of the page.



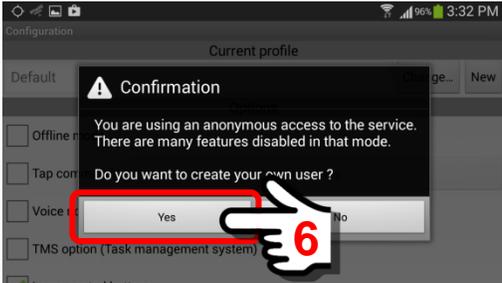
Select the “Configuration” Button from the Menu Block.



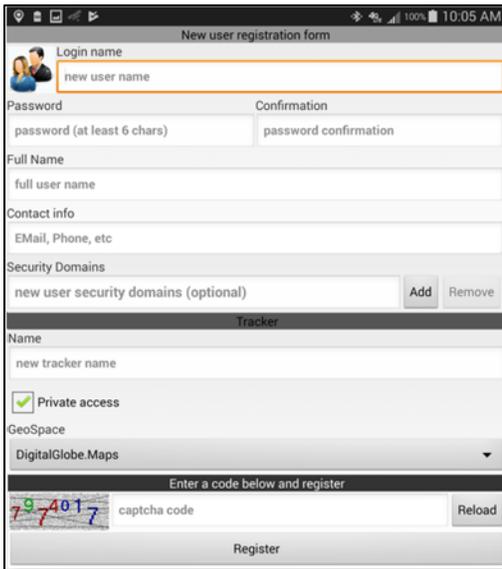
As the Configuration screen begins to display, a “pop-up” box appears and explains that prior to registration you ONLY have Anonymous user access to many of the features.



In order to have access to many of the SentryMDU features, you will need to register as a User. The registration process creates an “account” for you on the SentryMDU Data Server, identifies the mobile device, and creates a security profile. **Registration is free.** This is necessary if you wish to interact with other mobile devices on the network.



By clicking on the “Yes” button, the “New user registration form” will be presented. Depending on the type of device you are using (phone or tablet), as you touch one of the data entry boxes, the device will show a screen “keyboard” so you can enter the required text. See the following rules when filling out the form.



**NOTE:**

**Registration does NOT obligate you to anything. It is FREE.**

**The use of a License Key or Subscription is OPTIONAL.**

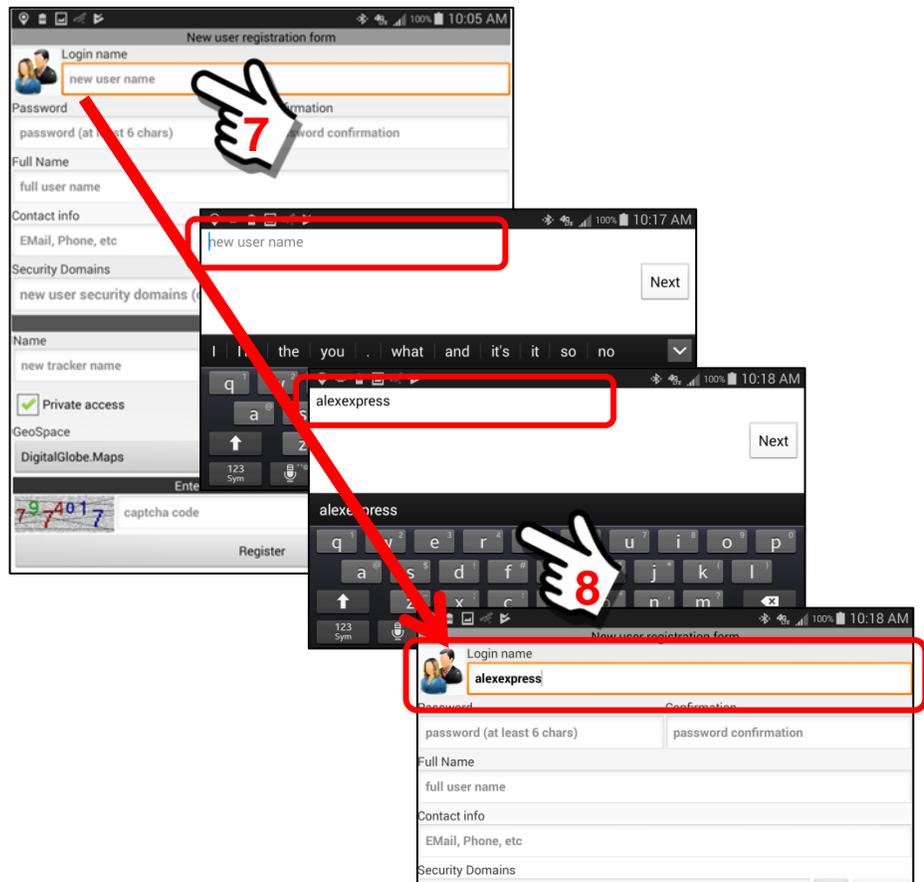
## Rules to follow when filling out the registration form:

### 1. Login name

A single word name of 5 – 255 characters, no spaces. Special characters (such as !@#\$%) are allowed. However the ' and ; characters are not allowed (apostrophe and semicolon). This will be your “username” so it should be a descriptive name. This name will appear on the Map Screen and will be the identifier with other Users. For example, if your job title was as the Director of the Emergency Operations Center .... you might use: EOCdirector (as shown below).



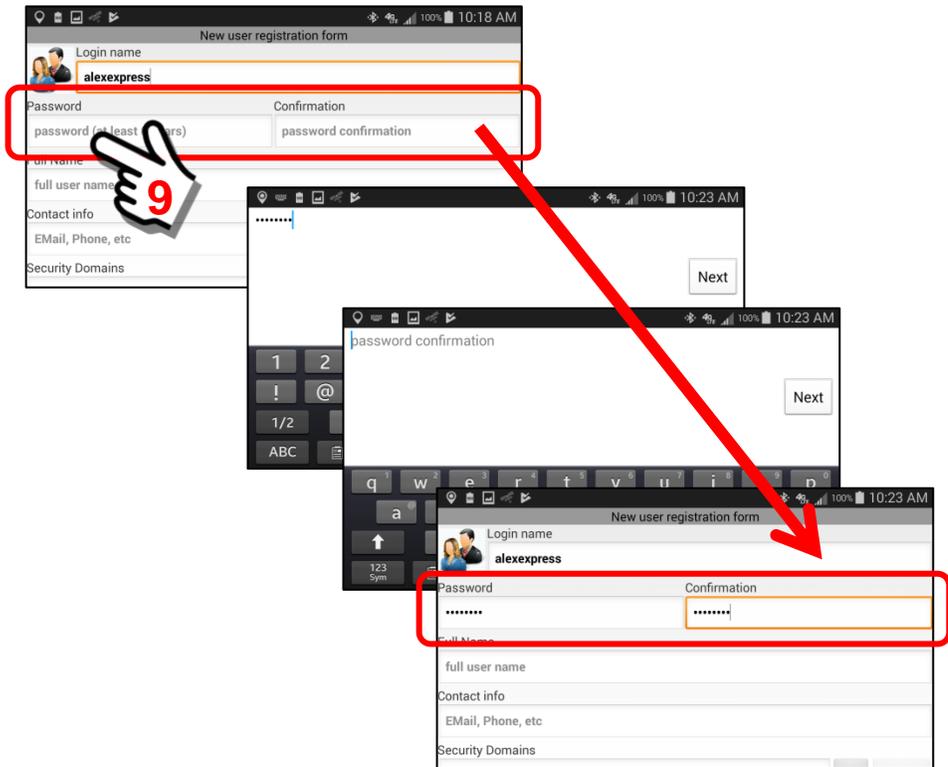
Click inside the “name” box to open an on-screen keyboard. Type your Username. For this example, we will use a user by the name of Alex Express and a Username = “alexexpress”.



## 2. Password

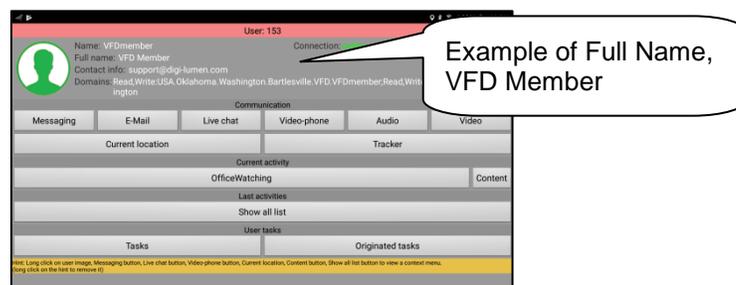
The Password must be 6 – 255 characters, no spaces. Special characters (such as !@#\$% ) are allowed. However the ' and ; characters are not allowed (apostrophe and semicolon).

Click in the password field and enter your password, then confirm by entering again.

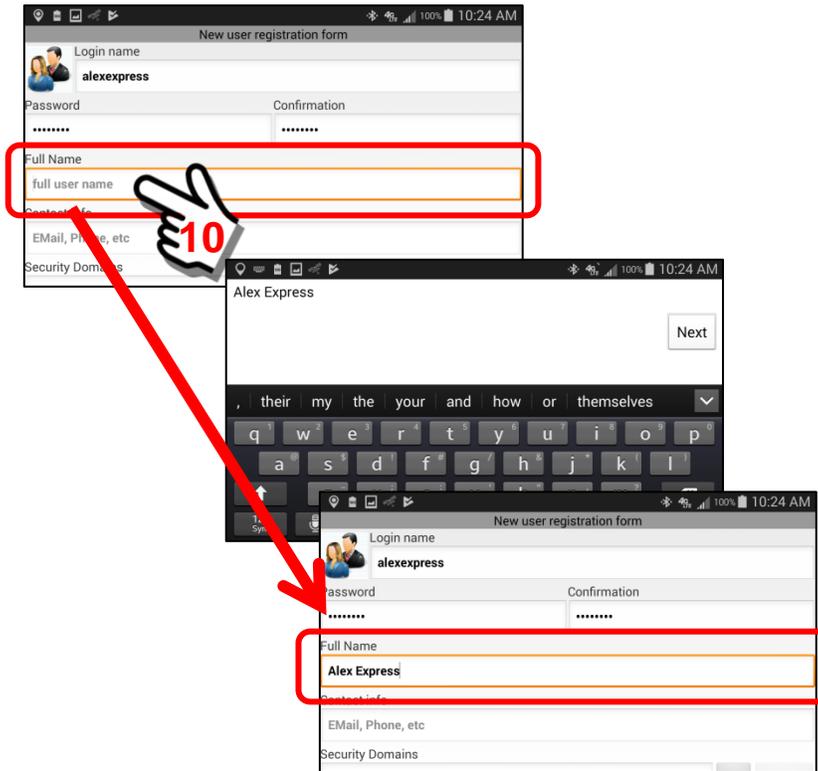


## 3. Full Name

This is your actual NAME ... such as Robert Jones or it could be a "job title" such as **VFD Member** (stands for **V**olunteer **F**ire **D**epartment **M**ember). Some features of the Sentry MDU System will use your Full Name in correspondence with other users on the system. Features such as Video Phone or Text Messages will use this name in alerts to other users.



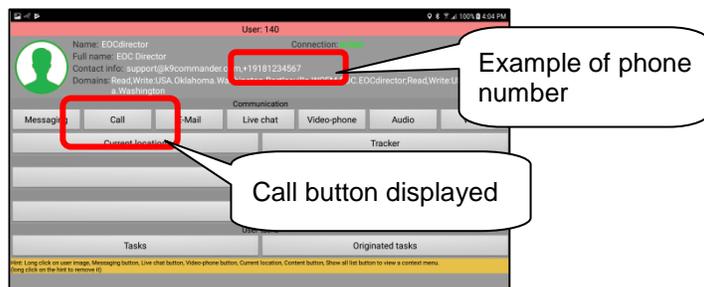
Click inside the data entry field to open the on-screen keyboard.  
Enter your Full Name. In this example we will use **Alex Express**.



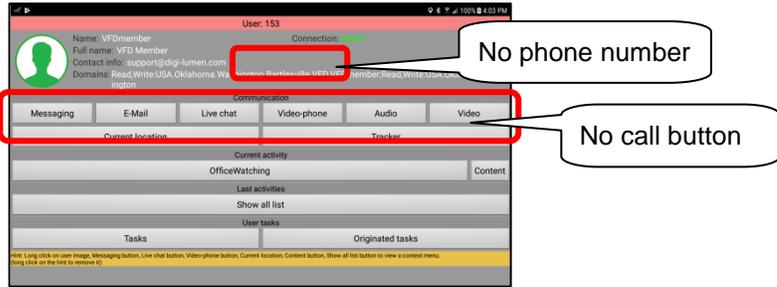
#### 4. Contact Info

This is an email address and (optionally) a phone number. This information is used in two ways:

- a. If the mobile device you are using has a SIM card (cellular enabled) and you enter the optional phone number, then other SentryMDU users will be able to call you on your phone **from within** the SentryMDU App (assuming security credentials allow).

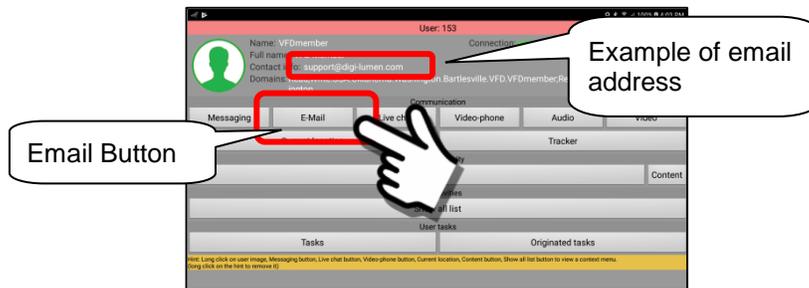


If no number is entered, there will **NOT** be a “Call” button displayed.



- b. Whether you enter a phone number or not, **we will need a valid email address** so that we may contact you in the event something is wrong with your account. We do NOT send marketing emails or other spam. This is only in the event we determine there has been unauthorized use of your account or some other important reason related to your account about which we need to contact you.

It is also for other Users in your organization to be able to email you.



### Email Address

The email address must be listed first and in standard email format such as:

**myName@gmail.com**

### Phone Number

The optional phone number must be listed after the email address and separated by a comma “ , “. The phone number must start with a “+” sign and may not include inter-country, inter-town access codes. It **must be made up entirely of numbers**. It should follow the standard international telephone format such as the USA example shown below:

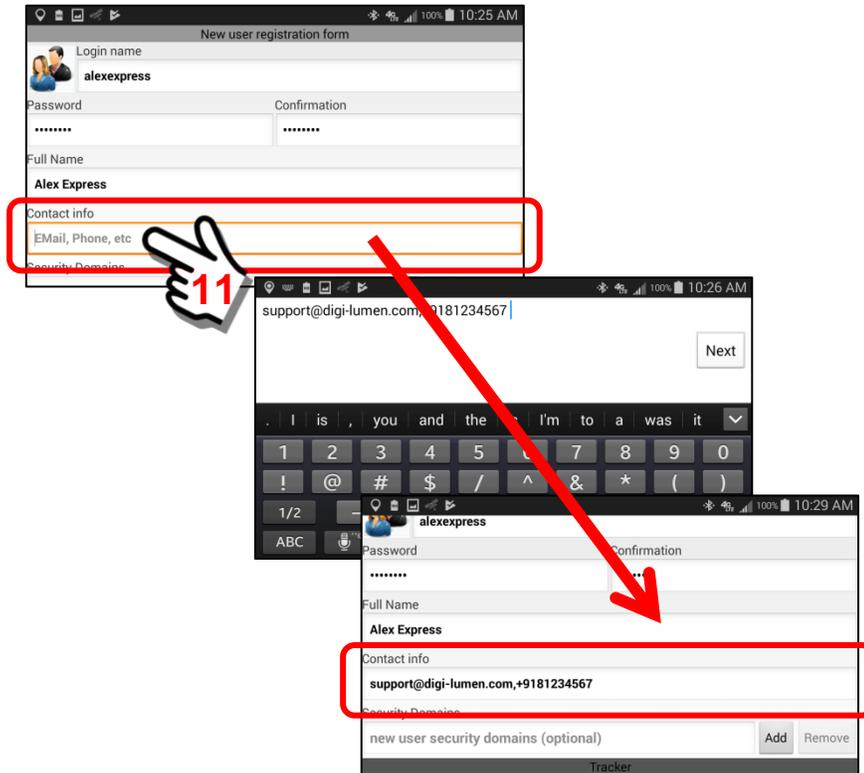
**+19181234567**

If you choose to list the optional phone number, the entry for the Contact data field may look similar to the following:

**myName@gmail.com,+19181234567**

**Note: No whitespace between letters/numbers**

Click in the “Contact Info” box to open the on-screen keyboard.  
Enter the contact information.



## 5. Security domains

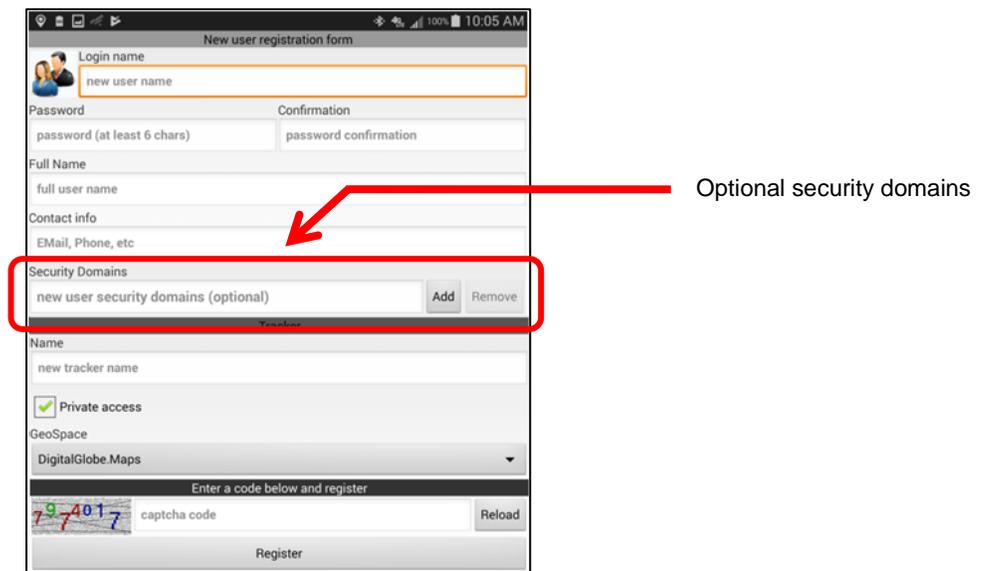
The Security Domains data field has several possible options:

- a. If you are part of a Licensed Group, the Account Administrator for your Group MAY provide you with Security Domain information to enter into this data field. If not, then leave this field “blank” during registration.
- b. **If you plan to purchase a subscription**, the system will assign you a “default” set of security settings with your “username” as the root context. In this case, **leave this field “blank”**. These are discussed in more detail in **Section 6.3**.

- c. **If you are a FREE user** and do not plan to purchase a subscription, or you MAY purchase a subscription at some later date ... **you should leave the field “blank”**. The system will assign you a “default” set of security settings with your “username” as the root context.
- d. **If you are a FREE user or a Subscription User AND you want to JOIN an existing Security Domain** ... AND you know the DOMAIN\_NAME/PASSWORD pair that has been provided to you by the owner of the Security Domain ( **Section 6.5** ), then you may enter that information in this block. In this case, the system will assign you your OWN default security domain (based on your Username) AND provide you access to the other Security Domain(s) you have added.

The Security Domains data block is “optional”.

**Skip ahead to Item #6 unless you are using Optional Security Domains.**



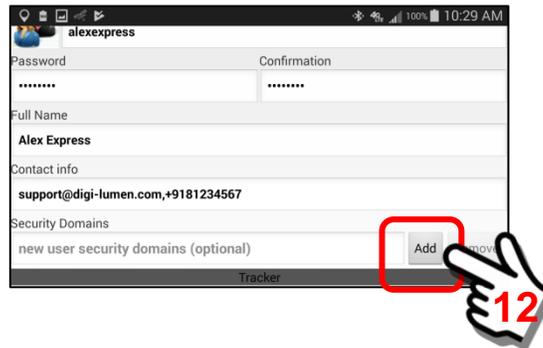
In this exercise, we will assume that we want to “Add” a security domain for a family member. When we add this security domain, it will be in addition to the “default” security domain that will be created by the system (using the Username you have chosen). See **Section 6.4 – 6.5** for additional details.

We will add the following:

**Read,Write:samexpress.family.travel.egypt**

This will be a Security Domain from **User = Sam Express** (samexpress).

To begin, click on the “Add” Button on the Registration Panel.



A Security Domain Structures panel will open that will enable a user to “search” for security domains of other users. These security domains may then be specified to be “added” to your list of available security domains.

In order to “add” a security domain of another user, there are three conditions that must be met.

#### **Device #1 (your device) and Device #2 (another user’s device)**

##### **Conditions to add a “personal” Security Domain of another User:**

1. The “other” user must be on the SAME data server instance.
2. Device #2 must have created a personal security domain.
3. User of Device #2 must provide the DOMAIN\_NAME / PASSWORD pair to YOU (ie Device #1) so your device may become part of their personal security domain.

Users may create multiple Security Domains to cover work, play, family, specific activities and so on. Users may have up to 100 security domains.

To add the security domain you will now need the DOMAIN\_NAME / PASSWORD pair for the user group you want to add.

**Domain Name:** samexpress.family.travel.egypt

**Password:** trip1234

The root element of “samexpress.family.travel.egypt” is “samexpress”.

Click on the “Enter a context of the root element” text area of the Security Domains Structures Panel.

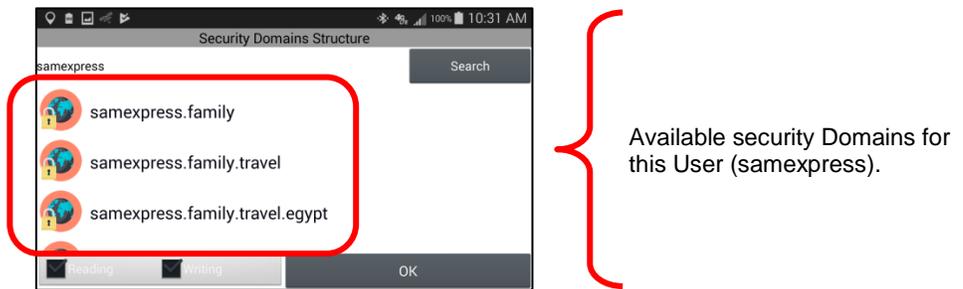


When “clicked” the on-screen keyboard will open. Enter the root element of the security domain ... **samexpress**.

When finished, click the **Search Button**.



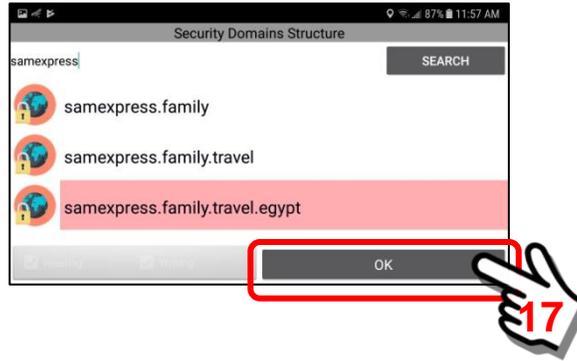
The system will search for ALL security domains with a root context of “samexpress”. In this example, we notice that 3+ items were retrieved.



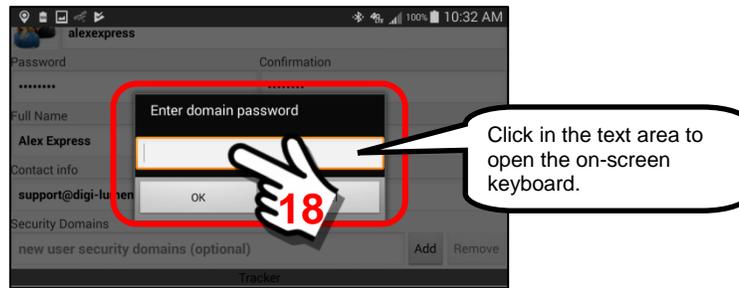
We are looking for ... **samexpress.family.travel.egypt** ... because this is the DOMAIN\_NAME that we have a password for. It will not work if we try to use one of the others.



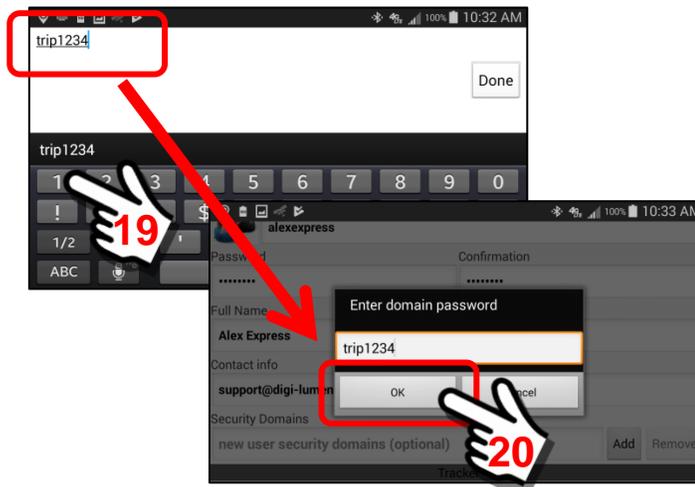
Select (click) on this item to activate the choice. Then click on the “OK” Button.



Now that you have selected the security domain that you want to add to your registration panel, the system will prompt for the password.

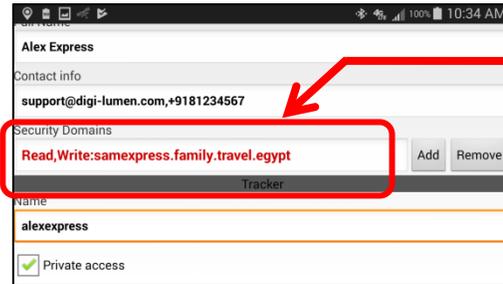


Enter the password for this security domain. This is the password that was provided to YOU by Sam Express, the owner of Device #2.



Click the “OK” Button to complete the transfer.

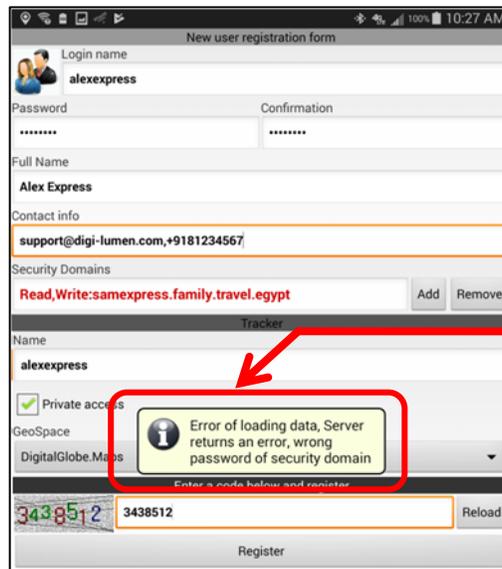
The Security Domain from User = Sam Express is now added to the Security Domains data field on the Registration Panel.



Security Domain for user "samexpress"

### Important Note:

**In the event you use an INCORRECT password, the Registration Form will fail with an error as shown below when you click the "Register" Button and the system processes the registration.**



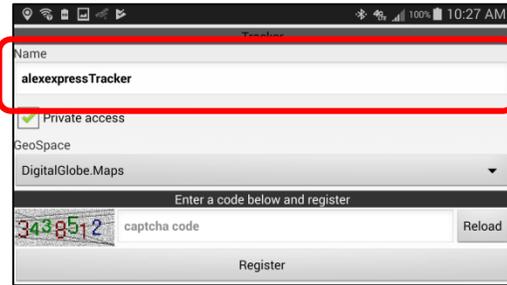
The FORM will not be processed if you have an incorrect password.

#### 6. Name (Tracker Name)

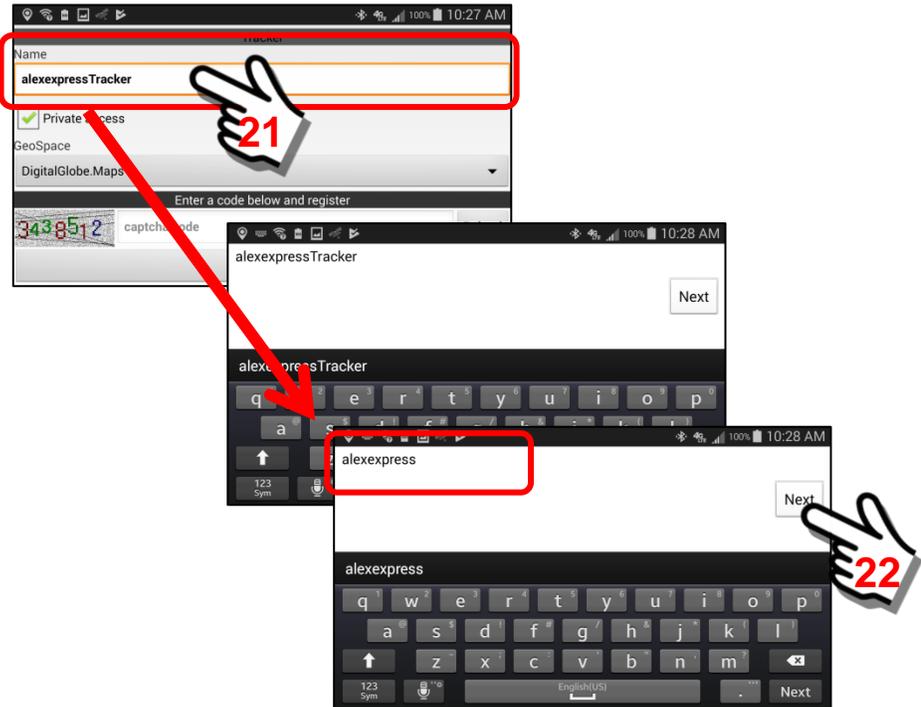
This will be the "name" that the GPS Tracker feature will use to identify a User. By default the system will append the word "Tracker" to the end of the Login name that you selected (Item #1 above). We would suggest you use the same name as you selected for a Login name ... however, you can use anything you want (alphanumeric characters only).

As shown in the following example, the Tracker Name will default to the entered Username + Tracker.

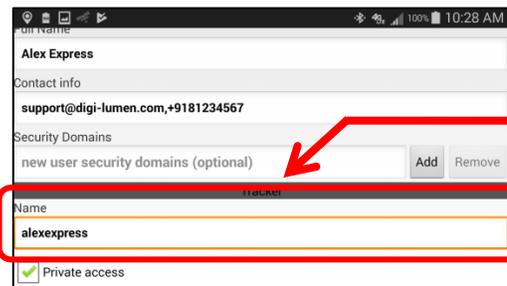
Default name = **alexexpressTracker**.



We will edit the Tracker Name and remove the “Tracker” part to leave just **alexexpress**. Click in the text field to open the on-screen keyboard.



We have now changed the **alexexpressTracker** name to **alexexpress**.



Tracker Name has been changed.

**7. Private access (checkbox)**

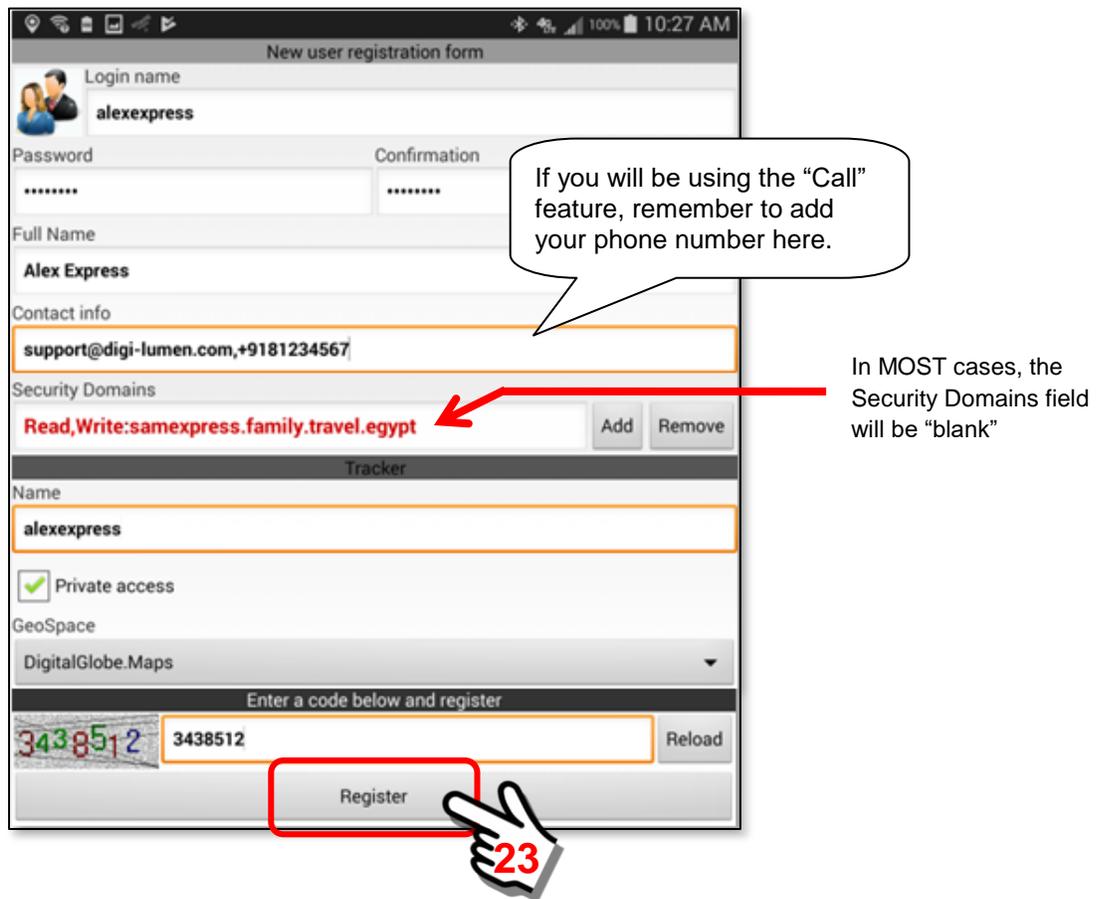
By default, the Private access checkbox IS CHECKED. Private access means that other Users CANNOT see you or interact WITH YOU unless the security domain settings specifically ALLOW them to see you.

For those users that have a Licensed Group, you WILL WANT to keep the Private access “checked” since the Account Administrator will have already set up the security domains for you.

**8. GeoSpace (selection drop-down box)**

By default, the DigitalGlobe.Maps GeoSpace is selected. This will work for most users that are located in all but a few regions of the world. The provider of satellite and high-resolution aerial imagery (MapBox or DigitalGlobe, Inc.) has most of the world covered. However, there are regions of the world where they do not have high resolution coverage. For this reason, we have a selection box where other imagery suppliers may be provided (or are available).

Once all of the data fields are filled out, your form should look something like this.

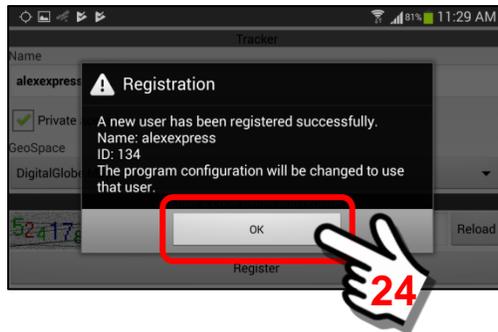


**Finally, click on the “Register” Button.**

When the “Register” Button is clicked, the mobile device will contact the SentryMDU Data Server and set up an account for you. You will need to have either a cellular or WiFi connection such that the mobile device can contact the SentryMDU Data Server network. This may take 10 – 20 seconds to complete. This account will set the security profile for you as a User of the SentryMDU System and will register your “device” as an authorized device.

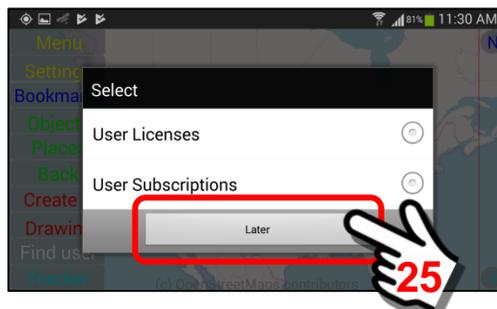


Once the “registration” is successful, you will get a message stating that an account has been created for you on the network and that your security profile has been changed from Anonymous to a registered user (in this example, alexexpress).

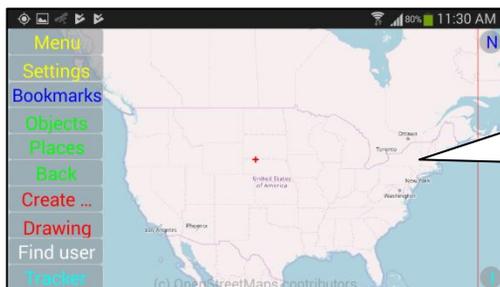


Once the “OK” Button is clicked, the screen will return to the Main Menu Screen. A pop-up box will be displayed allowing you to select either a *User License* or *User Subscription*.

For this example, we will NOT be selecting either a Subscription or User License. Click on the “Later” Button.



The Main Map Screen will look similar to the following. The default Map View uses the OpenStreetMaps data to display a roads/street map view.



The GPS location of YOUR device is not shown on the Main Map Screen.

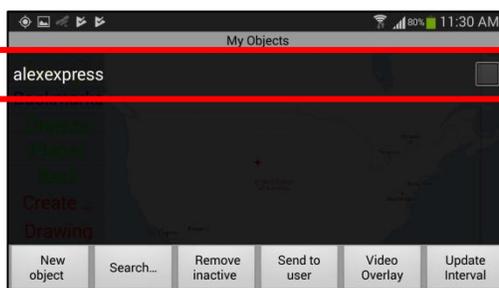
You have now “registered” but your location is not displayed on the map screen until you tell the mobile device that you would like to display your own location. In typical use, since you know where YOU ARE ... you may choose not to display YOUR location and only display the GPS location of other Users in the network.

In this example, we will turn on the GPS location (mobile object marker) of your mobile device. **Section 10.5** of this User Manual will cover this feature in detail, but for now, we will just turn on the Mobile Object Marker.

Click on the **Objects Button**.



The “My Objects” Panel will be displayed. Since you have only created YOURSELF as a User ... and have not imported other users from your Security Domain, your mobile device will be the only device in the list.

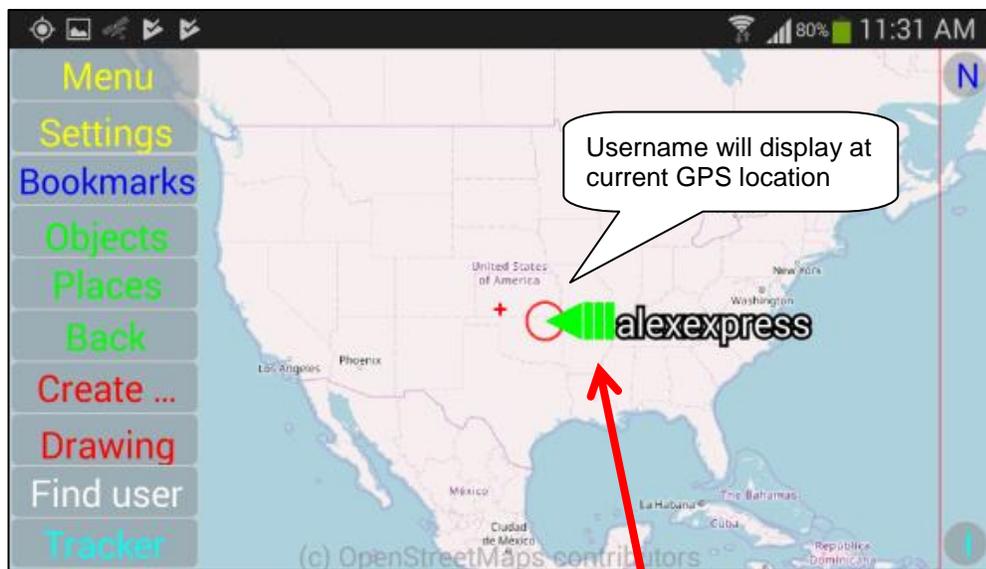


By default, this box is NOT checked during the install process.

In this example, you are the user Alex Express (username = alexexpress). When the “checkbox” is not checked, the user will NOT be displayed on the Map Screen. To illustrate this feature, we will put a “checkmark” in the checkbox to activate this user. Click on the checkbox. Return to the Main Map Screen.



As a “registered” User, the device will now display your Username at the GPS coordinates of your current location. You may need to zoom in/out to find your location (depending on where you are located in the world).



See Section 4.4, Item #13 for an explanation of these color codes.

## Note:

You have now REGISTERED ... **but you have NOT COMPLETED CONFIGURATION.** See Sections 3.14 and 5.4 for additional settings that you will need to make. This is important if your device is to provide a good user experience and to perform optimally (ie audio/video streaming, map images, etc.) for your specific hardware.

Your next step is to decide if you would like to also have access to satellite imagery. Some examples are shown below.



### 3.6. Using the SentryMDU App for FREE.

#### **The SentryMDU App is free to use:**

The SentryMDU App is free to download and install on your mobile device ... or 10 mobile devices ... or as many as you want (your whole family).

We do not have a "Trial" Version or a "Lite" Version with a reduced feature set. We have one version. The same for everyone. Whether you are a commercial entity with 10,000 users running your own Licensed Data Server or a "freebie" user with a group of two, you are both running the same SentryMDU App.

#### ***The primary difference between free and paid is this .....***

**We have to pay for the use of satellite imagery**, so we cannot just give it away for free (we are NOT supported by advertising and do not sell your data).

As a freebie user, **you get OpenStreetMaps map data** (Open Source) which is "street maps" and not satellite imagery. We can do this because we run our own OpenStreetMaps Servers and don't have to pay someone else to do it for us.

Freebie users **do not get disk storage** to store your audio/video files on OUR Data Server (you can still store it on your own mobile device).

Freebie users **cannot live stream broadcast through our Data Server** and consume bandwidth (most free users would not use this feature anyway).

#### **Using the SentryMDU App for free does NOT obligate you to purchase a Subscription or License the software later.**

If you are happy with the OpenStreetMaps type screens and don't need streaming or disk storage ... then staying a "freebie" will probably work for you. As explained above, the most noticeable thing you get with a paid subscription (or License) is the multi-zoom levels of beautiful satellite imagery.

#### **What we hope you will do:**

If you are a "Free" user, we hope you will enjoy the SentryMDU software, get some benefit out of it and tell your friends about it.

Eventually, we hope you will see the value to spending a few cents per day, in order to get access to the high resolution satellite imagery, disk storage space and the use of streaming resources through our Data Server.

Enjoy the ride!

### 3.7. Registration on a Licensed Server (using a License Key)

#### Licensing Process Overview:

When an organization “licenses” a SentryMDU System (Data Server and Desktop Client), this means they have signed a software agreement with us to license the use of the SentryMDU software for a specific period of time (ie Annual Contract). This software license enables the organization to use/install a dedicated SentryMDU Data Server instance exclusively for their own organization use. They may choose to provide and host their own hardware (for security and control reasons) or contract with third-party hosting companies to manage the resources.

As explained in Section 2, the SentryMDU System is comprised of 3 layers of technology. For full access to ALL available features it is necessary that all three technology layers are in control by the User (or User Group).

When a SentryMDU Data Server is licensed, DLT will provide an **Installation Guide** to the customer for software installation and configuration. Part of the configuration process will include the following:

- 1) Create a security domain hierarchy for the organization.
- 2) Identify the roles/responsibilities of User job classifications that will be linked to Security Domain access rights.
- 3) Create License Number / Access Key pairs to be used during User Registration.

#### Member of a Licensed Group:

The configuration of a licensed SentryMDU Data Server includes setting up several “temporary” User License Access Keys for that server instance. This License Access Key is usually maintained by the IT Department of the organization. As a User reading this document, you only need to know that someone in your IT Department will provide you with the License Access Key and other information you will use.

The purpose of the License Key is to make it very easy for “new” users in the organization to register. All of the Security Domain, job classification and access/control settings have been pre-determined by the Organization’s IT Department.

To register as a “new” user with a **License Number / License Access Key**, a user will need four (4) pieces of information:

- 1) An “Anonymous User” **initial registration password** for your Server Instance.
- 2) The **License Number** that has been given to the Job Classification for this User.
- 3) The temporary **License Access Key** that will be provided to the User for registration during a specific period of time.
- 4) The **Domain Name** (or IP Address) for your SentryMDU Licensed Server Instance.

## Licensed User Registration Overview:

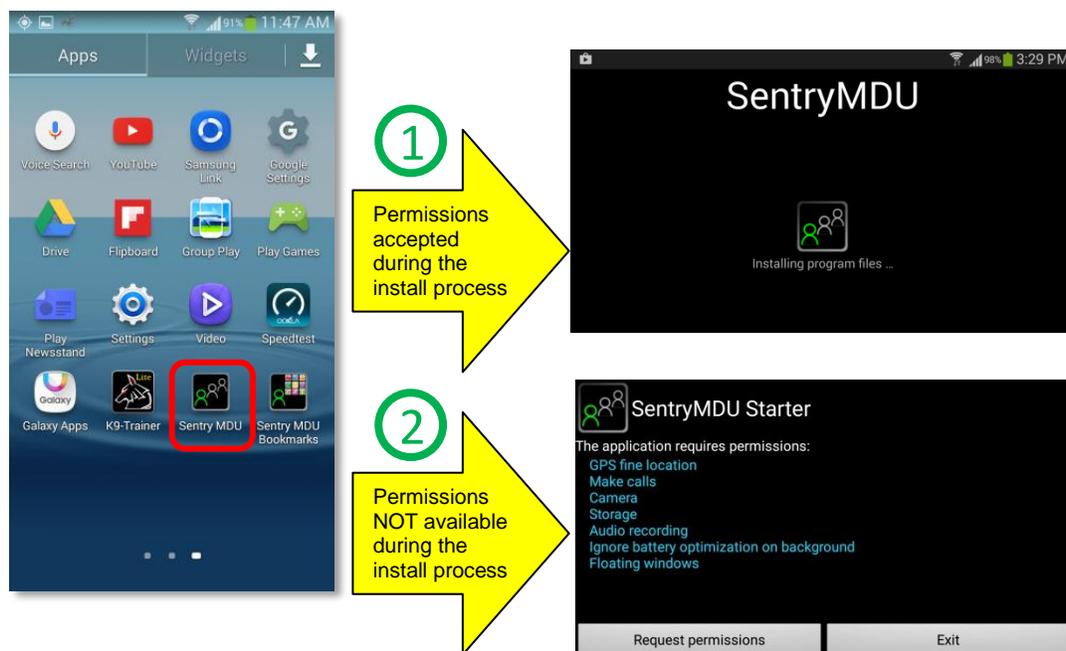
The SentryMDU installation and registration is straight forward. **Registration is FREE and does not obligate you to spend any money.** A User will perform the following steps:

- 1) Contact your Organization's Administrative Person and get the 4 pieces of information mentioned above, that will be needed for registration.
- 2) Go to the DLT or SentryMDU website and download the App.
- 3) Select to "Install" the SentryMDU App on your device.
- 4) If presented, accept required Access Permissions.
- 5) After the App is installed, return to your screen menu items and locate the SentryMDU Icon.
- 6) Launch the SentryMDU App on your device.
- 7) If App Permissions were not available and "Accepted" during the install process, accept them now (SentryMDU Starter Panel).
- 8) Agree to the EULA (End User License Agreement).
- 9) Agree to the Privacy Policy.
- 10) The SentryMDU App will now install on your device.
- 11) Enter your Licensed Server address into the Main Configuration Panel.
- 12) Enter the "Anonymous" user password for your Licensed Server.
- 13) Complete registration with a "new" Username and Password.
- 14) Enter your License Number / License Access Key.
- 15) You are done!

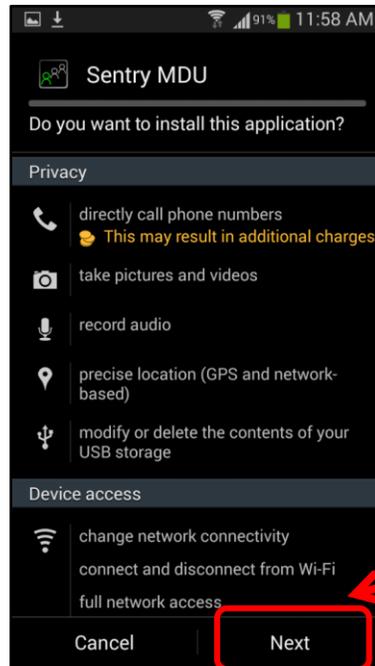
## Review of App Installation Steps:

Once the SentryMDU App is downloaded and installed on your device, the system will install two (2) SentryMDU icons on your Apps Panel.

Click the SentryMDU Icon to launch the App for the "first time" and begin the installation process. The system may display one of two different panels as shown below.



Over the last several years the evolution of the Android Operating System has placed increased emphasis on security and privacy. This evolution affects the way User Permissions are handled on a device. For example, older model cell phones may display the “permission” settings for an App as part of the installation process, as shown below.



Older generation mobile devices typically display “App Permissions” requirements during the install process.

Users may review permissions here.

Depending on the Manufacturer, Model and installed Android version of your device, the way that App Permissions are handled may be different. If you are not shown (and do not “Accept”) the App permissions at the “install” level then the SentryMDU app installation process will include a set of screens that cycle through the permission requirements for this App when you first “launch” the App.

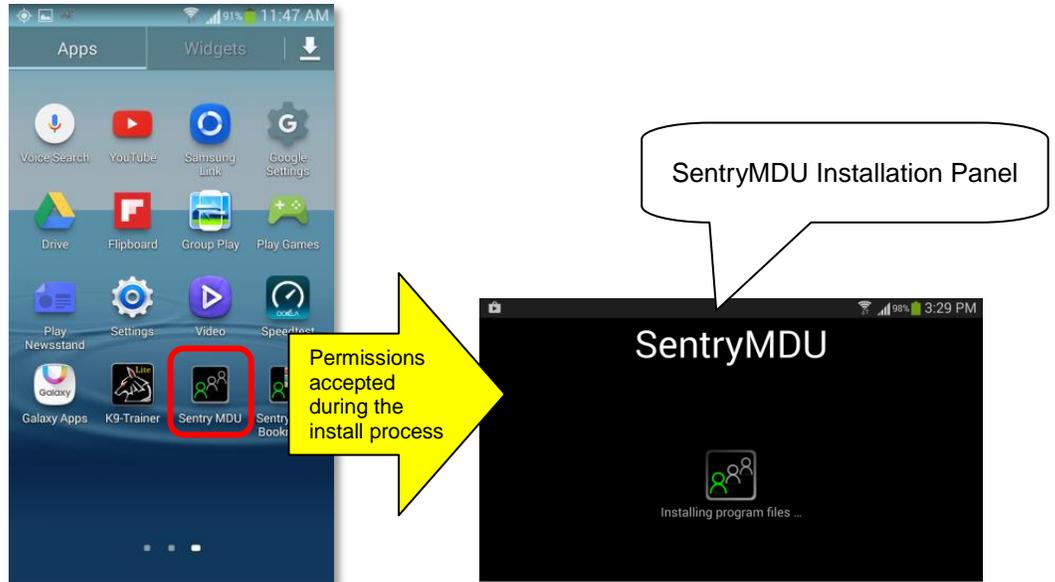
**Important Note:** For the SentryMDU App to function properly, ALL required permissions MUST BE ACCEPTED. You can not select some and not others. We use the “All or Nothing” approach. The SentryMDU App will not install until all necessary permissions are satisfied.

For example, assume you are going to use the “Motion Detection” features of the App to monitor a remote mobile device using the Camera as a remote surveillance camera. The system would need “network” permissions (Cellular or WiFi), “Camera” (to send video), “Microphone” (to monitor audio), “Location/GPS” (where is it), “Notification” (to notify you that a motion detection event had occurred) and so on.

For a full listing of the access required by the SentryMDU System, review the “Permissions” section for the App on the DLT or SentryMDU website.

**Scenario #1: Permissions approved during App installation**

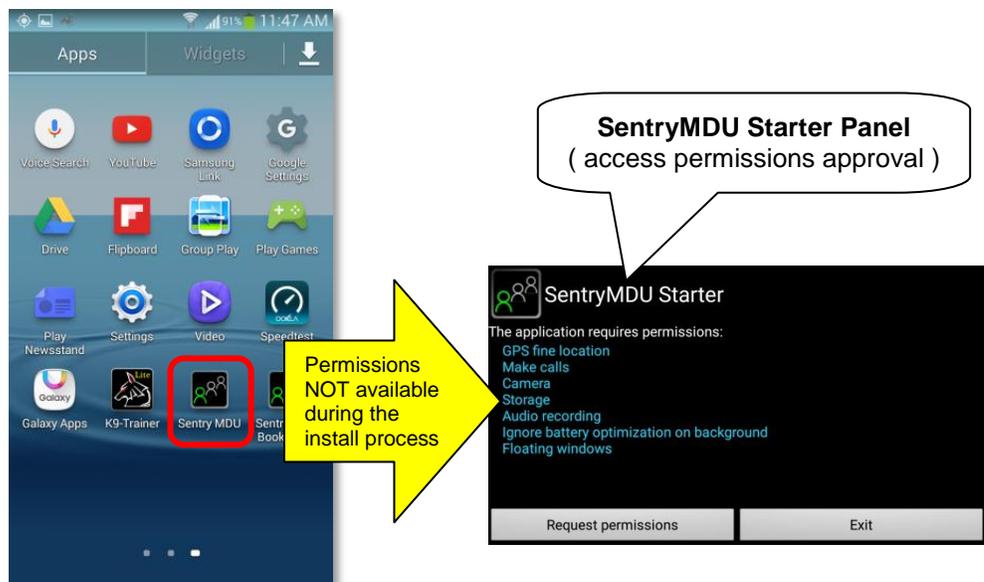
If you are using a device where the permissions list was presented when you installed the App (as shown in previous picture) ... when you launch the App for the first time, you will jump directly to the **SentryMDU Installation Panel**.



**Important Note:** Depending on the age and Android version of your mobile device, the time period for installing the program files may vary from 5 seconds ... up to 5 minutes. For example, a new Samsung S22 smartphone only takes a few seconds, where an older Samsung S9 may take several minutes. **Be patient.**

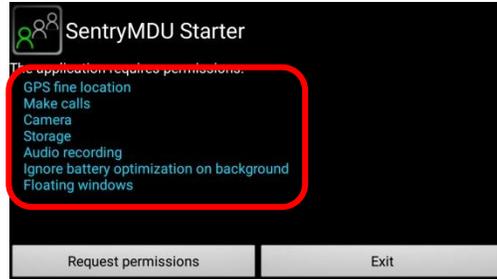
**Scenario #2: Permissions NOT accepted during the install process**

If you are using a device where the permissions list was NOT presented when you installed the App ... then you will be presented with a **SentryMDU Starter Screen** where the required permissions will be presented to you ... and you will need to “approve” them one-by-one. The SentryMDU Installation Panel will be displayed AFTER the permissions are approved.



### 1. **The SentryMDU Starter Screen**

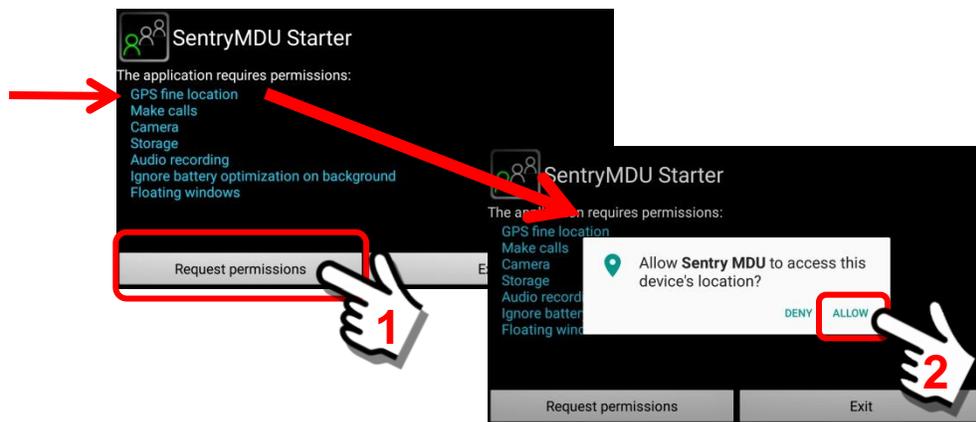
If the App Permissions are NOT set during download, they MUST be set before SentryMDU program files are installed. The SentryMDU Starter Panel is a feature that will ensure that the required permissions are set.



The SentryMDU System will NOT install unless all permissions on the list are approved.

### 2. **The “GPS fine location” permission setting.**

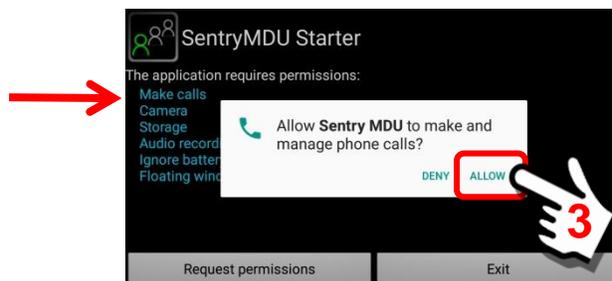
Click the “Request permissions” Button to begin the review process.



### 3. **The “Make Calls” permission setting.**

As you select and click the “ALLOW” Option on each permissions panel, the screen will advance to the next permission option.

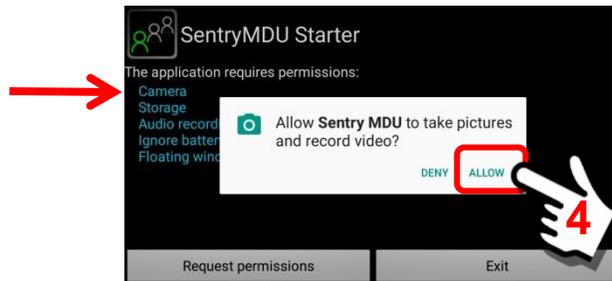
Click “Allow” on the Make Calls Panel (make and manage phone calls).



**4. The “Camera” permission setting.**

As you select and click the “ALLOW” Option on each permissions panel, the screen will advance to the next permission option.

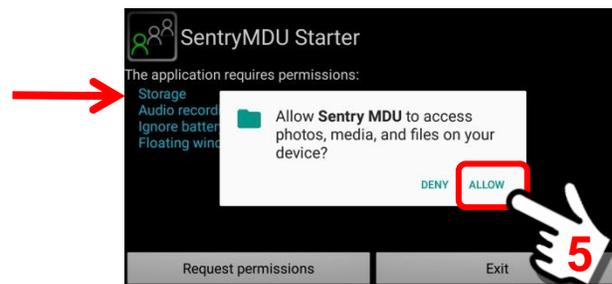
Click “Allow” on the Camera Panel (take pictures and record video).



**5. The “Storage” permission setting.**

As you select and click the “ALLOW” Option on each permissions panel, the screen will advance to the next permission option.

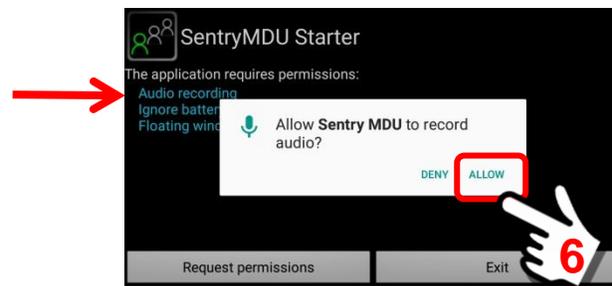
Click “Allow” on the Storage Panel (access photos, media and files).



**6. The “Audio Recording” permission setting.**

As you select and click the “ALLOW” Option on each permissions panel, the screen will advance to the next permission option.

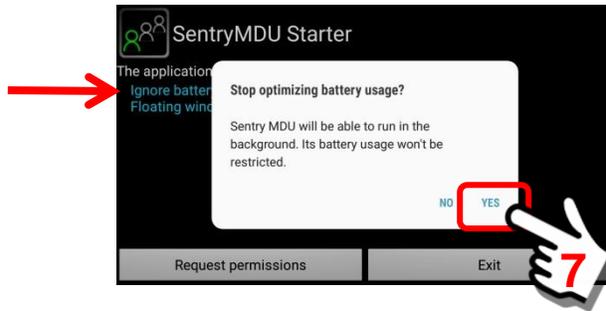
Click “Allow” on the Audio Recording Panel (to record audio).



**7. The “Battery Optimization” permission setting.**

As you select and click the “ALLOW” Option on each permissions panel, the screen will advance to the next permission option.

Click “Allow” on the Battery Optimization Panel.



The **Battery Optimization** “permission” may (or may not) be available on your device. This is a relatively “new” feature of the Android operating system that puts some Apps to “sleep” when not used for long periods of time. The objective is to reduce battery drain when the device is in hibernation or standby mode.

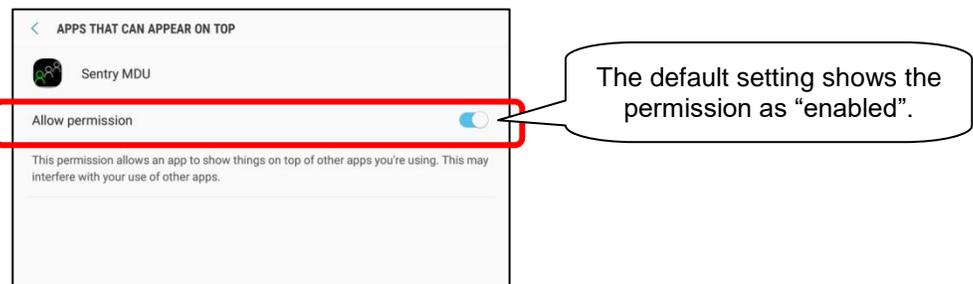
In order for the SentryMDU App to continue receiving notifications and to report GPS location, it is necessary that this optimization feature be “turned off” for the SentryMDU App. We are giving permission that the SentryMDU App can still operate, even when the device is in “standby mode”.

**8. The “Floating Window” permission setting.**

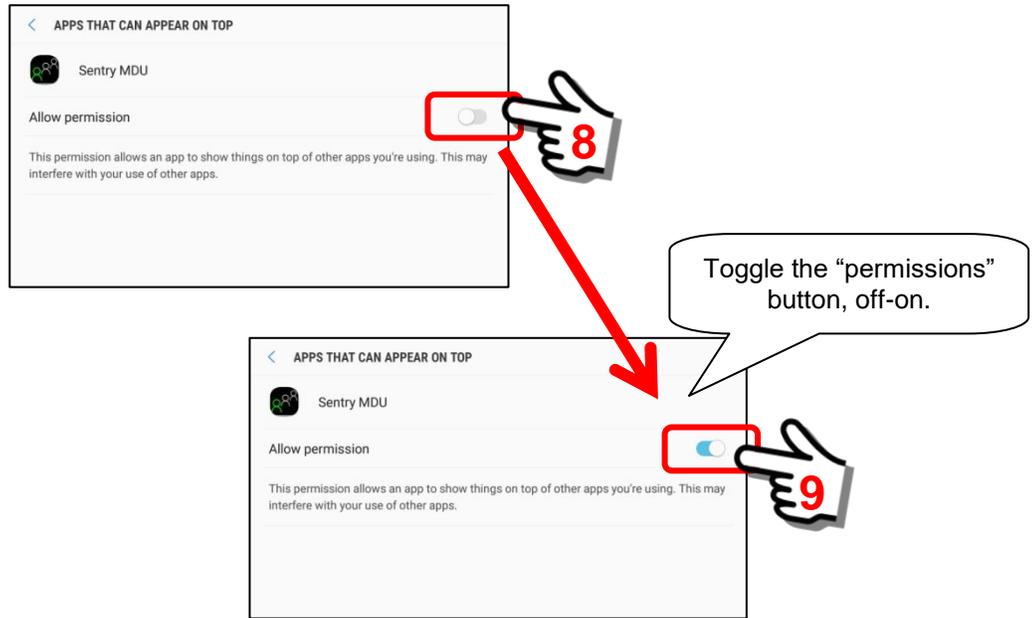
The final permissions setting is to allow the SentryMDU App to create re-sizable “Floating Windows” that will display on top of the display screens of other Apps. This requires a unique approval process.

When the “Floating Window” item is reached ... the system will retrieve the permission panel from the mobile device (not from within the SentryMDU code). If you want to learn about Floating Windows, see **Section 9.13**.

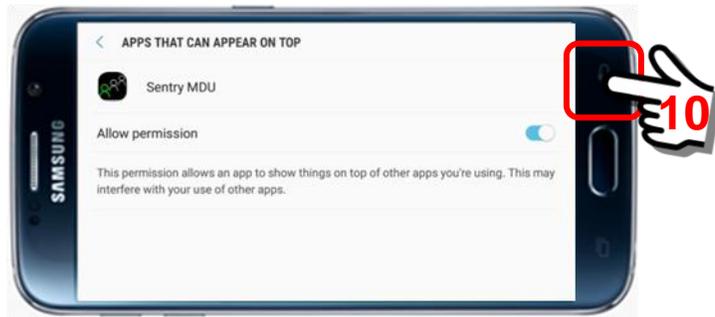
The example shown below is from a smartphone running Android Ver7. Yours may look a bit different. As you can see below, when displayed, it appears that the permission is already set to “Allow permission”.



However, for the SentryMDU App to access the permissions “setting” you must **toggle the permissions setting “off – on”**. This will force the device to recognize SentryMDU as an authorized App.



When finished, click the “Back” Button. The system will now display the SentryMDU Program Installation Panel and continue with installation.

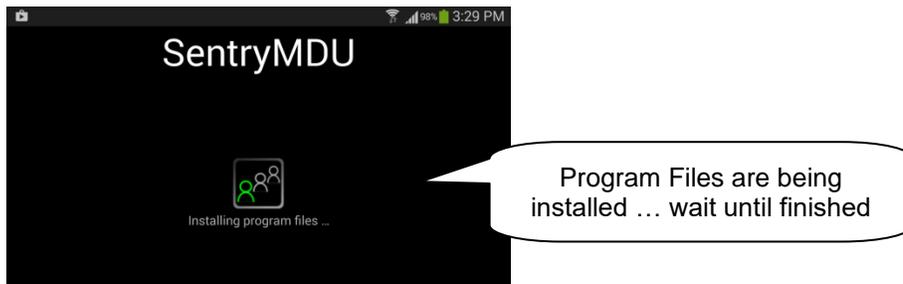


Permissions are now complete.

## Review of Registration Steps for a Licensed User:

The following screens will be displayed during the installation and registration process.

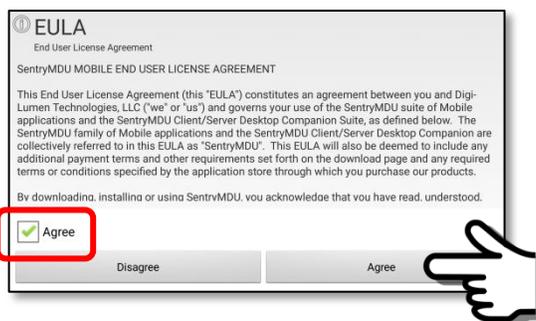
The *SentryMDU Program Installation Panel* will be displayed while the App is being configured and the file structure created.



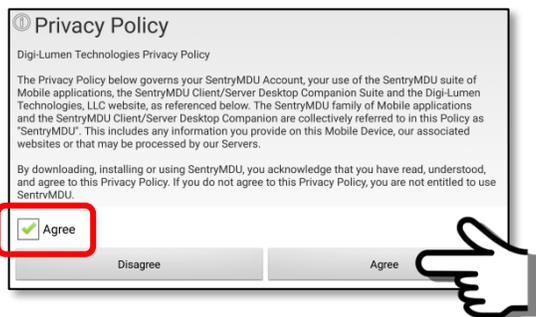
**Important Note:** Depending on the age and Android version of your mobile device, the time period for installing the program files may vary from 5 seconds ... up to 5 minutes.

For example, a Samsung S22 smartphone only takes a few seconds, where an older Samsung S9 may take several minutes. **Be patient.**

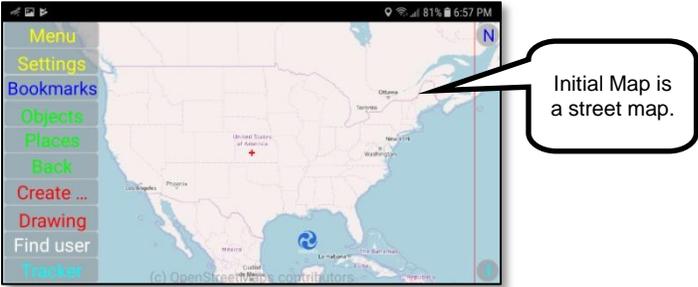
## Accept the End User License Agreement (EULA)



## Accept the Privacy Policy



After initial installation, the Main Map screen displays a “Street Map” (using OpenStreetMap data) and not a satellite image.



At this stage in the Registration Process you are still an “Anonymous” User. You have NOT yet selected or been assigned to a Security Domain.

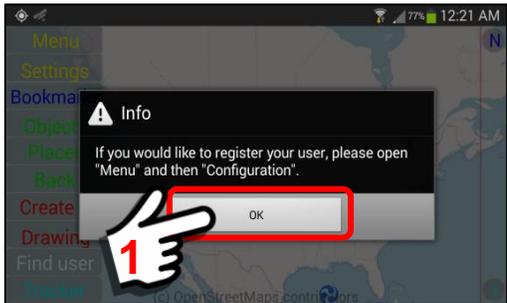
In this example, we are going to illustrate the screens that will be displayed during the User Licensing Process when you sign up with a Licensed Server.

**1. Starting at the Main Map Screen**

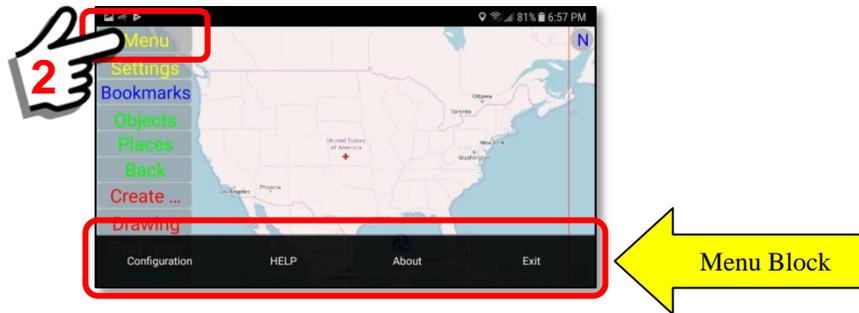
Once the SentryMDU program files have been installed and the EULA executed, a Main Menu screen will be displayed. This is the SentryMDU Main Screen. The “default” map image will be a Road Map View of the North American Continent (USA, Canada, Mexico).



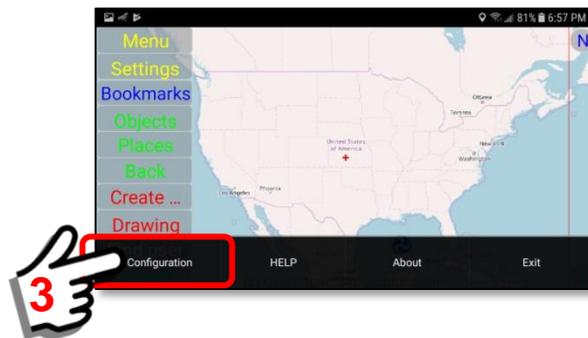
A pop-up message will remind you to continue with device Configuration.



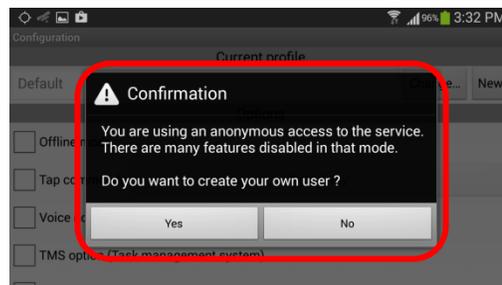
To continue with the registration process, click on the MENU button in the upper left hand side of the screen. A Menu block will now appear at the bottom of the page.



Select the “Configuration” Button from the Menu Block.



As the Configuration screen begins to display, a “pop-up” box appears and explains that prior to registration you will ONLY have Anonymous user access to many of the features.



In order to have access to the Licensed Server, **you will need to register as a User on that server instance.** The registration process creates an “account” for you on the Licensed Data Server, identifies the mobile device, and implements a security profile for that has been pre-selected for you by your Organization’s IT Department. **Registration is free.**

**BEFORE** we create a new user on the Licensed Server we must **SELECT** the licensed server that we want to use.

## 2. Change the Server Address on the Main Configuration Panel

Since we need to CHANGE the default registration server address to the Licensed Server that we will be using, we need to edit the Main Configuration Panel and enter the Domain Name (or IP address) of our Licensed Server.

Licensed Servers will generally fall into two categories:

- a. Servers administered by DLT within OUR server network.
- b. Customer owned/operated servers NOT within our network.

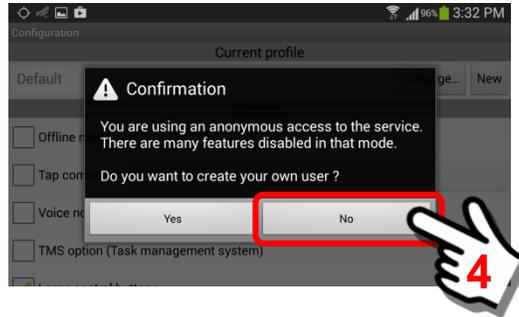
**This section will cover BOTH of these options (option "a" is preferred).**

An example of the Main Configuration Panel is shown below.

The screenshot displays the 'Configuration' screen with the 'User agent configuration' section highlighted. A red box labeled '1' encloses the 'Server address' field, which contains 'server.sentrymdu.com'. A red arrow points from this box to the text 'We will change this default server address to the Licensed Server address'. Below this, another red box labeled '2' encloses the 'Tracker Server Address' field, also containing 'server.sentrymdu.com'. A red arrow points from this box to the text 'We will change this default server address to the Licensed Server address'. The 'Options' section includes checkboxes for 'Offline mode', 'Tap commands', 'Voice notifications', 'TMS option', 'Large control buttons', 'Hide tracker', 'Keep screen on', and 'Show Quit item of menu'. The 'Tracker configuration' section includes fields for 'Tracker alias', 'Tracker object ID', 'Tracker Server Address', 'Tracker port', 'Tracker transmission interval', 'Tracker location reading interval', and 'Map for POIs'. There are also checkboxes for 'Server connection', 'Save tracker history', and 'Keep Wi-Fi hotspot server on'.

To start this change process, click the “No” Button. We do not want to create a new user just yet ... we first need to change the Server Address.

Click the “No” Button on the pop-up Confirmation Panel.



**a. Servers administered by DLT within OUR server network**

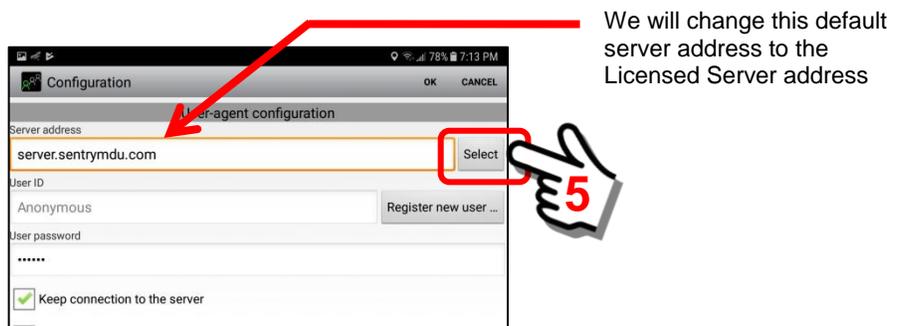
Servers within the SentryMDU System network will be available via a drop-down menu located on the Main Configuration Panel.

We will now use one of the four pieces of licensing information provided to us by our organization.

- 1) An “Anonymous User” **initial registration password** for your Server Instance.
- 2) The **License Number** that has been given to the Job Classification for this User.
- 3) The temporary **License Access Key** that will be provided to the User for registration during a specific period of time.
- 4) The **Domain Name** (or IP Address) for your SentryMDU Licensed Server Instance.

We will use the name of the Licensed Server Instance (or Domain Name). In this example, the Licensed Server name is **USA Server – Oklahoma**.

To see the available DLT Servers, click on the “Select” Button.

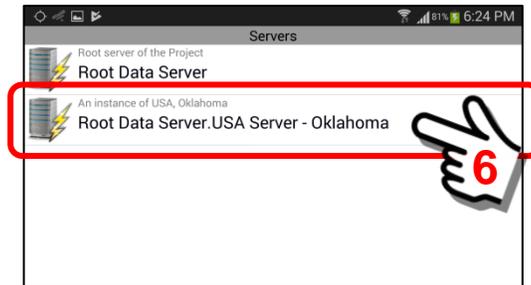


A listing of available DLT Data Servers is shown.

In the server list, two dedicated License Servers are shown. In this exercise, we will select the 2<sup>nd</sup> License Server (USA Server – Oklahoma). If your Organization has been assigned a DLT Licensed Server, this is where you would select your specific server instance.

**Important Note:** You CANNOT just pick a server from the list to use. It must be a server that your organization has “licensed” and that you have a password to access (the next step).

Click on the Server name.

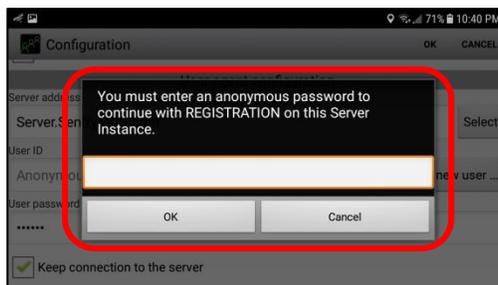


Since we are changing from the “default” DLT Registration Server to a Data Server dedicated to YOUR organization, you will need to enter an “Anonymous User” PASSWORD to be able to connect to this “new” server instance. Your organization may change this Anonymous User password on a periodic basis so you will need to make sure this is the current “active” password for your server instance.

We will now use another of the four pieces of licensing information provided to us by our organization.

- 1) An “Anonymous User” **initial registration password** for your Server Instance.
- 2) The **License Number** that has been given to the Job Classification for this User.
- 3) The temporary **License Access Key** that will be provided to the User for registration during a specific period of time.
- 4) The **Domain Name** (or IP Address) for your SentryMDU Licensed Server Instance.

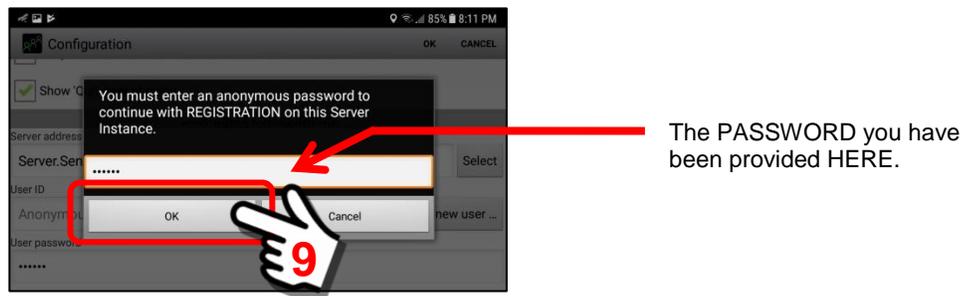
A pop-up panel will appear.



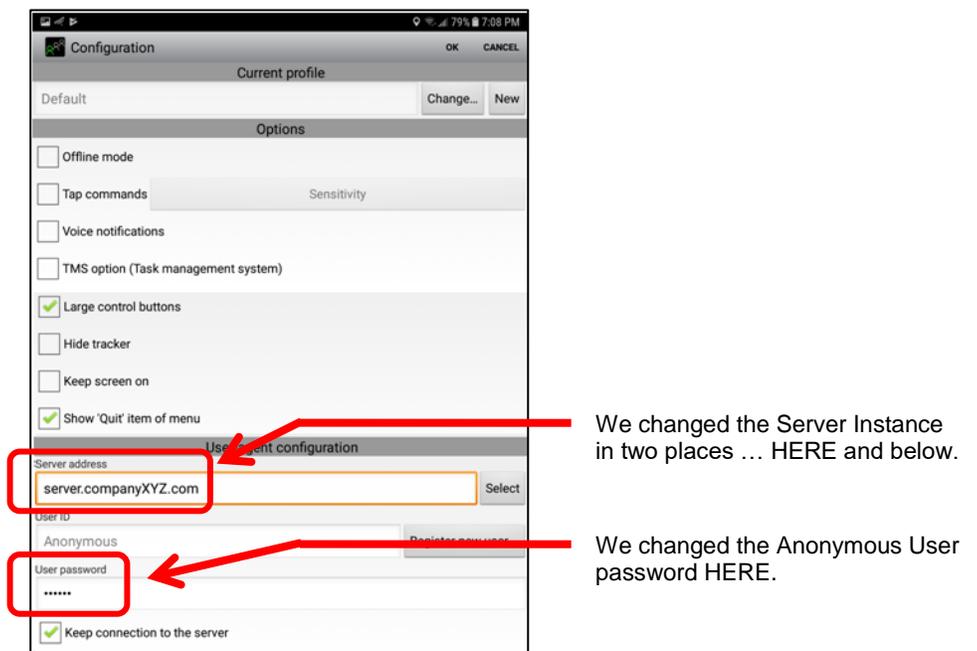
Click inside the data entry box. An on-screen keyboard will appear.  
Enter the "Anonymous User" password here.



Click the "Back" Button on your phone to return to the pop-up box.  
When finished, click the "OK" Button to continue.

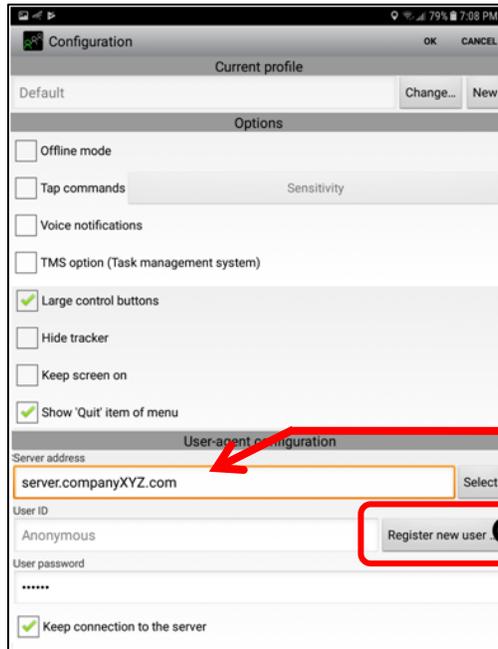


You will be returned to the Main Configuration Panel.



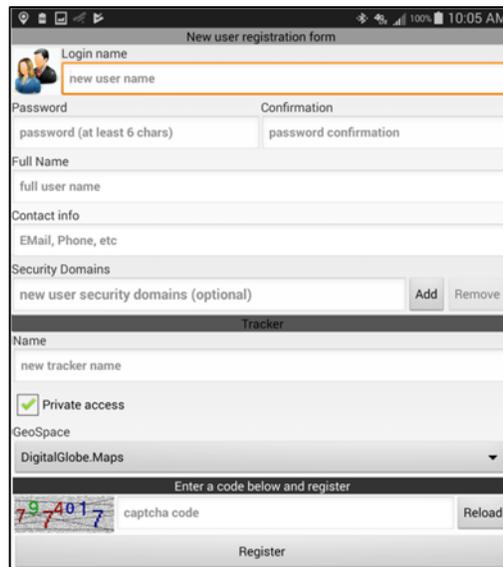
The next step is to change from an “Anonymous User” to an authorized REGISTERED user with a Username/Password combination. This will allow the creation of Security Domains on this Licensed Server instance.

To register as a “new” user, Click the “**Register new user ...**” Button on the Main Configuration Panel.



We will be registering on YOUR organization's Licensed Server.

By clicking on the “**Register new user ...**” button, the “New user registration form” will be presented. Depending on the type of device you are using (phone or tablet), as you touch one of the data entry boxes, the device will show a screen “keyboard” so you can enter the required text.



## NOTE:

**Registration is required to become a User on a Licensed Data Server.**

**b. Customer owned/operated servers NOT within our network.**

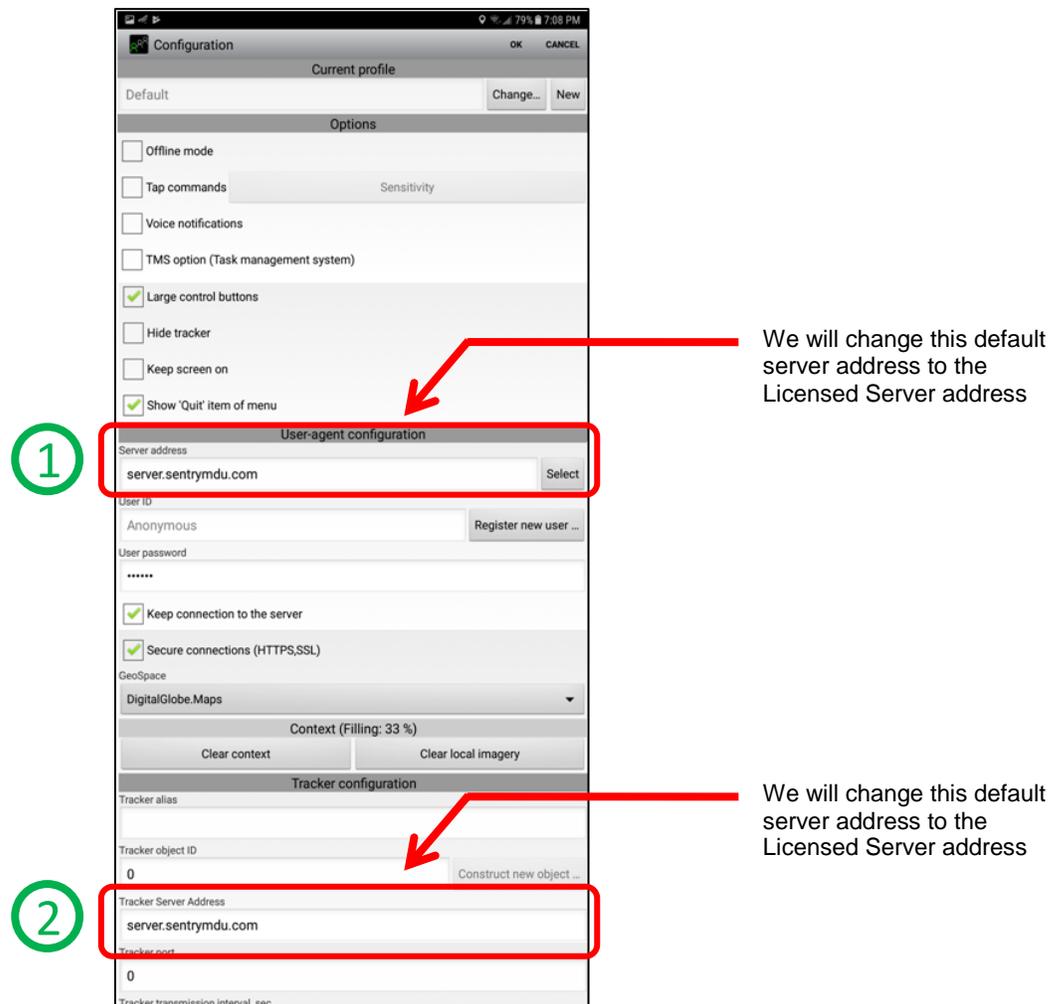
Servers NOT within the SentryMDU System network will need to be manually entered on the Main Configuration Panel.

We will now use one of the four pieces of licensing information provided to us by our organization.

- 1) An "Anonymous User" **initial registration password** for your Server Instance.
- 2) The **License Number** that has been given to the Job Classification for this User.
- 3) The temporary **License Access Key** that will be provided to the User for registration during a specific period of time.
- 4) The **Domain Name** (or IP Address) for your SentryMDU Licensed Server Instance.

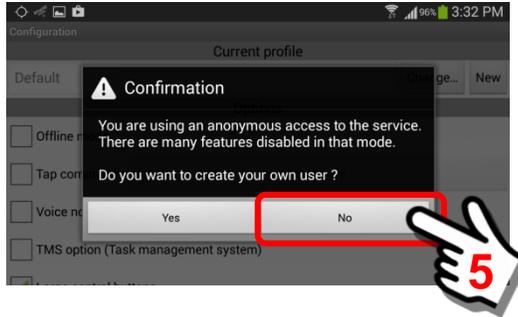
We will use the name of the Licensed Server Instance (or Domain Name). In this example, the Licensed Server name is **server.companyXYZ.com**.

An example of the Main Configuration Panel is shown below.

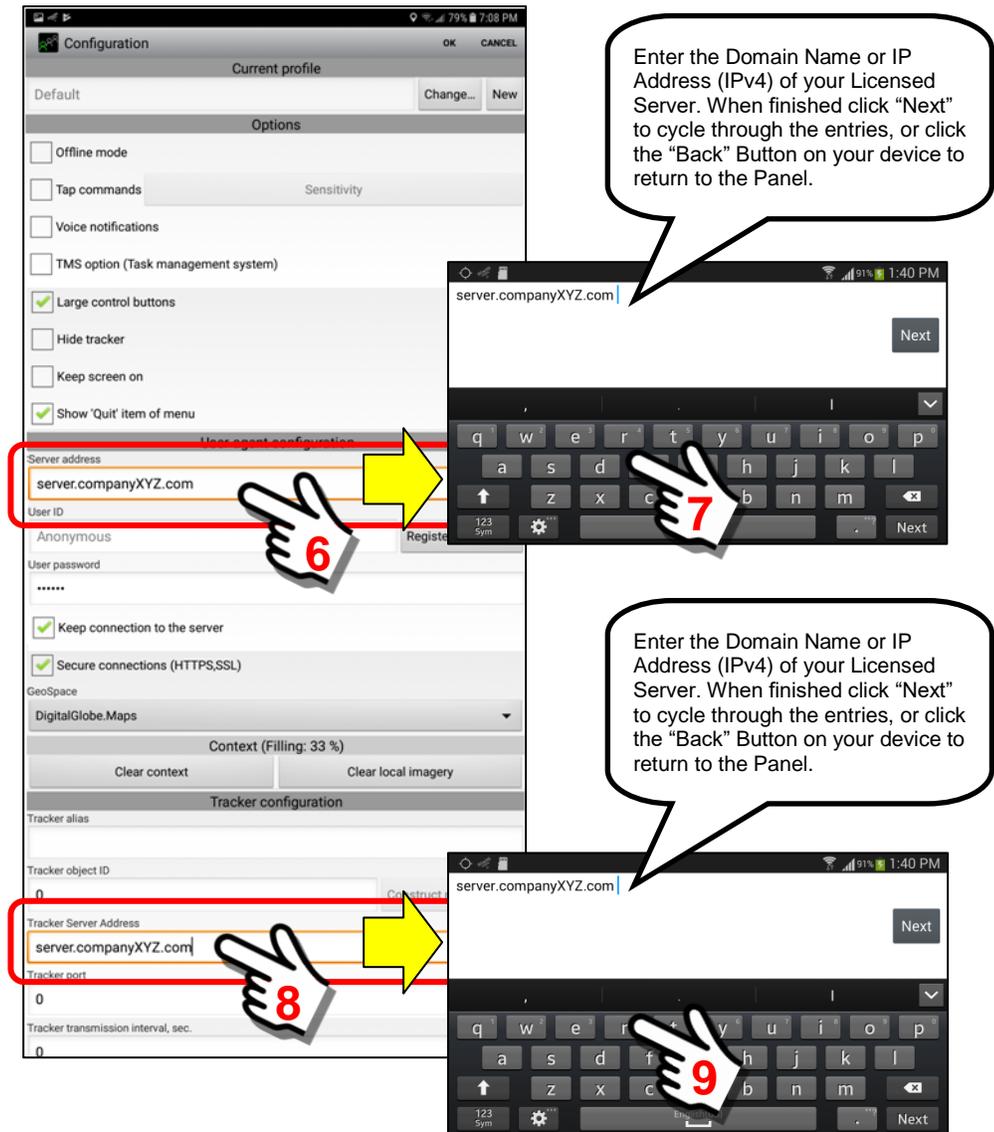


To start this change process, click the “No” Button. We do not want to create a new user just yet ... we first need to change the Server Address.

Click the “No” Button on the pop-up Confirmation Panel.



The Main Configuration Panel is displayed. Click inside the data fields. As you touch one of the data entry boxes, the device will show a screen “keyboard” so you can enter the required Domain Name or IP Address.



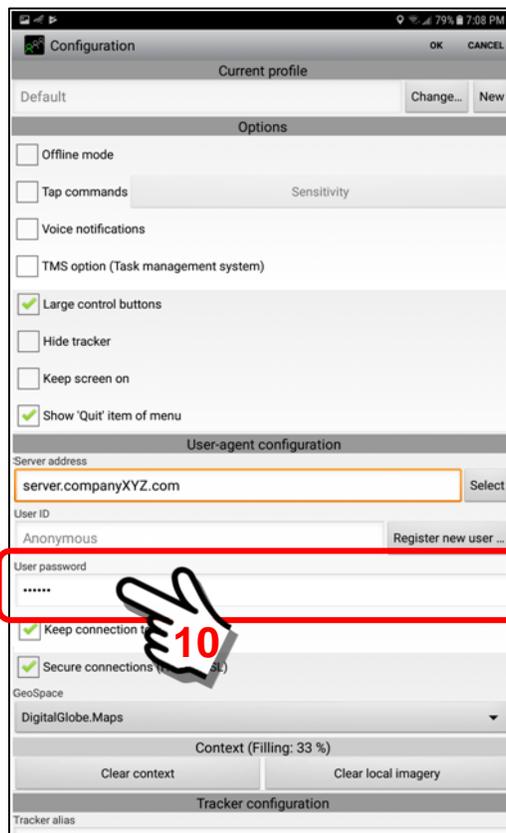
**Important Note:** Make sure that **BOTH** entries are to the **SAME Licensed Server**. If not, your registration will fail.

Since we are changing from the “default” DLT Registration Server to a Data Server (**server.companyXYZ.com**) dedicated to YOUR organization, you will need to enter an “Anonymous User” **PASSWORD** to be able to connect to this “new” server instance. Your organization may change this Anonymous User password on a periodic basis so you will need to make sure this is the current “active” password for your server instance.

We will now use another of the four pieces of licensing information provided to us by our organization.

- 1) An “Anonymous User” **initial registration password** for your Server Instance.
- 2) The **License Number** that has been given to the Job Classification for this User.
- 3) The temporary **License Access Key** that will be provided to the User for registration during a specific period of time.
- 4) The **Domain Name** (or IP Address) for your SentryMDU Licensed Server Instance.

While still at the Main Configuration Panel, change the password for the Anonymous user. Click on the “Password” data field.

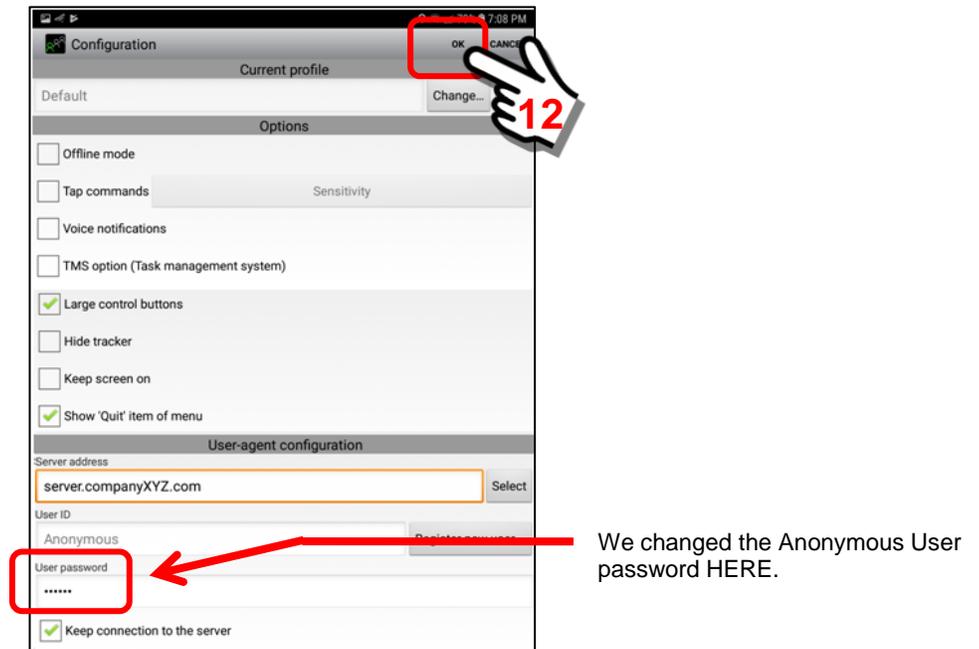


Change the Anonymous User password to that provided by your organization.

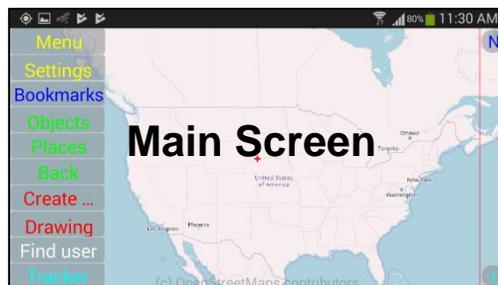


Click the "Back" Button on your mobile device to return to the Main Configuration Panel. Once back at the Main Configuration Panel, you must **SAVE this new configuration**.

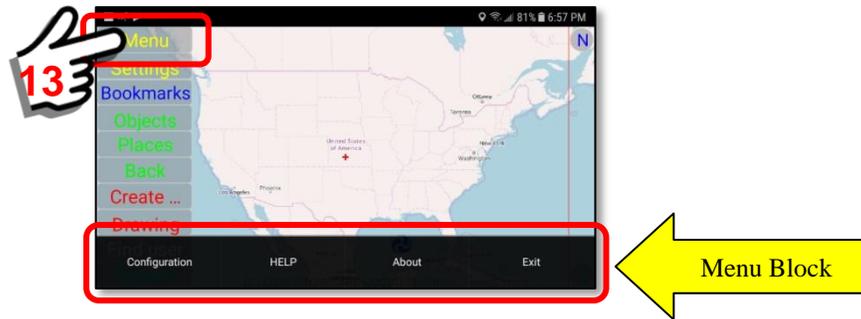
Click on the "OK" Button.



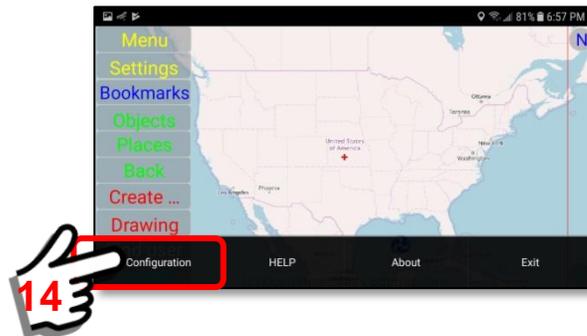
You will be returned to the Main Map Screen.



To continue with the registration process, click on the MENU button in the upper left hand side of the screen. A Menu block will now appear at the bottom of the page.



Select the "Configuration" Button from the Menu Block.



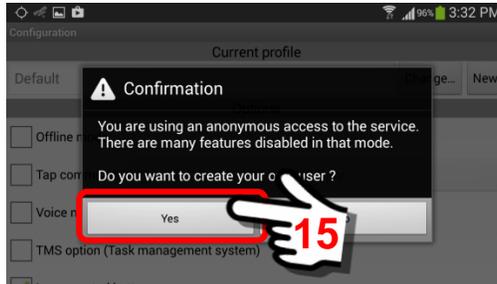
As the Configuration screen begins to display, the "pop-up" box appears a second time and again explains that prior to registration you ONLY have Anonymous user access to many of the features. **However, remember that NOW you are on a DIFFERENT server, your organizations Licensed Server.**



Since we have previously set the address for this Licensed Server, we can now start the registration process. This will create an "account" for you on the Licensed Data Server, identify the mobile device, and implement a security profile for that has been pre-selected for you by your

Organization's IT Department. **Registration is free.** This is necessary if you wish to interact with other mobile devices on the Licensed Data Server network.

Click the "Yes" Button.



By clicking on the "Yes" button, the "New user registration form" will be presented. Depending on the type of device you are using (phone or tablet), as you touch one of the data entry boxes, the device will show a screen "keyboard" so you can enter the required text. See the following rules when filling out the form.

A screenshot of a mobile application's "New user registration form". The form contains several sections: "Login name" with a text input field containing "new user name"; "Password" and "Confirmation" sections with text input fields; "Full Name" with a text input field; "Contact info" with a text input field; "Security Domains" with a text input field and "Add" and "Remove" buttons; "Tracker" section with a text input field; "Private access" with a checked checkbox; "GeoSpace" section with a dropdown menu showing "DigitalGlobe.Maps"; and a "captcha code" section with a captcha image and a "Reload" button. At the bottom of the form is a "Register" button.

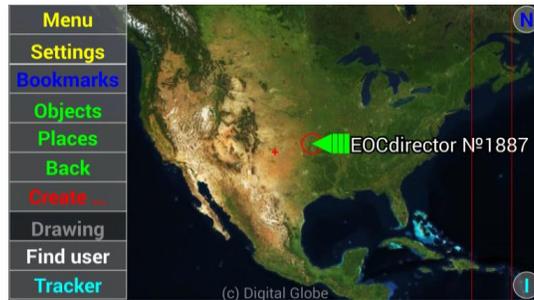
## NOTE:

**Registration is required to become a User on a Licensed Data Server.**

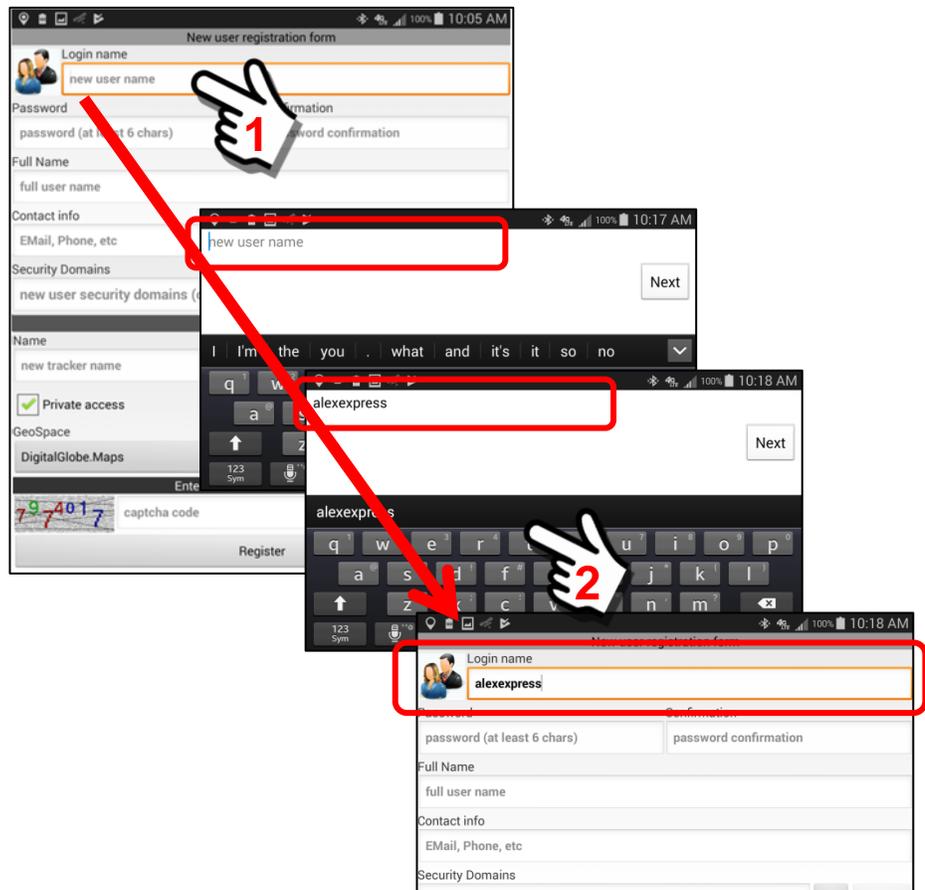
## Rules to follow when filling out the registration form:

### 1. Login name

A single word name of 5 – 255 characters, no spaces. Special characters (such as !@#\$%) are allowed. However the ' and ; characters are not allowed (apostrophe and semicolon). This will be your “username” so it should be a descriptive name. This name will appear on the Map Screen and will be the identifier with other Users. For example, if your job title was as the Director of the Emergency Operations Center .... you might use: EOCdirector (as shown below).



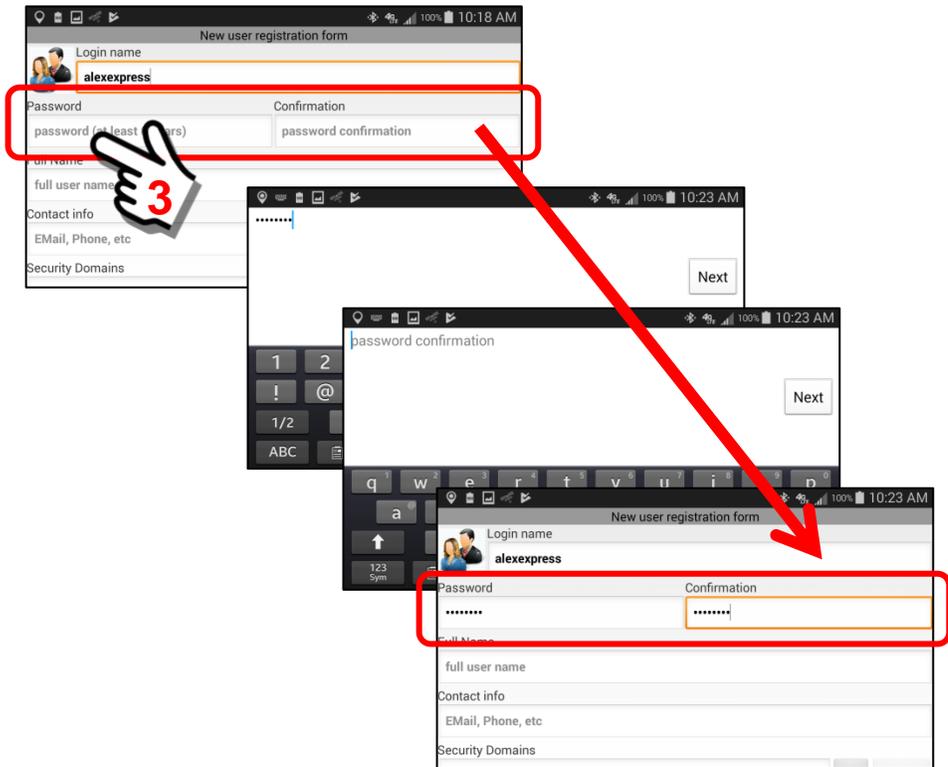
Click inside the “name” box to open an on-screen keyboard. Type your Username. For this example, we will use a user by the name of Alex Express and a Username = “alexexpress”.



## 2. Password

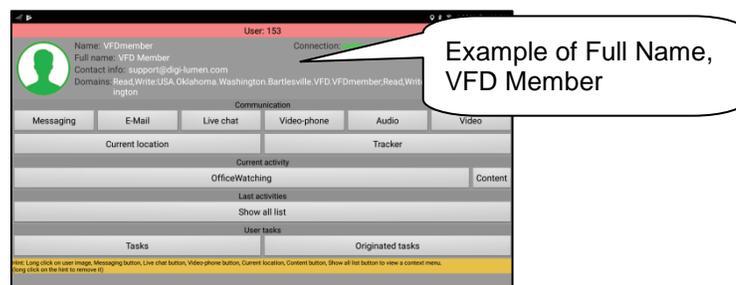
The Password must be 6 – 255 characters, no spaces. Special characters (such as !@#\$%) are allowed. However the ' and ; characters are not allowed (apostrophe and semicolon).

Click in the password field and enter your password, then confirm by entering again.

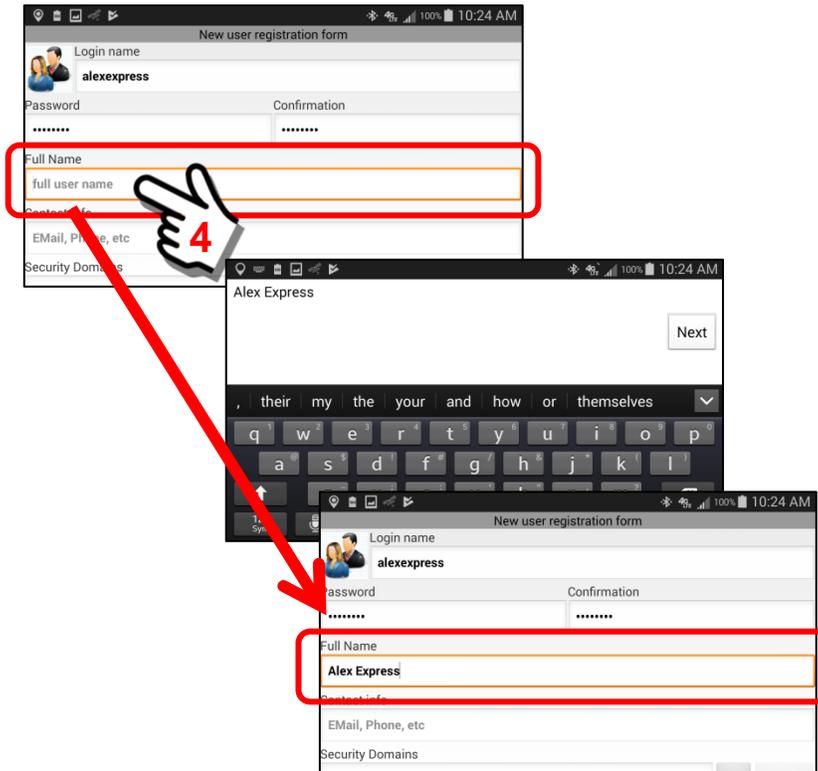


## 3. Full Name

This is your actual NAME ... such as Robert Jones or it could be a "job title" such as **VFD Member** (stands for **V**olunteer **F**ire **D**ePARTMENT **M**ember). Some features of the Sentry MDU System will use your Full Name in correspondence with other users on the system. Features such as Video Phone or Text Messages will use this name in alerts to other users.



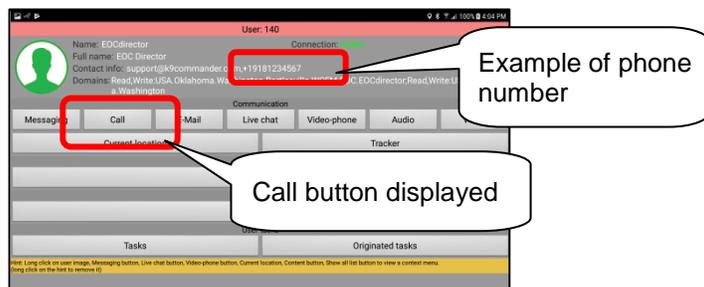
Click inside the data entry field to open the on-screen keyboard.  
Enter your Full Name.



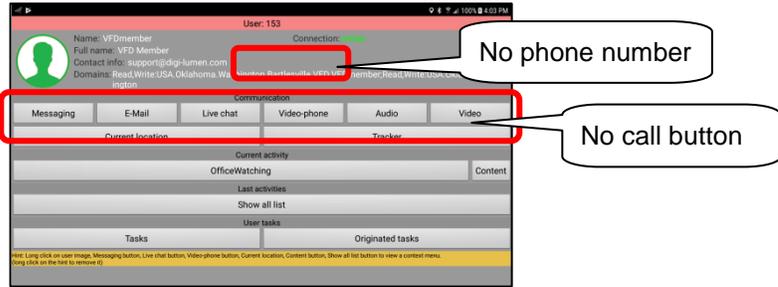
#### 4. Contact Info

This is an email address and (optionally) a phone number. This information is used in two ways:

- a. If the mobile device you are using has a SIM card (cellular enabled) and you enter the optional phone number, then other SentryMDU users will be able to call you on your phone **from within** the SentryMDU App (assuming security credentials allow).

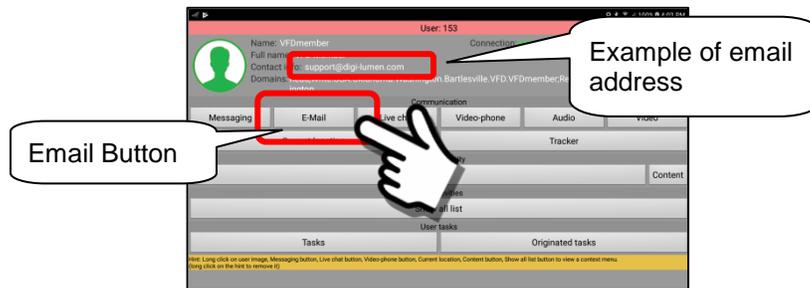


If no number is entered, there will **NOT** be a “Call” button displayed.



- b. Whether you enter a phone number or not, we will need a valid email address so that we may contact you in the event something is wrong with your account. We do **NOT** send marketing emails or other spam. This is only in the event we determine there has been unauthorized use of your account or some other important reason related to your account about which we need to contact you.

It is also for other Users in your organization to be able to email you.



### Email Address

The email address must be listed first and in standard email format such as:

**myName@gmail.com**

### Phone Number

The optional phone number must be listed after the email address and separated by a comma “ , “. The phone number must start with a “+” sign and may not include inter-country, inter-town access codes. It **must be made up entirely of numbers**. It should follow the standard international telephone format such as the USA example shown below:

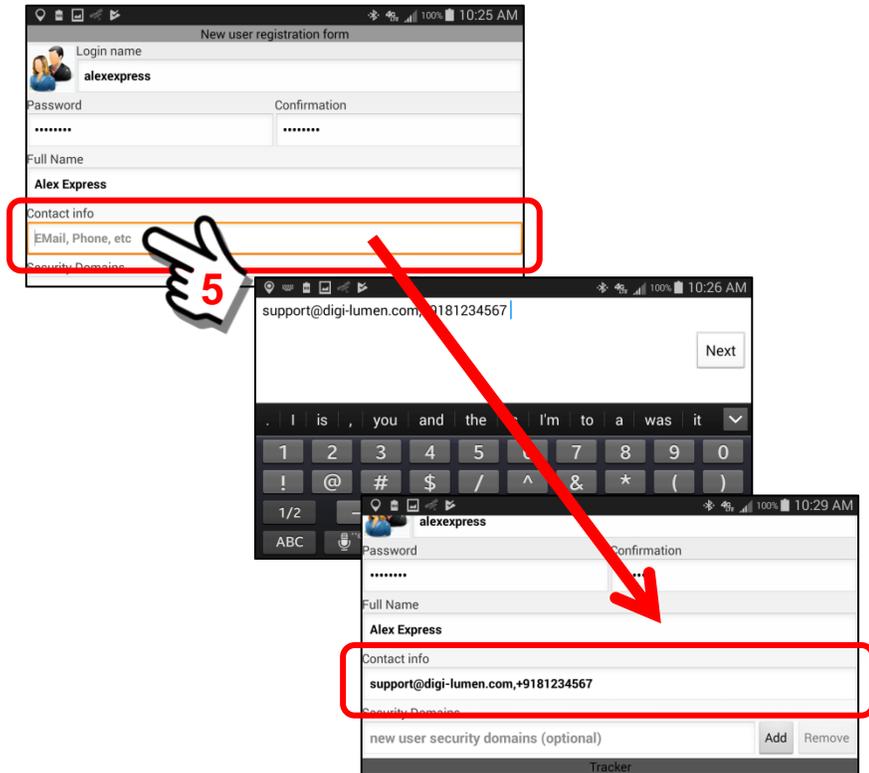
**+19181234567**

If you choose to list the optional phone number, the entry for the Contact data field may look similar to the following:

**myName@gmail.com,+19181234567**

**Note: No whitespace between letters/numbers**

Click in the “Contact Info” box to open the on-screen keyboard.  
Enter the contact information.



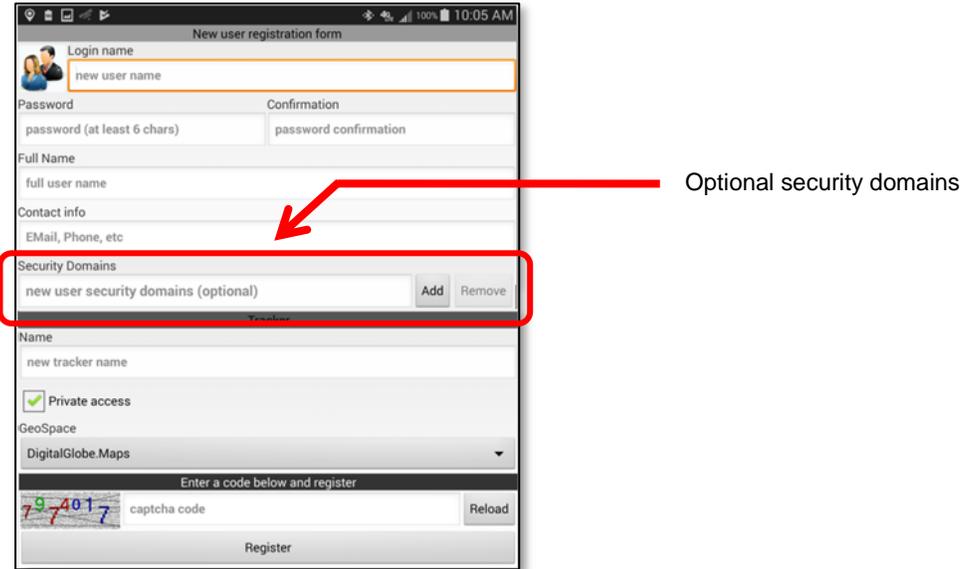
## 5. Security domains

The Security Domains data field has several possible options:

- a. If you are part of a Licensed Group, the Account Administrator for your Group MAY provide you with Security Domain information to enter into this data field. If not, then leave this field “blank” during registration.
- b. **If you will be a Licensed User AND you want to JOIN an existing Security Domain ... AND you know the DOMAIN\_NAME/PASSWORD pair that has been provided to you by the owner of the Security Domain ( Section 6.5 ), then you may enter that information in this block. In this case, the system will assign you your OWN default security domain (based**

on your Username) AND provide you access to the other Security Domain(s) you have added. This is in addition to the security domains assigned by the User License.

The Security Domains data block is “optional”.



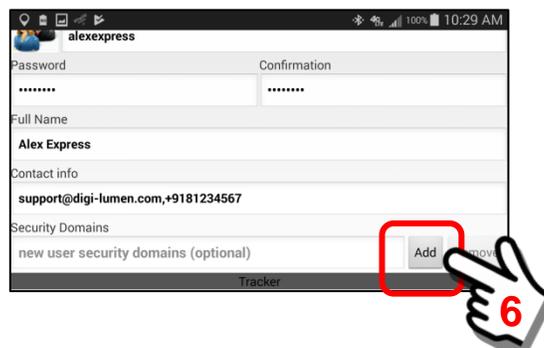
In this exercise, we will assume that we want to “Add” a security domain for a family member. When we add this security domain, it will be in addition to the security domain pre-configured by your IT Department AND the “default” security domain that will be created by the system using the Username you have chosen. See **Section 6.4 – 6.5** for additional details.

We will add the following:

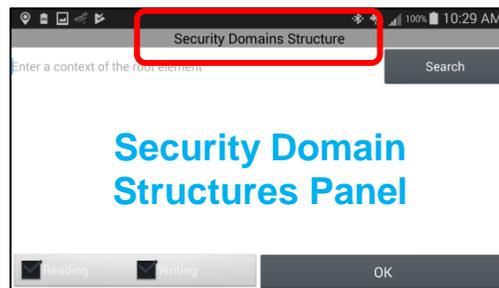
**Read,Write:samexpress.family.travel.egypt**

This will be a Security Domain from **User = Sam Express** (samexpress).

To begin, click on the “Add” Button on the Registration Panel.



A Security Domain Structures panel will open that will enable a user to “search” for security domains of other users. These security domains may then be specified to be “added” to your list of available security domains.



In order to “add” a security domain of another user, there are three conditions that must be met.

### **Device #1 (your device) and Device #2 (another user’s device)**

#### **Conditions to add a “personal” Security Domain of another User:**

1. The “other” user must be on the SAME data server instance.
2. Device #2 must have created a personal security domain.
3. User of Device #2 must provide the DOMAIN\_NAME / PASSWORD pair to YOU (ie Device #1) so your device may become part of their personal security domain.

Users may create multiple Security Domains to cover work, play, family, specific activities and so on. Users may have up to 100 security domains.

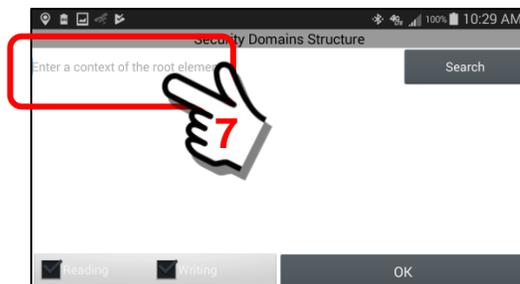
To add the security domain you will now need the DOMAIN\_NAME / PASSWORD pair for the user group you want to add.

**Domain Name:** samexpress.family.travel.egypt

**Password:** trip1234

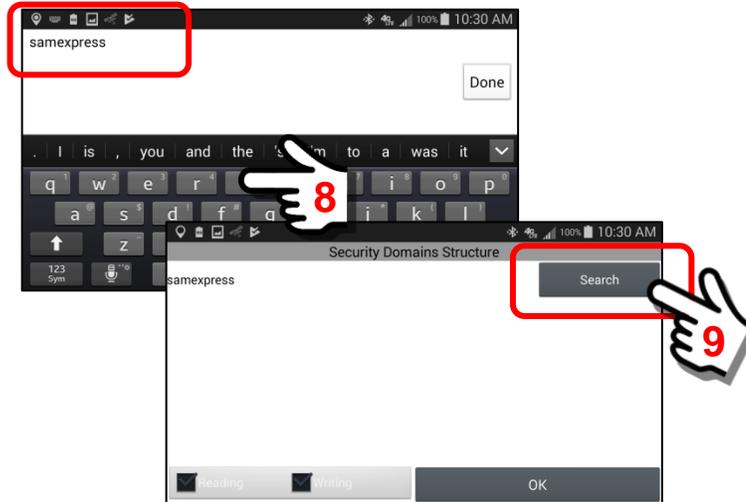
The root element of “samexpress.family.travel.egypt” is “samexpress”.

Click on the “Enter a context of the root element” text area of the Security Domains Structures Panel.

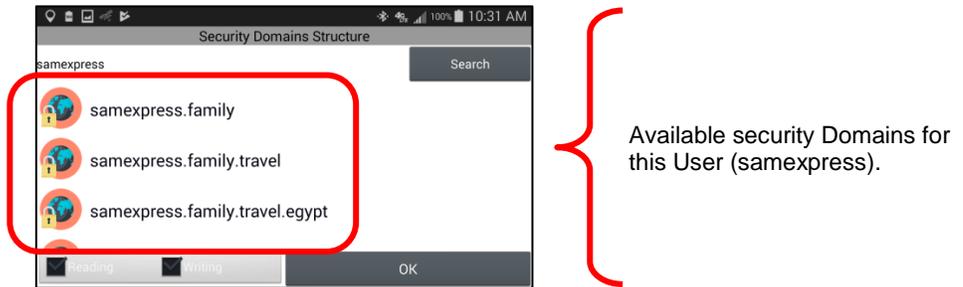


When “clicked” the on-screen keyboard will open. Enter the root element of the security domain ... **samexpress**.

When finished, click the **Search Button**.



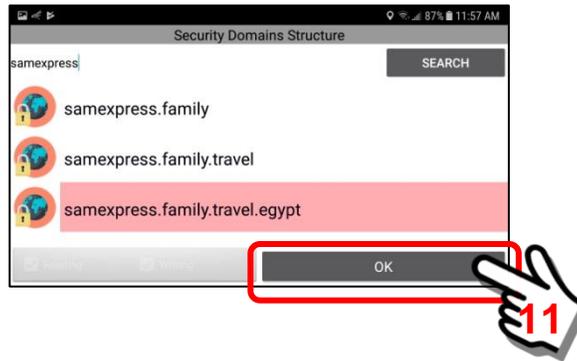
The system will search for ALL security domains with a root context of “samexpress”. In this example, we notice that 3+ items were retrieved.



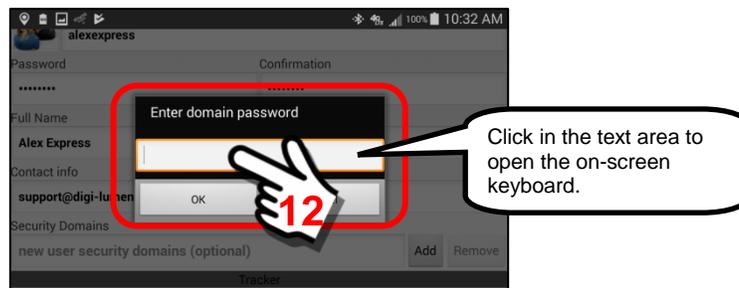
We are looking for ... **samexpress.family.travel.egypt** ... because this is the DOMAIN\_NAME that we have a password for. It will not work if we try to use one of the others.



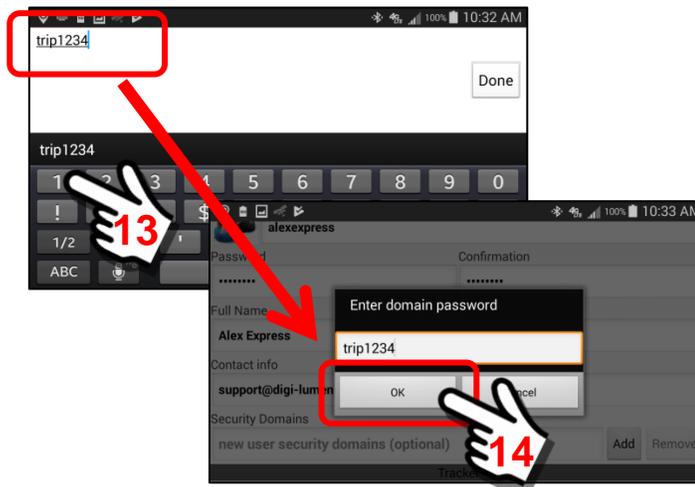
Select (click) on this item to activate the choice. Then click on the “OK” Button.



Now that you have selected the security domain that you want to add to your registration panel, the system will prompt for the password.

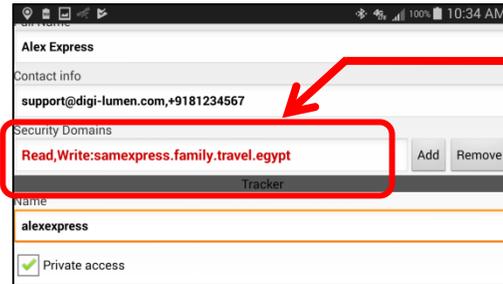


Enter the password for this security domain. This is the password that was provided to YOU by Sam Express, the owner of Device #2.



Click the “OK” Button to complete the transfer.

The Security Domain from User = Sam Express is now added to the Security Domains data field on the Registration Panel.



Security Domain for user "samexpress"

### Important Note:

**In the event you use an INCORRECT password, the Registration Form will fail with an error as shown below when you click the "Register" Button and the system processes the registration.**



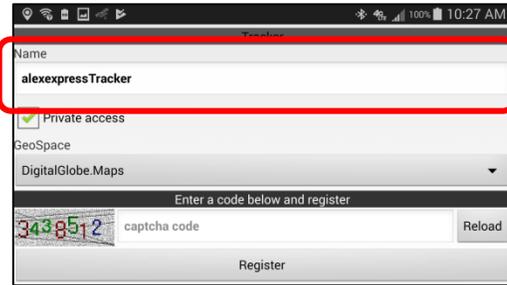
The FORM will not be processed if you have an incorrect password.

#### 6. Name (Tracker Name)

This will be the "name" that the GPS Tracker feature will use to identify a User. By default the system will append the word "Tracker" to the end of the Login name that you selected (Item #1 above). We would suggest you use the same name as you selected for a Login name ... however, you can use anything you want (alphanumeric characters only).

As shown in the following example, the Tracker Name will default to the entered Username + Tracker.

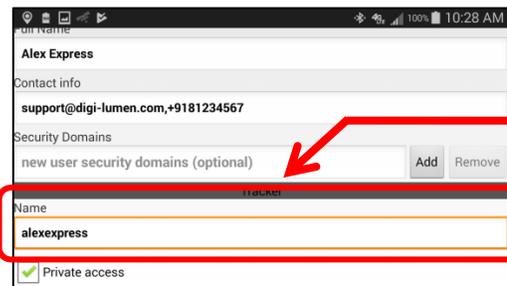
Default name = **alexexpressTracker**.



We will edit the Tracker Name and remove the “Tracker” part to leave just **alexexpress**. Click in the text field to open the on-screen keyboard.



We have now changed the **alexexpressTracker** name to **alexexpress**.



Tracker Name has been changed.

**7. Private access (checkbox)**

By default, the Private access checkbox IS CHECKED. Private access means that other Users CANNOT see you or interact WITH YOU unless the security domain settings specifically ALLOW them to see you.

For those users that have a Licensed Group, you WILL WANT to keep the Private access “checked” since the Account Administrator will have already set up the security domains for you.

**8. GeoSpace (selection drop-down box)**

By default, the DigitalGlobe.Maps GeoSpace is selected. This will work for most users that are located in all but a few regions of the world. The provider of satellite and high-resolution aerial imagery (MapBox / DigitalGlobe, Inc.) has most of the world covered. However, there are regions of the world where they do not have high resolution coverage. For this reason, we have a selection box where other imagery suppliers may be provided (or are available).

Once all of the data fields are filled out, your form should look something like this.

The image shows a mobile application interface for a "New user registration form". The form fields are filled with the following information:

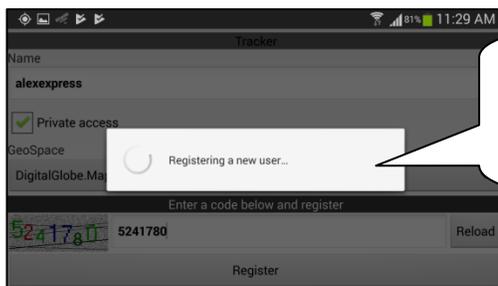
- Login name: alexexpress
- Password: [masked]
- Confirmation: [masked]
- Full Name: Alex Express
- Contact info: support@digilumen.com,+9181234567
- Security Domains: Read,Write:samexpress.family.travel.egypt
- Tracker: [empty]
- Name: alexexpress
- Private access:
- GeoSpace: DigitalGlobe.Maps
- Verification code: 3438512

Annotations on the form include:

- A speech bubble pointing to the Contact info field: "If you will be using the 'Call' feature, remember to add your phone number here."
- A red arrow pointing to the Security Domains field with the text: "In MOST cases, the Security Domains field will be 'blank'"
- A red box around the Register button with a hand icon pointing to it and the number "17".

Finally, click on the “Register” Button.

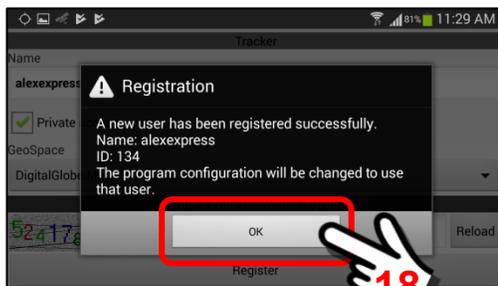
When the “Register” Button is clicked, the mobile device will contact the “licensed” SentryMDU Data Server for your organization and set up an account for you. You will need to have either a cellular or WiFi connection such that the mobile device can contact the SentryMDU Data Server network. This may take 10 – 20 seconds to complete. This will set your security profile that has been pre-configured by your Organization and will register your “device” as an authorized device.



The “**Registering a new user ...**” message will be displayed for about 10 seconds as the User is validated.

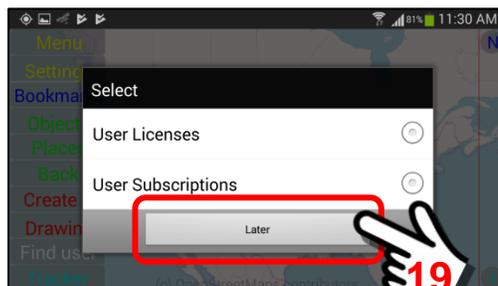
Once the “registration” is successful, you will get a message stating that an account has been created for you on the network and that your security profile has been changed from Anonymous to a registered user.

Click the “OK” Button to continue

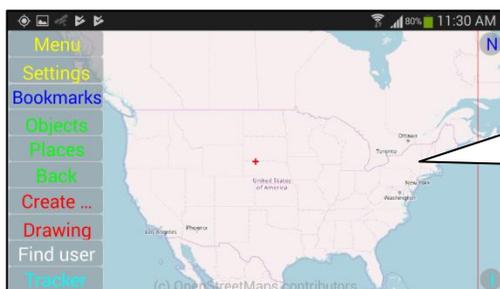


Once the “OK” Button is clicked, the screen will return to the Main Menu Screen. A pop-up box will be displayed allowing you to select either a *User License* or *User Subscription*.

For this example, we will NOT do a License just yet ... we will do it later in this section. Click on the “Later” Button.



The Main Map Screen will look similar to the following. The default Map View uses the OpenStreetMaps data to display a roads/street map view.



The GPS location of YOUR device is not shown on the Main Map Screen.

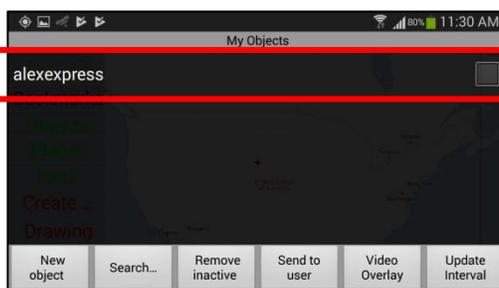
You have now “registered” but your location is not displayed on the map screen until you tell the mobile device that you would like to display your own location. In typical use, since you know where YOU ARE ... you may choose not to display YOUR location and only display the GPS location of other Users in the network.

In this example, we will turn on the GPS location (mobile object marker) of your mobile device. **Section 10.5** of this User Manual will cover this feature in detail, but for now, we will just turn on the Mobile Object Marker.

Click on the **Objects Button**.

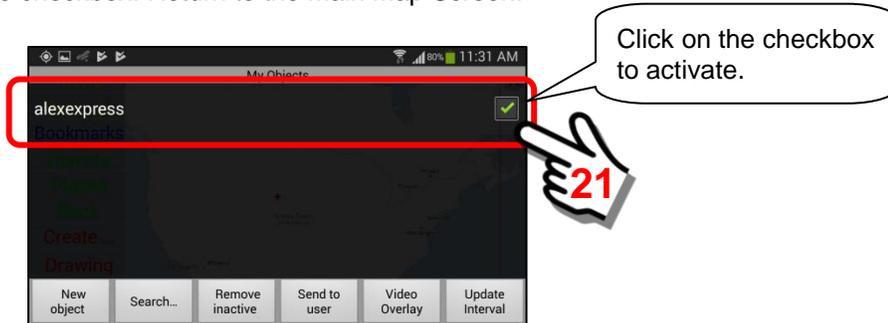


The “My Objects” Panel will be displayed. Since you have only created YOURSELF as a User ... and have not imported other users from your Security Domain, your mobile device will be the only device in the list.

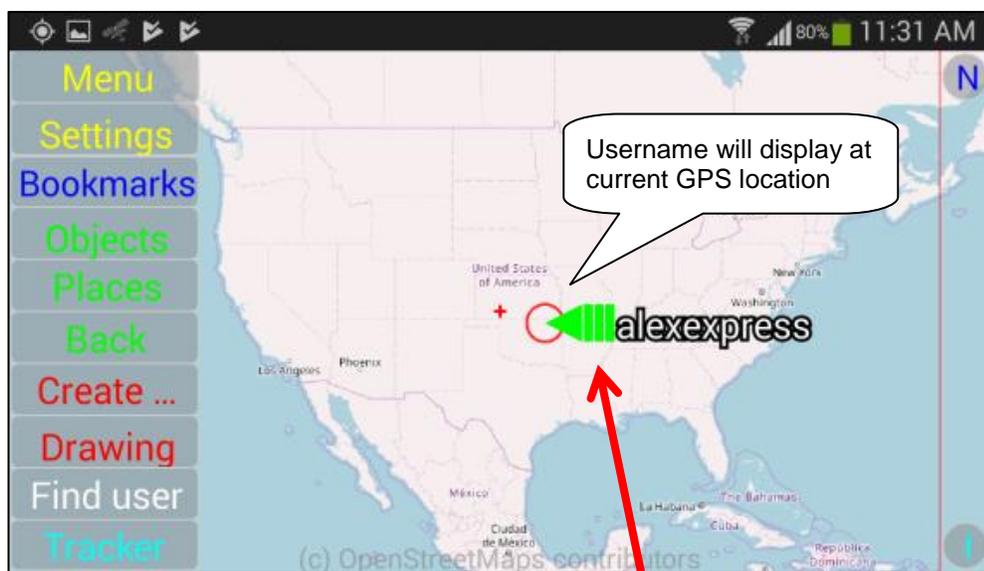


By default, this box is NOT checked during the install process.

In this example, you are the user Alex Express (username = alexexpress). When the “checkbox” is not checked, the user will NOT be displayed on the Map Screen. To illustrate this feature, we will put a “checkmark” in the checkbox to activate this user. Click on the checkbox. Return to the Main Map Screen.



As a “registered” User, the device will now display your Username at the GPS coordinates of your current location. You may need to zoom in/out to find your location (depending on where you are located in the world).



See Section 4.4, Item #13 for an explanation of these color codes.

## Note:

You have now REGISTERED ... the next step is to activate the User License assigned to your User Classification.

## Selecting and Installing a User License on a Device:

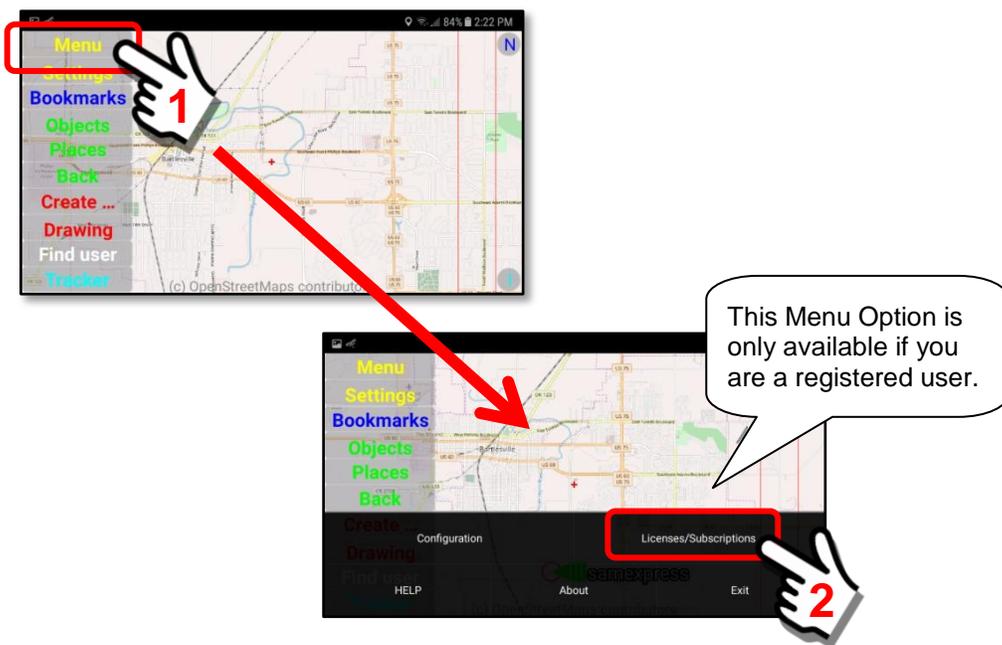
In this example, we have registered a “new” user on the Licensed SentryMDU Server of our Organization. We are now going to illustrate how to INSTALL a User License on a mobile device.

We will now use the remaining two pieces of licensing information provided to us by our organization.

- 1) An “Anonymous User” **initial registration password** for your Server Instance.
- 2) The **License Number** that has been given to the Job Classification for this User.
- 3) The temporary **License Access Key** that will be provided to the User for registration during a specific period of time.
- 4) The **Domain Name** (or IP Address) for your SentryMDU Licensed Server Instance.

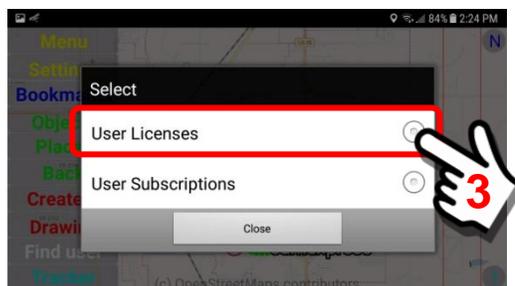
We will now review the following 10 steps.

### 1. Open the Menu Panel and select the “Licenses/Subscriptions” Button.

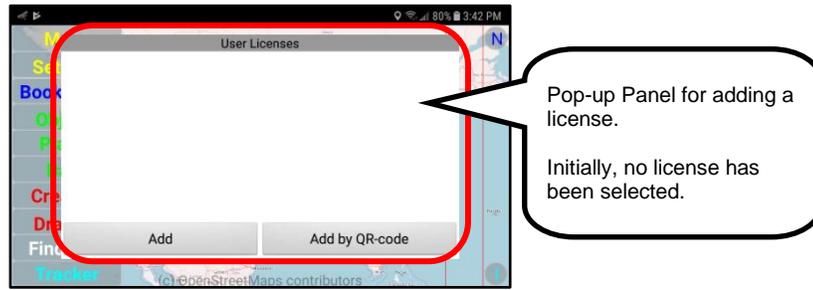


### 2. Select the “User Licenses” Option.

A pop-up panel will appear. Select the “User Licenses” option.

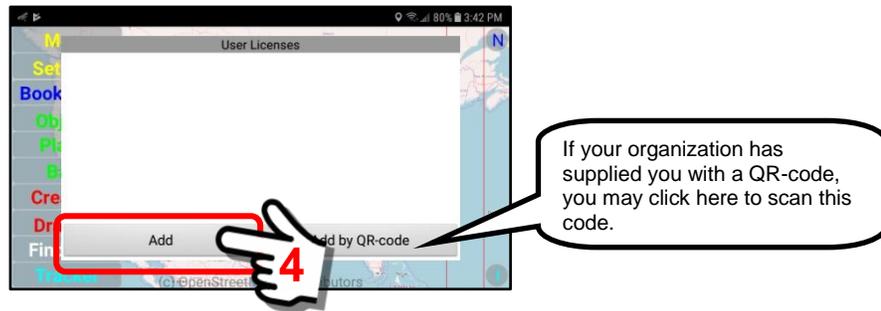


**3. The “User Licenses” selection panel will appear.**



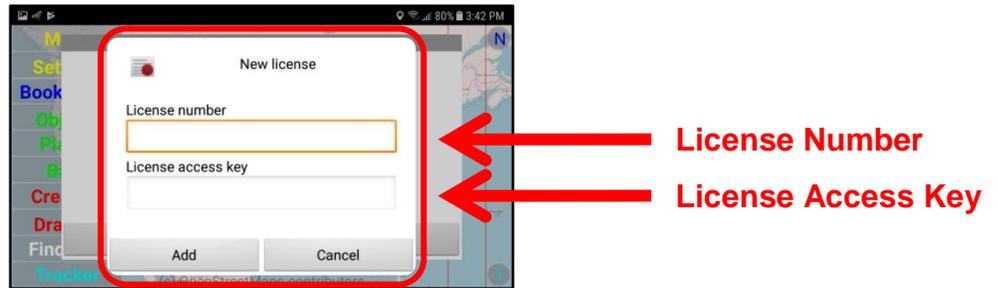
**4. Click on the “Add Button”.**

To display the license input screen, click the “Add” Button.



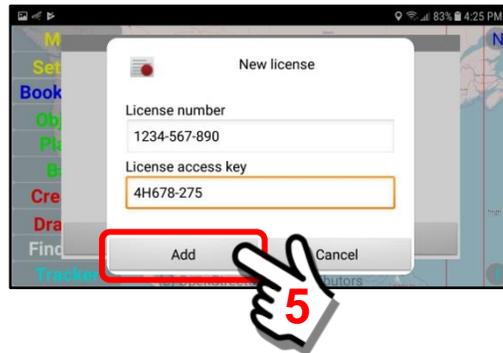
**5. Data Entry panel for new license is displayed.**

A pop-up panel will appear with two (2) data entry fields.



**6. Enter the License Number and License Access Key.**

Click on the “Add” button when finished.



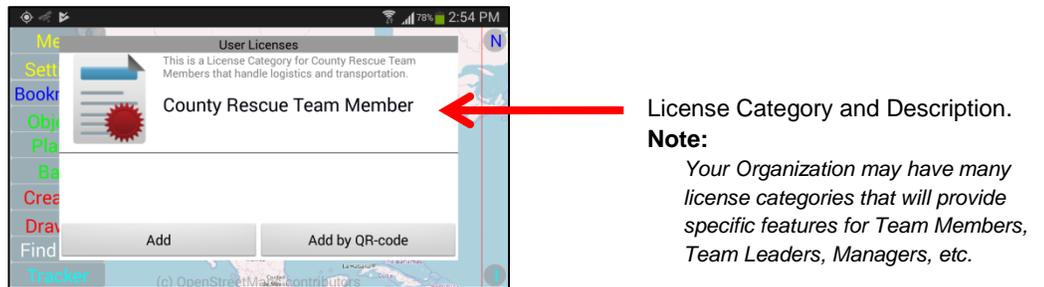
**7. The submitted User License job classification will be validated.**

If the entered data is correct, and the temporary License Access Key is used during the time period set by your IT Department, the User License security domain for this job category (County Rescue Team Member) will be installed on the mobile device.

The mobile device will contact the SentryMDU System to validate the license and retrieve the User Category parameters.

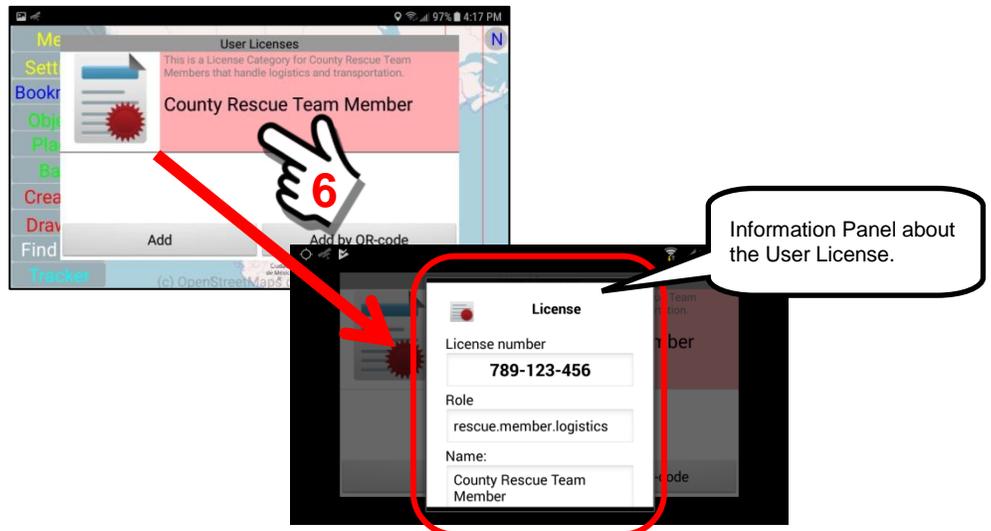


The validated License and User Category will be displayed on the panel.



**8. Review User License, job role and Security Domain**

Click on the User License name (County Rescue Team Member) to open a pop-up panel that will display the license parameters and the installed Security Domain.



The full listing may be displayed by scrolling the pop-up panel.

License

License number  
789-123-456

Role  
rescue.member.logistics

Name:  
County Rescue Team Member

Info  
This is a License Category for County Rescue Team Members that handle logistics and transportation.

Features  
Native tile server

Security Domains  
Read,Write:CountyRescue.U  
SA.OK.Washington

Supervisor domains  
Read,Write:CountyRescue.U  
SA.OK

URLs

License Number

User role and classification as selected by Licensed Organization

Organizations with a Licensed Server have access to create, modify and remove User License parameters via a web portal into an Administrative Server.

Default Security Domain for all users in this classification

Supervisory Security Domain for all users in this classification

Listing of URLs provided to this User Class during initial installation.

**Note:**  
*This is a list of the Custom Bookmarks and Data References that are installed for this specific User Category. These are set by your Organization.*

### 9. Return to the Main Map Screen

Click on the “Back” button on the device to return to the Main Map Screen.

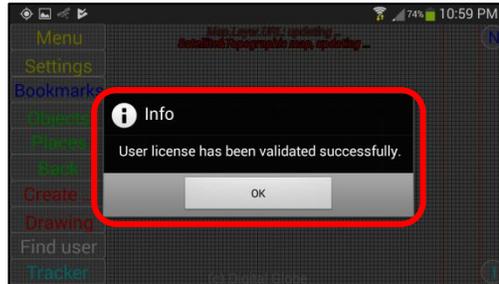


When the “Back” Button is clicked, this starts the License Validation Process. This may take several seconds depending on your internet connection.

### 10. Main Map Screen is now displayed with Satellite Imagery

As the mobile device processes the screen change, the satellite imagery for this User License is downloaded and installed on the device in accordance with the organization's imagery contract.

A pop-up message will display if the User License is valid.



Satellite imagery will now fill the screen



## Note:

You have now REGISTERED and installed a User License ... **but you have NOT COMPLETED CONFIGURATION**. See Sections 3.14 and 5.4 for additional settings that you will need to make. This is important if your device is to provide a good user experience and to perform optimally (ie audio/video streaming, map images, etc.) for your specific hardware.

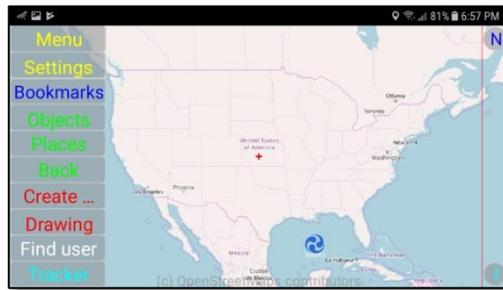
## Options for changing the type of Map Imagery to display:

The Sentry MDU Application allows a user to select a number of options on how they would like the screen to display satellite imagery and maps. There are 3 primary image/map options and several overlay “layers” that can display additional symbols and icons. The 3 primary map options are as follows:

1. Satellite Image overlaid with a street map
2. Satellite Image
3. Street Map

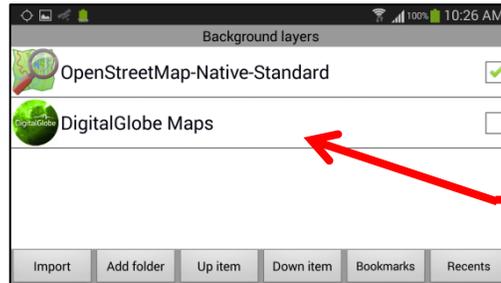
The “default” setting is Item #1 – Satellite image overlaid with a street map.

After initial installation (and before registration) you will notice that the Main Map screen displays a “Street Map” (using OpenStreetMap data) and not a satellite image.



### 1. Location of the Map Layer display options.

The available Map Layers are installed in the Background Layers Folder on the Viewing Configuration Panel.



OpenStreetMap (Street Maps Only) and imagery provided by MapBox / DigitalGlobe. These choices are mutually exclusive (can only select one).

This choice is only active for Users that have a Subscription or User License.

### OpenStreetMap-Native-Standard

OpenStreetMaps is an “Open Source” set of map data supported by a worldwide community. DLT operates a tile server that delivers this “road/street” map data to the SentryMDU App.

### DigitalGlobe Maps

DigitalGlobe (a Maxar company) is a commercial provider of high resolution satellite imagery to governments and industry. They operate a constellation of satellites that scan the earth continually and provide updates to their imagery on a regular basis. The SentryMDU App retrieves imagery data from MapBox, a reseller of DigitalGlobe imagery.

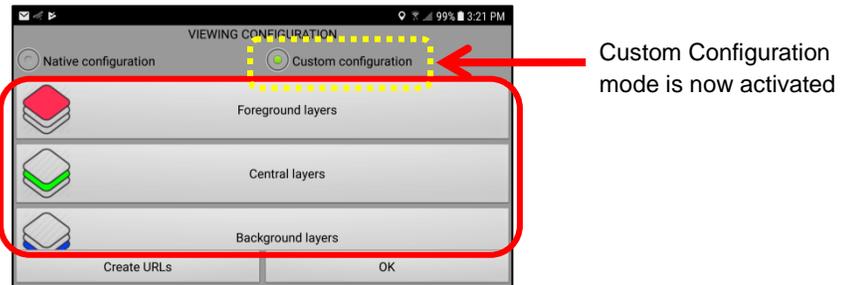
**2. Select the “Custom Configuration” Option**

The “Custom” option is an alternate view mode of the Foreground, Central and Background Layers functions. To open this panel, click the **Custom Configuration** Button on the Viewing Configuration Panel.



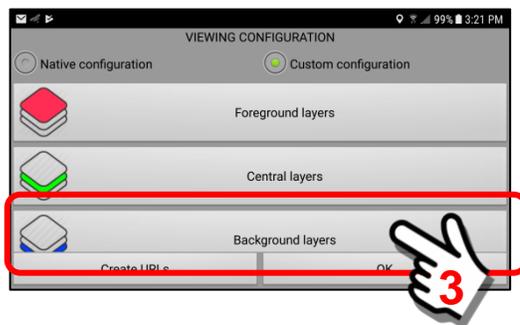
Three large buttons will be displayed

- 1. Foreground Layers
- 2. Central Layers
- 3. Background Layers

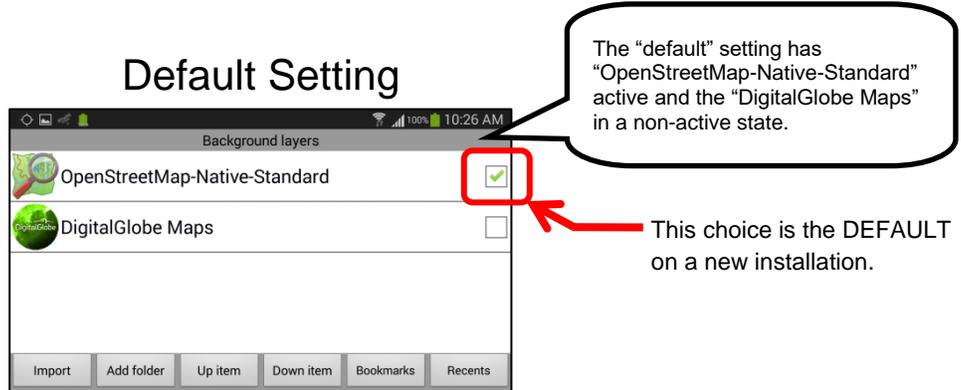


**3. Select the “Background Layers” Folder**

Select the Background Layers folder for access to the imagery and maps that are available on the Mobile Device.



The **Background Layers** folder contains the currently available sources for map imagery. In this example we show the 2 default entries. You may also put “custom” maps of your own in this folder.



**4. DigitalGlobe Maps for Users with a Subscription or User License.**

When a User device installs the MapBox/DigitalGlobe Map imagery by way of a Subscription or User License, the DigitalGlobe Maps menu item will become active.

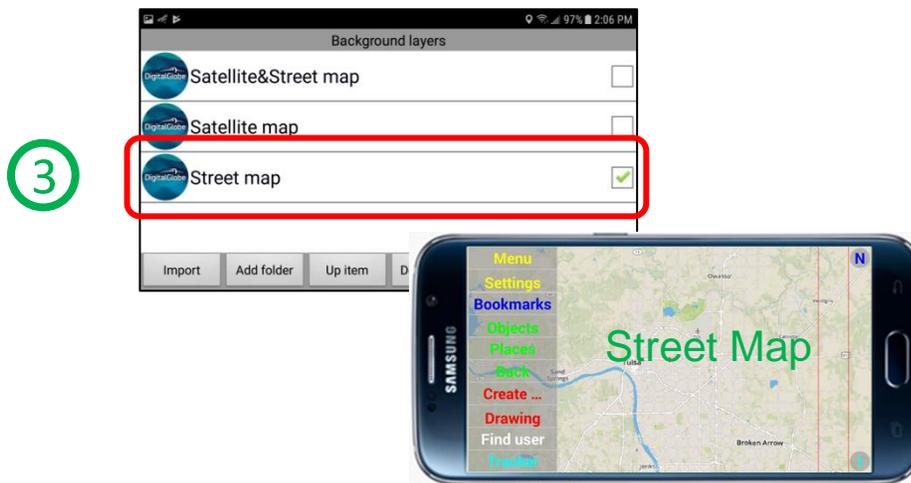
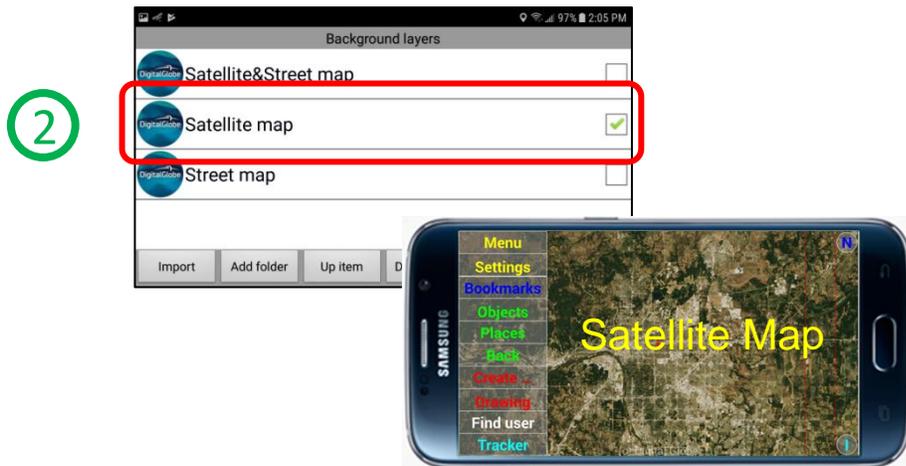
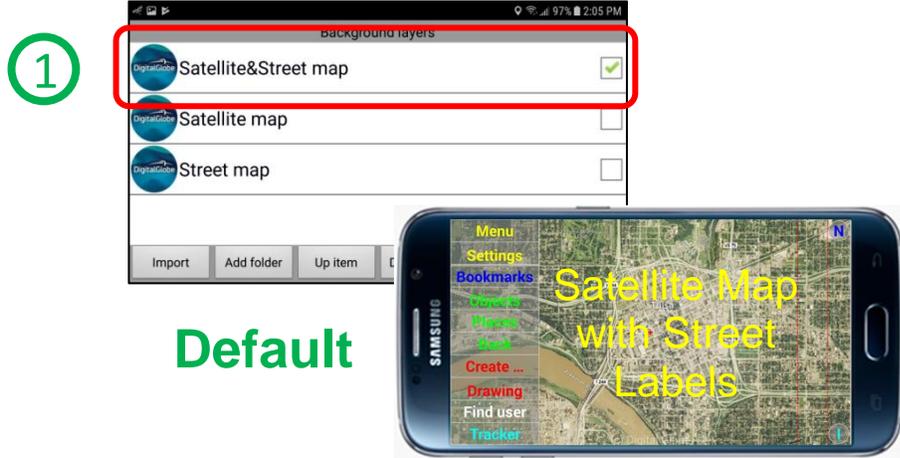
To view the 3 different DigitalGlobe Map options, click on the Menu Item.



During an initial install of the MapBox / DigitalGlobe Maps, the “**Satellite&Street map**” option will be installed by default.



A User may select any of the other map options as indicated below.



## Removing a User License from the Device:

In the SentryMDU system a Subscription and a User on a “licensed” Data Server (User License) may not co-exist for the same “User Profile”, on the same mobile device. You must be either one or the other (or none). See **Section 5.3** on how to create multiple “User Profiles” that will allow BOTH subscriptions and Licensed Users to co-exist on the same device.

In this example, we are going to illustrate how to REMOVE a User that has a User License on a SentryMDU data server. You may **use this feature if you have a User License in a specific category and you will be moving to a “new” category of License**. In this scenario you must remove the existing license and then install the “new” license.

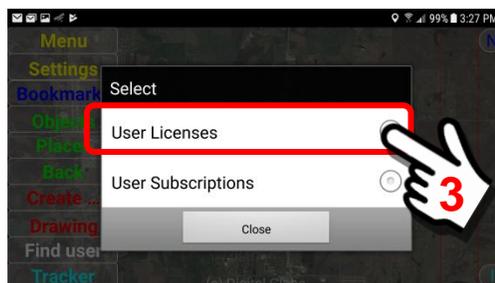
### 1. Open the Menu Panel and select the “Licenses/Subscriptions” Button

Click on the *Menu Button* on the Main Map Screen and then select the *Licenses/Subscriptions Button*.



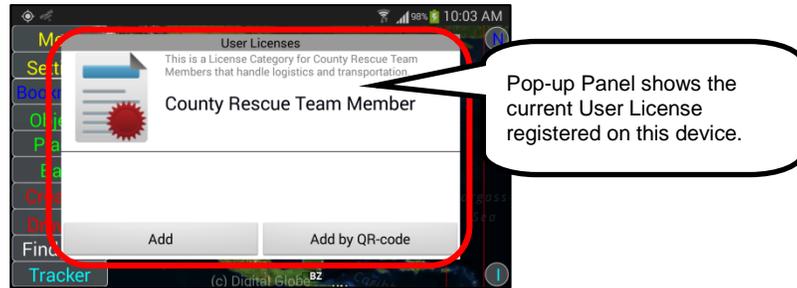
### 2. Select the “User Licenses” Option

A pop-up panel will appear. Select the “User Licenses” option



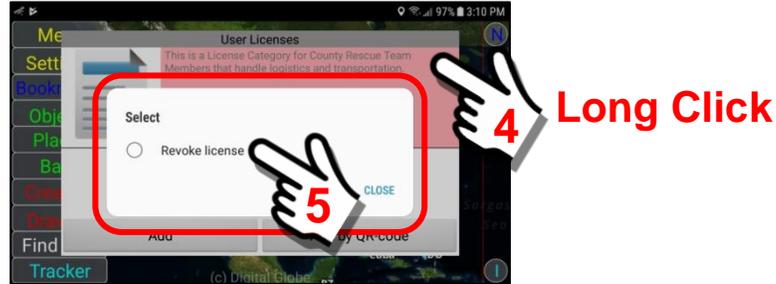
**3. The “User Licenses” selection panel will appear**

The User Licenses Panel will show the active User License that is installed on this mobile device.



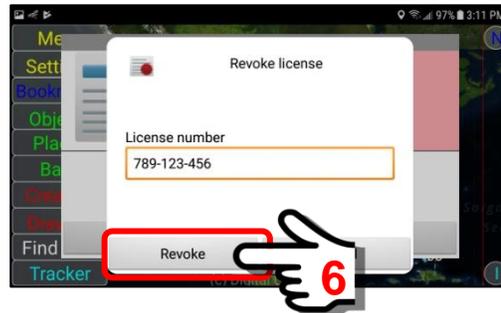
**4. Select the User License, long click on the name**

Perform a “long click” on the User License name. A pop-up box will appear with a button to “revoke” the User License. Click on the Revoke Button.



**5. Verify the correct License Number**

Verify the License Number for your Organization. Click on the **Revoke Button** to remove this license access from the mobile device.



**6. The User License will be removed from the device**

Notice that the User License (County Rescue Team Member) is no longer shown on the device.



**7. Satellite Imagery will be removed from the device**

Without a User License, the mobile device “access” will be removed from SentryMDU Data Server of the Organization. You will still be “registered” on the particular server instance, but you will default to your personal Security Domain. **You will no longer have access to others on the network until you select and install ANOTHER user license.**

You will no longer have access to file storage, streaming and satellite imagery that is provided by that Server Instance.

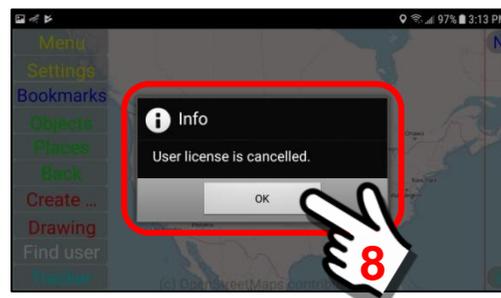
Click the “Back” Button to return to the Main Map Screen.



As you return to the Main Map Screen, the satellite imagery on the device will be removed.



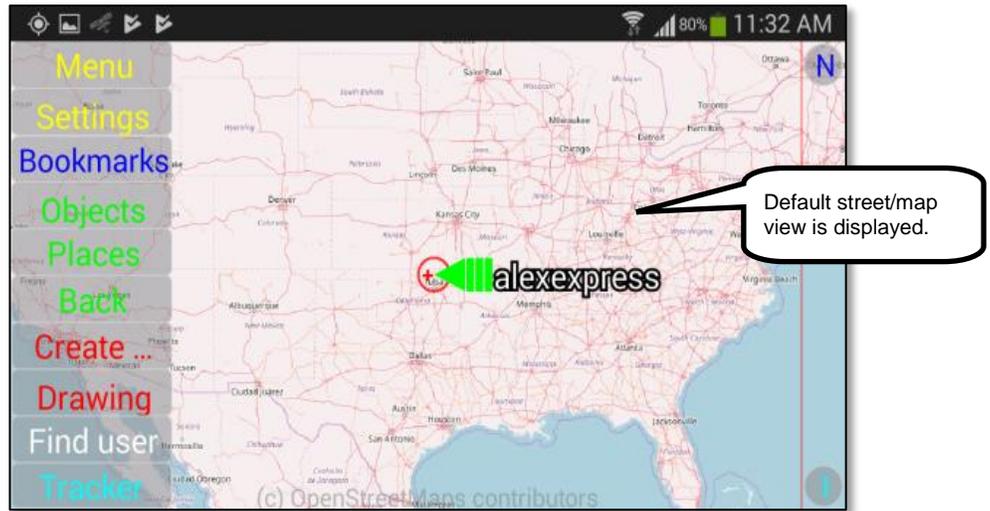
Finally, a pop-up box will inform the User that the User License has been successfully cancelled.



Click the “OK” Button to continue ...

**8. The “default” OpenStreetMaps data will now be displayed.**

Notice that the screen has now reverted to the road map display. Since you are on a Licensed Server, in order to access the high resolution satellite imagery once again, you must input another **User License/Access Key** combination.



## 3.8. Using In-App Subscriptions

### Subscription Overview:

In-App Subscriptions are available for those Users that do not belong to an organization that has a Licensed Server AND they would like access to enhanced satellite imagery, server data storage and broadcast bandwidth.

In most cases, a subscription would be used by a family, small civic group, clubs and small businesses with fewer than 20 members. Once a group size gets larger than 50-80 members it is usually more cost effective for the group to license a SentryMDU Server instance. Since the SentryMDU System is NOT supported by advertising (no Ads) and we do NOT sell User data, we must charge for our service in order to cover the use of Satellite Imagery, server disk storage and internet usage.

### Important Note:

**We use Stripe.com as our Payment Gateway and In-app Subscription Processor.** If you pay for Services or Subscriptions on our website or mobile app, they handle ALL financial transactions.

**Your billing information and credit card numbers NEVER hit our Servers. To validate purchases, Stripe.com sends us an encrypted ID Code that has been assigned to your account.**

**Stripe.com is certified to *PCI Service Provider Level 1*. This is the most stringent level of certification available in the payments industry.**

Subscriptions are governed by the following:

- a. We use **Stripe.com** as our Payment Gateway and In-app Subscription Processor. We accept all major credit and debit cards in 130+ currencies. You may visit their website to learn more.
- b. **All subscriptions on are on a "monthly" time period.** For example, a subscription that starts on the 12<sup>th</sup> day of a month will end on the 12<sup>th</sup> day of the next month.
- c. You may "upgrade" or "downgrade" a subscription at any time (ie in the middle of a month). The unused pro-rated remaining value of your current subscription will be applied as a credit toward your new subscription. You will not be "billed" until the remaining balance is used up. See Stripe.com documentation for details of this Policy.
- d. You may cancel a subscription at any time. However, there are NO refunds. You will continue to have access to the "paid for" content until your monthly time period has expired. At that point, the subscription will NOT be renewed.
- e. To "manage" your Subscriptions, access the SentryMDU Administrative Server Gateway website (via a computer or your mobile device) and log into your account. Here you can view, cancel, renew, upgrade/downgrade and manage your SentryMDU subscription.

We offer three (3) Subscription Levels to cover the needs of most subscription users.

1. **Level 1 Access** ( \$4.99 USD/mon, should be adequate for the casual user)
  - i. 6,000 Satellite Imagery tiles per month
  - ii. 100 Mb of Data Server Disk storage for audio/video files
  - iii. 500 Mb of data streaming to other remote devices
2. **Level 2 Access** ( \$9.99 USD/mon )
  - i. 12,000 Satellite Imagery tiles per month
  - ii. 200 Mb of Data Server Disk storage for audio/video files
  - iii. 1 Gb of data streaming to other remote devices
3. **Level 3 Access** ( \$14.99 USD/mon )
  - i. 24,000 Satellite Imagery tiles per month
  - ii. 500 Mb of Data Server Disk storage for audio/video files
  - iii. 2 Gb of data streaming to other remote devices
4. We suggest ALL users start at a Level 1 subscription ... if you exceed the usage rates for Level 1, then upgrade to Level 2, and so on.
5. We recommend a user to purchase a SentryMDU Server License if you have usage needs that are higher than Level 3.

Enhanced Services Pricing Tables		
Level 1 Access	Level 2 Access	Level 3 Access
\$ 4.99 / month	\$ 9.99 / month	\$ 14.99 / month
6,000 Satellite Tiles	12,000 Satellite Tiles	24,000 Satellite Tiles
100MB Server Storage	200MB Server Storage	500MB Server Storage
500MB Bandwidth	1GB Bandwidth	2GB Bandwidth
<a href="#">Subscribe</a>	<a href="#">Subscribe</a>	<a href="#">Subscribe</a>

**Subscription Users** do NOT have direct access to the Data Server via the SentryMDU Manager Desktop Client (MS Windows Program). There are some features/functions (about 10%) that will NOT be available/customizable. For these features, we have selected “defaults” that should work for most users. If you need/want the ability to “fine tune” the system, then you must have a SentryMDU Server License.



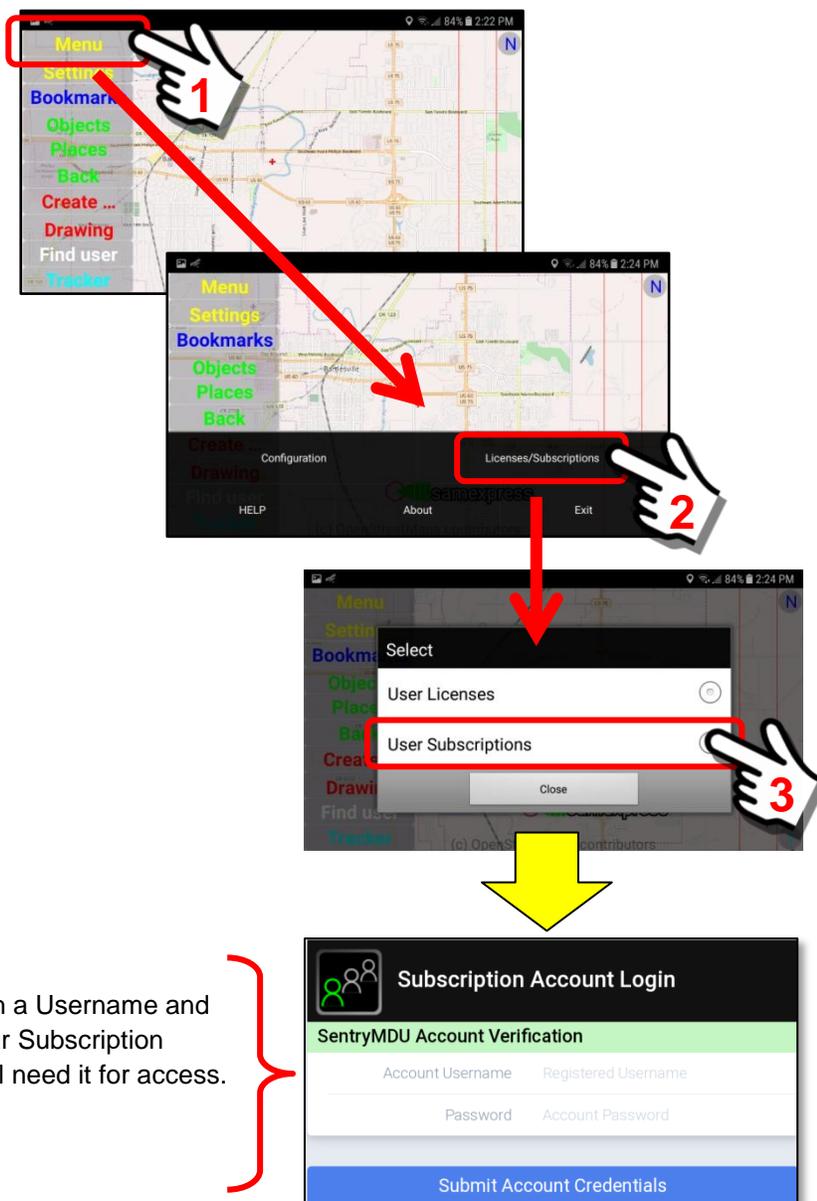
## Registering for a Subscription Account:

We provide two (2) methods/formats from which you can manage a Subscription Account.

1. Your mobile device (phone or tablet)
2. Desktop Computer via the SentryMDU Administrative Website.

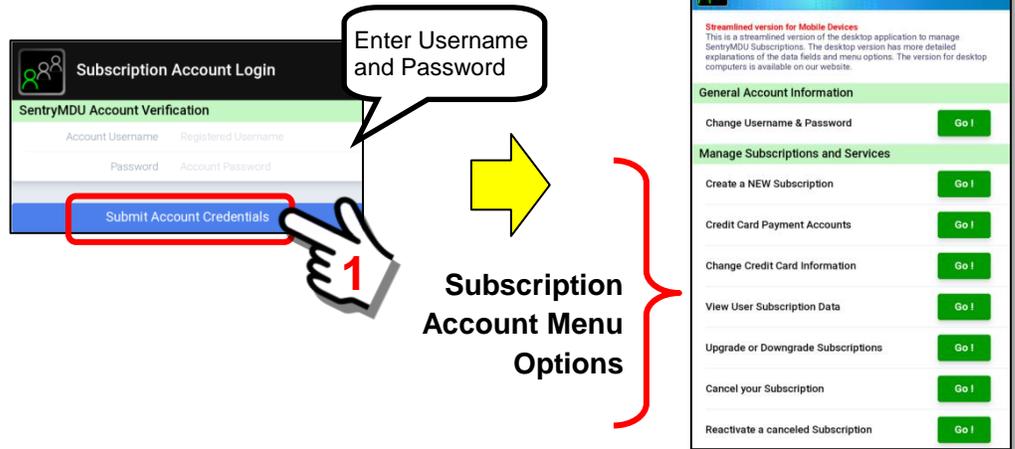
Before you can select a Subscription, you must create a "Subscription Account". This is a different account from what you used to "register" your mobile device. A subscription account (optional) will enable you to manage all aspects of a SentryMDU monthly subscription (provide credit card information, start a subscription, upgrade/downgrade, cancel, etc.). This account, once established, may be accessed from your mobile device or a desktop computer via the SentryMDU Administrative website.

The screens below show how to access your subscription account on a mobile device.



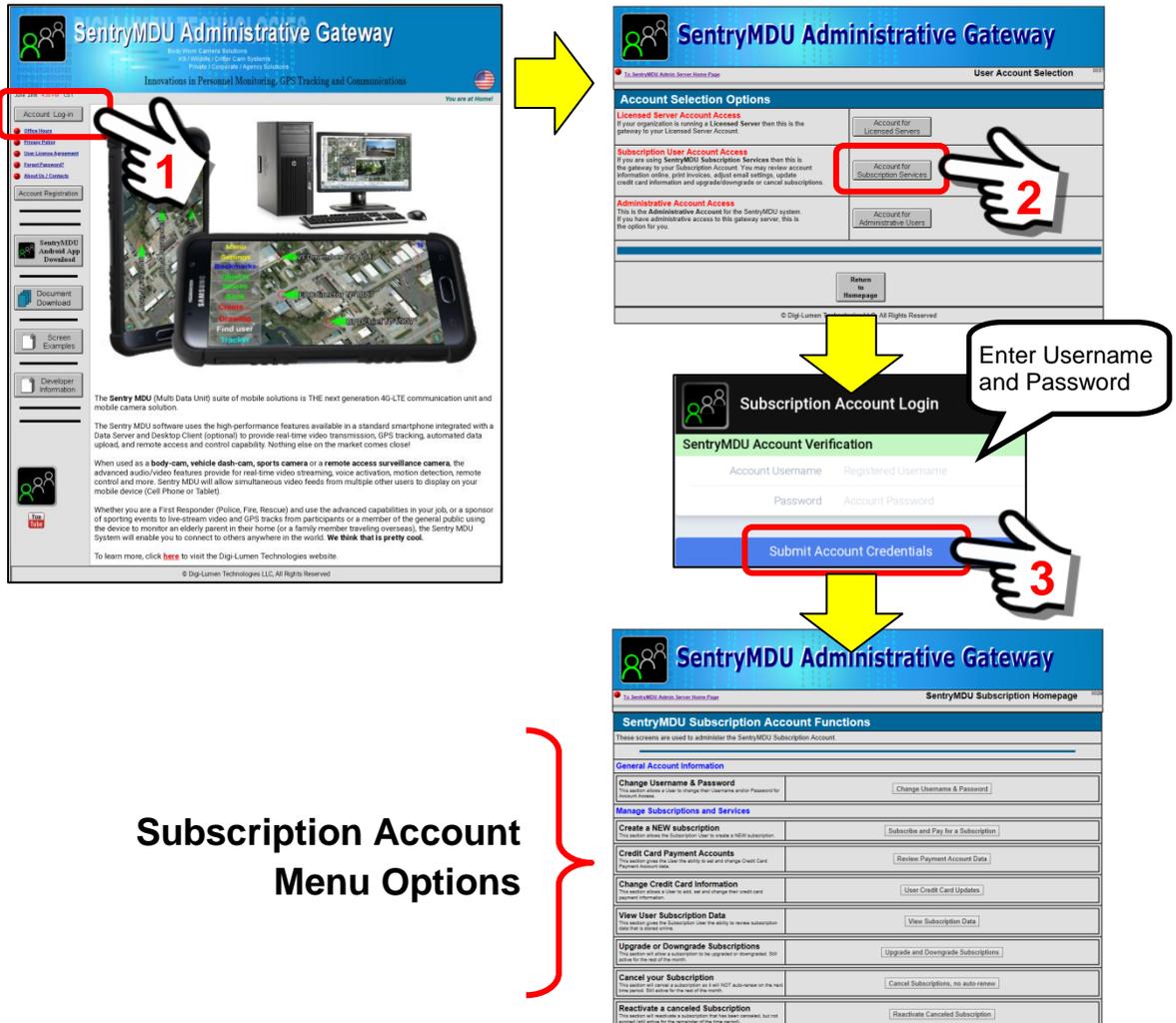
The "Login Panel" for a Subscription Account will look the same for both a Mobile Device and a Desktop Computer. However, the Menu Option screens will look different. Since the mobile device has a smaller screen, it will not have as much detail as the larger screens. Examples are shown below.

**Access to a Subscription Account on a mobile device**



The mobile interface shows a "Subscription Account Login" screen with fields for "Account Username" and "Password" (labeled "Registered Username" and "Account Password" respectively). A red box highlights the "Submit Account Credentials" button, with a hand icon pointing to it and the number "1". A speech bubble above says "Enter Username and Password". A yellow arrow points to the "Subscription Account Menu Options" section, which is a list of menu items on the "SentryMDU Administrative Gateway" page. A red bracket groups these options: "Change Username & Password", "Manage Subscriptions and Services", "Create a NEW Subscription", "Credit Card Payment Accounts", "Change Credit Card Information", "View User Subscription Data", "Upgrade or Downgrade Subscriptions", "Cancel your Subscription", and "Reactivate a canceled Subscription".

**Access to a Subscription Account on a Desktop Computer**



The desktop interface starts with the "SentryMDU Administrative Gateway" home page. A red box highlights the "Account Login" link in the top left navigation menu, with a hand icon pointing to it and the number "1". A yellow arrow points to the "User Account Selection" page, where a red box highlights the "Account for Subscription Services" button, with a hand icon pointing to it and the number "2". A speech bubble above says "Enter Username and Password". A yellow arrow points to the "Subscription Account Login" screen, which is identical to the mobile version. A red box highlights the "Submit Account Credentials" button, with a hand icon pointing to it and the number "3". A yellow arrow points to the "SentryMDU Subscription Account Functions" page, which is a detailed menu of options. A red bracket groups these options: "Change Username & Password", "Manage Subscriptions and Services", "Create a NEW subscription", "Credit Card Payment Accounts", "Change Credit Card Information", "View User Subscription Data", "Upgrade or Downgrade Subscriptions", "Cancel your Subscription", and "Reactivate a canceled Subscription".

**Subscription Account Menu Options**

## Registering a subscription account on a Mobile Device

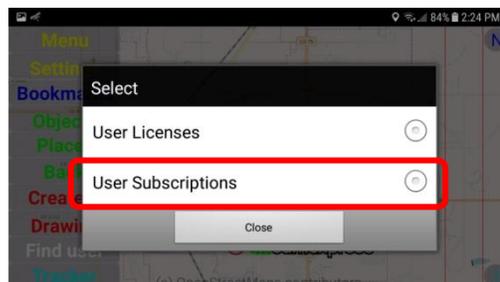
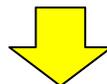
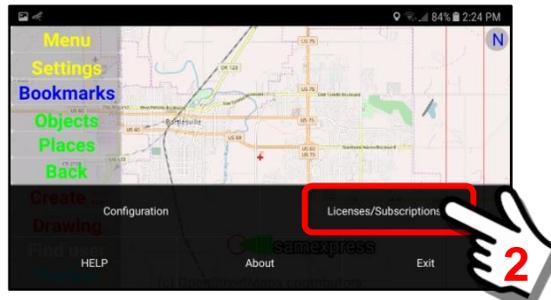
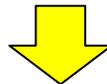
To access the subscription feature, you must first “register” an account on our SentryMDU Administrative Server and set up a payment method (ie credit card) so you can pay for the subscription. The use of subscriptions is “optional”.

The following list will describe the steps.

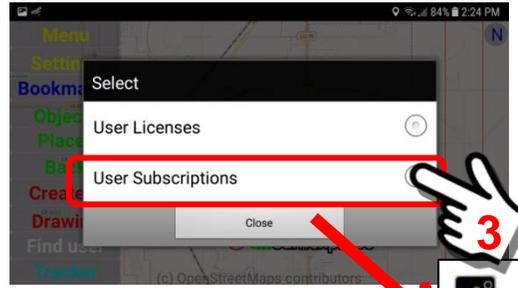
### 1. **Open the Menu Panel and select the “Licenses/Subscriptions” Button**

When you select the **User Subscriptions** option from the select box, the system will check to see if you have an existing Subscription Account. If you do NOT have an existing account, the system will provide a set of screens where you can register for a Subscription Account.

Navigate to the **User Subscriptions** option in the Select Box.



2. **Select the User Subscriptions option**  
 Click on the “User Subscriptions” option button.



This registration panel will only display if your “User” (ie User Profile) has NOT previously registered an online account.

### Subscription Account Registration

**Cancel Account Registration** **Cancel**

- Information required to create an Account**  
 To create a SentryMDU online account, you must install the SentryMDU mobile App on a device and you must “register” that device (registration is free). The account creation process will need the information that is assigned to the device. If you need help see the SentryMDU Mobile Device User Guide for details.
- Online Access Registration**  
 This panel will allow you to establish a Username/Password pair that you may use to access and change account information online.
- Upgrade, Downgrade and Cancel Subscriptions**  
 You may upgrade, downgrade or cancel subscriptions from this account. You may access this account from your mobile device or our website via a desktop computer.
- Credit Card Data**  
 Once your account is created, you will have the option to create a credit card profile. If you choose to do this (optional) you will be connected to an online payments processor (Stripe.com). You will provide THEM with the necessary information to establish a credit card profile account. THEY will handle all credit card transactions on THEIR servers in compliance with banking regulations (PCI Compliance Requirement). They send us an acknowledgement when a credit card charge is successful.

By tapping “Continue”, you accept our Terms of Service, Privacy Policy and EULA. These documents are available on our website.

#### General Account Information

Organization Name	Org Name (optional)
Contact First Name	Person First Name
Contact Last Name	Person Last Name
Address of Contact	Address Line 1
Address Line 2	Address Line 2 (optional)
City	Your City
State or Province	Your State
Postal Code	ZIP or Postal Code
Country	United States ▼
General Contact Email	jane.doe@example.com
Confirmation Email	jane.doe@example.com

#### Create Account Login Credentials

Passwords must be between 8 and 25 characters and are case sensitive (alex1234abc is different from Alex1234ABC). Passwords must start with a LETTER and may contain characters, numbers and underscore. The password does NOT expire.

New Account Name	Single word, 8-20 characters
Password	8-25 characters
Confirm Password	8-25 characters

**Continue Account Creation**

You will receive an email confirmation of your registration sent to the Confirmation email address entered above.

General contact information of the account user

Create a Username / Password for accessing your online Subscription Account

### 3. Fill out the Subscription Account Registration form

Fill out the Form. When finished, click the “Continue Account Creation” Button to continue. You will have a chance to review your entries before the final submit.

When you establish an account “Login” name, you may use the same username as your mobile device ... or a different name. We recommend a different name. You will have options to change BOTH the Username and Password of this Subscription Account, as you desire.

**Subscription Account Registration**

Cancel Account Registration Cancel

- Information required to create an Account**  
To create a SentryMDU online account, you must install the SentryMDU mobile App on a device and you must “register” that device (registration is free). The account creation process will need the information that is assigned to the device. If you need help see the SentryMDU Mobile Device User Guide for details.
- Online Access Registration**  
This panel will allow you to establish a Username/Password pair that you may use to access and change account information online.
- Upgrade, Downgrade and Cancel Subscriptions**  
You may upgrade, downgrade or cancel subscriptions from this account. You may access this account from your mobile device or our website via a desktop computer.
- Credit Card Data**  
Once your account is created, you will have the option to create a credit card profile. If you choose to do this (optional) you will be connected to an online payments processor (Stripe.com). You will provide THEM with the necessary information to establish a credit card profile account. THEY will handle all credit card transactions on THEIR servers in compliance with banking regulations (PCI Compliance Requirement). They send us an acknowledgement when a credit card charge is successful.

By tapping “Continue”, you accept our Terms of Service, Privacy Policy and EULA. These documents are available on our website.

**General Account Information**

Organization Name	My Company
Contact First Name	Will
Contact Last Name	Benito
Address of Contact	123 Any Street
Address Line 2	Address Line 2 (optional)
City	Tulsa
State or Province	Oklahoma
Postal Code	72456
Country	United States
General Contact Email	WillBenito@mail.com
Confirmation Email	Benito@mail.com

**Create Account Login Credentials**

Passwords must be between 8 and 25 characters and are case sensitive (alex1234abc is different from Alex1234ABC). Passwords must start with a LETTER and may contain characters, numbers and underscore. The password does NOT expire.

New Account Name	Teamleader3s
Password	.....
Confirm Password	.....

Continue Account Creation

You will receive an email confirmation of your registration to the Confirmation email address entered above.

When you establish an account “Login” name, you may use the same username as your mobile device ... or a different name.

**4. Review data entry ... submit to create new account**

This panel will provide a review of the data you entered. If you need to correct something, use the “Back” Button at the top right side of the panel to return to the previous screen.

**Important Note:** Make a note of your password and store in a secure place. Passwords do NOT expire and are encrypted on our Servers. If you lose your password, we cannot help you.

When you are ready to proceed, click the “Continue to Finalize Account Registration” Button at the bottom of the panel.

**Subscription Account Registration**

Cancel Account Registration

Go back to previous screen

**Review the Information Below**  
The information below will be used to create your Subscription Account. Please make sure it is correct.

If this information looks okay, you will be completing the Account Registration. If you QUIT before completing the next step, you will have to start over.

**General Account Information**

Organization Name	My Company
Contact First Name	Will
Contact Last Name	Benito
Address of Contact	123 Any Street
Address Line 2	
City	Tulsa
State or Province	Oklahoma
Postal Code	72456
Country	US
General Contact Email	WillBenito@mail.com
Confirmation Email	Benito@mail.com

**Account Login Credentials**

New Account Name	Teamleader3s
Password	*****

You will receive an email confirmation of your registration the Confirmation email address entered above.

You will receive a confirmation email of your registration.

### 5. Successful registration of a Subscription Account

When you submit the Registration Form, the system will check the data you entered for errors and incorrect formatting. In addition, your Username must be “unique” in our system ... if someone else has already selected that Username, you will be prompted to choose another name.

If all is well, you will see the following panel.

**Subscription Account Registration**

**Account Login Credentials**

New Account Name: Teamleader3s

Password: \*\*\*\*\*

**General Account Information**

Organization Name: My Company

Account Contact Name: Will Benito

**Login to Account** **Get Subscription**

**Next Steps after Registration**  
You have now created an online account that will enable you to login and manage any SentryMDU Subscriptions that you may have in the future.

You may also select and pay for a subscription NOW by clicking on the **Get Subscription** button shown above.

To access your account, go to the Account Login Button on your Mobile Device or the button located on the left side of the SentryMDU Administrative Server website homepage.

An email has been sent confirming your registration.

### 6. Next steps after Subscription Account registration

Upon a successful initial Account Registration, you will be presented with two options ... (1) Go to the Account Login Screen, (2) Sign up for a subscription.

The diagram illustrates the user's next steps after registration. A red arrow points from the **Login to Account** button in the registration form to the **Subscription Account Login** screen. Another red arrow points from the **Get Subscription** button to the **SentryMDU Administrative Gateway** page, which displays subscription options and pricing tables.

**Subscription Account Login**

**SentryMDU Account Verification**

Account Username: Teamleader3s

Password: Account Password

**Submit Account Credentials**

**SentryMDU Administrative Gateway**

**SentryMDU Subscription Options**

Return to Account Login Page **Return**

Go back to previous screen **Back**

**Enhanced Services Pricing Tables**

Level 1 Access	Level 2 Access	Level 3 Access
\$ 4.99 / month	\$ 9.99 / month	\$ 14.99 / month
6,000 Satellite Tiles	12,000 Satellite Tiles	24,000 Satellite Tiles
100MB Server Storage	200MB Server Storage	500MB Server Storage
500MB Bandwidth	1GB Bandwidth	2GB Bandwidth
<b>Subscribe</b>	<b>Subscribe</b>	<b>Subscribe</b>

The following payment methods are accepted

VISA MASTERCARD AMERICAN EXPRESS DISCOVER PAYCOMET

## 7. Sign up for a Subscription

In this example, we are selecting to sign up for a subscription option NOW. We could do it later, by logging into our Subscription Account and signing up for a new subscription ... but since we registered in order to get a subscription, we will do it now.

Select the "Get Subscription" Button.

Review the available subscription options and click the "Subscribe" Button for the subscription you want.

The image shows two screenshots from the SentryMDU Administrative Gateway. The top screenshot is the "Subscription Account Registration" page, which has two main sections: "Account Login Credentials" and "General Account Information". The "Account Login Credentials" section contains fields for "New Account Name" (Teamleader3s) and "Password" (\*\*\*\*\*). The "General Account Information" section contains fields for "Organization Name" (My Company) and "Account Contact Name" (Will Benito). At the bottom of this section are two green buttons: "Login to Account" and "Get Subscription". A red box highlights the "Get Subscription" button, and a hand icon with the number 6 points to it. Below the registration form is a "Next Steps after Registration" section with instructions on how to use the account and how to pay for a subscription. The bottom screenshot is the "SentryMDU Subscription Options" page. It features a "Return to Account Login Page" button and a "Go back to previous screen" button. Below these are "Enhanced Services Pricing Tables" with three columns: "Level 1 Access", "Level 2 Access", and "Level 3 Access". Each column lists pricing and service details. A red bracket on the left side of the pricing table is labeled "Three (3) subscription options are presented". At the bottom of each pricing table is a "Subscribe" button. A red box highlights the "Subscribe" button for Level 1 Access, and a hand icon with the number 7 points to it. A callout box next to this button says: "Unless you KNOW what you want, we suggest all new Users start off with **Level 1 Access.**". At the bottom of the page, there is a section titled "The following methods are accepted" with logos for VISA, MasterCard, Discover, American Express, and another logo.

**Subscription Account Registration**

**Account Login Credentials**

New Account Name: Teamleader3s

Password: \*\*\*\*\*

**General Account Information**

Organization Name: My Company

Account Contact Name: Will Benito

**Next Steps after Registration**

You have now created an online account that will enable you to login and manage any SentryMDU Subscriptions that you may have.

You may also select and pay for a subscription NOW by clicking on the Get Subscription button shown above.

To access your account, go to the Account Login Button on the Administrative Server website homepage.

An email has been sent confirming your account creation.

**SentryMDU Administrative Gateway**

**SentryMDU Subscription Options**

Return to Account Login Page **Return**

Go back to previous screen **Back**

**Enhanced Services Pricing Tables**

Level 1 Access	Level 2 Access	Level 3 Access
\$ 4.99 / month	\$ 9.99 / month	\$ 14.99 / month
6,000 Satellite Tiles	12,000 Satellite Tiles	24,000 Satellite Tiles
100MB Server Storage	200MB Server Storage	500MB Server Storage
500MB Bandwidth	1GB Bandwidth	2GB Bandwidth
<b>Subscribe</b>	<b>Subscribe</b>	<b>Subscribe</b>

The following methods are accepted

VISA, MasterCard, Discover, American Express

Three (3) subscription options are presented

Unless you KNOW what you want, we suggest all new Users start off with **Level 1 Access.**

**8. Enter your Credit Card information**

The SentryMDU Payment Panel will be displayed. Enter your credit card information and an email address where you would like a “confirming email” to be sent. All fields are required (except Postal Code).

For those countries that do NOT have postal codes (ZIP), leave this field blank.

When finished, click on the subscription price at the bottom of the form.

**SentryMDU Administrative Gateway**  
SentryMDU Payment Panel

Return to Subscription Login [Return](#)

Go back to previous screen [Back](#)

**Credit Card Account Information**

Name on Card	Jane Doe
Card Number	1234 1234 1234 1234
Expiry Date	MM / YY
CVC Code	CVC
Postal code (ZIP)	90210
Country	United States
Email	jane.doe@example.com

**\$ 4.99 per Month**

The following payment methods are accepted

VISA, MASTERCARD, DISCOVER, AMERICAN EXPRESS

You will receive an email confirmation of your purchase sent to the email address entered above.

**SentryMDU Administrative Gateway**  
SentryMDU Payment Panel

Return to Subscription Login [Return](#)

Go back to previous screen [Back](#)

**Credit Card Account Information**

Name on Card	Will Benito
Card Number	4242 4242 4242 4242 <b>VISA</b>
Expiry Date	12 / 21
CVC Code	123
Postal code (ZIP)	72456
Country	United States
Email	Benito@mail.com

**\$ 4.99 per Month**

The following payment methods are accepted

VISA, MASTERCARD, DISCOVER, AMERICAN EXPRESS

You will receive an email confirmation of your purchase sent to the email address entered above.

Fill out the Credit Card information form

This field is OPTIONAL. However, if your BANK requires the entry of a Postal Code, then your credit card will be declined if you do not enter one (most Banks require this).

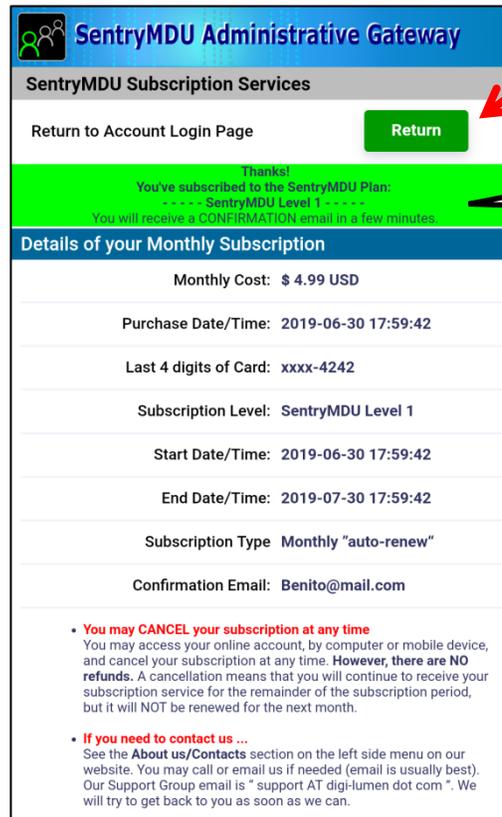
8

### 9. Credit card information is validated and processed

The validation process may take anywhere from a few seconds to a minute or more depending on your internet speed and your location in the world.

Do not “re-click” the button a second time, lots of things are happening in the background ... you will get an error message if things are not working correctly.

If the transaction is successful (card is charged and subscription is validated) you will see the following summary panel.



Click this button if you want to go to your online account and review card and subscription details.

Note that transaction was successful

Summary of the SentryMDU Subscription you have purchased

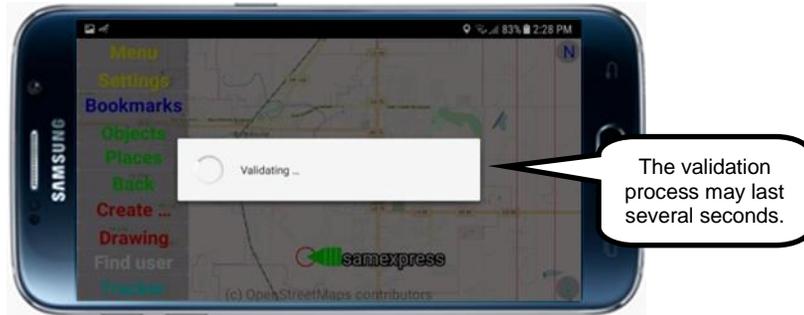
### 10. Close the Browser Panel

To “activate” the subscription you have just purchased, close the screen panel. Generally, clicking the “back” button on your mobile device will do it.



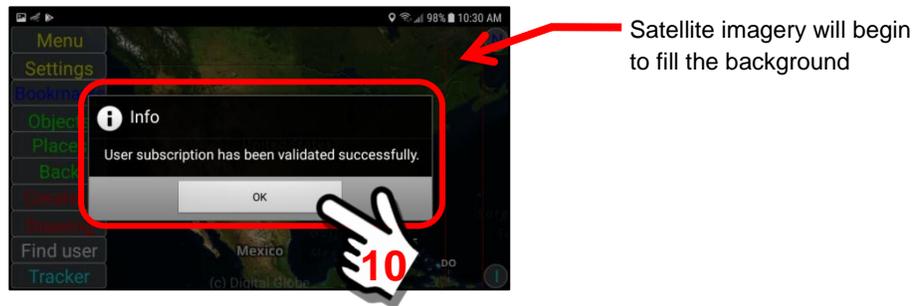
**11. Subscription validation and return to Main Map Screen**

The mobile device will contact the SentryMDU Administrative Server and receive validation that a successful transaction has occurred. Depending on your internet speed and location, this action may take 10 -20 seconds.



**12. Dialog box displayed after successful validation**

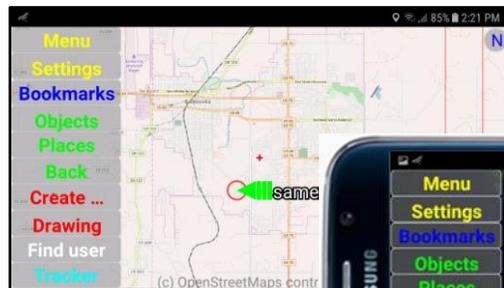
Upon subscription validation and contact with the SentryMDU Administrative Server, the system will display a pop-up dialog box. Click "OK" to continue.



**13. The system will install satellite imagery for the current map location.**

Satellite imagery will now be installed on the device and the Main Map Screen will change from an OpenStreetMaps street view map to satellite images. In addition, the Data Server will be configured for the data storage and data streaming parameters you selected.

**Street Map Screen**



**Satellite Map Screen**



## Registering a subscription account on a Desktop Computer

You may also use a Desktop Computer (internet Browser) to “register” an account on our SentryMDU Administrative Server. The use of subscriptions is “optional”. This example illustrates how to register for an “online” Subscription Account via a Desktop Computer.

Use your Internet Browser (ie MS Edge, Firefox, etc.) and navigate to the secure website of the SentryMDU Administrative Server.

<https://sentrymdu01.sentrymdu.com>



DLT SentryMDU  
Administrative Server  
“secure” website

Screen of  
Desktop Computer

In this example, we will use the **SentryMDU Administrative Server** website to register for a Subscription Account. Click on the “Account Registration” Button.



A page will appear for you to accept our Privacy Policy and EULA (End User License Agreement). Select “I Agree” to continue.

This will open a webpage where you can register for a Subscription User Account.

Click on the “Account for Subscription Services” Button.

**SentryMDU Administrative Gateway**

To SentryMDU Admin Server Home Page **User Account Registration**

### User Account Registration Options

**Registration for a Licensed Server Account**  
If your organization is running a Licensed Server then this is the type of account access that you will need. The Administrative Contact for your organization will provide you with a "Registry Key" that you will need to complete the account registration.

**Registration for a Subscription User Account**  
If you are using SentryMDU Subscription Services then this is the type of account access that you will need. You will need the "Username" and "UserID Code" from your mobile device to complete the account registration.

**Account for Licensed Servers**

**Account for Subscription Services**

**Return to Homepage**

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Account for  
Subscription Services

The “Subscription Account Registration” panel will be displayed.

Follow the instructions to register for an online account.

**SentryMDU Administrative Gateway**

To SentryMDU Admin Server Home Page **Subscription Account Registration**

### Subscription Account Registration

- Information required to create an Account**  
To create a SentryMDU online account, you must install the SentryMDU mobile App on a device and you must "register" that device (registration is free). You will need the **Username** from the mobile device and the **UserID** assigned to the device. We have included these as legends in our registration process in an attempt to keep out the robo-bots trolling the internet - we hope you understand. If you need help see the SentryMDU Mobile Device User Guide for details.
- Online Access Registration**  
This series of screens will allow you to establish a Username/Password pair that you may use to access and review account information online. You will be able to review past history on your account, print invoices and adjust the settings on how often you get emails from us.
- Upgrade, Downgrade and Cancel Subscriptions**  
You may upgrade, downgrade or cancel subscriptions from this account. Of course, you may also do this from your mobile device.
- User Contact Information**  
We will ask for name and address information for the User that will be associated with this Account.
- Credit Card Data**  
Once your account is created, you will have the option to create a credit card profile. If you choose to do this (optional) you will be connected to an online payments processing company (Stripe.com). You will provide THEM with the necessary information to establish a credit card profile account. THEY will handle all credit card transactions on THEIR servers in compliance with banking regulations (PCI Compliance Requirements). They send us an acknowledgement when a credit card charge is successful.

**SentryMDU App install verification**

SentryMDU Username from YOUR Mobile Device  (required)

SentryMDU UserID code from YOUR Mobile Device  (required)

**Payment Gateway Account Information**

Please Note: When you set up a NEW Subscription Payment Account, you will need to make a note of your Username and Password so you will be able to gain access to the system in the future.

**Contact Information for your SentryMDU Account**

1	Name of Organization setting up the Payment Account	<input type="text"/>	(optional)
2	First and Last Name of Person that will be the Contact	<input type="text"/>	(required)
3	Address of Contact (Street Address)	<input type="text"/>	Address Line 1
4	Additional address data for Contact (ie Suite No, Floor, etc.)	<input type="text"/>	Address Line 2
5	City	<input type="text"/>	
6	State or Province	<input type="text"/>	
7	Postal Code	<input type="text"/>	(required)
8	Country (required so we can pay taxes to your Country)	United States of America	(required)
9	General Contact Email Address	<input type="text"/>	(optional)
10	Email Address for automatic purchase confirmation	<input type="text"/>	(required)

**Create a Username/Password so you can access your SentryMDU Account**

Passwords must be between 8 and 25 characters and are case sensitive (e.g. Alex1234ABC is different from alex1234abc). Passwords must start with a LETTER and can contain characters, numbers and underscore. The password does NOT expire. If you lose it, we cannot help you since it is encrypted. Store in a secure place.

11	SentryMDU Payment Account Login Name (single word, no spaces)	<input type="text"/>	(8 characters minimum, 20 char max)
12	User Password (password will be encrypted after entry). Enter two times	<input type="password"/>	(8-25 chars)

When you are finished with the FORM, click on the SUBMIT button BELOW. The system will process your entry.

When you have completed the data entry then click this BUTTON to the right:

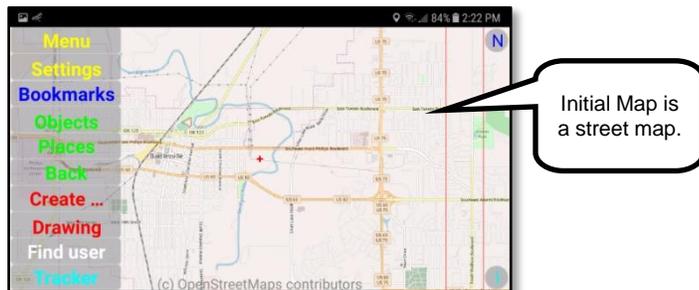
**Return to Homepage**

## Create a Subscription using the online Subscription Account

This example assumes that you are a registered User and that you have already established an “online” Subscription Account ... **but not yet signed up for a subscription.**

The SentryMDU App is free to download and install. We provide it for “free” so you may install it, play with it, look at some of the screens and decide if this is something you want to use. If you have played with it for a while, but now want a subscription, follow these directions.

After initial installation and registration you will notice that the Main Map screen displays a “Street Map” (using OpenStreetMap data) and not a satellite image.



We provide the OpenStreetMap views as the default display **BEFORE** you select one of the following options:

1. Do nothing and remain an Anonymous User (reduced feature set since you are not part of a group Security Domain).
2. Register a Username but do NOT purchase a subscription. Maps will be OpenStreetMaps Data and not satellite imagery. No data storage or streaming.
3. **Purchase an In-App Subscription.**
4. Sign up with a Licensed Server run by your Organization.

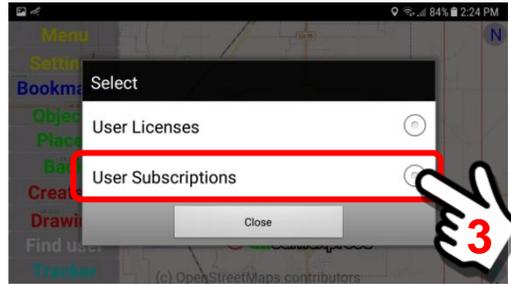
In this example, we are going to illustrate the screens that will be displayed during the Subscription Process (Item #3 above).

### 1. Open the Menu Panel and select the “Licenses/Subscriptions” Button



**2. Select the “User Subscriptions” Option**

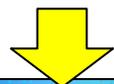
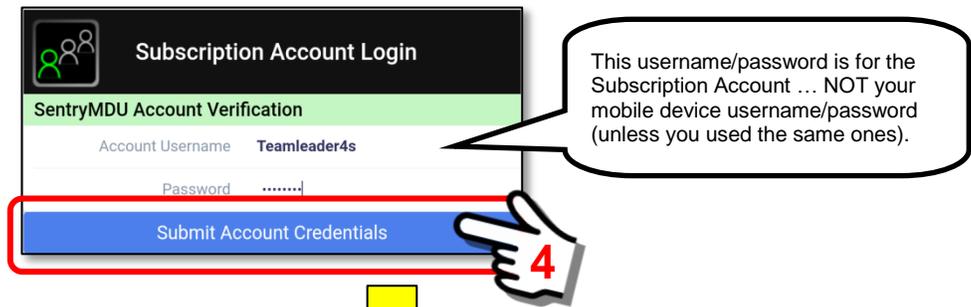
A pop-up panel will appear. Select the “User Subscriptions” option.



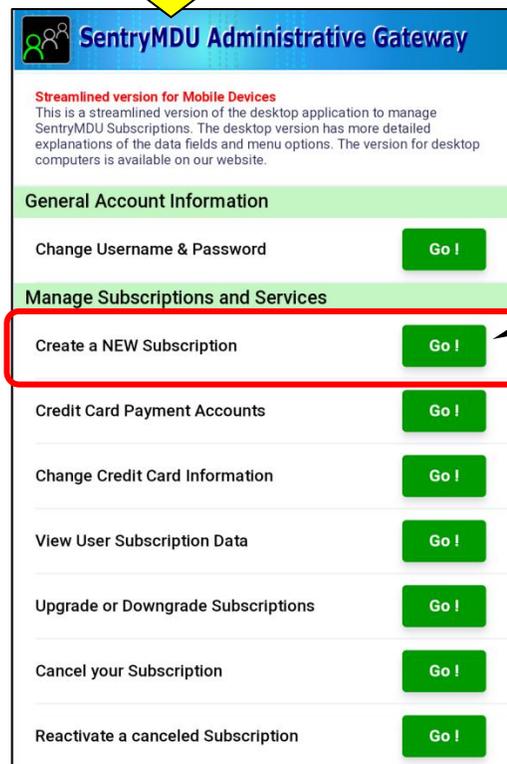
**3. The “Subscription Account Login” panel will appear**

A pop-up panel will appear on the mobile device. The “Account Username” data field will be pre-filled in for your mobile device (ie Teamleader4s).

Enter your Subscription Account password.  
Submit the account credentials.



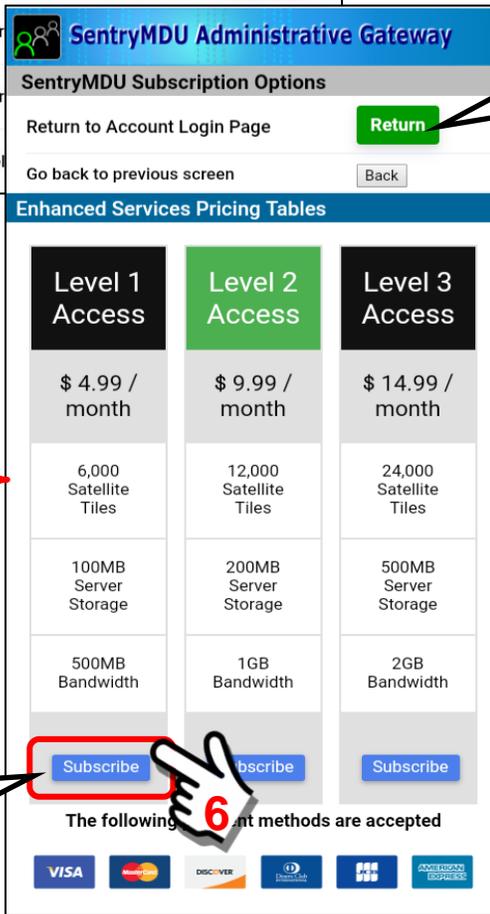
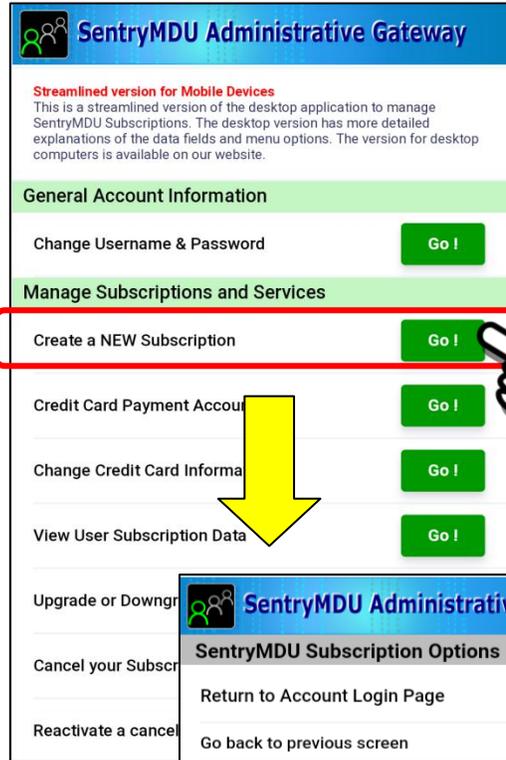
Subscription Account Management Panel (for a mobile device)



4. Click on the "Create a NEW Subscription" menu item

To display the available subscriptions, click the "Go!" Button.

Review the available subscription options and click the "Subscribe" Button for the subscription you want



If you want to ABORT the process, you can return to the Menu Page.

Unless you KNOW what you want, we suggest all new Users start off with **Level 1 Access.**

Three (3) subscription options are presented

**5. Enter your Credit Card information**

The SentryMDU Payment Panel will be displayed. Enter your credit card information and an email address where you would like a “confirming email” to be sent. All fields are required (except Postal Code).

For those countries that do NOT have postal codes (ZIP), leave this field blank.

When finished, click on the subscription price at the bottom of the form.

**SentryMDU Administrative Gateway**  
SentryMDU Payment Panel

Return to Subscription Homepage [Return](#)

Go back to previous screen [Back](#)

**SentryMDU User Verification**

SentryMDU Username: TeamLeader4s  
UserID Code: 261  
SentryMDU Email: jane.doe@example.com

**Credit Card Account Information**

Name on Credit Card: Jane Doe  
Card Number: 1234 1234 1234 1234  
Expiry Date: MM / YY  
CVC Code: CVC  
Postal code (ZIP): 90210  
Country: United States

\$ 4.99 per Month

The following payment methods are accepted

VISA, MASTERCARD, DISCOVER, AMERICAN EXPRESS, PULSE

You will receive an email confirmation of your purchase sent to the email address entered above.

If you want to ABORT the process, you can return to the Menu Page.

This field is OPTIONAL. However, if your BANK requires the entry of a Postal Code, then your credit card will be declined if you do not enter one (most Banks require this).

Fill out the Credit Card information form

**SentryMDU Administrative Gateway**  
SentryMDU Payment Panel

Return to Subscription Homepage [Return](#)

Go back to previous screen [Back](#)

**SentryMDU User Verification**

SentryMDU Username: TeamLeader4s  
UserID Code: 261  
SentryMDU Email: WillyD@mail.com

**Credit Card Account Information**

Name on Credit Card: Willy Dean  
Card Number: 4242 4242 4242 4242 VISA  
Expiry Date: 12 / 21  
CVC Code: 456  
Postal code (ZIP): 75154  
Country: United States

\$ 4.99 per Month

The following payment methods are accepted

VISA, MASTERCARD, DISCOVER, AMERICAN EXPRESS, PULSE

You will receive an email confirmation of your purchase sent to the email address entered above.



## 6. Credit card information is validated and processed

The validation process may take anywhere from a few seconds to a minute or more depending on your internet speed and your location in the world.

Do not “re-click” the button a second time, lots of things are happening in the background ... you will get an error message if things are not working correctly.

If the transaction is successful (card is charged and subscription is validated) you will see the following summary panel.

Click this button if you want to go to your online account and review card and subscription details.

Note that transaction was successful

Summary of the SentryMDU Subscription you have purchased

Details of your Monthly Subscription	
Monthly Cost:	\$ 4.99 USD
Purchase Date/Time:	2019-07-01 15:05:17
Last 4 digits of Card:	xxxx-4242
Subscription Level:	SentryMDU Level 1
Start Date/Time:	2019-07-01 15:05:17
End Date/Time:	2019-08-01 15:05:17
Subscription Type	Monthly "auto-renew"
Confirmation Email:	WillyD@mail.com

- **You may CANCEL your subscription at any time**  
You may access your online account, by computer or mobile device, and cancel your subscription at any time. **However, there are NO refunds.** A cancellation means that you will continue to receive your subscription service for the remainder of the subscription period, but it will NOT be renewed for the next month.
- **If you need to contact us ...**  
See the **About us/Contacts** section on the left side menu on our website. You may call or email us if needed (email is usually best). Our Support Group email is "support AT digi-lumen dot com ". We will try to get back to you as soon as we can.

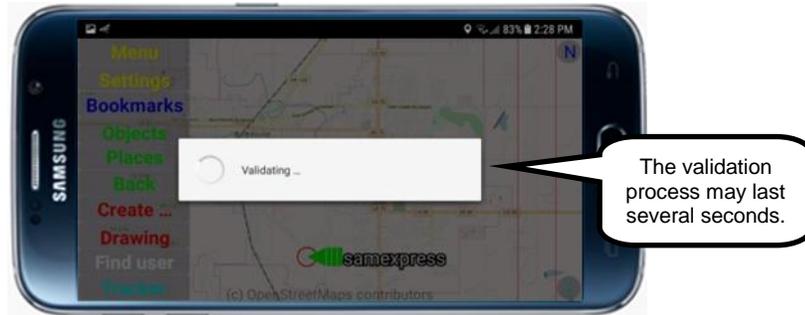
## 7. Close the Browser Panel

To “activate” the subscription you have just purchased, close the screen panel. Generally, clicking the “back” button on your mobile device will do it.



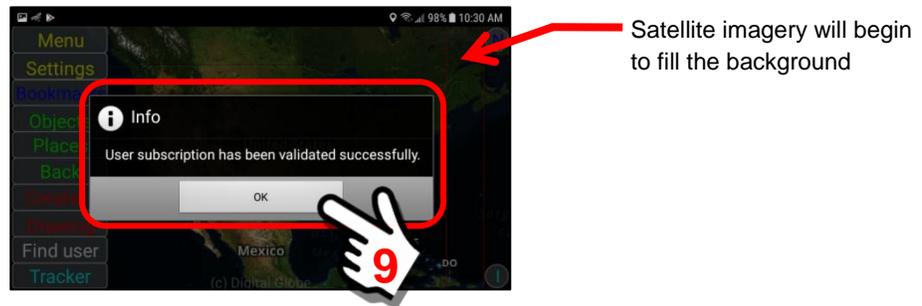
**8. Subscription validation and return to Main Map Screen**

The mobile device will contact the SentryMDU Administrative Server and receive validation that a successful transaction has occurred. Depending on your internet speed and location, this action may take 10 -20 seconds.



**9. Dialog box displayed after successful validation**

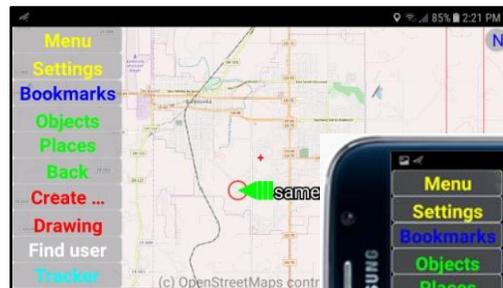
Upon subscription validation and contact with the SentryMDU Administrative Server, the system will display a pop-up dialog box. Click "OK" to continue.



**10. The system will install satellite imagery for the current map location.**

Satellite imagery will now be installed on the device and the Main Map Screen will change from an OpenStreetMaps street view map to satellite images. In addition, the Data Server will be configured for the data storage and data streaming parameters you selected.

**Street Map Screen**



**Satellite Map Screen**



### 3.9. Managing Subscription Accounts

#### Overview:

The SentryMDU App includes a Subscription Management feature that provides a set of screens for managing subscriptions and credit card information associated with subscriptions. **The purchase of a subscription** (for enhanced satellite imagery, data storage and streaming bandwidth) **is optional and not required to use the SentryMDU App**. This section will describe the features and menu options of the Subscription Management Panel.

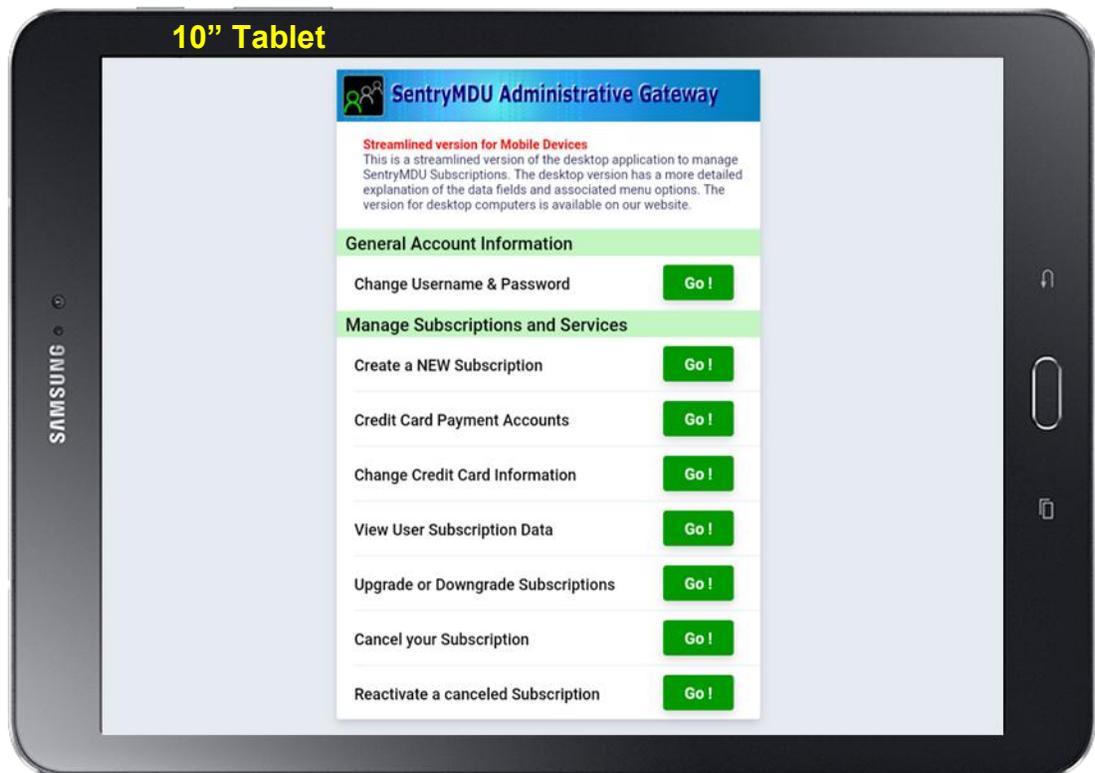
The **Subscription Management Panel** has a series of buttons that provides the following options.

1. Change Username/Password
2. Create a NEW Subscription
3. Credit Card Payment Accounts
4. Change Credit Card Information
5. View User Subscription Data
6. Upgrade or Downgrade Subscriptions
7. Cancel your Subscription
8. Reactivate a canceled subscription

#### Layout of the Subscription Management Panel:

In this example, we will focus on the Subscription Management Panel as displayed on a mobile device (phone or tablet). The same features (menu items) are provided on our website if you would prefer to use a desktop computer.

The picture below shows the **Subscription Management Panel** on a 10" Tablet.



## Review of Subscription Management Feature options:

### 1. Panel rotation for Portrait or Landscape Mode

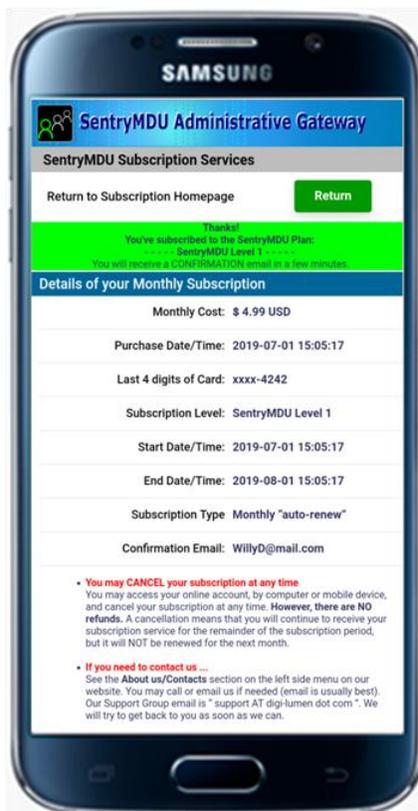
The Subscription Management Panel is designed to work on a variety of mobile devices of varying screen sizes. This includes the ability to display in either a "Portrait" or "Landscape" screen orientation.

**Important Display Note:** If you experience "word wrap" where text wraps due to narrow screen width, adjust your display "font size" to a smaller number and things should display properly (small to medium font size is best). Your mobile device must support HTMLv5 for these features to work (Android ver 7.1+ support HTMLv5).

#### Example of Landscape Mode



#### Example of Portrait Mode



**2. Navigate to the Subscription Management Panel “Homepage”**

The Subscription Management Panel is accessed from the Main Map Screen panel.

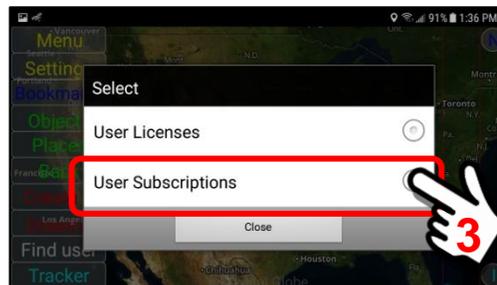
At the Main Menu Screen, click on the **Menu Button**.



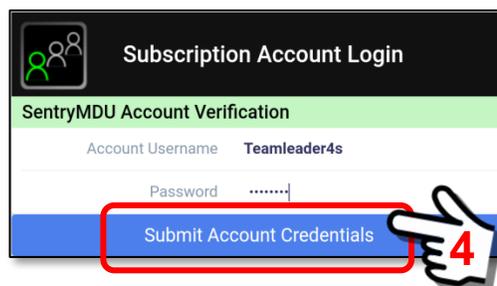
At the Main Menu Block, select the **Licenses/Subscriptions** option.



A pop-up “Select” Box will appear in the center of the screen. Click on the **“User Subscriptions”** option.



Log in to your Subscription Management Account.



### 3. **Subscription Management Panel “Homepage”**

The “Subscription Account Homepage” panel will be the homepage panel for all functions. As you execute menu items, you will have “return” options to return to this homepage panel.

The screenshot shows the SentryMDU Administrative Gateway interface. At the top, there is a blue header with the logo and title. Below the header, a red notice states: "Streamlined version for Mobile Devices. This is a streamlined version of the desktop application to manage SentryMDU Subscriptions. The desktop version has more detailed explanations of the data fields and menu options. The version for desktop computers is available on our website." The main content area is divided into two sections: "General Account Information" and "Manage Subscriptions and Services". Each section contains a list of actions with a corresponding green "Go !" button.

General Account Information	
Change Username & Password	Go !

Manage Subscriptions and Services	
Create a NEW Subscription	Go !
Credit Card Payment Accounts	Go !
Change Credit Card Information	Go !
View User Subscription Data	Go !
Upgrade or Downgrade Subscriptions	Go !
Cancel your Subscription	Go !
Reactivate a canceled Subscription	Go !

### 4. **Change Username and/or Password**

This option allows you to change the Subscription Account Username OR Password OR both. This screen will “default” to use your current Username as the Account Login Name. If you make a change, the system will return you to the Login Panel where you must log in again under your NEW name.

The screenshot shows the SentryMDU Administrative Gateway interface for Username/Password Administration. It features a blue header with the logo and title. Below the header, there is a grey bar with the title "Username/Password Administration" and a green "Return" button. The main content area is divided into two sections: "Account Access Information" and "Submit Username/Password Changes". The "Account Access Information" section contains a red notice about password requirements and a form with fields for Account Login Name, New Password, and Confirm Password. The "Submit Username/Password Changes" section contains a green button.

Return to Subscription Homepage [Return](#)

**Account Access Information**

Passwords must be between 8 and 25 characters and are case sensitive (alex1234abc is different from Alex1234ABC). Passwords must start with a LETTER and may contain characters, numbers and underscore. The password does NOT expire.

Account Login Name	samview19s
New Password	8-25 characters
Confirm Password	8-25 characters
Last Login Date	2019-06-25 10:15:57
Date account created	2019-06-25 10:09:06

[Submit Username/Password Changes](#)

## 5. **Create a NEW Subscription**

This is the option to create a NEW subscription. If your subscription has expired ... or you have not set up a subscription yet ... this is the place to create a new subscription.

## 6. **Credit Card Payment Accounts**

This option allows a User to update billing information for their Credit Card and other general account settings.

The following data fields are available for change

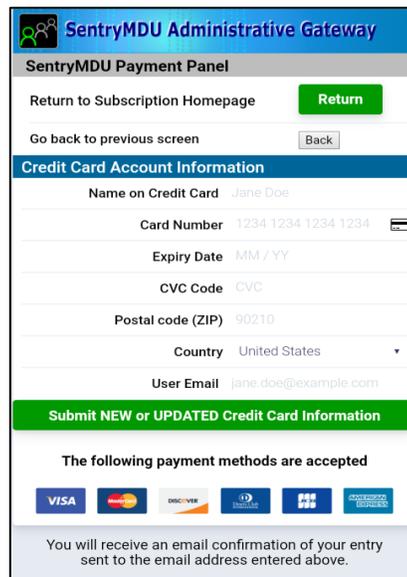
- a. Organization Name
- b. Address of Contact Person (Address Line 1)
- c. Address Line 2
- d. City
- e. State or Province
- f. Postal Code
- g. Country
- h. Device phone number
- i. General Contact Email Address
- j. Email receive settings (ie monthly, quarterly, never, etc.)

This panel does NOT allow you to change card numbers, expiration dates or CVC codes on your card ... those will be done on another panel (see below).

## 7. **Change Credit Card Information**

This option provides a “review” of the credit card information that is on file. It does NOT display a full card number (we only have the last 4 digits) or CVC code (we don't have the security code). This screen pulls data from the online Credit Card Processor that keeps the User sensitive information.

This section allows you to enter NEW credit card data, change existing data on a card or update your expiration date and CVC Code.



**SentryMDU Administrative Gateway**

**SentryMDU Payment Panel**

Return to Subscription Homepage

Go back to previous screen

**Credit Card Account Information**

Name on Credit Card Jane Doe

Card Number 1234 1234 1234 1234

Expiry Date MM / YY

CVC Code CVC

Postal code (ZIP) 90210

Country United States

User Email jane.doe@example.com

The following payment methods are accepted

VISA Mastercard DISCOVER American Express PAYPAL

You will receive an email confirmation of your entry sent to the email address entered above.

### **8. View User Subscription Data**

This menu option provides a review of your subscription. It will provide details of the subscription “level”, cost, subscription start/stop dates as well as statistics of resource usage (Tile, Storage and Streaming usage).

If a subscription is canceled, it will provide information on “who” canceled it and when.

### **9. Upgrade or Downgrade Subscriptions**

This menu option will allow you to upgrade or downgrade a subscription.

When a subscription is “upgraded”, the pro-rated time (\$\$) remaining on your current subscription is credited toward the purchase of your new subscription. The subscription start/stop periods are NOT changed. Your credit card will be charged immediately for any amounts due.

When a subscription is “downgraded”, the pro-rated time (\$\$) remaining on your current subscription is credited toward the purchase of your new subscription. The subscription start/stop periods are NOT changed. In the case of a “downgrade”, since the credit will be MORE than the cost of the “new” subscription, the credited amount will be carried over to the next months subscription payment (we do not provide refunds). Your credit card will NOT be charged on a “downgrade”. The next months subscription billing will apply the credit towards any due payments.

### **10. Cancel your Subscription**

This menu option will allow a User to CANCEL a subscription. We do not provide “refunds” on canceled subscriptions. When a User cancels a subscription, the User will still receive access to the subscribed content (Satellite imagery, Data Storage and Streaming bandwidth) for the remainder of the subscribed time period. Cancellation will stop the “auto-renew” process. At the end of the original subscribed time period, the subscription will NOT be renewed and the content access will terminate.

You may NOT cancel a Subscription ... AND THEN create a new one right away. The reason is because we do NOT provide refunds on subscriptions and you may have unexpired credits on your subscription. On a canceled subscription the user access and content is still available for the remainder of the subscribed time period. Once the time period has expired, you may create a NEW subscription.

If you have canceled your subscription by mistake, we have a Menu Item where you may “reactivate” a canceled subscription. This can only be done if you have unexpired time left on the original subscription time period.

For example, let us assume you started a subscription at the beginning of a month. About mid-month you decide to cancel the subscription so that it will

not renew automatically at the beginning of the next month. Of course, the cancellation only stops the auto-renewal ... you still have access to content. Five days before the end of the month, you have a change of mind and decide that you DO WANT TO CONTINUE with the subscription. As long as the subscription has not expired you may reactivate the subscription (and upgrade/downgrade as desired).

#### **11. *Reactivate a canceled Subscription***

This menu option allows a User to “reactivate” a canceled subscription.

If you have canceled your subscription by mistake, this Menu Item is where you may “reactivate” a canceled subscription. This can only be done if you have unexpired time left on the original subscription time period.

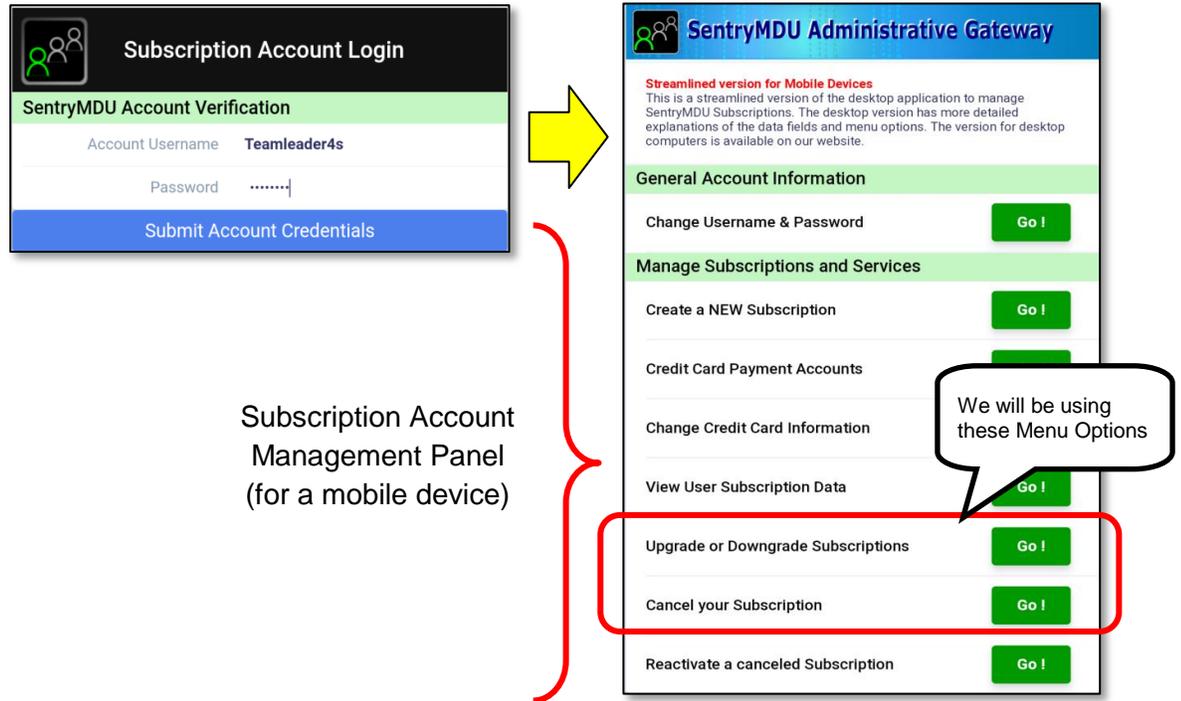
For example, let us assume you started a subscription at the beginning of a month. About mid-month you decide to cancel the subscription so that it will not renew automatically at the beginning of the next month. Of course, the cancellation only stops the auto-renewal ... you still have access to content. Five days before the end of the month, you have a change of mind and decide that you DO WANT TO CONTINUE with the subscription. As long as the subscription has not expired you may reactivate the subscription (and upgrade/downgrade as desired).

### 3.10. Upgrade/Downgrade and Cancel Subscriptions

#### Overview:

This section will describe how to upgrade, downgrade and cancel subscriptions using the Subscription Management Account. These features are available on your mobile device and/or with a Desktop Computer via the SentryMDU Administrative Website.

In this example, we will use the mobile device as our platform.



#### User Subscription Panel (Upgrade, Downgrade and Cancel):

After initial installation and registration, the Main Map Screen displays a “Street Map” (using OpenStreetMap data) and not a satellite image. The previous sections covered how to “Add” a Subscription to your mobile device if you want high resolution satellite imagery. This section will describe options to **Upgrade/Downgrade** a subscription and how to **Cancel** a subscription from your device.

The Subscription Management Panel has a series of buttons that provides the following options.

1. Change Username/Password
2. Create a NEW Subscription
3. Credit Card Payment Accounts
4. Change Credit Card Information
5. View User Subscription Data
6. Upgrade or Downgrade Subscriptions
7. Cancel your Subscription
8. Reactivate a canceled subscription

The sections below will cover the **Upgrade/Downgrade** and **Cancel** options.

**1. Upgrade / Downgrade a Subscription.**

In this example, we will assume you currently have a “Level 1” subscription and want to **UPGRADE** to a “Level 2” subscription.

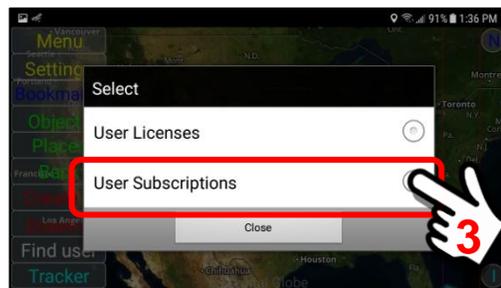
At the Main Menu Screen, click on the **Menu Button**.



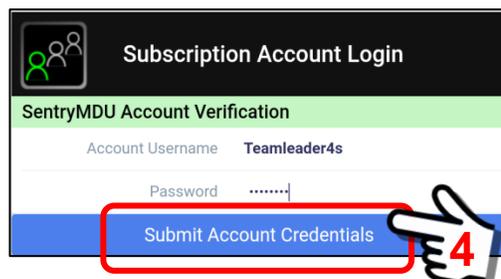
At the Main Menu Block, select the **Licenses/Subscriptions** option.



A pop-up “Select” Box will appear in the center of the screen. Click on the “**User Subscriptions**” option.



Log in to your Subscription Management Account



The Subscriptions Management Panel will be displayed.  
Locate the “Upgrade/Downgrade Subscriptions” Menu item.  
Click on the “Go!” Button.

**SentryMDU Administrative Gateway**

**Streamlined version for Mobile Devices**  
This is a streamlined version of the desktop application to manage SentryMDU Subscriptions. The desktop version has more detailed explanations of the data fields and menu options. The version for desktop computers is available on our website.

**General Account Information**

- Change Username & Password **Go!**

**Manage Subscriptions and Services**

- Create a NEW Subscription **Go!**
- Credit Card Payment Accounts **Go!**
- Change Credit Card Information **Go!**
- View User Subscription Data **Go!**
- Upgrade or Downgrade Subscriptions **Go!****
- Cancel your Subscription **Go!**
- Reactivate a canceled Subscription **Go!**

**SentryMDU Administrative Gateway**

**Subscription Upgrade / Downgrade**

Return to Subscription Homepage **Return**

**Review subscription for upgrade/downgrade**

Organization Name	My Company
Account Login Name	Teamleader4s
Cardholder Name	Willy Dean
Purchase Category	subscription
Product Description	SentryMDU Level 1
Subscription Price	\$ 4.99 /mon (auto renew)
Product Usage Limits	Tiles = 6000 /mon Storage = 100 Mb Data = 500 Mb Streaming = 500 Mb

**Select the desired Upgrade / Downgrade for your Subscription** SentryMDU Level 1 @ \$4.99/mon ▼

Last 4 digits of Card	xxxx-4242
Confirmation Email	WillyD@mail.com
Last Login Date	2019-08-06 13:20:16 UTC6
Date Account Created	2019-07-01 15:01:57 UTC6

**Subscription Dates and Features Usage**

Subscription START	2019-08-01 15:05:17 UTC6
Subscription STOP	2019-09-01 15:05:17 UTC6
Date usage checked	2019-08-06 13:09:31 UTC6
Tile Usage	65
Storage Usage	0
Streaming Usage	0
Canceled Date	

**Submit Subscription Changes**

Notice that the CURRENT Subscription has a “red” box around it.  
To CHANGE the current subscription, click to open a pop-up options menu.

A pop-up panel will appear with the available subscription options. Since you are currently in a “Level 1” Subscription, the available options are Levels 2-3.

Select the desired upgrade option from the choices.

Red Box around current subscription choice. Click to open pop-up menu options

**SentryMDU Administrative Gateway**  
Subscription Upgrade / Downgrade

Return to Subscription Homepage [Return](#)

Review subscription for upgrade/downgrade

Organization Name	My Company
Account Login Name	Teamleader4s
Cardholder Name	Willy Dean
Purchase Category	subscription
Product Description	SentryMDU Level 1
Subscription Price	\$ 4.99 /mon (auto renew)
Product Usage Limits	Tiles = 6000 /mon Storage = 100 Mb Data = 500 Mb Streaming = 500 Mb

Select the desired Upgrade / Downgrade for your Subscription

SentryMDU Level 1 @ \$4.99/mon
--------------------------------

Last 4 digits of Card: xxxx-4242  
Confirmation Email: WillyD@mail.com  
Last Login Date: 2019-08-06 13:20:16 UTC6  
Date Account Created: 2019-07-01 15:01:57 UTC6

**Subscription Dates and Features Usage**

Subscription START	2019-08-01 15:05:17 UTC6
Subscription STOP	2019-09-01 15:05:17 UTC6
Date usage checked	2019-08-06 13:09:31 UTC6
Tile Usage	65
Storage Usage	0
Streaming Usage	0
Canceled Date	

[Submit Subscription Changes](#)

Will display the Current active subscription

**SentryMDU Administrative Gateway**  
Subscription Upgrade / Downgrade

Return to Subscription Homepage [Return](#)

Review subscription for upgrade/downgrade

Organization Name	My Company
Account Login Name	Teamleader4s
Cardholder Name	Willy Dean
Purchase Category	subscription
Product Description	SentryMDU Level 1
Subscription Price	SentryMDU Level 1 @ \$4.99/mon
Product Usage Limits	SentryMDU Level 2 @ \$9.99/mon SentryMDU Level 3 @ \$14.99/mon

Select the desired Upgrade / Downgrade for your Subscription

SentryMDU Level 1 @ \$4.99/mon
--------------------------------

Last 4 digits of Card: xxxx-4242  
Confirmation Email: WillyD@mail.com  
Last Login Date: 2019-08-06 13:20:16 UTC6  
Date Account Created: 2019-07-01 15:01:57 UTC6

**Subscription Dates and Features Usage**

Subscription START	2019-08-01 15:05:17 UTC6
Subscription STOP	2019-09-01 15:05:17 UTC6
Date usage checked	2019-08-06 13:09:31 UTC6
Tile Usage	65
Storage Usage	0
Streaming Usage	0
Canceled Date	

[Submit Subscription Changes](#)

In our example, we want to UPGRADE our subscription from Level 1 Access to Level 2 Access. We selected Level 2.

We have now selected a Level 2 Option from our pop-up menu. We are currently in a “Level 1” Subscription, and we want to move to a Level 2 subscription.

When you are satisfied with your choice, click on the “Submit Subscription Changes” Button at the bottom of the page.

The screenshot displays the 'SentryMDU Administrative Gateway' interface for a 'Subscription Upgrade / Downgrade'. At the top, there is a 'Return to Subscription Homepage' link and a green 'Return' button. Below this is a section titled 'Review subscription for upgrade/downgrade' containing the following details:

- Organization Name: My Company
- Account Login Name: Teamleader4s
- Cardholder Name: Willy Dean
- Purchase Category: subscription
- Product Description: SentryMDU Level 1
- Subscription Price: \$ 4.99 /mon (auto renew)
- Product Usage Limits: Tiles = 6000 /mon, Storage = 100 Mb, Data = 500 Mb, Streaming = 500 Mb

A callout bubble points to the 'SentryMDU Level 1' product description, stating: 'This shows the Current active subscription option at Level 1 Access'. A red arrow labeled 'Original Subscription' also points to this line.

Below the review section is a dropdown menu titled 'Select the desired Upgrade / Downgrade for your Subscription'. The selected option is 'SentryMDU Level 2 @ \$9.99/mon'. A red arrow labeled 'New UPGRADE' points to this dropdown. A callout bubble points to this dropdown, stating: 'This shows the UPGRADE choice to Level 2.'

Further down, there are fields for 'Last 4 digits of Card' (xxxx-4242), 'Confirmation Email' (WillyD@mail.com), 'Last Login Date' (2019-08-06 13:20:16 UTC6), and 'Date Account Created' (2019-07-01 15:01:57 UTC6).

A section titled 'Subscription Dates and Features Usage' shows:

- Subscription START: 2019-08-01 15:05:17 UTC6
- Subscription STOP: 2019-09-01 15:05:17 UTC6
- Date usage checked: 2019-08-06 13:09:31 UTC6
- Tile Usage: 65
- Storage Usage: 0
- Streaming Usage: 0
- Canceled Date: (empty)

At the bottom of the page is a green button labeled 'Submit Subscription Changes', which is highlighted with a red box and a hand icon with the number '8' pointing to it.

A pop-up Confirmation Panel will appear. Click “OK” to confirm your selection.

The screenshot shows a confirmation pop-up panel with a dark background. The text reads: 'Page at https://sentrymdu01.sentrymdu.com says: Are you SURE you want to make the CHANGES you have selected for this Subscription?'. At the bottom, there are two buttons: 'OK' and 'Cancel'. The 'OK' button is highlighted with a red box and a hand icon with the number '9' pointing to it. A callout bubble points to the 'OK' button, stating: 'We are confirming an UPGRADE to our subscription from Level 1 to Level 2.'

You have now selected to UPGRADE your subscription. The system will credit any “unused” portion of your previous subscription (\$\$\$) towards the purchase of this “new” subscription (you will only be charged the difference).

The Credit Card Payments Processor (that handles our Banking) will begin to implement the change process and accept payment. You will receive an “automated” confirmation email with a receipt and the purchase details. You will be charged via the Credit Card information that is currently on file with the Payment Processor (we do not store that information). If your Card is declined you will get an error message.

If all goes well, the screen will display a “Subscription Change Success” message and display the NEW subscription parameters as shown below.

**SentryMDU Administrative Gateway**

Subscription Upgrade / Downgrade

Return to Subscription Homepage **Return**

**Subscription Change Success**  
You have successfully changed your subscription. Please restart the SentryMDU App on your mobile device. Within 10 minutes of a restart your device will contact the Data Server and retrieve the new subscription parameters.  
The details of your NEW subscription are shown below.

**Review subscription for upgrade/downgrade**

Organization Name	My Company
Account Login Name	Teamleader4s
Cardholder Name	Willy Dean
Purchase Category	subscription
Product Description	SentryMDU Level 2
Subscription Price	\$ 9.99 /mon (auto renew)
Product Usage Limits	Tiles = 12000 /mon Storage = 200 Mb Data = 1000 Mb Streaming = 1000 Mb

Select the desired Upgrade / Downgrade for your Subscription: SentryMDU Level 2 @ \$9.99/mon

Last 4 digits of Card: xxxx-4242

Confirmation Email: WillyD@mail.com

Last Login Date: 2019-08-06 13:23:38 UTC6

Date Account Created: 2019-07-01 15:01:57 UTC6

**Subscription Dates and Features Usage**

Subscription START	2019-08-01 15:05:17 UTC6
Subscription STOP	2019-09-01 15:05:17 UTC6
Date usage checked	2019-08-06 13:09:31 UTC6
Tile Usage	65
Storage Usage	0
Streaming Usage	0
Canceled Date	

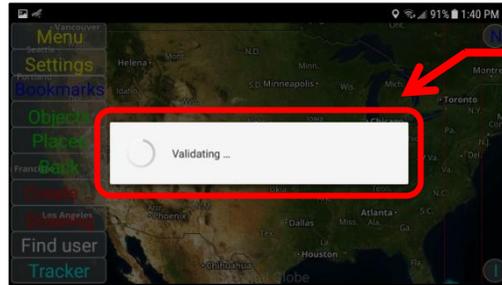
**Submit Subscription Changes**

Click the “Return” Button to return to the Subscription Management Panel.

**Success Message !**

The system will show the NEW subscription (and price) and new parameters

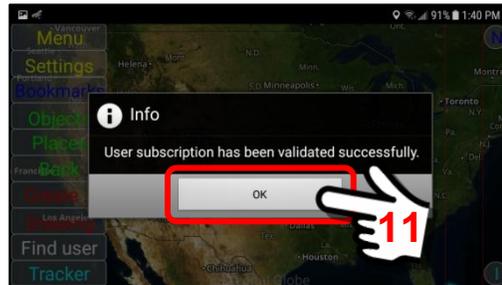
As you return to the Main Map Screen, the system will process these changes and validate the transaction.



Validation process may take several seconds ... depending on your internet connection.

If the validation is successful, you will receive a message that the subscription UPGRADE has been validated successfully.

Click the "OK" Button to continue.



Since the UPGRADE transaction has been successful, you now have access to the "new" upgraded parameters of the "Level 2" Subscription (tile usage, data storage and streaming bandwidth).



## 2. Cancel a Subscription

In this example, we will assume you currently have a “Level 2” subscription and want to **CANCEL** this subscription. **When you “cancel” a subscription you will continue to receive the subscribed content until the end of the period. However, it will NOT RENEW when the subscription expires.**

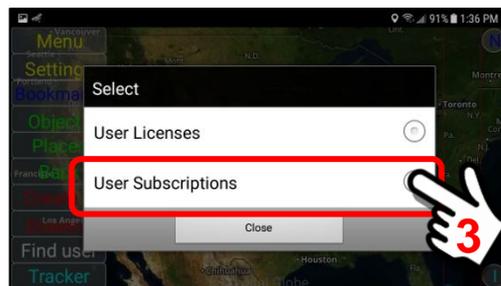
At the Main Menu Screen, click on the **Menu Button**.



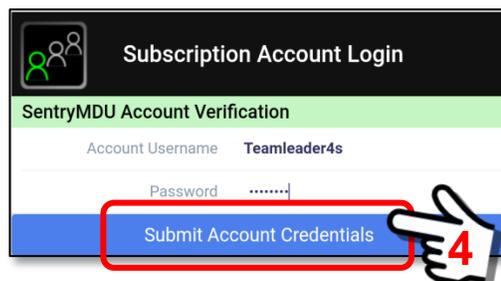
At the Main Menu Block, select the **Licenses/Subscriptions** option.



A pop-up “Select” Box will appear in the center of the screen. Click on the “**User Subscriptions**” option.



Log in to your Subscription Management Account



The **Subscriptions Management Panel** will be displayed.  
 Locate the “Cancel your Subscription” Menu item.  
 Click on the “Go!” Button.

**SentryMDU Administrative Gateway**

**Streamlined version for Mobile Devices**  
 This is a streamlined version of the desktop application to manage SentryMDU Subscriptions. The desktop version has more detailed explanations of the data fields and menu options. The version for desktop computers is available on our website.

**General Account Information**

Change Username & Password [Go!](#)

**Manage Subscriptions and Services**

Create a NEW Subscription [Go!](#)

Credit Card Payment Accounts [Go!](#)

Change Credit Card Information [Go!](#)

View User Subscription Data [Go!](#)

Upgrade or Downgrade Subscriptions [Go!](#)

Cancel your Subscription [Go!](#)

Reactivate a canceled Subscription [Go!](#)

**SentryMDU Administrative Gateway**

**SentryMDU Subscription Cancellation**

Return to Subscription Homepage [Return](#)

**Subscription Cancellation**  
 If you desire to CANCEL your current Subscription, click on the button below. You will continue to enjoy the subscription features until your current time period has expired. Cancellation means it will NOT be renewed at the end of the period.

**Subscription and Payment Information**

Organization Name	My Company
Account Login Name	Teamleader4s
Cardholder Name	Willy Dean
Purchase Category	subscription
Product Description	SentryMDU Level 2
Product Usage Limits	Tiles = 12000 /mon Storage = 200 Mb Data = 1000 Mb Streaming = 1000 Mb
Publishing State	active
Payment State	Payment received
Country Code	US-United States of America
Subscription Price	\$ 9.99 /mon (auto renew)
Last 4 digits of Card	xxxx-4242
Currency Code	usd
Cancel Reason Code	
Confirmation Email	WillyD@mail.com
Last Login Date	2019-07-01 17:18:04 UTC6
Date Account Created	2019-07-01 15:01:57 UTC6

**Subscription Dates and Features Usage**

Subscription START	2019-08-01 15:05:17 UTC6
Subscription STOP	2019-09-01 15:05:17 UTC6
Date usage checked	2019-08-06 13:09:31 UTC6
Tile Usage	65
Storage Usage	0
Streaming Usage	0
Canceled Date	

[Cancel the current Subscription](#)

Will display the Current active subscription

Information about the current subscription

To cancel a current subscription, select the Button at the bottom of the **SentryMDU Subscription Cancellation** panel.

Click on the button now.

**SentryMDU Administrative Gateway**

### SentryMDU Subscription Cancellation

[Return to Subscription Homepage](#) [Return](#)

**Subscription Cancellation**  
If you desire to CANCEL your current Subscription, click on the button below. You will continue to enjoy the subscription features until your current time period has expired. Cancellation means it will NOT be renewed at the end of the period.

#### Subscription and Payment Information

Organization Name	My Company
Account Login Name	Teamleader4s
Cardholder Name	Willy Dean
Purchase Category	subscription
Product Description	SentryMDU Level 2
Product Usage Limits	Tiles = 12000 /mon Storage = 200 Mb Data = 1000 Mb Streaming = 1000 Mb
Publishing State	active
Payment State	Payment received
Country Code	US-United States of America
Subscription Price	\$ 9.99 /mon (auto renew)
Last 4 digits of Card	xxxx-4242
Currency Code	usd
Cancel Reason Code	
Confirmation Email	WillyD@mail.com
Last Login Date	2019-07-01 17:18:04 UTC6
Date Account Created	2019-07-01 15:01:57 UTC6

#### Subscription Dates and Features Usage

Subscription START	2019-08-01 15:05:17 UTC6
Subscription STOP	2019-09-01 15:05:17 UTC6
Date usage checked	2019-08-06 13:09:31 UTC6
Tile Usage	65
Storage Usage	0
Streaming Usage	0
Canceled Date	

[Cancel the current Subscription](#)

Information about the current subscription



Click to Cancel

A pop-up Confirmation Panel will appear.  
Click "OK" to confirm you want to cancel your subscription.

The screenshot displays the SentryMDU Administrative Gateway interface. At the top, there is a header with the logo and the text "SentryMDU Administrative Gateway". Below this, the page title is "SentryMDU Subscription Cancellation". There is a "Return to Subscription Homepage" link and a green "Return" button. A red heading "Subscription Cancellation" is followed by a paragraph explaining the cancellation process. The main content area is titled "Subscription and Payment Information" and contains a table of details:

Organization Name	My Company
Account Login Name	Teamleader4s
Cardholder Name	Willy Dean
Purchase Category	subscription
Product Description	SentryMDU Level 2
Product Usage Limits	Tiles = 12000 /mon Storage = 200 Mb Data = 1000 MB

A dark grey confirmation pop-up is overlaid on the page. It contains the text "Page at https://sentrymdu01.sentrymdu.com says: Are you SURE you want to CANCEL this Subscription?". Below this text are two buttons: "OK" and "Cancel". The "OK" button is highlighted with a red rectangle, and a hand icon with the number "7" is pointing to it. Below the pop-up, the rest of the subscription details table is visible:

Subscription Price	\$ 9.99 /mon (auto renew)
Last 4 digits of Card	xxxx-4242
Currency Code	usd
Cancel Reason Code	
Confirmation Email	WillyD@mail.com
Last Login Date	2019-07-01 17:18:04 UTC6
Date Account Created	2019-07-01 15:01:57 UTC6

Below this table is another section titled "Subscription Dates and Features Usage" with the following data:

Subscription START	2019-08-01 15:05:17 UTC6
Subscription STOP	2019-09-01 15:05:17 UTC6
Date usage checked	2019-08-06 13:09:31 UTC6
Tile Usage	65
Storage Usage	0
Streaming Usage	0
Canceled Date	

At the bottom of the page, there is a green button labeled "Cancel the current Subscription".

We are confirming the cancellation of our subscription

You have now selected to CANCEL your subscription. You will continue to have access to "content" (Satellite imagery, Data Storage and Streaming Bandwidth) for the remaining duration of your subscription time period. **When the time period expires, the subscription will NOT renew for the next month.**

If all goes well, the screen will display a “Subscription Cancellation Success” message and display the subscription parameters as shown below.

**SentryMDU Administrative Gateway**  
**SentryMDU Subscription Cancellation**

Return to Subscription Homepage **Return**

**Subscription Cancellation Success**  
 You have successfully canceled your subscription. You will continue to have access to your subscription content until the end of the original time period.  
 ---- 2019-09-01 15:05:17 ----  
 The subscription will NOT renew at that time.

**Subscription and Payment Information**

Organization Name	My Company
Account Login Name	Teamleader4s
Cardholder Name	Willy Dean
Purchase Category	subscription
Product Description	SentryMDU Level 2
Product Usage Limits	Tiles = 12000 /mon Storage = 200 Mb Data = 1000 Mb Streaming = 1000 Mb
Publishing State	active
Payment State	Payment received
Country Code	US-United States of America
Subscription Price	\$ 9.99 /mon (auto renew)
Last 4 digits of Card	xxxx-4242
Currency Code	usd
Cancel Reason Code	User canceled subscription
Confirmation Email	WillyD@mail.com
Last Login Date	2019-07-01 17:18:04 UTC6
Date Account Created	2019-07-01 15:01:57 UTC6

**Subscription Dates and Features Usage**

Subscription START	2019-08-01 15:05:17 UTC6
Subscription STOP	2019-09-01 15:05:17 UTC6
Date usage checked	2019-08-06 13:09:31 UTC6
Tile Usage	65
Storage Usage	0
Streaming Usage	0
Canceled Date	2019-08-06 13:15:06

**Success Message !**

Information about the subscription that was canceled

Shows that the “User“ canceled the subscription.

Shows when the subscription access will STOP.

Shows the Date/Time that the “User“ canceled the subscription.

You have completed the cancellation process. You may now return to the Subscription Management Panel.

### 3.11. Changing Map Imagery

#### Overview:

The Sentry MDU App has several options to display different type of Map Imagery. This section will outline the various options and describe the menus where the settings are made.



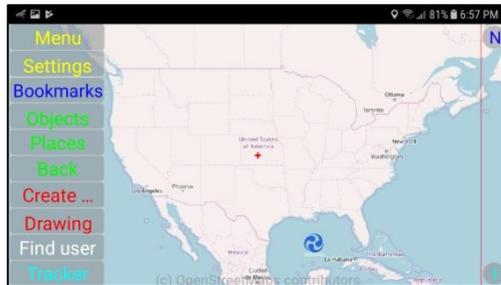
#### Options for changing the type of Map Imagery to display:

The Sentry MDU Application allows a user to select a number of options on how they would like the screen to display satellite imagery and maps. There are 3 primary image/map options and several overlay “layers” that can display additional symbols and icons. The 3 primary map options are as follows:

1. Satellite Image overlaid with a street map
2. Satellite Image
3. Street Map

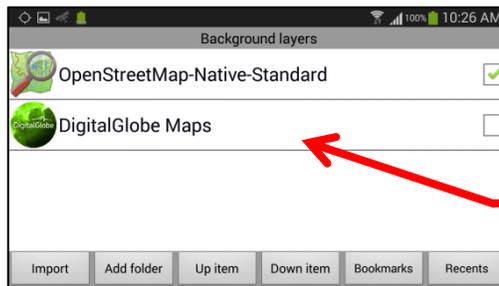
The “default” setting is Item #1 – Satellite image overlaid with a street map.

After initial installation (and before registration) you will notice that the Main Map screen displays a “Street Map” (using OpenStreetMap data) and not a satellite image.



#### 1. Location of the Map Layer display options.

The available Map Layers are installed in the Background Layers Folder on the Viewing Configuration Panel.



OpenStreetMap (Street Maps Only) and imagery provided by MapBox/DigitalGlobe. These choices are mutually exclusive (can only select one).

This choice is only active for Users that have a Subscription or User License.

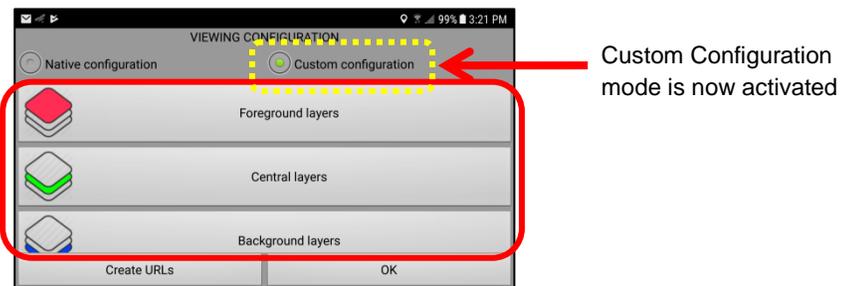
## 2. Select the “Custom Configuration” Option

The “Custom” option is an alternate view mode of the Foreground, Central and Background Layers functions. To open this panel, click the **Custom Configuration** Button on the Viewing Configuration Panel.



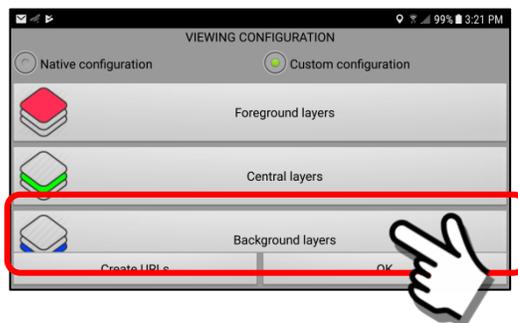
Three large buttons will be displayed

1. Foreground Layers
2. Central Layers
3. Background Layers



## 3. Select the “Background Layers” Folder

Select the Background Layers folder for access to the imagery and maps that are available on the Mobile Device.



The **Background Layers** folder contains the currently available sources for map imagery. In this example we show the 2 default entries. **You may also put “custom” maps of your own in this folder.**



**4. DigitalGlobe Maps for Users with a Subscription or User License.**

When a User device installs the MapBox/DigitalGlobe Map imagery by way of a Subscription or User License, the DigitalGlobe Maps menu item will become active.

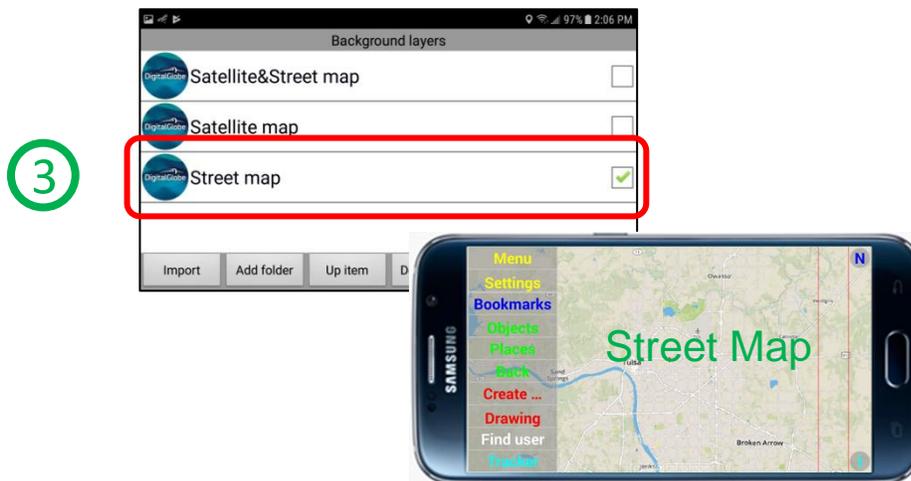
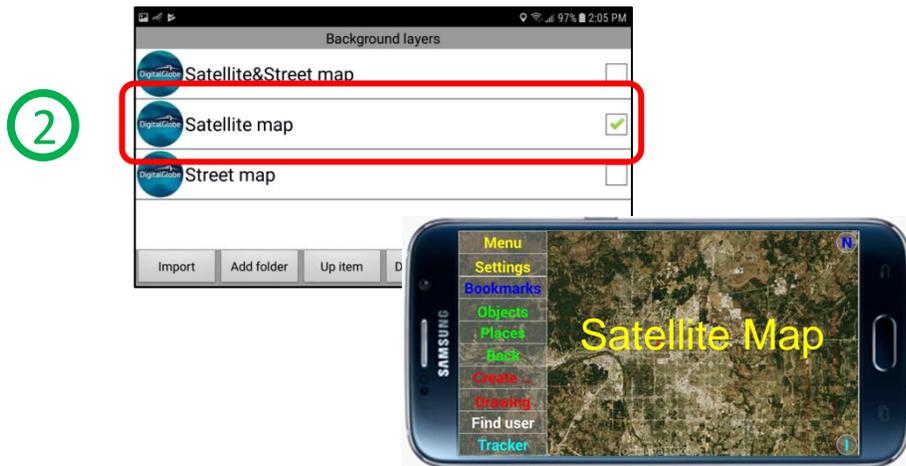
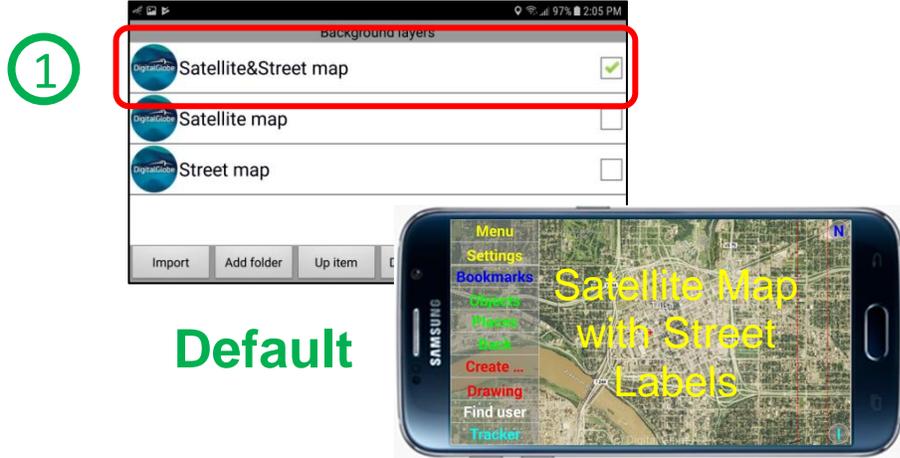
To view the 3 different DigitalGlobe Map options, click on the Menu Item.



During an initial install of the DigitalGlobe Maps, the “**Satellite&Street map**” option will be installed by default.



A User may select any of the other map options as indicated below.



### 3.12. Folders and files created on your Mobile Device

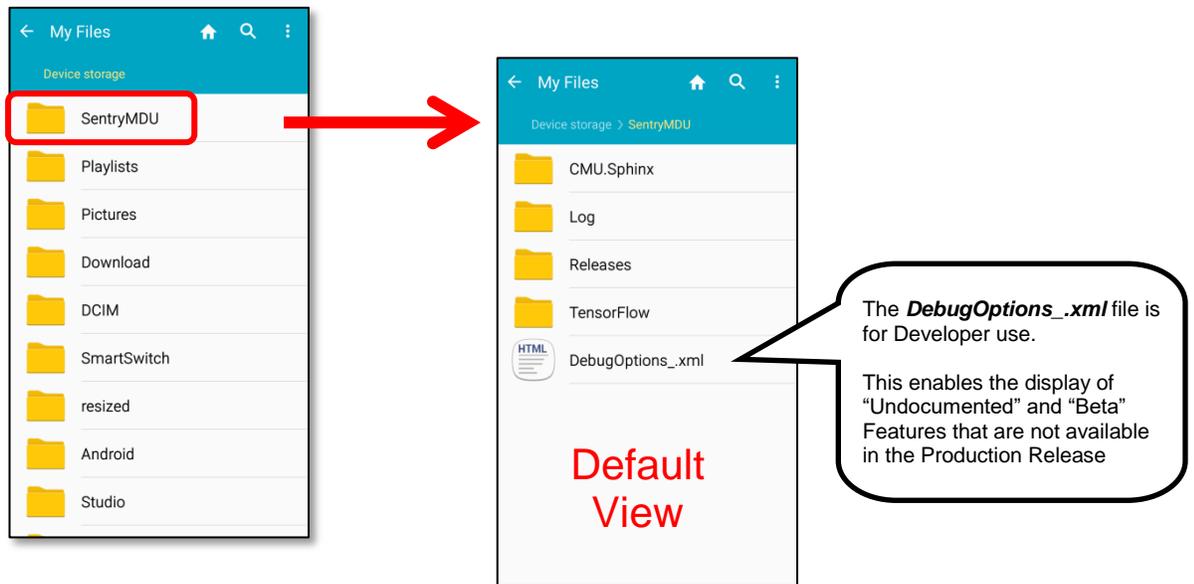
#### Overview:

The Sentry MDU App creates one main folder on the mobile device with 8 sub-folders. The primary program folder is called ... **SentryMDU**.

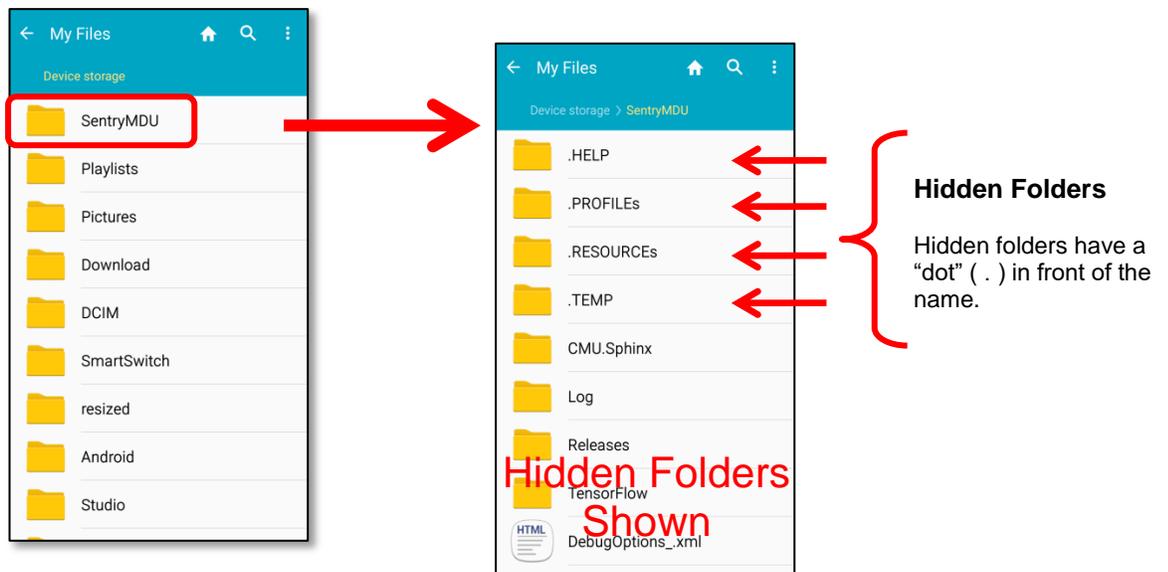
Most mobile devices have a setting (in File Folders menu) that conceals what are called “hidden folders”. These are file folders that a general user does not need to know about. The Sentry MDU System installs 4 visible folders and 4 hidden folders. If you want to see the hidden folders, then adjust your device settings to allow you to see the hidden folders.

#### Folders installed by the Sentry MDU Application:

The example screens shown below are from a Samsung Galaxy smartphone. Your screens may look somewhat different.



When the “hidden” folders are displayed, the display will look as follows:



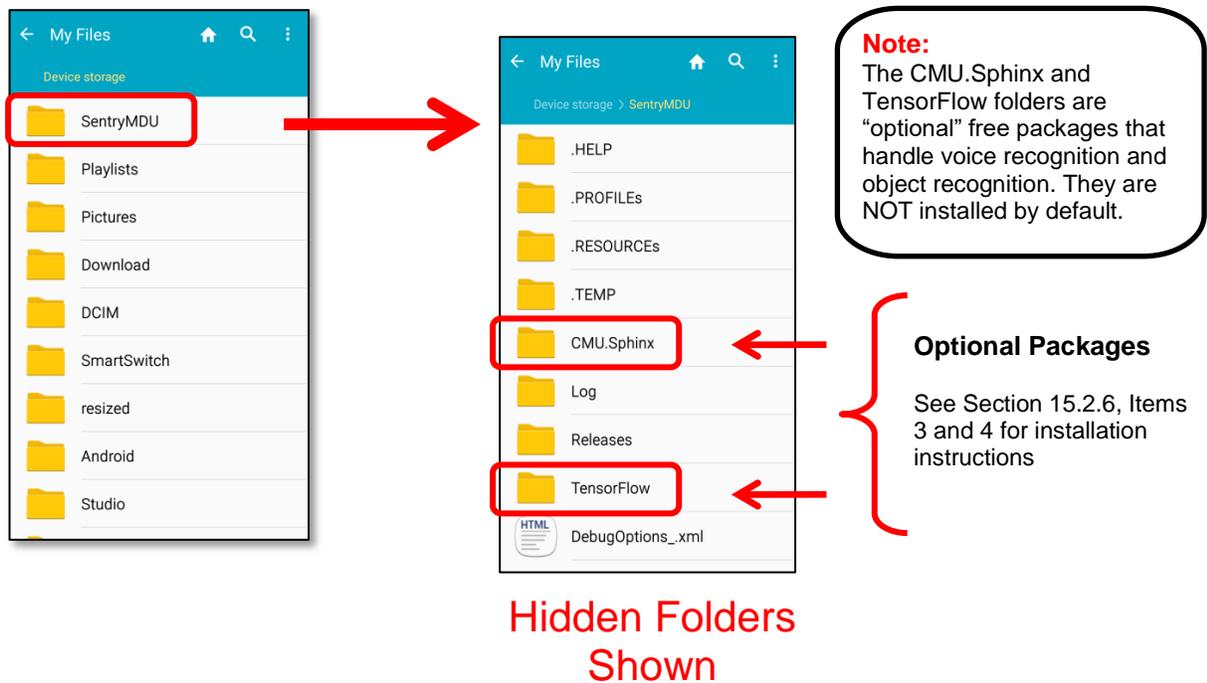
## “Optional” folders to install in the Sentry MDU Application:

The SentryMDU Application provides additional downloads for those Users that would like to use *Voice Recognition* and *Object Recognition* features. These two features utilize 3<sup>rd</sup> Party “Open Source” software and are NOT included by default because they are LARGE packages.

The default download of the SentryMDU App is about 59 MB. If we included these optional packages in the SentryMDU App, it would push the initial download to 100+ MB. Therefore, since many users may not have a need for the advanced features found in the *Voice Recognition* and *Object Recognition* packages, we have decided to make them optional. They are free to download. See Sections 15.2.6, Items 3 and 4 for installation instructions.

The *Object Recognition* package (utilizing A.I., artificial intelligence technology) when installed, will create the **TensorFlow Folder**. The *Voice Recognition* package, when installed, will create the **CMU.Sphinx Folder**.

Example screens shown below are from a Samsung Galaxy smartphone. Your screens may look somewhat different.



## Uninstall and Completely Remove the SentryMDU App:

To “uninstall” the SentryMDU App ... simply use **App Management** on your mobile device to uninstall the SentryMDU App. However, the SentryMDU Folder (with data and account settings) will still remain. Delete the SentryMDU Folder to completely remove all traces of SentryMDU.

### 3.13. Access rights, permissions and background processes

#### Overview:

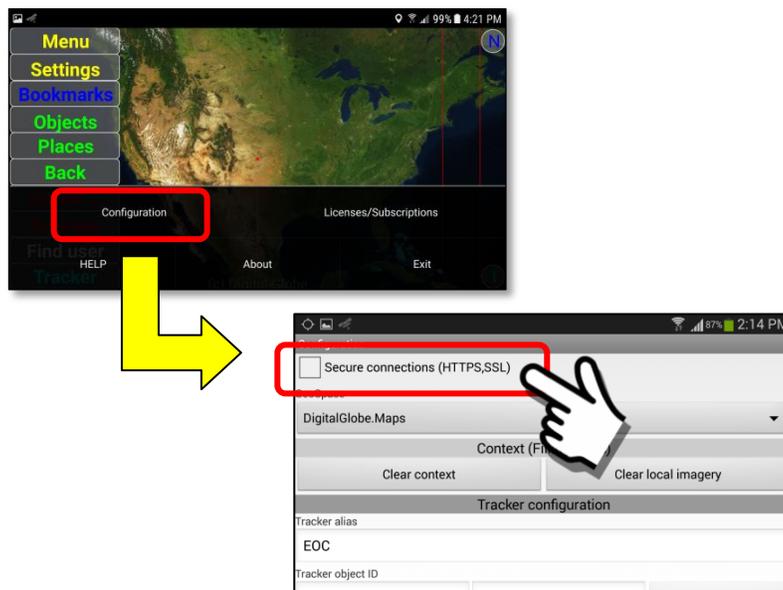
The Sentry MDU System incorporates several layers of security. Some of these security features may be adjusted by the User, others will require System Administrative privileges.

1. Users that created a Username/Password pair during registration should use hard to guess passwords.
2. The device can be configured to use HTTPS / SSL (Secure Socket Layer) encryption to make sure all communications is secured between communicating devices. This setting is available on the Main Configuration panel.
3. Licensed users (and their associated IT Departments) may configure user security domains to restrict/allow access to other users and/or features of the mobile device. Some of the security domain features include Read, Write, View Only, segregate user population into groups, exercise supervisory control and more. The Sentry MDU Desktop Client is required to set and edit Security Domains. Subscription Users have limited control of these features.
4. The Sentry MDU App can be set to “start” when the phone is first turned on. This is necessary if a User is to receive communications, messaging and GPS location monitoring even if the Sentry MDU App is not launched. These background processes may be turned off from the main menu (more later on this). Typical situations where you may want to turn off the background process would be times when you are on vacation, off-duty or you just don't want other users (that have the permissions) to know where you are.

#### A few example screens:

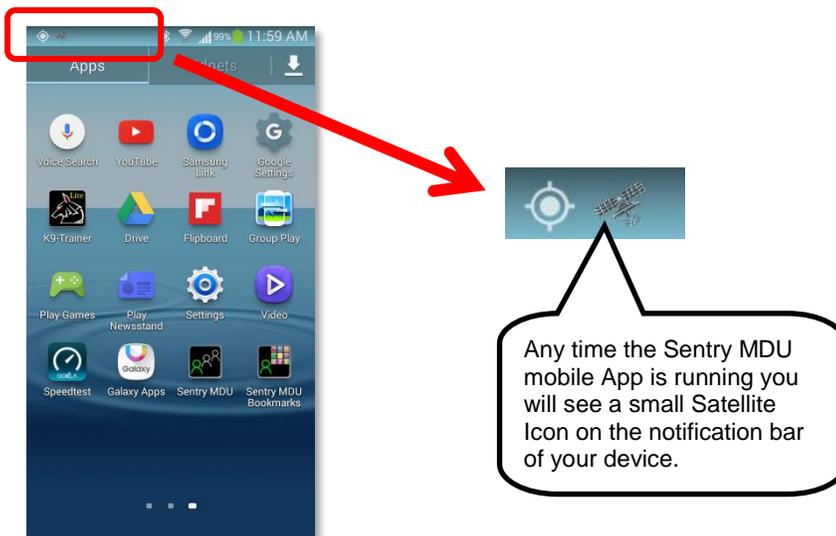
##### **Setting HTTPS / SSL (Secure Socket Layer) Encryption.**

To set the HTTPS / SSL encryption make sure the checkbox on the main configuration screen is “checked”. The default is “unchecked”.

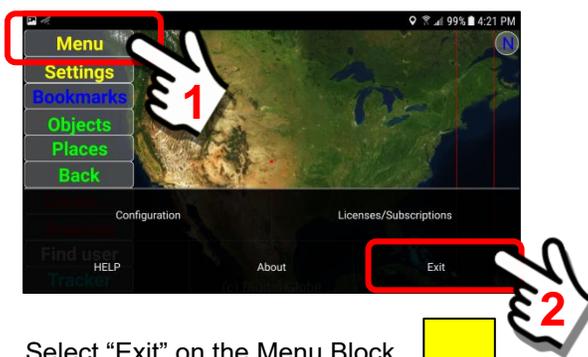


### Turn off the Sentry MDU background process

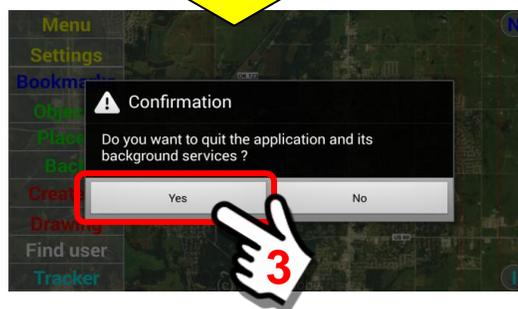
If you wish to completely “turn off” the Sentry MDU mobile App, follow the instructions below.



Launch the Sentry MDU App and select the Menu Button on the Main Map screen.

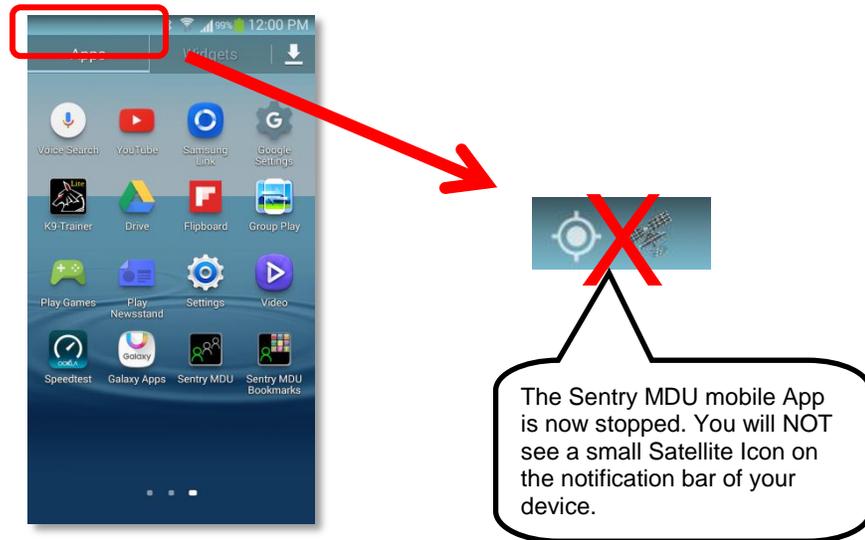


Select “Exit” on the Menu Block



Click on “Yes” to confirm that you want to stop all Sentry MDU processes.

As you exit the App and return to the device screen you will notice that the Satellite Icon is no longer shown. This indicates that the Sentry MDU Application has been stopped.



### **Automatic start-on-phone-start feature:**

To manage the start-stop of the SentryMDU System each time the mobile device is turned on, we have equipped the App with an automatic start-stop feature.

Here is how it works:

- If the SentryMDU App is running (active) when the mobile device is turned "off" then it will start automatically when the mobile device is turned on again.
- If the SentryMDU App is NOT running (not active) when the phone is turned "off" then the App will NOT start automatically when the mobile device is turned on again.

## 3.14. Additional recommended settings for your Mobile Device

### Overview:

Modern mobile devices (Smartphones and Tablets) have a variety of screen, audio and video settings that can be adjusted by the User. Many of the settings are “personal preferences” set by the user while others may be phone defaults.

Depending on the settings some may interfere with features of the Sentry MDU Application or affect the user experience.

### Review the following settings on your mobile device:

#### 1. **Adjust screen “touch” sensitivity to match User ability**

The Sentry MDU App uses two forms of screen activation. The first is where a user touches (clicks) on a menu item ... we will call this a “Short Click”. The second is what you will see referred to as a “Long Click”. A long click is where the screen is touched for at least ½ second.

If a user has hand “shake” issues it may be beneficial to adjust the length of time that a “touch” is interpreted as a “Long Click”. Most mobile devices have a setting where this time is adjustable. The default for most phones is ½ second.

#### 2. **Screen timeout**

We suggest you set the screen timeout to at least 10 minutes. Most mobile devices set the screen timeout to 2 minutes to conserve battery life. If you plan to use the Sentry MDU to observe the location of other Users on the network (via GPS) or view video you do not want the screen to “turn off” every few minutes.

If the device is mounted in a vehicle or you are using a tablet on a desktop, and are connected to a power source .... there is no reason to conserve battery power. We suggest you set it to at least 10 minutes or to “Keep screen on” mode that is available at the Configuration Panel (see Section 5.4, Item #8 for details).

#### 3. **Brightness**

We suggest you set the screen brightness to 80%+. Most mobile devices set the screen brightness to “automatic” to conserve battery life. If the mobile device is to be used outdoors or in sunlight you will want it to be as bright as possible.

If the device is mounted in a vehicle or you are using a tablet on a desktop, and are connected to a power source .... there is no reason to conserve battery power. We suggest you set it to 80 – 100% brightness.

#### **4. Touch sounds**

The touch sounds give a “click” sound as you type and do screen entries. You will want this feature turned “on”.

#### **5. Volume Settings**

Volume settings on most mobile devices have 4 components that can be individually adjusted.

- a. Music, video, games and other media.
- b. Ringtone
- c. Notifications
- d. System

Generally, you want all of these to be at a high level. To use the audio/video features (recording, streaming, listening) you will need both “a” and “d” at a high level.

#### **6. Vibrations**

The Sentry MDU System uses the “vibration” feature on mobile devices to provide feedback to the user. It provides feedback when you make screen selections, when voice commands are activated and as recording notification. You will want vibration turned “on”.

#### **7. Voice Control (Voice commands to control device)**

Many mobile devices have a “Voice Command” feature built into the device. The Sentry MDU also has a voice control feature that can turn recording (or activate other sensors) on/off. We recommend turning “off” the voice control feature of your mobile device so it does not conflict with the Sentry MDU feature.

#### **8. Power Saving mode**

We recommend turning “off” the Power Saving Mode of your mobile device.

#### **9. Accessibility**

Many mobile devices have an “Accessibility” feature that allows adjustment of touch, sound and screen features for users who have impaired vision, hearing or reduced dexterity. If you have difficulty doing a “Long Click” menu selection, we recommend you adjust the “Press and hold delay” setting of your device.

#### **10. Motion**

We recommend turning “off” the Motion feature on your mobile device. The Motion feature allows users to tilt a phone for pan/zoom operations, shake for updates and more. The issue is that the Sentry MDU Application monitors and makes available to users all of the sensors on the mobile device (GPS, Accelerometer, Barometric, Gyroscopic, Proximity, etc.). If the Motion feature is not deactivated, it may interfere with the Sentry MDU App.

### **11. Smart Screen**

We recommend turning “off” the Smart Screen feature on your mobile device. The Smart Screen feature (available on some mobile devices) uses the front facing camera to see if a user is looking at the screen and will adjust display rotation and time the display stays on by knowing if a person is looking at it. For this feature to work the phone uses the front facing camera. The Sentry MDU App also uses the front facing camera as just another “sensor” that can be monitored either locally or remotely. If the Smart Screen feature is not deactivated, it may interfere with the Sentry MDU App.

### **12. Hands Free Mode**

We recommend turning “off” the Hands Free Mode feature on your mobile device.

### **13. Location Services**

We recommend turning “on” the Location Services of the mobile device. The Sentry MDU System uses GPS satellites to provide location data.

### **14. Adjust font size for text (Subscription Management Panel)**

On a mobile device, Users have the ability to “set” the size of the text “font” that is displayed. Since the Subscription Management feature allows the screen display to rotate “on-the-fly” from either Portrait or Landscape mode, if the text size is too large, you may see the text “word wrap” down the screen. The “fix” for this issue is to reduce the size of your text font. A midrange setting of “medium” to “small” font size will work best.

### **15. Auto rotate screen**

The Sentry MDU App uses the mobile device screen in a Landscape mode. The program will use this mode regardless of the Auto Rotate setting. You can set it any way you like.

### **16. Battery Optimization Settings**

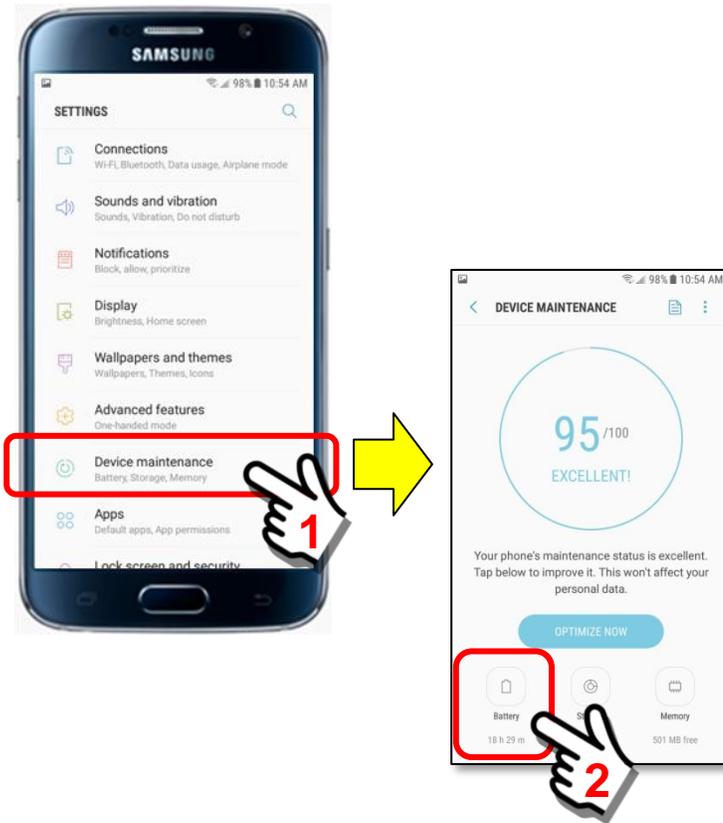
Many smartphones have battery optimization features that will put Apps to “sleep” if they are not used in a long period of time. As a User, you can customize these features. Since the SentryMDu App will run in the “background” when you are not accessing it directly (for notifications, alerts, GPS location, etc.), you want to make sure that your device does not put the App to “sleep”. **This is very important for mobile devices that are used in remote locations for remote monitoring**, such as when installed in our Solar Powered remote enclosure (ie the Birdhouse).



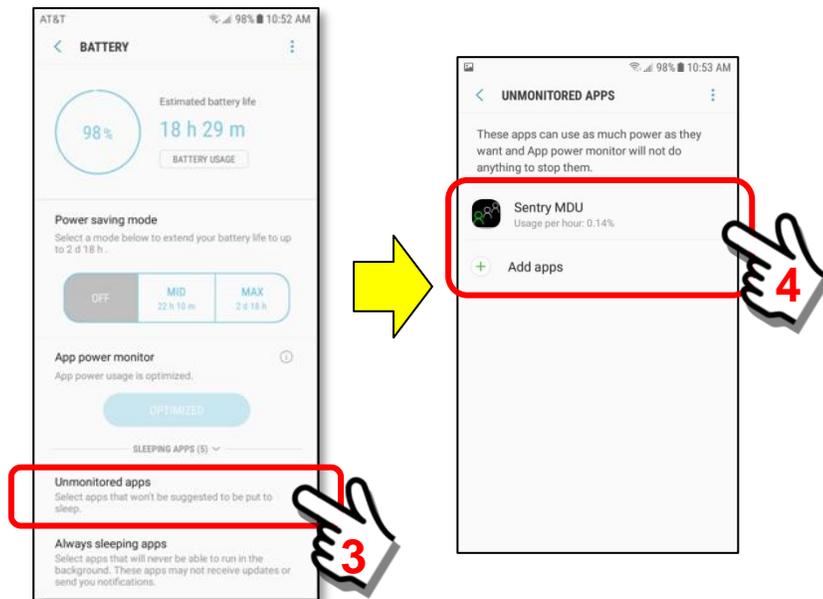
Solar Powered remote surveillance enclosure for locations without power.

To adjust the Battery Optimization settings, navigate to the native “**Settings App**” on your device. Illustrated below will be a Samsung Phone, yours may look somewhat different, however the features should be similar.

Open the Settings Panel and locate the Battery Optimization Feature



Select the Battery Feature, then add SentryMDU as an **Unmonitored App**



### 3.15. SentryMDU software “updates” sent to your Mobile Device

#### Overview:

The SentryMDU System includes a “software updater” that will notify you of updates to the SentryMDU App. **Updates are optional, but recommended.** We continually improve and add features to the software so it is always a good idea to install any updates..

In most cases, updates will not remove any user data or change any user configurations. In the event changes will impact User data, you would be notified in advance to take steps to copy/backup your data.

#### Follow these steps to “update” the SentryMDU App:

**1. The SentryMDU App must be “running” to receive an update notification**

The SentryMDU App must be running in order to receive a notification that a software “update” is available. It can be running in the foreground (you are using it) or the background (you are not using it, but it is still running and you can see the satellite icon on the notification bar). When the SentryMDU App is “started” a timer counts to 10 minutes. After 10 minutes, the App will contact the SentryMDU Administrative Server to see if there are any software updates available. It will compare the current software version on the mobile device, to the “new” available software update. If you need a new version, the software update will be downloaded and stored in the SentryMDU Folder on your device in the “Releases” sub-folder (see **Section 3.12** for file system details).

**Important Note:** Once the App is “started” it will only check **ONE TIME** for a software update. If you never re-start the SentryMDU App, it will **NOT** check again for a software update. It is always a good idea to check/restart the App every so often so that you can see if a software update is available.

**At this stage, the software has been downloaded to your device ... but NOT installed.** You are still running the previous version.

**2. Install the new software version on your device.**

The software update will be installed into the “Releases” Folder located in the SentryMDU folder on your mobile device. It will be an APK file. All Android applications are APK files.

The name will be something like this:



SentryMDU\_260.apk

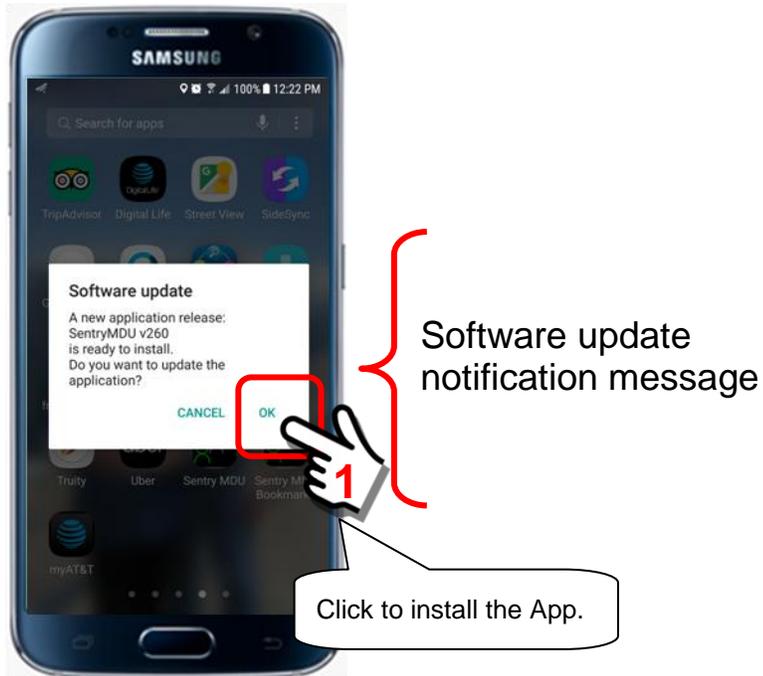


This is the “Release Version” number of the SentryMDU App

When installed, the app will be identified as **SentryMDU.apk** (Android Application File).

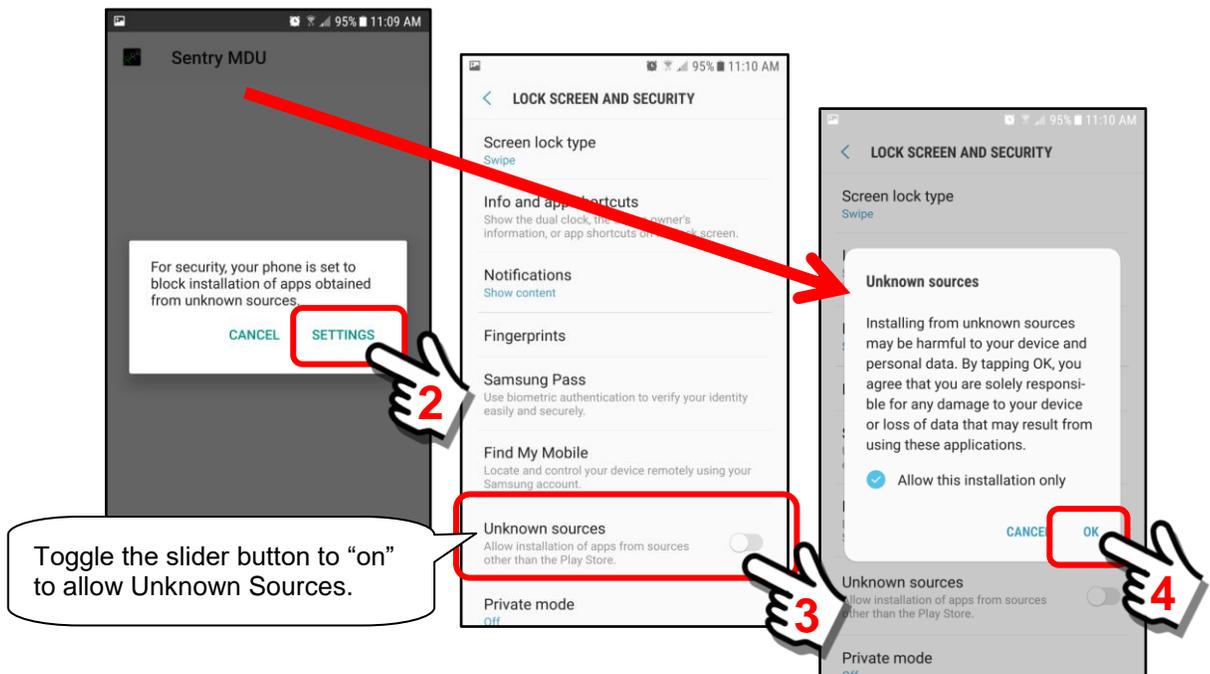
When the software has been downloaded and stored in the Releases Folder, you will then get a “Notification” on your phone that a software “update” is available.

The Notification pop-up is as follows:



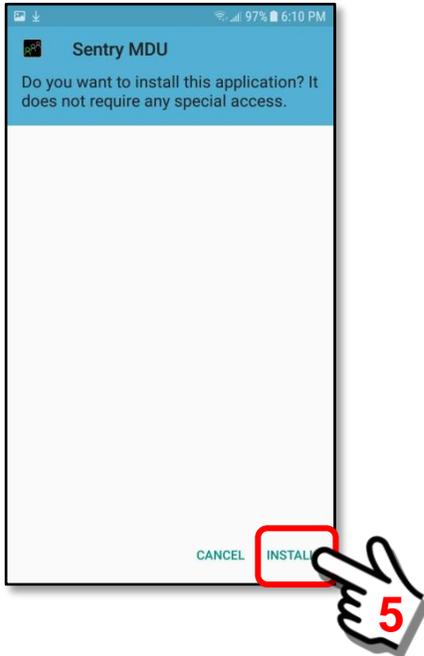
**The SentryMDU App will now begin installation.**

Since the SentryMDU App is NOT downloaded from the Google Play Store, it is considered an “Unknown Source” by Google since they don’t know about it. Depending on your device “settings” you may have “Unknown Sources” blocked. If this is the case, you will need to adjust your settings to allow the SentryMDU App to install.



You will get a “scary looking message” from Android about Unknown Sources. Click the “OK” Button when you are ready to continue.

You will be presented with an INSTALL screen. Click the “Install” Button to continue with installation.



As the SentryMDU App is being installed you will see an installation screen similar to the following. This may take anywhere from 5 seconds to 60 seconds.

Click “Done” when the installation is complete.



The SentryMDU app “update” is now installed on your device. **You must re-launch the App and start it again.**

# 4. The Sentry MDU Main Menu

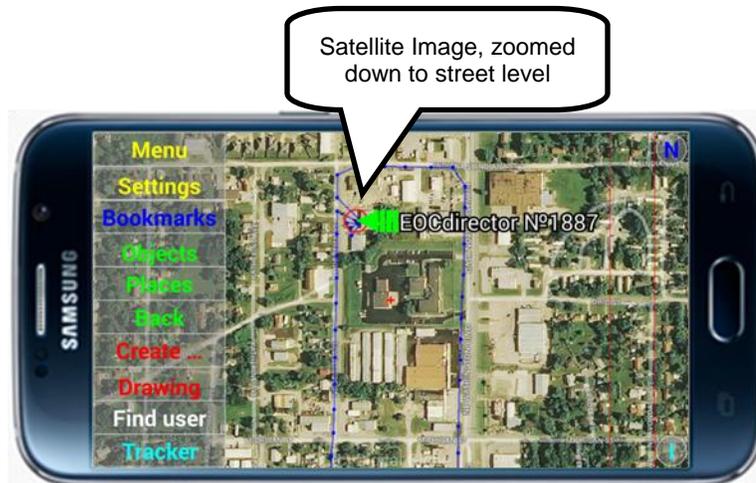
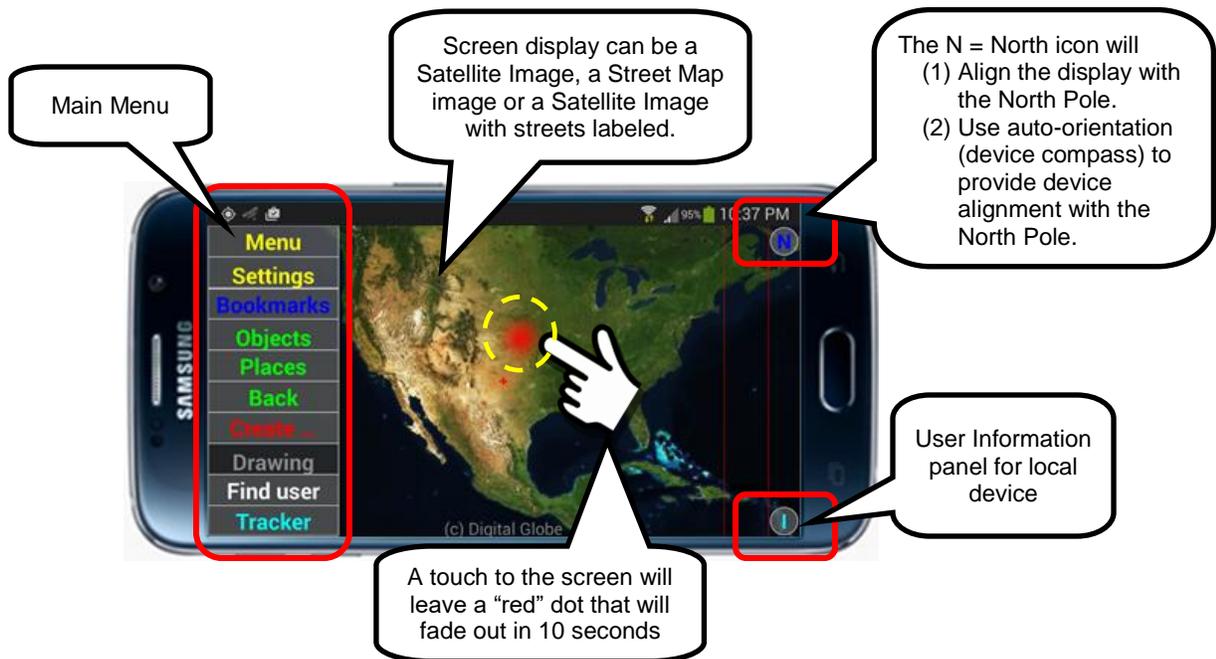
## 4.1. Overview and screen layout

### Overview:

The Sentry MDU App is designed to run on both smartphones and tablets. The “look & feel” on both devices should be about the same. The only difference is in the size of the screens and the amount of scrolling required (less on the larger screens).

### Layout of the Sentry MDU screen:

The Sentry MDU Application is oriented in “landscape” mode on mobile devices. The primary elements are detailed below as shown on a Samsung S6 smartphone.



## 4.2. General screen navigation, menu access, pan/zoom, rotate

### Overview:

The Sentry MDU App provides the user with a number of options for screen navigation. There are 3-modes that can be set via a configuration menu (Default, Arrow, Multi-touch).

In all 3 modes, the screen can pan to the right, left, up or down by simply dragging a finger about on the screen. The zoom function can be set to use a “two-finger” multi-touch swipe or a single-finger zoom with the activated side-panel. The screen can also be “rotated” so that a user can orient the screen to their physical location for a more accurate user experience. This section will describe the screen navigation features of the Sentry MDU App.

### Navigation features of the Sentry MDU Application:

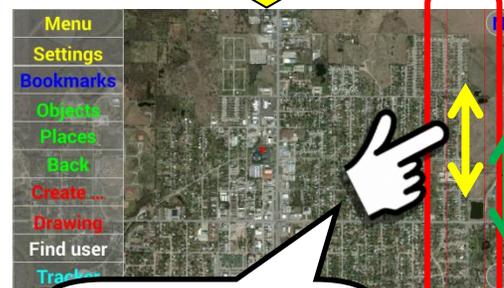
#### 1. Configuration of the 3 navigation modes.

The various navigation modes are set from the SETTINGS Menu.

#### Option #1: Default Mode



In the “Default” mode, a panel is added to the right side of the display, bordered by the vertical red lines. Swipe your finger up and down to zoom in and out.



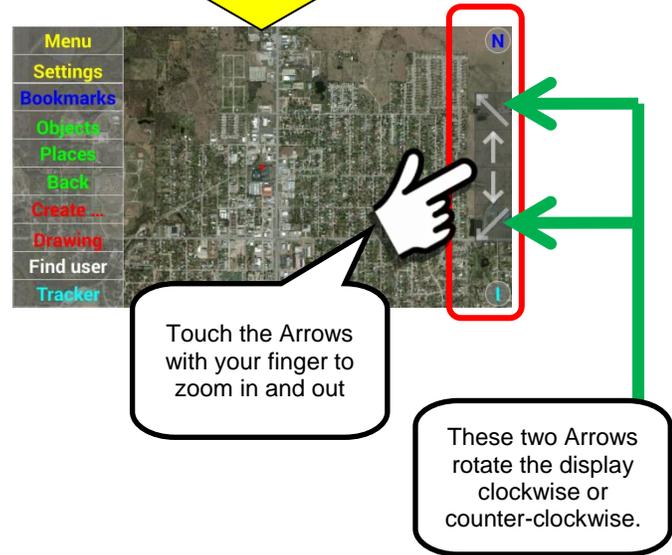
Swipe with your finger to zoom in and out.

Swipe up and down in this area to rotate the screen

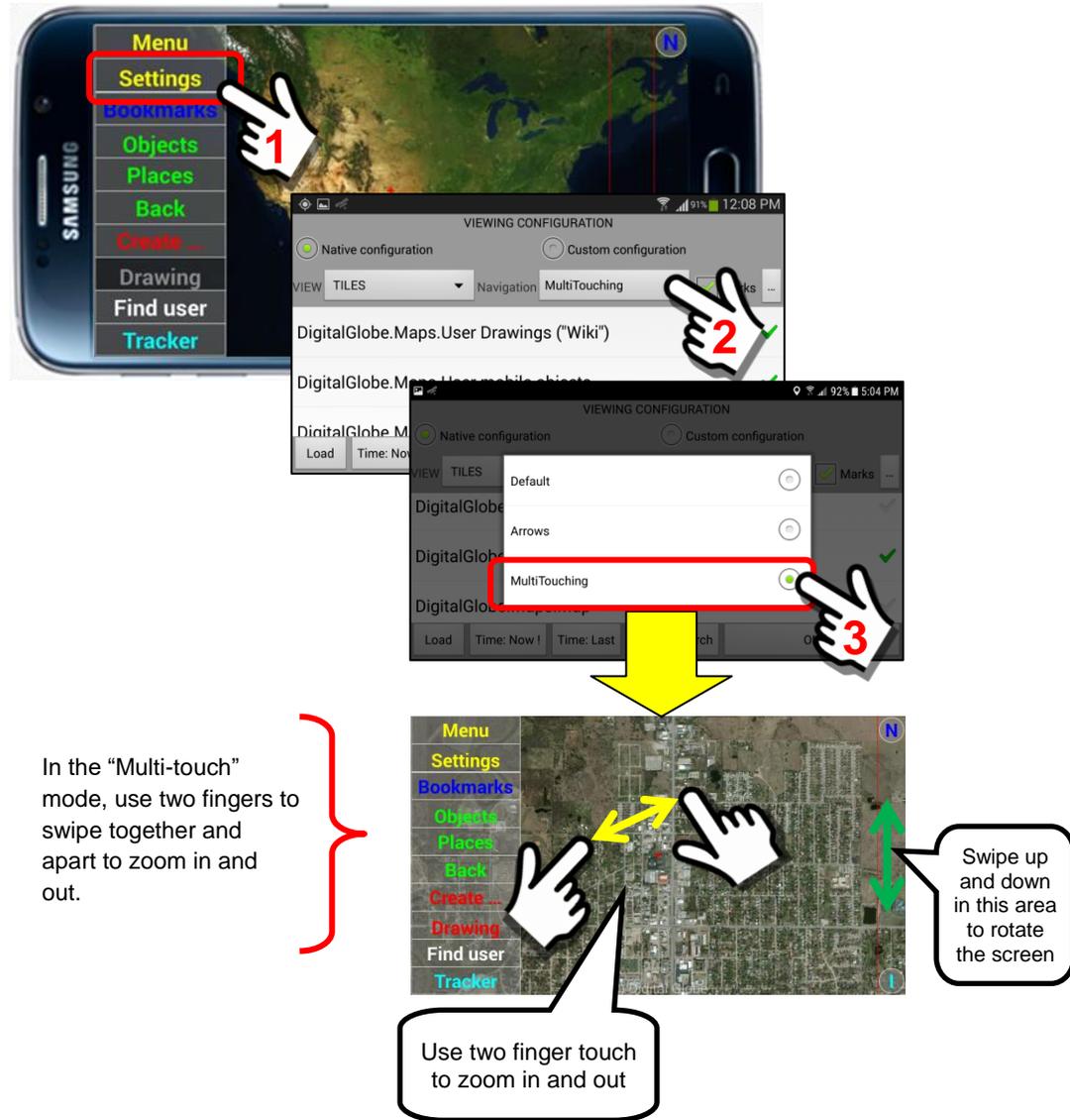
## Option #2: Arrows Mode



In the "Arrows" mode, a set of arrows are added to the right side of the display, bordered by a vertical red line. Touch the arrows to navigate the screen.



### Option #3: Multi-touch Mode



### **2. Screen rotation to NORTH using "N" Icon.**

The SentryMDU System has a North Button with two functions.



- a. Performing a "Short click" will align the display maps of the mobile device with the North Pole.
- b. Performing a "Long click" will use the internal compass and gyroscopic sensor of the mobile device to provide continuous auto-orientation of the map screen to be in alignment with the North Pole.

In the examples below we will illustrate these functions.

Short click to align display maps to the North Pole

In the default operating mode, the Main Map Screen will be aligned in a vertical orientation ... assuming that “North” is at the top of the screen. As we have shown, users have the ability to “rotate” the map screen image to achieve a better viewing angle.



Once you are done with the screen rotation and would like to re-align the screen to “North”, simply click on the “N” icon as shown below.



Long click to use the compass to align the map screen with the North Pole

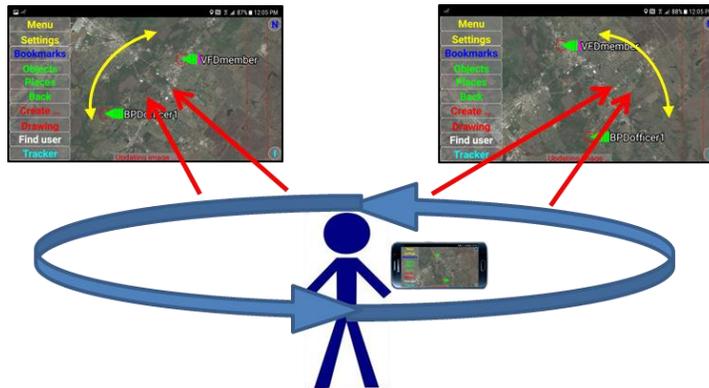
In this “auto-orientation” mode the Map Screen on the mobile device will continuously be adjusted (rotated) to align with the North Pole. As the user walks around with the mobile device, the internal compass of the mobile device will continuously update the relative position of the device to the North Pole.

The auto-orientation mode feature is illustrated as follows. Perform a “Long click” on the “N” Icon Button.



As you move the mobile device to different positions, you should notice the screen rotation to maintain a “North Pole” orientation of the device.

**Important Note:** Some of the less expensive mobile devices **DO NOT HAVE** gyroscopic sensors. If your device does not have one, this auto-rotation feature will NOT work.



Perform a “Long click” again to toggle the auto-orientation feature to “off”.

### 4.3. Selecting a Main Screen view (Satellite or Map view)

#### Overview:

The Sentry MDU Application allows a user to select a number of options on how they would like the screen to display satellite imagery and maps. There are 3 primary image/map options and several overlay “layers” that can display additional symbols and icons. The 3 primary map options are as follows:

1. Satellite Image overlaid with a street map
2. Satellite Image
3. Street Map

The “default” setting is Item #1 – Satellite image overlaid with a street map.

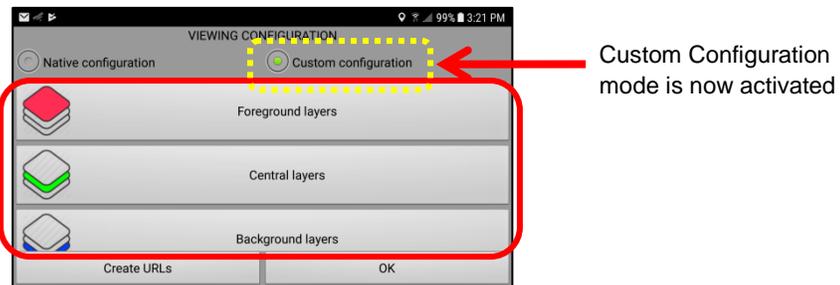
#### Setting up the desired display screen:

The following example screens below explain how to set the Main Screen view options.

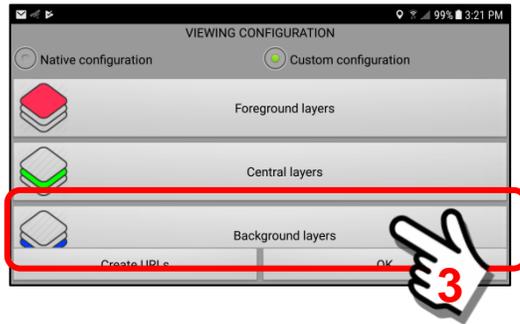


Three large buttons will be displayed

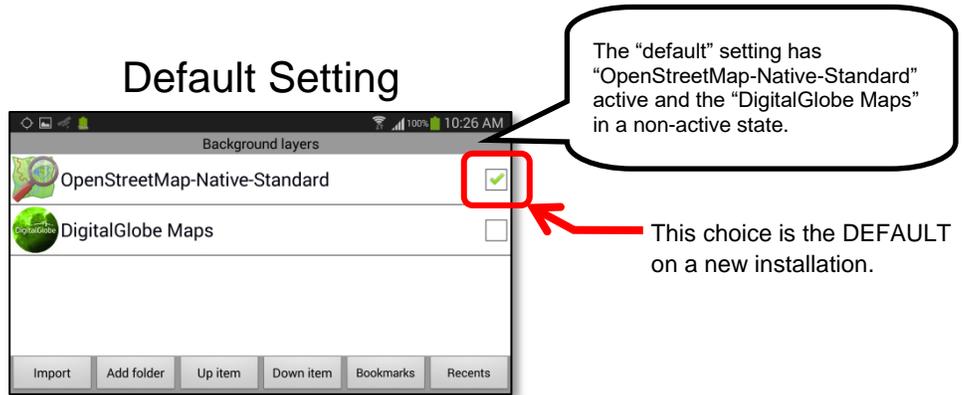
1. Foreground Layers
2. Central Layers
3. Background Layers



Select the Background Layers folder for access to the imagery and maps that are available on the Mobile Device.



The **Background Layers** folder contains the currently available sources for map imagery. In this example we show the 2 default entries. You may also put "custom" maps of your own in this folder.



When a User device installs the MapBox / DigitalGlobe Map imagery by way of a Subscription or User License, the "DigitalGlobe Maps" menu item will become active.

To view the 3 different DigitalGlobe Map options, click on the Menu Item.

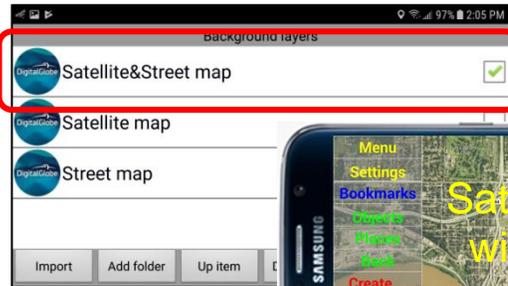


During an initial install of the DigitalGlobe Maps, the “Satellite&Street map” option will be installed by default.



A User may select any of the other map options as indicated below.

1



Default

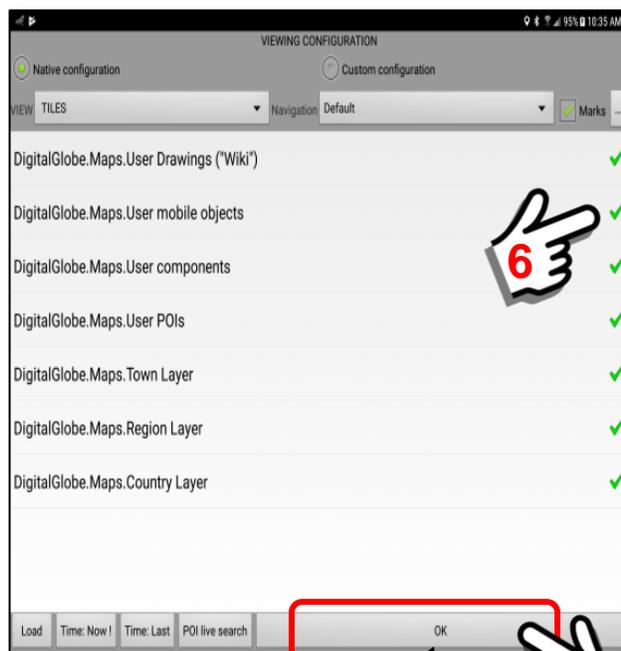
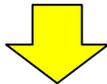
2



3



Available additional layers are described below. See **Section 8.12** for further details.



After your selection, click "OK" to save your selections.

**User Drawings** layer shows the drawing created by a user via the "Drawing" Menu Option.

**User Mobile Objects** layer shows user Tracker Objects.

**User Components** layer shows objects created by a user via the "Create ..." Menu Option.

**POI's**, known as "Points of Interest" will display user created points of interest created via the Tracker Panel.

**Country, Region and Town layers** are currently NOT being used. It is a "future" enhancement that will eventually contain "border" markings for these areas.

## 4.4. Introducing the Main Screen menu choices and buttons

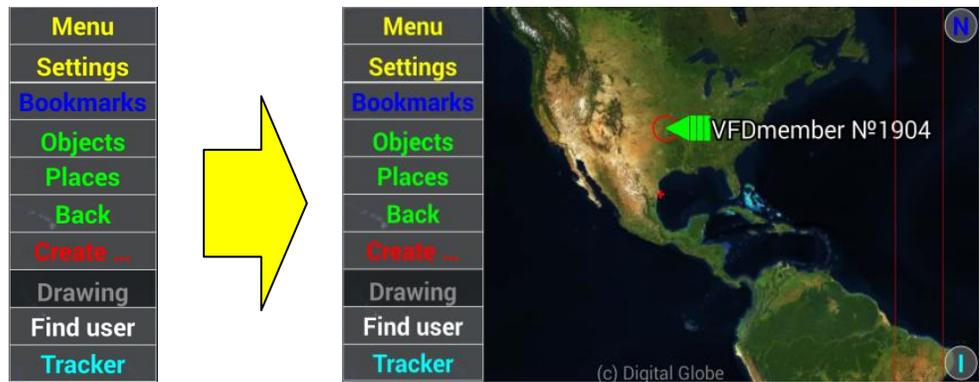
### Overview:

All features of the Sentry MDU System can be reached from the Main Menu screen. The system is designed as a hierarchical set of cascading menus with additional features launched via a “Long Click” action on specific menus.

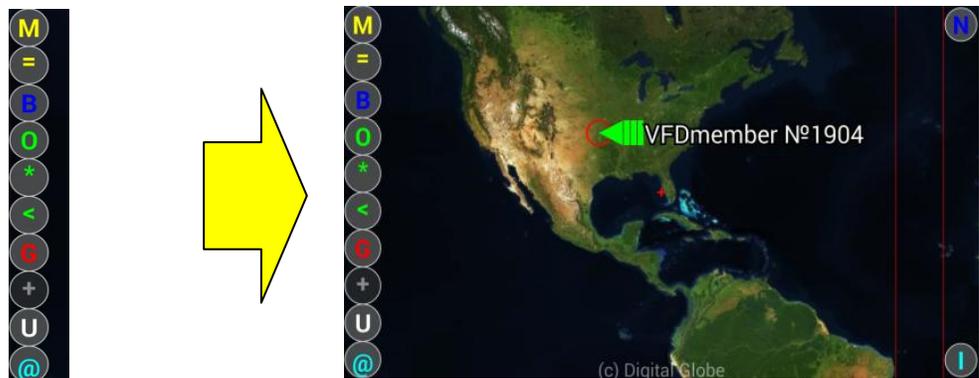
This overview will introduce the first set of Main Screen menus. Subsequent chapters of this User Guide will explore each menu level in additional detail.

### The Sentry MDU App main screen menus:

The default setting of the Sentry MDU App main screen is to provide word descriptions of the Main Menu buttons. This is the recommended setting until a user becomes familiar with the Sentry MDU System.



An alternative setting that uses letters and symbols can be selected once the user becomes familiar with the screen layout. This feature opens up more screen area for use as shown below.



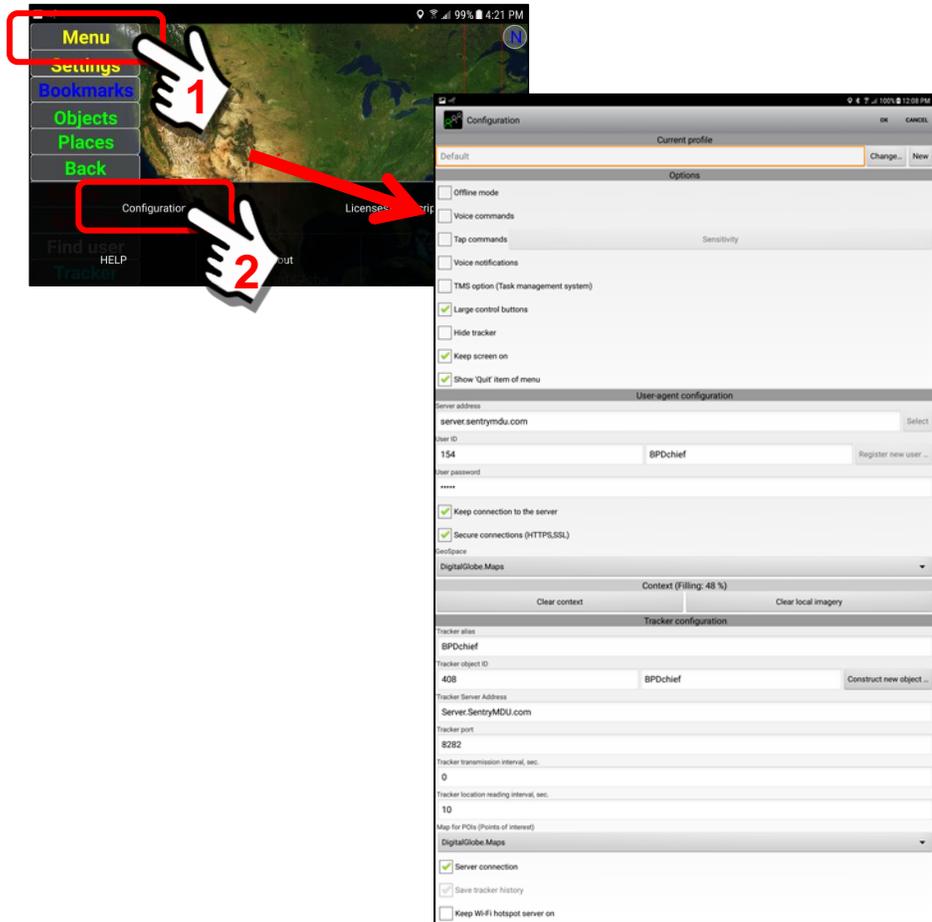
To change the Main Screen menu settings a user will “uncheck” the “Large control buttons” configuration option at the Main Configuration panel, and then SAVE the change.



### Description of the Main Screen menu buttons:

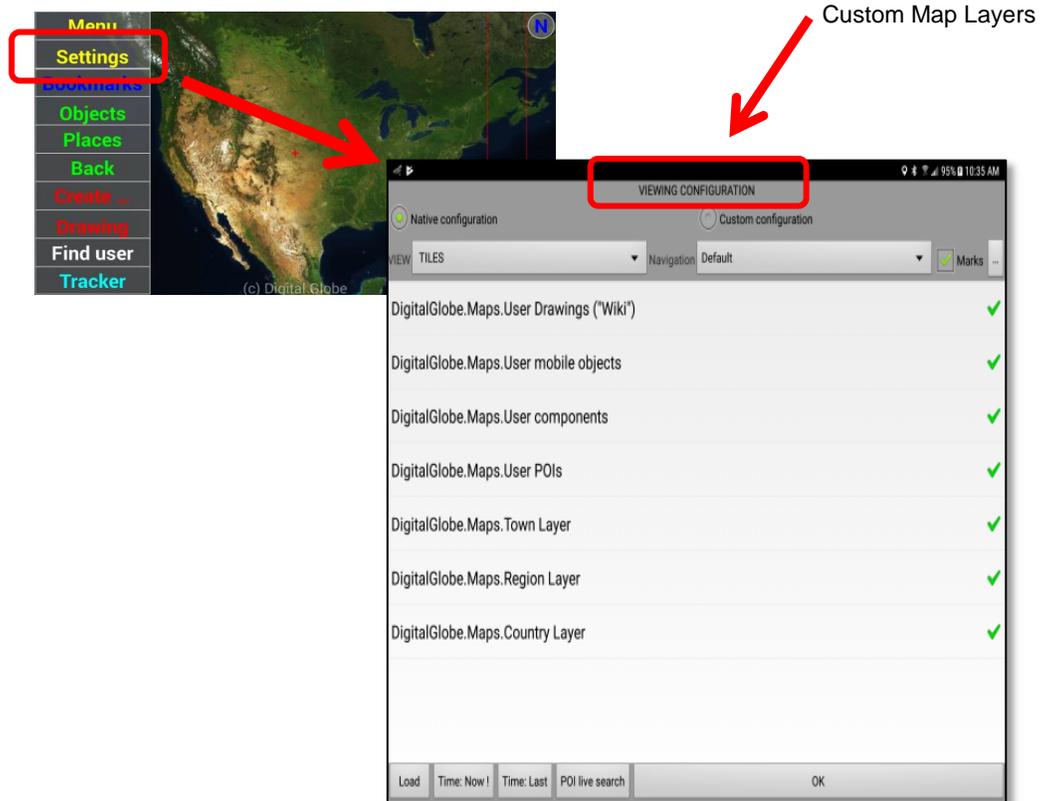
1. **Menu -** Menu

The Menu Button on the Main Screen displays a panel block at the bottom of the screen. The Sentry MDU App main configuration panel is available from this menu block.



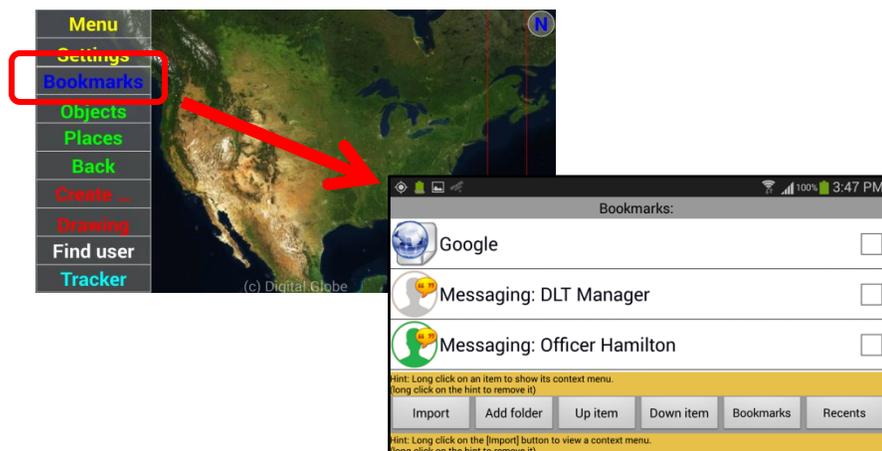
## 2. Settings - Settings

The Settings Button provides a panel where different satellite and map imagery can be selected. In addition, specific object, Custom Maps and “points-of-interest” layers may be added to the image. Navigation preferences are also set from this panel.



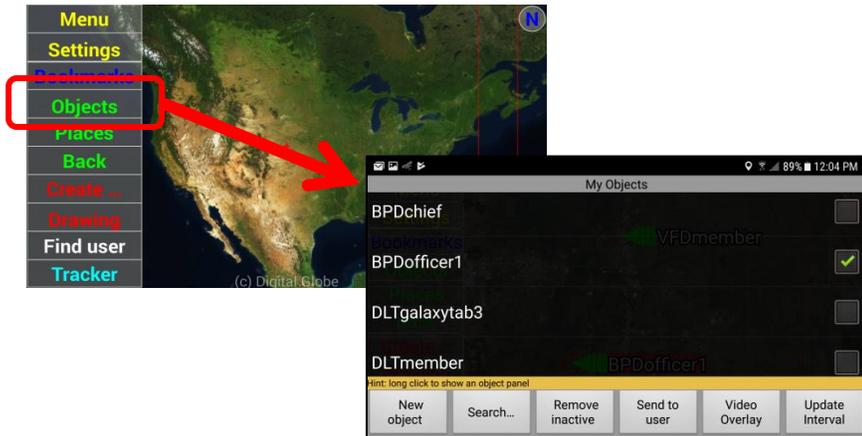
## 3. Bookmarks - Bookmarks

Bookmarks are “shortcuts” that are created to provide rapid access to many of the Sentry MDU features. Examples can be pre-set video recording, access to other users, instant messaging and internet website access.



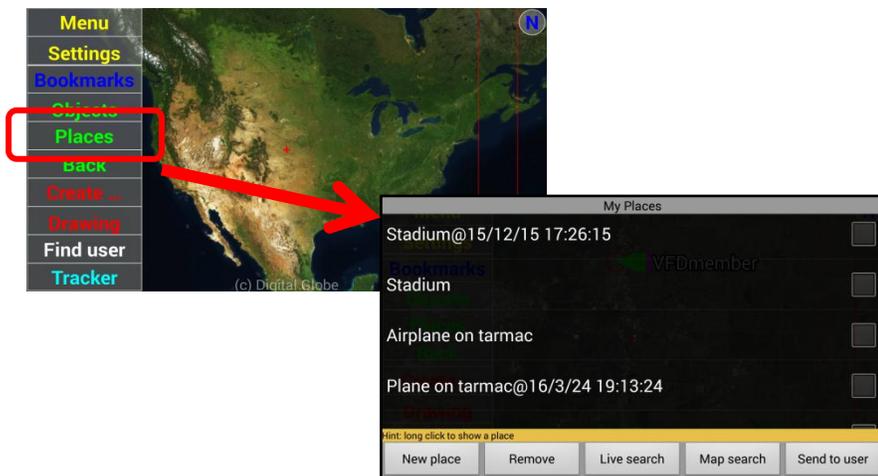
4. **Objects** - **Objects**

Objects are the name given to “users” and “devices” on the Sentry MDU network. This panel allows users to search for other users, create new objects, remove inactive objects and provide rapid video connections to other mobile devices (assuming security permissions allow).



5. **Places** - **Places**

The Places Button allows a user to designate a specific location (via GPS coordinates) as a “place”. Audio, video and pictures may be attached to a “place”. The places feature allows for rapid retrieval of the stored information and further allows one user to send another user the “places” data.



6. **Back** - **Back**

The Back Button allows a user to go “back” and retrieve the previous screen that was being viewed.

7. **Create ...** - **Create ...**

The “Create ...” feature allows a user to create regions on the map where information can be stored. This data can include pictures, video files, audio files, reference information, etc.



8. **Drawing** - **Drawing**

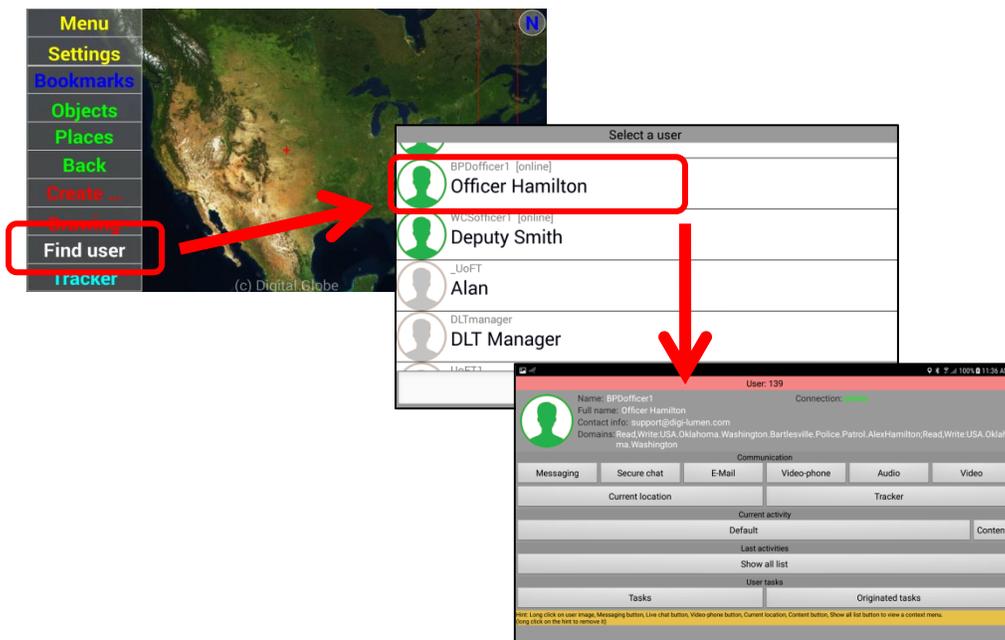
The Drawing feature allows a user to “draw” on the device screen using a finger as a stylus. These drawings may be saved on the device or sent to other users in the Sentry MDU network.



This feature may be disabled from the Settings Panel. See **Section 8.12** of this user guide for details.

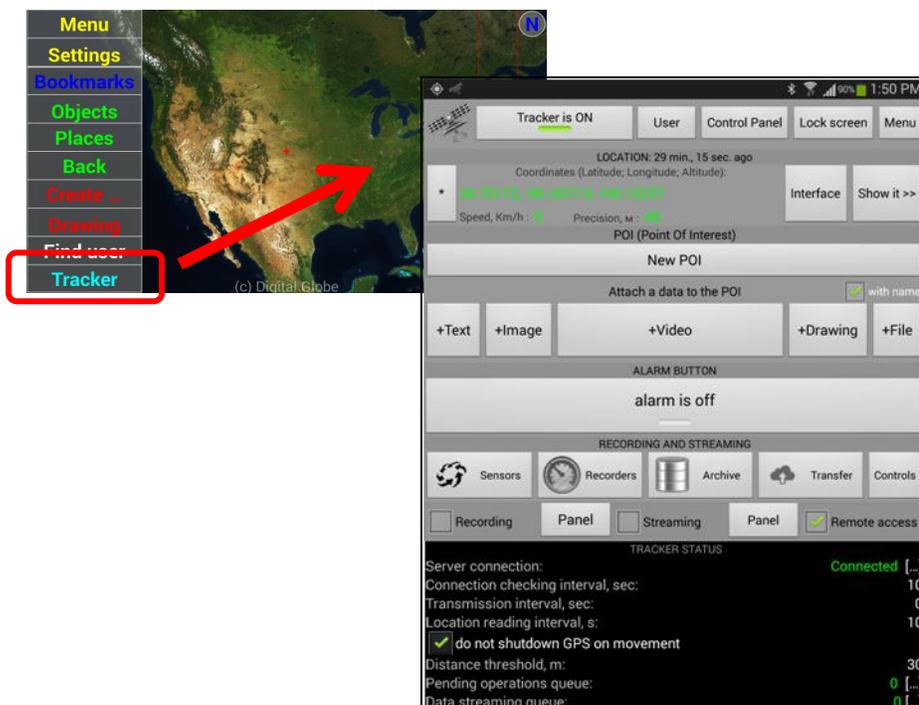
## 9. Find user - Find user

The Find User feature allows users to search for other users in the network and then connect via text messaging, live chat or video-phone. In addition, users may view/review the stored content (audio, video, images, places) of other users (assuming permissions allow).



## 10. Tracker - Tracker

The Tracker feature provides for audio/video recording, body cam capability, setting of POI's, monitoring environmental sensors and setting alarm parameters. This is the primary GPS tracking feature panel.



### 11. North Alignment Icon -

The SentryMDU System has a North Button with two functions.

- a. Performing a “Short click” will align the display maps of the mobile device with the North Pole.
- b. Performing a “Long click” will use the internal compass of the mobile device to provide continuous auto-orientation of the map screen to be in alignment with the North Pole (phone must have gyroscopic sensor).



### 12. User Information Icon -

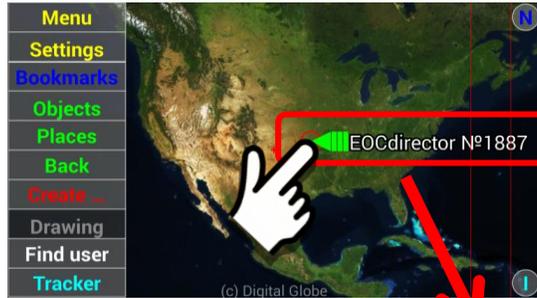
The User Information panel is where a user stores and retrieves “content” for future use. The content may be text, audio, video, images, drawings and data files. The content may be further arranged by activity classification if desired.



### 13. Mobile Object of User -



All registered users on the Sentry MDU network will have a “mobile object” name that is displayed on the Main Screen by GPS location. Clicking on the Mobile Object of a user will open the Mobile Object Panel for the user (assuming that Security Domain and access privileges are sufficient).



## 4.5. Program “Hints” displayed at the bottom of a screen panel

### Overview:

The Sentry MDU App is designed to include helpful “hints” at the bottom of many of the panels. These bits of help text provide a refresher to the user on the features of the particular panel. Once you are familiar with the program, these “hints” may be removed if they are no longer needed. This section will describe the “hints” feature, how to remove the hints and how to reinstall them should you need to.

### Layout of the Sentry MDU panel with “Hints”:

Many of the screen panels contain helpful “hints” on the available features. Below are shown a few of the screens that contain these hints. The “hints” will always be displayed against an orange colored background.

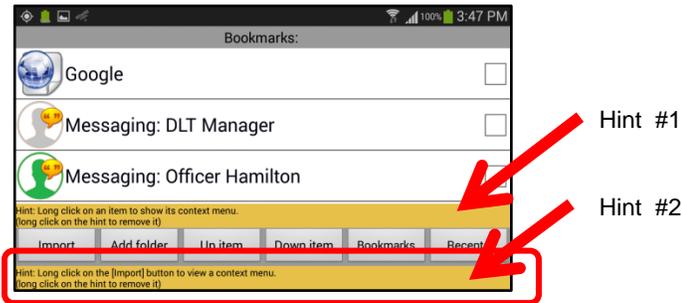


## Review of “Hints” options:

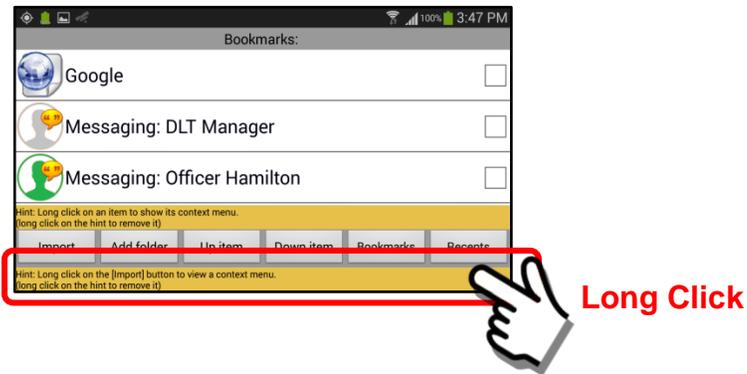
### 1. Removing the “Hints” from the screen panel.

The text “Hints” may be removed from the screen panel if they are no longer needed. This removal is permanent. However, if you do make a mistake and remove a hint ... we will show you a “manual” method whereby you can reinstall the hint. This will be described later in this section.

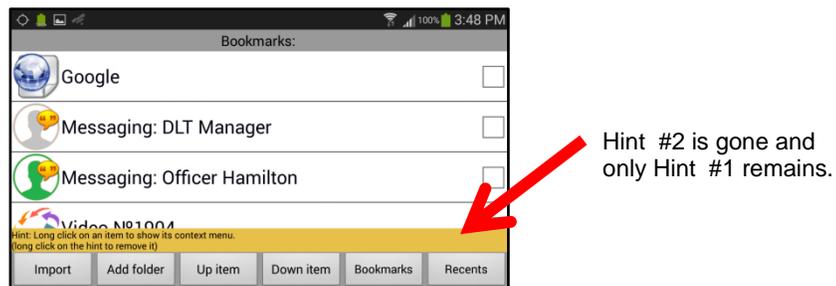
To remove a hint, perform a “Long click” on the hint text. This is illustrated below. The Bookmarks panel contains two hints. We will remove the bottom hint.



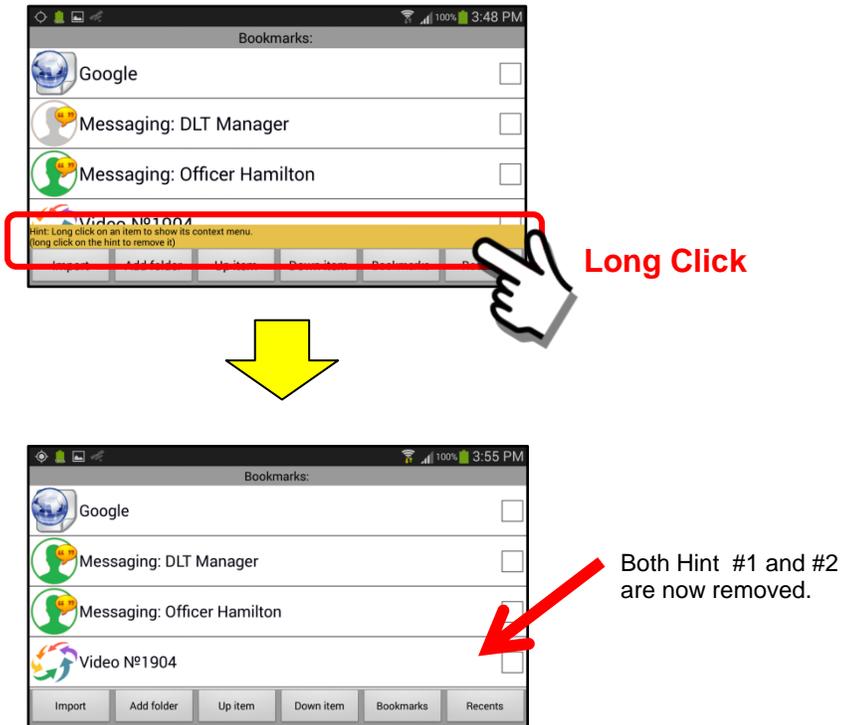
Perfrom a “Long click” on Hint #2.



Hint #2 has now been removed.



To remove Hint #1, perform a “Long click” on Hint #1 text. Hint #1 is now removed.



## 2. *The manual procedure to reinstall ALL hints.*

The removal of help text “hints” is designed to be a permanent removal. However, we will show a way that you can “restore” the help text “hints” by manually editing the file system of the Sentry MDU App. This is generally not recommended for the average user. However, if you are familiar with file systems, then the removal of “hints” can be reversed.

### Discussion of the procedure

Many screens on the Sentry MDU System contain hints. When a hint is removed, the system keeps track of which hints have been removed by storing the information in a text file. To restore the hints, we will simply “erase” (delete) this text file from the SentryMDU file system.

The Hint information filename = **DisabledHints.txt**

Directory path to file = **SentryMDU.HELP**

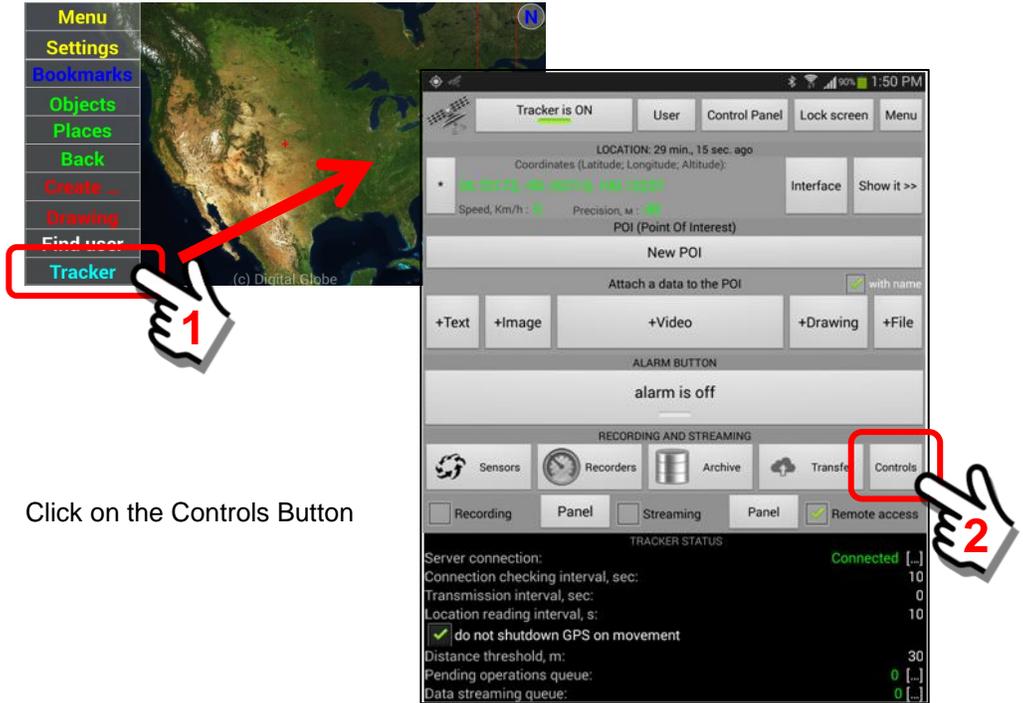
Note that the file is stored in a “hidden” folder (.HELP). Hidden folders are designated with a “period” ( . ) in front of the name. You will need to go to the “Settings” App of your mobile device and make sure that the preferences are set to allow you to “see” hidden folders. Likewise if you plug your phone into a USB port and use a computer to access the file

system ... please note that MS Windows computers cannot see dotted files (ie .HELP). Linux and Mac computers can see the files.

### 3. Perform a “manual” reinstall of ALL hints.

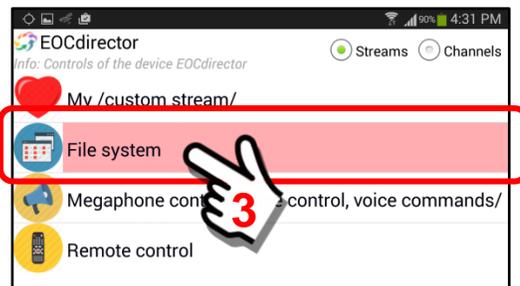
Shown below is a step-by-step procedure for reinstalling hints.

Start at the Main Menu Screen. Open the Tracker Panel.

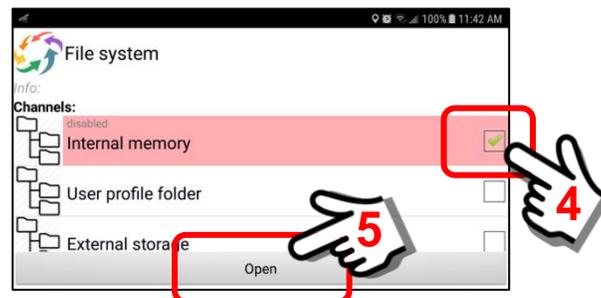


Click on the Controls Button

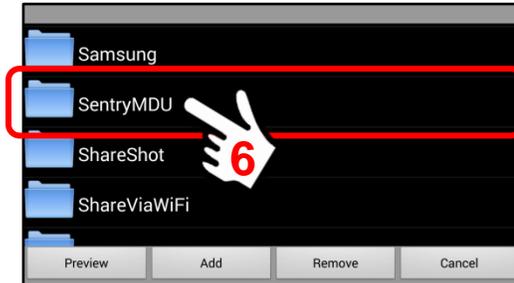
At the Controls Panel, select and click on the “File Systems” heading.



Select the “Internal Memory” control feature. Put a checkmark in the checkbox and click on the Open Button.

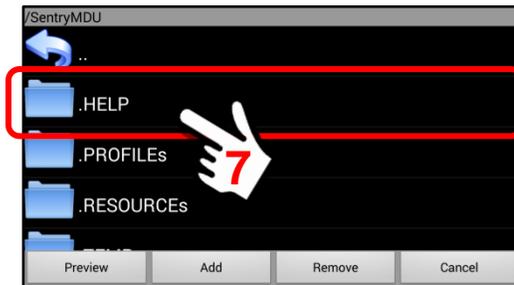


You will be presented with the file system of the mobile device. You will be at the Root level (top level). Scroll down the list of directories until you find the SentryMDU directory. You are now at the top level of the SentryMDU App folder. Click on the SentryMDU folder.



Open the SentryMDU folder. Assuming you have adjusting your file settings so that you can see “hidden folders” you will see a list of directories (both hidden and not hidden).

Click on the .HELP folder (this is a hidden directory).

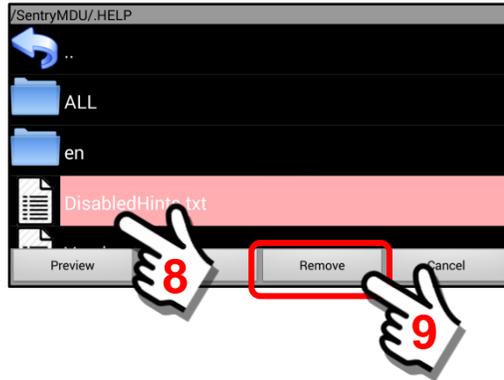


Within the .HELP directory you will see a few folders and some files. Locate the **DisabledHints.txt** file in the list.



This is the file where the information on “Hints” is stored. We will remove this file.

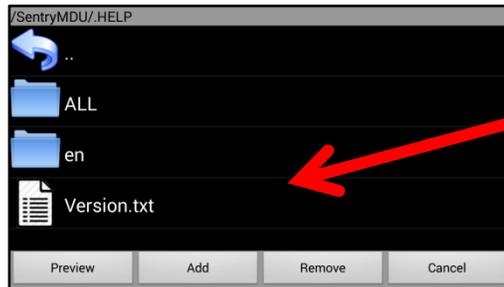
Select the **DisableHints.txt** file from the list. It will be highlighted as shown below.



Click on the “Remove Button” to start the process of erasing (deleting) the file from the directory. When the system asks to “confirm” the removal ... click on the “Yes” Button.

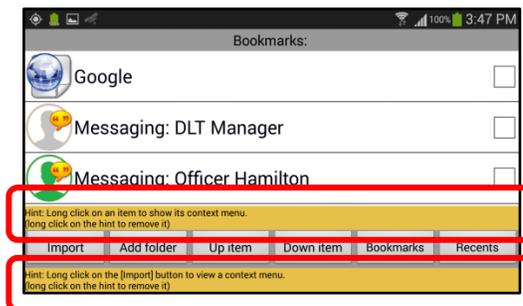


The **DisabledHints.txt** file has now been removed.



The “**DisabledHints.txt**” file has now been removed.

Return to the screen panel and notice that the “Hints” are now restored.



Hint #1

Hint #2

## 5. Configuration settings on a Mobile Device

### 5.1. Initial device configuration after App installation

The default settings of the Sentry MDU Application are appropriate for most users. However, depending on the hardware (phone or tablet) and the intended use, it is important for a user to review the primary configuration settings to ensure they meet your needs.

The following are several examples of situations where further configuration is needed:

- a. If you are a Licensed Group and run your own Data Server instance, then you will have a different network address (IP address or domain name) than the default “public” address listed in the current setup.
- b. The default setting of the App is to operate unencrypted. If you want data encryption turned on, then this is a setting you will need to change. See **Section 5.5** for details.
- c. If you are a First Responder and wish to use the Tap Control or Voice Activation features of the device, then these will also need to be turned on (they are “off” by default). The voice activation feature requires an “optional” voice recognition package (CMU.Sphinx) be loaded on the mobile device. **Section 15.2.6** of this guide will show you how to install this package (it is free).
- d. If you are a First Responder and wish to use the Object Recognition features of the device, then these will also need to be turned on (they are “off” by default). The Object Recognition feature requires an “optional” package (TensorFlow) be loaded on the mobile device. **Section 15.2.6** of this guide will show you how to install this package (it is free).
- e. The Sentry MDU System uses specific communications “ports” in various features. If you have a private network with a router/firewall that blocks these ports, then you will need to make changes to the ports used. (see DLT Tech Support for more information)
- f. Depending on the mobile device and hardware capability ... there are settings for video framerate, bitrate, video size (ie 1920x1080, 1280x720, 640x480, etc.). All of these will need to be set depending on the device capability, available bandwidth and application requirements. See **Section 15.2.17** for details.
- g. If you are a Subscription User, you should create several “personal” Security Domains including those for family, friends, hobbies, travel and more. You may have up to 100 security domains. See **Sections 6.4 – 6.7** for details.
- h. Review the “factory default” settings of your mobile device. Some of these may interfere with the SentryMDU features. See **Section 3.14** for details.
- i. If the mobile device you are using is most often connected to a permanent power source (desktop charger), there are several settings that will optimize the device. See **Section 3.14** for details.
- j. Adjust **Picture Quality** of the display of satellite imagery. The default setting is suitable for most devices, but if you want the display very “crisp” then adjust the settings. See **Section 8.3** to adjust the picture quality to match your device.

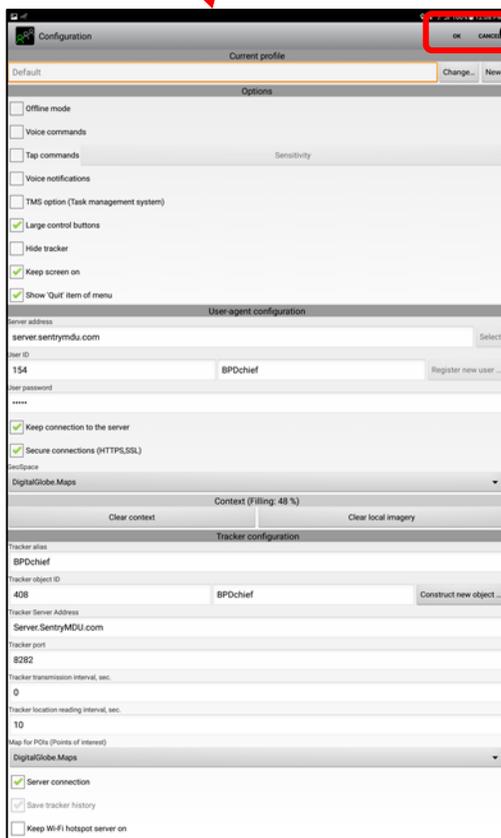
## 5.2. Main configuration panel layout

### Overview:

The settings on the Main Configuration panel can be used to optimize the Sentry MDU System for your specific application. The layout is shown below.

### Sentry MDU Main Configuration panel:

Launch the Main Configuration panel from the Menu Button on the main screen.



Once changes are made .... Click "OK" to SAVE the changes.

#### Options section:

To turn on/off Tap Commands, Voice Commands, put large control buttons, etc.

#### User agent configuration section:

Settings for network IP address, User ID and password and server connections.

#### Tracker configuration section:

Settings for the GPS tracking features, including Tracker Server IP, network port address and tracking update intervals.

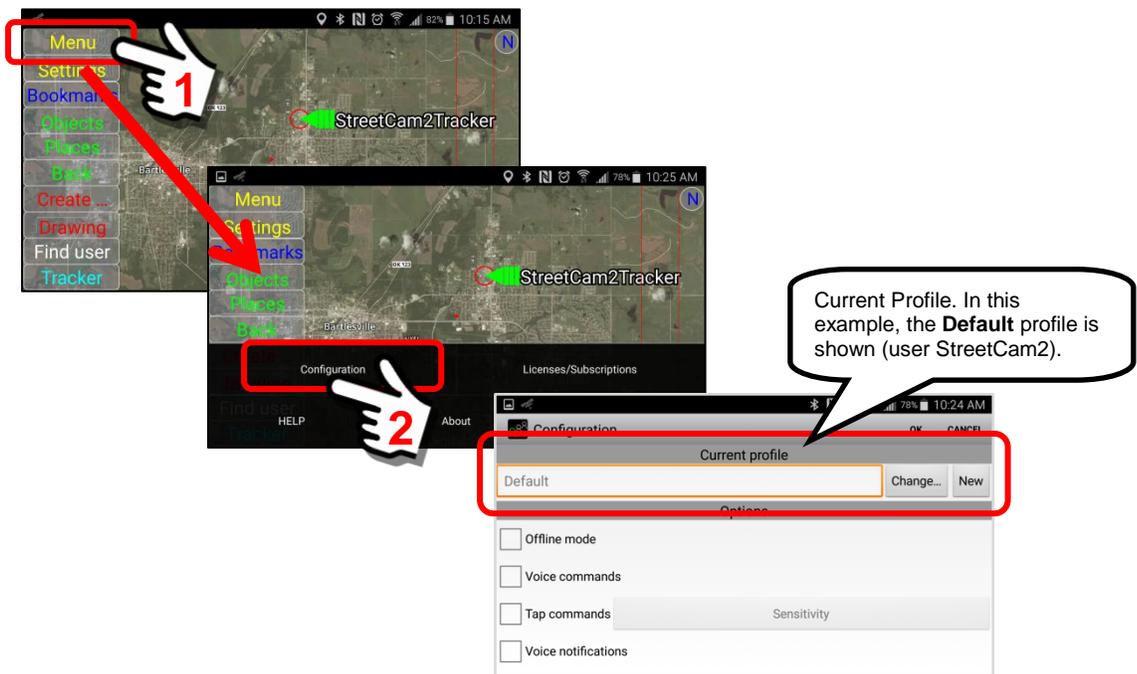
### 5.3. User Profile – One device, Multiple Sentry MDU Systems

#### Overview:

Each device may have several different user “profiles” stored in memory. These different profiles may have settings to access different Sentry MDU server instances. This section will explain how the User Profile feature works.

When a user installs the SentryMDU App on their device and does an initial **General User Registration**, the system creates a “default” user PROFILE. This profile will adopt the configuration settings that the user has designated for the application.

Access to the **Profiles Feature** is found on the Main Configuration Panel, as shown below.



Additional **NEW profiles may be created with different configuration settings that are specific to an application task.** To illustrate, we will assume a scenario where you could have three (3) user profiles on your mobile device.

1. Let's assume that as your “day job” you are a Firefighter for the City and your mobile device (cell phone) is configured to access a SentryMDU Licensed Server that is operated by the City. For this profile your Username is “**Station4-FF4587**” (Fire Station No. 4, Firefighter No. 4587).
2. You are also the member of a rural Volunteer Fire Department. Your VFD is part of a county-wide Mutual Aid Group where all volunteer fire departments have access to a SentryMDU Licensed Server that is operated by the County. For this profile, your Username is “**VeraVFD-DougJones**”.
3. You have also configured your device for your “personal” family group. You have created a family “security domain” for your wife and two children and have subscribed to a “Level 1 Access” subscription. For this profile, your Username is “**DougJones**”.

In this example, you will have three DIFFERENT user PROFILES on your mobile device. You may select whichever profile you want to be the “active” profile. This would be analogous to switching a radio to a different frequency channel. In this case, each of your three profiles has access to a completely different SentryMDU Data Server, security domains and set of configuration options.



During initial “General Registration” the system created a default user profile based on the Username you selected. This section will describe the steps necessary to create a second User Profile. For purposes of illustration, the second User Profile we create will also be a user that purchases a “Level 1 Access” Subscription.

The following 19 steps will be covered in detail:

1. Preparation for the exercise
2. Create a “new” User Profile name
3. Submit to create the NEW user Profile
4. Verify the NEW user for the device
5. Create a new user for the device (stored under a new user profile)
6. Register for a Subscription Account
7. Review data entry ... submit to create a new account
8. Successful registration of a Subscription Account
9. Next steps after a Subscription Account registration
10. Sign up for a Subscription
11. Enter your Credit Card information
12. Credit card information is validated and processed
13. Close the Browser panel
14. Subscription validation and return to the Main Map Screen
15. Dialog box displayed after successful validation
16. System will install satellite imagery for the current map view
17. Change settings to display YOUR user GPS location on Map Screen
18. Review the NEW user profile you have added (StreetCam3s)
19. Removing a User Profile (permanently delete)

## Process to create additional User Profiles:

### 1. Preparation for this exercise ... complete these steps first.

In this example, we will assume you have completed the following steps. We want to start with a device that has a **User License already installed** that provides access to a SentryMDU Licensed Server. If you need a “refresher”, please review **Section 3.7**.

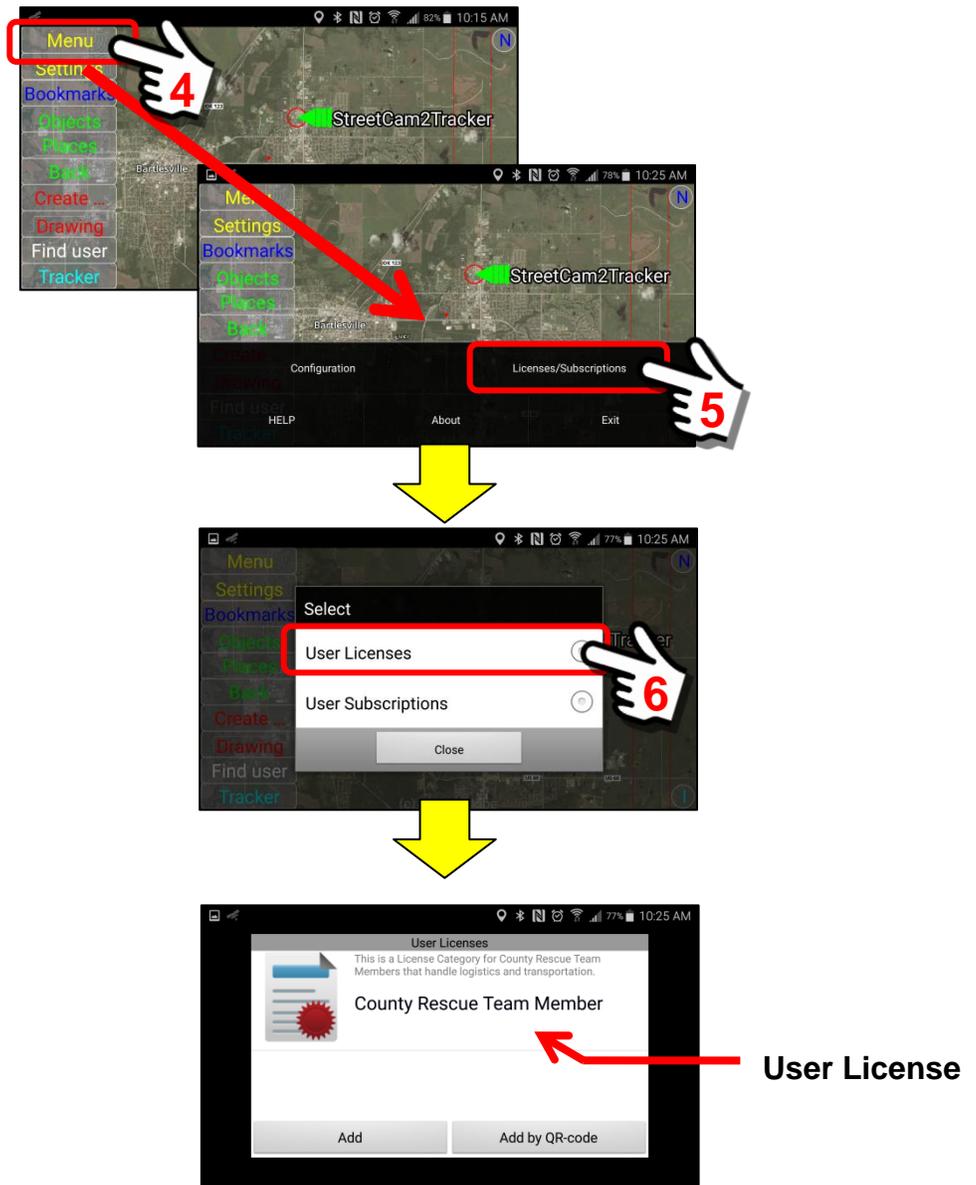
#### Steps to Complete

- Install the SentryMDU App on our mobile device
- Register as a User on a Licensed Server
- Create a “default” Username (ie our example is “StreetCam2”)
- Add a User License to our device

Once these steps are complete, you should see a User Profile similar to the following screens.

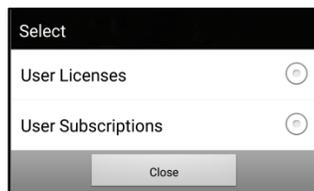


We see that we have the one “Default” Profile. Now, let’s review this default profile and verify that we have an active User License.



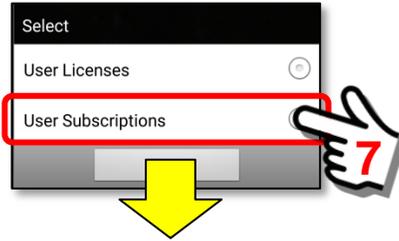
As shown above, we have an active User License for this device (County Rescue Team Member).

As illustrated above, when we navigate to the Licenses/Subscription Menu item, we have two choices.



When working with User profiles ... remember that a User Profile can have a **User License OR a User Subscription ... but NOT BOTH at the same time.**

In our example above, if you were to “click” on the **User Subscriptions** menu option, you will receive an error message as below.



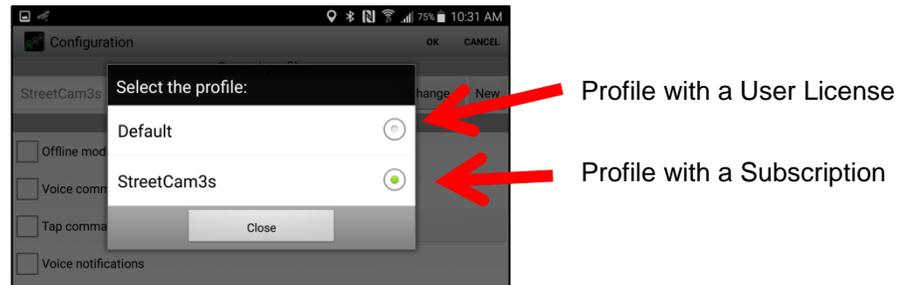
**Error Message**

If we have a User Profile that has an active User License ... we cannot also activate a Subscription for this same user profile.

An individual User Profile cannot have BOTH a User License and a Subscription ... at the same time.

**In this exercise, since we already have a profile with a User License, we will create an additional User Profile for a Subscription. This is the purpose of this section.**

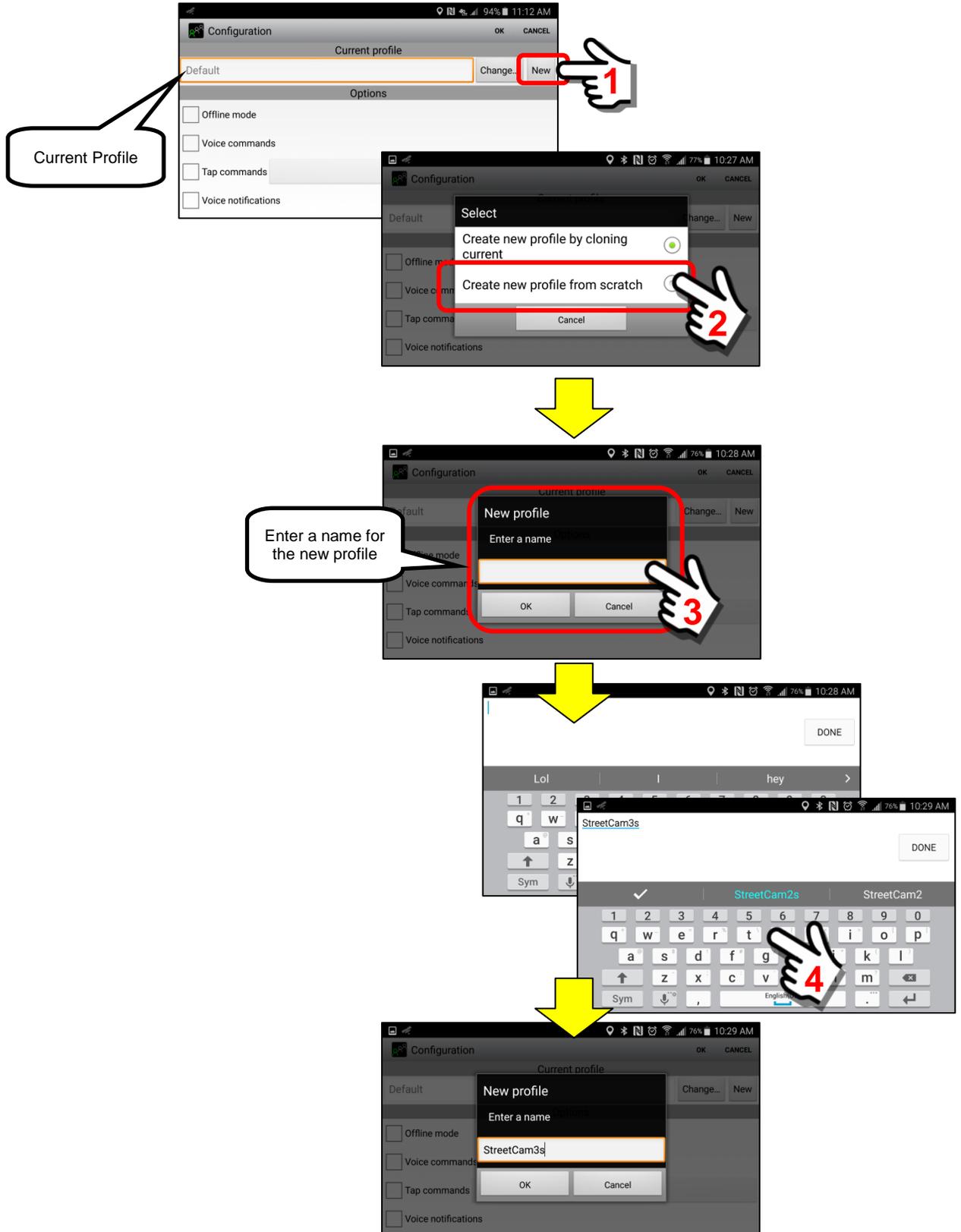
This is how the **Profile Select Menu** will look when we are finished.



The next parts of this section will provide the steps necessary to create an additional User Profile that will have a SentryMDU Subscription.

**2. Create a “new” User Profile name**

Navigate to the Main Configuration menu and select “New” under the Current Profile section. Create a NAME for the new profile as shown below.



**3. Submit to create the NEW user Profile**

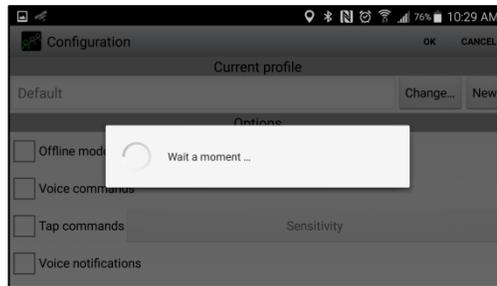
Once we have decided on a “name” for the new profile, we must submit this name. Since our choice was to “**Create new profile from scratch**” this means we will create a complete NEW User.

**Important Note:** The Profile Name does NOT have to be the same as the Username you will select when registering this new User. However, it is usually better if you make them the same as it is easier to remember.

When you are ready, click the “OK” Button to continue.



The mobile device will contact the SentryMDU Data Server and create a “new” Anonymous User with the User Profile name of “StreetCam3s”.



It may take 20 – 30 seconds as it creates a new profile on the Data Server.

You will see a pop-up message that indicates that a new Profile has been created.

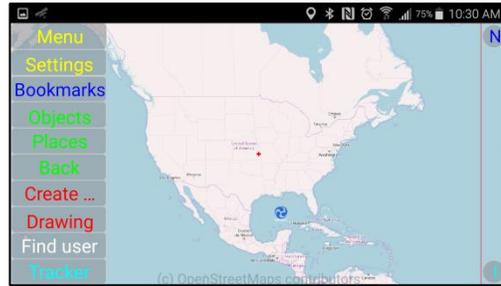


Profile Success Notification (3 secs)

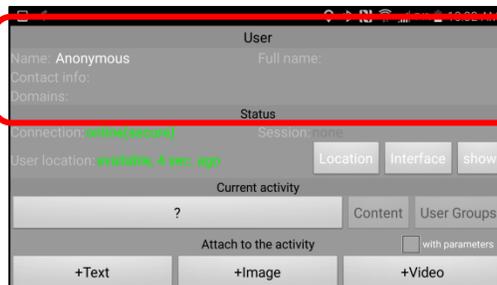
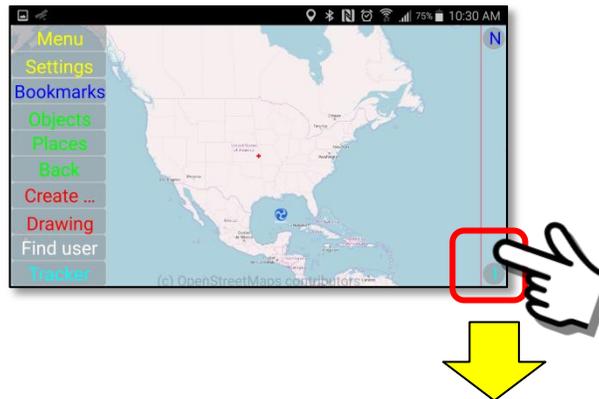
#### 4. Verify the NEW user for the device

The system will now create an Anonymous “new” user under the profile name that you entered (ie StreetCam3s). The device will revert to the OSM (OpenStreetMaps) map imagery just as if this was a new initial install.

The screen will display the Main Map Screen with OpenStreetMaps data.



To view your “status” as an Anonymous User, click on the **User Information** button on the lower right-hand side of the Main Map Screen.



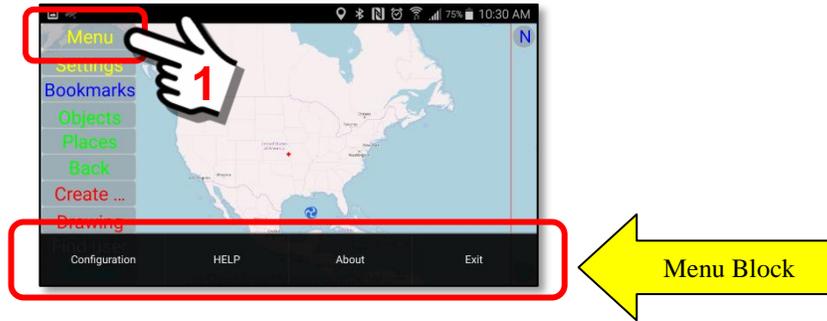
No information is available as an Anonymous User.

As an Anonymous User, since you have not yet established an account on the Data Server, you will not have a security domain or other account data.

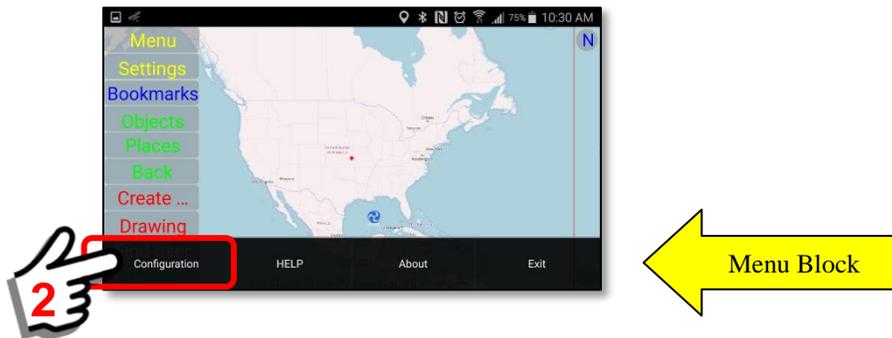
5. **Create a NEW user for the device (stored under new profile)**

Since this “new” User Profile is an Anonymous User (with no access), we shall create a new user.

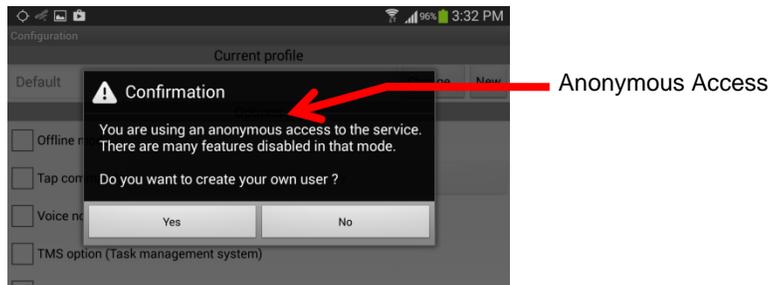
Click on the Menu Button to display the Menu Block.



Select the “Configuration” Button from the Menu Block.

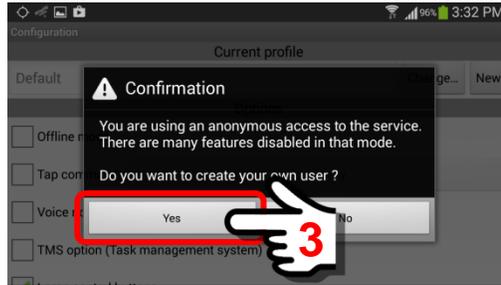


As the Configuration screen begins to display, a “pop-up” box appears and explains that prior to registration you ONLY have Anonymous user access to many of the features.



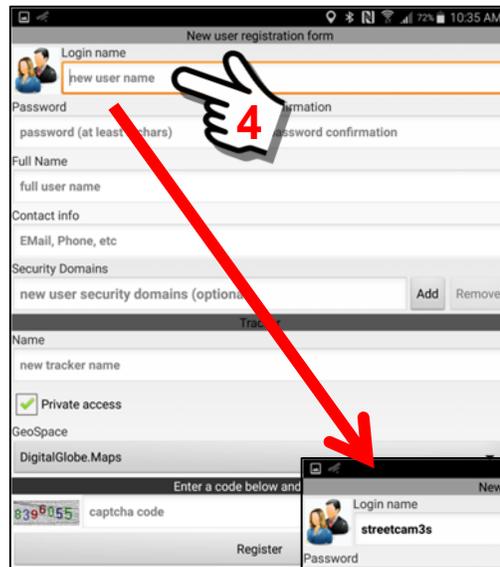
In order to have access to many of the SentryMDU features, you will need to register as a User. The registration process creates an “account” for you on the SentryMDU Data Server, identifies the mobile device, and creates a security profile. **Registration is free.** This is necessary if you wish to interact with other mobile devices on the network.

Click the “Yes” Button to continue.



By clicking on the “Yes” button, the “**New user registration form**” will be presented. Depending on the type of device you are using (phone or tablet), as you touch one of the data entry boxes, the device will show a screen “keyboard” so you can enter the required text. Please follow the rules in **Section 3.5** when filling out the form.

Fill out the Form. When finished, click the “Register” Button.

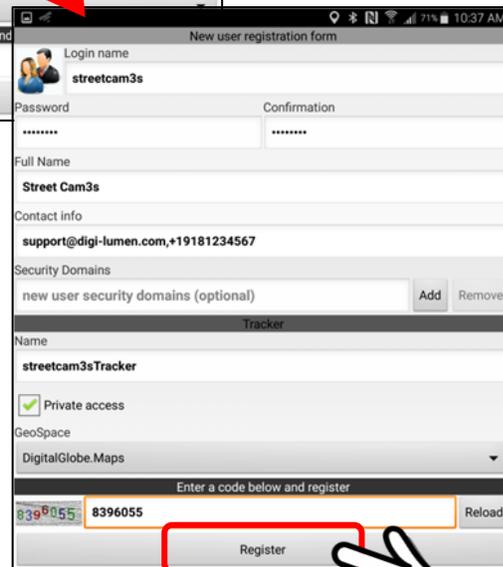


**NOTE:**

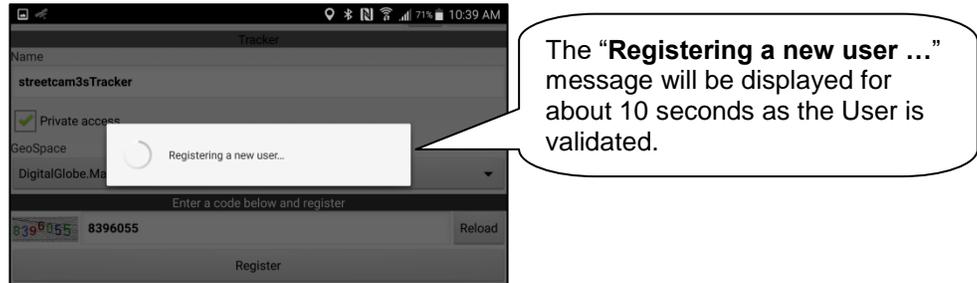
**Registration does NOT obligate you to anything. It is FREE.**

**The use of a License Key or Subscription is OPTIONAL.**

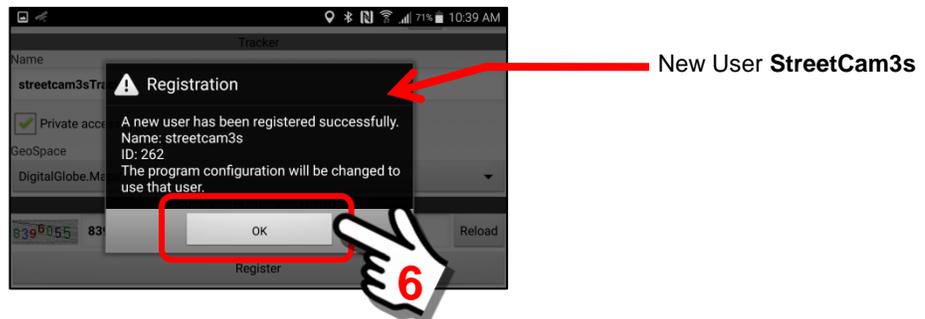
We have created user “StreetCam3s”



When the “Register” Button is clicked, the mobile device will contact the SentryMDU Data Server and set up an account for you. You will need to have either a cellular or WiFi connection such that the mobile device can contact the SentryMDU Data Server network. This may take 10 – 20 seconds to complete. This account will set the security profile for you as a User of the SentryMDU System and will register your “device” as an authorized device.

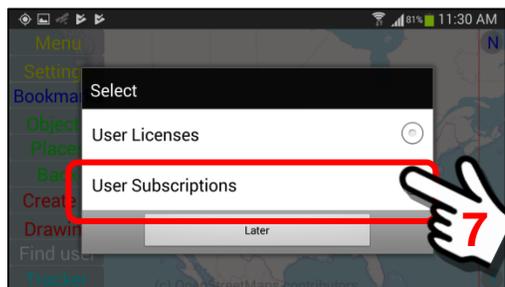


Once the “registration” is successful, you will get a message stating that an account has been created for you on the network and that your security profile has been changed from Anonymous to a registered user (in this example, **StreetCam3s**).



Once the “OK” Button is clicked, the screen will return to the Main Menu Screen. A pop-up box will be displayed allowing you to select either a *User License* or *User Subscription*.

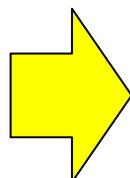
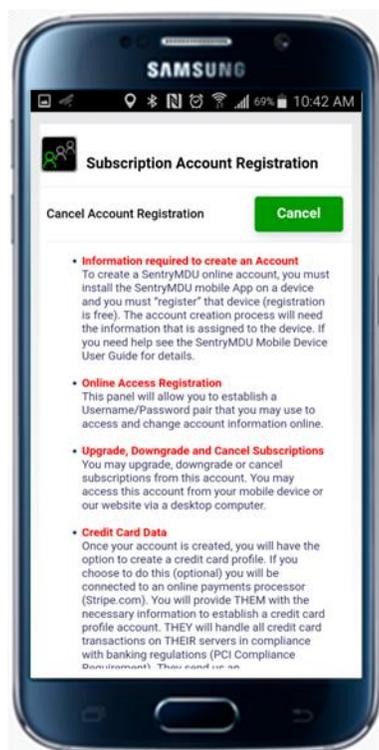
For this example, since we want to add a Subscription Account, we will be selecting the “**User Subscriptions**” menu option.



## 6. Register for a Subscription Account

The next step in this example, is to register for an “online” Subscription Account. Since this is a new user and we do not have an existing Subscription Account, the system will display the **Subscription Account Registration** form. When finished, click the “Continue Account Creation” Button to continue. You will have a chance to review your entries before the final submit.

When you establish an account “Login” name, you may use the same username as your mobile device ... or a different name. We recommend a different name. You will have options to change BOTH the Username and Password of this Subscription Account, as you desire



By tapping "Continue", you accept our Terms of Service, Privacy Policy and EULA. These documents are available on our website.

General Account Information	
Organization Name	Org Name (optional)
Contact First Name	Person First Name
Contact Last Name	Person Last Name
Address of Contact	Address Line 1
Address Line 2	Address Line 2 (optional)
City	Your City
State or Province	Your State
Postal Code	ZIP or Postal Code
Country	United States
General Contact Email	jane.doe@example.com
Confirmation Email	jane.doe@example.com

Create Account Login Credentials	
New Account Name	Single word, 8-20 character
Password	8-25 characters
Confirm Password	8-25 characters

**Continue Account Creation**

General contact information of the account user

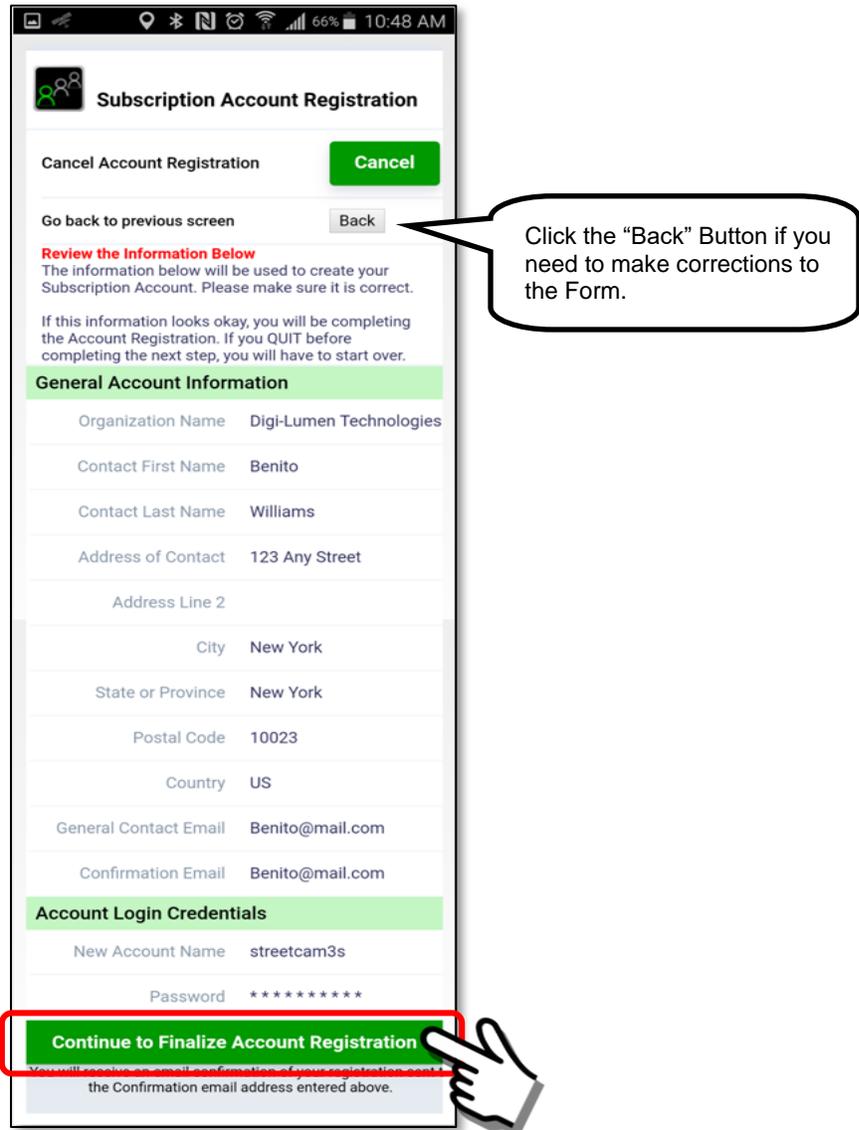
Create a Username / Password for accessing your online Subscription Account

**7. Review data entry ... submit to create a new account**

This panel will provide a review of the data you entered. If you need to correct something, use the “Back” Button at the top right side of the panel to return to the previous screen.

**Important Note:** Make a note of your password and store in a secure place. Passwords do NOT expire and are encrypted on our Servers. If you lose your password, we cannot help you.

When you are ready to proceed, click the “Continue to Finalize Account Registration” Button at the bottom of the panel.

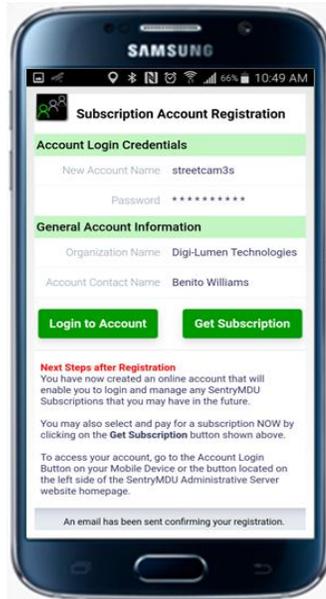


You will receive a confirmation email of your registration.

### 8. Successful registration of a Subscription Account

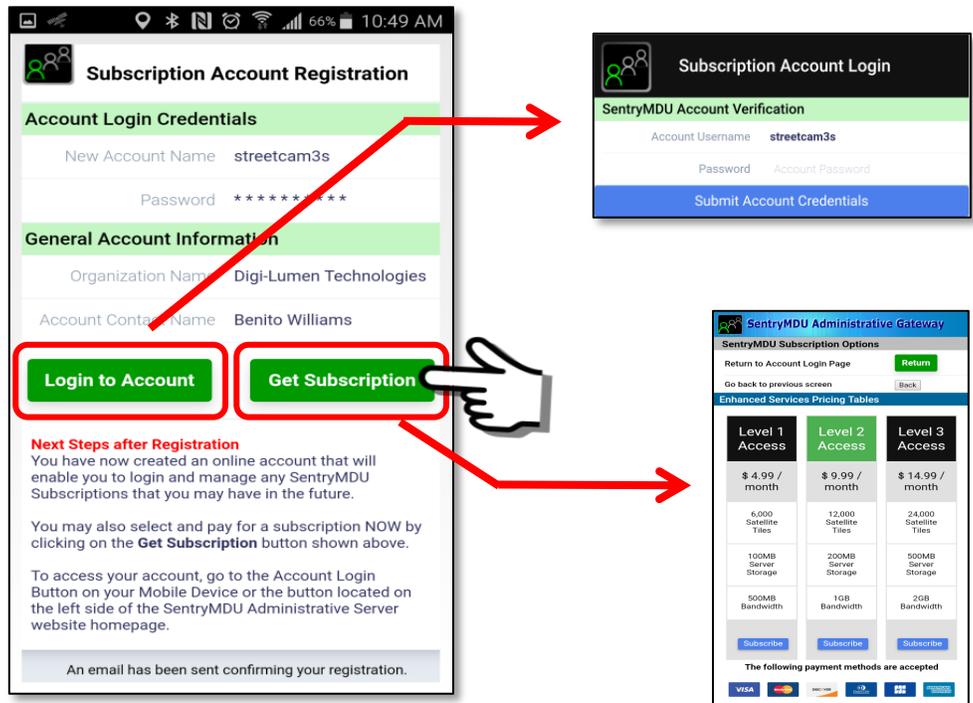
When you submit the Registration Form, the system will check the data you entered for errors and incorrect formatting. In addition, your Username must be “unique” in our system ... if someone else has already selected that Username, you will be prompted to choose another name.

If all is well, you will see the following panel.



### 9. Next steps after a Subscription Account registration

Upon a successful initial Account Registration, you will be presented with two options ... (1) Go to the Account Login Screen, (2) Sign up for a subscription.



## 10. Sign up for a Subscription

In this example, we are selecting to sign up for a subscription option NOW. We could do it later, by logging into our Subscription Account and signing up for a new subscription ... but since we registered in order to get a subscription, we will do it now.

Select the "Get Subscription" Button.

Review the available subscription options and click the "Subscribe" Button for the subscription you want.

**Subscription Account Registration**

Account Login Credentials

New Account Name streetcam3s

Password \*\*\*\*\*

General Account Information

Organization Name Digi-Lumen Technologies

Account Contact Name Benito Williams

Login to Account Get Subscription

**Next Steps after Registration**

You have now created an online account. This will enable you to login and manage any SentryMDU Subscriptions that you may have in the future.

You may also select and pay for a subscription by clicking on the **Get Subscription** button shown below.

To access your account, go to the Account Login Button on your Mobile Device or the button located on the left side of the SentryMDU Administrative Gateway website homepage.

An email has been sent confirming your registration.

**SentryMDU Administrative Gateway**

SentryMDU Subscription Options

Return to Account Login Page Return

Go back to previous screen Back

**Enhanced Services Pricing Tables**

Level 1 Access	Level 2 Access	Level 3 Access
\$ 4.99 / month	\$ 9.99 / month	\$ 14.99 / month
6,000 Satellite Tiles	12,000 Satellite Tiles	24,000 Satellite Tiles
100MB Server Storage	200MB Server Storage	500MB Server Storage
500MB Bandwidth	1GB Bandwidth	2GB Bandwidth
Subscribe	Subscribe	Subscribe

The following payment methods are accepted

VISA MASTERCARD DISCOVER AMERICAN EXPRESS

Three (3) subscription options are presented

Unless you KNOW what you want, we suggest all new Users start off with a **Level 1 Access** subscription.

### 11. Enter your Credit Card information

The SentryMDU Payment Panel will be displayed. Enter your credit card information and an email address where you would like a “confirming email” to be sent. All fields are required (except Postal Code).

For those countries that do NOT have postal codes (ZIP), leave this field blank.

When finished, click on the subscription price at the bottom of the form.

The screenshot shows the SentryMDU Administrative Gateway Payment Panel. The form includes fields for Name on Card, Card Number, Expiry Date, CVC Code, Postal code (ZIP), Country, and Email. A callout box points to the Postal code (ZIP) field with the text: "This field is OPTIONAL. However, if your BANK requires the entry of a Postal Code, then your credit card will be declined if you do not enter one (most Banks require this)." Below the form, the price is listed as \$ 4.99 per Month, and a list of accepted payment methods (VISA, MasterCard, Discover, American Express) is shown. A note at the bottom states: "You will receive an email confirmation of your purchase email address entered above."

Fill out the Credit Card information form

The second screenshot shows the same form with a hand cursor pointing to the \$ 4.99 per Month price. The form is filled out with the following information: Name on Card: Benito Williams, Card Number: 4242 4242 4242 4242, Expiry Date: 12 / 21, CVC Code: 568, Postal code (ZIP): 10023, Country: United States, and Email: Benito@mail.com. The price is highlighted with a red box.

## 12. Credit card information is validated and processed

The validation process may take anywhere from a few seconds to a minute or more depending on your internet speed and your location in the world.

Do not "re-click" the button a second time, lots of things are happening in the background ... you will get an error message if things are not working correctly.

If the transaction is successful (card is charged and subscription is validated) you will see the following summary panel.

Click this button if you want to go to your online account and review card and subscription details.

Note that transaction was successful

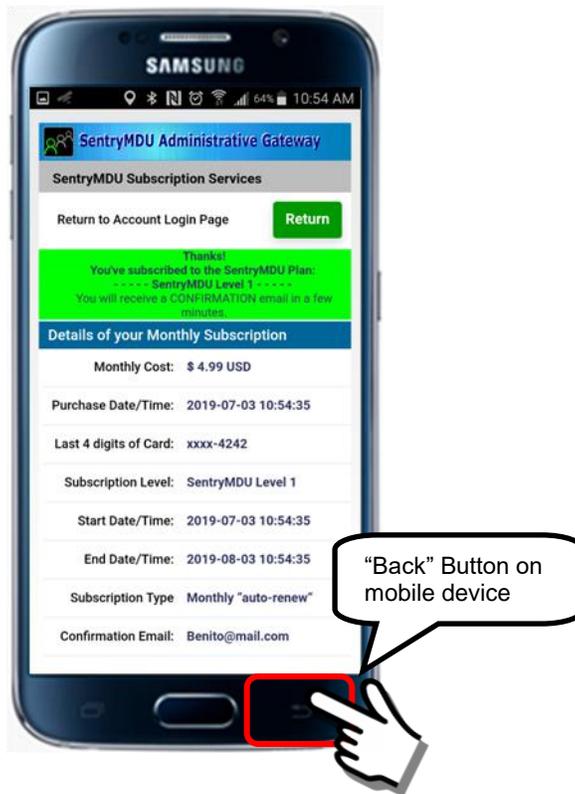
Summary of the SentryMDU Subscription you have purchased

Details of your Monthly Subscription	
Monthly Cost:	\$ 4.99 USD
Purchase Date/Time:	2019-07-03 10:54:35
Last 4 digits of Card:	xxxx-4242
Subscription Level:	SentryMDU Level 1
Start Date/Time:	2019-07-03 10:54:35
End Date/Time:	2019-08-03 10:54:35
Subscription Type:	Monthly "auto-renew"
Confirmation Email:	Benito@mail.com

- You may CANCEL your subscription at any time**  
You may access your online account, by computer or mobile device, and cancel your subscription at any time. **However, there are NO refunds.** A cancellation means that you will continue to receive your subscription service for the remainder of the subscription period, but it will NOT be renewed for the next month.
- If you need to contact us ...**  
See the **About us/Contacts** section on the left side menu on our website. You may call or email us if needed (email is usually best). Our Support Group email is "support AT digi-lumen dot com ". We will try to get back to you as soon as we can.

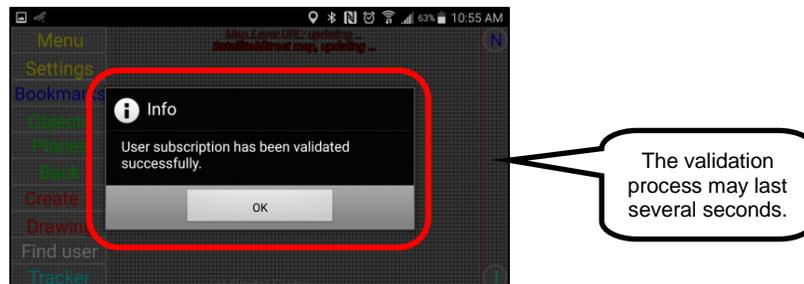
### 13. Close the Browser Panel

To “activate” the subscription you have just purchased, close the screen panel. Generally, clicking the “back” button on your mobile device will do it.



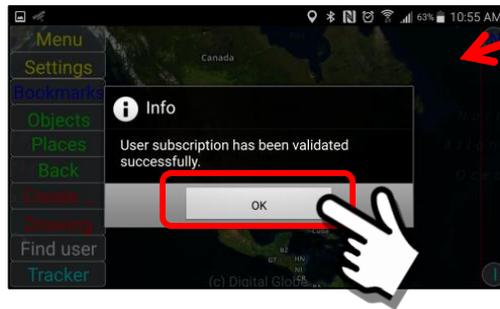
### 14. Subscription validation and return to the Main Map Screen

The mobile device will contact the SentryMDU Administrative Server and receive validation that a successful transaction has occurred. Depending on your internet speed and location, this action may take 10 -20 seconds.



**15. Dialog box displayed after successful validation**

Upon subscription validation and contact with the SentryMDU Administrative Server, the system will display a pop-up dialog box. Click “OK” to continue.

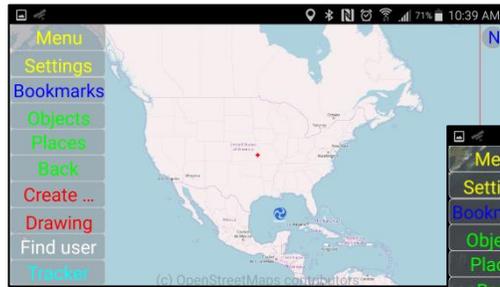


Satellite imagery will begin to fill the background

**16. System will install satellite imagery for the current map view**

Satellite imagery will now be installed on the device and the Main Map Screen will change from an OpenStreetMaps street view map to satellite images. In addition, the Data Server will be configured for the data storage and data streaming parameters you selected with the Subscription.

**Street Map Screen**



**Satellite Map Screen**



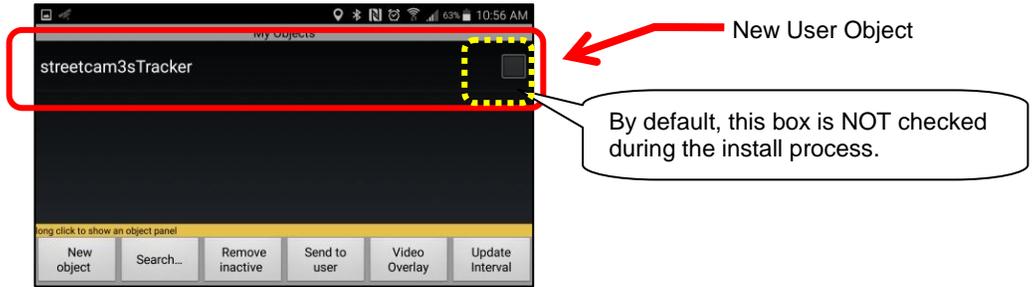
**17. Change settings to display YOUR user GPS location on Map Screen**

A subscription has now been installed on your mobile device under the Username of “StreetCam3s”. If you would like to display the current GPS location of this mobile device on the Main Map Screen, follow the directions below.

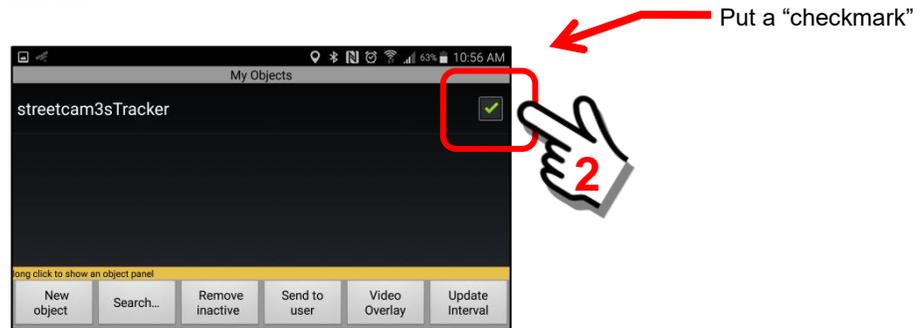
Start at the Main Map Screen, click the **Objects** Menu Button.



At the **My Objects** panel, notice that the mobile object “streetcam3sTracker” (which is the NEW user you created) is the only object listed (for now).



Put a “checkmark” in the Checkbox to activate this mobile object so it will display on the Main Map Screen. See **Section 10.5** for details of the Object Marker.



Return to the Main Map Screen and observe that the GPS location of the device is now shown. You may “zoom” down to street level if desired.



### 18. Review the NEW user profile you have added (StreetCam3s)

In this example, we have added the “StreetCam3s” user Profile to the initial “Default” user Profile (StreetCam2) which was created on a Licensed Server.

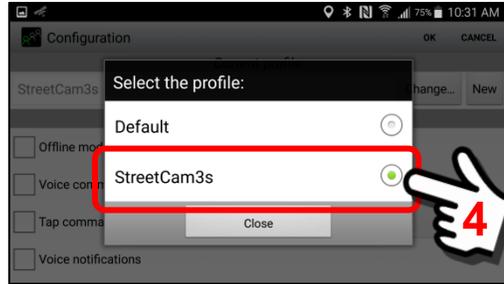
We will now review the two profiles installed on our device. We will assume that the “Default” Profile (StreetCam2) is the active profile.

Access to the **Profiles Feature** is found on the Main Configuration Panel, as shown below.



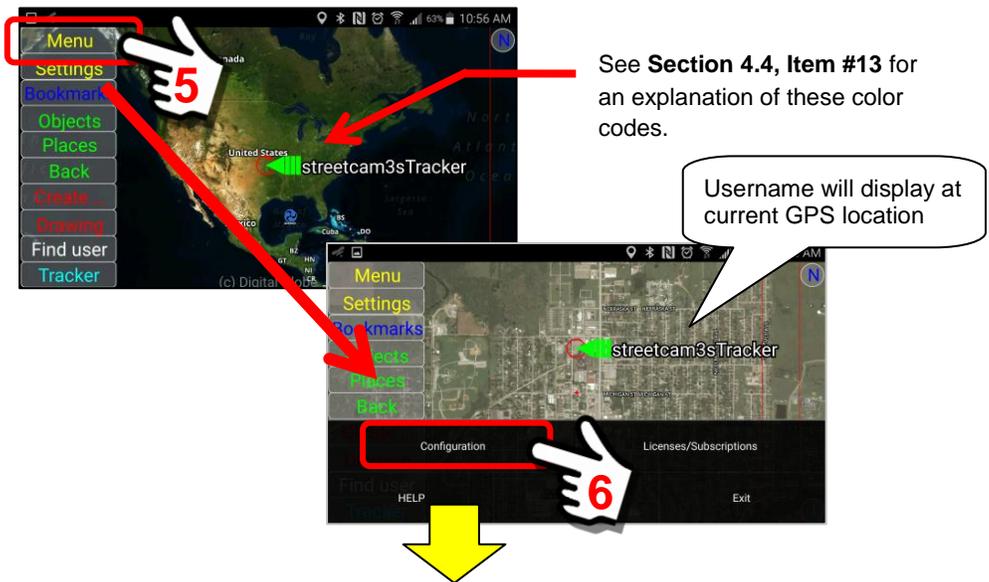
To activate a different profile than the one you are currently using ... simply select the profile from the list.

To illustrate, we will **select StreetCam3s** to be our “active” profile.

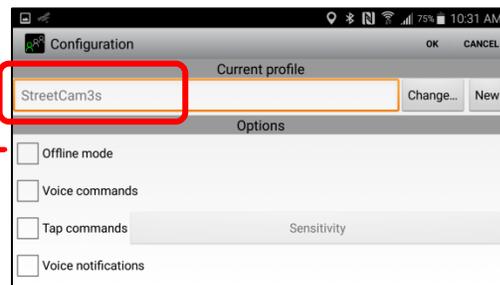


The SentryMDU screen will “refresh” and re-launch the App under the NEW selected profile.

We will review the “Main Configuration” panel to review the settings for the **StreetCam3s** user.



Current active profile for user “StreetCam3s” with associated configuration options.



As a “registered” User (with a Subscription), the device will now display your Username at the GPS coordinates of your current location. You may need to zoom in/out to find your location (depending on where you are located in the world).



## Note:

You have now REGISTERED ... AND created a new Subscription for the device ... **but you have NOT COMPLETED CONFIGURATION** for the user “StreetCam3s”. See Sections 3.14 and 5.4 for additional settings that you will need to make. This is important if your device is to provide a good user experience and to perform optimally (ie audio/video streaming, map images, etc.) for your specific hardware.

### 19. Removing a User Profile (permanent delete)

By “design”, a User Profile (ie Registered Username) will remain on a SentryMDU Data Server until removed by a user with access to the SentryMDU Manager Desktop Client (Microsoft Windows Application).

A typical “user” does NOT have access to the Desktop Client. For most organizations this is reserved for an IT Person with Administrative Access.

This section will describe a “method” by where a User may delete a User Profile from their mobile device. **This only removes the profile from their device and NOT the Data Server. In addition, the Username (since it is unique to the system) cannot also be used again.**

The removal of a User Profile involves “deleting” a file system “folder” from the mobile device. This is an action that, although not difficult, does require some level of technical “skill” on the part of the User. If you make a mistake and delete the wrong part of the SentryMDU file system, you may “break” the application (and would have to do a uninstall and re-install).

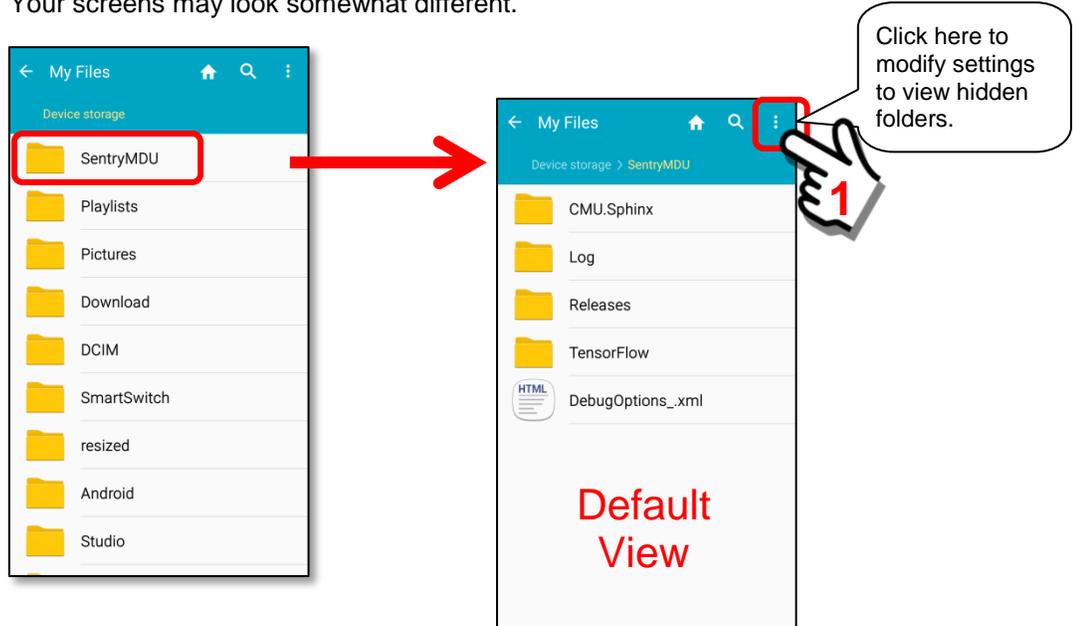
## Overview of the File System:

The Sentry MDU App creates one main folder on the mobile device with 8 sub-folders. The primary program folder is called ... **SentryMDU**.

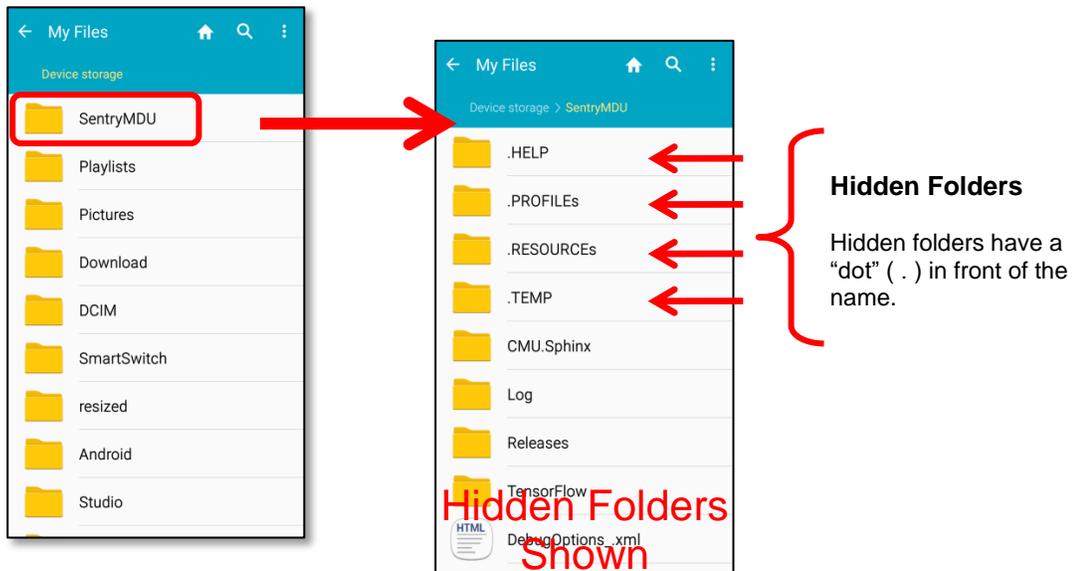
Most mobile devices have a setting (in File Folders menu) that conceals what are called “hidden folders”. These are file folders that a general user does not need to know about. The Sentry MDU System installs 4 visible folders and 4 hidden folders. If you want to see the hidden folders, then adjust your device settings to allow you to see the hidden folders.

## Folders installed by the Sentry MDU Application:

The example screens shown below are from a Samsung Galaxy smartphone. Your screens may look somewhat different.



When the “hidden” folders are displayed, the display will look as follows:

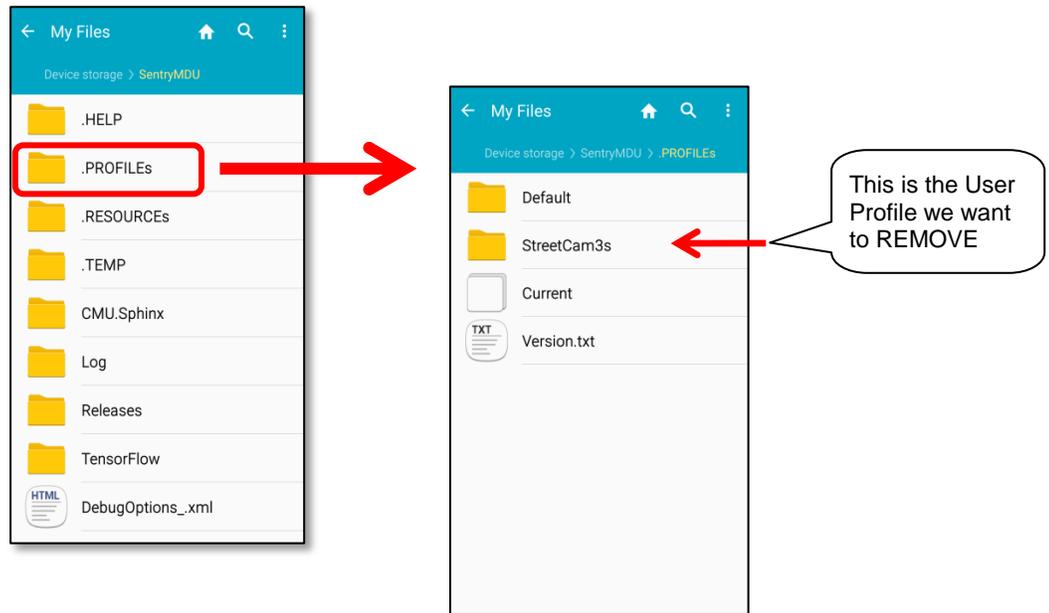


### Preparation to DELETE a User Profile folder:

In order to permanently remove a User Profile, we must remove a folder from the “.PROFILES” hidden directory. However, you must make sure that the User Profile that you want to REMOVE is NOT the current “active” profile that is currently in use by the SentryMDU App.

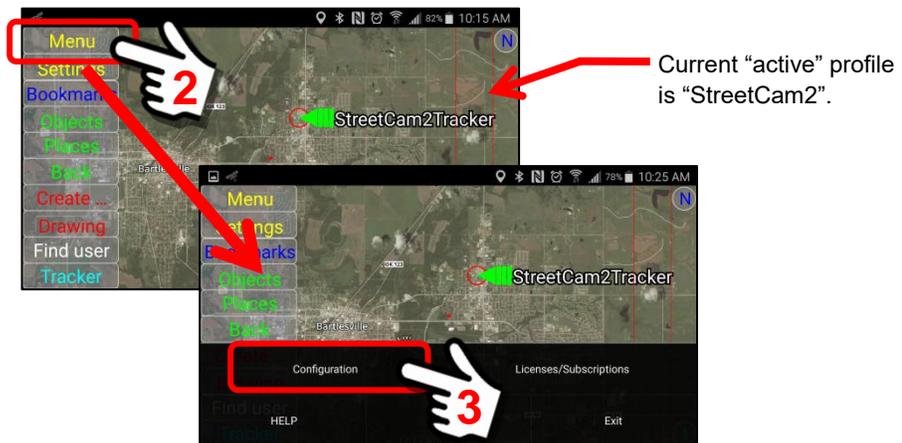
**Important Note:** Make sure the User Profile you want to REMOVE is NOT the current active profile.

In this example, we have the following file system view.

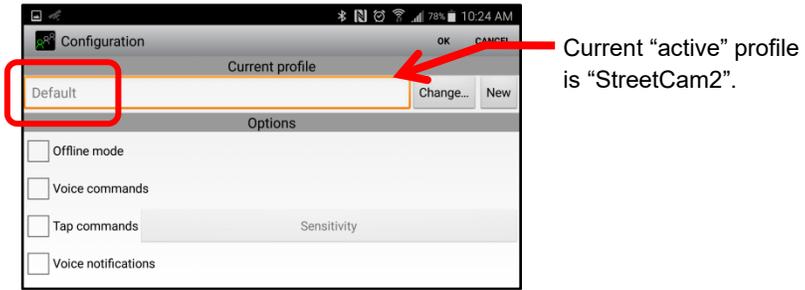


Now that we know what to do, let us **verify that the user profile “StreetCam3s” is NOT the active profile.** We will review the Profiles Feature.

Access to the **Profiles Feature** is found on the Main Configuration Panel, as shown below. We have switched to the “Default” Profile which is StreetCam2.



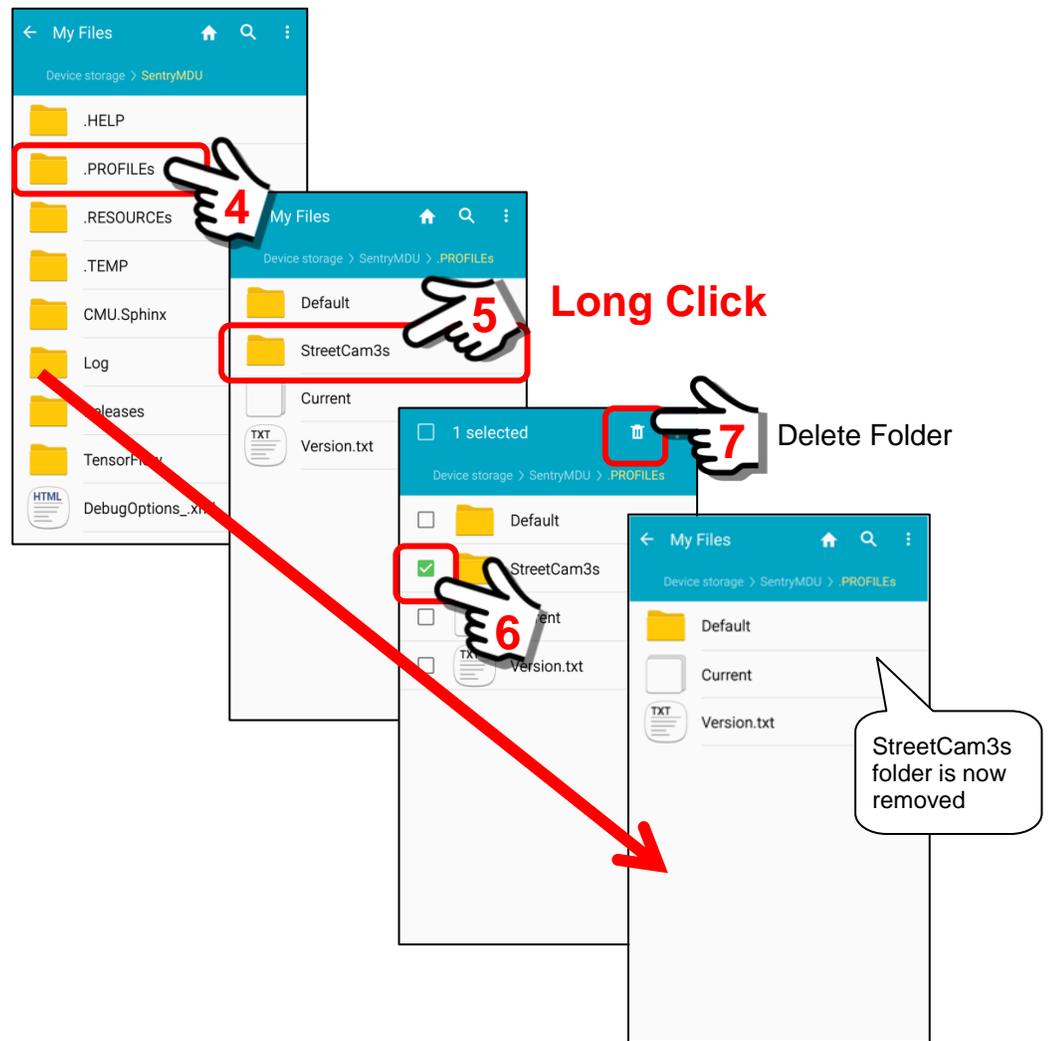
Navigate to the Main Configuration Panel and we can verify that the “Default” profile is the current active profile (Default is User = StreetCam2).



### Delete a folder from the .PROFILES folder:

Now that we have verified that it is “OK” to remove the “StreetCam3s” User Profile, navigate once again to the “.PROFILES” folder.

We will delete the “StreetCam3s” file folder. The screens shown below are from a Samsung Galaxy smartphone ... the process on your mobile device may be different.



We have now REMOVED the “StreetCam3s” User Profile FOLDER from the .PROFILES hidden directory.

**Verify the “StreetCam3s” User Profile has been removed:**

Starting on the Main Map Screen, navigate to the Main Configuration panel. Click on the “Change” Button and view the available User Profiles.

The “StreetCam3s” has been removed. Success!

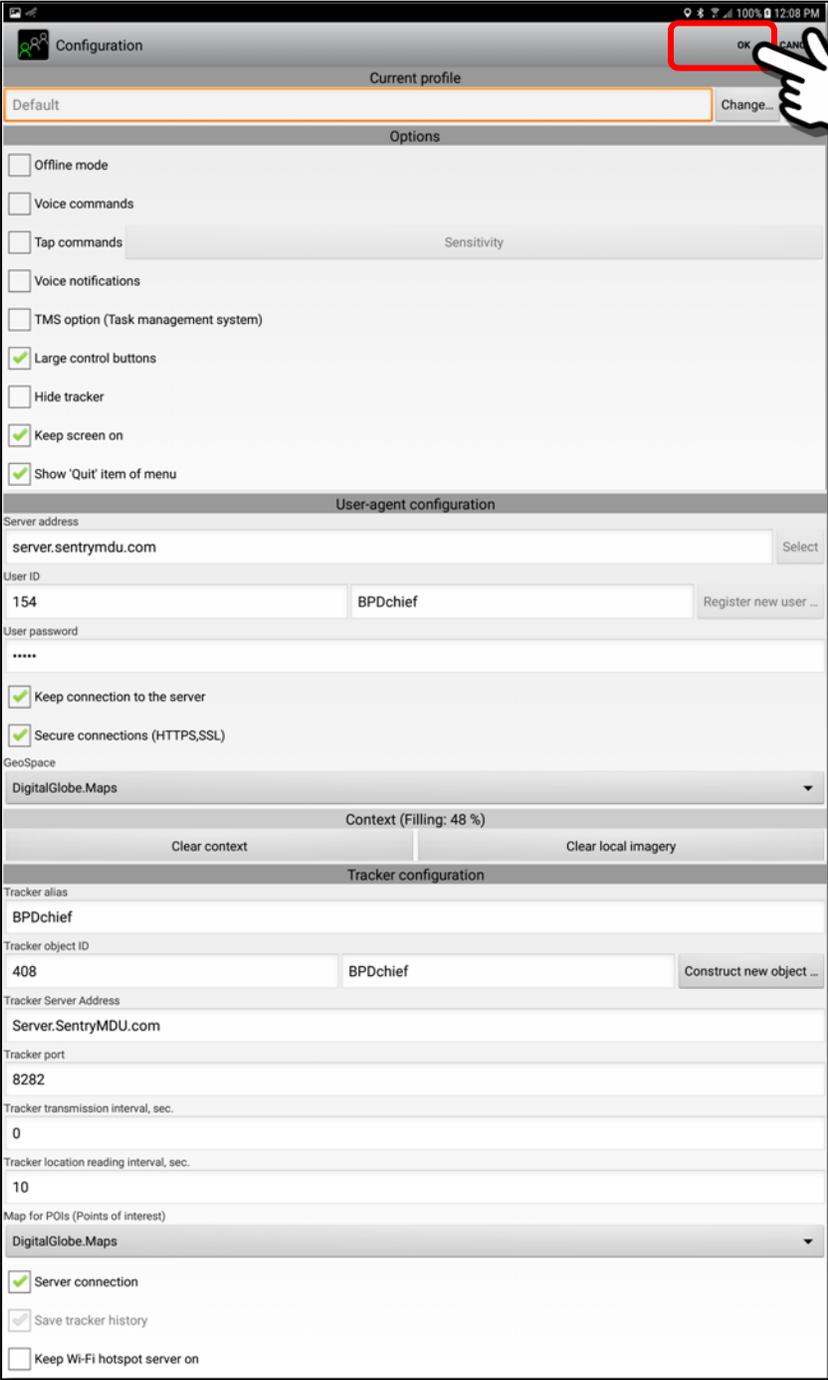


We see that we have the one “Default” Profile, which is User = StreetCam2.

## 5.4. Main configuration panel settings

### Overview:

The Main Configuration panel is where most of the Sentry MDU configuration options are selected. This section will explain each of the settings.



Once changes are made. Click "OK" to SAVE the changes.

## Description of Main Configuration panel settings:

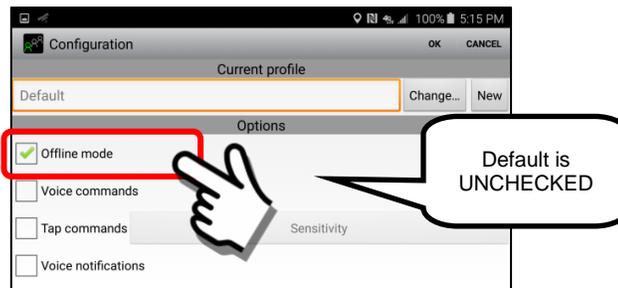
### 1. **Offline Mode**

The Offline Mode feature is used for two specific functions:

- a. Operating the Mobile device in a “standalone” mode without a Data Server connection.
- b. Implementing the Planet-Satellite aggregation feature (together with the “Tracker alias” parameter).

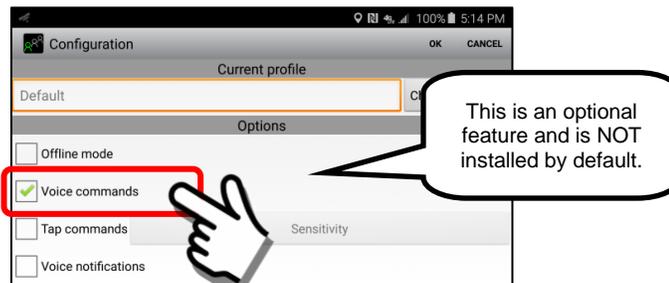
The Planet-Satellite feature enables a single Sentry MDU device (the Planet) to capture all of the sensor data from a group of other Sentry MDU devices (the Satellites). Up to 255 Sentry MDU devices can be monitored by a single Sentry MDU Device.

Both of these features will be described in other sections of this User Guide.

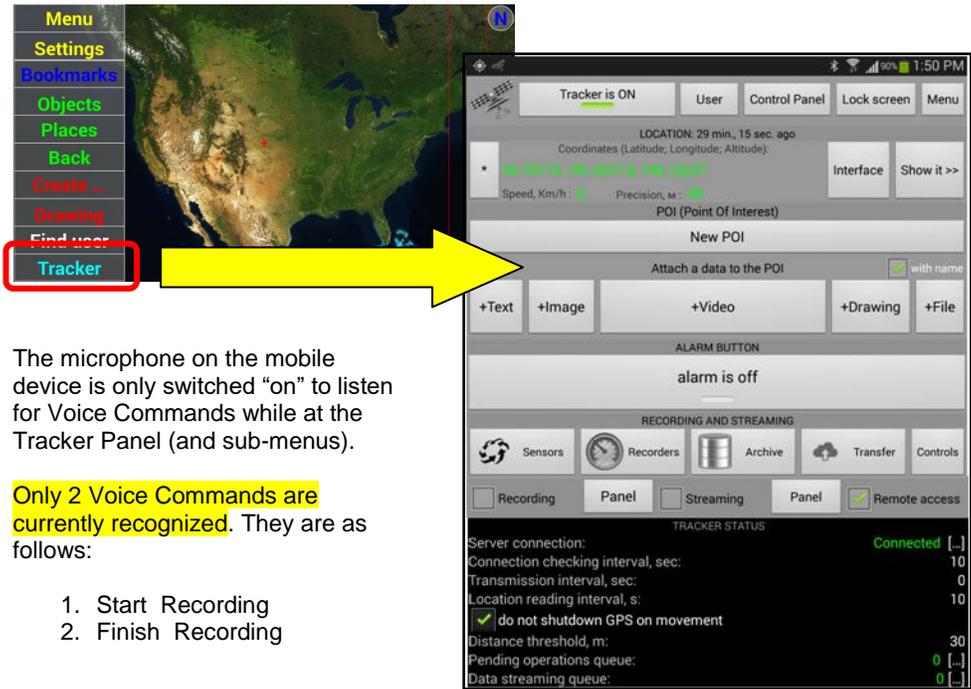


### 2. **Voice Commands (optional free module)**

By default, the Voice Commands feature is not visible. This option requires that the “CMU.Sphinx” voice recognition engine is installed in the application folder. By default, we do not install the CMU.Sphinx module due to its size (15Mb). However, **it is free to download/install** and we have instructions in **Section 15.2.6** of the User Guide on how to install this option. The Voice Commands option, when checked, will allow a user to control the start and stop of the various “Recorders” by voice command.



When the Voice Command feature is installed, it is only active once the user is at the Tracker Panel.



The microphone on the mobile device is only switched “on” to listen for Voice Commands while at the Tracker Panel (and sub-menus).

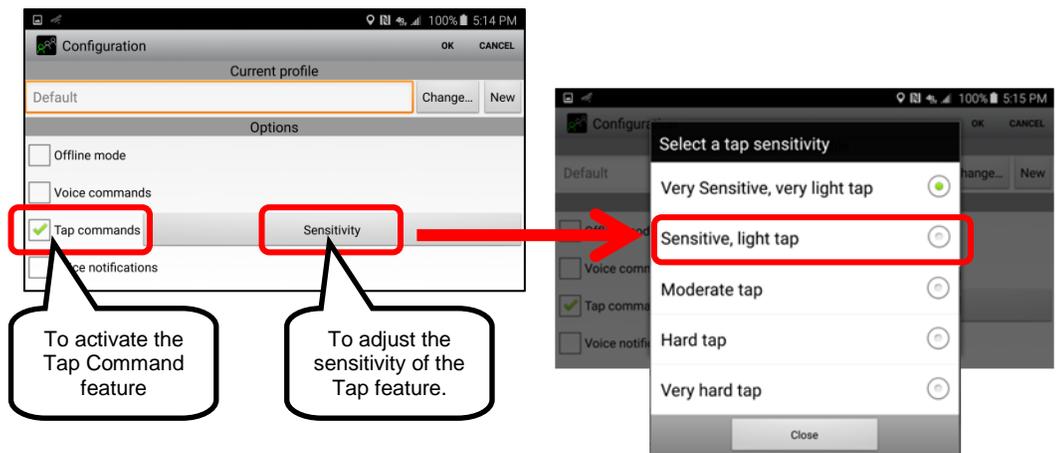
Only 2 Voice Commands are currently recognized. They are as follows:

1. Start Recording
2. Finish Recording

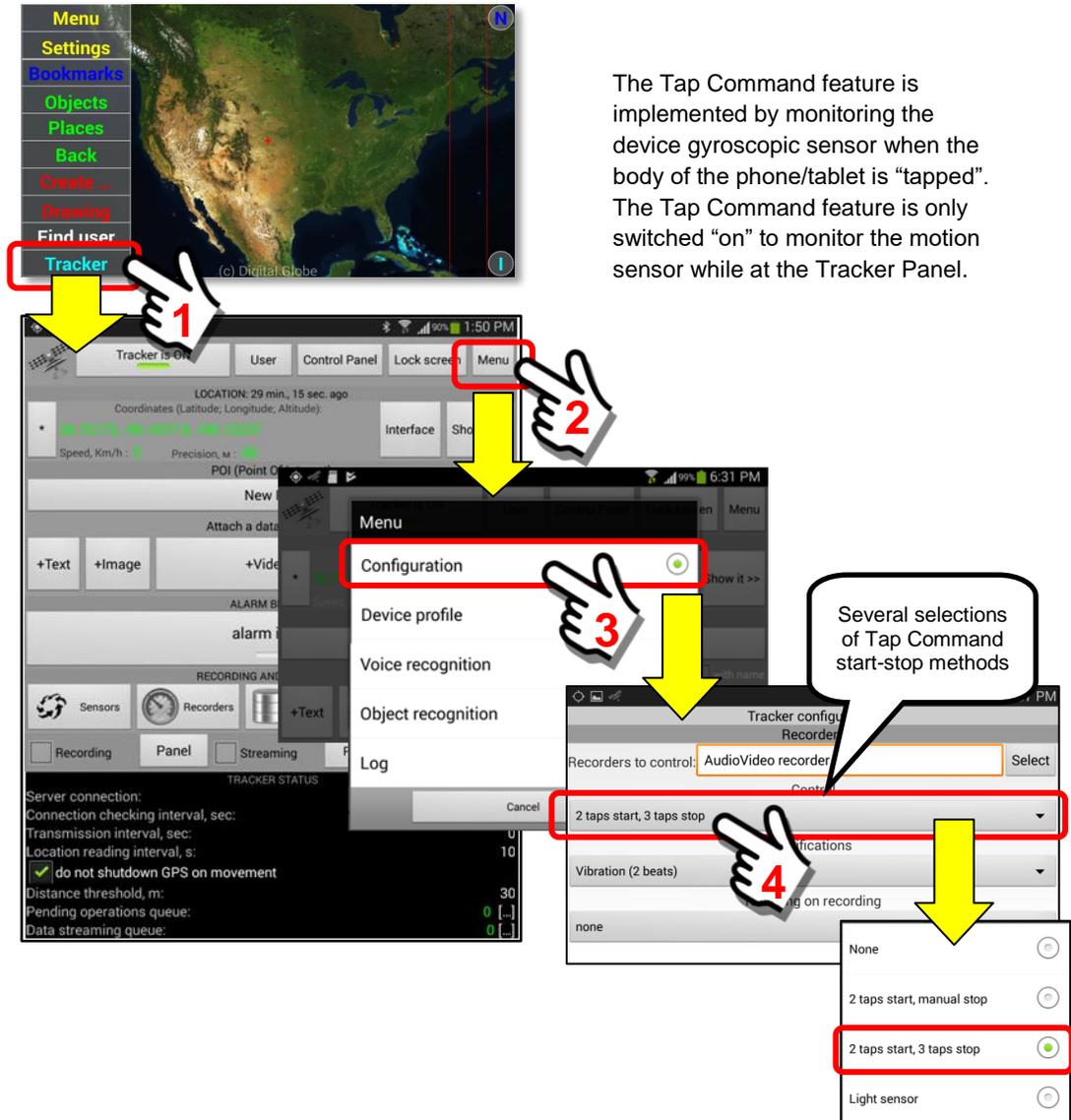
### 3. Tap Commands

The Tap Command feature provides a user the ability to turn the “recording mode” on/off by tapping on the back of the phone with a finger. The tapping on the device causes the built-in gyroscopic sensor to register an input. Different mobile devices have varying qualities of gyroscopic sensors. To compensate for this, we have provided a method whereby the user may adjust the sensitivity of the device to the “tap” provided by the user. Each user will need to experiment with their device to arrive at the correct setting for their application. Some devices may only require a “light” tap and others a “hard” knock.

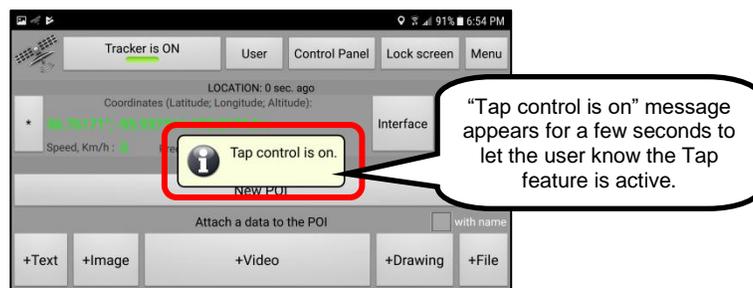
**Important Note:** Some of the less expensive mobile devices **DO NOT HAVE** gyroscopic sensors. If your device does not have one, you will **NOT HAVE** the Tap Command option.



The Tap Command feature is only active once the user is at the Tracker Panel.



When the Tap Command is activated, a message will appear on the initial opening of the Tracker Panel. The use of the Tap Command would typically be when a User carries a mobile device (phone) in the front shirt pocket, with the camera facing outward. The user simply "taps" the phone while in their pocket and the device begins recording audio/video.

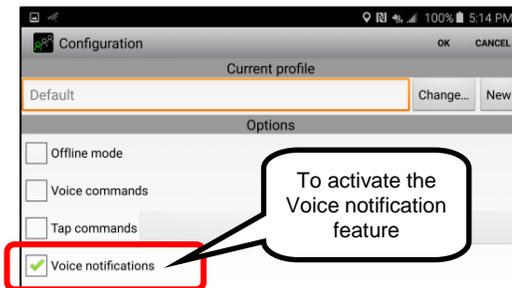


#### 4. Voice Notifications

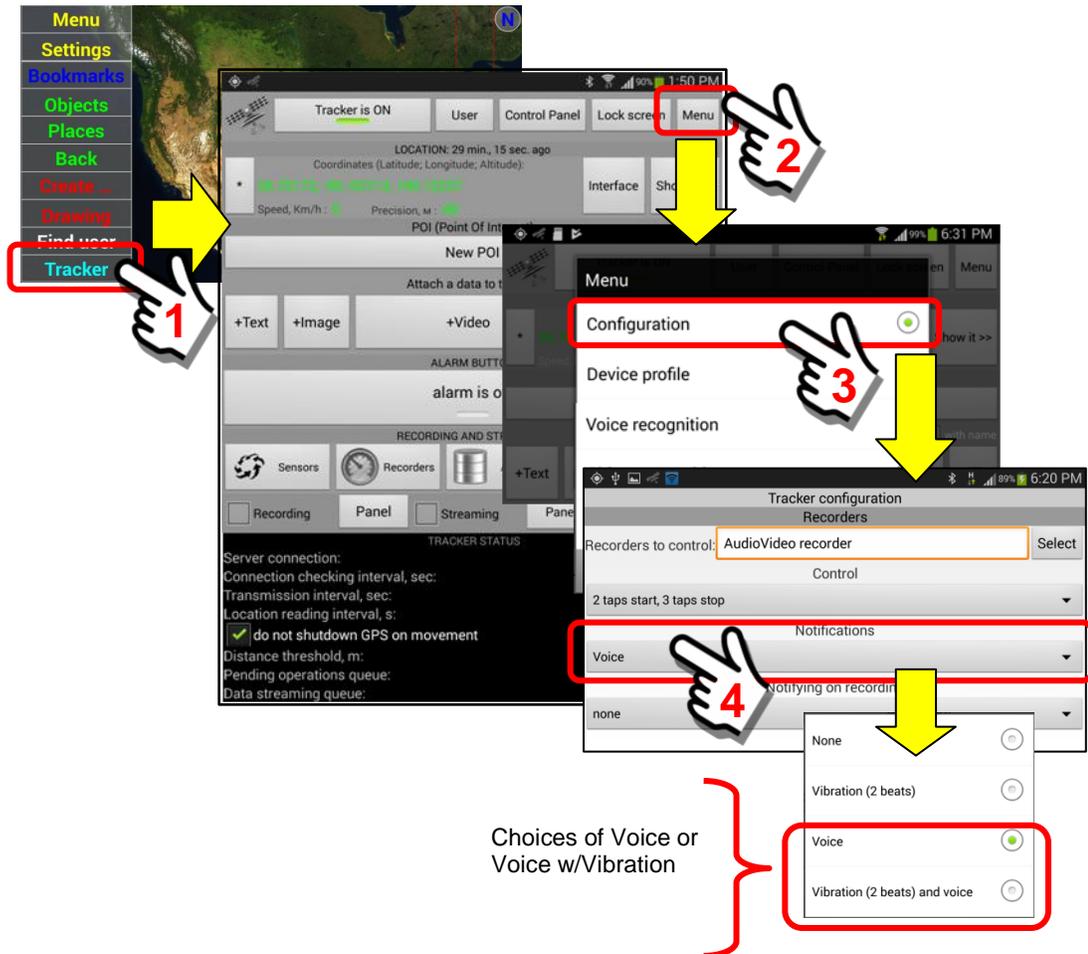
The default is “unchecked”. The Voice Notification feature provides for a verbal notification to the User when recording has started. There are several different notification types ... including voice, a beeping sound, and vibration. This feature activates the “Voice” notification. The Tracker Panel has settings to allow combining several of these notification methods.

Voice notification has six possible notifications:

- a. Voice notification for Manual recording (both start and stop)
- b. Voice notification for Voice Activated recording (both start and stop)
- c. Voice notification for Tap Command recording (both start and stop)

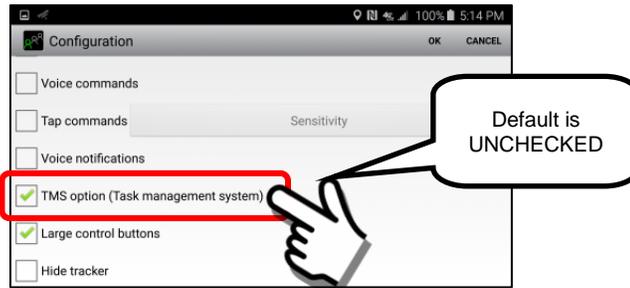


In addition to the Voice Notification setting above, the settings on the Tracker Panel must also be set.



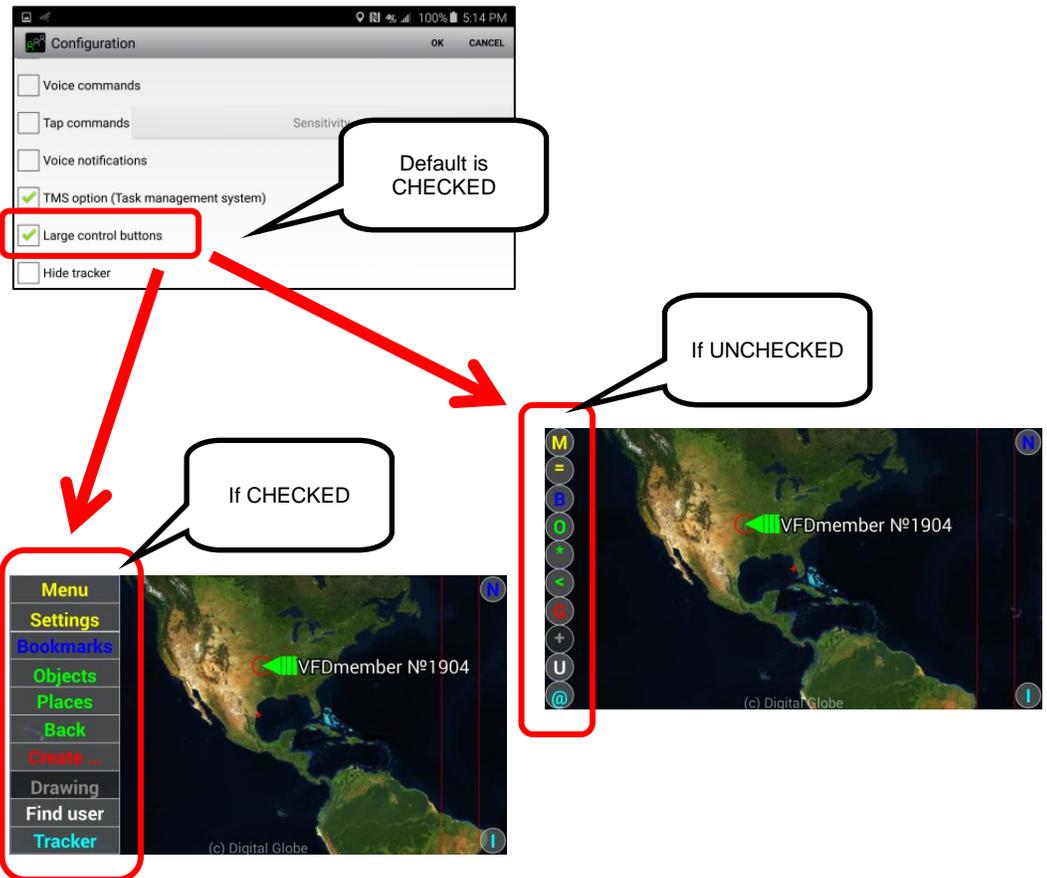
### 5. TMS option (Task Management System)

The Task Management System is a feature that allows a User (or group of users) to coordinate and provide notification for work tasks. The default setting is “unchecked” (off). When activated, additional options are available on the User Panel. **To take advantage of TMS features a SentryMDU Server License and Desktop Client License are necessary** (additional setup and configuration is required).



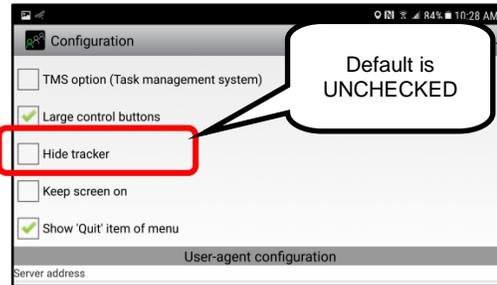
### 6. Large control buttons

This feature allows the Sentry MDU App main menu to use either text descriptions of the menu choices or character-symbol descriptions.

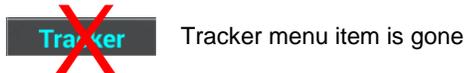
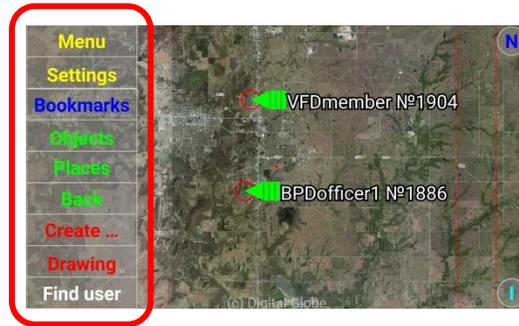


## 7. Hide Tracker

The “Hide Tracker” configuration setting allows a user to hide the Tracker Panel so that the menu choice does NOT appear on the Main Screen.



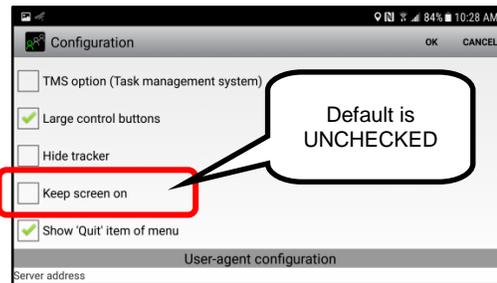
If CHECKED, notice that the Tracker menu item does NOT appear on the menu



## 8. Keep screen on

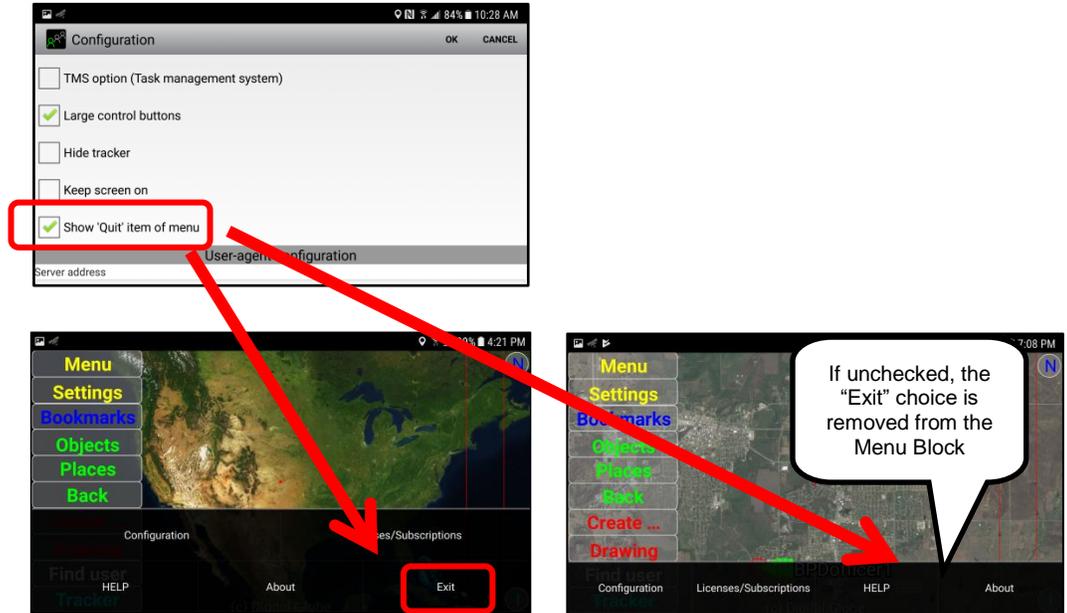
The “Keep screen on” configuration setting allows a user to “override” the phone/tablet display settings that turn off (timeout) the display screen after a few minutes. There are situations (ie Emergency Operation Center Dispatchers) where it is desirable to monitor the screen on a continual basis without having to interact with the display (Tablets).

The default is “unchecked”. Screen turns off based on device settings.



### 9. Show "Quit" item of Menu

The default setting is "checked". This allows the "Exit" choice to appear on the Menu Block as shown below.

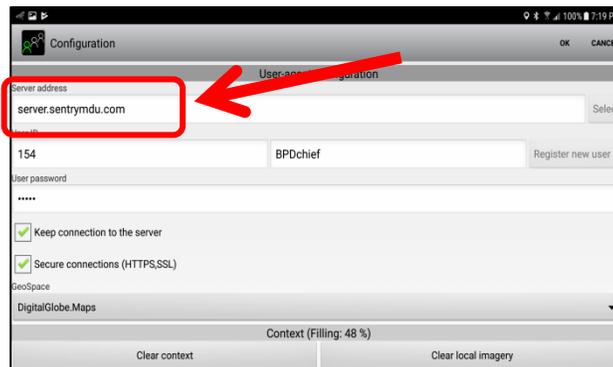


### 10. Server Address

The server address may be an IP Address (ie 24.117.17.7) or a domain name (ie server.sentryMDUname.com).

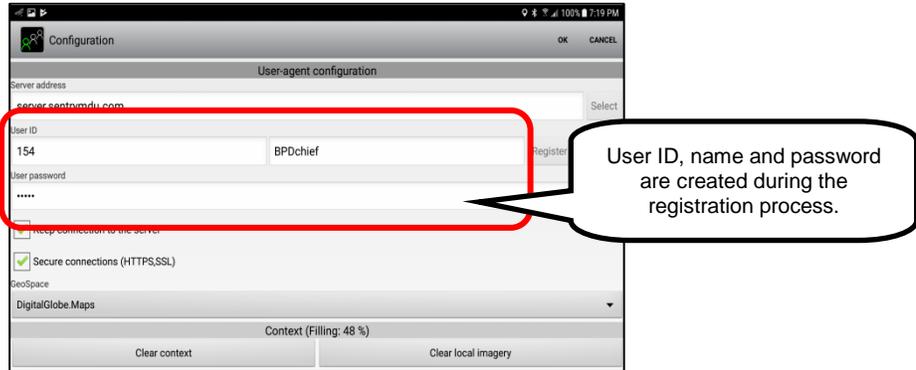
At the time of this manual writing, the default server address for the Sentry MDU App = server.sentrymdu.com (this may change in the future).

The default address is a Public Sandbox area that all users may access. For those that are members of a Licensed Group, your IP address should be taken care of automatically. If necessary, your IT Department will provide you with the address of the SentryMDU Data Server instance for your Group.



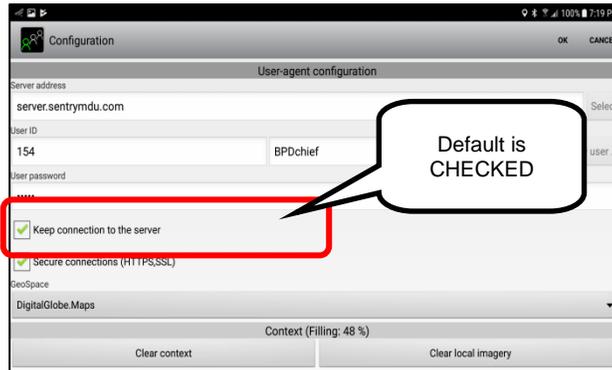
### 11. User ID and Password

The Username and Password will be created during the initial registration process. They will be displayed in this area of the form.



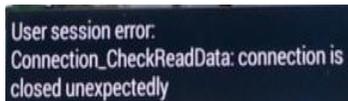
### 12. Keep connection to Server

This setting keeps a permanent session to the Data Server and ensures that the mobile device is sent “notifications” immediately. **If unchecked, notifications and instant messaging would be sent at 5 minute intervals.**



### IMPORTANT NOTE:

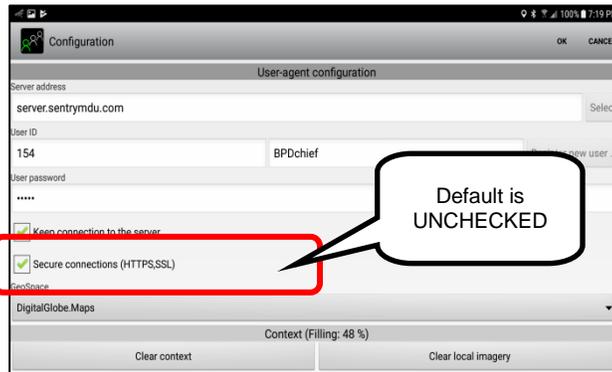
A User may have several different devices all registered with the SAME User ID. However, if a user has multiple devices all registered with the same User ID, only ONE of them should have the  **Keep connection to the server** “checked” as active. If more than one device has this option checked the following error message will appear.



The error is generated because the system does not know “which” device to send the messaging to since several devices all have the same User ID.

### 13. Secure connections (HTTPS, SSL)

The default setting is “unchecked”. For encrypted communications, put a checkmark in this box.



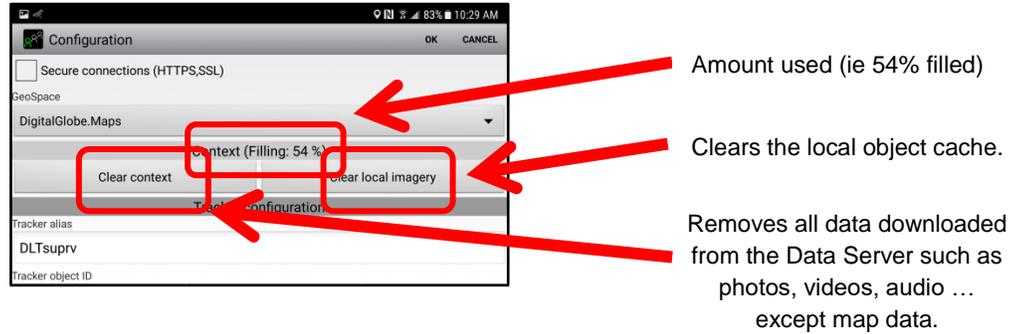
### 14. GeoSpace (Map selections)

The default is DigitalGlobe.Maps. This will allow users the 3 options discussed previously (Street maps, Satellite image, Satellite image with Street maps overlay). The OpenStreetMaps option is a “street maps only” option (no satellite imagery). It is for those User organizations that would create/operate their own tile server using OpenStreetMaps tile data.



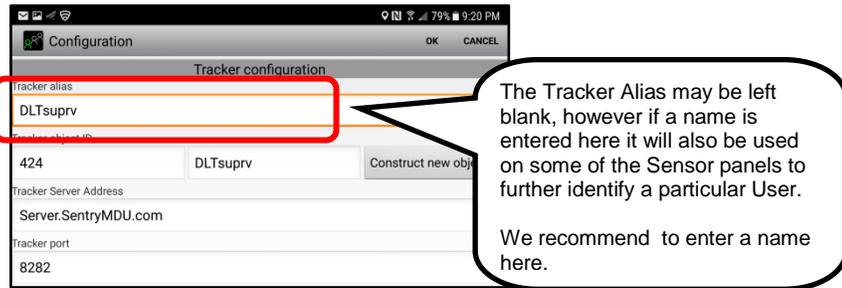
### 15. Context Storage Space (Storage on mobile device)

Provides a measure of how much memory storage space is used on the device. User may remove/delete data and imagery if desired.



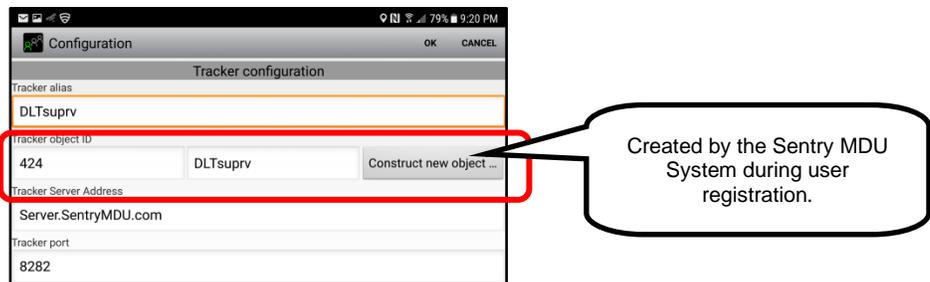
### 16. Tracker Alias

The Tracker Alias is used in the "Offline mode" when implementing the Planet-Satellite Feature. This is an alternate name by which the Tracker Object is monitored on other devices since it is not connected to the Data Server. See a further description of this feature in other sections of the manual.



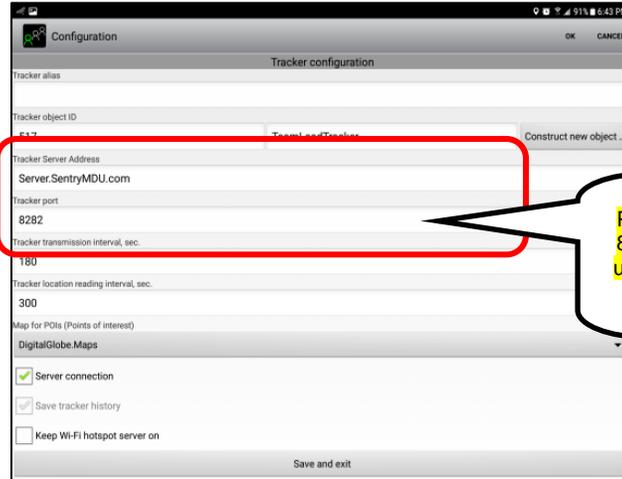
### 17. Tracker Object ID

These are created by the system during registration. Options do exist to "manually" create a new object (although only in special circumstances and the SentryMDU Desktop Client is required). See other sections of the manual for a discussion of this option.



### 18. Tracker Server Address and Tracker Port

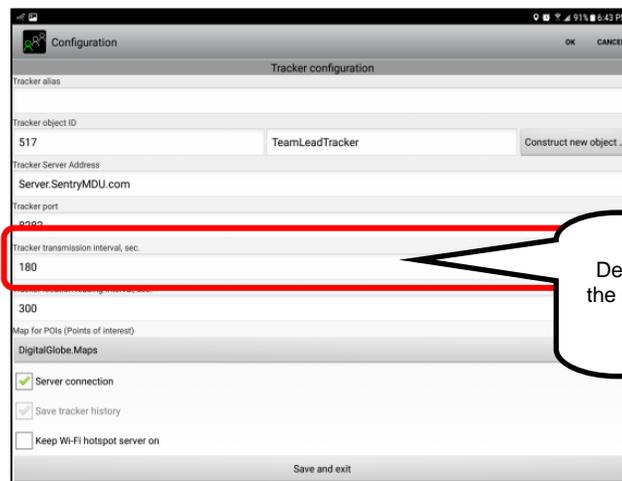
As installed, the SentryMDU App uses an IP address of the Public Sandbox Server (shown below as Server.SentryMDU.com). Licensed users will see a different Tracker Server Address as issued by their IT Department for their specific Sentry MDU Data Server instance.



Port number should always be set at 8282 unless your specific installation uses a different port. If so, you will be notified by your IT Department.

### 19. Tracker transmission interval, sec

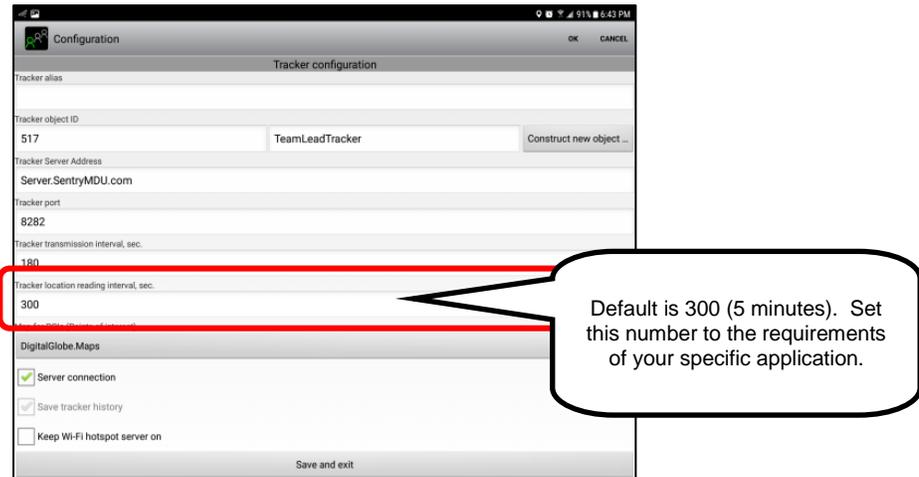
The Tracker transmission interval is the time interval, in seconds, of how often the device events (such as GPS locations, battery level, cellular signal strength, etc.) are transmitted to the Data Server. When set to "0" (zero) then the transmission is "continuous". For first responders, a setting of "0" is appropriate, for most other applications a setting of 180 (3 minutes) is good enough.



Default is 180 seconds. Set to the requirements of your specific application.

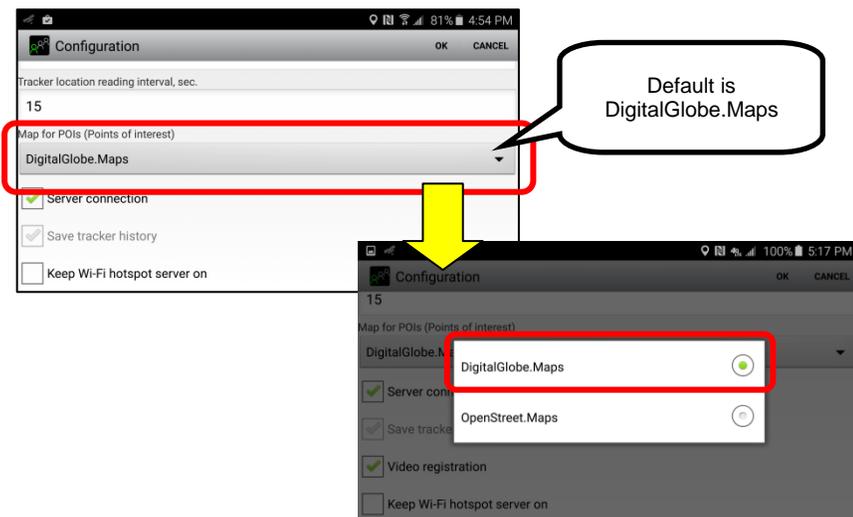
## 20. Tracker location reading interval, sec

The location reading interval is how often the mobile device reads the internal GPS location from the available satellites. The default is 300 seconds (5 minutes). In practical terms, a good number to use is 10-20 seconds for First Responders. This is a good balance between accuracy of location and battery usage.



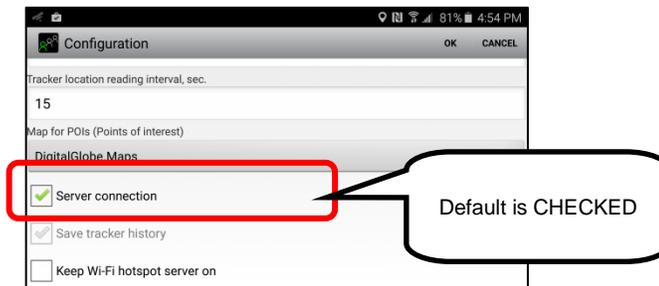
## 21. Map for POI's (points of interest)

The default is DigitalGlobe.Maps. This will allow users the 3 options discussed previously (Street maps, Satellite image, Satellite image with Street maps overlay). The OpenStreetMaps option is a "street maps only" option (no satellite imagery). It is for those Licensed User organizations that would create/operate their own tile server using OpenStreetMaps tile data.



## 22. Server connection

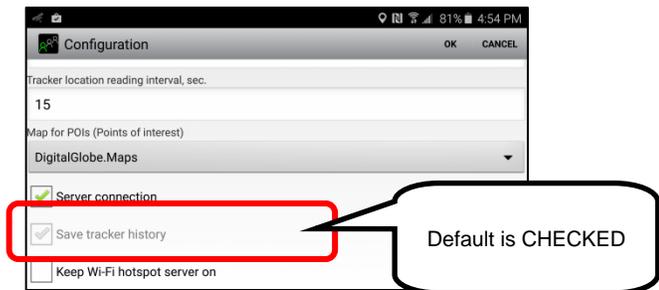
The default is to maintain a Server Connection for the Tracker Object. Without this option checked (and with “Save tracker history” checked) the tracker feature works as a “Black Box” that records all device events into an internal disk queue (not transmitted to the Data Server).



## 23. Save tracker history

**This option is specifically for the “Black Box” mode.** If the “Server connection” box above is “unchecked” then the “Save tracker history” checkbox becomes active (available). By default, when active, the “Save tracker history” checkbox is “checked” which means that all device events are recorded into an internal disk queue on the device.

Notice that the box is “checked” but grayed-out indicating that it is not active while the “Server connection” checkbox is “checked”.

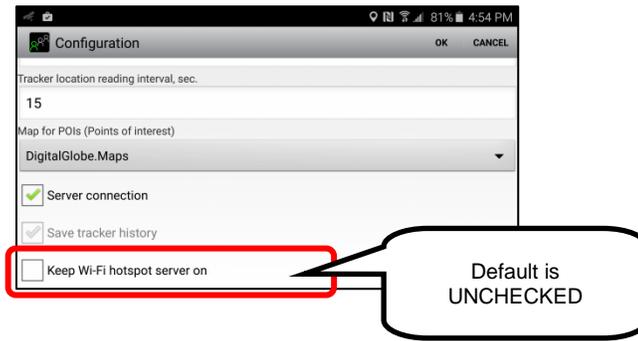


## 24. Keep Wi-Fi hotspot service on

This option allows the mobile device with Sentry MDU to work as a “host” for other satellite Sentry MDU devices in the local WiFi network. This means that the Sentry MDU device will ALWAYS keep running the WiFi hotspot service even if a user turns off the “Hotspot” feature on the phone settings. If a user turns it off (from the phone settings) the Sentry MDU App will turn it on again automatically after a short time.

Typically, this setting would be used where the Sentry MDU System is used in a “standalone” mode such as during remote Search & Rescue operations

where internet is not available and the Sentry Data Server is running on a local private network out of a Mobile Command Center using portable Wifi Towers.



## 5.5. Data Encryption Features for secure communications

### Overview:

The SentryMDU System provides users with several data encryption features. This section will explain the options you have available to secure your data and communications.

#### General Setting (Main Configuration Panel)

On the Main Configuration Panel you may select Https/SSL encryption that will encrypt ALL communications from the device to other mobile devices and the data server.

#### Specific Encryption protocols for Messaging and Chat Features

For messaging, live chat and data streaming (audio-video) you have the option to further encrypt data transfers between two specific devices (end-to-end encryption). This encryption uses a cryptography key exchange with a refresh at 15 minute intervals. This results in a communications channel that is virtually unbreakable with current technology.

This section will explain these features.

### SentryMDU data encryption protocols:

This following data encryption protocols are available.

#### **HTTPS / SSL**

SSL (secure sockets layer) is a standard security technology for establishing an encrypted link between a server and a client – typically a web server. In this case, the secure client(s) are the SentryMDU Data Server or the SentryMDU Administrative Server. For this encryption a SSL Certificate is required.

#### **DH – AES**

Data is secured using end-to-end Diffie-Hellman (DH) as a method of exchanging cryptography keys for use in symmetric encryption algorithms. “AES” refers to the “Advanced Encryption Standard” which has been adopted by the U.S. Government and is now used worldwide. The application will automatically update/replace session encryption keys at 15 minute intervals.

#### **DH – AES – CBC**

Data is secured using end-to-end Diffie-Hellman (DH) as a method of exchanging cryptography keys for use in symmetric encryption algorithms. “AES” refers to the “Advanced Encryption Standard” which has been adopted by the U.S. Government and is now used worldwide. “CBC” refers to “Cipher Block Chaining” where each ciphertext block depends on all plaintext blocks that have been processed up to that

point, thereby strengthening the cipher. The application will automatically update/replace session encryption keys at 15 minute intervals.

### DH – AES – EIV

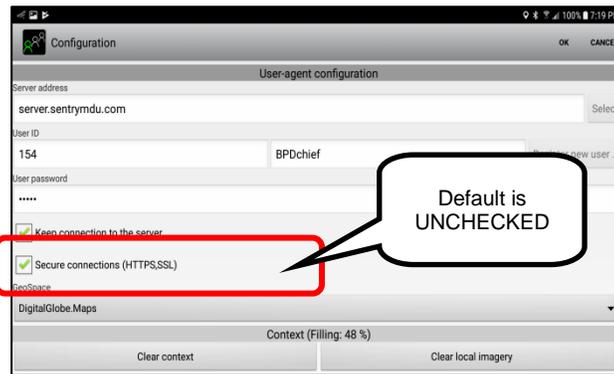
This is the “default” for messaging and secure chat. It is the newest method. Data is secured using end-to-end Diffie-Hellman (DH) as a method of exchanging cryptography keys for use in symmetric encryption algorithms. “AES” refers to the “Advanced Encryption Standard” which has been adopted by the U.S. Government and is now used worldwide. “EIV” refers to the encryption of IV with ECB to create EIV. The application will automatically update/replace session encryption keys at 15 minute intervals.

## Data Encryption Features:

### 1. General encryption using https/SSL.

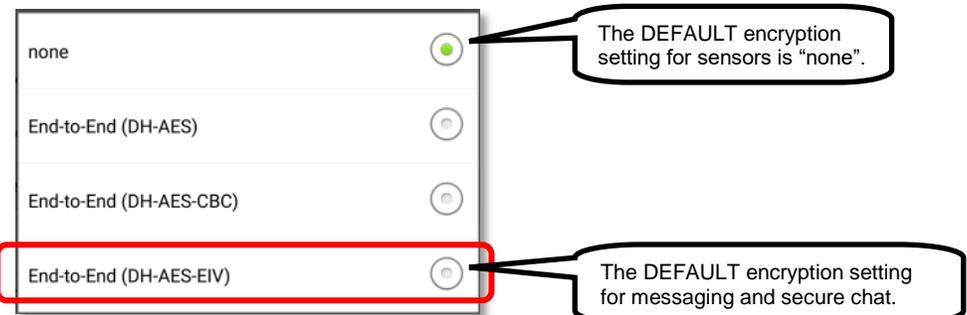
If you have sensitive data or communications it is recommended to turn “on” the HTTPS / SSL option in the Main Configuration Panel as shown below.

The default setting is “unchecked”. For encrypted communications, put a checkmark in this box.



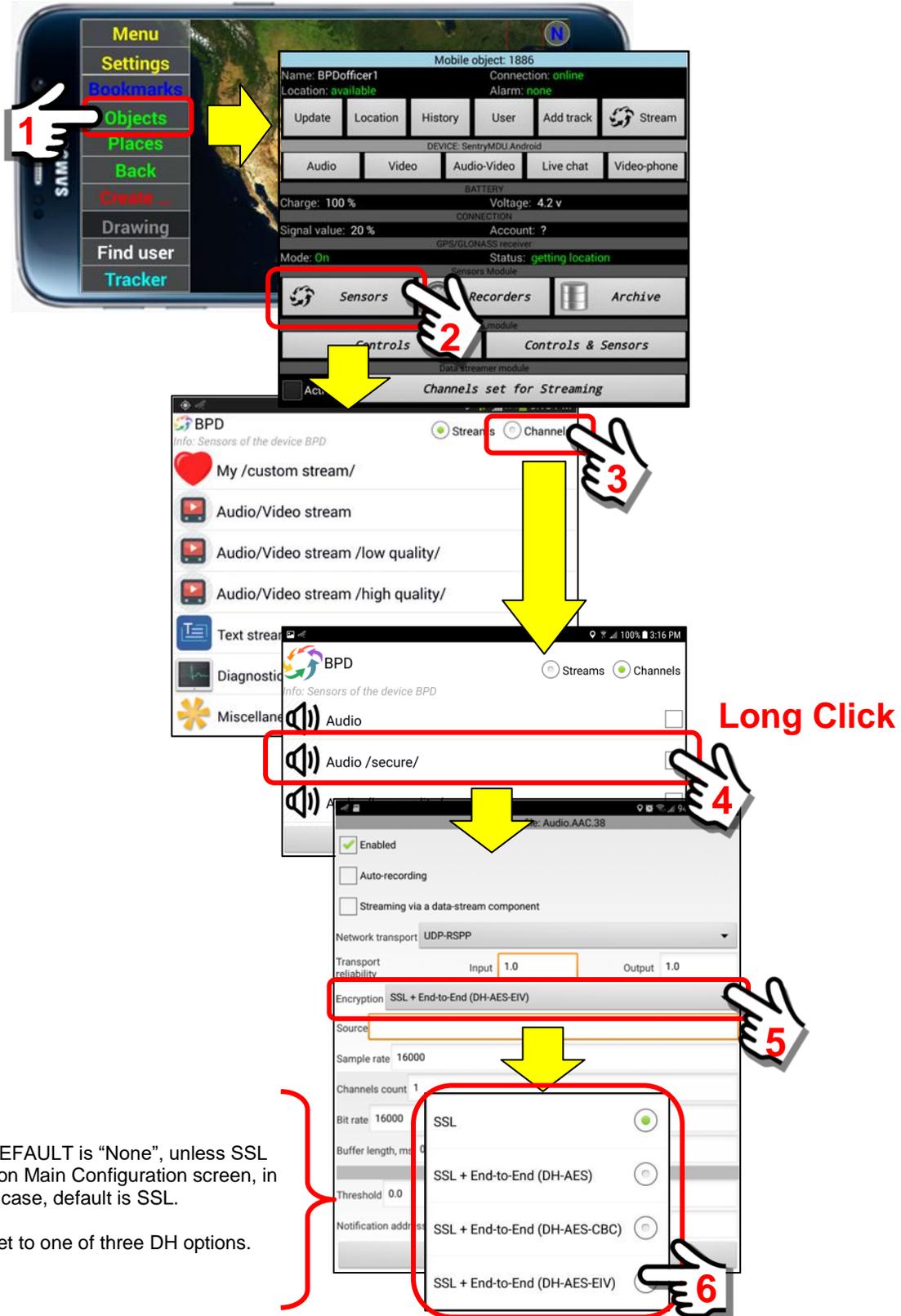
### 2. Review of various Diffie-Hellman (DH) encryption options.

The SentryMDU System includes 3 Diffie-Hellman encryption options for messaging, chat and sensor data transmission (ie audio, video). The selection list will look as follows:



### 3. Configuring sensors for encryption.

In order to encrypt the various data sensors for end-to-end encryption it will be necessary to change the “default” setting in the sensor configuration files. The following steps will show how this is done.



The DEFAULT is “None”, unless SSL is set on Main Configuration screen, in which case, default is SSL.

Can set to one of three DH options.

## 5.6. Reliable UDP connection protocol (RSPP)

### Overview:

There are two types of Internet Protocol (IP) traffic generally in use. They are TCP or **Transmission Control Protocol** and UDP or **User Datagram Protocol**. TCP is a connection oriented protocol, which means that once a connection is established, data can be sent bidirectional. UDP, on the other hand, is a simpler connectionless internet protocol. Multiple messages are sent as packets in chunks using UDP.

TCP is a more reliable connection since it manages message acknowledgement and retransmissions in case packets are lost. With TCP there is absolutely NO missing data. UDP does not ensure that communication has reached the receiver since concepts of acknowledgement, time out and retransmission are not present.

UDP is a lightweight transport layer designed on top of an IP, there are no tracking connections or ordering of messages. The UDP protocol supports error detection via checksum, but when an error is detected, the packet is discarded. However, UDP is faster than TCP and for time sensitive applications like voice transmissions, audio-video and things like “gaming” where error recovery and retransmission would be pointless because the time the packet would be needed has now passed.

A review of sensor configuration in the SentryMDU System will show that a User has the option to specify either TCP (default in most cases) or UDP as the transmission protocol. One of the biggest problems with TCP when many users may be broadcasting data (one device to many) is the scenario where a congestion control algorithm (which treats packet loss as a sign of bandwidth limitations) may automatically throttle the sending of packets. This can cause significant latency on 5G/4G or WiFi networks.

In an attempt to address this issue, and build a more reliable UDP connection protocol, SentryMDU has developed a protocol we call “**RSPP**” which is **Reliable Secure Packet Protocol**.

This section will describe how this protocol works within the SentryMDU System.

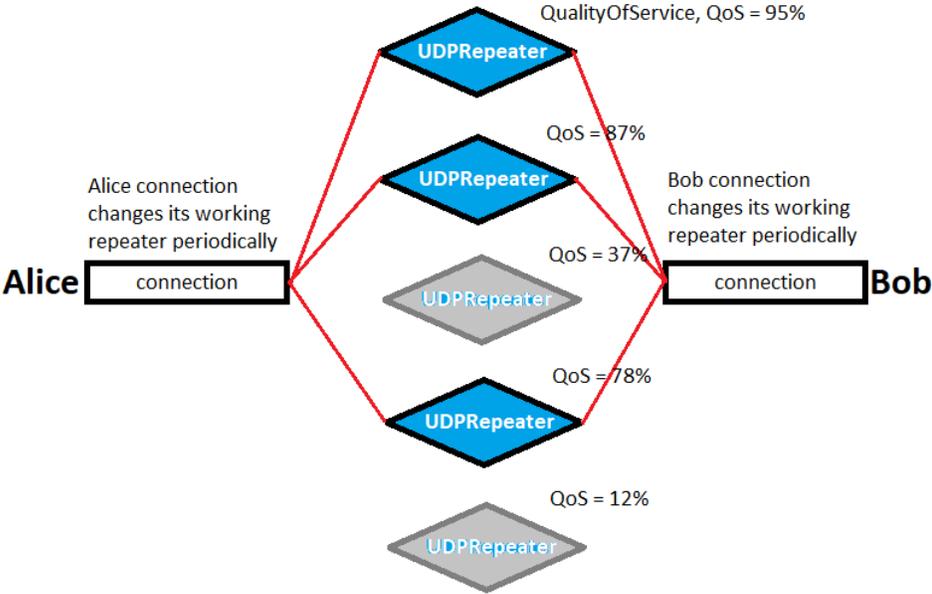
### The UDP Repeater:

The SentryMDU System allows Users to send out and receive multiple streams of sensor data (ie audio-video, GPS, accelerometer, gyroscopic, etc.). Depending on the network bandwidth (Cellular, WiFi) this can increase server load and network latency. In order to improve overall system performance the SentryMDU system offer users the option of shifting TCP data transfers to the UDP protocol and route the data transfers to UDP Repeater Applications that do the bandwidth intensive work. These UDP Repeater applications may be running on standalone servers or SentryMDU Data Servers that have excess bandwidth capacity.

A single “random” UDP Repeater that has established a virtual reliable connection, would be represented as follows:



To improve reliability in the event a “random” repeater becomes unavailable, we have expanded the scheme to include multiple UDP Repeaters. This scheme is represented as follows.



**The advantages of a distributed UDP Repeater model:**

The advantages of this arrangement are described below.

1. A connection between Alice and Bob becomes very stable. If some amount of packets are lost on an offline repeater, they will be restored by sending them via a repeater with a good QualityOfService value. As an example, if we have two repeaters running as “Server01” and “Server02”. If we shutdown one of them, the packets will be re-routed through an available one (Server02).
2. An additional side effect is related to security. The SentryMDU **RSPP** changes the designated **UDP Repeater** every few packets. So that, the encrypted packets of an RSPP connection are distributed between various UDP Repeaters. If someone, between Alice-Bob, wants to intercept and try to decrypt “A”-”B” data packets, they would need to be listening at various “random” repeaters around the world. That would be a difficult task.

**Using a “Direct Control” channel with the UDP Repeater model:**

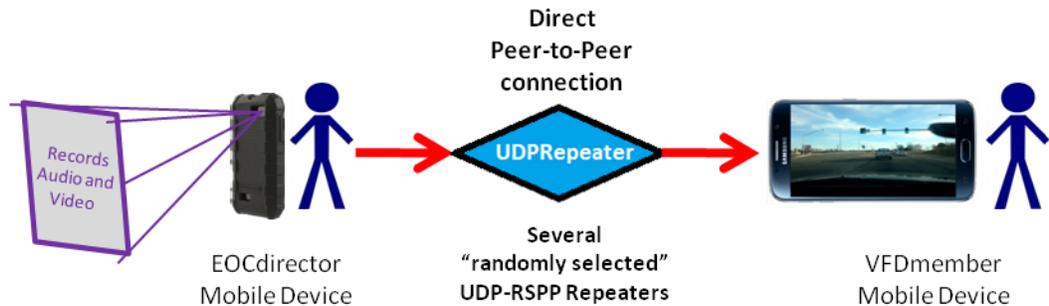
The SentryMDU System typically uses the SentryMDU Data Server as the connecting device between two communicating Client Devices.



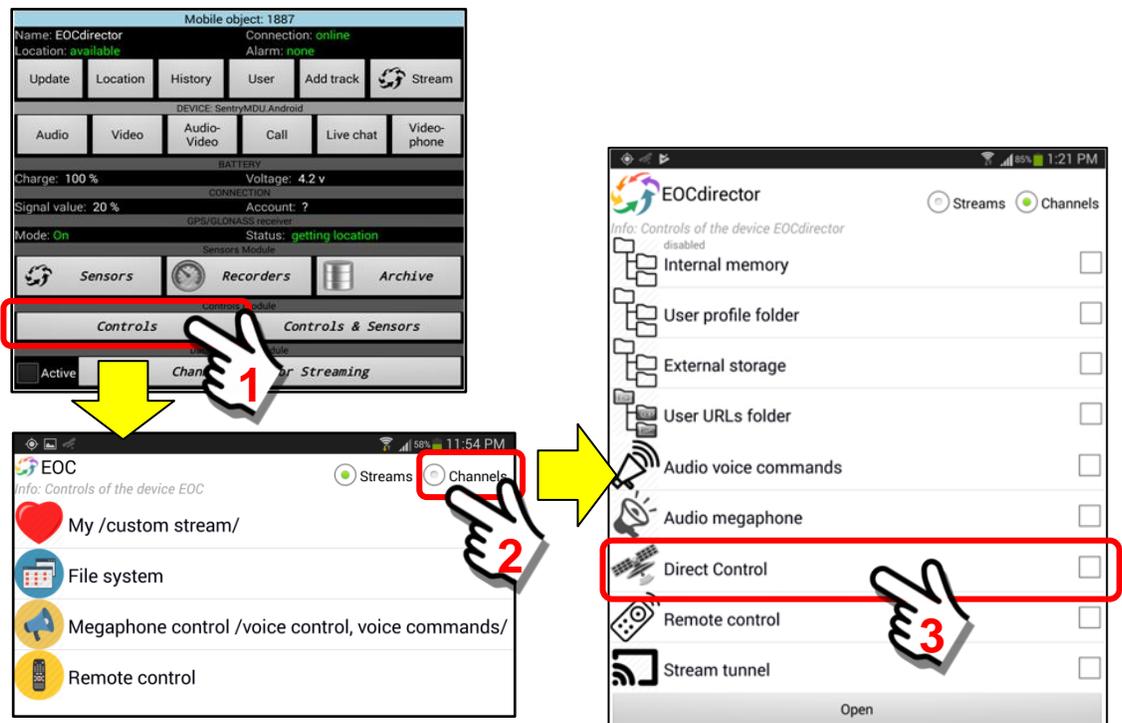
In addition to user authentication functions, the Data Server uses system resources to maintain the connection. Depending on the type of transmission (TCP or UDP), the effect on system resources can be considerable when large numbers of simultaneous connections are present. For situations where “real-time” encrypted transmission is important, such as audio-video, the increase in speed (by using UDP) and a reduction in bandwidth bottlenecks (via distributed UDP Repeaters) will decrease system latency and improve overall performance.

In the “Direct Control” scenario, system loads are shifted from the Data Server to the individual Client Devices and the distributed UDP Repeaters. **All control traffic will be tunneled through a peer-to-peer UDP connection via the distributed UDP Repeaters.** This “Direct Control” channel is based on the SentryMDU “UDP-RSPP” protocol.

This feature increases the security of a “Client-to-Device” link since it is practically impossible to know (as a Man-in-the-Middle) which operations a Client Device is using and at which time they are accessing their device.



Access to the “Direct Control” Feature is available from the Mobile Object Panel of any device. **An implementation example is available in Section 10.21 of this Manual.**



## Using the “Adjustable Delivery Reliability” mode with UDP RSPP.

In the transmission of audio-video over the internet there can often be a noticeable “delay” between the action taking place and the resulting video of the action. This is due to the internet bandwidth, the protocol used and the number of intermediate hops (servers) between the two devices (transmitting and receiving). Some of the latency is “built-in” and we can not do anything about.

However, in the processing of video, we can “tune” the system to allow dropping data packets that are “late” in order to speed up overall transmission. In some situations this may decrease latency and shorten the video delay by up to 2 seconds without significantly impacting video quality. The following applies:

**100%** = Full reliability, all data packets are delivered

**0%** = Unreliable transmission with possible skipping of old data frames. The RSPP protocol doesn’t re-deliver any lost data packets in this mode.

**1% - 99%** = Conditional reliability interval. By design, the maximum time for delivery of a single data packet is 60 seconds. So, setting reliability to 99% means that the RSPP Codec will try to re-deliver a packet during 60 seconds. Setting to 10% causes delivery during 6 seconds (10% of 60), and so on.

If the UDP RSPP protocol has been configured for the sensor channel you will see an “Adjustable Reliability” Button located on the display panel, as shown below.



In order for the “**Adjustable Reliability**” Button to be active, you must ensure that the “UDP-RSPP” protocol has been selected as the **Network Transport** in the Profile. An example is shown below.



**UDP-RSPP Mode must be selected**

**Button to Start/Stop the UDP RSP mode on the remote mobile device**



**Adjustable Reliability Mode “On” (Short click)**

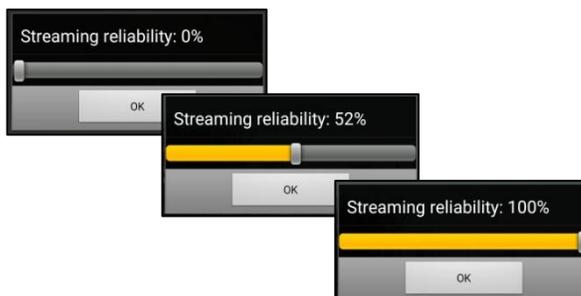


**Adjustable Reliability Mode “Off” (Short click)**

**Button to adjust the SETTINGS of the UDP RSP mode**



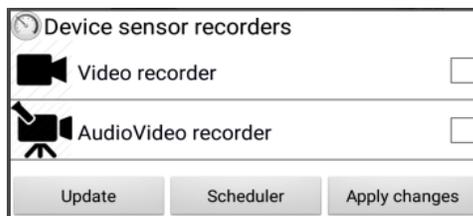
**Adjustable Reliability Settings (Long click)**



**Button to open the Sensor Recorder panel to activate or schedule recording**



**Click to open Recorder Panel on remote device**



**Button to Start/Stop recording and store files on the remote mobile device**



**“Off” position, click to turn on (Short click)**



**“On” position, click to turn off (Short click)**

## 5.7. Internal Memory access configuration (file system access)

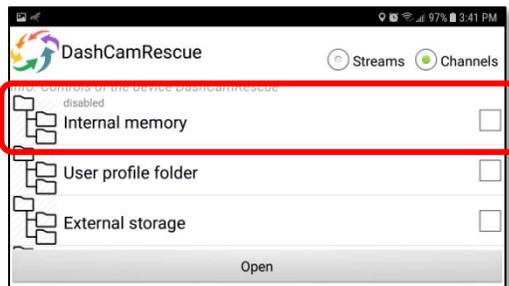
### Overview:

In order to transfer large data files between mobile devices, the devices must explicitly ALLOW access to their file systems. This Internal Memory configuration option can only be implemented by the User of the local device (cannot be overridden by the system).

This section will explain this feature and provide instructions on setting up file access.

### Sentry MDU file access configuration:

This section will illustrate how to set the Internal Memory access configuration located in the Tracker Panel, Controls section.



### Steps to configure file system access:

**1. Set the “Internal Memory” channel profile to enable file access.**

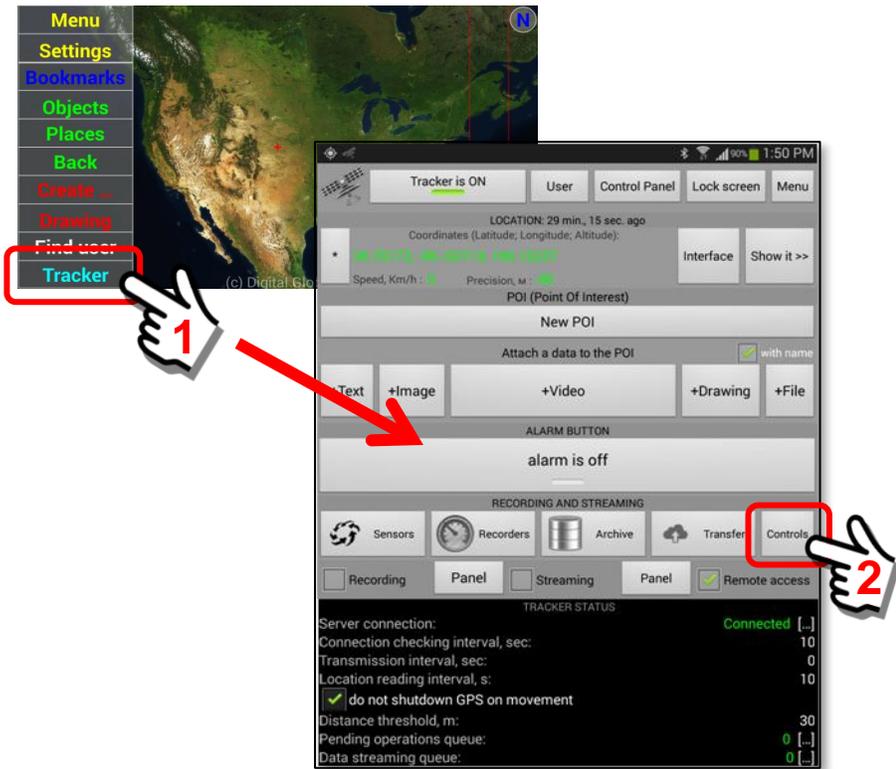
In order to do peer-to-peer file transfers, both mobile devices (sending and receiving) must allow access to the file systems on the devices. The “Internal Memory” channel profile is the place where these changes are to be made.

#### Important Notes:

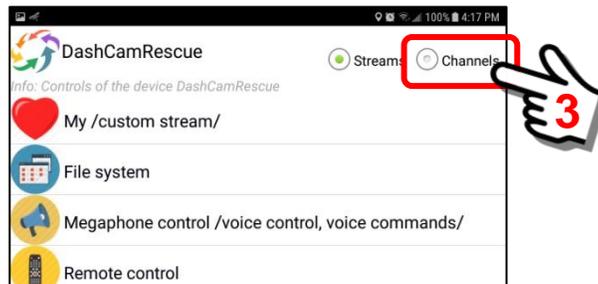
- a. This feature is turned “off” by default.
- b. It must be explicitly turned “on” (Enabled) by the User of the mobile device since it allows access to the internal file system of the mobile device by others. Do you trust them?
- c. This feature CANNOT be changed by another user or by the system. Only the local user can adjust this setting.
- d. For YOU to access this feature on another persons mobile device you must have security credentials that allow access AND they must have turned it “on”.

Both users (sending and receiving) will have to make sure that the “Internal Memory” Channel is “Enabled”. Generally, this would be set up during the mobile device initial configuration. The process to set this parameter is shown below.

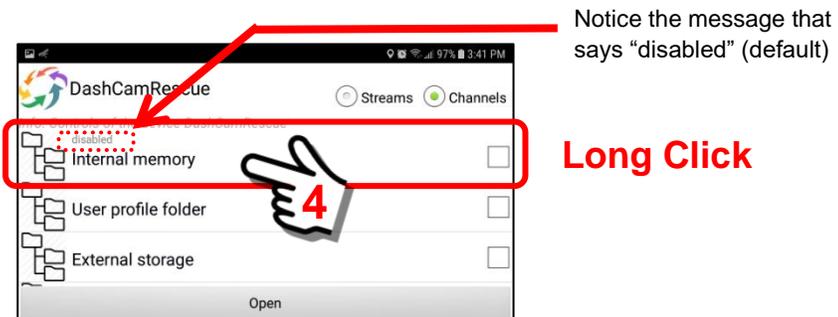
Open the Tracker Panel, click on the Controls Button



Select the Channels Option in the upper right corner of the Panel.

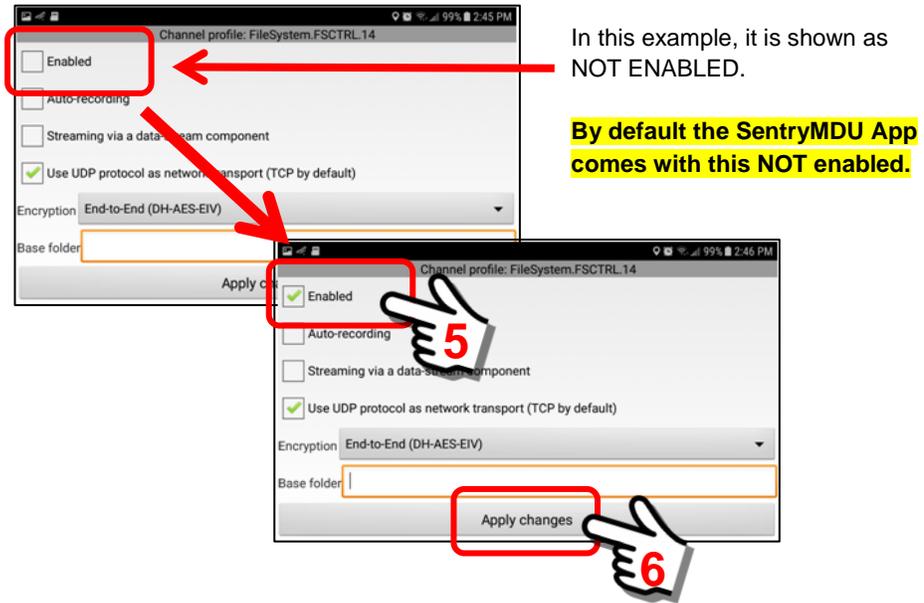


At the Controls Panel channels listing, perform a “Long click” on the Internal Memory option.



Make sure that the channel is “Enabled”.

The Channel Profile for the “Internal Memory” parameter will be displayed. Put a checkmark in the enabled box (if there is not one there already) and click “Apply changes”.



The “Internal Memory” filesystem feature is now enabled. This means that the Sentry MDU System and users with sufficient security credentials can now access the file system on the mobile device (upload and download files).

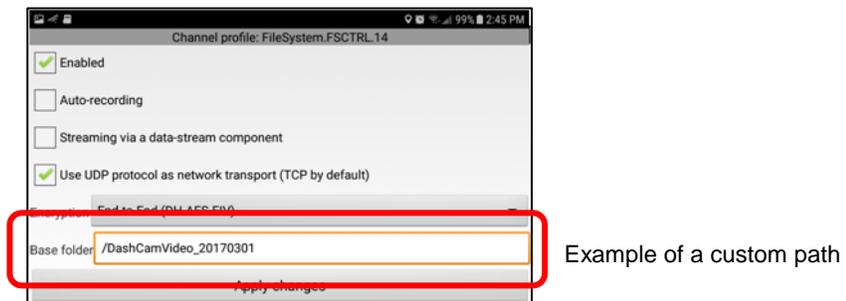
Note about “Base Folder” configuration

The default “Base folder” is the Root Directory ( / ) of the device file system. As an option, Users can specify a different Base Folder default value. This can be used to allow access to specific parts of the file system (and exclude others).

The entry would be specified as follows:

Path = <InternalMemoryRootFolder>/BaseFolder

A different Base Folder might be used if a user created a custom channel and wanted to specify a custom path that had direct access to that folder.



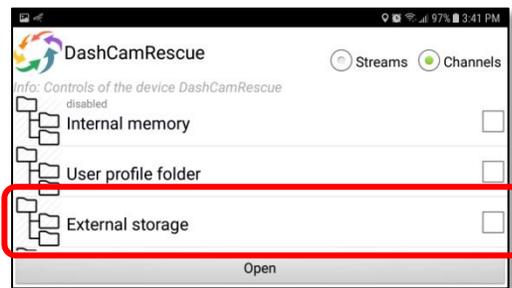
## 5.8. External Storage access configuration (SD-Card access)

### Overview:

Some mobile devices come equipped with SD Card slots to expand the storage of the device. Depending on the device, you may have 16GB, 64GB, 128GB or more of possible external storage. If you have stored large Audio/Video files on the “external” storage of your mobile device (SD-Card), this feature will allow you to access and “download” these large files directly to another mobile device. You may choose to use this feature if the recording device is “remote” from your location (other side of the world) and/or you want to make a back-up copy and store for safekeeping. The “External Storage” channel profile is the feature you will use to access these stored files.

### Sentry MDU file access configuration:

This section will illustrate how to set the External Storage access configuration located in the Tracker Panel, Controls section.



### Steps to configure file system access:

**1. Set the “External Storage” channel profile to enable SD Card access.**

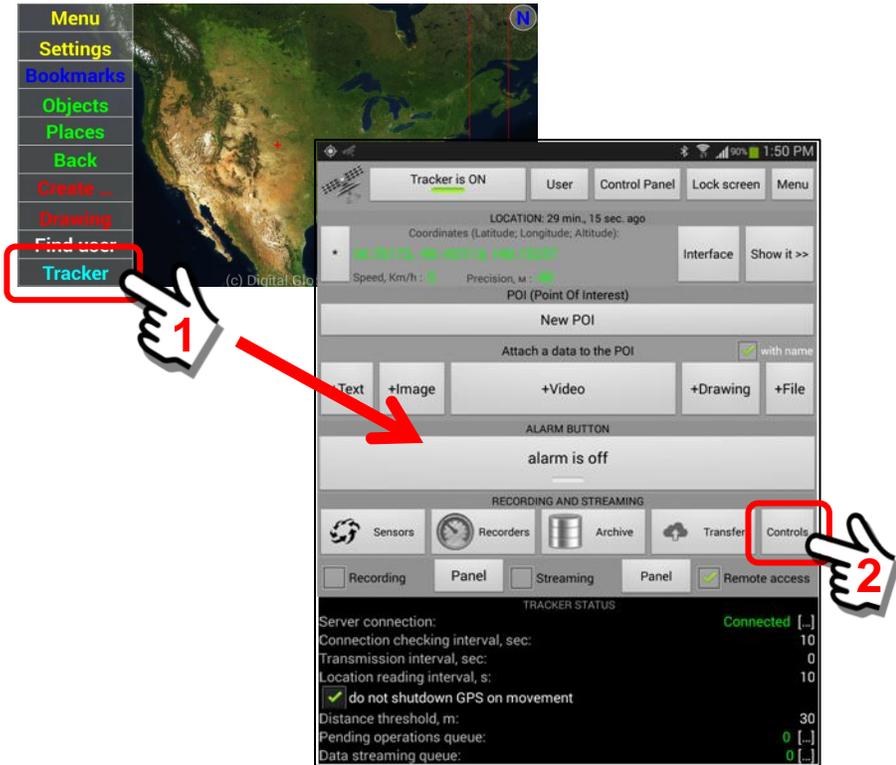
In order to access an SD Card for file transfers, you must allow the SentryMDU App access to the file systems on the SD Card. The “External Storage” channel profile is the place where these changes are to be made.

#### Important Notes:

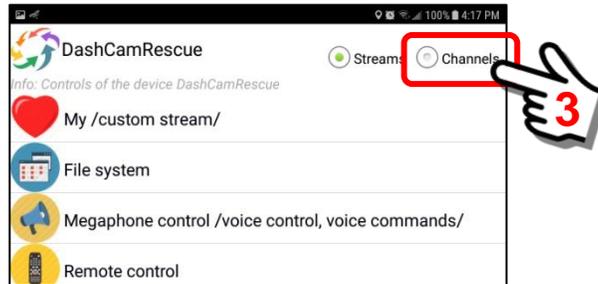
- a. This feature is turned “on” by default (SD Card can be used).
- b. It must be explicitly turned “off” (disabled) by the User of the mobile device if you do not want others to have access to the SD Card on the mobile device. Do you trust them?
- c. This feature CANNOT be changed by another user or by the system. Only the local user can adjust this setting.
- d. For ANOTHER USER to access this feature on YOUR mobile device they must have security credentials that allow access.

Generally, the SD Card is used to store audio-video files when you have a device recording 24/7 and you are generating many GB of files and would exceed the capacity of your internal memory. The process to set this feature up is shown below.

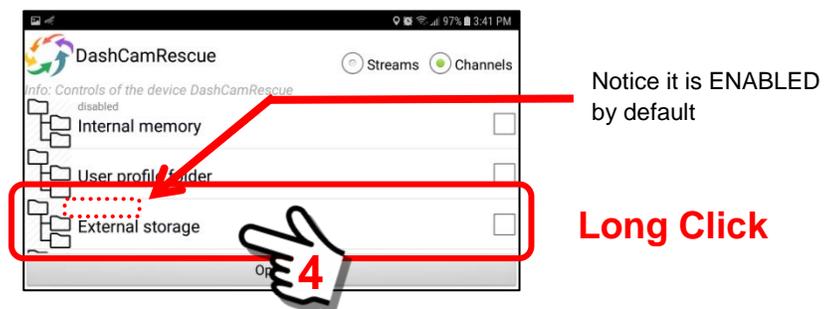
Open the Tracker Panel, click on the Controls Button



Select the Channels Option in the upper right corner of the Panel.

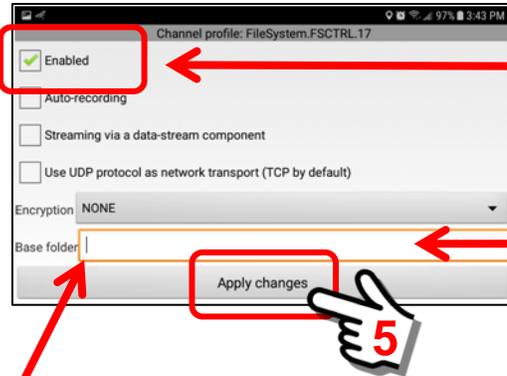


At the Controls Panel channels listing, perform a “Long click” on the External Storage option.



Make sure that the channel is “Enabled”.

The Channel Profile for the “External Storage” parameter will be displayed. By default it should be “enabled”. Put a checkmark in the enabled box (if there is not one there already) and click “Apply changes”.



In this example, it is shown as ENABLED.

**By default the SentryMDU App comes with this enabled.**

File PATH of the SentryMDU ROOT directory on the SD Card

<SD Card> / Android / data / com.sentrymdu.GeoEye / files / Device /  
( Default PATH when field is blank )

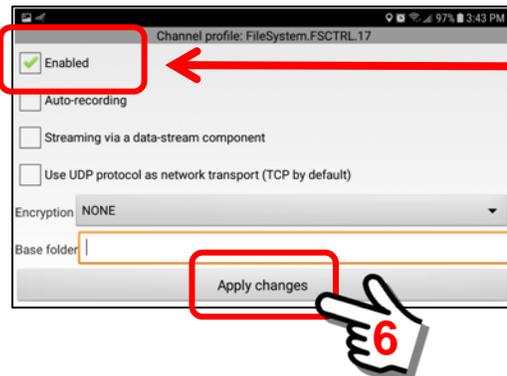
The “External Storage” filesystem feature is now enabled. This means that the Sentry MDU System and users with sufficient security credentials can now access the SD Card file system on the mobile device to **view and download files**.

**Files may not be “uploaded” to the SD Card by other users.** Only the local SentryMDU App can put files on the SD Card.

To disable the External Storage feature

The External Storage option is ENABLED by default. If you wish to DISABLE the external storage option, simply open the channel profile and “uncheck” the Enable checkbox as shown below.

Click “Apply changes” to confirm.

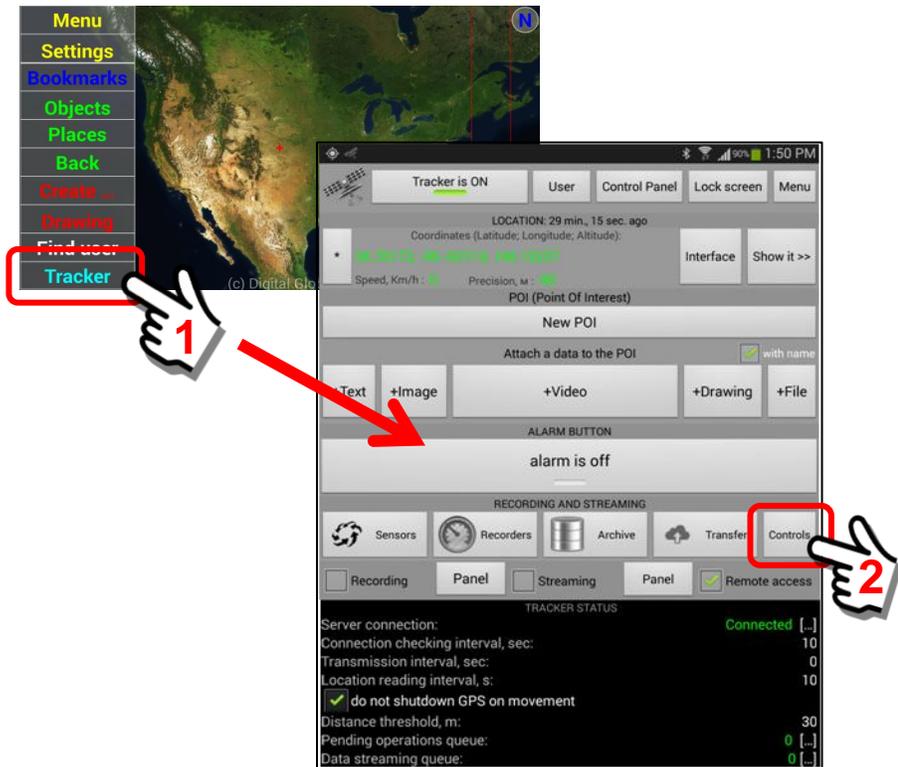


“Uncheck” the Enabled checkbox to disable this feature.

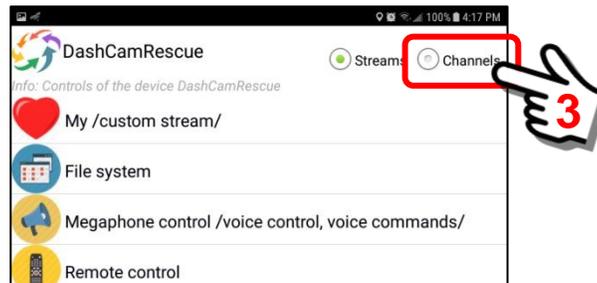
**2. Review files stored in the External Storage (SD Card).**

In most cases, the external storage feature (SD Card) will be used to store recorded audio-video files for situations where you may be recording 24/7 or for extended periods of time (days-weeks-months). By default the system will create files that are 60 Minutes in length each (3600 seconds). This can be changed by the user (see **Section 15.2.18, Item #4**) into whatever length you desire.

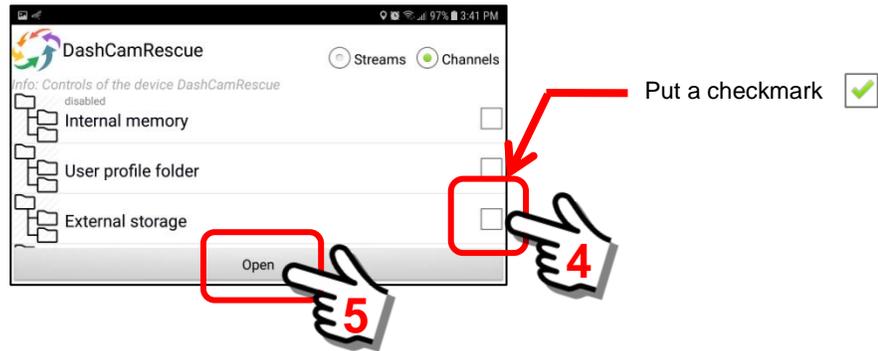
Open the Tracker Panel, click on the Controls Button



Select the Channels Option in the upper right corner of the Panel.

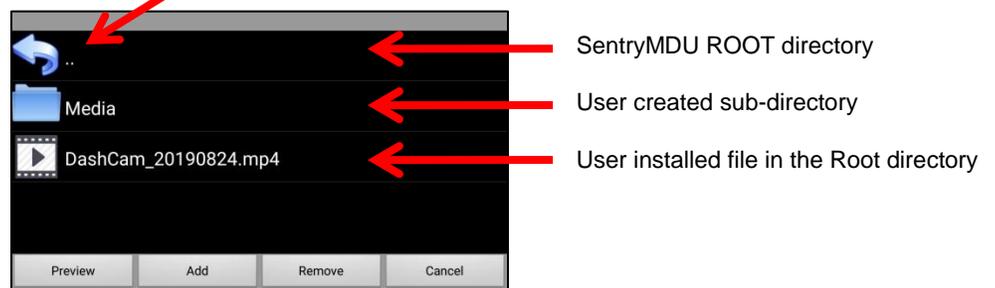


At the Controls Panel channels listing, locate the **External Storage** option.  
Put a checkmark in the “checkbox” and click the “Open” Button.



Stored files will be displayed relative to the User Defined ROOT directory  
When you “open” the file location of the External Storage channel, you will see the ROOT level of the SentryMDU file system on the SD Card.

<SD Card> / Android / data / com.sentrymdu.GeoEye / files / Device /



### 3. **General layout and structure of the SD Card file system**

This section will describe the general layout of the file system on an SD Card and how it is created by the Android operating system. We will then describe how the SentryMDU App uses this file system to store data.

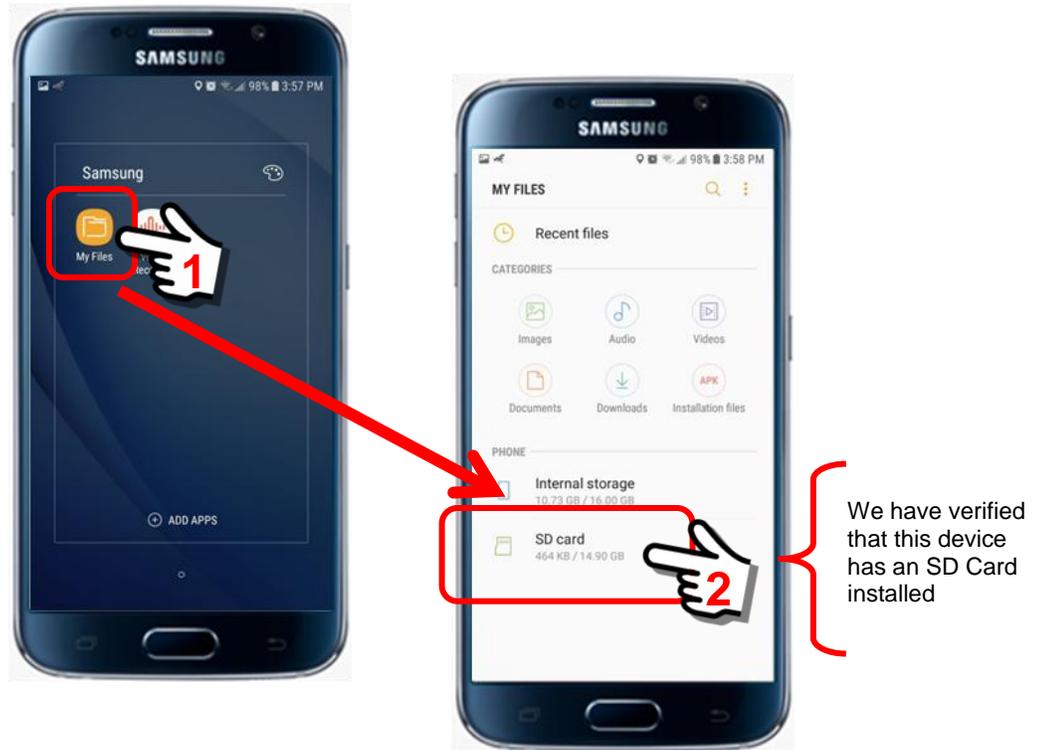
#### Android Operating System setup and permissions

The Android operating system has built-in protections (permissions requirements) on how “user” data is handled on SD Cards. This is to protect user data from one App being removed or overwritten by another App.

When a User installs an SD Card in their device, the Android OS creates a series of directories which it uses to manage data flow from the Apps installed on the device ... assuming the User wants to store App data on the SD Card. In many Apps a user must provide specific authorization in order to store data on an SD Card. This is the case with the SentryMDU system, we must set up the App to store audio-video recordings.

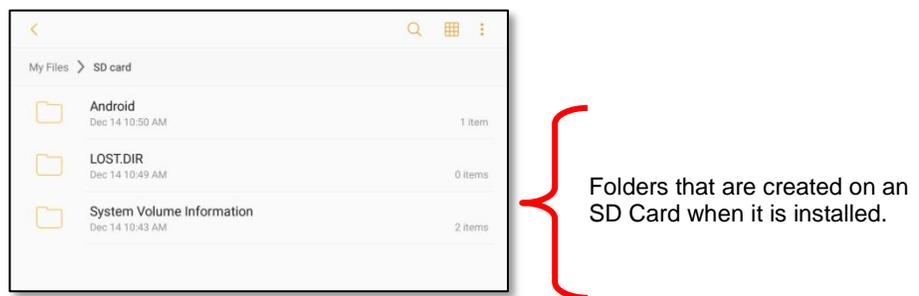
Access the file system on the device and verify the SD Card

In this example, we will navigate the Android file system to review the files on the SD Card. Use the native tools on the device. In this case we are using a Samsung phone and the “Files” App on the phone.

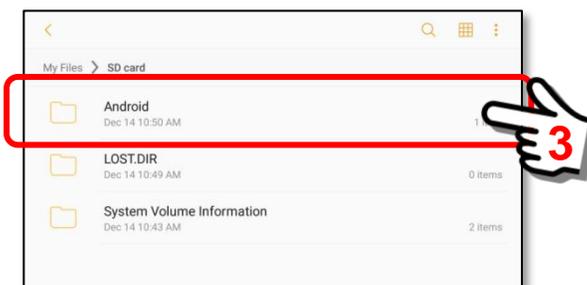


We now access the file system on the SD Card

Click on the “SD card” heading to open the file system on the SD Card.

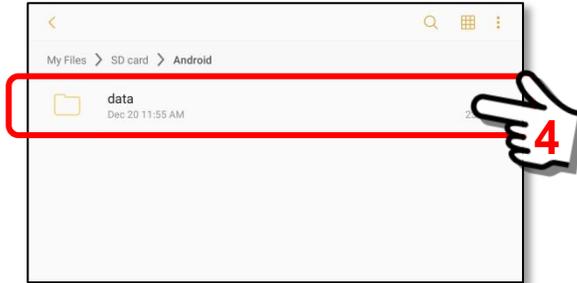


Open the Android Folder. This is where the SentryMDU files are stored.



Within the Android Folder, a “data” folder is created by the operating system. This is to hold data for any Apps that will be using the SD Card.

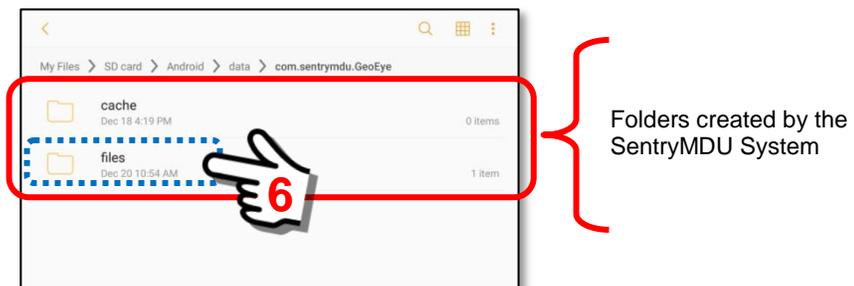
Click to open the “data” folder.



The next step is to open the “**com.sentrymdu.GeoEye**” Folder  
Within the Android Folder, the operating system organizes an additional folder for each App on the device. In this example, we scroll down the list and locate the **SentryMDU App** in the list. Notice the format that Android uses to identify the SentryMDU App folder ( ie **com.sentrymdu.GeoEye**).



The SentryMDU App uses the **com.sentrymdu.GeoEye** folder (generated by the Android operating system) as the base directory for the SentryMDU external storage area. Within this folder, the SentryMDU System creates two additional file folders ... a “files” folder and a “cache” folder as shown below.

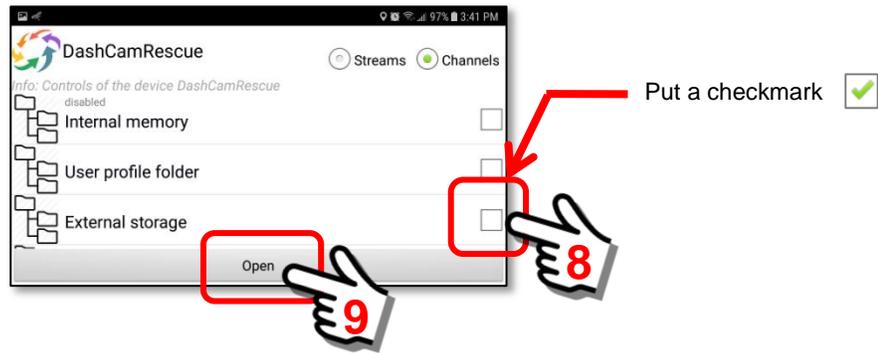


The “files” folder is the directory where data will be stored.

Open the “files” folder as we drill down to the SentryMDU ROOT folder  
 Within the “files” folder is a “Device” Folder. The “Device” folder is the ROOT folder for the External Storage feature.

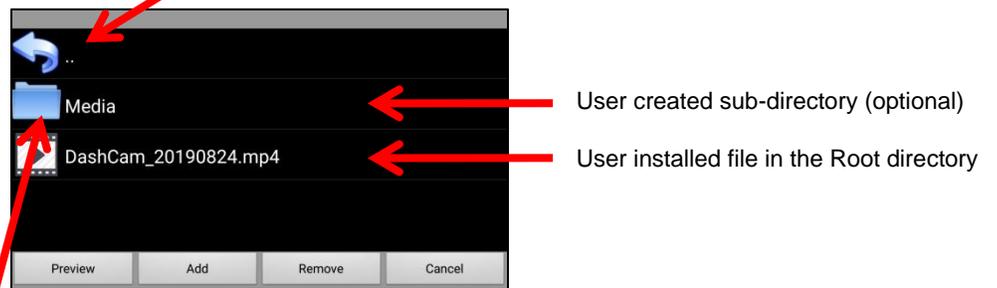


When we “open” the External Storage channel, we are opening the “Device” Folder. Follow the example below.



Stored files will be displayed relative to the User Defined ROOT directory  
 When you “open” the file location of the External Storage channel, you will see the ROOT level of the SentryMDU file system on the SD Card (Device Folder). Folder names are “case sensitive”.

<SD Card> / Android / data / com.sentrymdu.GeoEye / files / Device /



<SD Card> / Android / data / com.sentrymdu.GeoEye / files / Device / Media  
 ( PATH when a sub-folder is provided )

## 5.9. Automatic transfer of recorded data to an SD Card

### Overview:

For mobile devices that have SD Card “external” storage, the SentryMDU System has features that allows the “automatic” transfer of files and data to an SD Card. This feature is useful when “remote” devices are used in surveillance applications where recording is performed 24/7. This can move multi-Gigabyte groups of audio-video files from internal memory to an installed SD Card on a periodic basis.

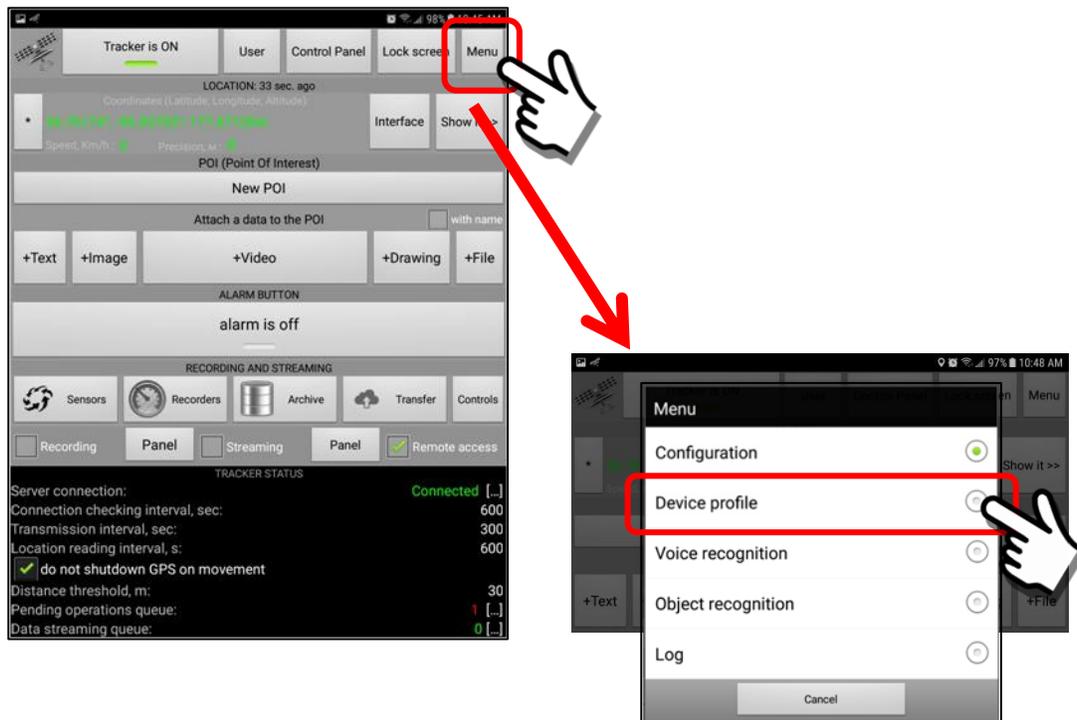
This section will describe how to configure a “recorder” to transfer files from internal memory to the SD Card for storage. This is often used to transfer files stored on an SD Card of a remote device to another SentryMDU enabled device for archiving/storage. In order to transfer large data files between mobile devices, the devices must explicitly ALLOW access to their file systems.

### Important Note:

If you configure a device to transfer recording files from internal memory to the SD Card, note that if you are running out of “free space” on the SD Card, **the system will automatically DELETE “old” files** to make room for the “new” files to be transferred. The removal is based on date/time (First-in, First-out).

### SentryMDU recorder configuration for SD Card transfer:

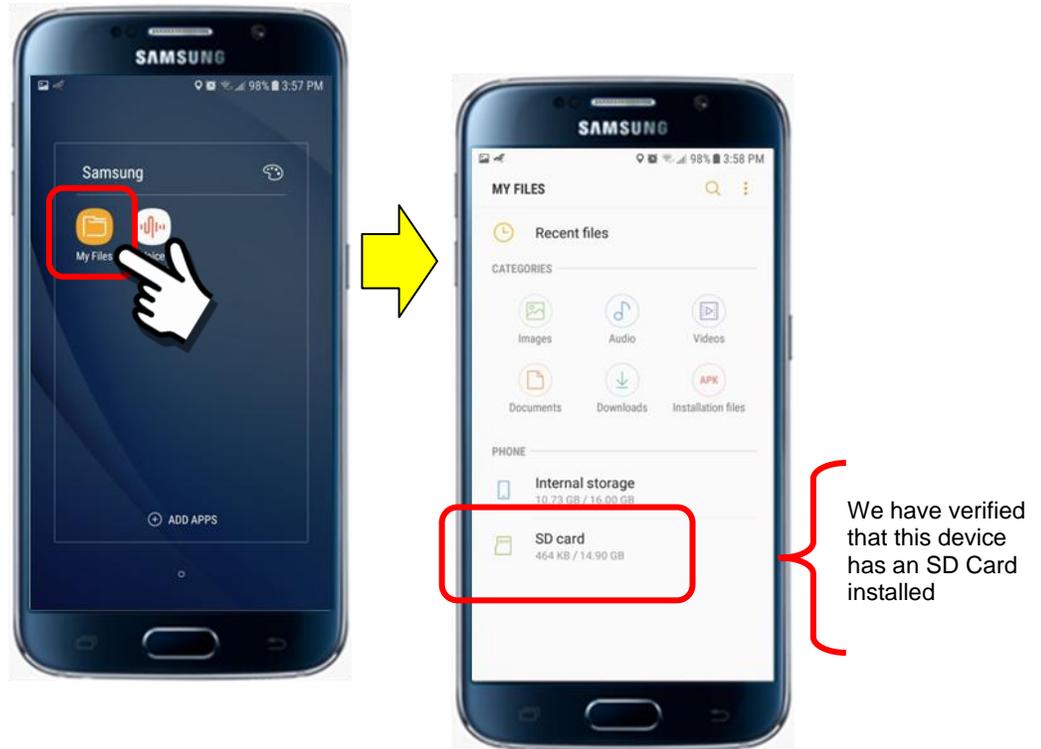
This section will illustrate how to set up the recorder configuration so that the SentryMDU System can automatically transfer data files from internal memory to the SD Card of a mobile device.



## Steps to configure recorder transfer:

### 1. **Install an SD Card in the mobile device (or verify one is installed)**

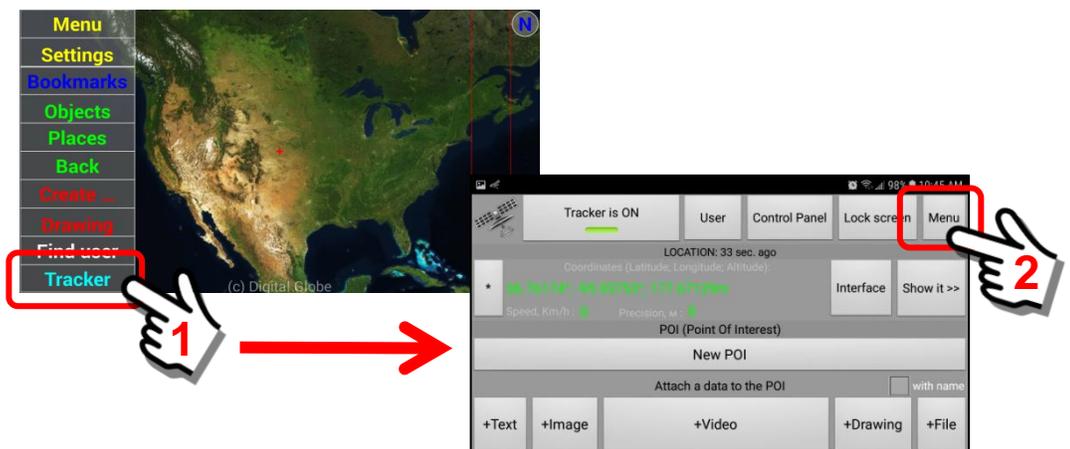
Make sure you have an SD Card installed. Depending on your device manufacturer your screens may be different, but you should have something similar to the following (showing a Samsung phone):



### 2. **Set the “Device Profile” module for Recorder External Storage**

By default, the SentryMDU App will record all data to files stored on the “internal” memory of the device. In order to store (transfer) files to external storage (ie SD Card) we must configure a setting in the Device Profile.

Open the Tracker Panel, click on the Menu Button



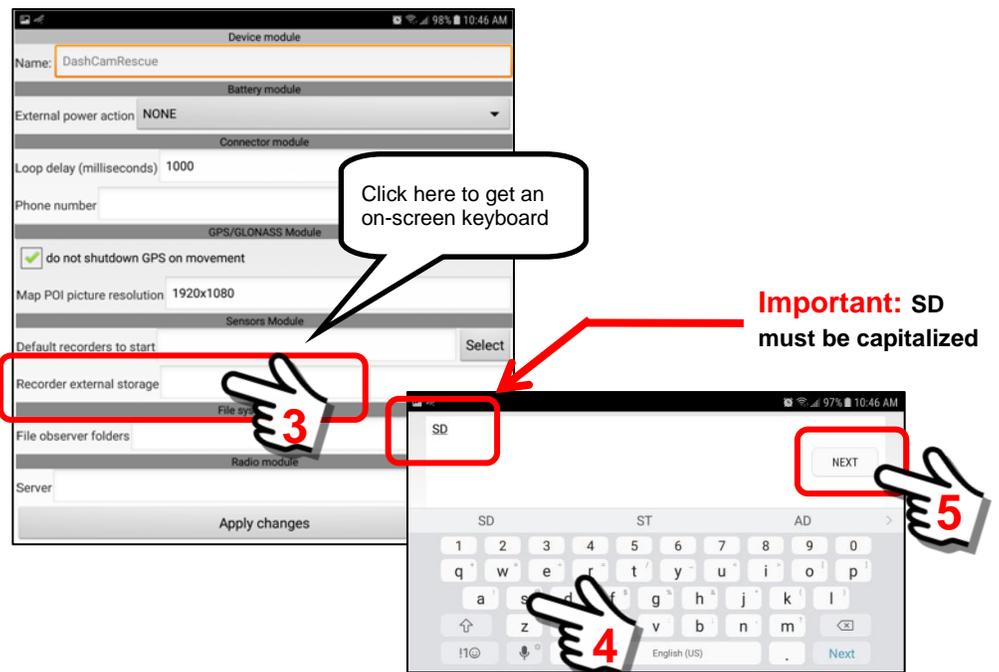
Review the Recorder External Storage Option on the Panel

By default, the “Recorder External Storage” option field is “blank”. This means that any data files that are stored are stored on the internal memory of the device. In order to use “external storage” (ie SD Card) we must indicate that an SD Card is to be used.



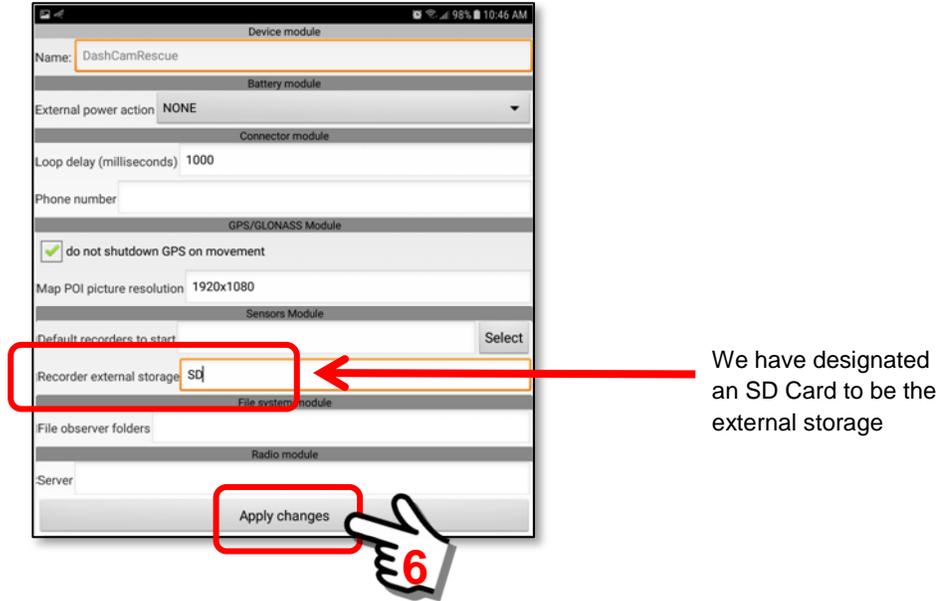
Edit the Recorder External Storage to designate an SD Card

Enter the letters ... **SD** to indicate an **SD Card** is the external storage location for the files. **It is REQUIRED that the letters SD are capitalized.**



Save the changes to the Device Profile Panel

The Device Profile for the mobile device has now been changed to indicate that an SD Card will be used for Recorder External Storage. Click “Apply changes” to save the settings.

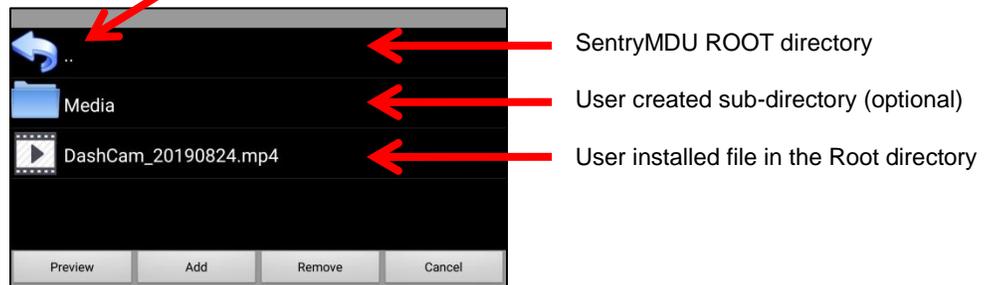


The “Recorder External Storage” feature is now enabled. This means that the Sentry MDU System will now store recorded files on the SD Card at specified intervals.

Stored files will be put into the User Defined ROOT directory

For a default configuration, the file location of the External Storage will be at the ROOT level of the SentryMDU file system on the SD Card as shown below.

<SD Card> / Android / data / com.sentrymdu.GeoEye / files / Device /



Later in this section we will describe how to create sub-directories if you wish to segregate your files into logical folders.

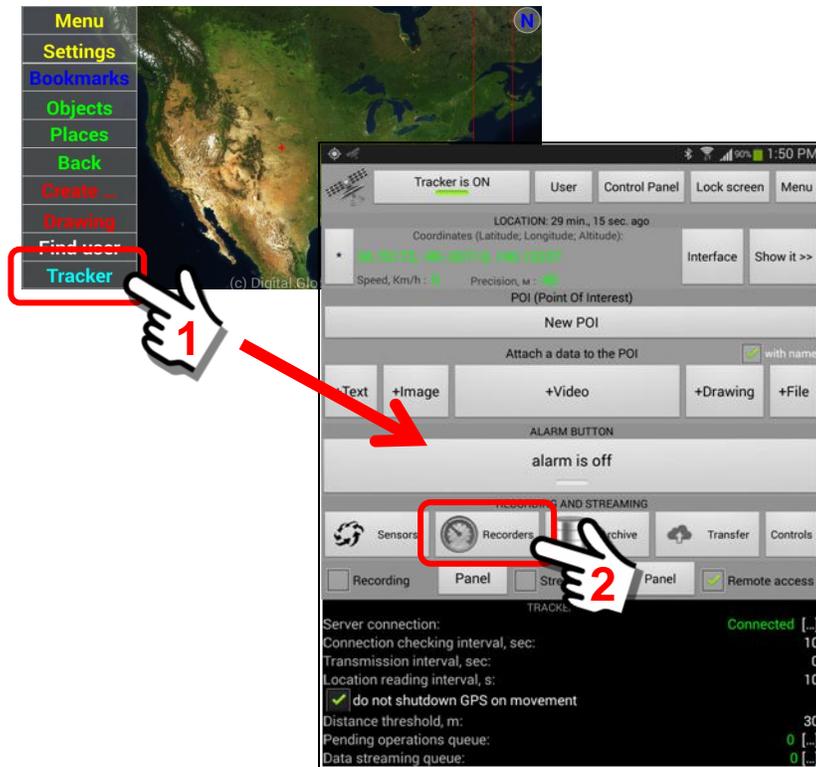
**3. Set the “File Transfer” interval to copy to the SD Card.**

There are two issues that must be considered when transferring files from internal memory to an SD Card.

- a. The length of the recording (ie 10min, 30min, 60min, etc.).
- b. How often a transfer should be done (ie day, week, month, etc.)

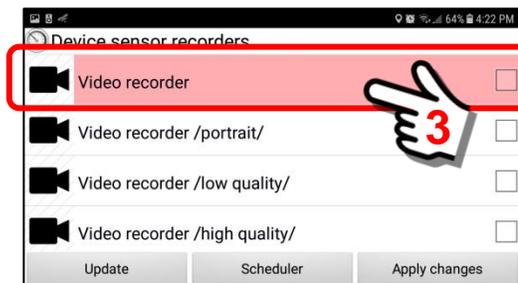
Both of these issues are described in other sections of this User Manual, but we will briefly touch on them here. Please see **Section 15.2.18, Item #4** for additional details.

Open the Tracker Panel, click on the Recorders Button



Select a “Device Sensor Recorder” to use

In this example, the Video Recorder will transfer files over to the SD Card. We will edit the transfer interval from 30 days to daily.



**Long Click**

Review the Video Recorder configuration panel

The video recorder configuration panel contains settings for both the recorded “length” of each video file and the “life time” in days for when the file will be transferred or removed from internal memory. See **Section 15.2.18, Item #4** for a complete discussion of these features.

In this example, we leave the recorded length at 60 minutes (3600 seconds) but will change the “Life time, days” from 30 days to one day.

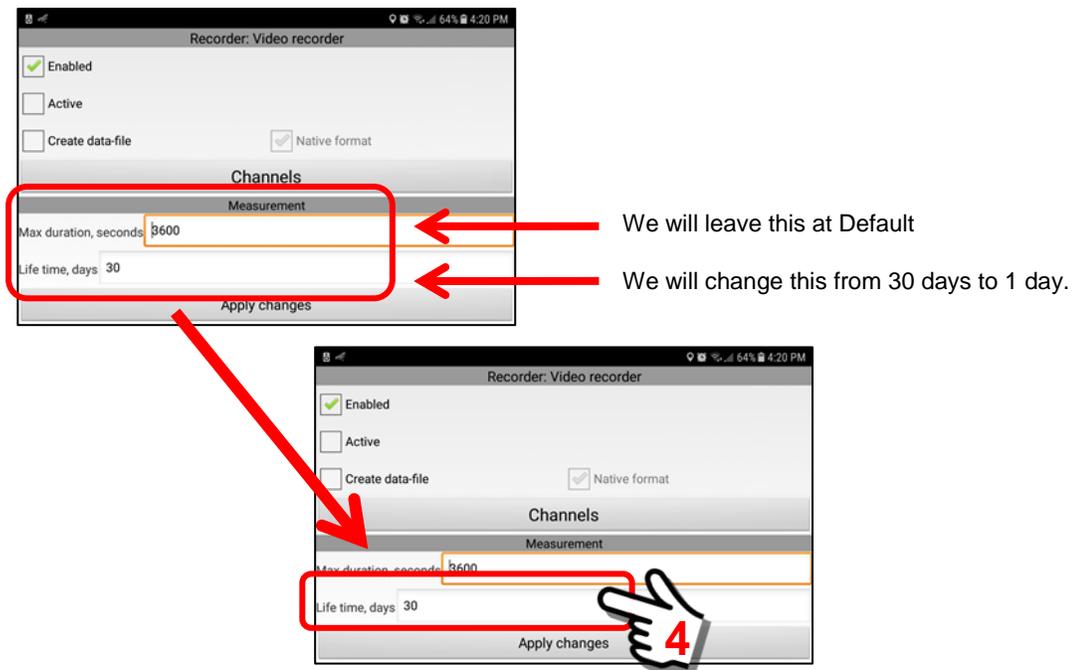
**Max Duration, seconds:**

This is the maximum length of a single data record in seconds. For example, the default is 3600 seconds (60 minutes). This means the application will record a single data file for a maximum of 60 minutes and then start a new file. If a recording is to last 3.5 hours, the resulting data files would be 3 files @ 60 minutes each and 1 file @ 30 minutes.

**Life time, days:**

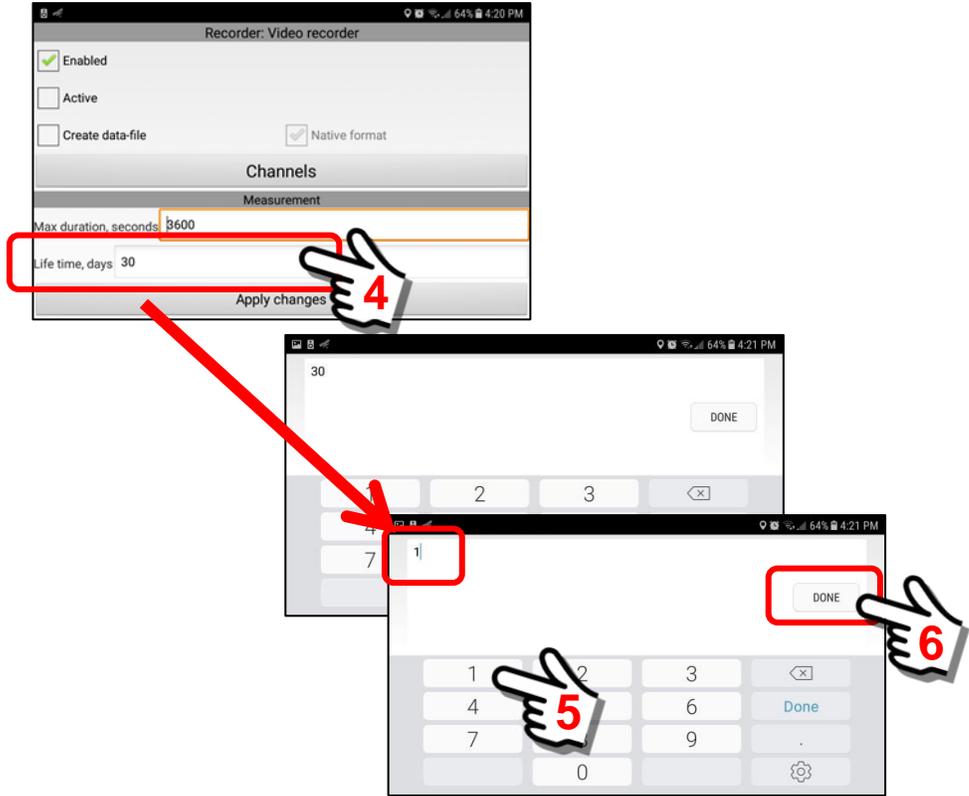
This is time period that a recorded file will stay on the mobile device before it is automatically removed. When time is expired, the file will either be (1)removed, (2)transferred to the Data Server (if you have a License or Subscription) or (3)transferred to an available SD Card.

The Sentry MDU System has settings for the mobile device and the Data Server. They are set independently. This setting is for the mobile device and the default is 2 days. If a record is not saved to the Data Server it will be automatically removed after this time interval setting unless it is transferred to the SD Card.



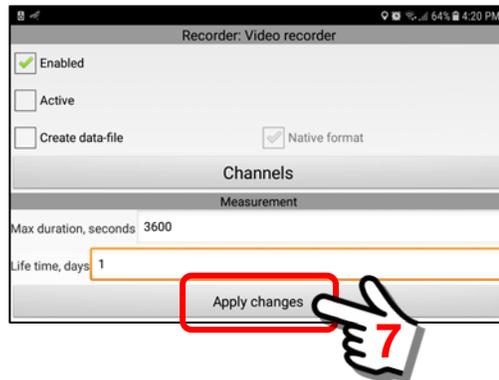
Configure the “Life time” for 1 day

Click on the “Life time” field to access the on-screen keyboard and make changes.



Accept changes and save

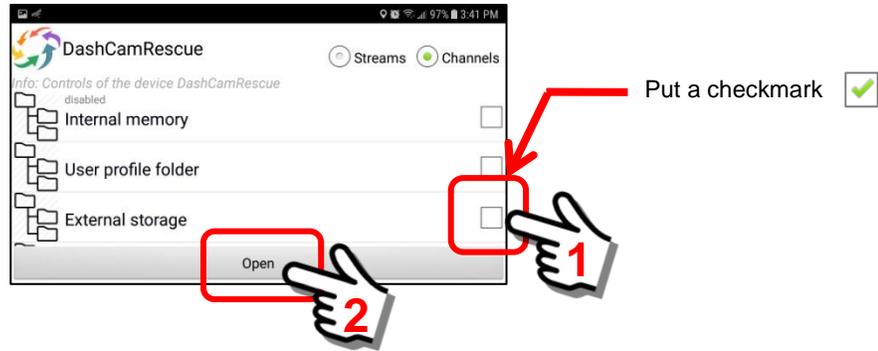
Click the “Apply changes” Button to save the new configuration.



With the “Life time” set for one day, and the Recorder External Storage set to transfer files to the SD Card, we have now configured the SentryMDU App to record Video and do a daily transfer of video files from internal memory storage to the external SD Card.

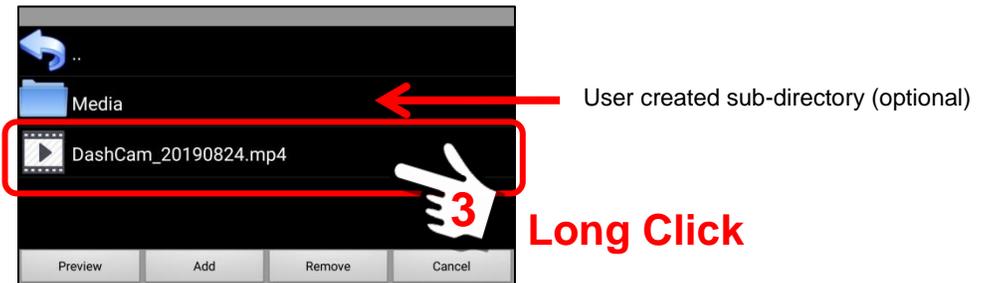
#### 4. Access to data and files on the SD Card.

This section will describe the access available to users for the data stored on the SD Card. We begin with access to the file structure of the card.

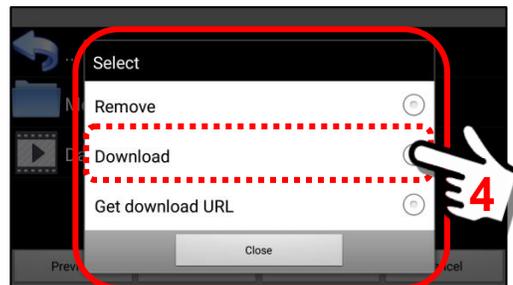


When you “open” the file location of the External Storage channel, you will see the ROOT level of the SentryMDU file system on the SD Card (**Device Folder**).

Navigate the file system and locate a file. Perform a “Long click” on the selected file name.



A “Long click” on the file name will open a pop-up menu that provides options to Download or Remove a file. If you have “remote” access, you may also download the file to your device (assuming you have security credentials).



# 6. Security Domain of Mobile Device

## 6.1. The purpose of a Security Domain

### Overview:

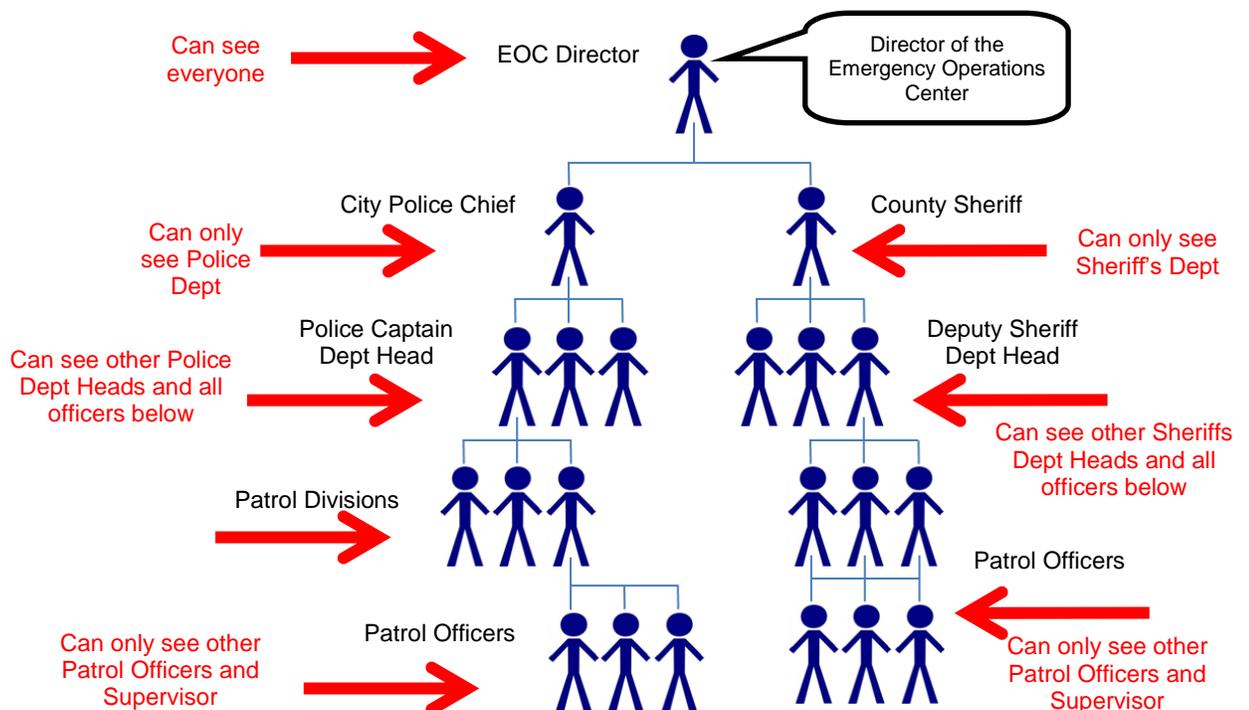
Each user that “registers” in the Sentry MDU System has “private” access. This means that other users can only view and control those functions that they are specifically “allowed” to access/control. This is controlled by the settings of the Security Domain.

**Important Note:** Security Domain settings are for a specific Data Server instance. Users on different Data Servers CANNOT communicate.

All Users may create “personal” security domains and assign existing domains (from other users) to themselves by using a Domain Name / Password pair. In addition, a Security Domain may be configured by users with Administrative privileges to a Data Server instance. Security Domains are controlled in the following manner:

- a. Licensed users on a dedicated Data Server instance. They will be set up and administered by the group’s IT Department.
- b. Licensed users on a “shared” Data Server instance. They will be set up and administered by Digi-Lumen Technologies support personnel.
- c. All Registered Users will have the ability to add other users to their “personal” security domain. Must be on the same SentryMDU Data Server instance.
- d. Anonymous users (not registered), will only have “view” access of other users within the Public Sandbox since they are not part of a security domain “group”.

Security Domains can be configured in both hierarchical and parallel configurations which allow a virtually unlimited combination of options. The following diagram illustrates one possible configuration of a group Security Domain with 5 levels.



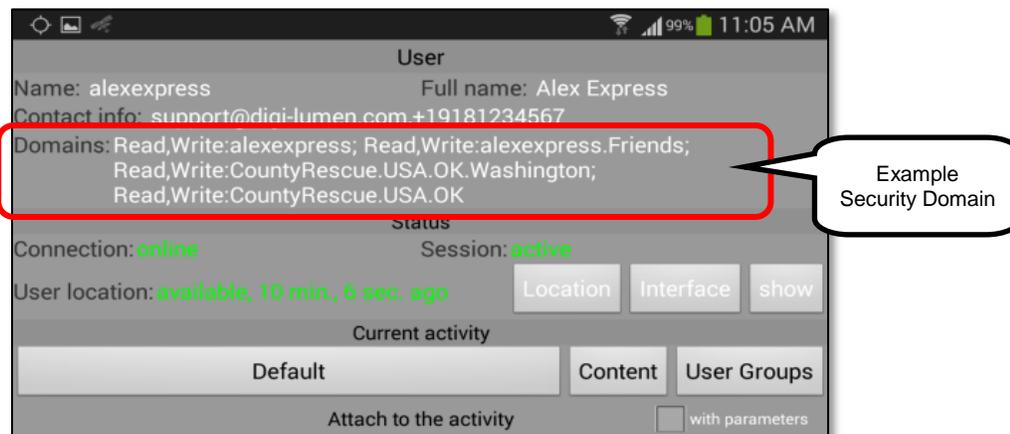
## 6.2. The Security Domain format

### Overview:

One of the security features of the SentryMDU System is the concept of Security Domains. **This is an important concept that the User should understand** ... as this controls “who” can interact with their mobile device and “what” access is allowed. A security domain is organized in “levels” of parent-child relationships.

The Security Domain is comprised of three (3) parts:

1. Personal Security Domain
2. Home Domains
3. Supervisor Domains



In the sample shown above, the three parts are shown as follows:

**Personal Domain** = Read,Write:alexexpress; Read,Write:alexexpress.Friends

**Home Domain** = Read,Write:CountyRescue.USA.OK.Washington

**Supervisor Domain** = Read,Write: CountyRescue.USA.OK

### Three parts of the Security Domain feature:

#### 1. Personal Domain

**All user accounts have “personal” security domains created automatically upon registration.** The personal security domain uses the “username” as the root context of the security domain. In addition, the system will create a “Friends” sub-domain (ie Read,Write:alexexpress.Friends). Users may create additional sub-domains for work, play, civic groups and so on. Users may invite “other” users to join them in their personal security domain by providing them with a password. More on this later in **Sections 6.4 – 6.5.**

## 2. Home Domains

This is the type of security access assigned to YOUR UserID. The first component establishes Read/Write provisions of “your” account. These domains are used for creating “objects” that are owned by the User (pictures, audio-video, places, bookmarks, etc.). Also for accessing objects created by “other” users on the same Data Server instance, with the same security domain. A user may have many “Home” security domains. One for family, another for work, another for play, another for a civic group and so on.

This allows who can see your location (ie GPS), monitor the sensors on your mobile device and remotely access/control your mobile device.

## 3. Supervisor Domains

This is the access you have to view/change OTHER USERS mobile devices. The second component contains security domains that the User uses only for viewing/supervising “other” users and the “objects” that other users create. A user may have many “Supervisor” security domains.

This establishes the access and control YOU have over other user devices. This determines whether or not you can view/monitor/control another user’s mobile device.

## Access Permissions within a Security Domain:

The SentryMDU System uses two types of permissions.

1. **Read:** This means you may only “view” (Read) data from another Users device.
2. **Write:** This means you may “change/modify” another Users information or data. For example, if you want to monitor the camera on another user’s device, you will need “Write” permission because you are turning “on” their camera (changing a setting on the other device).

You may use a “Read” by itself in a domain access statement such as:

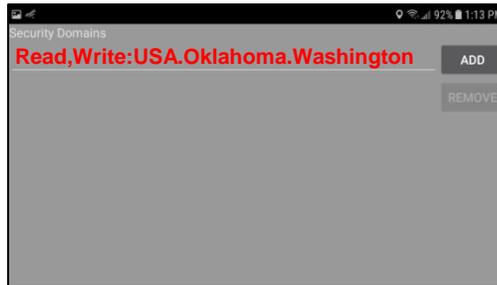
**Read:USA.Oklahoma.Washington**



When using a “Write”, you must use BOTH as:

**Read,Write:USA.Oklahoma.Washington**

(You must be able to “read” it first, before you can “write” to it.)



If you attempt to access another User’s mobile device and receive an “Access Denied” error message, this is most likely a case where you do NOT have sufficient security credentials to perform the action (do NOT have Read/Write access).

### **Security Domain hierarchy:**

The SentryMDU System uses a domain structure organized in a parent-child relationship. Together with “Read,Write” permissions, this format provides enhanced user access and control.

Read,Write:Country.State.County.City.Organization.User

In the following example (USA.Oklahoma.Washington.Bartlesville.EOC.EOCdirector) we establish the hierarchical relationship within the overall Security Domain system. The hierarchy is as follows:

- Country (USA)
- State (Oklahoma)
- County (Washington County)
- City (Bartlesville)
- Organization (Emergency Operations Center)
- Individual user position within organization (EOC Director)

Read,Write:USA.Oklahoma.Washington.Bartlesville.EOC.EOCdirector

**Important Concept:** Each “parent level” within a domain hierarchy has access to all “child levels” below. In the example above, a User with a domain at the “City” Level ...

**Read,Write:USA.Oklahoma.Washington.Bartlesville**

**will have access to ALL devices at the “City.Organization.User” levels.**

- Country (USA)
- State (Oklahoma)
- County (Washington County)
- **City (Bartlesville)**
  - Organization (Emergency Operations Center)
  - Individual user position within organization (EOC Director)

An example of a Supervisory Security Domain is shown below.

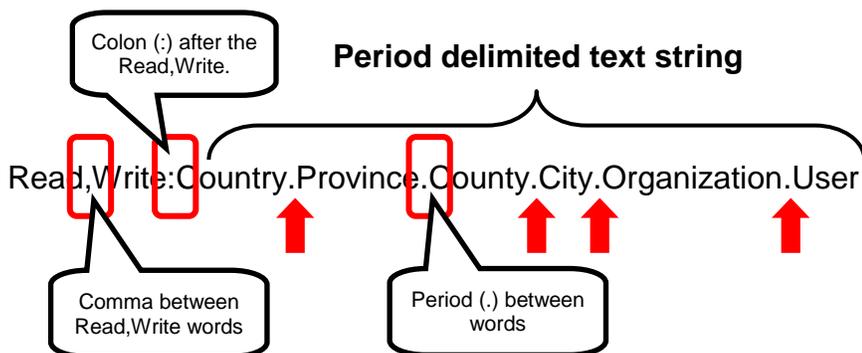


If you are aware of other “users” on the system, but you are not able to access them, check your security domain settings on the **Supervisor Domains Panel**.

### Format of the Security Domain statement:

#### 1. **The Read,Write statement.**

The Security Domain format uses the capitalized words **Read** and **Write** separated by a comma (,) ending with a colon (:) as shown below:



#### Rules to follow when constructing a Security Domain statement:

- “Read” must be the first word and must be capitalized.
- If “Write” is used, it must be capitalized.
- If BOTH Read and Write are used, they must be separated by a comma (,).
- A Colon (:) is used after the “Read,Write” to separate it from the domain text entry.
- The Domain text listing must be single words separated by a period.
- The Domain text listing is case insensitive text, up to 100 characters.
- NO whitespace or special characters in the Domain text string.
- A “personal” Security Domain will ALWAYS start with the Username of the account creating the Security Domain.

## 2. Domain Text String format example for "Home" Domain

The next several examples assume you are an Admin User of a Licensed Data Server and have access via the SentryMDU Manager Desktop Client. This provides more flexibility in creating the text string of a Security Domain than is available from within the SentryMDU App. However, the principles are the same and can be applied in both user situations. To begin, give some thought on having your Users organized into "levels" of permissions (think parent-child relationships).

In the first example, we will assume the following ... We want to create a "Home" Security Domain for a person who is the Director of the Emergency Operations Center located in the USA, State of Texas, Harris County, Office of Emergency Management. We might end up with something similar to the following:

Read,Write:USA.Texas.Harris.OEM.EOCdirector

Now, let's look at another example ... We want to create a "Home" Security Domain for a person who is the Deputy Sheriff of the Sheriff's Department located in the USA, State of Texas, Harris County. We might end up with something similar to the following:

Read,Write:USA.Texas.Harris.Sheriff.DeputySheriff

Notice that BOTH are the same for the Country, State and County (USA, Texas, Harris) but after that, each has a unique Organization and Name.

Read,Write:USA.Texas.Harris.OEM.EOCdirector

Read,Write:USA.Texas.Harris.Sheriff.DeputySheriff

If we expand the **Office of Emergency Management** (OEM) group to other users we might have the following:

Read,Write:USA.Texas.Harris.OEM.member1

Read,Write:USA.Texas.Harris.OEM.member2

Read,Write:USA.Texas.Harris.OEM.member3

Additional OEM Members

If we expand the **Sheriff's Department** (Sheriff) group to other users we might have the following:

Read,Write:USA.Texas.Harris.Sheriff.officer1

Read,Write:USA.Texas.Harris.Sheriff.officer2

Read,Write:USA.Texas.Harris.Sheriff.officer3

Additional Sheriff Officers

### Summary

In these two examples, we assume that an Administrative User of a Licensed Server has set up eight (8) users from two different Organizations.

#### Office of Emergency Management

User #1 = EOCdirector

User #2 = member1

User #3 = member2

User #4 = member3

#### Harris County Sheriff's Department

User #5 = DeputySheriff

User #6 = officer1

User #7 = officer2

User #8 = officer3

Each of these Users has a private "Home" Security Domain. In the next section, we will explore the "Supervisor" Security Domain that will allow these Users we have created to interact with each other.

### **3. Domain Text String format example for "Supervisor" Domain**

As explained above, the "Supervisor" Security Domain will set the access permissions that a user will have to other User Accounts. When a domain text string is organized in a hierarchy this allows stepwise fine granularity in setting up access rules. We will look at some examples.

In our first example, we will use the EOCdirector. This user has a "Home" Security Domain as follows:

Read,Write:USA.Texas.Harris.OEM.EOCdirector



In this example, we want to set the "Supervisor" Security Domain such that the EOCdirector can "Read" and "Write" to ANY of the members of the

Emergency Operations Center mobile devices. To do this, we would set the “Supervisor” Security Domain as follows:

Read,Write:USA.Texas.Harris.OEM



Notice that the “Supervisor” Security Domain is now set such that it can access all devices in the OEM level (and below). This will include the following members.

Read,Write:USA.Texas.Harris.OEM.member1  
Read,Write:USA.Texas.Harris.OEM.member2  
Read,Write:USA.Texas.Harris.OEM.member3

In this scenario, we have configured the **EOCdirector** mobile device as follows:

Home Security Domain  
Read,Write:USA.Texas.Harris.OEM.EOCdirector

Supervisor Security Domain  
Read,Write:USA.Texas.Harris.OEM

If we want the members of the Office of Emergency Management (member1,2,3) to have full access to everyone in the OEM (including the EOCdirector’s mobile device), then we would set their “Supervisor” Security Domain to the same.

Home Security Domain  
Read,Write:USA.Texas.Harris.OEM.member1

Supervisor Security Domain  
Read,Write:USA.Texas.Harris.OEM

However, if we only want the members to have “Read” access (view but not change) the EOCdirectors device, then we would set the members “supervisor” Security Domain with only “Read” access for EOCdirector.

Supervisor Security Domain

Read:USA.Texas.Harris.OEM.EOCdirector

Only “Read” Access

To carry this example further, we DO WANT **member1** to have “Read,Write” access to the other members (member2 and 3). To do that, we now create two additional “Supervisor” Security Domains. One for member2 and one for member3. The member1 device would now look like this:

Home Security Domain

Read,Write:USA.Texas.Harris.OEM.member1

Supervisor Security Domain

Read:USA.Texas.Harris.OEM.EOCdirector

Read,Write:USA.Texas.Harris.OEM.member2

Read,Write:USA.Texas.Harris.OEM.member3

Read Access for EOC director

Read,Write Access for member2 and 3.

The SentryMDU System will support up to 100 Security Domain entries. With combinations of “Read,Write” and hierarchy, you can customize the security settings to meet your needs.

#### **4. Domain Text String format example for Organizational Access**

As we have seen, by using combinations of “Read,Write” and hierarchy levels we can customize access. In the previous examples, all access was within the OEM Security Domain. The Office of Emergency Management was a secure “island” and other groups could not see (or access) any of the mobile devices. The Sheriff’s Department could not access any of the Office of Emergency Management (OEM) devices and vice versa.

This final example will show how to move access up one more level. In this example, we want the supervision of BOTH the Sheriff’s Department and the Emergency Operation Center to be able to see everything going on in Harris County. We set the “supervisor” Security Domain level to “Harris” for both.

#### **Security Domains for EOCdirector**

Home Security Domain

Read,Write:USA.Texas.Harris.OEM.EOCdirector

Supervisor Security Domain

Read,Write:USA.Texas.Harris

## Security Domains for DeputySheriff

### Home Security Domain

Read,Write:USA.Texas.Harris. Sheriff.DeputySheriff

### Supervisor Security Domain

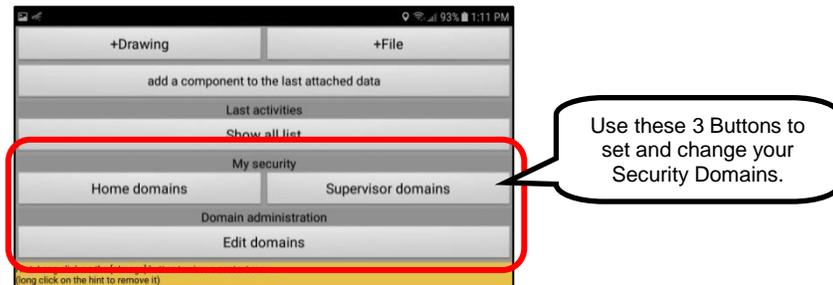
Read,Write:USA.Texas.Harris

## Format of the “personal” Security Domain statement:

### 1. *The format of the “personal” Security Domain.*

The format of the Security Domain that can be configured from within the SentryMDU App is similar to the configuration that is performed by an Administrative User via the SentryMDU Manager Desktop Client.

If you (or your Organization) do not have a Licensed SentryMDU Server instance, then you must use the “personal” Security Domain that is assigned to your User. This would be the case if you are a Subscription User.



A “personal” Security Domain will ALWAYS start with a Username. For example, if we had a User by the name of **Sam Express** ... and a registered Username = “samexpress”, then the ROOT value of the “Home” Security Domain would default to the following:

Read,Write:samexpress



When a new user is created, the SentryMDU System will create one personal security domain and a sub-domain:

Read,Write:<username>  
Read,Write:<username>.Friends

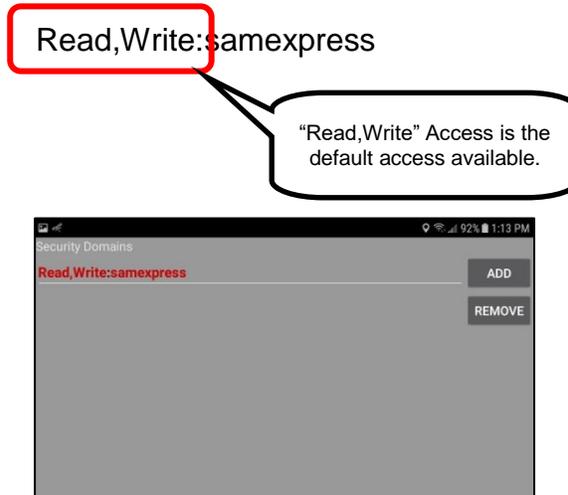
As shown in the previous examples, you may also create additional security domains for your account. A few examples showing the “personal” Security Domain are as follows:

Read,Write:samexpress.work  
Read,Write:samexpress.family  
Read,Write:samexpress.family.children.alex  
Read,Write:samexpress.hobby.sailing

Notice that ALL “personal” security domains have the same ROOT context of “samexpress”. This would be the system default for this user.

**2. Personal Security Domain will have “Read,Write” permissions**

All personal security domains will be created WITH a “Read,Write” permission. During initial setup you do not have the option to do only a “Read” permission (you do have the ability to change it later).



## 6.3. Adding and removing Security Domains

### Overview:

During the registration process, it is recommended that a user put a checkmark in the “Private access” checkbox. This allows the user to establish a private security domain that can only be viewed/accessed by others also in the same security domain.

The screenshot shows a mobile registration form with the following fields and values:

- Login name: VFDmember
- Password: \*\*\*\*\*
- Confirmation: \*\*\*\*\*
- Full Name: VFD Member
- Contact info: support@digilumen.com
- Security domains (leave blank unless issued special code):
- Tracker: Name: VFDmember
- Private access:  (highlighted with a red box and callout bubble stating "Default is CHECKED")
- Geospace: DigitalGlobe.Maps
- Enter a code below and register: 6385694 (with CAPTCHA image)
- Register button

### How Security Domains are created:

In most cases, a User of a Licensed SentryMDU Data Server will be assigned a Security Domain category that has been set up by their IT Department. The System Administrator for the organization can assign any security domain to any User on the server instance.

All Users will have a personal security domain created for them by the system **AND** may create additional “personal” security domains and assign personal security domains of other users to themselves (assuming they have permission). However, a User can only assign a “personal” Security Domain by using a DOMAIN\_NAME / PASSWORD pair. To assign a personal Security Domain to yourself that was created by another User, you must be given the Domain Name and Password by the other User.

Users may create multiple Security Domains to cover work, play, family, specific activities and so on. **Users may have up to 100 security domains.**

### Guidelines for using a “personal” Security Domain:

1. Users may create multiple Security Domains to cover work, play, family, specific activities and so on.
2. Security domains may be created and used for short periods of time and then removed when no longer needed.
3. “Personal” security domains are password protected.

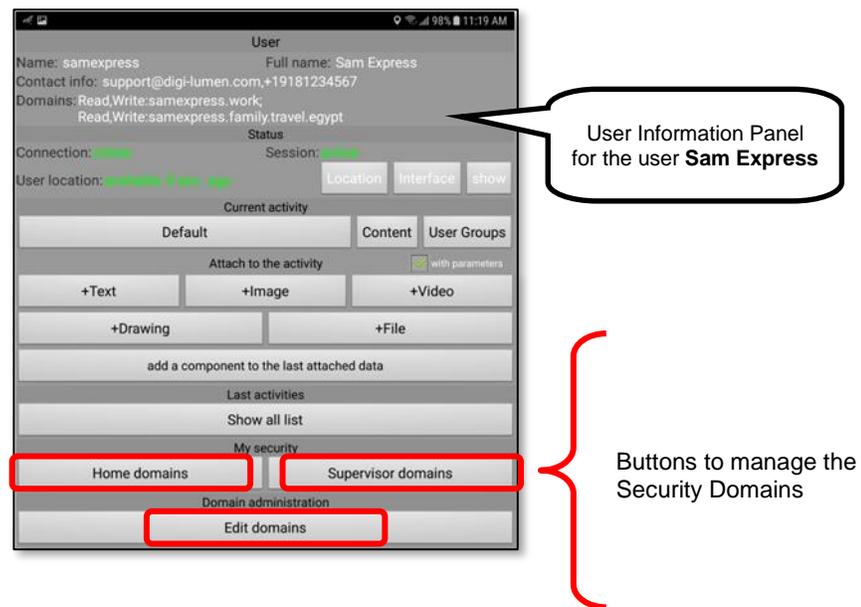
## Domain Security and Administration Buttons:

### 1. *In-App Features to manage Domain Security.*

On completion of the User Registration Process, by default, a Security Domain is created with the same name as the “Username” that was selected by the User. The SentryMDU System provides 3 Menu Items for managing “personal” Security Domains.

#### Menu Items for Administration:

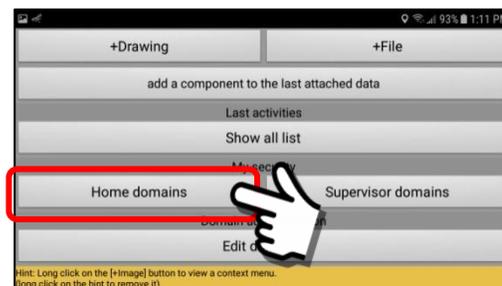
- a. Home Domains Button
- b. Supervisor Domains Button
- c. Edit Domains Button



### 2. *The “Home Domains” Button*

The “Home Domains” Button will open a panel that will display the Home Domains that this mobile device has access to. This can be a combination of security domains. If you are on a Licensed Data Server, it can be security domains installed by your IT Department and it can also be personal security domains you have installed yourself.

To access, click on the Home Domains Button.



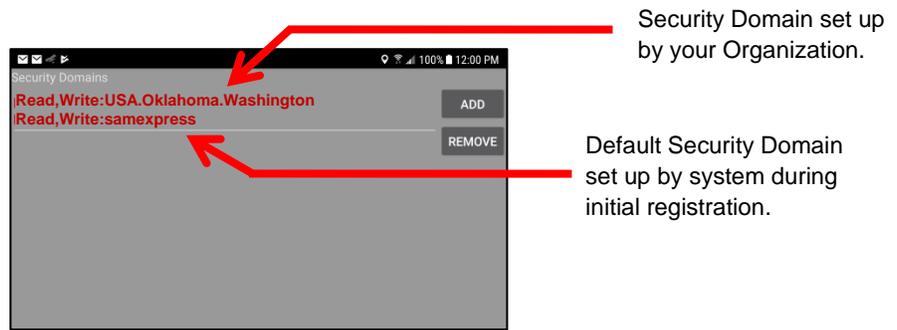
A pop-up “Security Domains” Panel will appear. After a “new” install of the SentryMDU App, you may see screens similar to the following.

**We will look at several Home Security Domain scenarios**

- a. You are part of an Organization that has a Licensed Server
- b. You have a Subscription Account (not on a Licensed Server)
- c. Registered Account only (no Subscription, not on a Licensed Server)

**You are part of an Organization that has a Licensed Server**

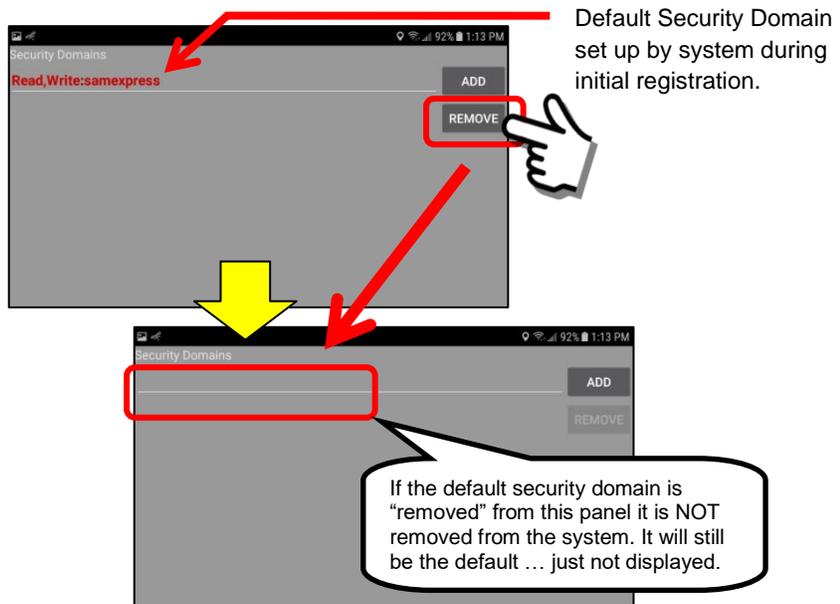
As part of an Organization that has a Licensed Data Server, you will have one (or more) security domain entries made by your IT Department. In addition, you will have the system “default” personal security domain.



**You have a Subscription Account (not on a Licensed Server)**

A Subscription Account user will have the system “default” personal security domain (and a sub-domain). This is set up during registration. There will be NO custom security domains since a Subscription User does not have administrative access to the SentryMDU Data Server.

This user WILL be able to create additional security domains that reflect the parent-child relationship to their default domain.

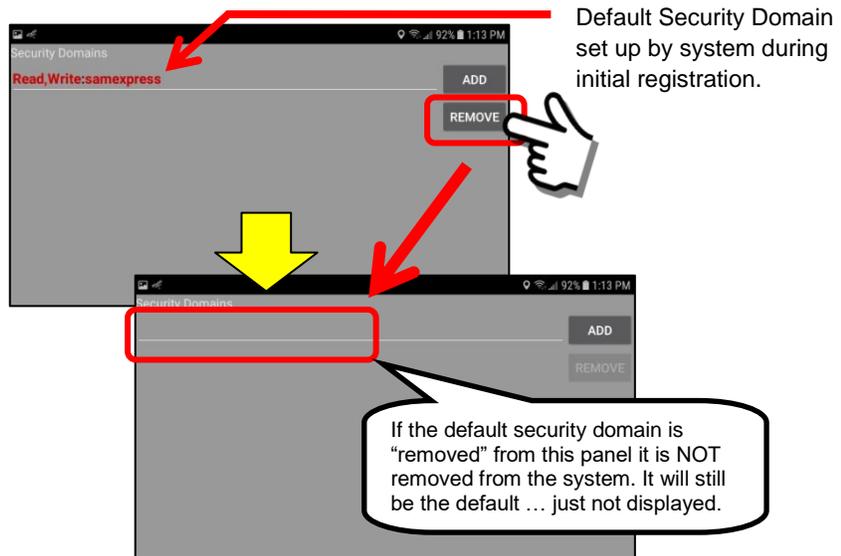


The default security domain that is set up during registration may be removed from the Security Domains Panel if desired. However, it is still the default, it is simply removed from the panel.

Registered Account only (no Subscription, not on a Licensed Server)

All registered accounts will have a system generated “default” personal security domain. This is set up during registration. There will be NO custom security domains since a General User does not have access to the SentryMDU Data Server.

This user WILL be able to create additional security domains that reflect the parent-child relationship to their default domain.

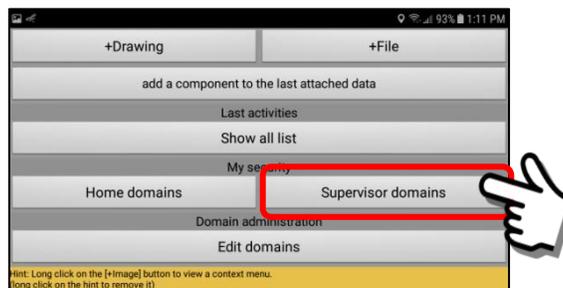


The default security domain that is set up during registration may be removed from the Security Domains Panel if desired. However, it is still the default, it is simply removed from the panel.

**3. The “Supervisor Domains” Button**

The “Supervisor Domains” Button will open a panel that will display the Supervisor Domains that this mobile device has access to. This can be a combination of security domains. If you are on a Licensed Data Server, it can be security domains installed by your IT Department and it can also be personal security domains you have installed yourself.

To access, click on the Supervisor Domains Button.



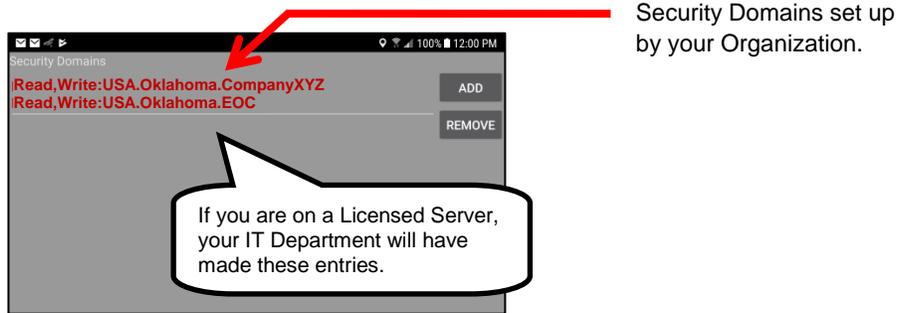
After a “new” install of the SentryMDU App, you may see screens similar to the following.

**We will look at several Supervisor Security Domain scenarios**

- a. You are part of an Organization that has a Licensed Server
- b. You have a Subscription Account (not on a Licensed Server)
- c. Registered Account only (no Subscription, not on a Licensed Server)

You are part of an Organization that has a Licensed Server

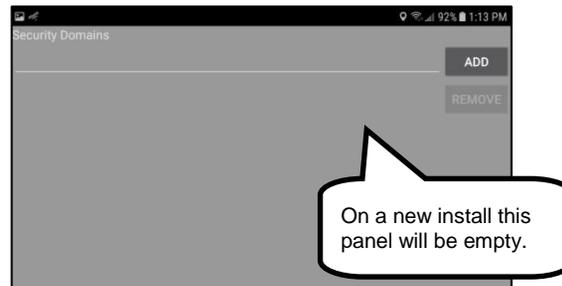
As part of an Organization that has a Licensed Data Server, you will have one (or more) Supervisor security domain entries made by your IT Department.



You have a Subscription Account (not on a Licensed Server)

A Subscription Account user will have NO custom security domains since a Subscription User does not have administrative access to the SentryMDU Data Server. This field will be empty.

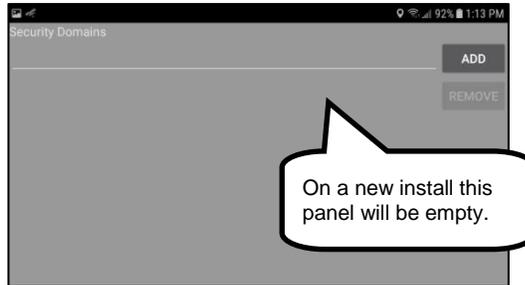
This user WILL be able to install Supervisor security domains provided by OTHER users using the DOMAIN\_NAME / PASSWORD pair. This will be described later in this section.



Registered Account only (no Subscription, not on a Licensed Server)

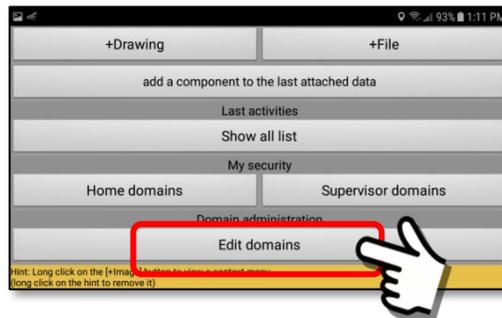
General registered accounts will have NO custom security domains since a User does not have administrative access to the SentryMDU Data Server. This field will be empty.

This user WILL be able to install Supervisor security domains provided by OTHER users using a DOMAIN\_NAME / PASSWORD pair. This will be described later in this section.

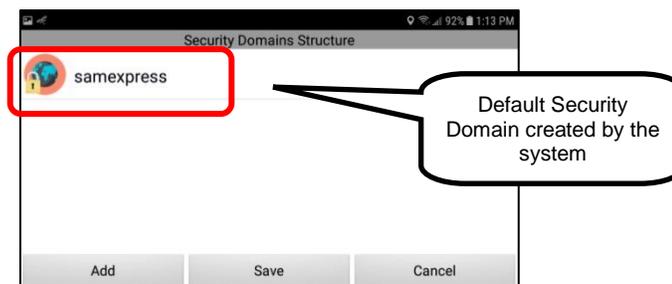


**4. The “Edit Domains” Button**

This feature allows ALL USERS to create additional “personal” sub-domains that can be used to organize a parent-child domain hierarchy on their device. As part of the process, a User will create a DOMAIN\_NAME / PASSWORD pair that can be provided to OTHER users to create “private” groups. This will allow private groups of 2 – 100’s of people.



To access, click on the “Edit Domains” Button. The **Security Domains Structure** Panel will open. It will display the default “personal” security domain that has been set up for this User.



The **Security Domain Structures** Panel has 3 buttons. These will be described in detail in later sections. They are as follows:



#### Add Button

Opens a series of screens that will enable you to create additional sub-domains that are password protected. These sub-domains can then be provided to OTHER users to create private groups.

#### Save Button

This button will "Save" any changes that have been made to this panel.

#### Cancel Button

This button will "cancel" this panel and return to the previous screen.

## 6.4. Creating a personal Security Domain

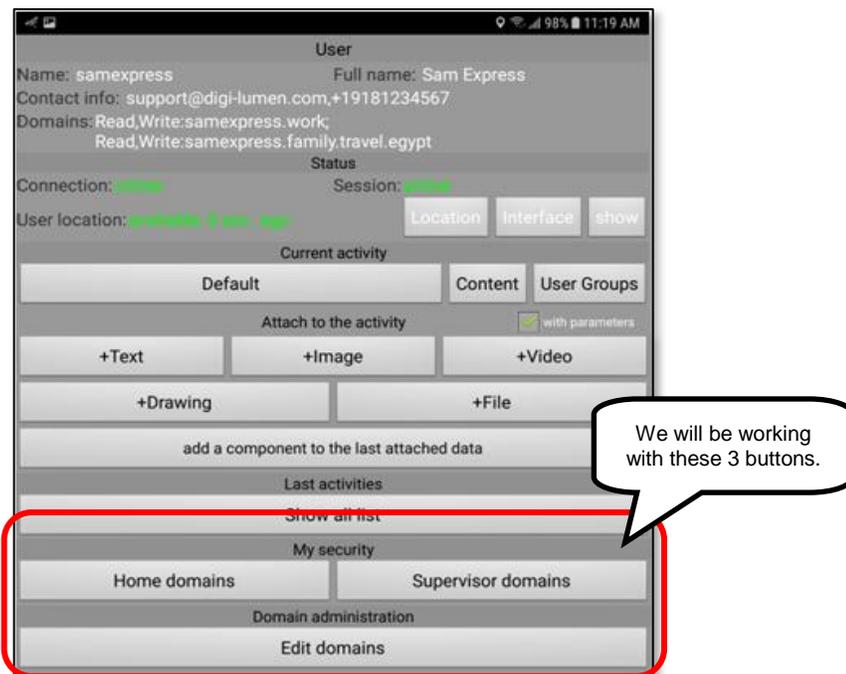
### Overview:

All Users may create “personal” security domains and assign personal security domains of other users to themselves (assuming they have permission). However, a User can only assign a “personal” Security Domain by using a DOMAIN\_NAME / PASSWORD pair. To assign a personal Security Domain to yourself that was created by another User, you must be given the Domain Name and Password by the other User.

### Steps to create a new “personal” Security Domain:

1. The “private access” checkbox must be checked during registration.
2. During registration, a default “personal” security domain is created by the SentryMDU System. This domain will use the “username” of the registered user.
3. Verify that the default “personal” security domain was created.
4. Decide on a naming scheme for sub-domains of your personal security domain. These should reflect a parent-child relationship.
5. Review the current Security Domains that are available to your user account.
6. Create a new “child” security sub-domain for your “parent” domain.
7. Create a password for this new security sub-domain.
8. Provide the DOMAIN\_NAME / PASSWORD pair to other Users so they may become part of your personal security domain.

Users may create multiple Security Domains to cover work, play, family, specific activities and so on. Users may have up to 100 security domains.



## How to create personal Security Domains:

### 1. Personal security domain created during registration.

On completion of the User Registration Process, by default, a Security Domain is created with the same name as the “Username” that was selected by the User (and a .Friends sub-domain).

In the example shown below, if during registration, a user by the name of **Sam Express** created a Username = “samexpress”, a security domain of the same name is created.



## 2. Decide on a naming “format” for your Security Domain.

As outlined in **Section 6.2** “The Security Domain Format” it will be necessary for you to select a naming format for your personal security domains. A little thought now will make it easier on you later in the event you expand your number of private groups.

**You may have up to 100 security domains.** This can cover family, work, play, civic clubs, neighborhood watch groups and more. In addition, you may create a personal security domain for a short period of time and then remove it. For example, assume your town has a 3-day Festival and you will be taking a group of children (they all have phones now). So they don’t get lost, you could create a security domain for this group, just for the Festival, and then remove it once the Festival is over. This way, you could know where everyone is located during the time of the Festival.

The “default” ROOT personal domain for this User is “samexpress” as shown below. All new security domains will start with this “samexpress” name.



Examples of “new” potential security domain names:

Read,Write:samexpress.family

**Read,Write:samexpress.family.travel.egypt**

Read,Write:samexpress.family.children.school.fieldtrip

Read,Write:samexpress.family.children.alex.sports.soccerteam

Read,Write:samexpress.family.children.maria.sports.gymnastics

Read,Write:samexpress.work

Read,Write:samexpress.work.companyxyz.shift.paintcrew

Read,Write:samexpress.play

Read,Write:samexpress.play.hiking.trip.yellowstone

Read,Write:samexpress.play.bicycle.trip.natcheztrace

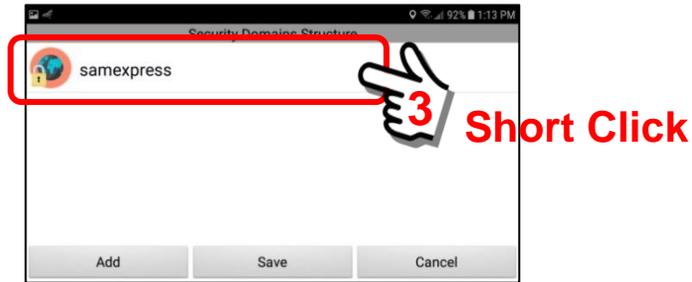
The following sections will show how to create a security domain for a family vacation trip to Egypt. This will be installed on family members mobile devices.

**Read,Write:samexpress.family.travel.egypt**

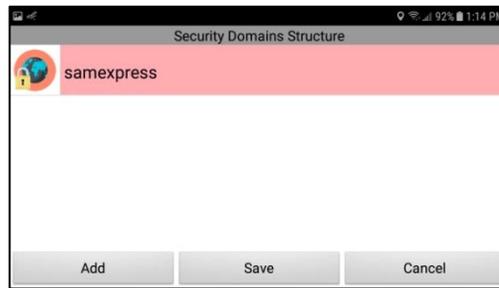
**3. Select the “parent” security domain.**

Security domains are arranged in a linear parent-child relationship format. In this example, since we have not created any other security domains, we only have the system default of “samexpress”.

Perform a “short click” on the **samexpress** domain name.

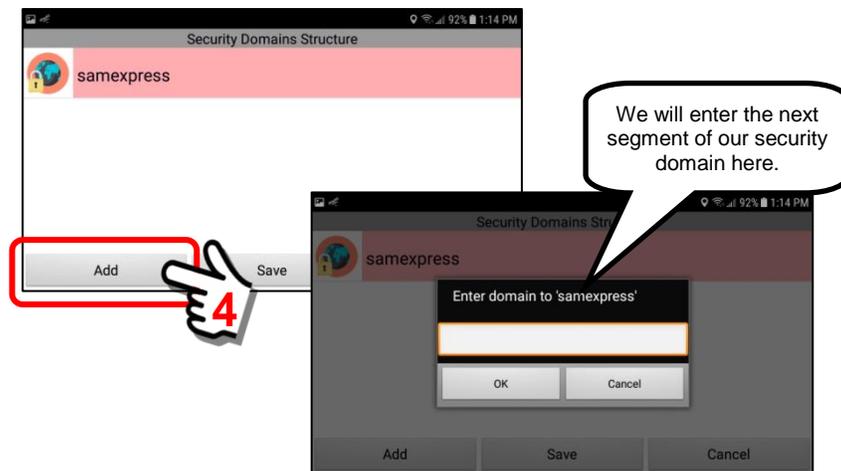


Highlight the “samexpress” domain name. This will make it ACTIVE for the next step.



**4. Construct a “new” personal security domain.**

With the “samexpress” name highlighted, click on the **Add Button**. This will open a series of screens to create a new personal security domain.



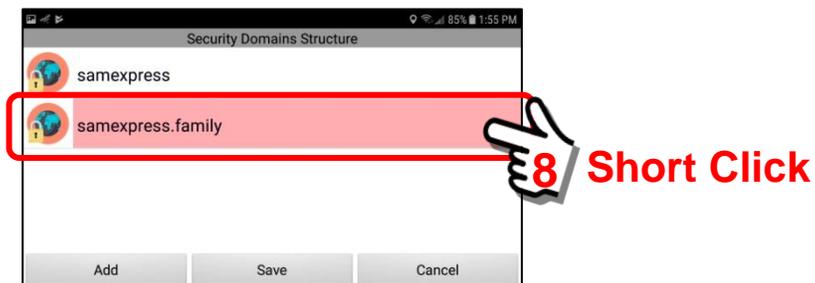
We are wanting to construct a new personal security domain as:

**Read,Write:samexpress.family.travel.egypt**

Our next step is to add the “family” segment to the domain text. Click inside of the text box to open the “on-screen” keyboard.



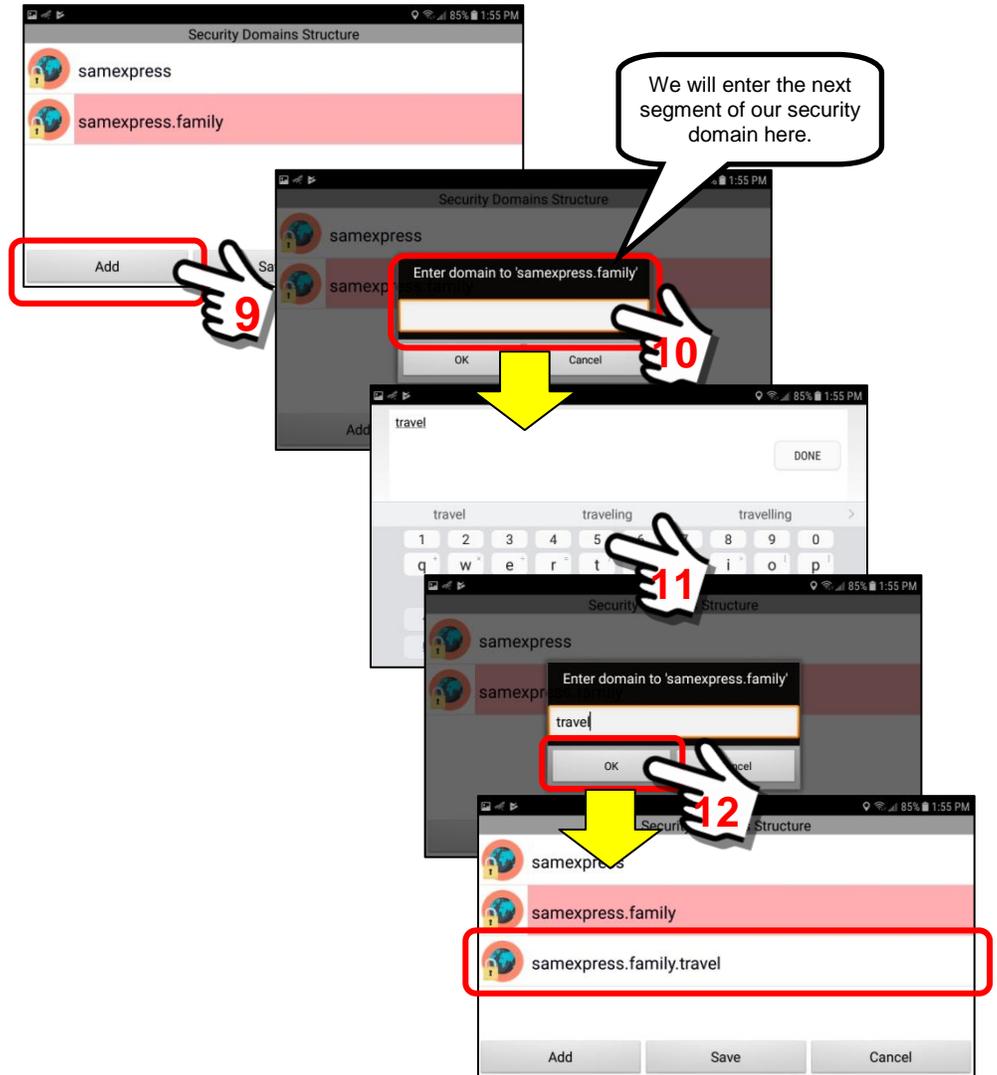
We have now created the “family” portion of the new personal security domain. Perform a “short click” on the **samexpress.family** name to make it the ACTIVE one to work on.



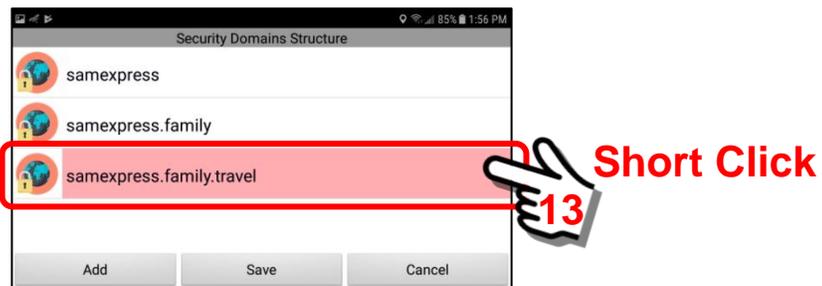
We have added the “family” segment, now to add the “travel” segment of the security domain.

**Read,Write:samexpress.family.travel.egypt**

Click the Add Button again and then click inside of the text box to open the “on-screen” keyboard. Enter the “travel” segment for the domain.



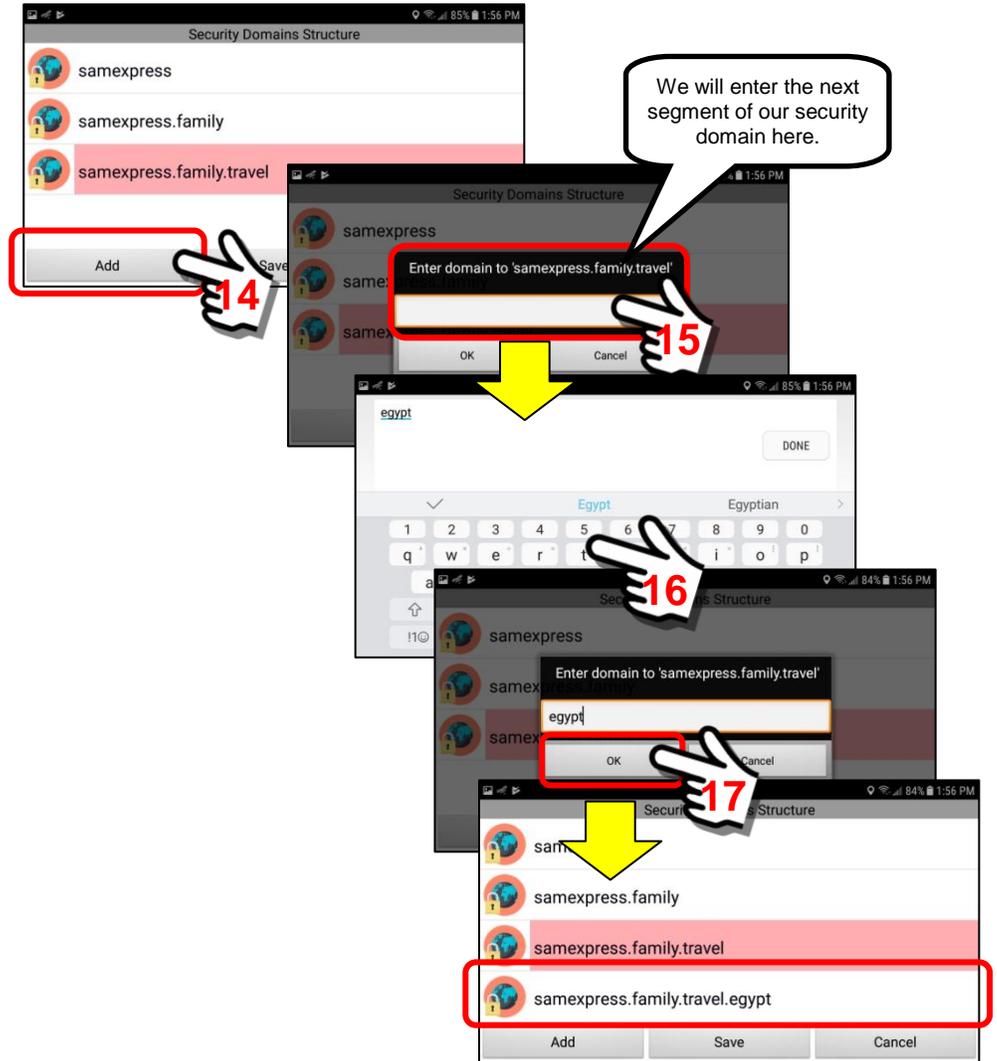
We have now created the “travel” portion of the new personal security domain. Perform a “short click” on the **samexpress.family.travel** name to make it the ACTIVE one to work on.



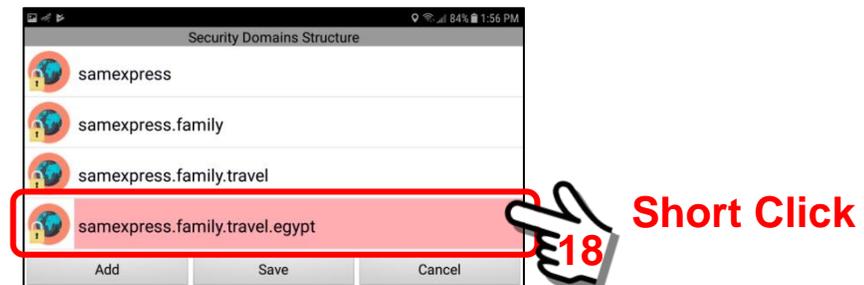
We have added the “travel” segment, now to add the “egypt” segment of the security domain.

**Read,Write:samexpress.family.travel.egypt**

Click the Add Button again and then click inside of the text box to open the “on-screen” keyboard. Enter the “egypt” segment for the domain.



We have now created the “egypt” portion of the new personal security domain. Perform a “short click” on the **samexpress.family.travel.egypt** name to make it the ACTIVE one to work on.



After completion of the “egypt” segment, the domain text string is now ready to be **SAVED**. Click on the **Save Button** to save this work. This save action will save all changes to the screen. It will save the following:

- samexpress.family
- samexpress.family.travel
- samexpress.family.travel.egypt



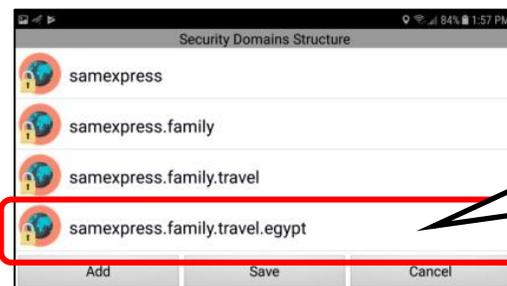
When the **SAVE** action is completed, the screen will return to the User Panel. A “Done” pop-up message will display for a few seconds.



Will display for 3 seconds

The new personal security domain has now been completed. The next section will describe how to assign a password to this new security domain and make it available to other users (to form private groups).

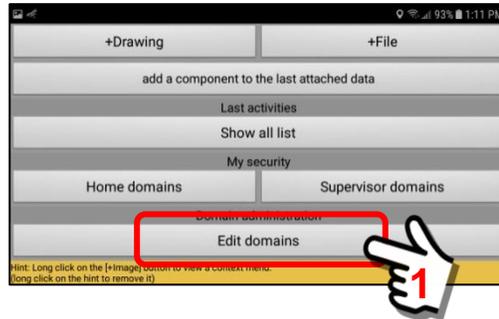
**Read,Write:samexpress.family.travel.egypt**



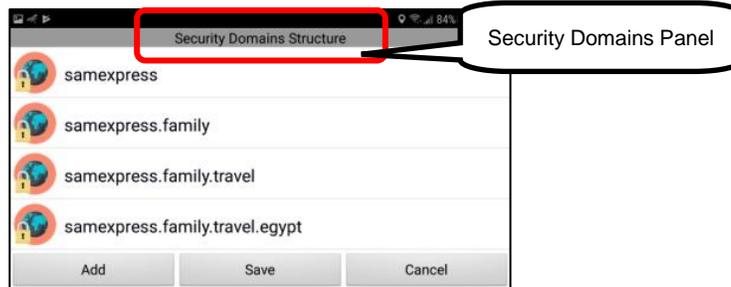
Has now been saved and is ready to use.

**5. Assign a PASSWORD to the personal security domain.**

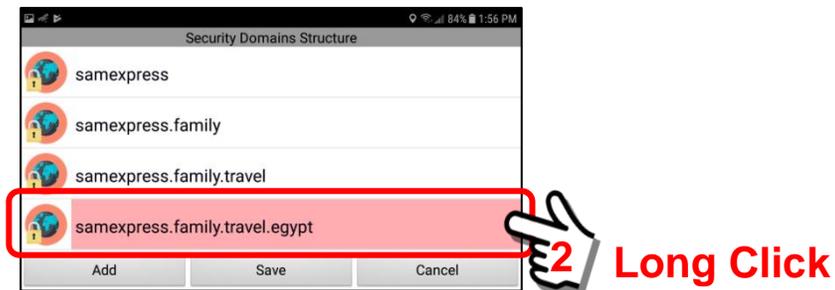
In order to share a “personal” security domain with another user (so they can become part of your private group) you must create a password that will authorize their access. This section will describe the process.



Open the User Panel, navigate to the bottom of the screen and click on the “**Edit Domains**” Button. The Security Domains Structures Panel will be displayed.



Select the Security Domain that you want to create a password for. In our example, we will select .... **samexpress.family.travel.egypt**.

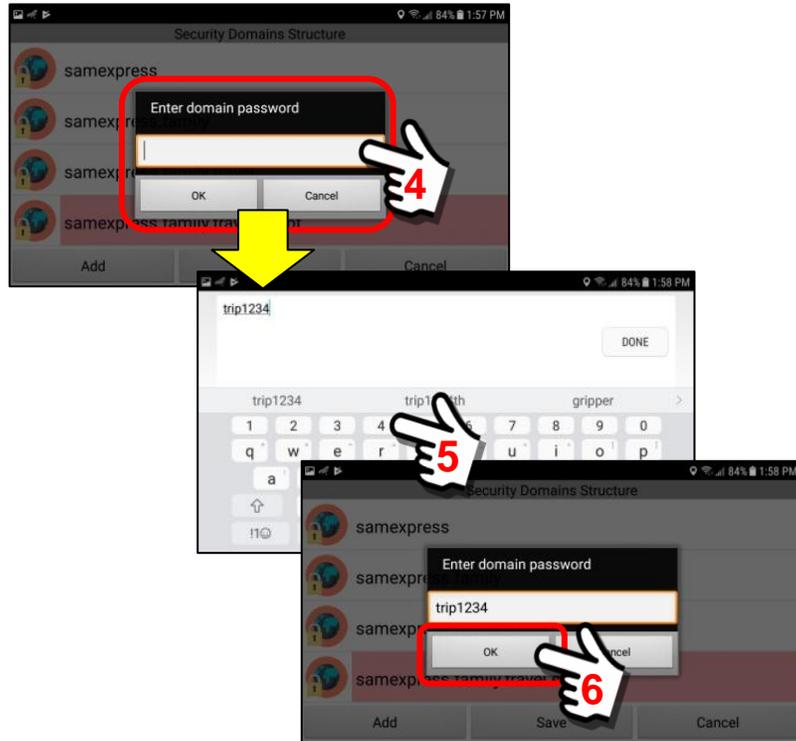


Perform a “Long click”. This opens a Select Menu Box with options to set a password. Click on the “Set Password” option.

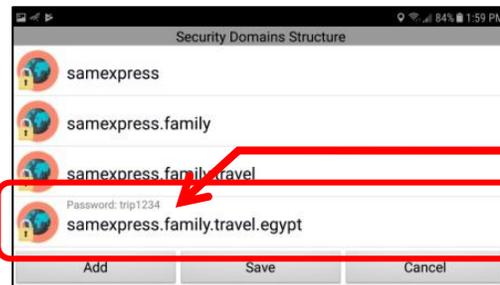


A pop-up box will appear where you will enter a domain password. This will be the password that will protect this particular personal security domain.

Click inside the text box. An on-screen keyboard will appear.



In this example, we have entered .... **trip1234** as our password for this security domain.



Notice that the PASSWORD is displayed above domain name

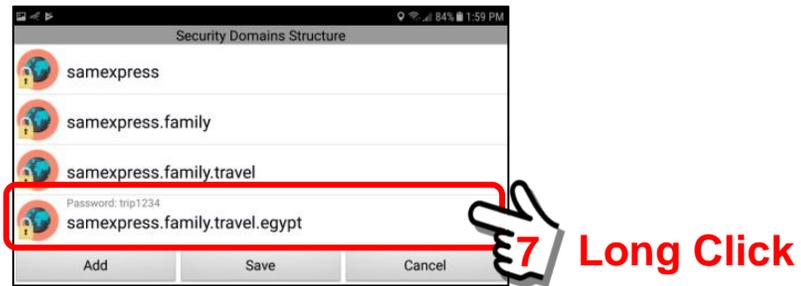
Notice that we have NOT created passwords for the other security domains. We could do that if we wanted. Those passwords would/should be different.



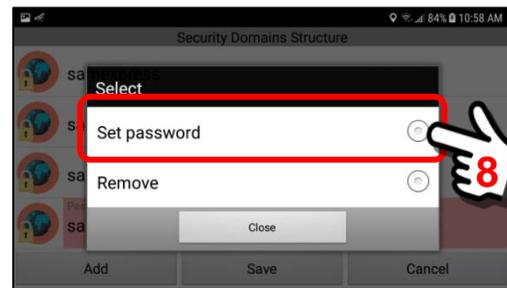
No passwords are created for these.

**Important Note:** Passwords may be CHANGED at any time. You may create a password ... allow new Users to use this password for a few days ... then change the password. The original password will no longer work and future new Users will now need the NEW PASSWORD in order to install the selected private security domain. Existing users that have already installed the private security domain are NOT affected, they continue to have access.

In this example, we will change the password from “trip1234” to “trip2345”.



A pop-up select box will appear. Select the **Set Password** option.



The **Enter domain password** text entry panel will appear. Enter a “new” domain password. Click “OK” when finished.



Click the “Save Button” to save the changes.

## 6.5. Sharing a personal Security Domain with other Users

### Overview:

This section will describe the steps necessary to share one of YOUR personal security domains with other Users. This will create a private Group. A group may have 2 – 100's of members. A group member can only assign a "personal" Security Domain by using a DOMAIN\_NAME / PASSWORD pair. You must provide the Domain Name and Password to the other User.

This example will use two (2) mobile devices:

### Device #1 (your device) and Device #2 (another user's device)

#### Steps to share a "personal" Security Domain:

1. Create a personal security domain on Device #1.
2. Create a password for this new security sub-domain.
3. Install this personal security domain into the Supervisor Domain Panel on Device #1.
4. Provide the DOMAIN\_NAME / PASSWORD pair to other Users (ie Device #2) so they may become part of your personal security domain.
5. Install the personal security domain into the "Home Domain" panel on Device #2.
6. Review "one way" access ... Device #1 can access Device #2.
7. Create "two-way" access ... BOTH devices can access each other.

Users may create multiple Security Domains to cover work, play, family, specific activities and so on. Users may have up to 100 security domains.

#### Steps to share a personal Security Domain:

1. **Create a personal security domain on Device #1.**

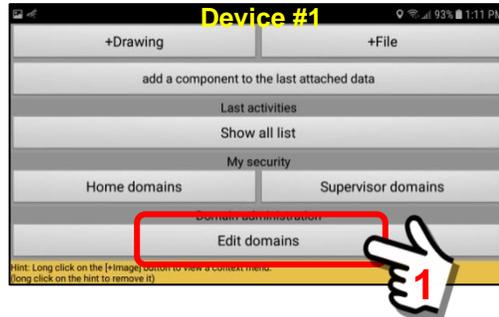
Follow the steps in **Section 6.4** to create a personal security domain. In this example, we will be using:

Read,Write:**samexpress.family.travel.egypt**



**2. Assign a PASSWORD to the personal security domain.**

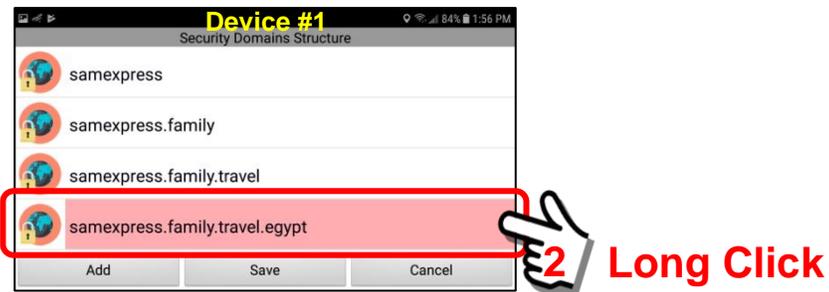
In order to share a “personal” security domain with another user (so they can become part of your private group) you must create a password that will authorize their access. This section will describe the process.



Open the User Panel, navigate to the bottom of the screen and click on the “**Edit Domains**” Button. The Security Domains Structures Panel will be displayed.



Select the Security Domain that you want to create a password for. In our example, we will select .... **samexpress.family.travel.egypt**.

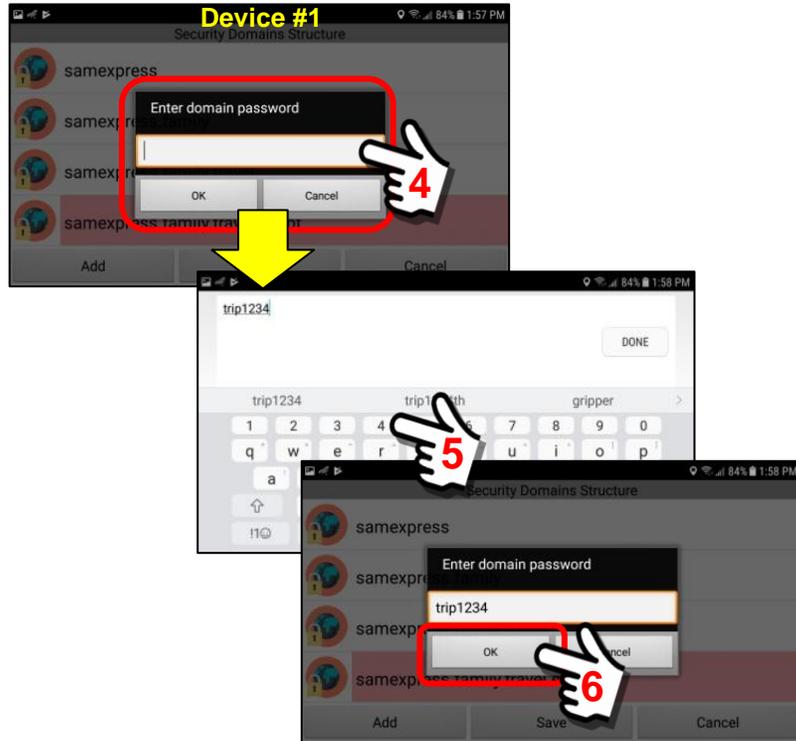


Perform a “Long click”. This opens a Select Menu Box with options to set a password. Click on the “Set Password” option.



A pop-up box will appear where you will enter a domain password. This will be the password that will protect this particular personal security domain.

Click inside the text box. An on-screen keyboard will appear.



In this example, we have entered .... **trip1234** as our password for this security domain.



Notice that the PASSWORD is displayed above domain name

Notice that we have NOT created passwords for the other security domains. We could do that if we wanted. Those passwords would/should be different.



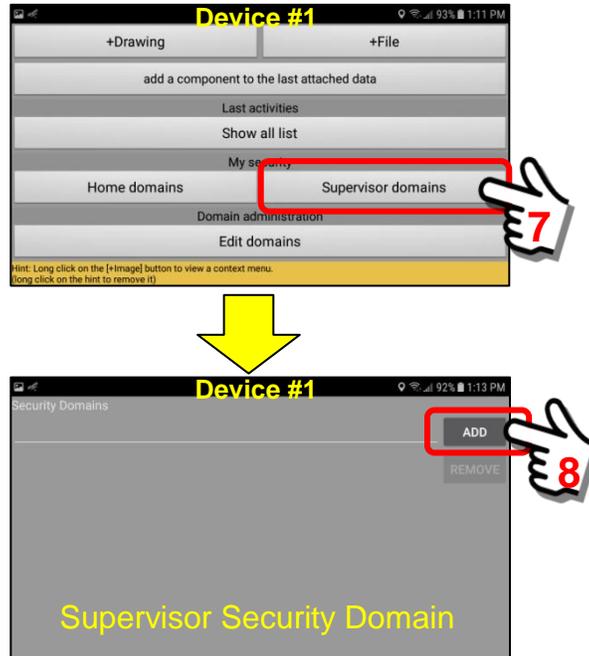
No passwords are created for these.

### 3. Install personal security domain into Device #1.

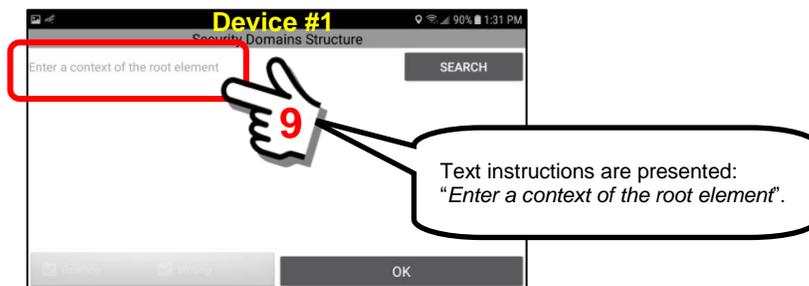
For the first part of this example, we will install the personal security domain into the Supervisor Domain Panel. This will allow Device #1 (the originating device) to access any/all members of the private group.

We will add the following:

Read,Write:**samexpress.family.travel.egypt**



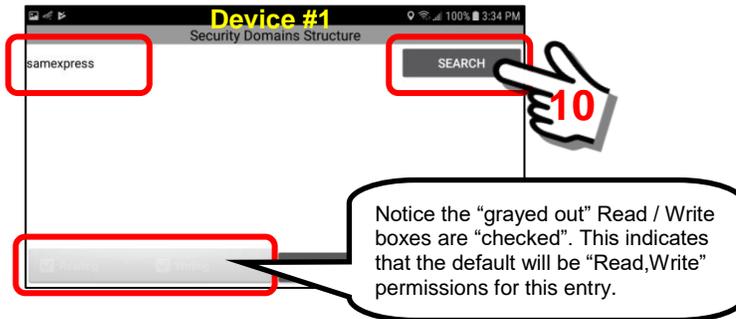
Click on the “ADD” Button. This will open a **Security Domain Structure** panel to search for available security domains.



To search for available security domains, click on the “gray” text. This will open an on-screen keyboard to enter the ROOT element of the personal security domain.

The root element of “Read,Write:**samexpress.family.travel.egypt**” is “**samexpress**”.

Enter “samexpress” into the data entry field and click the **Search Button**.

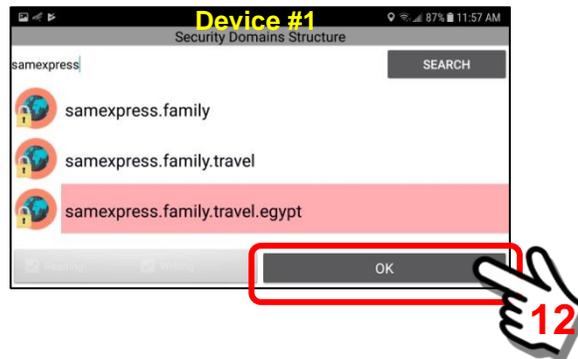


The system will search for ALL security domains with a root context of “samexpress”. In this example, we notice that 3 items were retrieved. These were the 3 additional security domains we created in **Section 6.4**.

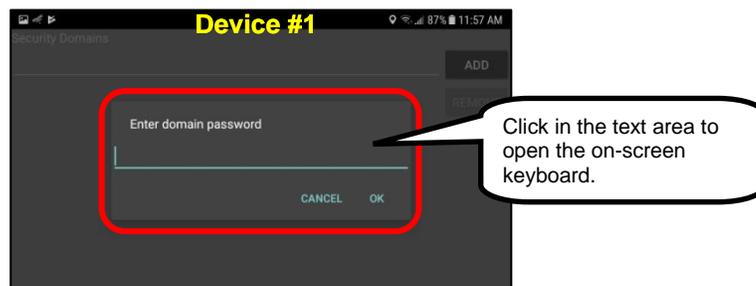
We are looking for ... **samexpress.family.travel.egypt**



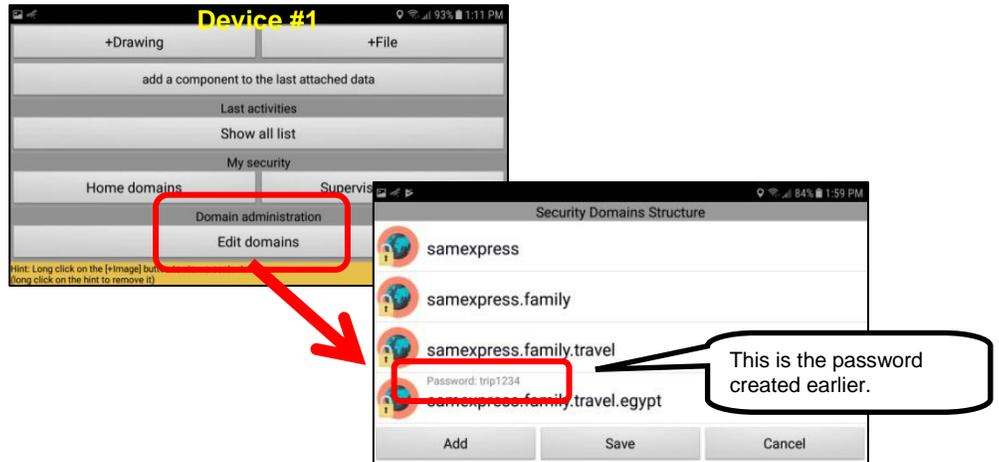
Select (click) on this item to activate the choice. Then click on the “OK” Button.



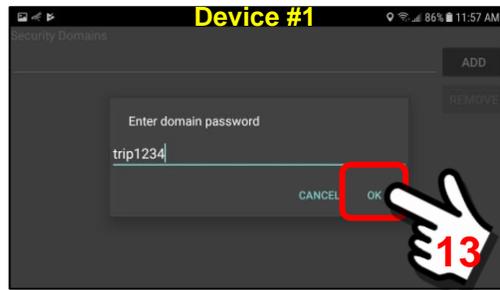
Now that you have selected the security domain that you want to add to your Supervisor Domain, the system will prompt for the password.



Enter the password for this security domain. This is the password that was created in Section 6.4 when we created the entry.



Enter the password, then click “OK” to accept.



Once the password is verified and authenticated by the system, the Supervisor Domain screen will refresh and now display the new personal security domain.



You have now successfully installed a new personal Security Domain in the Supervisor Domain panel of Device #1. The next sections will show how to install this same security domain on Device #2.

**4. Provide DOMAIN\_NAME / PASSWORD pair to Device #2.**

In order to create private “groups” (when NOT part of a licensed Server instance), it is necessary to create a DOMAIN\_NAME / PASSWORD pair and provide this information to all users that would be part of this group.

In this example, you will need to provide the following information to everyone that you would like to have access to this private group. For this instruction, we assume you have provided it to the User of Device #2.



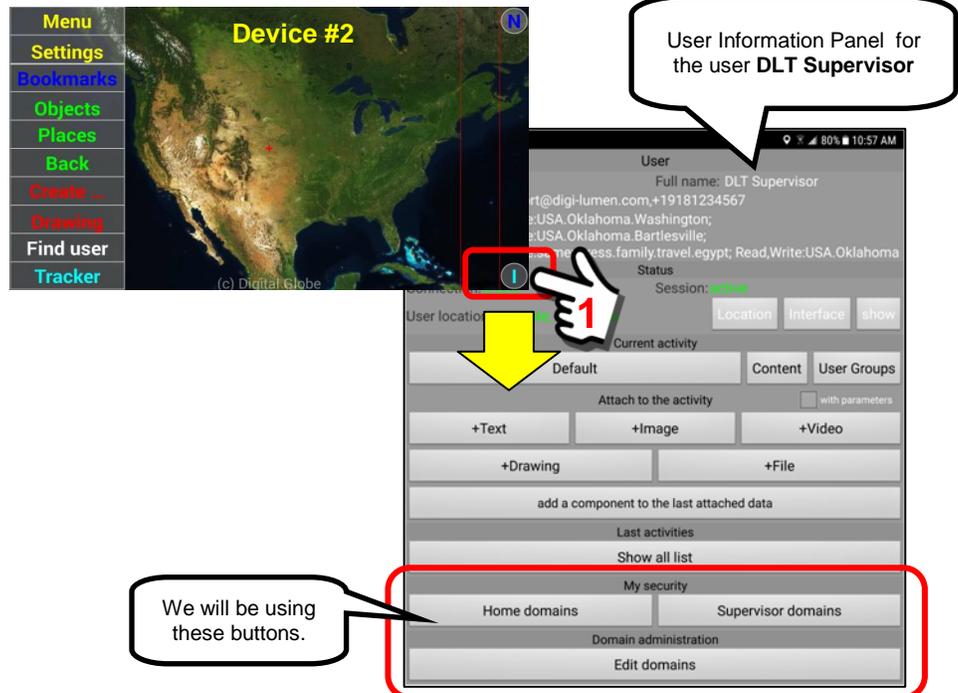
Domain Name: **samexpress.family.travel.egypt**

Password: **trip1234**

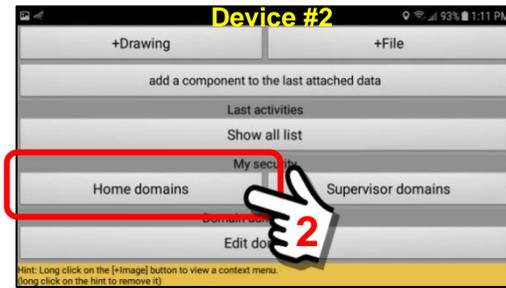
**5. Install personal security domain into “Home Domain” on Device #2.**

We now assume we are the User of Device #2 and we have the DOMAIN\_NAME / PASSWORD pair for the private group.

Starting at the Main Menu screen of Device #2, click on the “I” Button to access the User Information Panel.



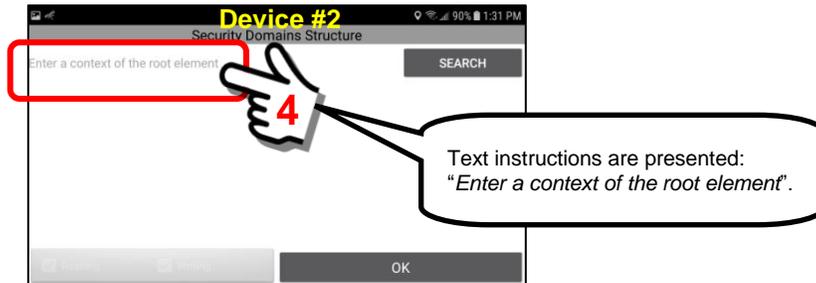
At the User Panel of Device #2, click on the “Home Domains” Button.



This will open the “Home Domains” Panel of Device #2. Notice that this mobile device currently HAS two other security domains listed.



Click on the “ADD” Button. This will open a **Security Domain Structure** panel to search for available security domains.



To search for available security domains, click on the “gray” text. This will open an on-screen keyboard to enter the ROOT element of the personal security domain.

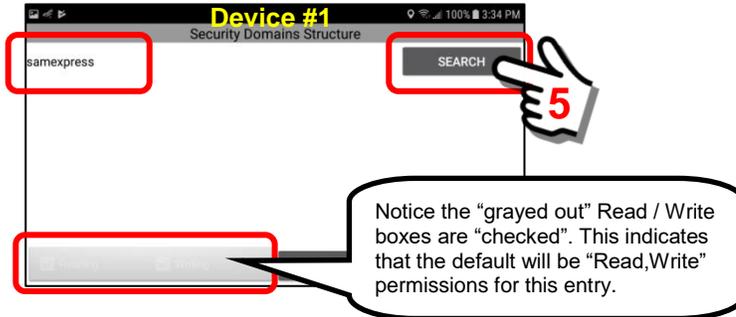
To create the security domain you will now need the DOMAIN\_NAME / PASSWORD pair for the private group you want to create.

**Domain Name:** samexpress.family.travel.egypt

**Password:** trip1234

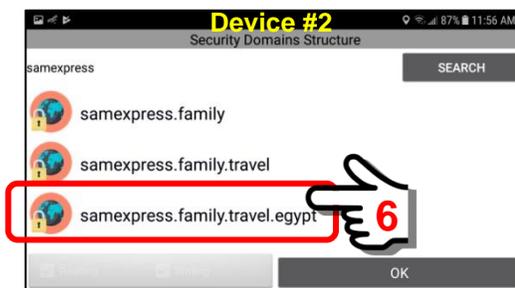
The root element of “Read,Write:samexpress.family.travel.egypt” is “samexpress”.

Enter “samexpress” into the data entry field and click the **Search Button**.

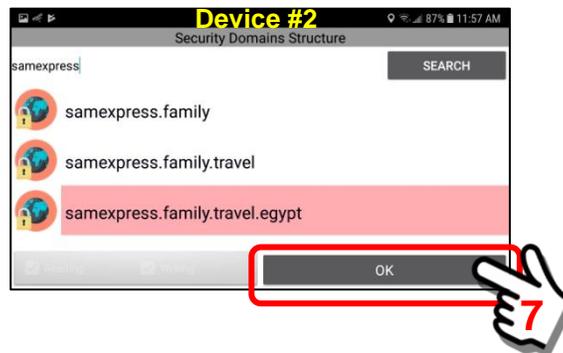


The system will search for ALL security domains with a root context of “samexpress”. In this example, we notice that 3 items were retrieved. These were the 3 additional security domains we created in Section 6.4.

We are looking for ... samexpress.family.travel.egypt



Select (click) on this item to activate the choice. Then click on the “OK” Button.



Now that you have selected the security domain that you want to add to your Home Domain, the system will prompt for the password.

Perform a “click” on the text entry area and the on-screen keyboard will appear. Enter the PASSWORD that was provided by the originator of the private group.

**Password:** **trip1234**

Click “OK” when finished.



Once the password is verified and authenticated by the system, the Home Domain screen will refresh and now display the new private security domain.

**Read,Write:** **samexpress.family.travel.egypt**



You have now successfully installed a new personal Security Domain in the Home Domain panel of Device #2.

**6. Review the installed access (Device #1 can access Device #2).**

At this stage of our security domain configuration, we shall review what we have done and the results.

**To create a one-way mode of access:**

- a. Installed a security domain in the Supervisor Domain of Device #1.
- b. Installed a security domain in the Home Domain of Device #2.
- c. **Result:** Device #1 can access Device #2, but Device #2 CANNOT access Device #1.

Devices	Home	Supervisor	Available Access
Device #1		X	Device #1 can see Device #2
Device #2	X		Device #2 cannot see Device #1

In this example, Device #1 can access Device #2 and turn on the camera of Device #2 and monitor real-time audio/video. However, if Device #2 tries to access Device #1, they will receive an “Access Denied” error message. It is only a one-way transfer of data.

**To create a two-way mode of access (all members can access each other):**

- a. Installed a security domain in the Home Domain of Device #1.
- b. Installed a security domain in the Home Domain of Device #2.
- c. **Result:** All devices can access each other.

Devices	Home	Supervisor	Available Access
Device #1	X		Device #1 can see Device #2
Device #2	X		Device #2 can see Device #1

In this example, Device #1 can access Device #2 and turn on the camera of Device #2 and monitor real-time audio/video. Likewise, Device #2 can access Device #1 and turn on the camera of Device #1 and monitor real-time audio/video. It is a two-way transfer of data.

**To create a two-way mode of access (with supervisory):**

- a. Installed a security domain in the Home Domain of Device #1.
- b. Installed a security domain in the Supervisor Domain of Device #1.
- c. Installed a security domain in the Home Domain of Device #2
- d. Installed a security domain in the Supervisor Domain of Device #2.
- e. **Result:** All devices can access each other.

Devices	Home	Supervisor	Available Access
Device #1	X	X	Device #1 can see Device #2 + Suprv
Device #2	X	X	Device #2 can see Device #1 + Suprv

In this example, the Home Domains are the same as before, however we have also “checked” the Supervisor Domains. **In the case of personal security domains (not set up via a licensed Data Server) the installation of a supervisory security domain setting will NOT provide additional access or control.** It is redundant to the Home Domain since it will have the same levels.

An originator of the security domain CAN create additional security domains at a higher level (ie samexpress.family.travel) if there are additional “travel” locations other than Egypt.

**Important Note:** Typically, we would leave the Supervisor Security Domain “blank” as shown below.

<b>Devices</b>	<b>Home</b>	<b>Supervisor</b>	<b>Available Access</b>
Device #1	X		Device #1 can see Device #2
Device #2	X		Device #2 can see Device #1

## 6.6. Adding another user's Mobile Object to our list.

### Overview:

This section will describe the steps necessary to “add” another user's Mobile Object to your list once you have successfully created AND shared a personal security domain with that user (**Sections 6.4 and 6.5**). You will need to have completed the previous steps in order to add another user. See **Section 10.5** for additional details on adding users to the “My Objects” Panel.

In this example, we are going to add user **DLTsuprv** to the My Objects Panel on the device of user **samexpress**. We can do this because user **samexpress** has created a personal security domain and provided the credentials to user **DLTsuprv** who has installed them on HIS device.

### Before adding the new User Object



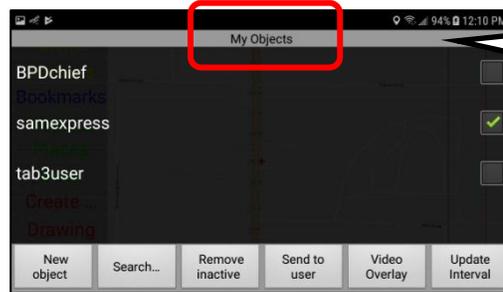
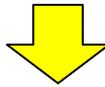
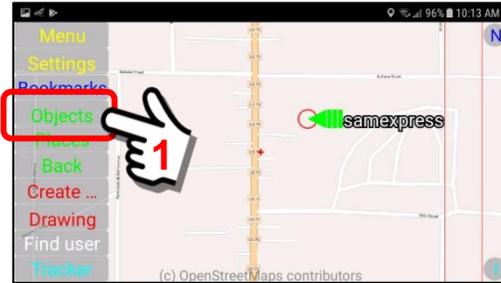
### After adding the new User Object



## Steps to add a new User Object to the “My Objects” Panel:

### 1. *Navigate to the My Objects Panel.*

Starting at the Main Map Screen, click on the “Objects” Menu item button located on the left side of the panel. This will open the “My Objects” Panel.



My Objects Panel for the user **Sam Express**

### 2. *Search for the desired Security Domain of the user you want.*

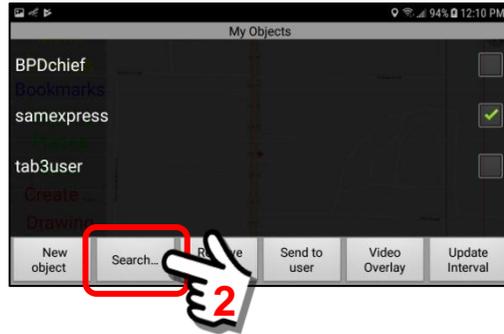
We need to locate the security domain of the user we want to add. From previous steps, we know that we created a security domain and shared it with user DLTsuprv.

**Read,Write:samexpress.family.travel.egypt**

As a reminder ... this was the Security Domain we created



To continue, click on the **Search Button**.



The Object Search Panel will appear showing a text entry box. This is where you will enter the personal security domain that you created earlier.

In this example, we want to enter the following security domain.

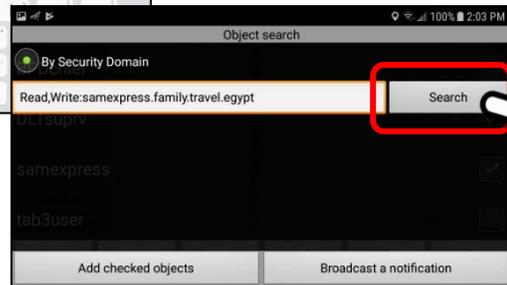
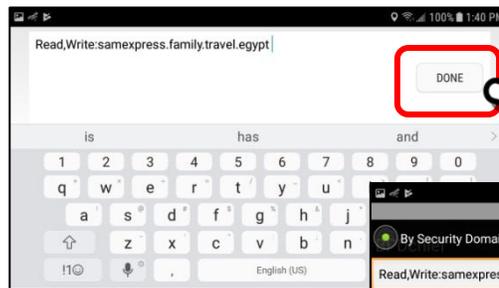
**Read,Write:samexpress.family.travel.egypt**



The security domain entry uses a specific format. See the section on Security Domains for instructions.

Click in the "text entry" box. An on-screen keyboard will open allowing the entry of text.

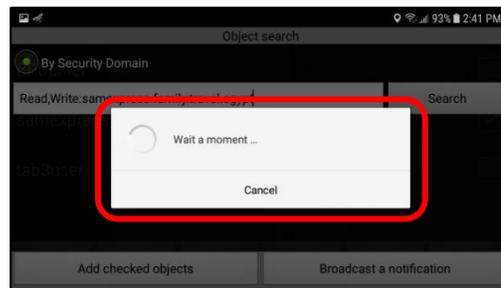
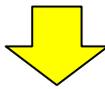
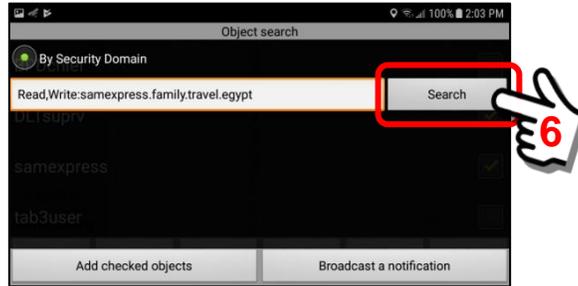
Enter the security domain that you want to search. Make sure the words "Read" and "Write" are capitalized and that there are no spaces (whitespace) in the text entry.



Click "Done" when finished or click the "Search" Button on the panel.

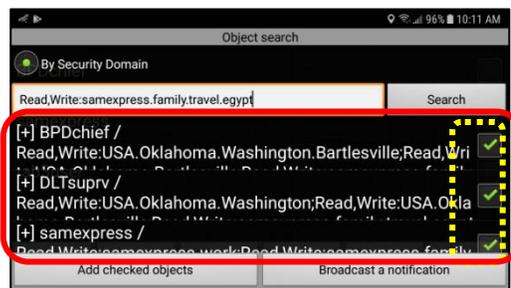
**3. Select the desired User from the list of users within the Security Domain.**

The system will contact the SentryMDU Data Server and retrieve all users that have access in the specified security domain. Depending on the speed of your internet connection, this may take a few moments.



The screen will now display a list of users that have been given access to this security domain.

**Read,Write:samexpress.family.travel.egypt**

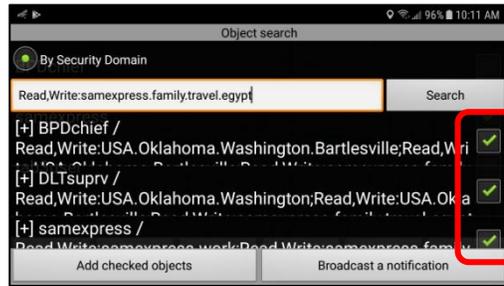


In this example, notice that we have 3 Usernames displayed. If you have many entries, simply scroll the list to see them all.

- [+] BPDchief**
- [+] DLTsuprv**
- [+] samexpress**

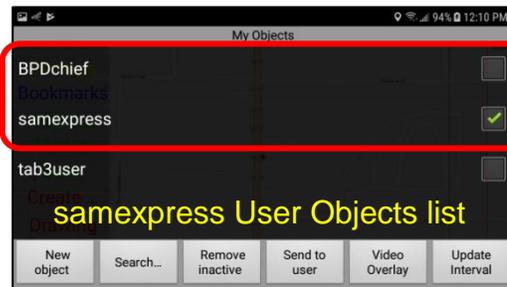
The [+] indicates that the mobile device is CURRENTLY active (online).

When the system retrieves other users in the security domain, by default, it “selects” (puts a checkmark in the box) of all users in the security domain.



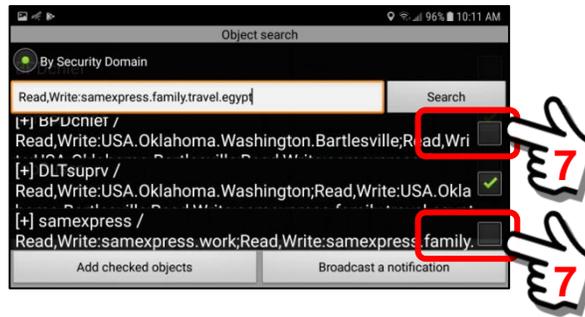
By DEFAULT, all users are selected to be added ... **even our own device**. You will want to de-select those mobile objects you do NOT want to install on your device.

In this example, since we are currently on the **samexpress** device, and we already have **samexpress** and **BPDchief** mobile objects installed, we do NOT want/need them installed again.

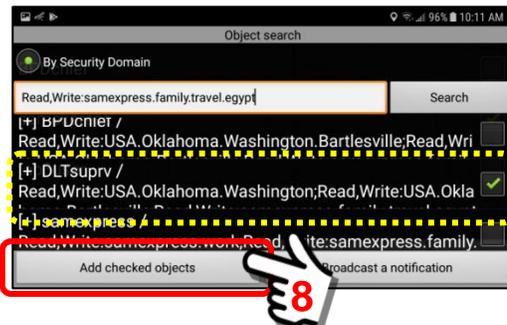


Since we already have these two mobile objects on our list we will de-select them from our list of mobile objects to copy..

De-select (uncheck) both **samexpress** and **BPDchief** mobile objects in the list. This will leave the **DLTsuprv** object as the one we want to install.

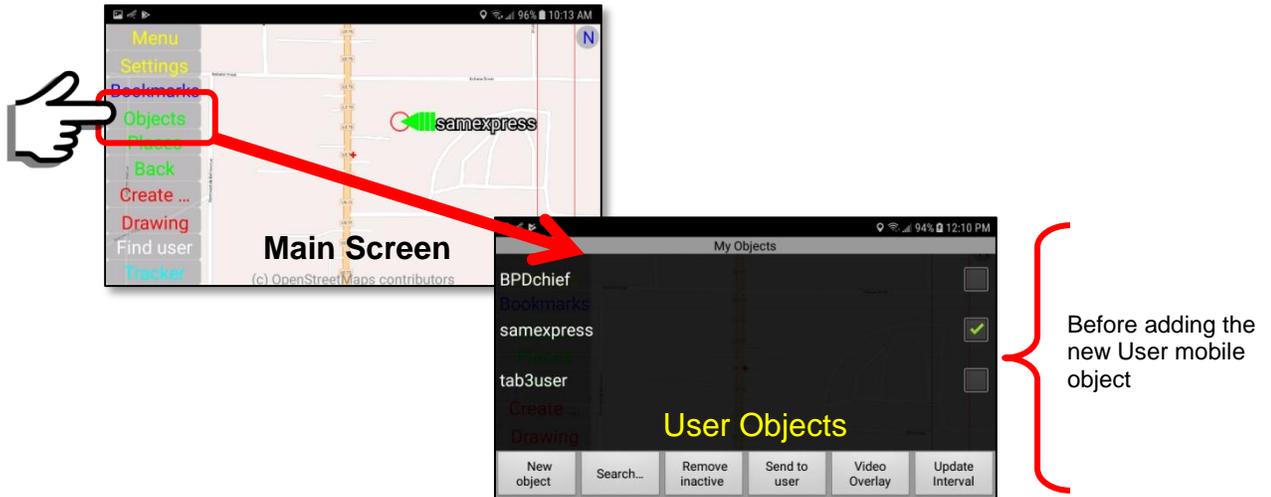


To install the **DLTsuprv** Object into our list of available Users, click on the “Add checked objects” Button.



**Review the User Objects installed on SAMEXPRESS mobile device.**  
We will now review what we have done. In this example, we have now installed the **DLTsuprv** mobile object on the **samexpress** mobile device.

**Before adding the new User Object**



**After adding the new User Object**



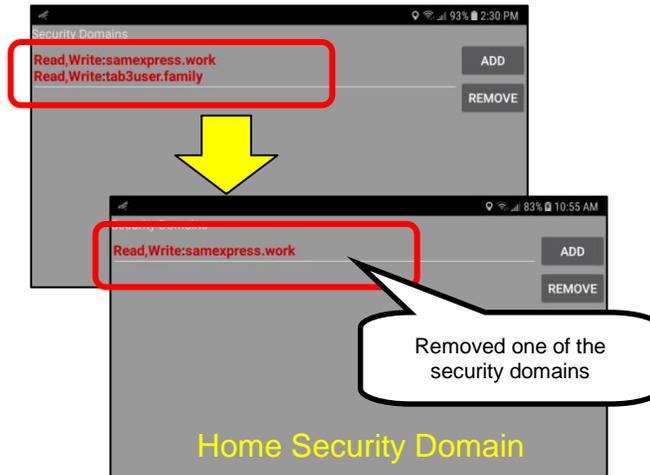
## 6.7. Removing a Security Domain and adjust permissions.

### Overview:

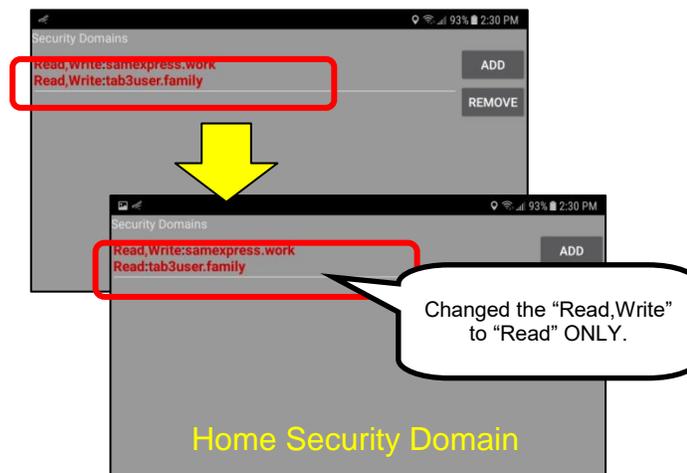
This section will describe the steps necessary to remove a security domain when it is no longer needed. **Users have the option to create up to 100 security domains.** These can cover work, play, hobbies and civic activities. You can create security domains to last for a few minutes or to last years ... it is up to you. In addition to removing a security domain, it is possible to alter the “Read,Write” permissions associated with a security domain. This section will cover these topics.

### Topics covered in the Section:

1. How to remove security domains.



2. How to alter “Read,Write” permissions of security domains.



## Removing security domains:

### 1. *Navigate to the User Information Panel.*

Starting at the Main Map Screen, click on the "I" Button located on the lower right hand side of the panel. This will open the User Information Panel. Select the **Home Domains Button** under the My Security Section.

Menu  
Settings  
Bookmarks  
Objects  
Places  
Back  
Create ...  
Drawing  
Find user  
Tracker

(c) Digital Globe

User Information Panel for the user **Sam Express**

User Information Panel for the user **Sam Express**

Home domains

Supervisor domains

Security Domains

Read,Write:samexpress.work  
Read,Write:tab3user.family

ADD

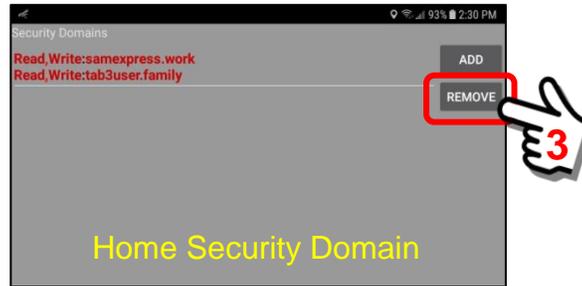
We will remove the second security domain.

**Read,Write:tab3user.family**

Home Security Domain

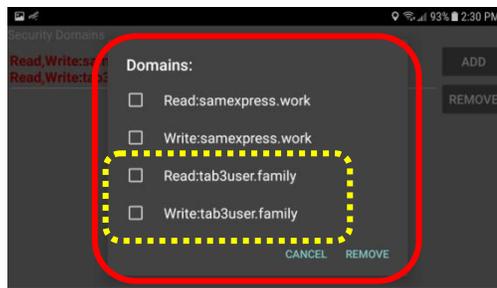
**2. Select the security domain you wish to REMOVE.**

The Home Security Domains panel will display the available security domains. Click on the **Remove Button**.



A pop-up panel will appear showing the available domains. In this example, we want to remove the **tab3user.family** security domains. Notice that the **tab3user.family** security domain is comprised to two parts:

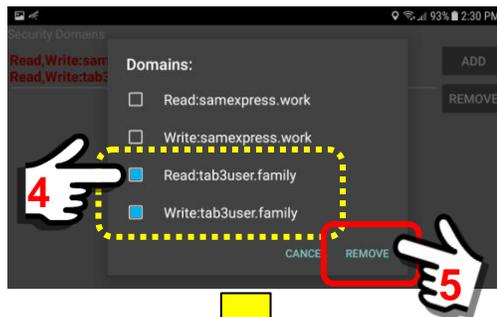
**Read:tab3user.family**  
**Write:tab3user.family**



Locate the two components of the security domain.

**3. Remove the Security Domain.**

To remove the security domain, select the two (2) components of the security domain, then "click" the Remove Button.



## Changing “Read,Write” permissions of security domains:

### 1. *Navigate to the User Information Panel.*

Starting at the Main Map Screen, click on the “I” Button located on the lower right hand side of the panel. This will open the *User Information Panel*. Select the **Home Domains Button** under the My Security Section.

Menu  
Settings  
Bookmarks  
Objects  
Places  
Back  
Create ...  
Drawing  
Find user  
Tracker

(c) Digital Globe

1

User Information Panel for the user **Sam Express**

2

Home domains Supervisor domains

Read,Write:samexpress.work  
Read,Write:tab3user.family

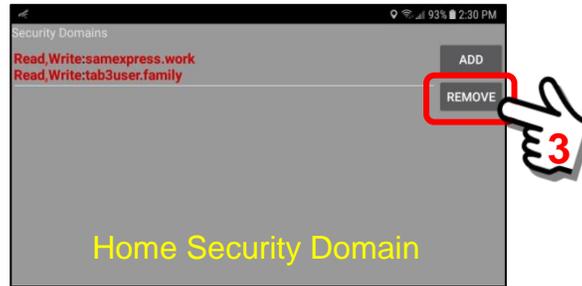
ADD

We will change the Read/Write permissions of the second security domain.  
**Read,Write:tab3user.family**

Home Security Domain

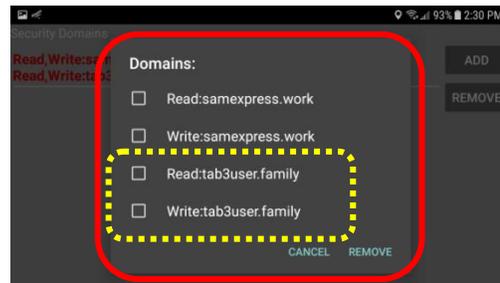
**2. Select the security domain you wish to change.**

The Home Security Domains panel will display the available security domains. Click on the **Remove Button**.



A pop-up panel will appear showing the available domains. In this example, we want to change the "Read,Write" permissions of the **tab3user.family** security domain. Notice that the **tab3user.family** security domain is comprised to two parts:

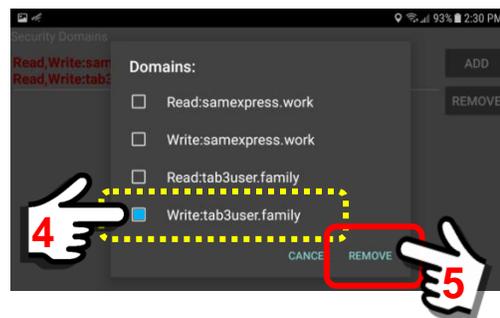
**Read:tab3user.family**  
**Write:tab3user.family**



Locate the two components of the security domain.

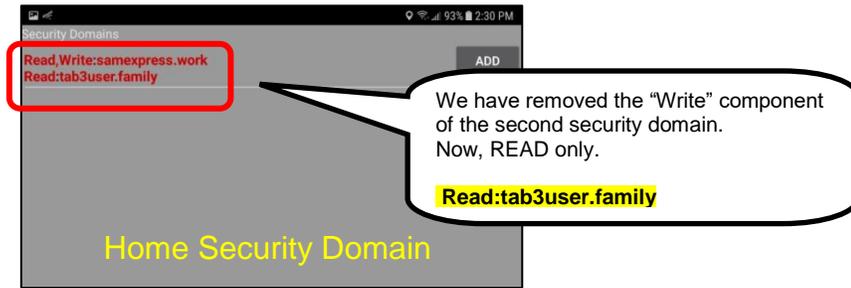
**3. Remove the "Write" permission from the Security Domain list.**

In this example, we will remove the "Write" permission from the list ... leaving the "Read" permission. Select the "Write" component of the security domain, then "click" the Remove Button.



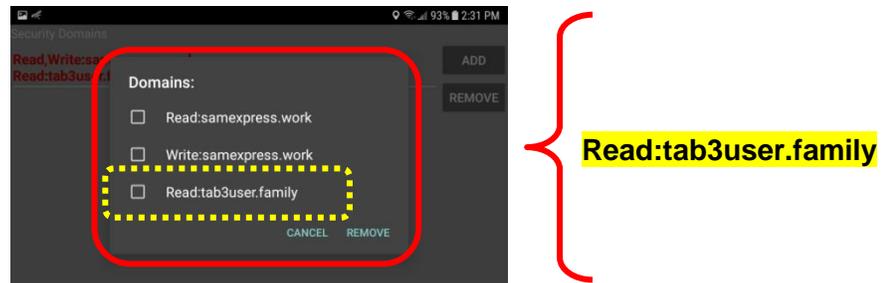
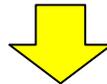
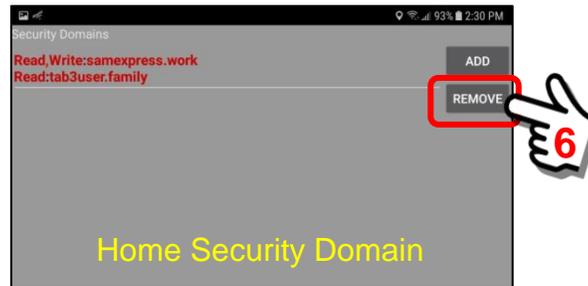
The screen will refresh and return to the Home Domains listing.

We have now removed the component of the **tab3user.family** security domain that allowed “Write” permissions.



If we open the listing of security domains again, you will see only a “Read” permission for **tab3user.family**.

**Read:tab3user.family**



# 7. The “Menu” Button features

## 7.1. Elements of the Main Menu block

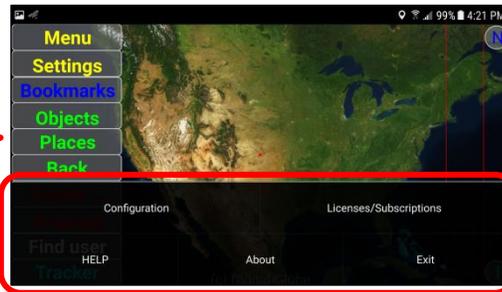
### Overview:

The “Menu” Button launches a menu block at the bottom of the Main Map Screen. This menu block can have 4 or 5 options depending on the configuration settings. This section will describe the menu block and associated features.



In the “Default” mode, five options are available:

1. Configuration
2. Licenses/Subscriptions
3. HELP
4. About
5. Exit



Menu Block

If a User removes the “Exit” option from the Menu Block at the Configuration Panel, the following screen will display.

In the edited mode, four options are available:

1. Configuration
2. Licenses/Subscriptions
3. HELP
4. About



Menu Block

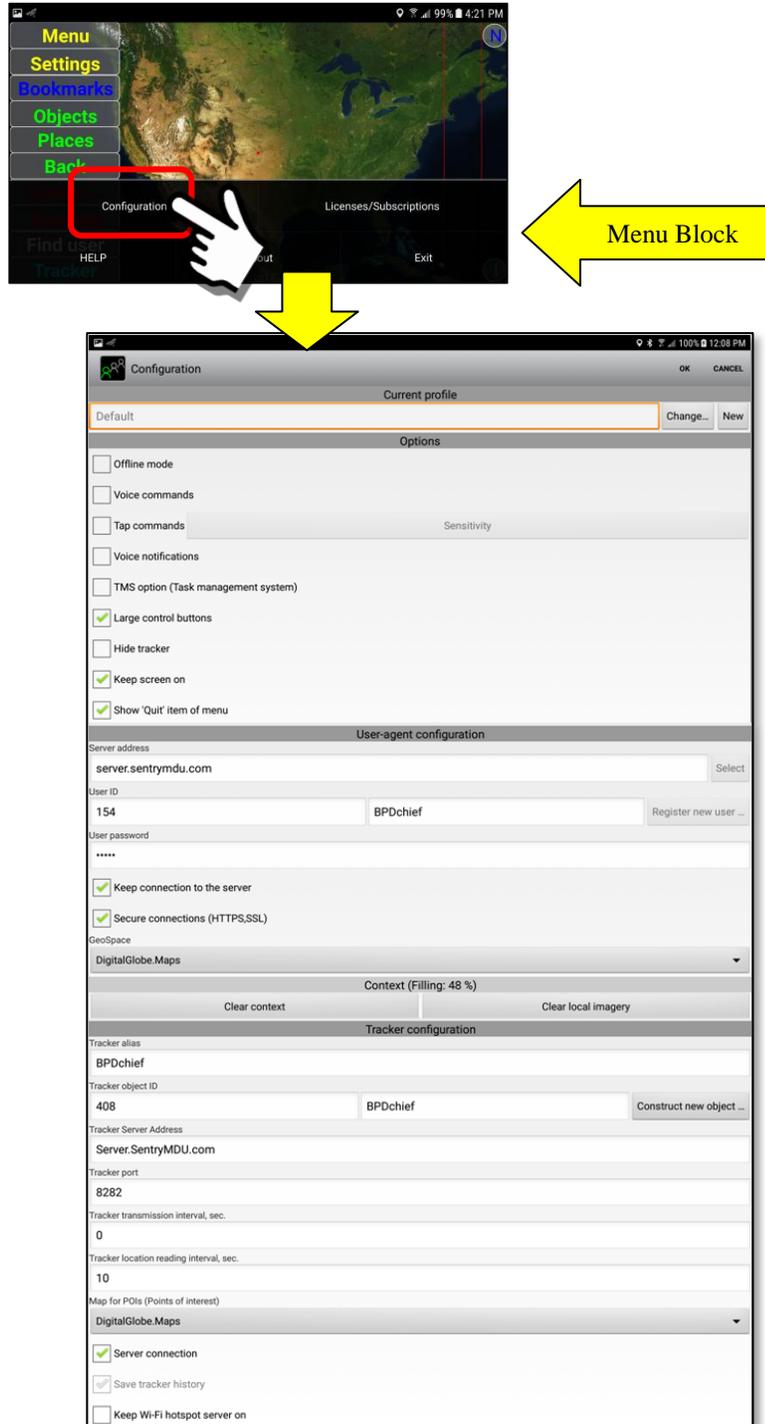
## 7.2. Configuration

### Overview:

The “Configuration” Button launches the Sentry MDU configuration panel. This is the primary configuration panel for the mobile device.

### Sentry MDU Configuration Panel:

To access the Configuration Panel, click on the “Menu” Button on the main map screen and then click on the “Configuration” Button on the Menu Block.



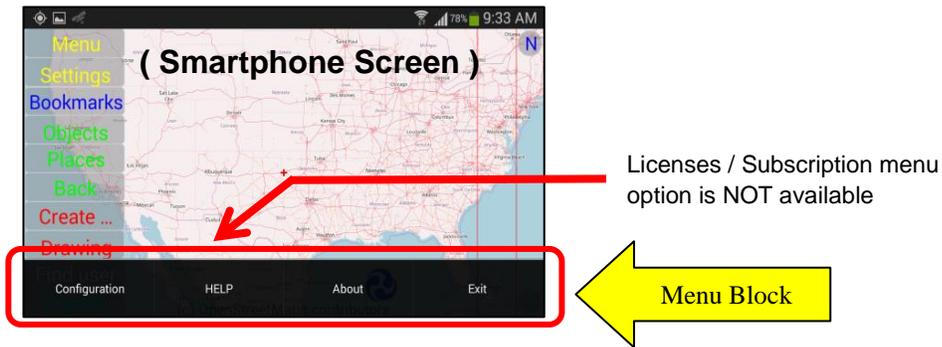
### 7.3. Licenses / Subscriptions

#### Overview:

The **Licenses / Subscriptions** Button will only appear on the Menu Block AFTER you have completed Registration. Registration is required because you must have a Username/Password in order to have a License or Subscription. See **Sections 3.5 – 3.10** for a full discussion of the Licenses / Subscriptions feature.

If you are an Anonymous User (not yet registered) and you have downloaded and installed the App ... just to play with it ... **you will not have this menu option.**

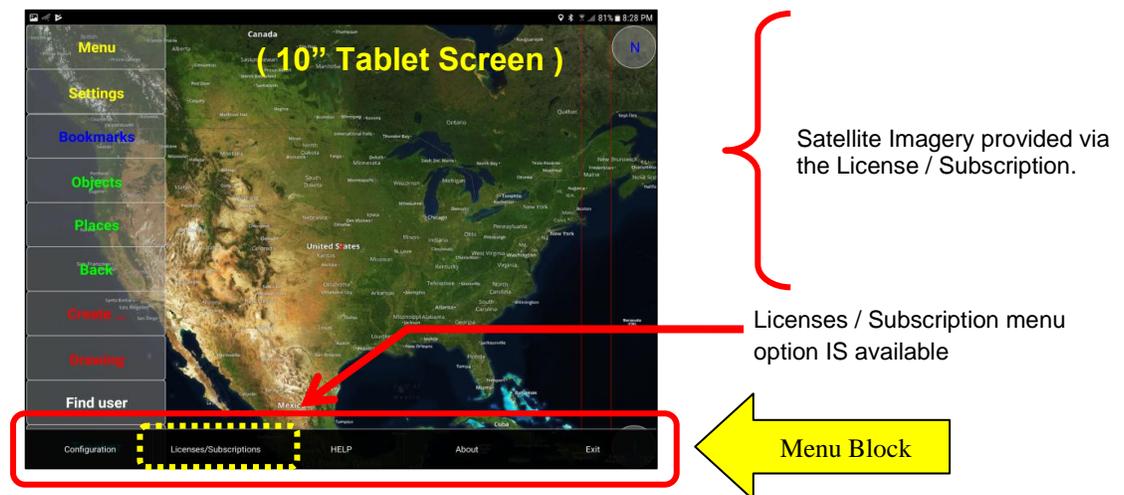
Main Screen as an ANONYMOUS User (not registered)



Main Screen of REGISTERED User (but not yet Subscribed or Licensed)



Main Screen of REGISTERED and LICENSED User (or with a Subscription)



## Installing a User License on a Device:

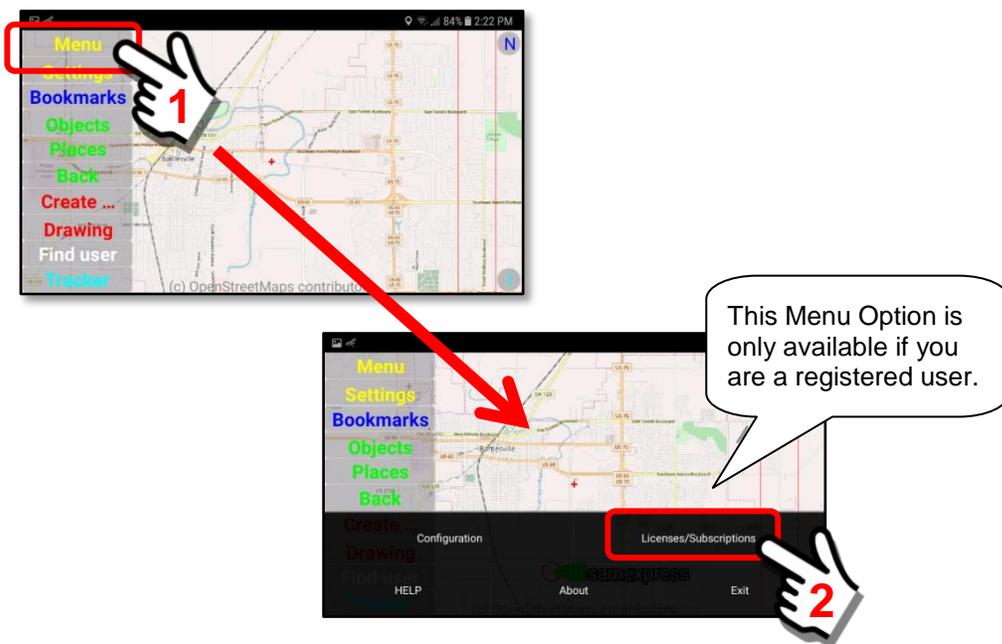
In this example, we have a registered user on the Licensed SentryMDU Server of our Organization. We are now going to illustrate how to INSTALL a User License on a mobile device. This section is an abbreviated version of **Section 3.7**.

We will need two pieces of licensing information provided to us by our organization.

- 1) The **License Number** that has been given to the Job Classification for this User.
- 2) The temporary **License Access Key** that will be provided to the User for registration during a specific period of time.

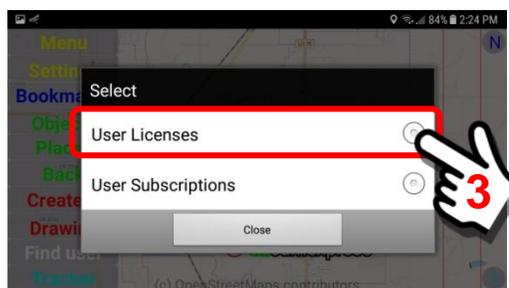
We will now review the following 10 steps.

### 1. Open the Menu Panel and select the “Licenses/Subscriptions” Button.

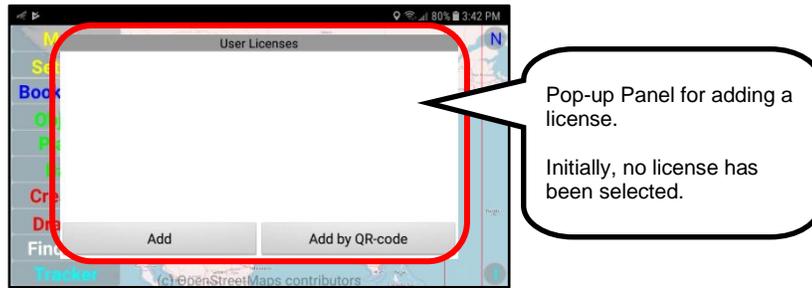


### 2. Select the “User Licenses” Option.

A pop-up panel will appear. Select the “User Licenses” option.

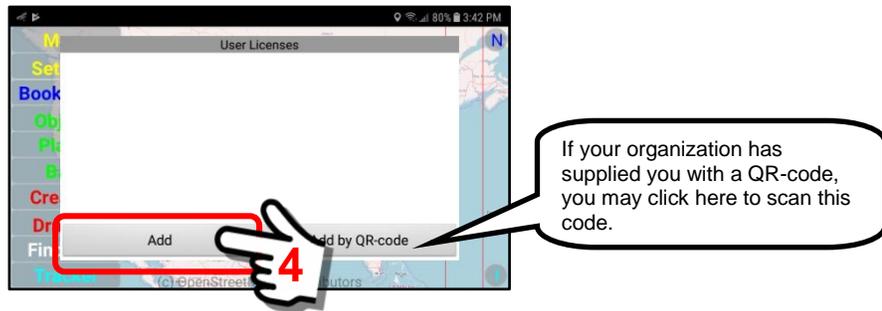


**3. The “User Licenses” selection panel will appear.**



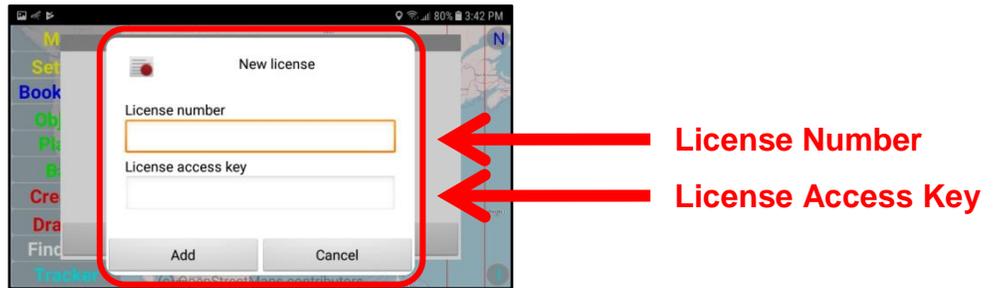
**4. Click on the “Add Button”.**

To display the license input screen, click the “Add” Button.



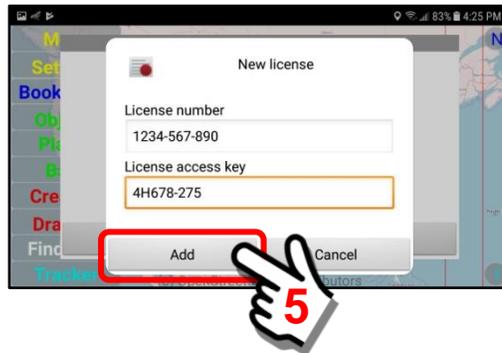
**5. Data Entry panel for new license is displayed.**

A pop-up panel will appear with two (2) data entry fields.



**6. Enter the License Number and License Access Key.**

Click on the “Add” button when finished.



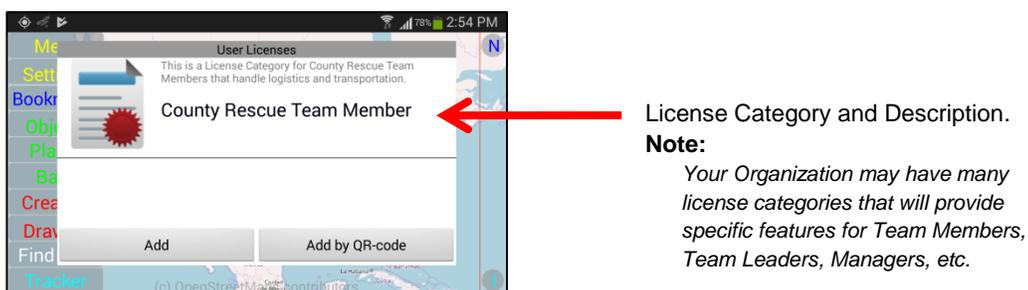
**7. The submitted User License job classification will be validated.**

If the entered data is correct, and the temporary License Access Key is used during the time period set by your IT Department, the User License security domain for this job category (County Rescue Team Member) will be installed on the mobile device.

The mobile device will contact the SentryMDU System to validate the license and retrieve the User Category parameters.

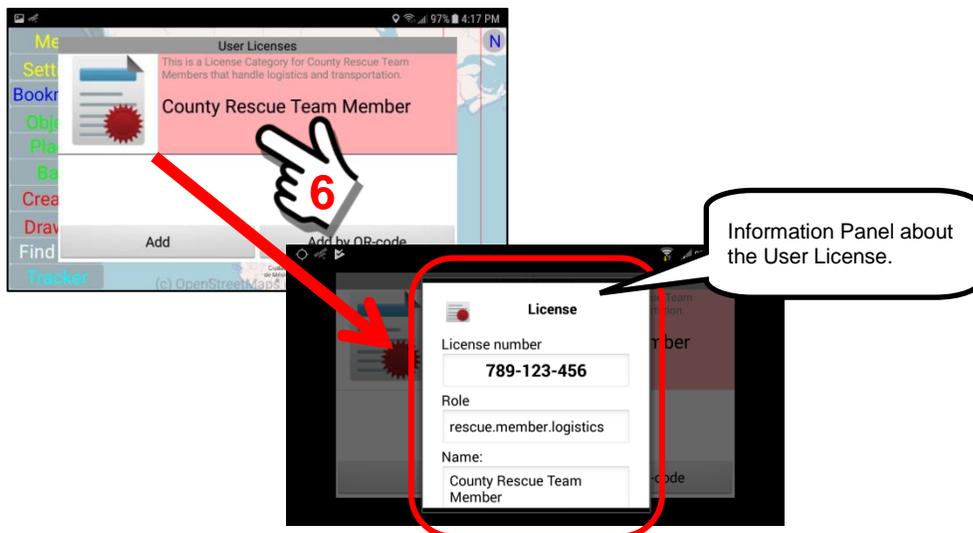


The validated License and User Category will be displayed on the panel.

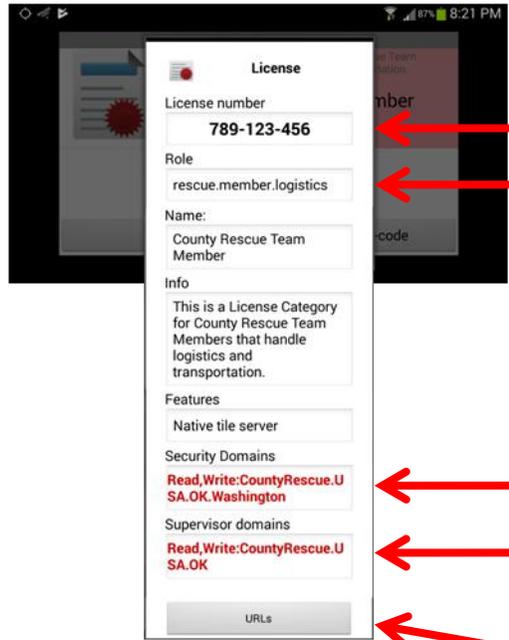


**8. Review User License, job role and Security Domain**

Click on the User License name (County Rescue Team Member) to open a pop-up panel that will display the license parameters and the installed Security Domain.



The full listing may be displayed by scrolling the pop-up panel.



The screenshot shows a mobile application interface with a 'License' pop-up panel. The panel contains the following information:

- License number:** 789-123-456
- Role:** rescue.member.logistics
- Name:** County Rescue Team Member
- Info:** This is a License Category for County Rescue Team Members that handle logistics and transportation.
- Features:** Native tile server
- Security Domains:** Read,Write:CountyRescue.U SA.OK.Washington
- Supervisor domains:** Read,Write:CountyRescue.U SA.OK
- URLs:** (A button to view the list)

Annotations with red arrows point to the following elements:

- License Number
- User role and classification as selected by Licensed Organization
- Organizations with a Licensed Server have access to create, modify and remove User License parameters via a web portal into an Administrative Server.
- Default Security Domain for all users in this classification
- Supervisory Security Domain for all users in this classification
- Listing of URLs provided to this User Class during initial installation.

**Note:**  
*This is a list of the Custom Bookmarks and Data References that are installed for this specific User Category. These are set by your Organization.*

### 9. Return to the Main Map Screen

Click on the "Back" button on the device to return to the Main Map Screen.

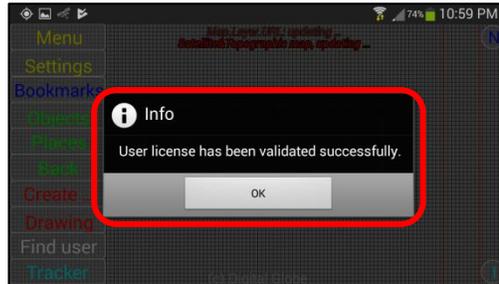


When the "Back" Button is clicked, this starts the License Validation Process. This may take several seconds depending on your internet connection.

### 10. Main Map Screen is now displayed with Satellite Imagery

As the mobile device processes the screen change, the satellite imagery for this User License is downloaded and installed on the device in accordance with the organization's imagery contract.

A pop-up message will display if the User License is valid.



Satellite imagery will now fill the screen



## Note:

You have now REGISTERED and installed a User License ... **but you have NOT COMPLETED CONFIGURATION**. See Sections 3.14 and 5.4 for additional settings that you will need to make. This is important if your device is to provide a good user experience and to perform optimally (ie audio/video streaming, map images, etc.) for your specific hardware.

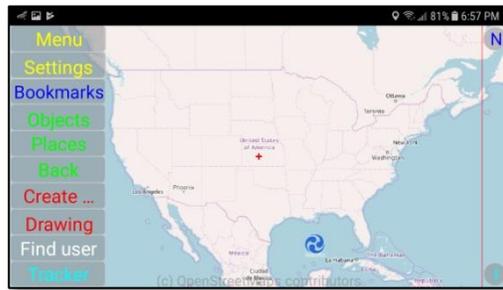
## Options for changing the type of Map Imagery to display:

The Sentry MDU Application allows a user to select a number of options on how they would like the screen to display satellite imagery and maps. There are 3 primary image/map options and several overlay “layers” that can display additional symbols and icons. The 3 primary map options are as follows:

1. Satellite Image overlaid with a street map
2. Satellite Image
3. Street Map

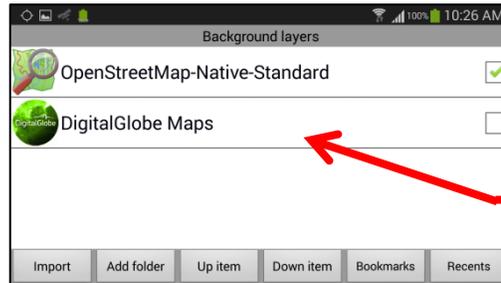
The “default” setting is Item #1 – Satellite image overlaid with a street map.

After initial installation (and before registration) you will notice that the Main Map screen displays a “Street Map” (using OpenStreetMap data) and not a satellite image.



### 1. Location of the Map Layer display options.

The available Map Layers are installed in the Background Layers Folder on the Viewing Configuration Panel.



OpenStreetMap (Street Maps Only) and imagery provided by MapBox/DigitalGlobe. These choices are mutually exclusive (can only select one).

This choice is only active for Users that have a Subscription or User License.

### OpenStreetMap-Native-Standard

OpenStreetMaps is an “Open Source” set of map data supported by a worldwide community. DLT operates a tile server that delivers this “road/street” map data to the SentryMDU App.

### DigitalGlobe Maps

DigitalGlobe (a Maxar Company) is a commercial provider of high resolution satellite imagery to governments and industry. They operate a constellation of satellites that scan the earth on a regular basis. MapBox is a “reseller” of DigitalGlobe Imagery. The SentryMDU App retrieves imagery data from MapBox/DigitalGlobe.

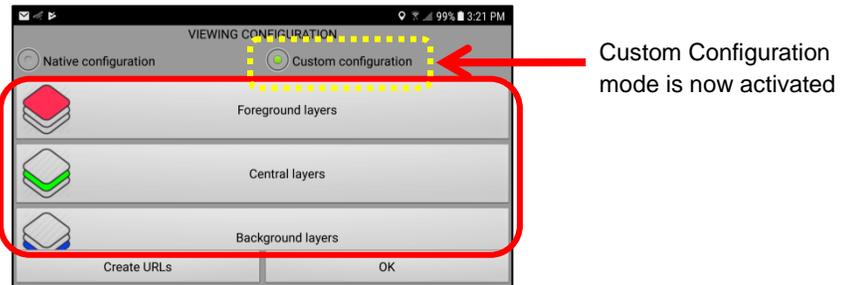
**2. Select the “Custom Configuration” Option**

The “Custom” option is an alternate view mode of the Foreground, Central and Background Layers functions. To open this panel, click the **Custom Configuration** Button on the Viewing Configuration Panel.



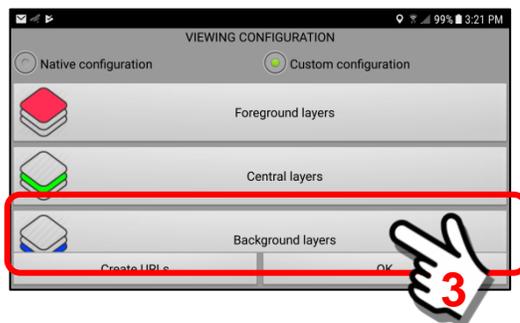
Three large buttons will be displayed

- 1. Foreground Layers
- 2. Central Layers
- 3. Background Layers



**3. Select the “Background Layers” Folder**

Select the Background Layers folder for access to the imagery and maps that are available on the Mobile Device.



The **Background Layers** folder contains the currently available sources for map imagery. In this example we show the 2 default entries. You may also put “custom” maps of your own in this folder.



**4. DigitalGlobe Maps for Users with a Subscription or User License.**

When a User device installs the MapBox/DigitalGlobe Map imagery by way of a Subscription or User License, the “DigitalGlobe Maps” menu item will become active.

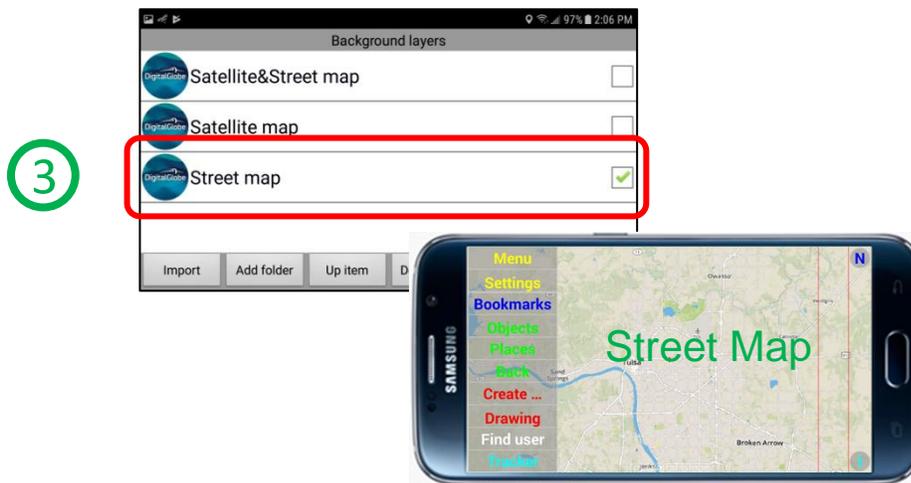
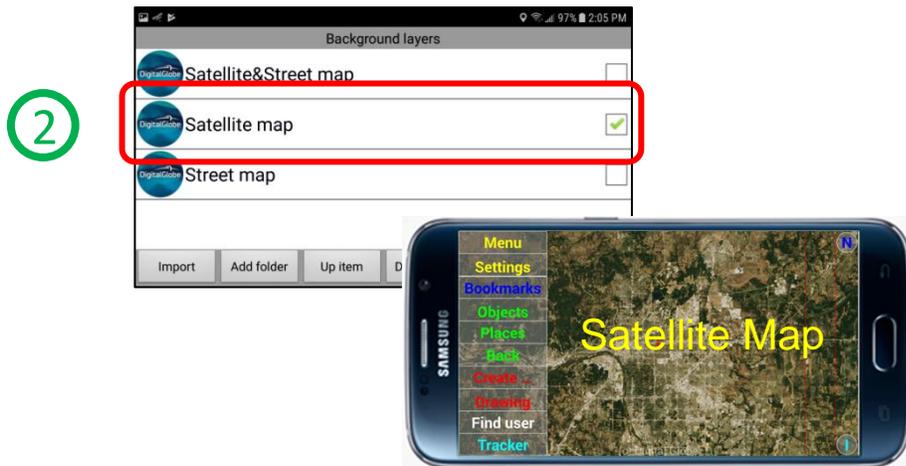
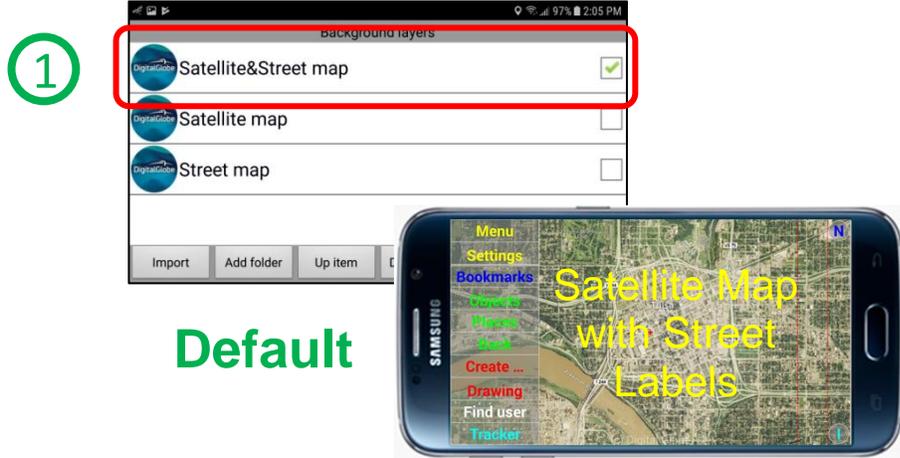
To view the 3 different DigitalGlobe Map options, click on the Menu Item.



During an initial install of the DigitalGlobe Maps, the “**Satellite&Street map**” option will be installed by default.



A User may select any of the other map options as indicated below.



## Removing a User License from the Device:

In the SentryMDU system an individual User Profile may not have BOTH a User License and a Subscription at the same time. You must be either one or the other (or none). However, a User may have several User Profiles on their device ... some of which are User Licenses, Subscriptions, or none. See **Section 5.3** for a detailed step-by-step description on how to create multiple User Profiles.

In this example, we are going to illustrate how to REMOVE a User that has a User License on a SentryMDU data server. You may **use this feature if you have a User License in a specific category and you will be moving to a “new” category of License**. In this scenario you must remove the existing license and then install the “new” license.

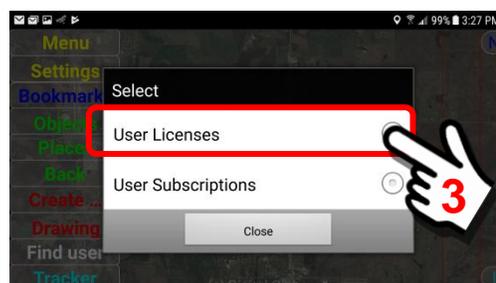
### 1. Open the Menu Panel and select the “Licenses/Subscriptions” Button

Click on the *Menu Button* on the Main Map Screen and then select the *Licenses/Subscriptions Button*.



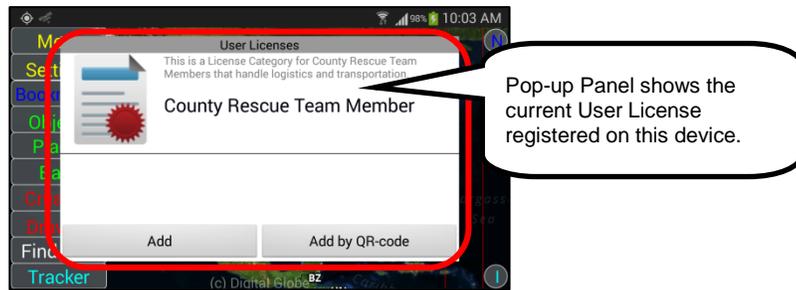
### 2. Select the “User Licenses” Option

A pop-up panel will appear. Select the “User Licenses” option



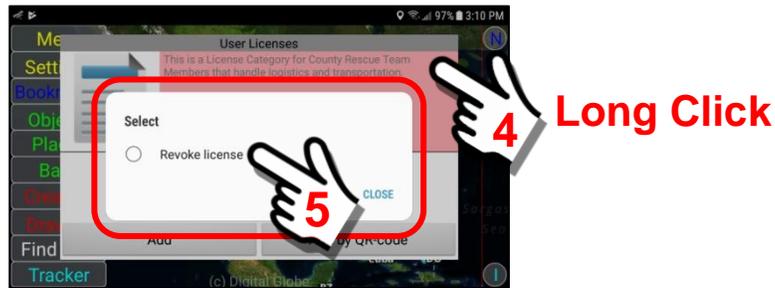
**3. The “User Licenses” selection panel will appear**

The User Licenses Panel will show the active User License that is installed on this mobile device.



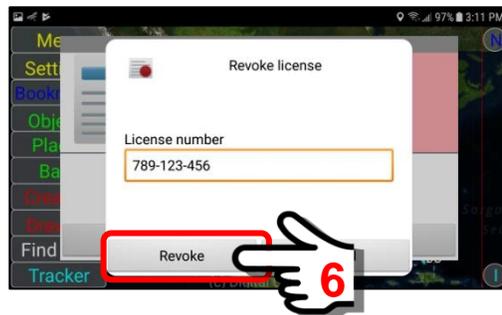
**4. Select the User License, long click on the name**

Perform a “long click” on the User License name. A pop-up box will appear with a button to “revoke” the User License. Click on the Revoke Button.



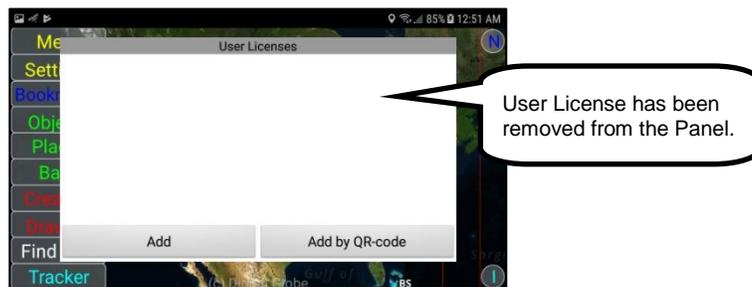
**5. Verify the correct License Number**

Verify the License Number for your Organization. Click on the **Revoke Button** to remove this license access from the mobile device.



**6. The User License will be removed from the device**

Notice that the User License (County Rescue Team Member) is no longer shown on the device.



**7. Satellite Imagery will be removed from the device**

Without a User License, the mobile device “access” will be removed from SentryMDU Data Server of the Organization. You will still be “registered” on the particular server instance, but you will default to your personal Security Domain. **You will no longer have access to others on the network until you select and install ANOTHER user license.**

You will no longer have access to file storage, streaming and satellite imagery that is provided by that Server Instance.

Click the “Back” Button to return to the Main Map Screen.



As you return to the Main Map Screen, the satellite imagery on the device will be removed.



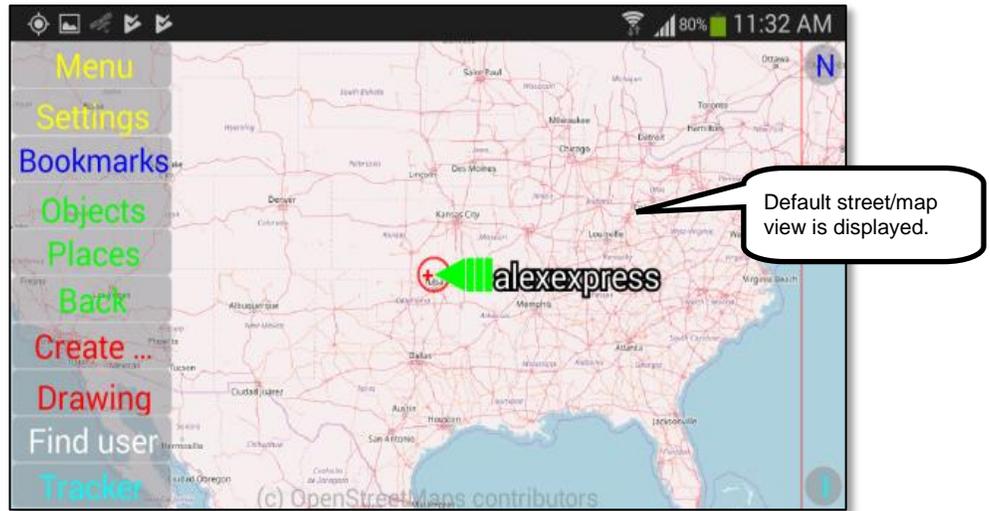
Finally, a pop-up box will inform the User that the User License has been successfully cancelled.



Click the “OK” Button to continue ...

**8. The “default” OpenStreetMaps data will now be displayed.**

Notice that the screen has now reverted to the road map display. Since you are on a Licensed Server, in order to access the high resolution satellite imagery once again, you must input another **User License/Access Key** combination.

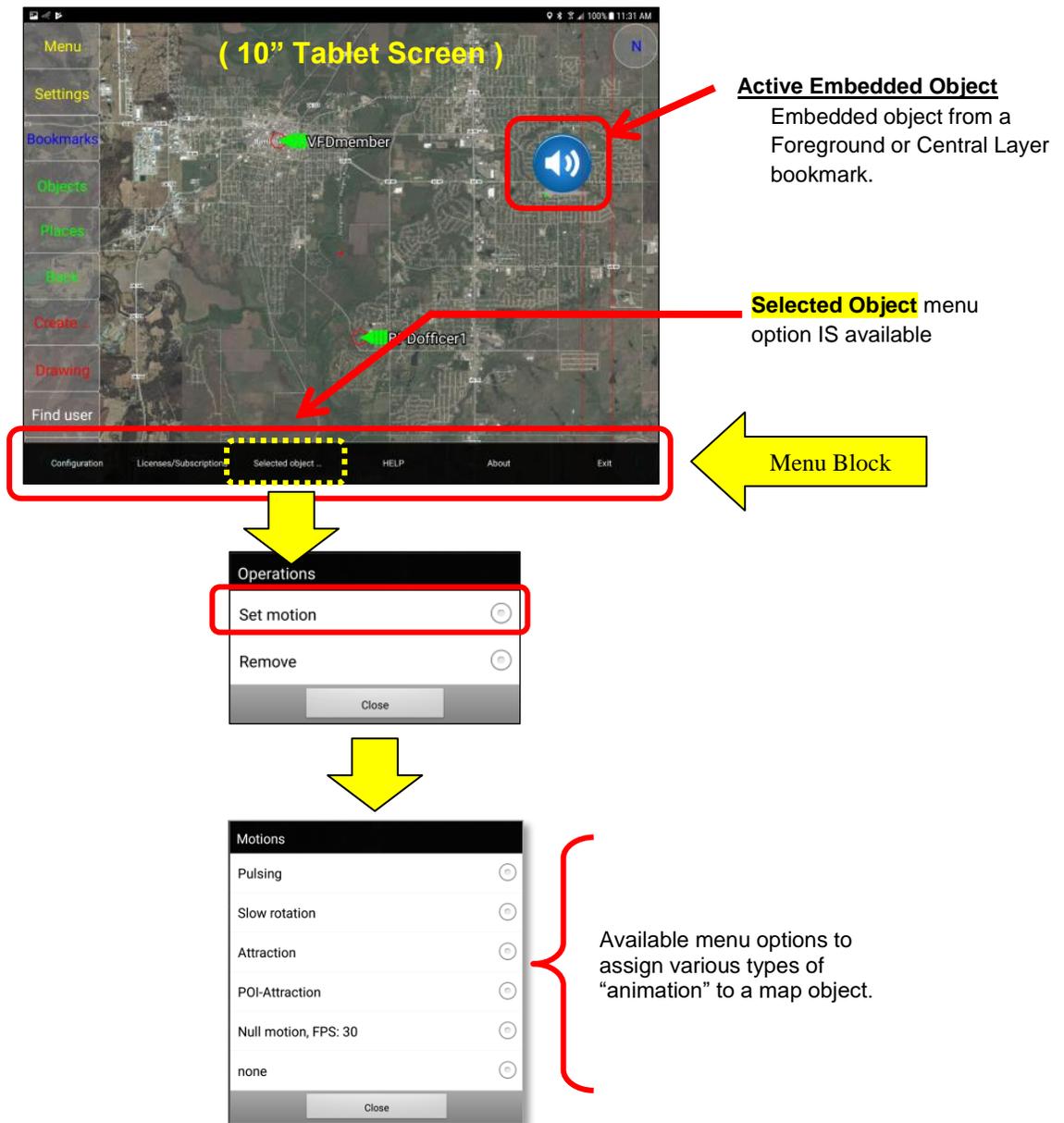


## 7.4. Selected objects ...

### Overview:

The **Selected Object** Button will appear on the Menu Block when “active” objects are present on the Main Map Screen AND they have been “selected” for actions. These active objects may be in the form of Bookmark items from Foreground and Central Layers. The Selected Object Button provides a range of menu options that allow for assigning “motion” to the embedded object.

This section will describe the “Selected object” Features.



## Review of “Selected Object” menu options:

### 1. How to select an embedded object.

An embedded object is a user created icon (image) that is linked to reference materials, audio-video sources, local file systems or remote internet sites. These links are created by the User and stored on the mobile device as a “Bookmark” object. These objects may then be “embedded” into map screens, tied to GPS coordinates or regions of map displays.

The embedded objects may come from 3 sources within the App:

- a. General Bookmark List
- b. Foreground Layer custom maps
- c. Central Layer custom maps

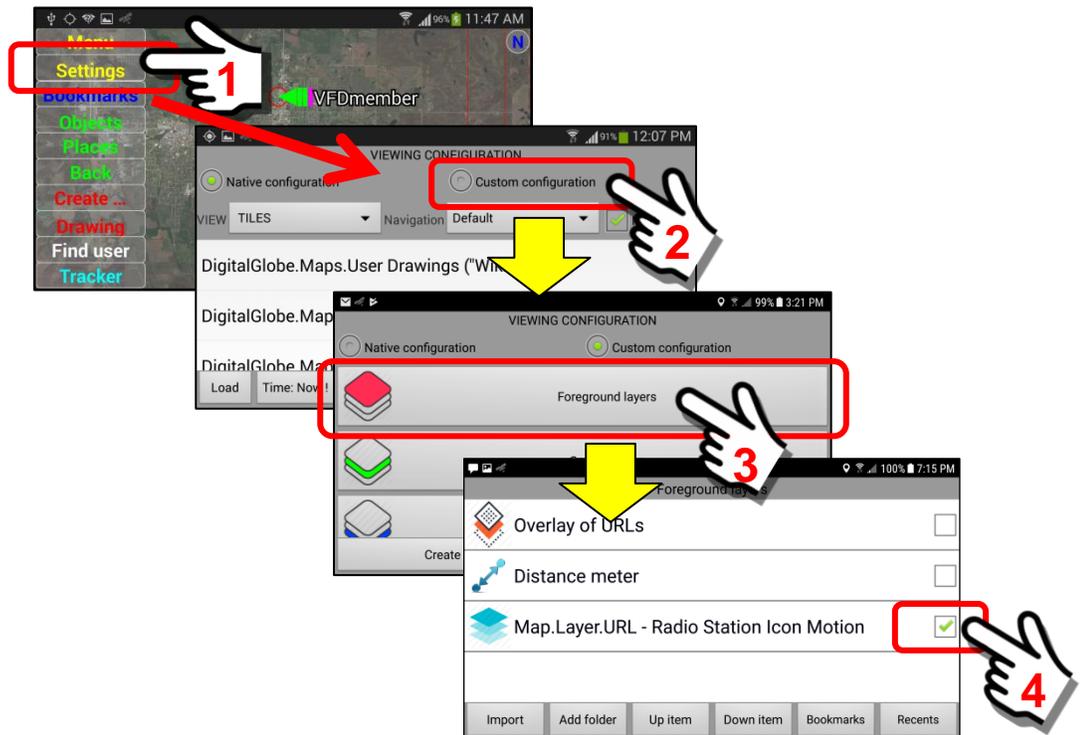
In this section, we will assume a User has selected a Radio Station object from a bookmark. This object has been configured to launch a floating window when active.



### 2. Launching a Foreground Layer map object.

In this exercise, we will designate the KYFM Radio Station, located in a Foreground Layer, to be our mobile object.

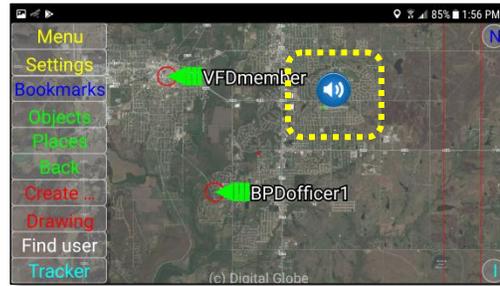
To access this mobile object, we do the following:



### 3. **Selecting the Mobile Object.**

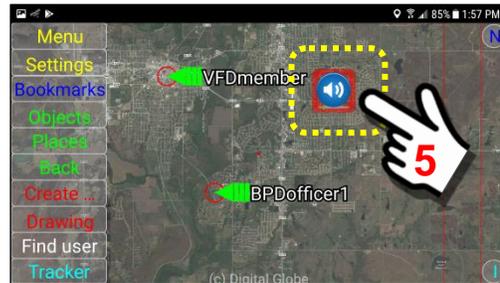
Once the Radio Station icon is selected (checkmark in the checkbox), return to the Main Map Screen. In this example, we are showing a single mobile object. However, you could have MANY mobile objects on the screen.

The next step is to “select” the desired mobile object.



Radio Station map object is displayed on the Main Map Screen as Foreground Layer.

Click on the Radio Station icon to select it. Perform a “short click”. You should see a “red box” surround the icon. The Radio Station floating window may open, if so, close the floating window (click on the “X” in the top right corner). We want to have the screen with the Radio Station icon “selected” with the red box surrounding it (means it is selected for further actions).



**Short Click**

### 4. **Click on the Menu Button on the Main Map Screen.**

Now that we have “selected” the Radio Station icon as an active object (red box) we need to configure the motion animation features.



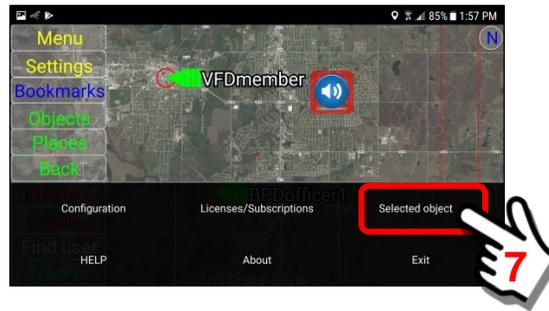
**Active Embedded Object**

Since the embedded object is active (red box), the Menu Block at the bottom of the screen now displays the “Selected object” option.

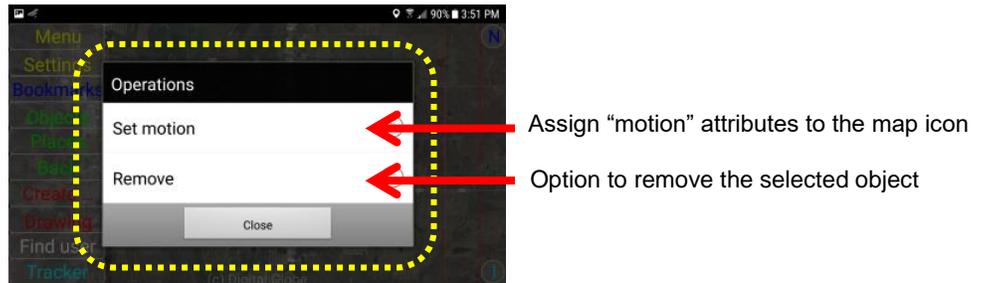
**Menu Block**

The Menu Button will open the Menu Panel at the bottom of the screen. The “selected object” menu option is now displayed.

5. **Click the “Selected object” Button located on the Menu Bar.**  
To gain access to the Motion/Animation features, click on the “Selected object” Button. This will launch a pop-up Operations Menu.

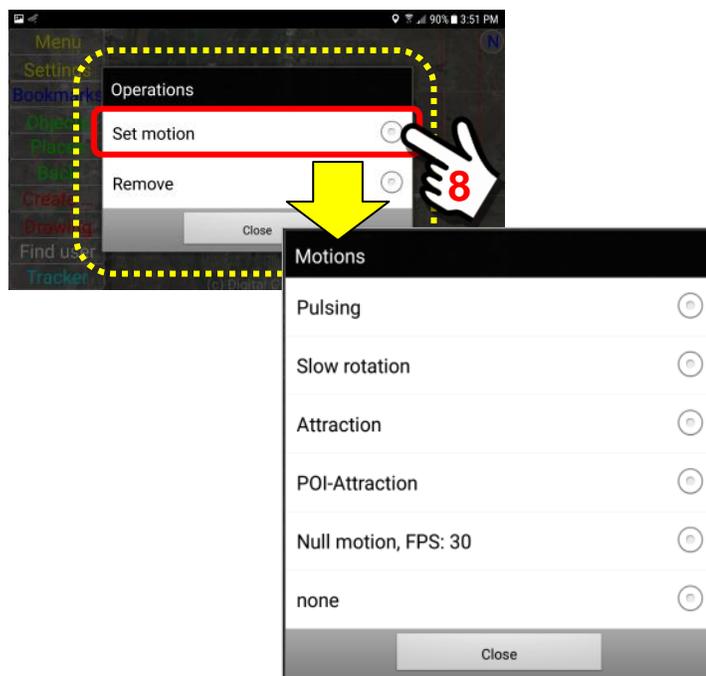


The Operations Panel has two options. We will select the “Set motion” option.



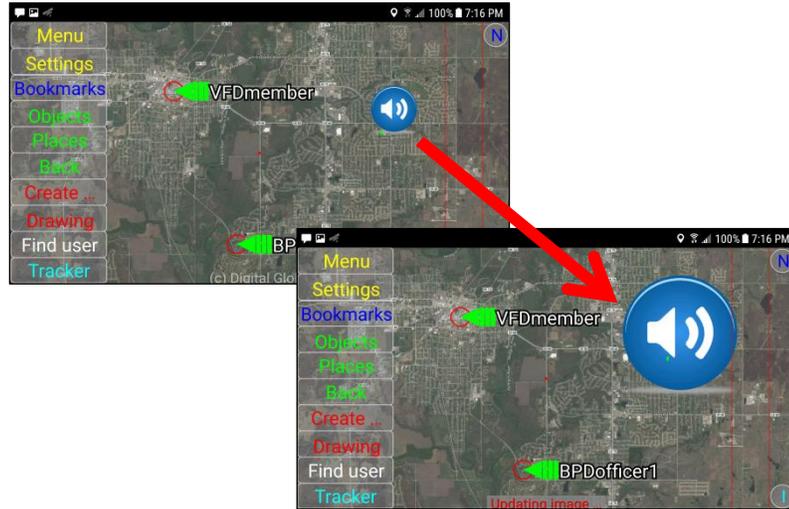
6. **Review of Menu options on the Motions Panel.**

A Motions Panel will open with 6 menu options. We will discuss these 6 menu options in the following text.



### Pulsing

The **Pulsing Option** causes a map icon (graphic element) to “pulse” three times (get bigger and smaller) over a period of 6 seconds. This animation is designed to make the element more “noticeable” on the screen and easily recognizable (since it will get BIG). This has application where you may have many graphic elements on a display and want certain ones to stand out.



### Slow rotation

The **Slow Rotation Option** causes a map icon (graphic element) to “rotate counterclockwise” on a continual basis. This animation is designed to make the element more “noticeable” on the screen and easily recognizable (since it is rotating). This has application where you may have many graphic elements on a display and want certain ones to stand out.



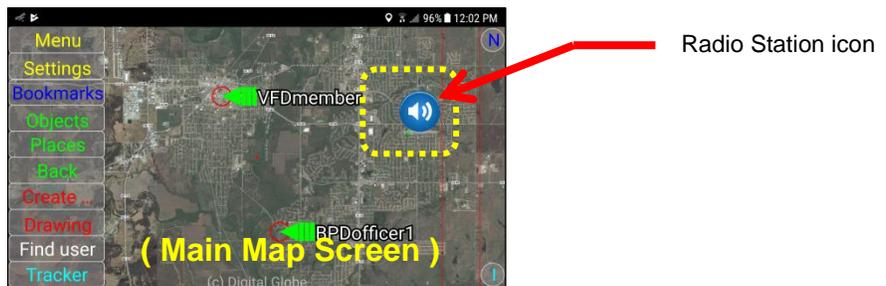
### Attraction

The **Attraction Option** means that if an object (graphic element) is visible in a map window, it is displayed “as is”. However, as the object goes outside of the map window, the application “attracts” the icon to the border of the map window, reduces the size of the icon and maintains it in a relative position on the screen border. In this way, a User can recognize a

direction to move the screen in order to find the object ... by following the attracted object.

Note that this can be used for “static” objects (objects that are fixed to a GPS point) and “dynamic” objects such as a “Live” video panel transmitted by another user that is moving in real-time (ie Dash Cam from a vehicle).

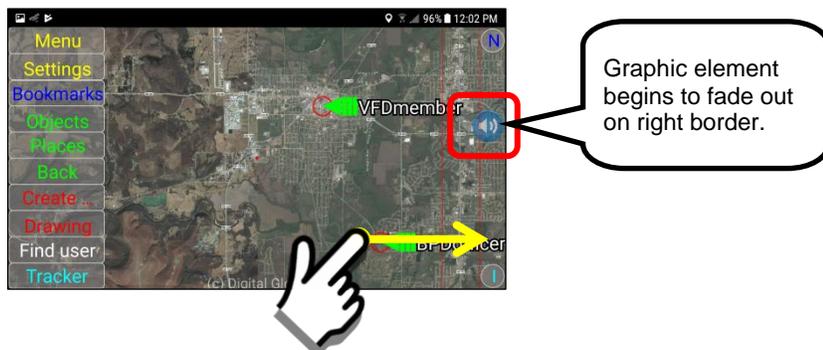
To illustrate the concept, we have a Radio Station icon that has the motion attribute set as “Attraction”. When the icon is displayed during use on the screen, it maintains the normal size as set by the user during setup.



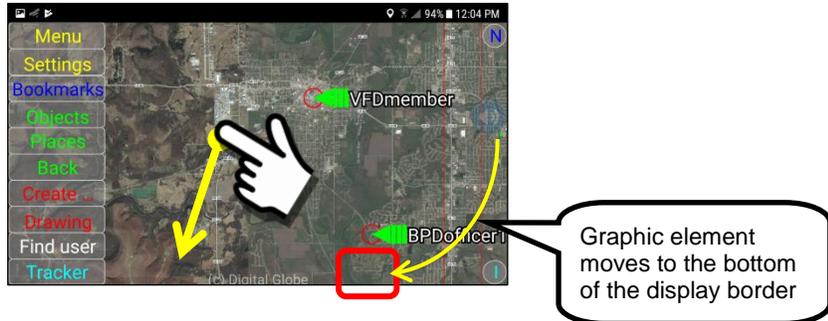
Drag the screen to the right such that the icon bumps into the right border of the display. The icon reduces in size.



As the Radio Station icon bumps into the right side of the screen, it will reduce in size and maintain a relative position on the right border of the display.



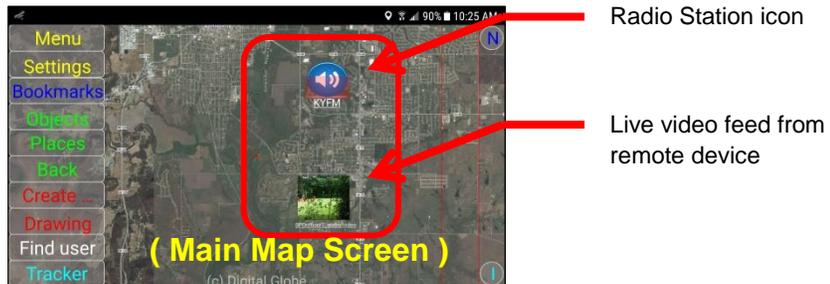
If the Map Screen is further moved “down” and to the “left”, notice that the Radio Station icon will follow in a relative position around the border of the screen. This provides a user with an indication of “where” the Radio Station URL link is located relative to the current map location.



**POI-Attraction**

The **POI-Attraction Option** refers to an object that is constant width/height in a map window, such as remote video monitoring. However, as the object goes outside of the map window, the application “attracts” the video panel to the border of the map window and keeps it there. In this way, a User can recognize a direction to move the screen in order to find the object ... by following the attracted object.

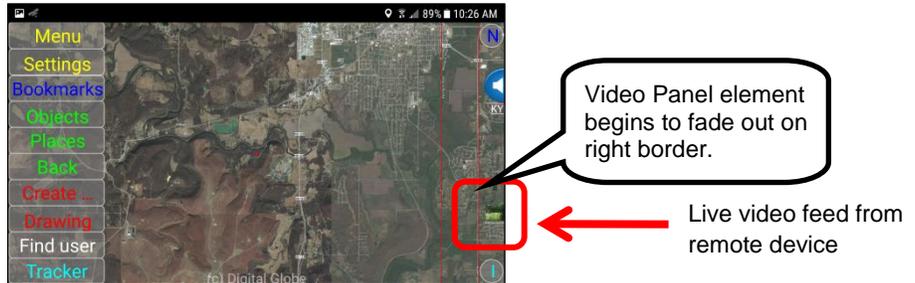
To illustrate this concept, we have a Foreground Layer panel with two objects. A radio station (KYFM) and a remote video feed (BPDOfficer1) showing on the panel. The remote video feed has been set to a motion attribute of “POI-Attraction”.



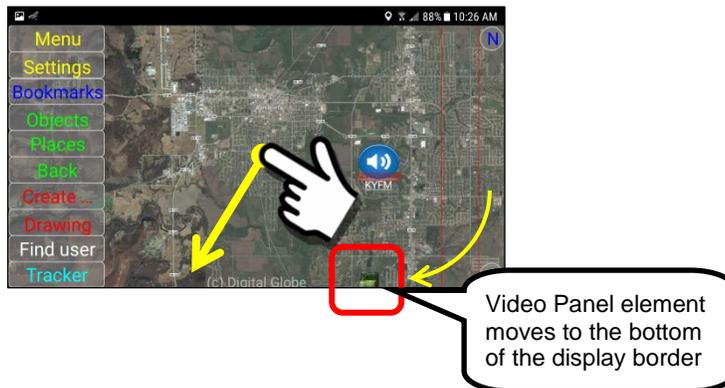
Drag the screen to the right such that the video panel bumps into the right border of the display.



As the video panel bumps into the right border of the display, the size of the video panel reduces in size and the picture begins to “fade” out. The **POI-Attraction Feature** allows the video panel to remain at the correct height/width ratio.



If the Map Screen is further moved “down” and to the “left”, notice that the Video Panel element will follow in a relative position around the border of the screen. This provides a user with an indication of “where” the video feed URL link is located relative to the current map location.



**Null Motion, FPS:30**

The **Null Motion, FPS:30 Option** means that there will be NO motion for the selected object ... however, the screen will refresh at 30 times per second. This option would typically be used by Developers as a “frame rate driver” trigger for the display. If a map shows an object that has the “Null Motion, FPS:30” motion attribute, the map view will be updated 30 times per second.

**None**

The **None Option** means that NO motion attributes are assigned to the selected object. If you have an object that has motion and you want to remove that motion (make static again) you would select “None” as the motion option choice.

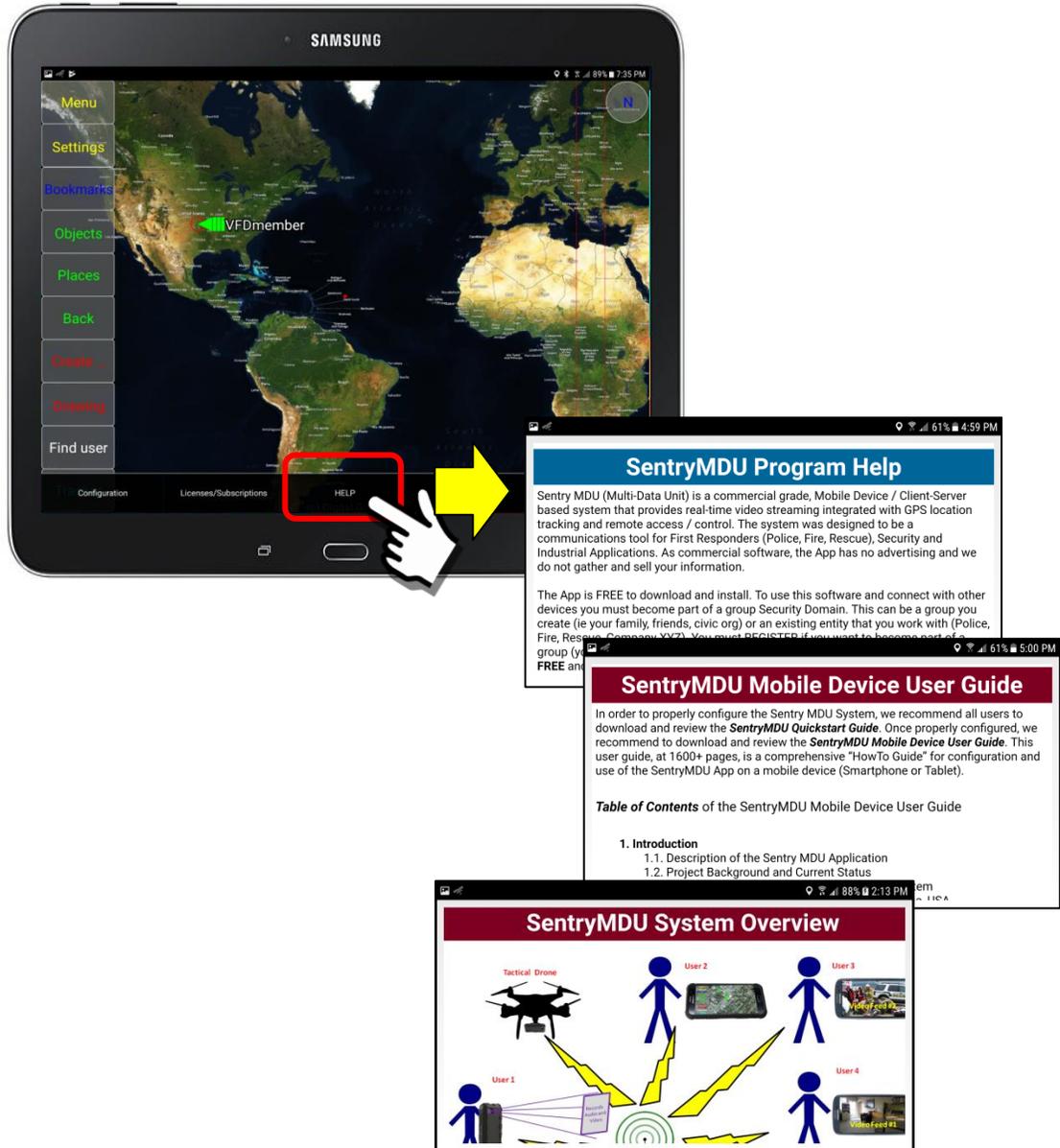
## 7.5. HELP

### Overview:

The “HELP” Button launches the Help Panel on the mobile device. This is a brief help reference.

### Sentry MDU Application:

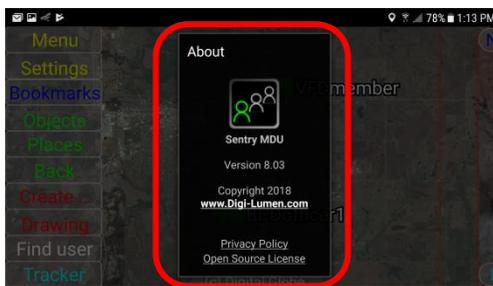
To access the Help Panel, click on the “Menu” Button on the main map screen and then click on the “HELP” Button on the Menu Block.



## 7.6. About

### Overview:

The “About” menu block selection will display copyright information and a website link to Digi-Lumen Technologies, the creator of the Sentry MDU Application.



#### **www.Digi-Lumen.com**

Link to *Digi-Lumen Technologies, LLC* website. Additional SentryMDU information and documentation is available.

#### **Privacy Policy**

Full text of Privacy Policy for the SentryMDU System

#### **Open Source License**

Description of the Open Source Licenses used in the SentryMDU App

## 7.7. Exit

### Overview:

The “Exit” Button allows a user to completely exit from the Sentry MDU Application and stop ALL background processes (notifications, messaging, everything).

The SentryMDU App has a “memory” function that provides for automatic start of the application, when the phone is turned on, if desired by the User.

This function works in the following manner:

- If the SentryMDU App is “running” when the phone is turned “off”, **the application will start automatically** and run in the “background” the next time the phone is turned on.
- If the SentryMDU App is NOT “running” when the phone is turned “off”, **the application will NOT start automatically** when the phone is turned on again.

When the SentryMDU App is running in the background (you have not clicked on the Icon) a few background processes will continue to run. These include GPS location and messaging features. To turn off all of these functions and “go dark” a User must click on the “Exit” button and then confirm that they wish to turn off all background processes.

### To turn off all Sentry MDU processes:



# 8. The “Settings” Button features

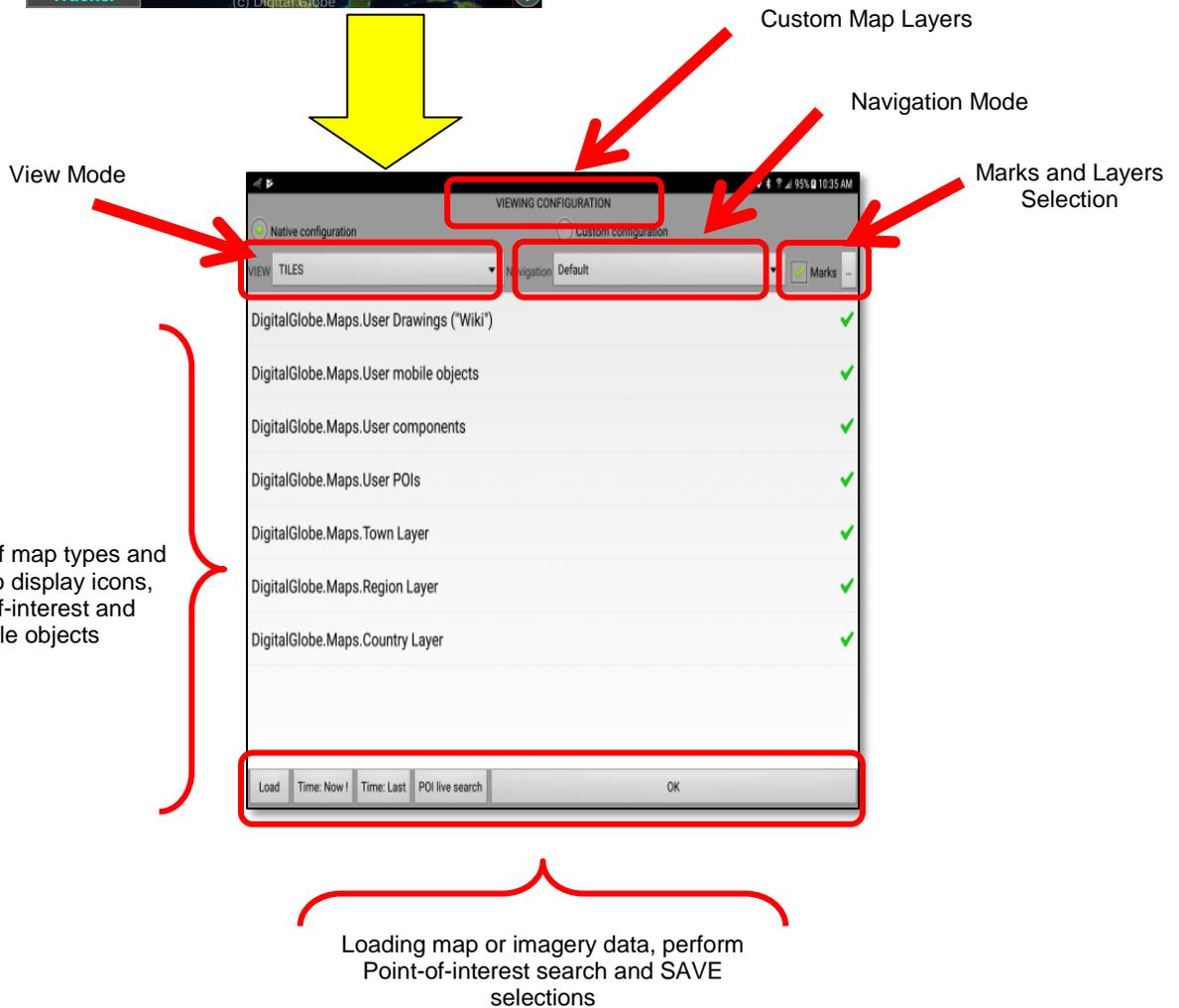
## 8.1. Overview of the Viewing Configuration panel

### Overview:

The Viewing Configuration panel allows a user to select map types, how zoom in-out will be performed and the layers of additional information they would like on the mobile device screen. This section will describe the available features and buttons.



Short Click



## “Quick” Launch of Foreground, Central and Background Layers:

The Settings Button will also provide a “quick launch” of custom layer bookmark panels. This quick launch feature allows a user to have a “one click” access to the Foreground, Central and Background Layer panels (Tablets only).

We have provided this “alternate” launch feature by performing a “Long click” on the Settings Button.

**Note:** This feature **ONLY** works for **Tablets** that have a large display area. Each of the layers (Foreground, Central and Background) have a scrolling region so we have disabled it for small screens (ie Phones).

The following pictures will illustrate the screens.



Perform a “Long click” on the **Settings Button** on the Main Map Screen..



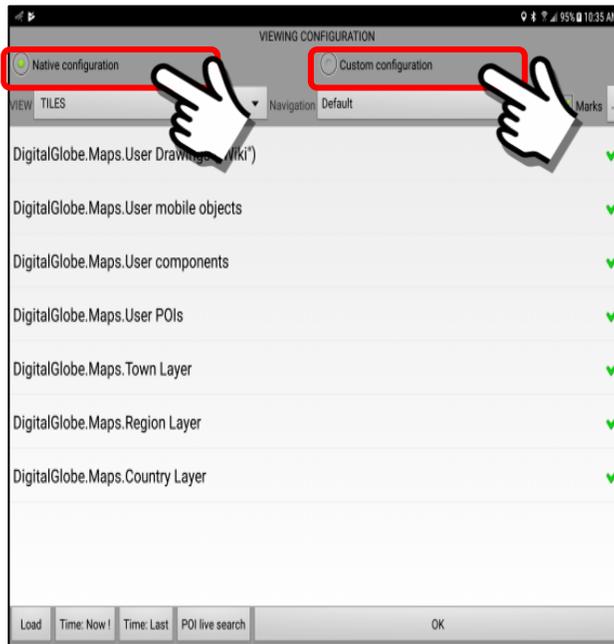
## 8.2. Native and Custom Configuration Modes

### Overview:

The Viewing Configuration Panel has two (2) display options that will allow the User access to many of the features.

1. Native configuration
2. Custom configuration

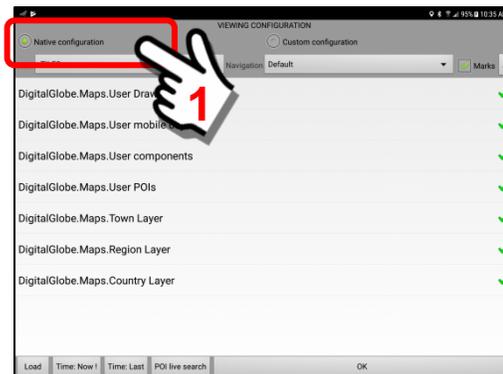
This section will review these two display options.



### Review of Native and Custom configuration options:

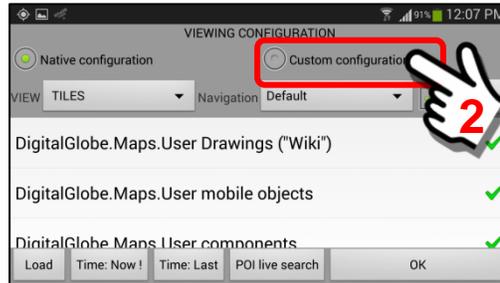
#### 1. Native Configuration Mode

The “Native” option is the default screen view for the **Viewing Configuration** Panel. This displays map options with layer types including points-of-interest, user drawings and mobile objects.



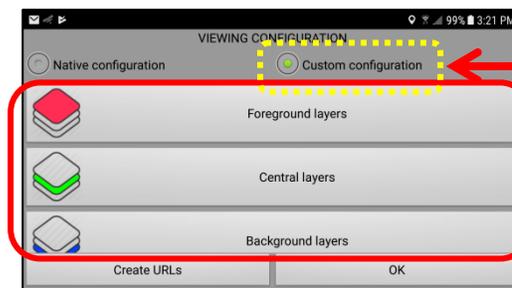
## 2. Custom Configuration Mode

The “Custom” option is an alternate view mode of the Foreground, Central and Background Layers functions. To open this panel, click the **Custom Configuration** Button on the Viewing Configuration Panel.



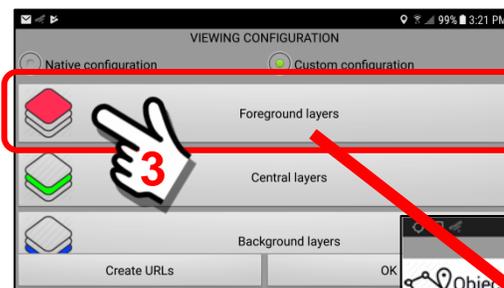
Three large buttons will be displayed

1. Foreground Layers
2. Central Layers
3. Background Layers



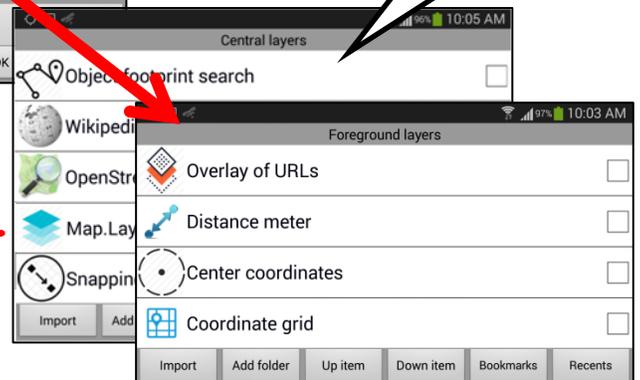
Custom Configuration mode is now activated

These features will be described in detail in **Section 8.5**.



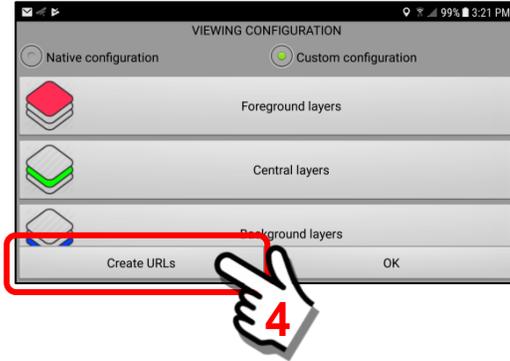
Examples of Foreground and Central Layer bookmark panels.

These panels allow the use of previously created bookmarks and map overlays to be used in Custom Layers.

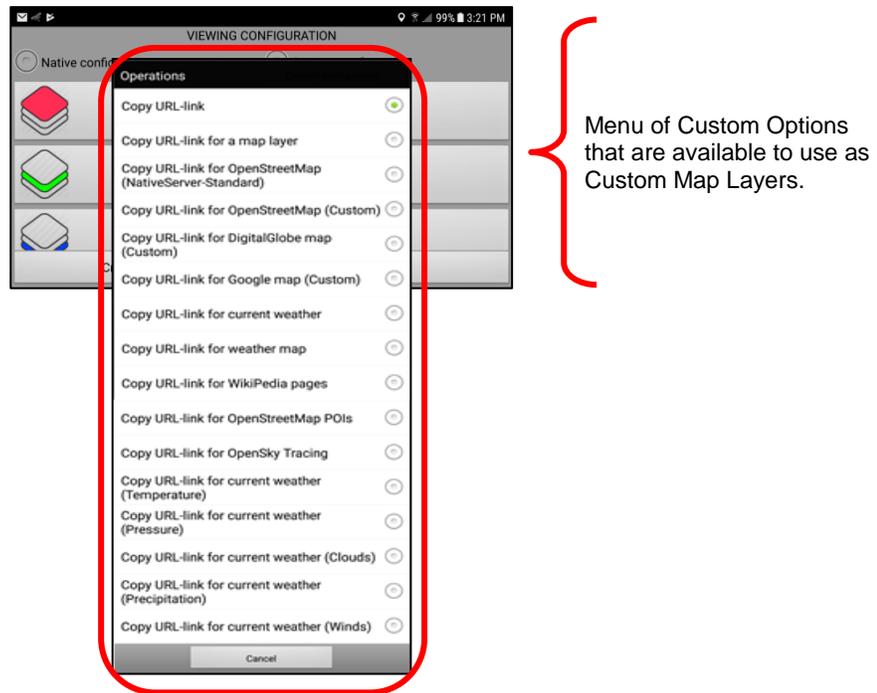


In addition to the ability to create Foreground, Central and Background Layers, the panel includes a “**Create URLs**” Button that has pre-defined map features that may be used to create the layers.

Click on the Create URLs Button.

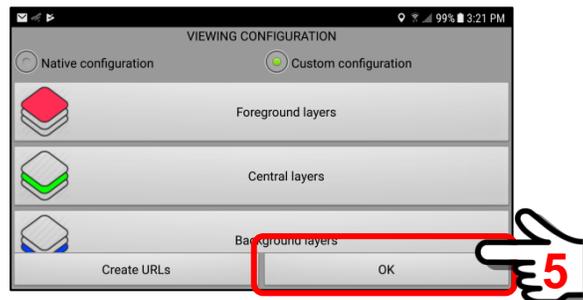


A pop-up panel will open with 16 menu options. These options will be described in **Section 8.4.1**.



### 3. **Saving Custom Configuration Options**

To save your work, click the “**OK**” Button on the Viewing Configuration Panel. You are returned to the Main Map Screen.



# 9. The “Bookmarks” Button features

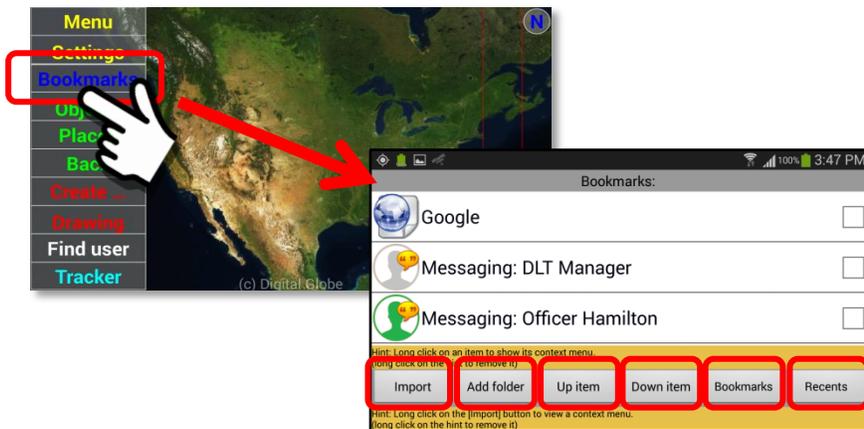
## 9.1. Overview of the Bookmarks panel

### Overview:

The “Bookmarks” feature allows a user to save a SHORTCUT to various functions of the mobile device. If a particular feature is used on a regular basis, a “bookmark” can be created so that a user can access it with a few simple clicks without having to navigate the menus.

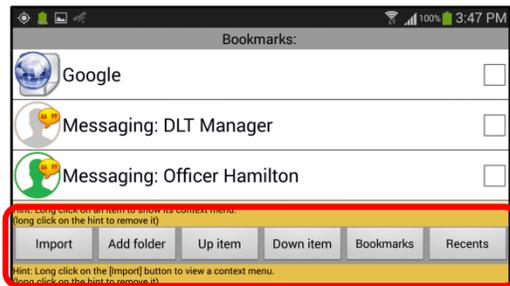
### Sentry MDU bookmarks panel:

As shown below the Bookmarks panel has six primary buttons.



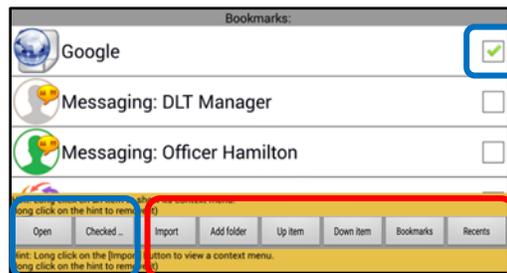
### General Layout of the Bookmarks Panel:

The Bookmarks Panel provides two modes of display depending on the level of detail desired by the User. These two formats are shown below.



### Standard Menu

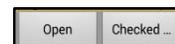
The “default” Standard Menu is what normally appears when the Bookmarks Button is clicked.



### Enhanced Menu

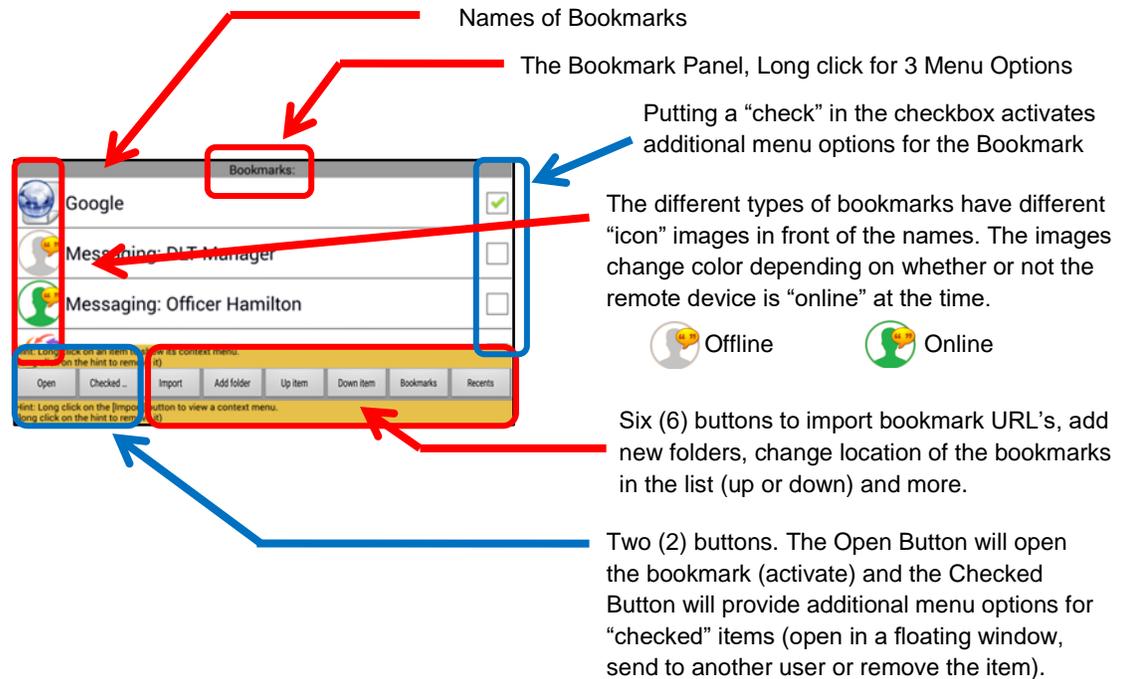
The “Enhanced” Menu is what appears when a checkbox adjacent to any of the bookmark items is “checked”.

Two additional buttons are put on the bottom menu bar.



## Description of the Panel Buttons on the “Bookmarks” screen:

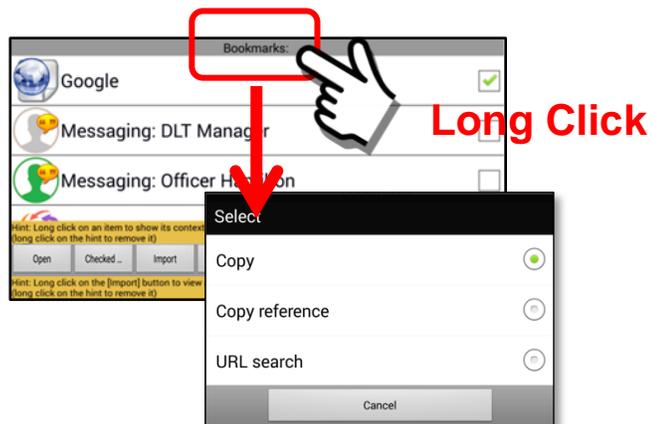
This section will describe the Menu Buttons and their associated features as used on the “Bookmarks” panel.



### 1. **Bookmark panel**

The Bookmark Panel has a top level set of Menu Options that will allow a user to copy bookmarks, copy bookmark references and to perform URL searches.

To access this top level menu, perform a “Long click” on the Bookmarks Title at the top of the panel.



Performing a “Long click” on the Bookmarks Title Block will open a pop-up Select Menu with 3 options.

### Copy

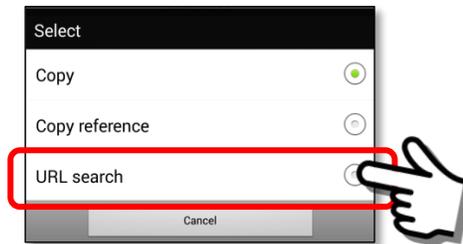
The “Copy” menu option will make a copy of the bookmark URL for the whole panel and store it on the Sentry MDU “clipboard” (.TEMP file folder). A user may then “Import” this bookmark and rename it to another name.

### Copy reference

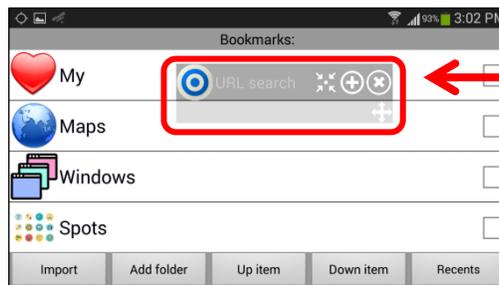
The “Copy reference” menu option is generally used when a large data item (ie Map with multiple objects and layers) needs to be sent as a bookmark. This feature does not actually “copy” the URL data. Instead, it uploads the body of the URL (the data) to the SentryMDU Data Server instance and then creates a reference “link” to that data. In this way, a large data item can still be transferred between mobile devices easily because only the “link” is being sent and not the complete data package. A bookmark created with the “Copy reference” may be sent to other Users the same way as other bookmarks are handled. A user may then “Import” this bookmark and rename it to another name. Allows easy setup of new bookmarks.

### URL Search

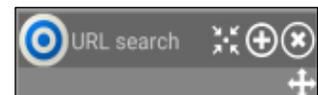
The “URL Search” option provides a Floating Window panel with a “target” button that can launch bookmarks and URL search functions across the SentryMDU App. See **Section 16.2** for a detailed discussion of the URL Search Panel.



This is an example of the “target panel button” that is launched by the URL Search function.

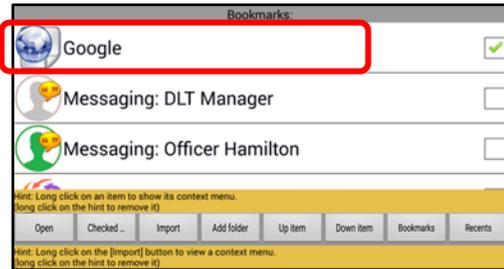


The URL Search Panel will appear as a floating window.



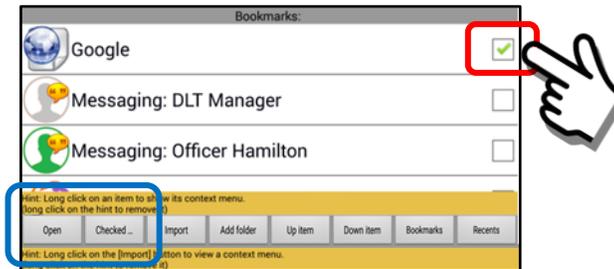
## 2. **Bookmark name**

This is the name of the bookmark as stored in the system. Users have the ability to edit and change names as necessary.



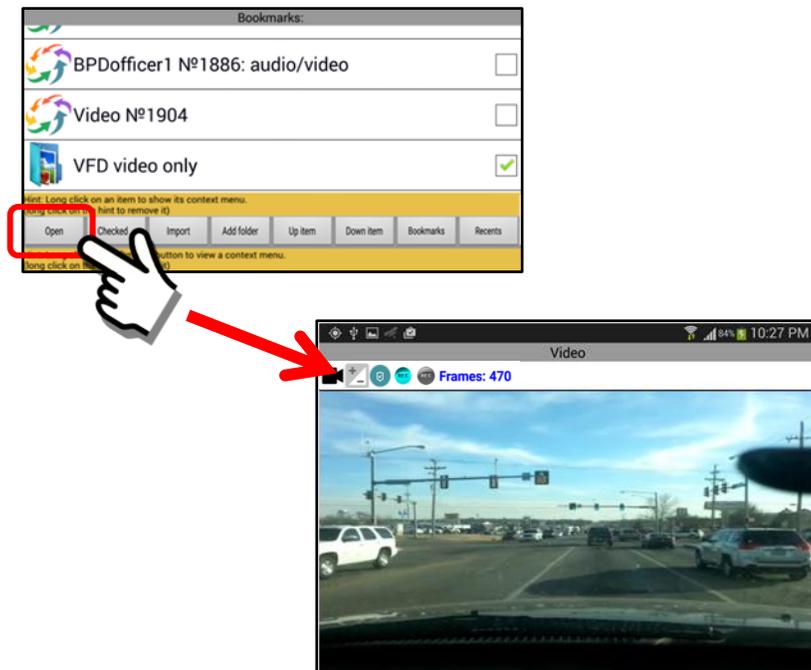
## 3. **Bookmark “checkbox”**

Activating the “checkbox” will put two additional buttons on the bottom menu bar. These provide additional features as illustrated below.



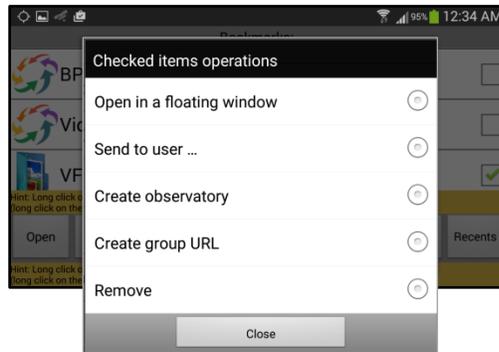
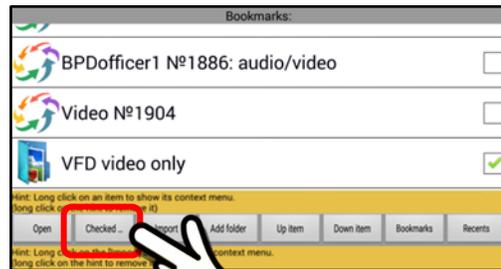
### The Open Button

The User may “open” the bookmark of the checked item(s).



### The Checked Button

Click on the “Checked ...” Button to open additional menu options.



#### Open in a floating window

Will open the bookmark viewer panel in a floating window. Refer to **Section 9.13** for more details on Floating Windows.

#### Send to User

Will open a list of users on the Sentry MDU Network from which the user can select someone to send the bookmark to.

#### Create observatory

Combine “checked” objects into an Object Observatory. See **Section 9.12** for details on Object Observatories.

#### Create group URL

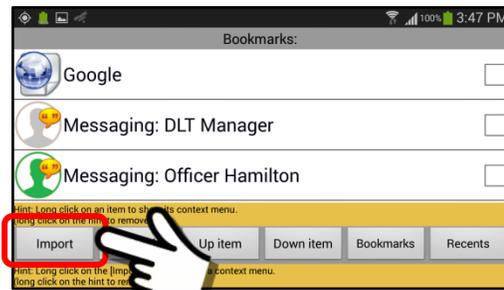
Create a combined URL (group) from the “checked” items selected from the Bookmark List.

#### Remove

Provides the User the ability to “remove” bookmarks from their mobile device.

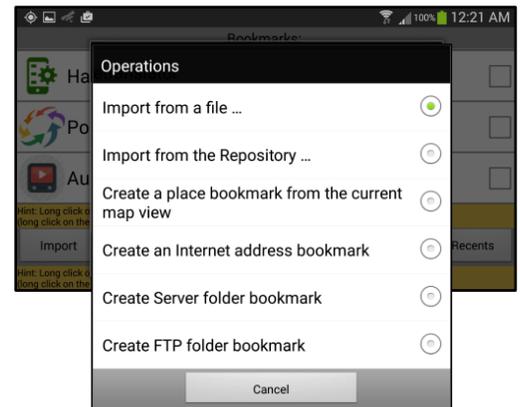
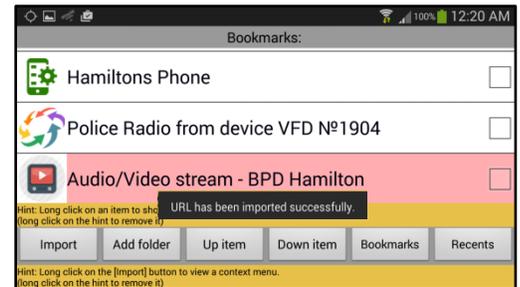
#### 4. Import Button

The “Import” Button will import previously saved bookmarks into the application and create “new” bookmarks from maps, files and the internet.



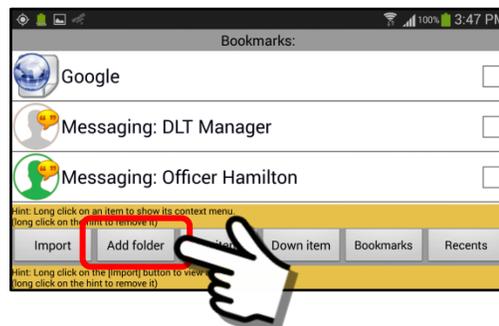
Short click for import

Long click for Menu



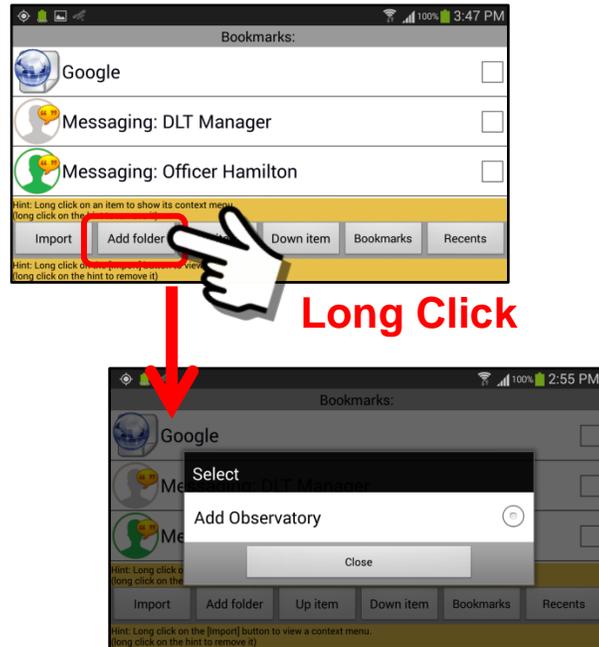
#### 5. Add Folder Button – Short click

Performing a “short click” on the “Add folder” button allows a user to create folders in the bookmark database. This will allow storing of bookmarks by function, department or subject matter.



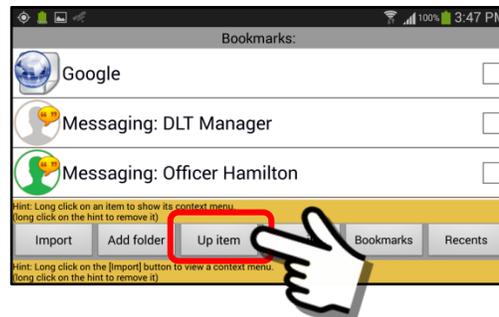
## 6. Add Folder Button – Long click

Performing a “long click” on the “Add folder” button opens the “Add Observatory” feature which enables a user to create multi-channel bookmarks that allow the monitoring of multiple people and sensors with a single click. See **Section 9.12** for a detailed description of the Object Observatory feature and how to set one up.



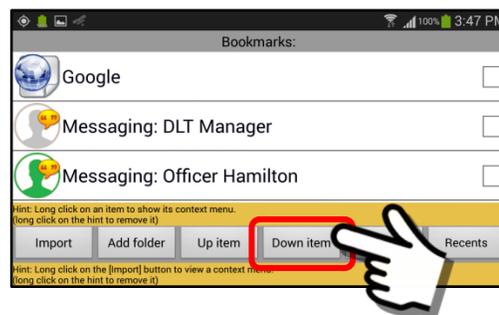
## 7. Up item Button

Allows a user to move the items in the bookmark list up in the listing order.



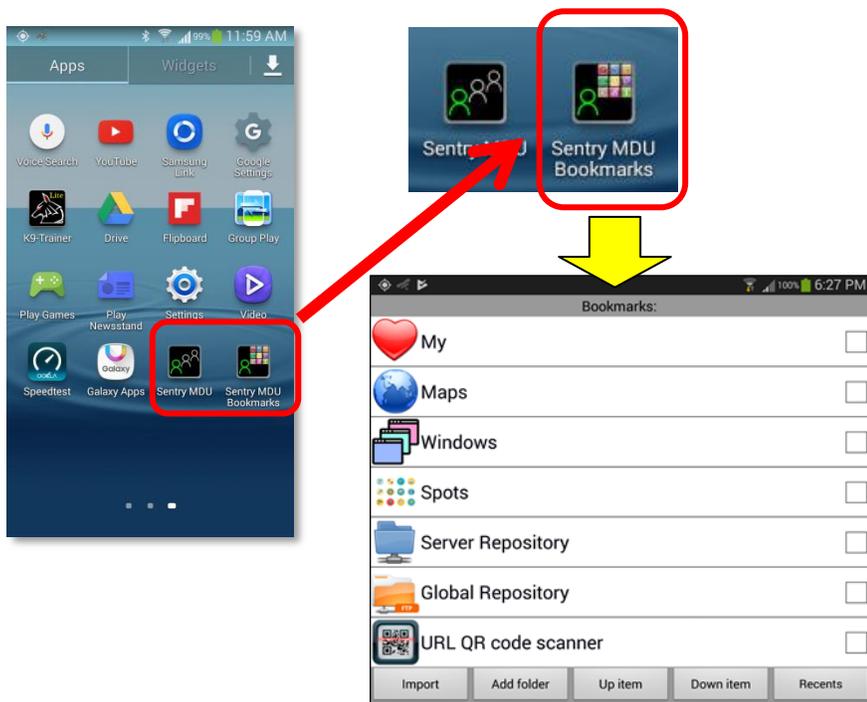
## 8. Down item Button

Allows a user to move the items in the bookmark list down in the listing order.



### 9. **Bookmarks Button**

Displays the “Quick Access” Bookmarks that are contained in the separate smartphone icon on the device screen.



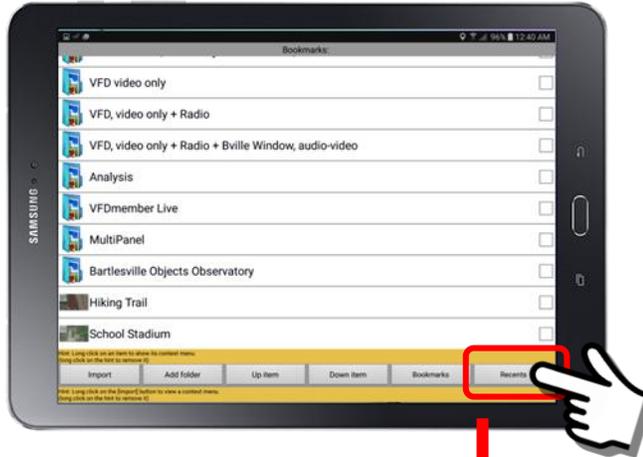
Clicking on the Bookmarks button takes you directly to the “Sentry MDU Bookmarks” Panel. See Section 9.31 for more details about the quick access bookmarks.



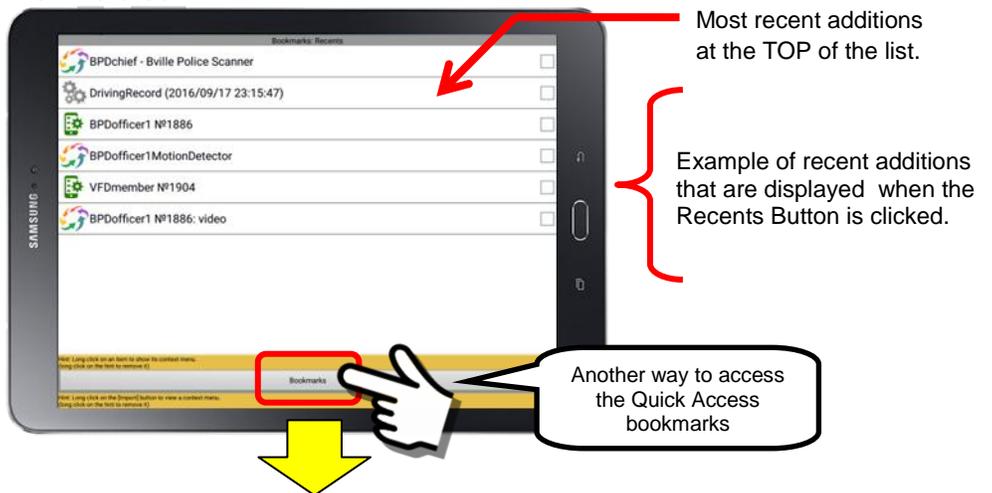
### 10. Recents Button

Allows a user to view/review items in the bookmark list that have recently been “added” to the bookmark listing. The list will contain the 25 most recent additions to the Bookmarks Panel, sorted by date, with the most recent at the top of the list.

#### 10” Tablet



#### 10” Tablet



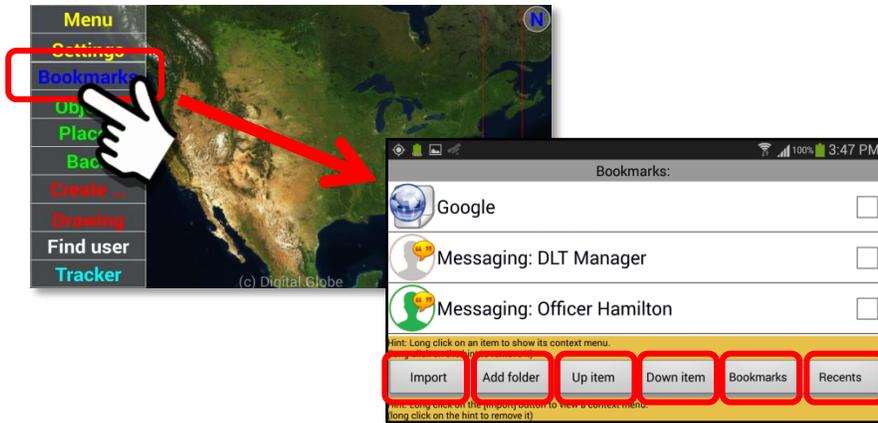
## 9.2. Navigating the Bookmarks panel

### Overview:

The “Bookmarks” Feature includes a variety of menus and options that allow a user to save a SHORTCUT to various functions of the mobile device. This section will describe the available panels and menu options.

### Sentry MDU bookmarks panel:

As shown below the Bookmarks panel has six primary buttons.



### Description of the panel buttons and features:

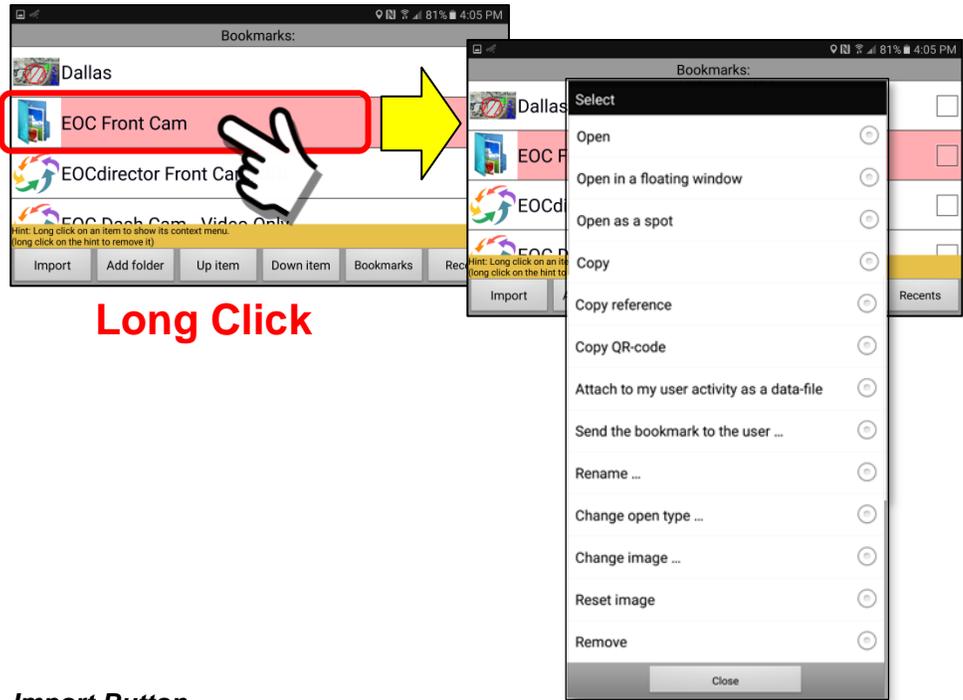
#### 1. Launching a “Bookmark” (short click on bookmark name)

To launch a bookmark, simply click on the bookmark name.



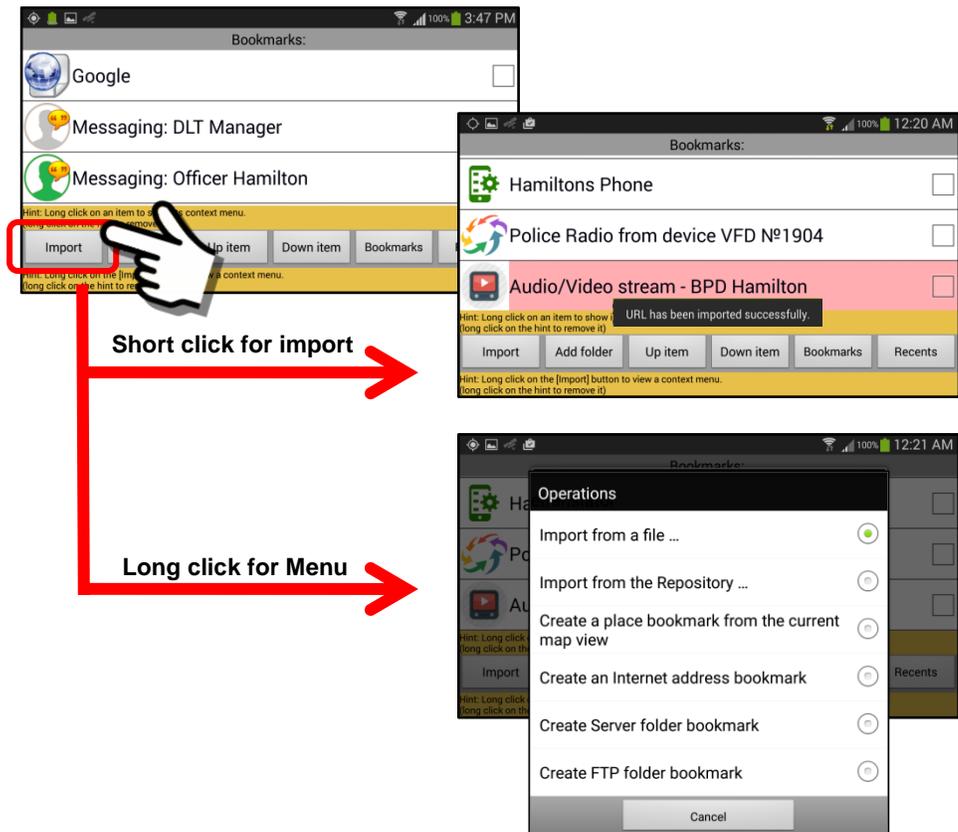
## 2. Working with existing bookmarks (long click on bookmark name)

Existing bookmarks can be manipulated in a variety of ways. A “long click” on the bookmark name will launch a menu of options.



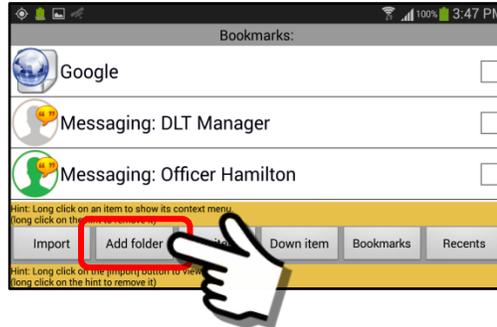
## 3. Import Button

The “Import” Button will import previously saved bookmarks into the application and create “new” bookmarks from maps, files and the internet.

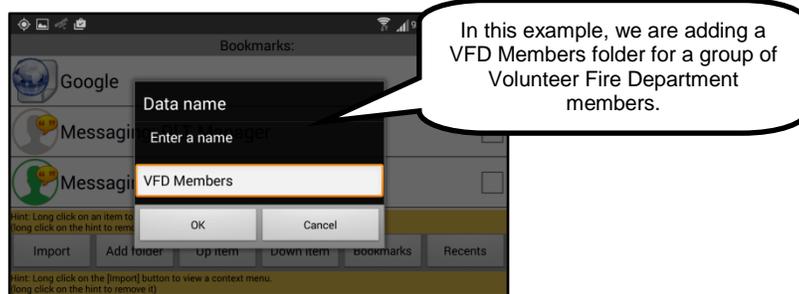


#### 4. Add Folder Button – Short click

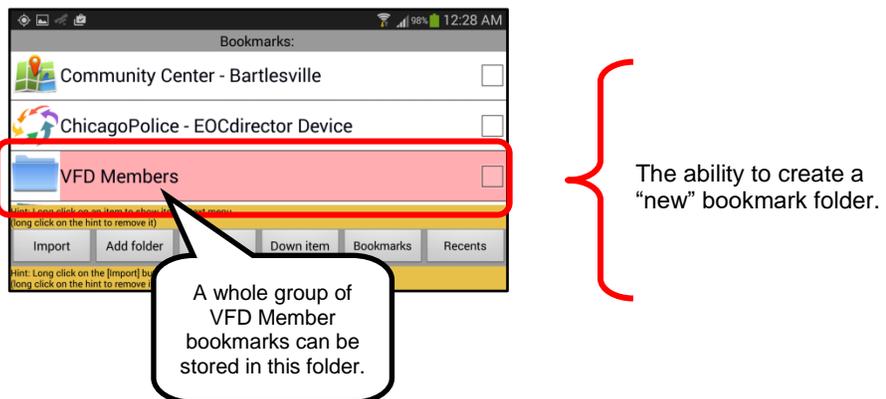
Performing a “short click” on the “Add folder” button allows a user to create folders in the bookmark database. This will allow storing of bookmarks by function, department or subject matter.



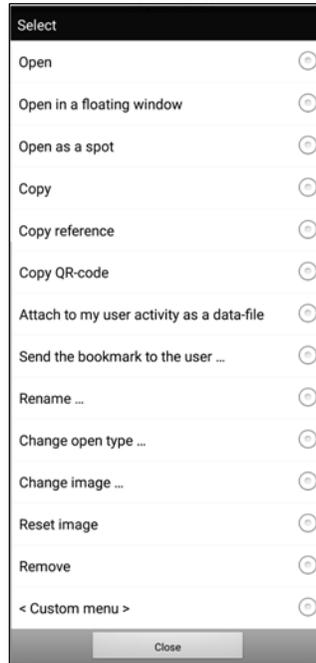
A “short click” will open a pop-up box where you will enter the name of the folder you want to create. The name should describe the feature and User Group that this bookmark will reference. You will have options later to “rename” the folder if you decide you want to change it.



Once created, the folder will appear at the bottom of the bookmark list. It may be necessary to scroll down to the bottom to see the new folder.



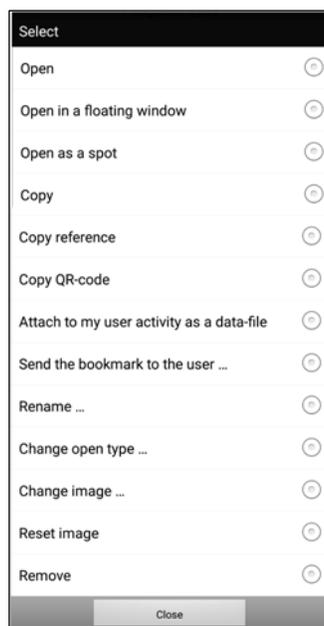
When a “new” folder (bookmark entry) is created, the User has a series of fourteen (14) menu options that are available. The list of menu options is shown below.



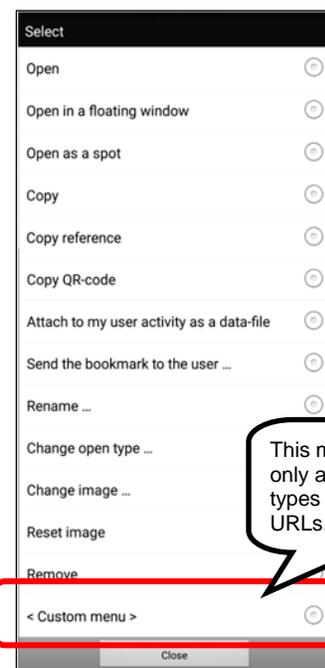
These menu items will be discussed in detail later in this section.

It is important to note that the **<Custom menu>** item (last item in the list) will only appear for specific types of URL bookmarks. For those bookmark entries where a Custom Menu option cannot be used, this menu item will NOT appear on the list.

### Standard Menu Option List

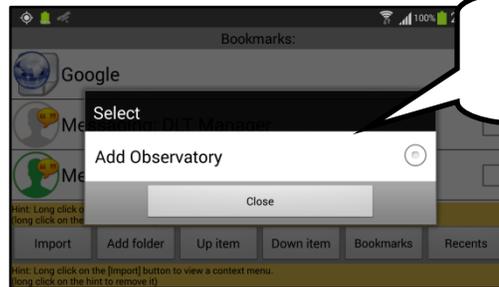
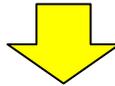
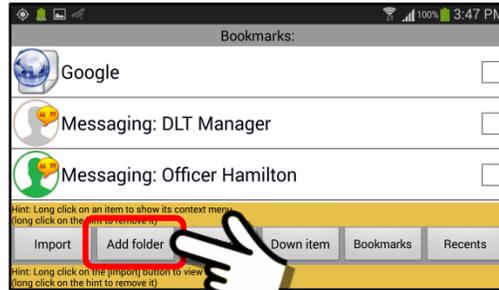


### Custom Menu Option List



### 5. Add Folder Button – Long click

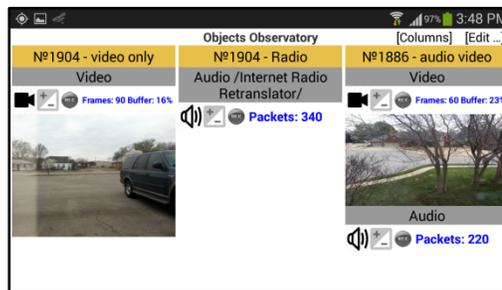
Performing a “long click” on the “Add folder” button opens the “Add Observatory” feature which enables a user to create multi-channel bookmarks that allow the monitoring of multiple people and sensors with a single click. Please see **Section 9.12** for a detailed description of the **Object Observatory** feature and how to set up everything.



A “Long click” will open an “Add Observatory” panel which is the first step in the setup.

This is a typical view of an Object Observatory panel. In this example, the screen has 3 sensor inputs. Two video feeds from remote devices and one audio retranslation from the internet. These two panels illustrate both a horizontal view and stacked view configuration.

#### Horizontal View

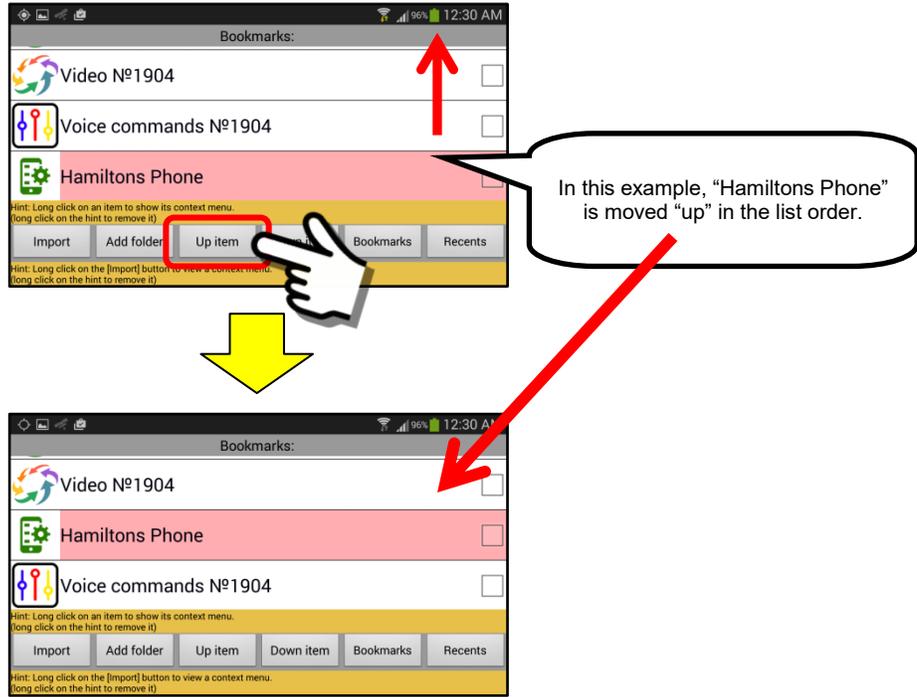


#### Stacked View



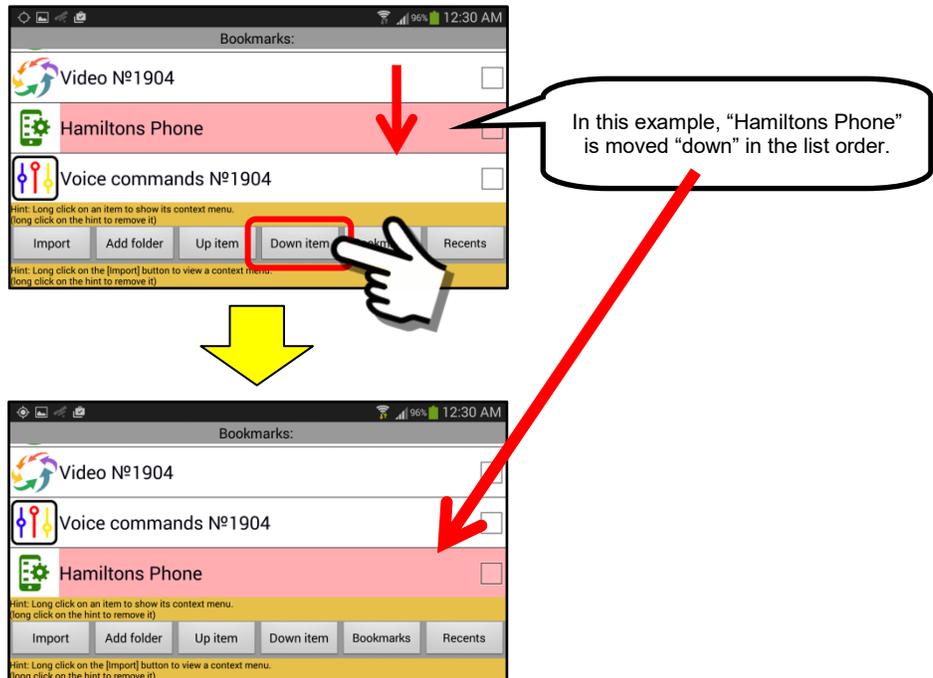
## 6. Up item Button

Allows a user to move the items in the bookmark list up in the listing order.



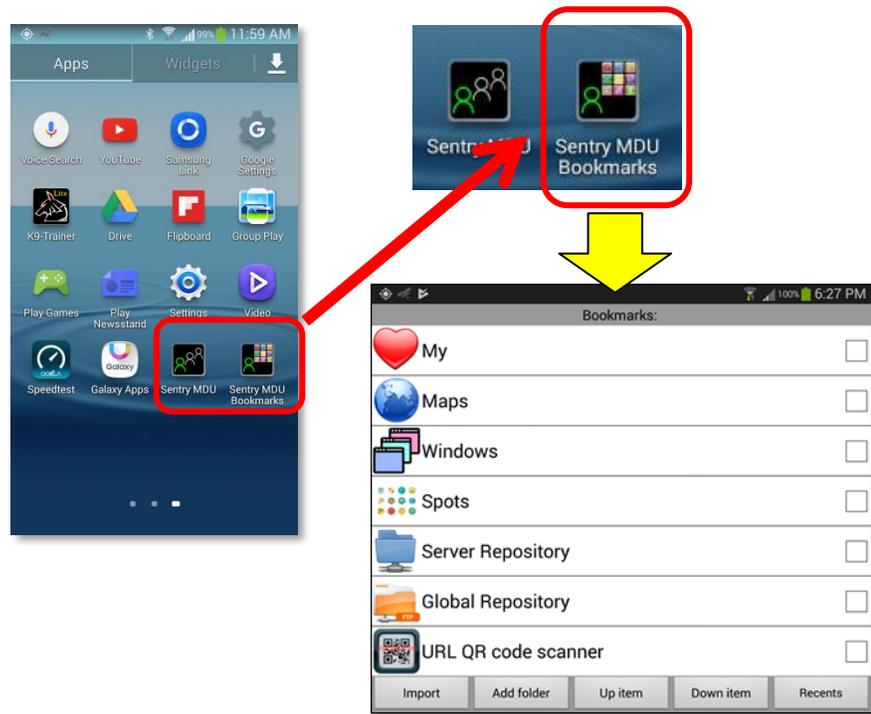
## 7. Down item Button

Allows a user to move the items in the bookmark list down in the listing order.



### 8. **Bookmarks Button**

Displays the “Quick Access” Bookmarks that are contained in the separate smartphone icon on the device screen.



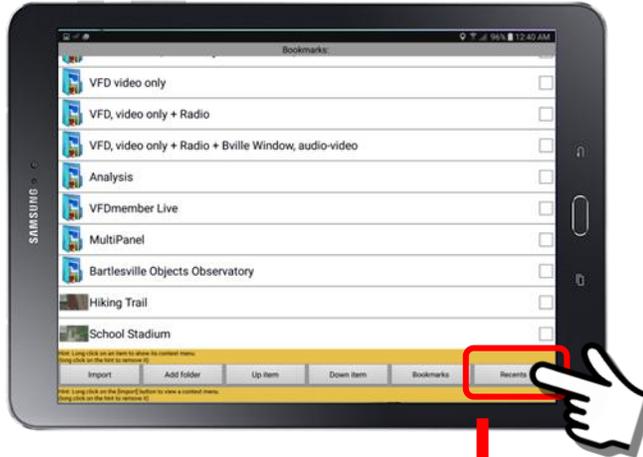
Clicking on the Bookmarks button takes you directly to the “Sentry MDU Bookmarks” Panel. **See Section 9.32 for more details about the quick access bookmarks.**



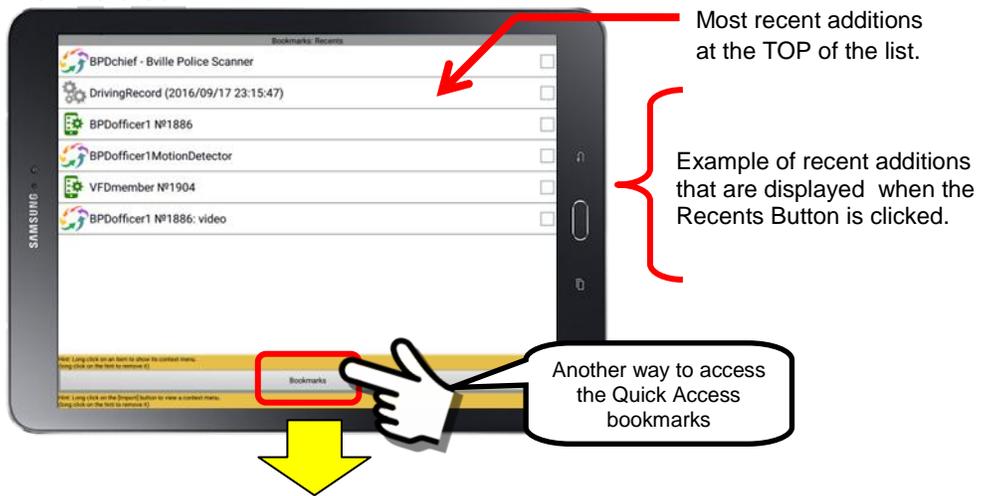
### 9. Recents Button

Allows a user to view/review items in the bookmark list that have recently been “added” to the bookmark listing. The list will contain the 25 most recent additions to the Bookmarks Panel, sorted by date, with the most recent at the top of the list.

#### 10” Tablet



#### 10” Tablet



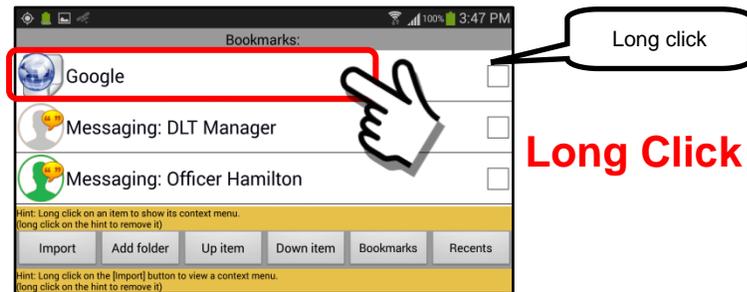
### 9.3. Menu options on the Bookmarks Panel

#### Overview:

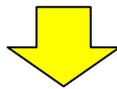
The standard configuration will show thirteen (13) menu options that a user has available to manipulate bookmark entries. In addition, certain types of bookmark URLs may use a "Custom" configuration option. In this case, fourteen (14) menu options will be displayed. Perform a "long click" on a bookmark name to open the options menu. This section will explain each of the menu options.

#### Sentry MDU Bookmark options menu:

Perform a "long click" on a bookmark name to open the options menu.

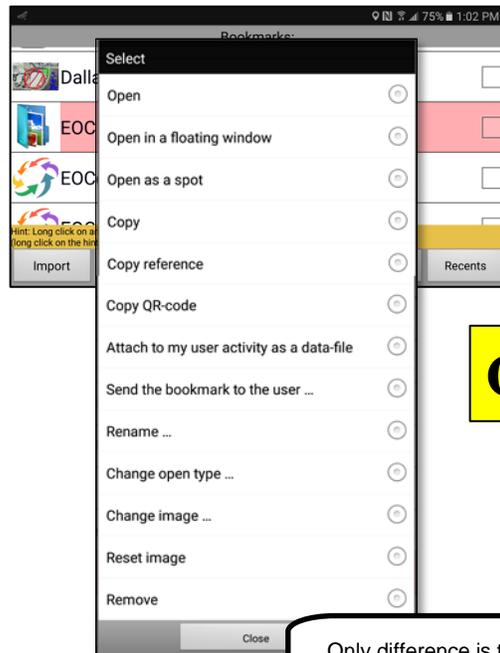


Long Click

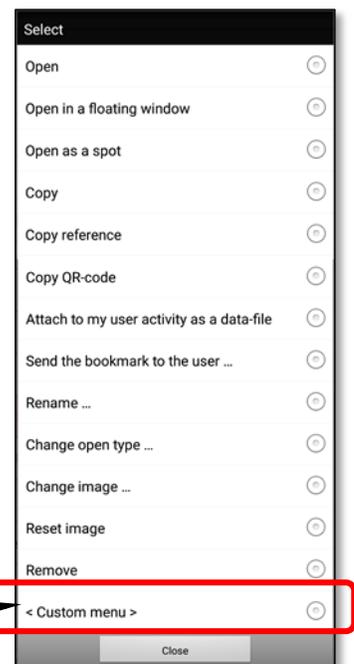


Depending on the type of bookmark and whether or not it was created with the <Custom Menu> option, there are two (2) types of Menu Option lists that may be displayed. They are shown below.

#### Standard Menu Option List



#### Custom Menu Option List



Only difference is the Custom Menu option

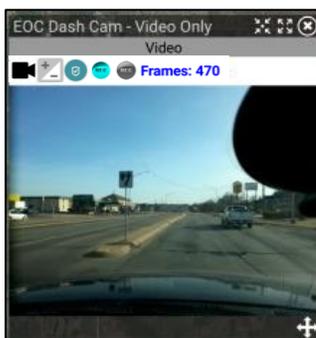
The 14 menu items are explained in detail below.

### Open

The “Open” menu option will open the bookmark and display the contents. This may be audio, video, maps and locations. In the case of this example, this bookmark (Google) will open the Google internet search engine.

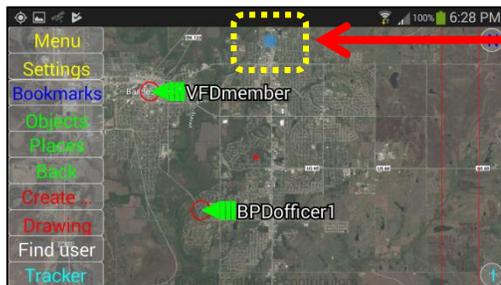
### Open in a floating window

This option opens the bookmark data in a “floating window”. The floating window may then be resized and moved about the screen.



### Open as a spot

The “Open as a spot” menu option will install a 5mm “colored dot” along the top border of the screen display. When “clicked” this spot will launch the bookmark URL (ie floating window, video panel, etc.).



Example of a “spot” created as a URL link. Click to open a floating window.

### Copy

The “Copy” menu option will make a copy of the bookmark and store it on the Sentry MDU “clipboard” (.TEMP file folder). A user may then “Import” this duplicate bookmark and rename it to another name. Allows easy setup of new bookmarks.

### Copy reference

The “Copy reference” menu option is generally used when a large data item (ie Map with multiple objects and layers) needs to be sent as a bookmark. This feature does not actually “copy” the URL data. Instead, it uploads the body of the URL (the data) to the SentryMDU Data Server instance and then creates a reference “link” to that data. In this way, a large data item can still

be transferred between mobile devices easily because only the “link” is being sent and not the complete data package. A bookmark created with the “Copy reference” may be sent to other Users the same way as other bookmarks are handled. A user may then “Import” this bookmark and rename it to another name. Allows easy setup of new bookmarks.

#### Copy QR-code

The “Copy QR-code” menu option will make a copy of the bookmark URL and store it on the Sentry MDU “clipboard” (.TEMP file folder) as a QR-code image. A user may then “Import” this bookmark by scanning the QR-code. Allows easy setup of new bookmarks.

#### Attach to my user activity as a data-file

This option provides that the URL code in the bookmark can become part of the “content” stored under the user’s Current Activity (ie Default, Summer, Winter, etc.).

#### Send the bookmark to the user

The Sentry MDU System makes it possible for Users to “share” bookmarks with each other. This will enable users to rapidly share bookmarks of contact information, places and locations with other users. See **Section 9.10** for details. Bookmarks that use “local” sensors cannot be sent to other users since they do not have those “local” sensors on their mobile device.

#### Rename

This option allows a user to change the name that is attached to a particular data element. When we click on the “Rename” menu option, we are presented with a data entry box to edit/change the name.

#### Change open type

When a bookmark is “opened”, the default setting is to open the data element from within the Sentry MDU App. This option allows a user to change the “default” such that the data element may be opened as a floating window.

#### Change image

This option will allow a user to change the thumbnail “icon” image that is displayed on the bookmark list. Depending on the data element, the Sentry MDU System assigns a data type thumbnail to the bookmark. This option allows a user to install custom thumbnail images that may be more relevant to their organization.

#### Reset image ...

This option allows a user to change the icon back to the system “default” image in the event the icon had been changed previously.

#### Remove

The “Remove” menu option allows a user the ability to permanently remove bookmark data elements that are no longer needed.

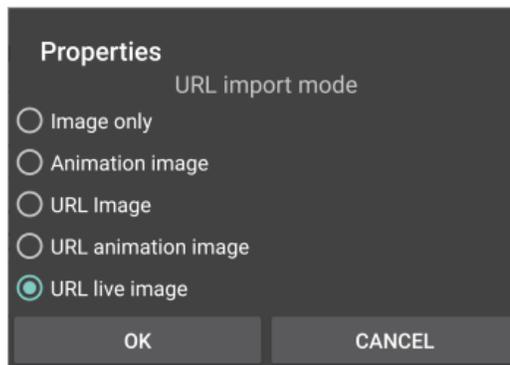
<Custom menu> (does not appear for all bookmark types)

Certain types of bookmark URLs may use a “Custom” configuration option. This following section (9.4) will explain the **<Custom menu>** option.

The use of **User Defined** custom map layers will incorporate this **<Custom menu>** option in the configuration. This option will identify the **PROPERTIES** available in the URL Import Mode when the **<Custom menu>** option is used.

A “Long click” on a bookmark created as a **User Defined** custom map layer will provide the **<Custom menu>** option that will provide a pop-up menu of **PROPERTIES**.

The Properties Panel is shown below:



The Properties Panel sets the **URL Import Mode** for the URL that is being attached to the Custom Map Layer. There are 5 property types that may be specified.

## 9.4. Using the <Custom menu> option with Map Layers

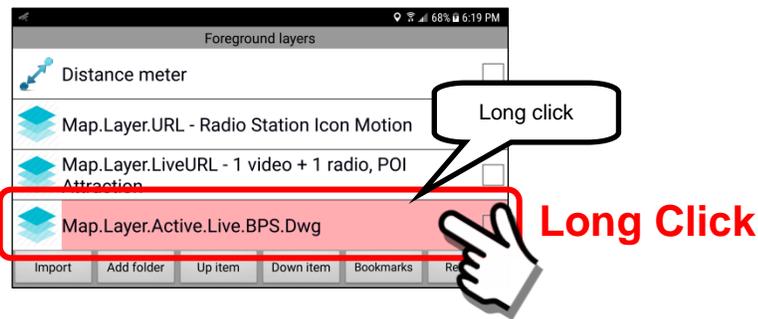
### Overview:

Certain types of bookmark URLs may use a “Custom” configuration option. In this case, fourteen (14) menu options will be displayed. Perform a “long click” on a bookmark name to open the options menu. This section will explain the <Custom menu> option.

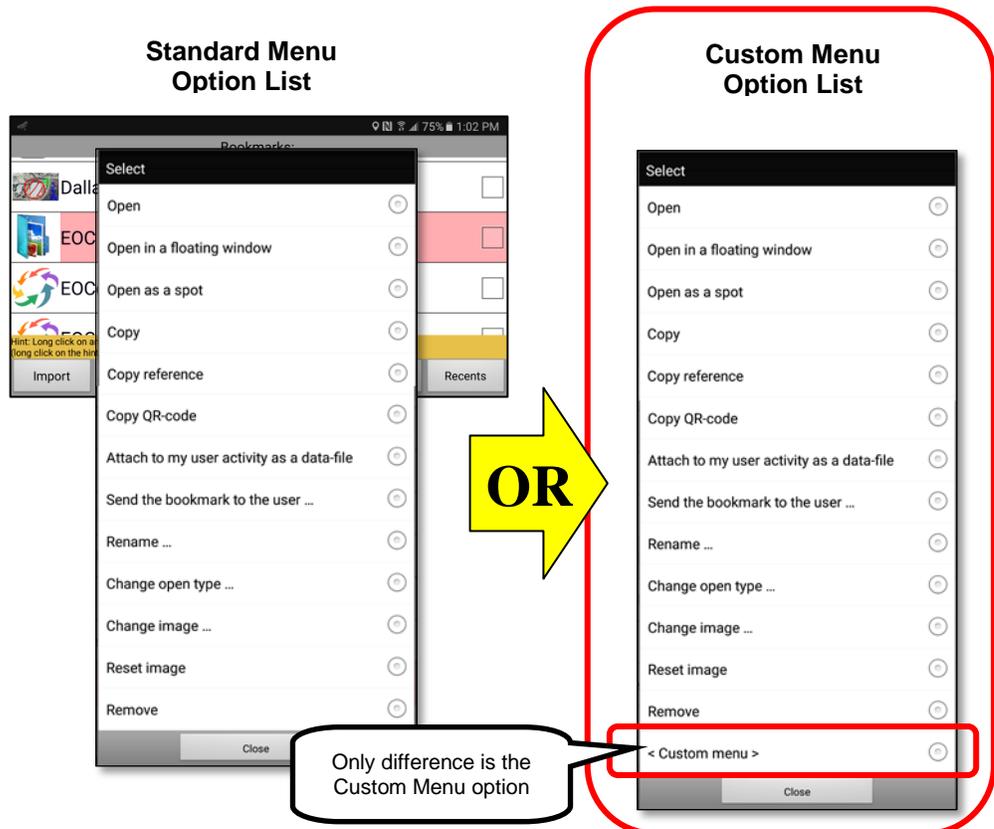
The use of **User Defined** custom map layers will incorporate this <Custom menu> option in the configuration. This section will identify the PROPERTIES available in the URL Import Mode when the <Custom menu> option is used.

### The <Custom menu> options menu:

Perform a “long click” on a bookmark name to open the options menu.



Depending on the type of bookmark and whether or not it was created with the <Custom Menu> option, there are two (2) types of Menu Option lists that may be displayed. They are shown below.

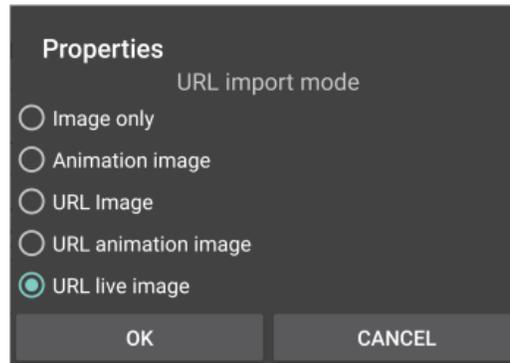


The <Custom menu> option (does not appear for all bookmark types)

### **User Defined Custom Map Layers**

A “Long click” on a bookmark created as a **User Defined** custom map layer will provide a pop-up menu of PROPERTIES.

The Properties Panel is shown below:



The Properties Panel sets the **URL Import Mode** for the URL that is being attached to the Custom Map Layer. There are 5 property types that may be specified.

#### Image only

This import mode configures the custom map layer to accept an “image” with no corresponding URL link properties. You get just an image.

#### Animation image

This import mode configures the custom map layer to accept an “image” that HAS animation properties (ie animated GIF). This lets the custom layer know that a particular graphic element has animation properties.

#### URL image

This import mode configures the custom map layer to accept a “URL image” that DOES HAVE corresponding URL link properties. When a User clicks on the “image” a URL link will be launched.

#### URL animation image

This import mode configures the custom map layer to accept a “URL image” that HAS animation properties (ie animated GIF) AND has a corresponding URL link property. When a User clicks on the “URL animation image” a URL link will be launched.

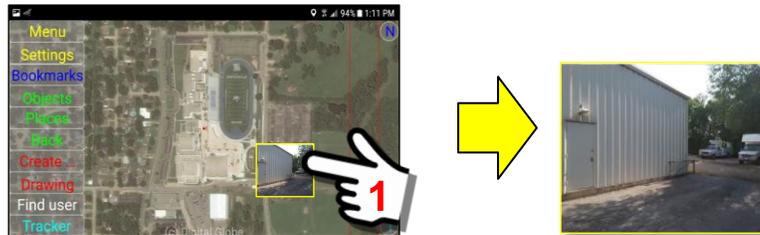
#### URL live image

This import mode configures the custom map layer to accept a “URL live image” that has a corresponding URL link that will stream “live” data such as audio or video. When a User clicks on the “URL live image” a URL link will be launched.

When configuring multiple URL sources attached to a Custom Map Layer you **MUST specify the correct URL Import Mode for the particular data type.** The system will attempt to guess based on the type of custom map layer “name” that you specify, but if you have multiple embedded objects (doing different things), adjustments are usually required.

For example, if you specify a **Map.Layer.Active.Live** custom map layer, the system will assume the “URL live image” type of URL Import Mode. However, if you have multiple URL types on the same Map Layer you will need to adjust the URL Import Mode setting for each different URL type.

For example, **if we want the BPDofficer1 “Covert Cam” to be transmitting whenever we access this Custom Layer.**

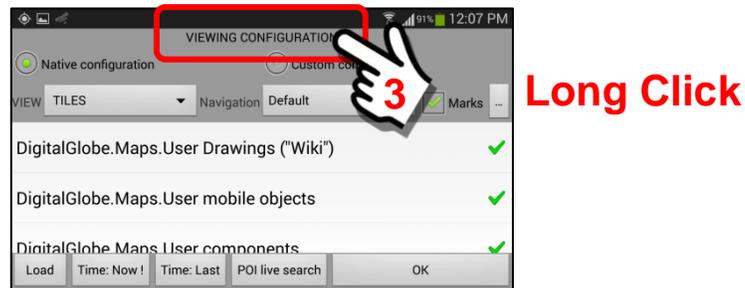


To adjust the URL Import Mode setting for the “Covert Cam” we do the following.

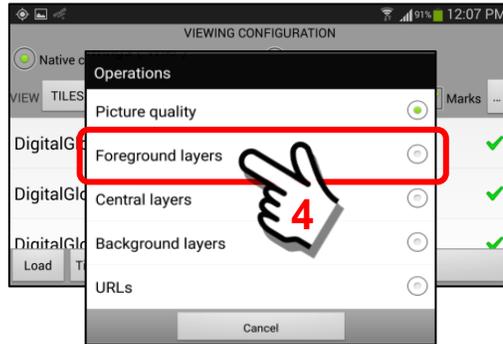
At the Main Map Screen, click on the Settings Button.



At the Settings Panel, perform a “Long click” on the **Viewing Configuration** heading bar.

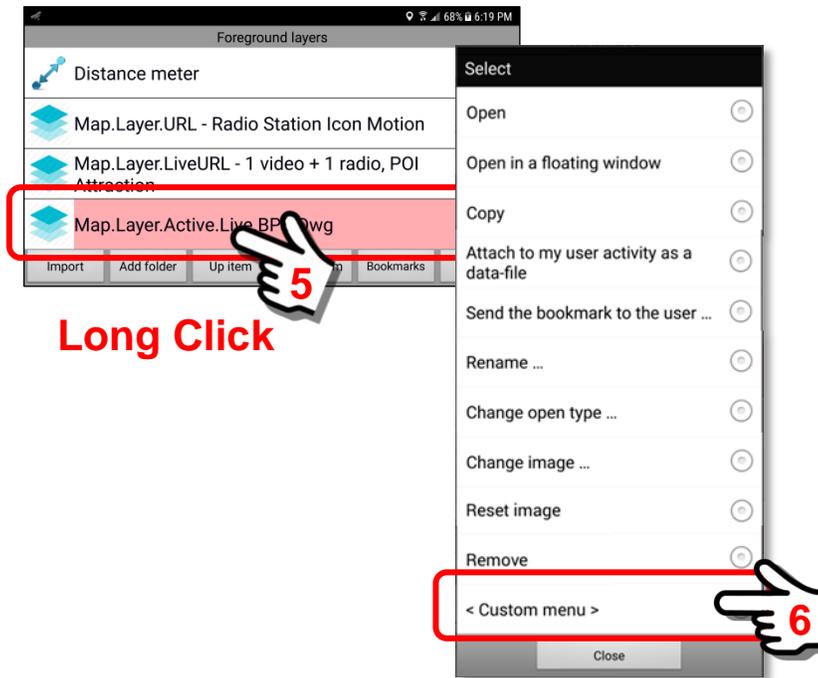


A pop-up Operations Menu will appear. Select the Foreground Layers option.



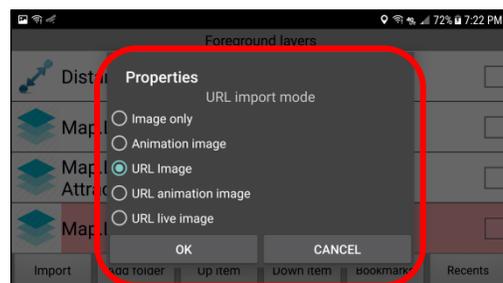
The Foreground Layers menu option will open the Foreground Layers Panel where we have the **Map.Layer.Active.Live.BPS.Dwg** Layer. To adjust the settings, we will go to the “<Custom Menu>” item in the Options Menu

“Long Click” on the Custom Map Layer item.



Select the “<Custom menu>” Option from the pop-up menu listing. A Custom Map Layer pop-up **Properties Panel** will open.

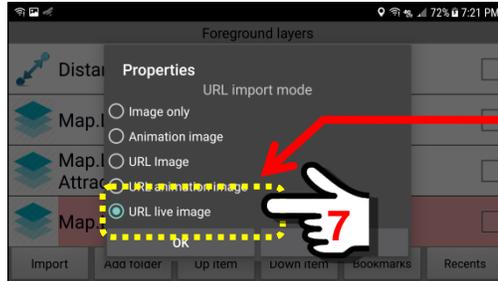
**Inspect the default setting for the URL Import Mode.**



### Properties Panel

Determines HOW the attached URL will act when embedded into the Custom Map Layer.

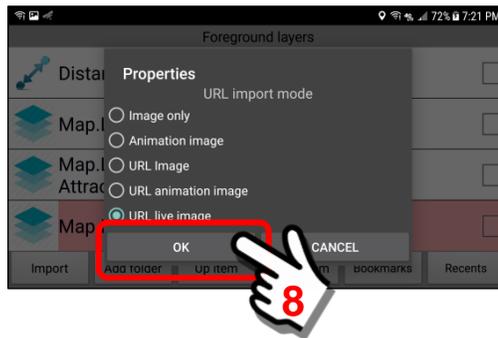
Always be aware that the **URL Import Mode** default setting will be set to whatever it was the last time it was used. In this example, we want the “URL live Image” mode because we want the “Covert Cam” video to be running all the time whenever we launch this Custom Map Layer. Click on the **URL live Image** menu option to activate that mode.



We want to click on a “URL live image” to make sure the Covert Surveillance Camera is always running.

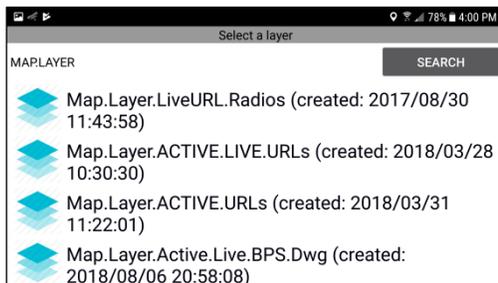
**URL live Image**

When finished, click the “OK” Button to close the panel settings.



**Important Note:** You will need to review/adjust these settings for each new type of URL you install on a Custom Map Layer.

This Properties Panel will generally be displayed for bookmarks that are used for **User Defined** Custom Map Layers. Examples are shown below.

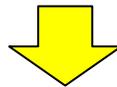
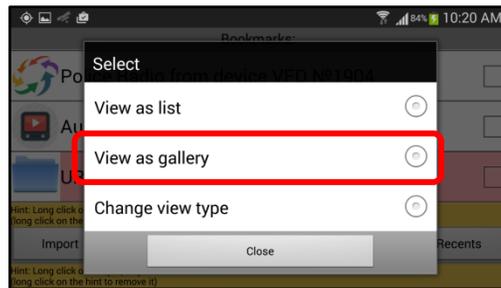


Typical bookmark types that will use the **<Custom menu>** option **Properties Panel**

**Gallery Bookmark <Custom menu> option**

When used with the Gallery Bookmark feature, the “Custom menu” option allows a user to group common bookmarks onto either a “list view” or a “floating panel view” that can be accessed from the device screen. See **Sections 9.14** on how to set up and use a URL Gallery Bookmark.

The example below will show a Floating Panel view.



**10” Tablet showing a URL Gallery floating panel**



# 10. The “Objects” Button features

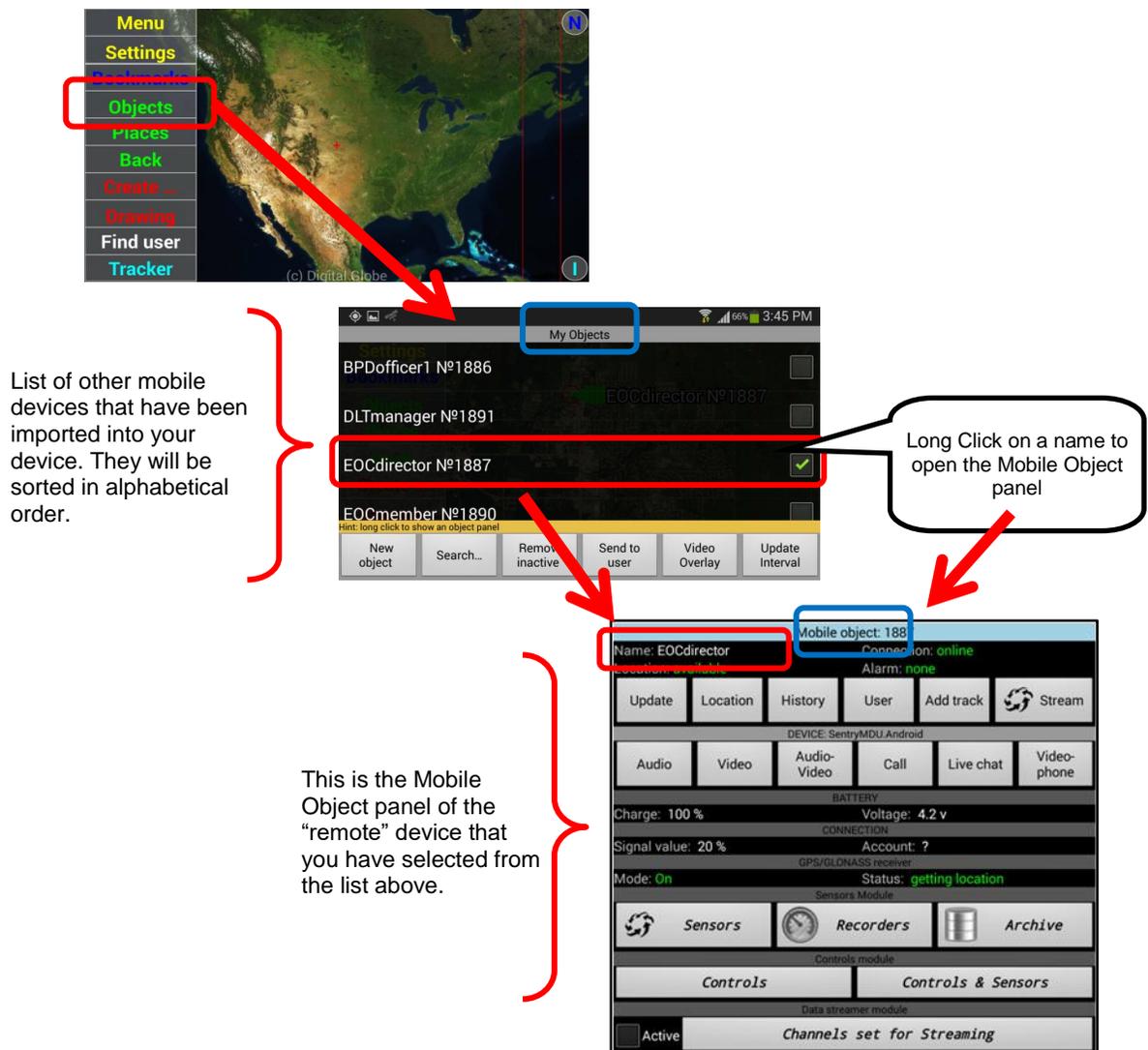
## 10.1. Overview of the My Objects and Mobile Objects panels

### Overview:

The “Objects” Button opens a panel that provides a list of other mobile devices (objects) that have been identified on a specific Sentry MDU Data Server instance. When the SentryMDU App is initially installed on a mobile device, only the “object” of the device itself is installed. Depending on the security settings of a particular user the mobile devices of others on the network may also be installed on the device.

The “My Objects” Panel provides the list of other mobile devices that have been imported to the device. Performing a “long click” on a mobile device name (ie EOCdirector) will open the “Mobile Object” Panel for that particular device. Depending on your specific security access, you may have access to view the sensors of the remote device and monitor audio-video streams and other content.

This section will explain all features of the two panels.

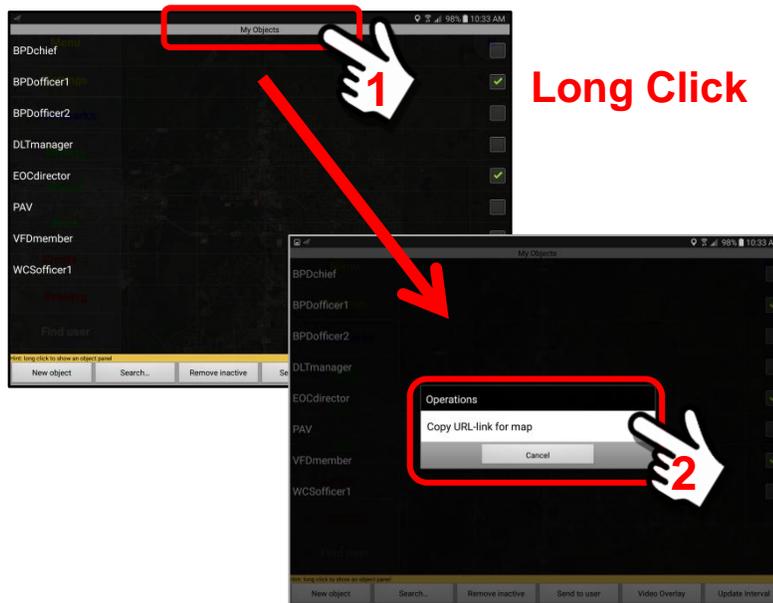


## Custom Map option available from the “My Objects” Panel:

The “My Objects” Panel has a bookmarks feature that allows a user to save a SHORTCUT that will create a “custom map panel” that can monitor the audio/video from multiple remote devices. If a group of devices is monitored on a regular basis, a custom map screen bookmark can be created so that a user can access all of them with a few simple clicks without having to navigate other menus.

A full explanation is available in **Section 9.16** on how to create a Custom Map Bookmark that will display the audio-video from a group of remote devices.

Several of the key screens are illustrated below.



The result is a **Bookmark** that will create a custom map screen with multiple users in display mode. The data streams from each remote device may be toggled to “full screen”. Simply “click” on the individual picture for the remote device and it will enlarge to full screen. In addition, when full screen, the audio stream from that particular remote device will now be active.



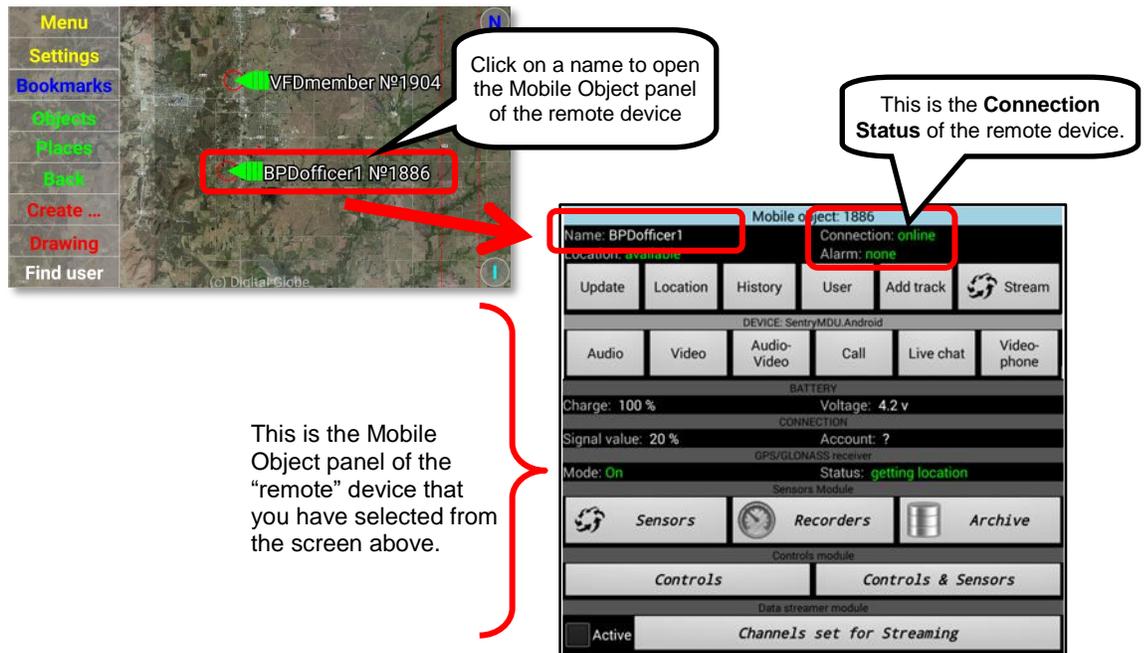
## 10.2. Access to Mobile Objects Panel from SentryMDU Main Screen

### Overview:

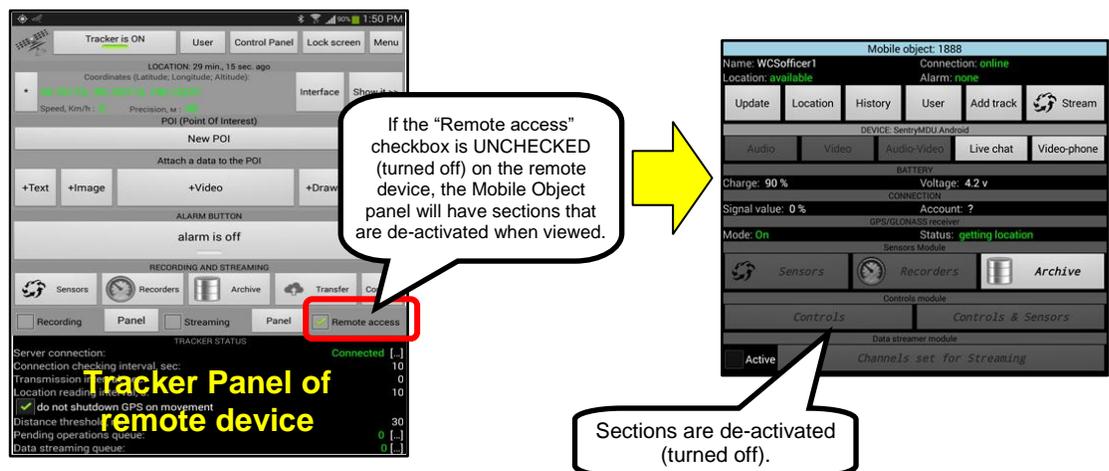
The Mobile Object panel of any remote device may be accessed by clicking on the object marker from the main map screen. The Connection Status of the remote device shows the current state of the network connection between the Object (remote User) and the SentryMDU Data Server. **If an object loses connection, it does NOT attempt to reconnect immediately (avoiding multiple connect tries). The system will wait 30 seconds before a reconnect attempt.**

### Sentry MDU Mobile Object panel:

Click on the object “marker” on the main map screen. The Mobile Object panel for that user/device will open providing access to the remote device features.



If a remote user has disabled the **Remote access** feature on their Tracker Panel, the mobile object panel will have sections that are de-activated (grayed out) when viewed.



Depending on User Configuration, you may see two different layouts of the Communications Buttons on the Mobile Object Panel. These two versions will be used throughout this guide.

The differences in the panel buttons is due to the “Call” Feature (using the phone) included in the Sentry MDU System. During initial registration, if a User provides a telephone number (optional choice) then the “Call” Feature (Button) is provided on both the Mobile Object Panel and the User Information Panel.

The Default button layout

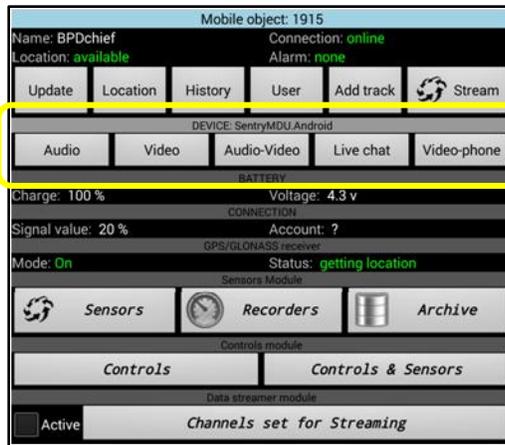


The Call Feature button layout (when a telephone number is provided)

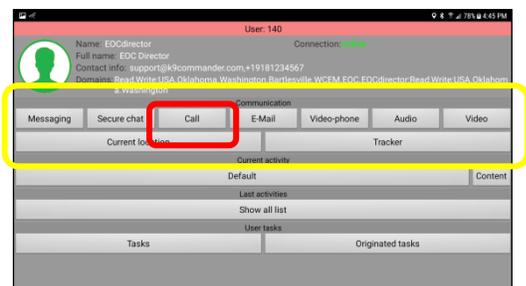
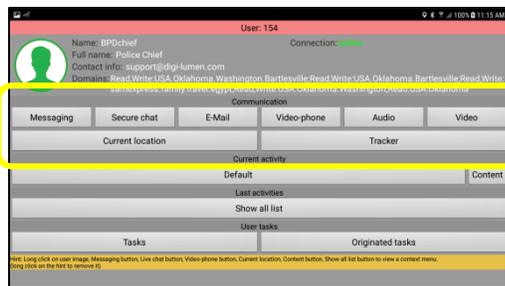
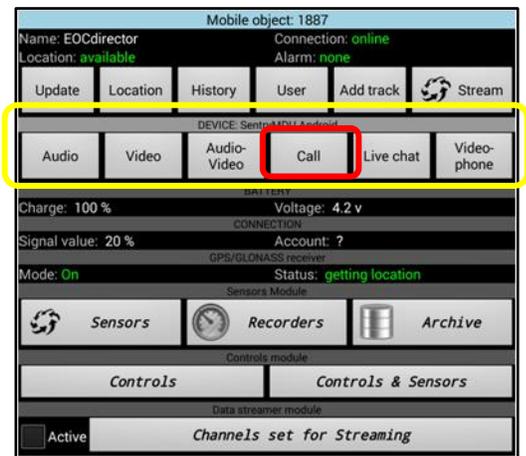


Review the two panels shown below.

**No Call Button Displayed**



**Call Button Displayed**



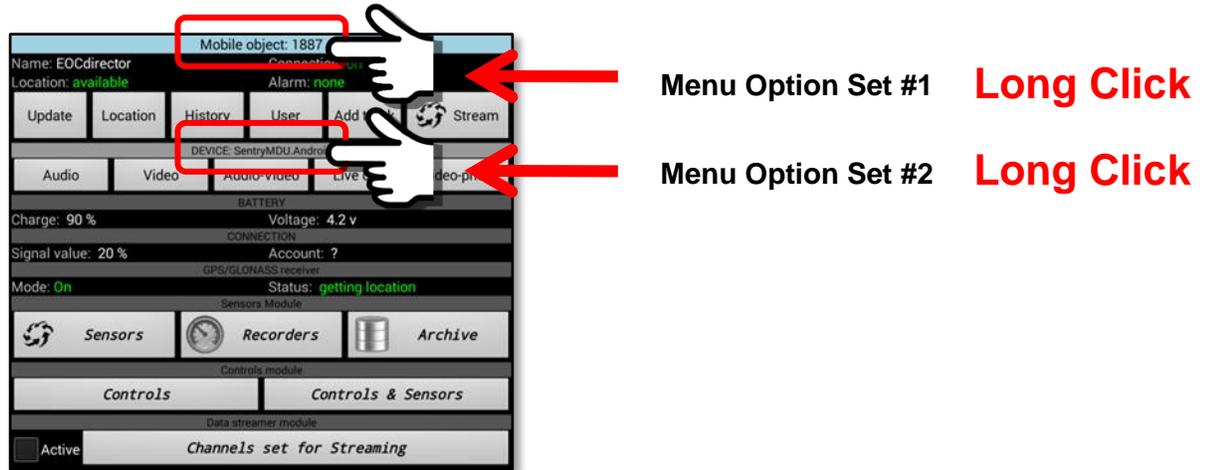
### 10.3. Menu options on the Mobile Objects Panel

#### Overview:

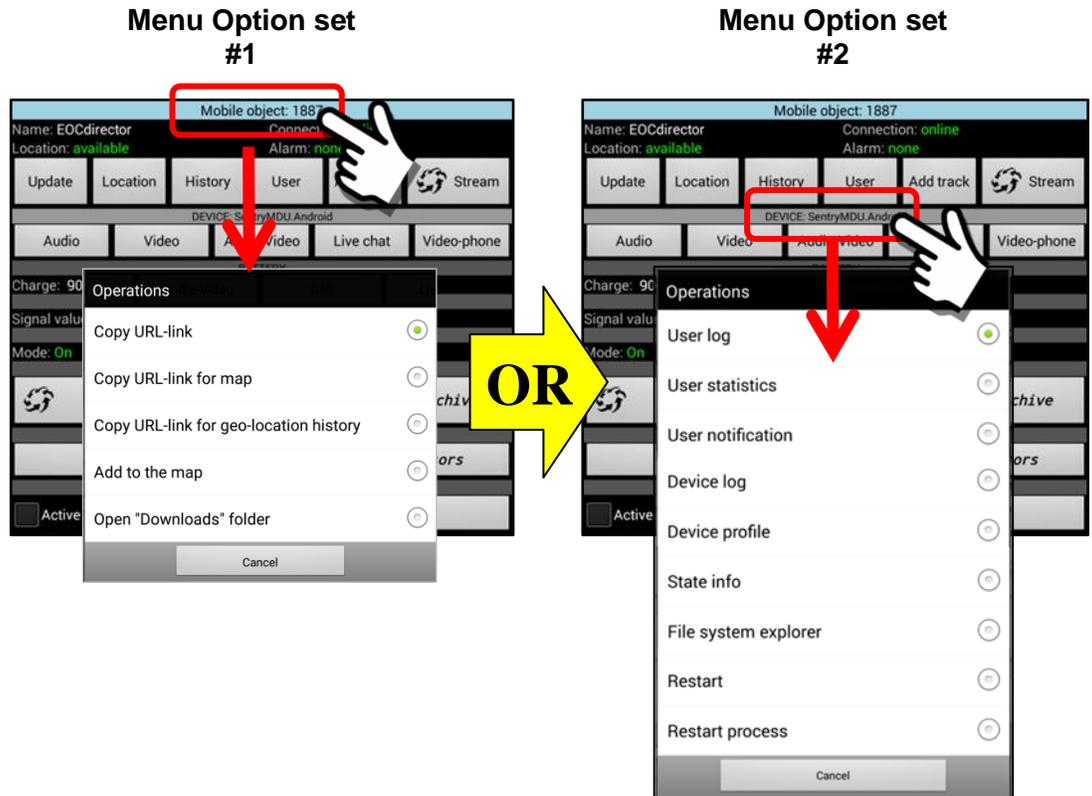
The Mobile Objects Panel has a series of Menu Options that are available by performing a “Long click” on specific parts of the Panel. One group has five (5) menu options and the other group has nine (9) menu options. This section will summarize each group of menu options. Detailed explanations will be provided in other sections of this guide.

#### Sentry MDU Mobile Object Panel options:

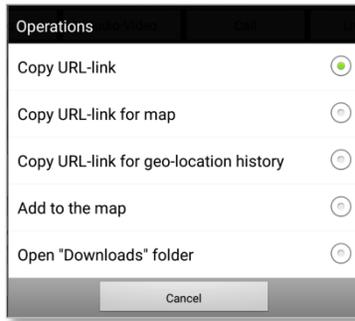
Perform a “long click” on the header text to open the options menu.



Depending on the option group you select, there are two (2) types of Menu Option lists that may be displayed. They are shown below.



The 5 menu items for Option Set #1 are explained in detail below.



### Copy URL-link

The “Copy URL-link” menu option will make a copy of the URL for the selected user’s Mobile Object Panel and store it on the Sentry MDU “clipboard” (.TEMP file folder). This URL link may then be “imported” as a bookmark. Allows easy setup of new bookmarks.

### Copy URL-link for map

The “Copy URL-link for map” menu option will make a copy of the audio-video settings for the selected user’s mobile device and store it on the Sentry MDU “clipboard” (.TEMP file folder). This URL link may then be “imported” as a bookmark. This allows for “one click” access to a live audio-video feed from the remote device.

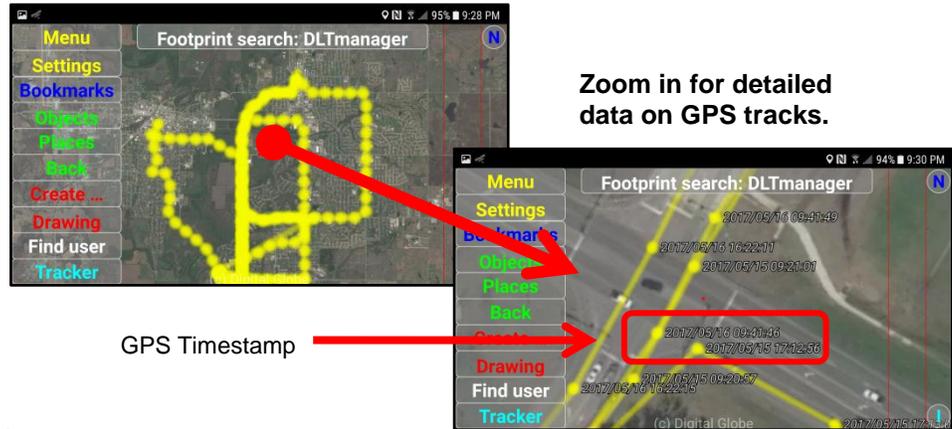


**Click once to go “full screen” and again to return to the small screen.**



### Copy URL-link for geo-location history

The “Copy URL-link for geo-location history” menu option will make a copy of the GPS track data for the selected user’s mobile device and store it on the Sentry MDU “clipboard” (.TEMP file folder). This URL link may then be “imported” as a bookmark. Allows the view/review of GPS tracks for the remote device over a variety of time periods (week, month, year, etc.).



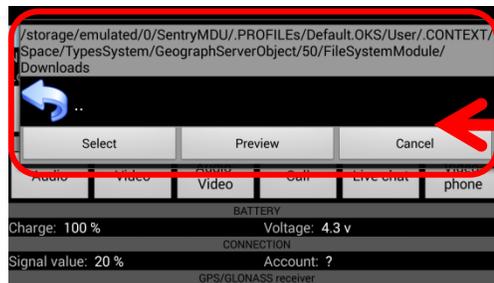
### Add to the map

This option allows the selected user’s Object Marker to be quickly installed on the Map Screen.



### Open “Downloads” folder

This option will open the Sentry MDU “Downloads” file folder on the mobile device of the selected User. See **Section 5.7** for additional details on enabling the “Internal Memory” access option.

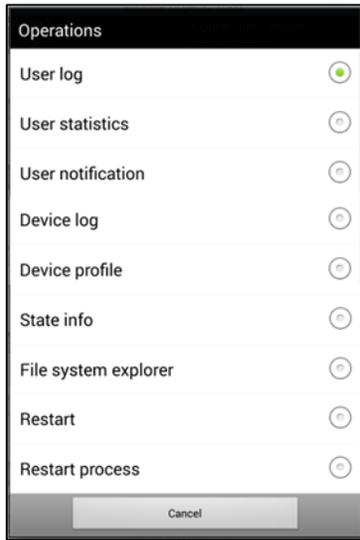


Screen showing the “Downloads” Folder. In this example, it is empty.

### **Important Notes:**

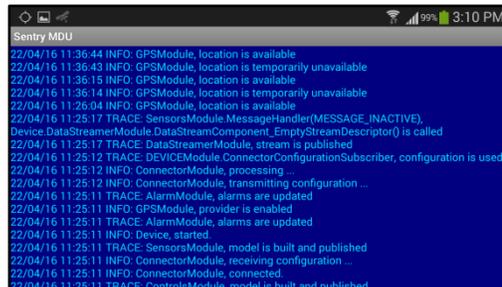
1. **This feature is turned “off” by default.**
2. **It must be explicitly turned “on” (Enabled) by the User of the mobile device since it allows access to the internal file system of the mobile device by others.**
3. **This feature CANNOT be changed by another user or by the system. Only the local user can adjust this setting.**
4. **For YOU to access this feature on another persons mobile device you must have security credentials that allow access.**

The 9 menu items for Option Set #2 are explained in detail below.



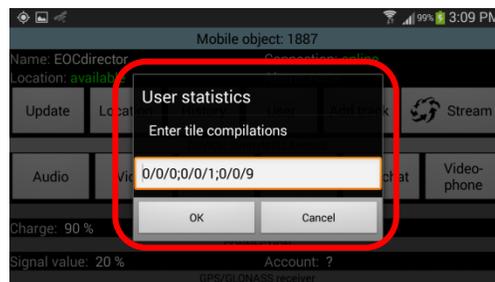
### User log

The “User log” menu option will open a log file for viewing. The log file provides User level log data. Generally, there is no User relevant information here. It may be of benefit to Developers.



### User statistics

This option provides statistics on imagery tile usage. A screen is shown in .xml format that provides tile usage statistics for the User Profiles on the mobile device. **Generally only of use to Developers.**

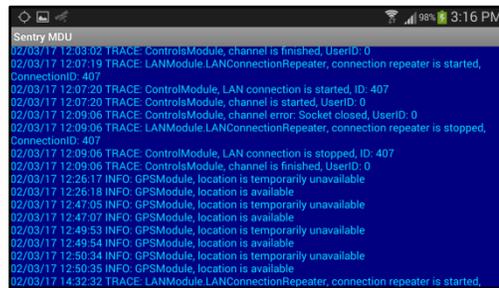


### User notification

The “User notification” menu option allows a user to select a media file from a directory on their device (ie mp4) and then send this file to be played on a remote user’s mobile device. This would be used to distribute/play urgent alerts, tactical video newsletters or advertising clips. This feature is a one-to-one transfer (ie. one user sending a video clip to one user). The clip will start playing automatically on the remote users device and continue playing (looping) until they stop it. If the remote user is not logged into the Sentry MDU System, the video will begin playing as soon as they do log in.

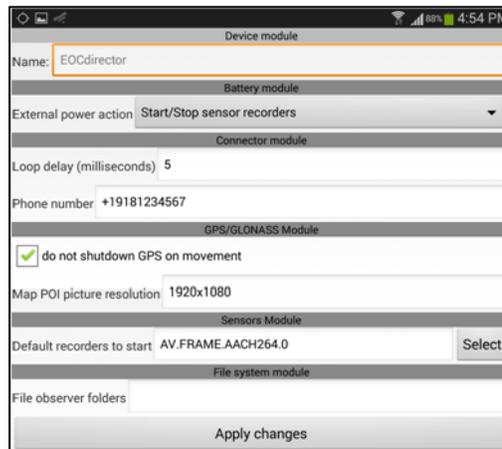
### Device log

The “Device log” menu option will open a log file for viewing. The log file provides device level log data. Generally, there is no User relevant information here. It may be of benefit to Developers.



### Device profile

This option allows a user to change a few specific Device Profile parameters such as External Power Action (ie for Dash Cam applications), user phone number and default recorders to start. These settings are a subset of more comprehensive configuration lists.



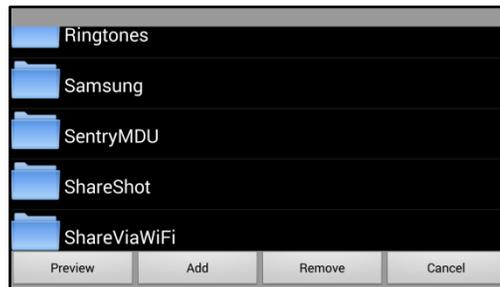
### State Info

This option provides information on the memory conditions available in the mobile device. Generally only of use to Developers.



### File system explorer

This option provides access to the file system on a device (either local or remote). In order to have access the target device must have the Internal Memory setting set to “Enabled” (and the appropriate Security Credentials).



This feature will be described in detail in **Section 15.9**.

### Restart

This option allows a user to “restart” the Tracker Object in the SentryMDU Process. This is most often used to “remotely” restart the Tracker Process on a remote device if for some reason the process stopped (ie a Camera image froze up).

### Restart process

This option allows a user to “restart” the complete SentryMDU App in the Android OS. This feature would be used to “remotely” restart the SentryMDU App on a remote mobile device. It is similar to exiting the application and starting again. This situation could occur if the Android OS did an automatic update and that action caused the SentryMDU process to freeze up.

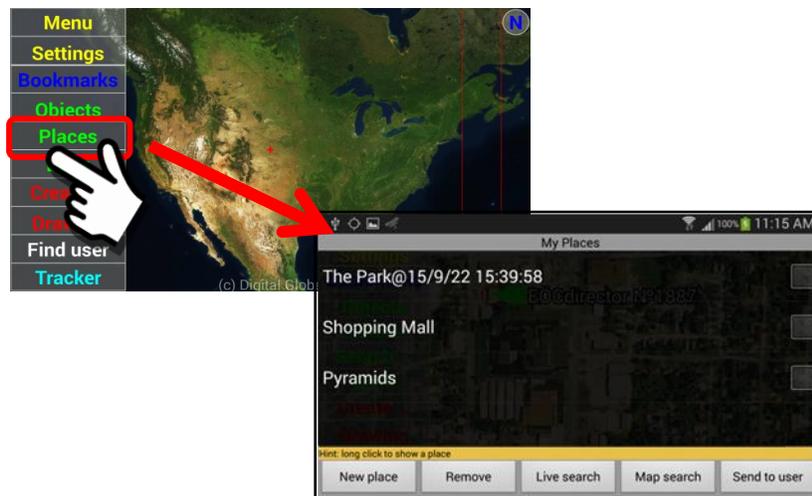
# 11. The “Places” Button features

## 11.1. Overview of the Places feature

### Overview:

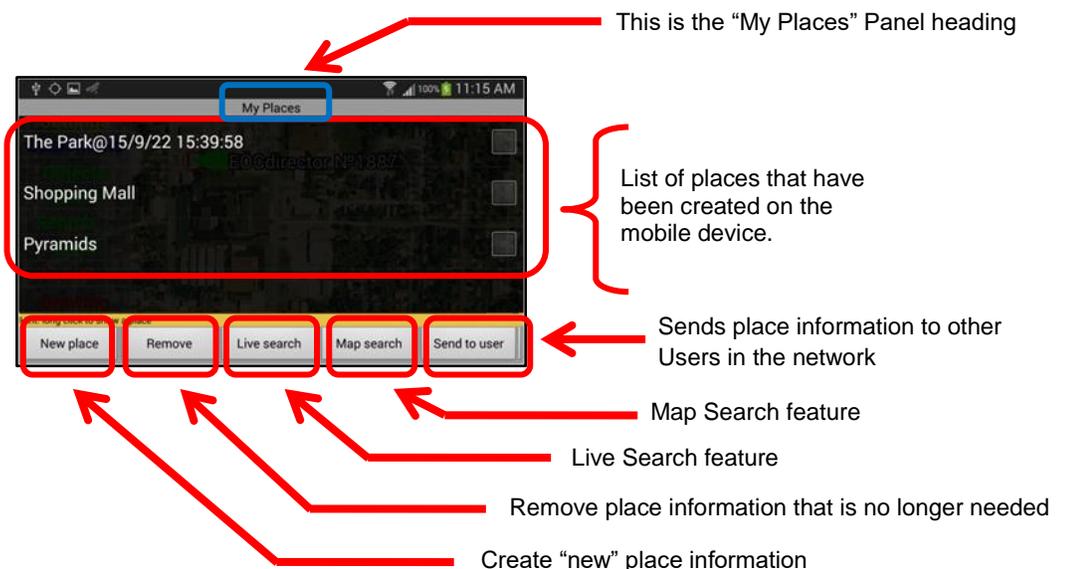
The “Places” Feature allows a user to designate places and points-of-interest on maps and save these locations for future “quick” retrieval. In addition to map views, users can draw on the map locations (to point out specific features) and add icons and symbols to the designated places.

This section will describe the steps required to add new “places”, send placemarks to other users, remove obsolete places and more.



### General layout of the “My Places” Panel:

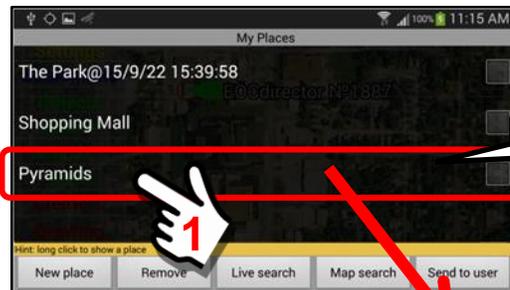
The “My Places” panel provides a list of places and a group of 5 buttons across the bottom.



## Description of the button functions and features:

### 1. Selecting a "Place" to display

Display a "Place" on the list by performing a "Long click" on the place name.



Long Click

This example is a satellite view of the Pyramids in Egypt.



### 2. "New place" Button

The "New place" button will allow a User to create additional places to add to the list. The procedure to create a new place is as follows:

- Locate the "place" on the Main Map screen of the location that you want to capture.
- Click on the "Places" Menu Choice.
- Click on the "New place" Button.
- Enter a "name" for the new place.
- Click on the "Add new place" button.

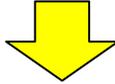


On the Main Map screen, zoom in to the location to achieve the image that you want to save.

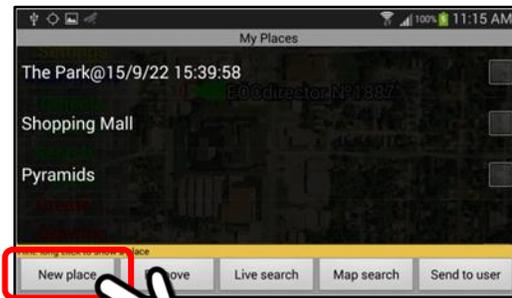
In this example, we want a view of the Stadium.

This is the image of the place we want to save.

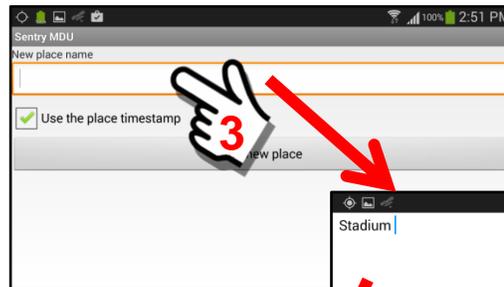
Click on the "Places" menu choice.



The "My Places" panel opens. Click on the "New place" button.



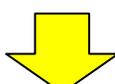
A panel opens asking for a "name" for the place that you wish to save.



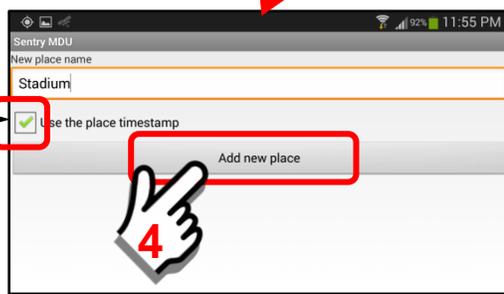
Enter the text for the name you want, then click the "back" button on the phone to transfer the text into the panel.



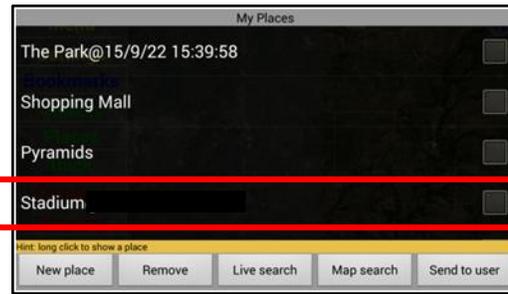
You may also click the "Done" button. However, by clicking "Done" you will skip the Entry Panel.



If you wish to "timestamp" the location image, leave this box "checked" (default).

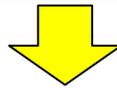


The “new” place has now been created and stored in the Places database.

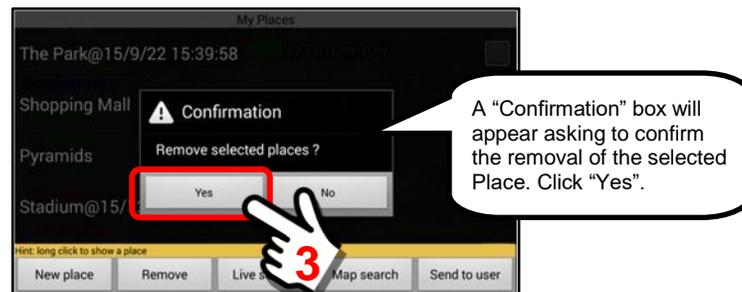
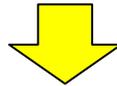
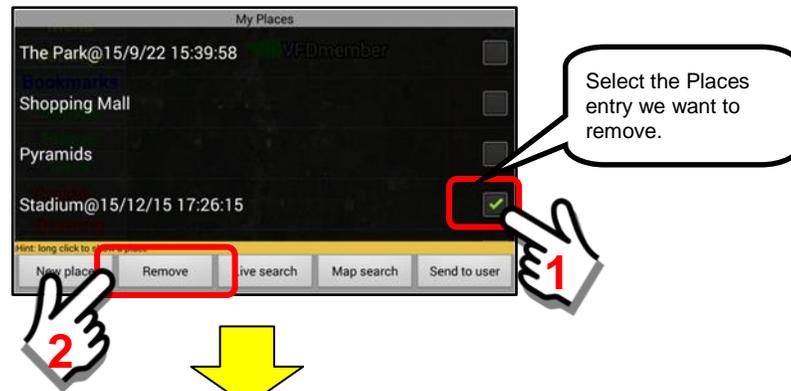


### 3. “Remove selected” Button

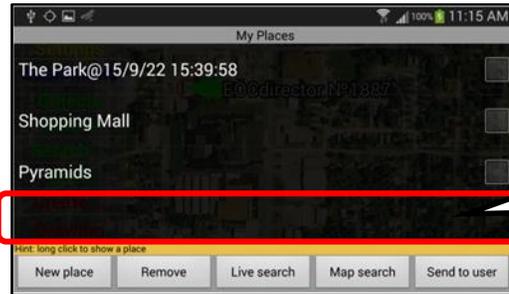
The “Remove selected” button will allow a User to select and remove places from the list that are no longer needed. In this example we will remove the Place = “Stadium@15/12/15 17:26:15” from the places list.



Click on the “checkbox” adjacent to the text name to select the entry to be removed. Then click on the “Remove selected” button.



The place entry for “Stadium@15/12/15 17:26:15” has now been removed from the places list.

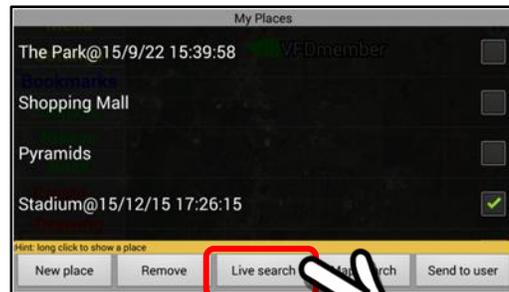


The “Stadium@15/12/15 17:26:15” place has now been removed.

#### 4. Live Search feature

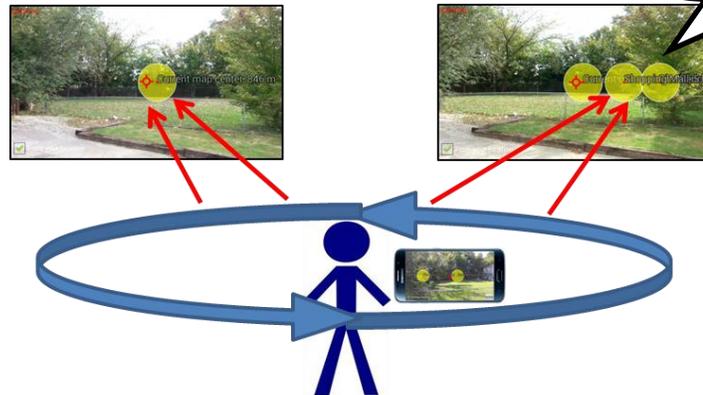
The Places “Live” Search feature will allow a user to search for “places” on the system by simply pointing your phone in the direction of the places. As the phone is rotated around, a yellow icon with the Place Name will come into view when you are pointed in the direction of the place(s). In addition, the distance from your location (or another reference point) will be displayed.

**Important Note:** Some of the less expensive mobile devices DO NOT HAVE gyroscopic sensors. If your device does not have one, the Live Search feature will NOT work.



Select the “place” you want to search for and then click the “Live Search” Button.

The Places Live Search feature uses “yellow” dot icons to represent a “place”.



This option will be discussed in further detail in **Section 11.2**.

## 5. Map Search feature

The Places “Map Search” feature will allow a user to search for “places” on the system and display them on a Map Overlay. The Map View will provide a distance measurement from a reference point (User location or Map Center) to the places displayed on the Map.

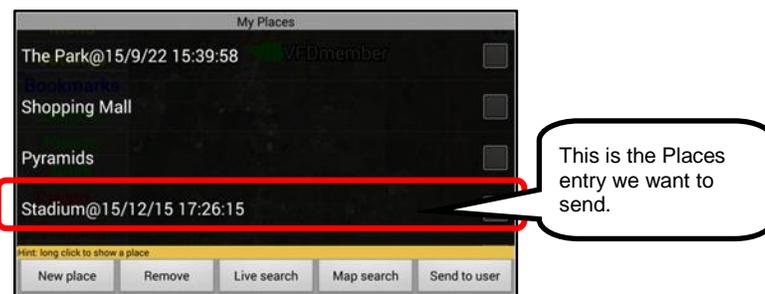


This option will be discussed in further detail in **Section 11.3**.

## 6. “Send to user” Button

The “Send to user” button will allow a User to select and send a place reference to another User on the network. In this manner, a “place” or multiple places may be distributed around the system rapidly.

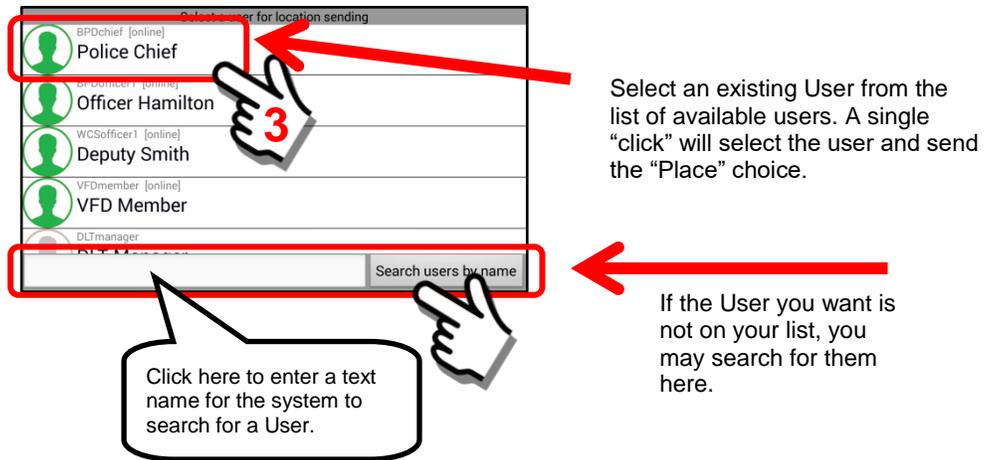
In this example, we will send the place entry for “Stadium@15/12/15 17:26:15” to another User on the network.



Click on the “checkbox” adjacent to the text name to select the entry to be sent. Then click on the “Send to user” button.

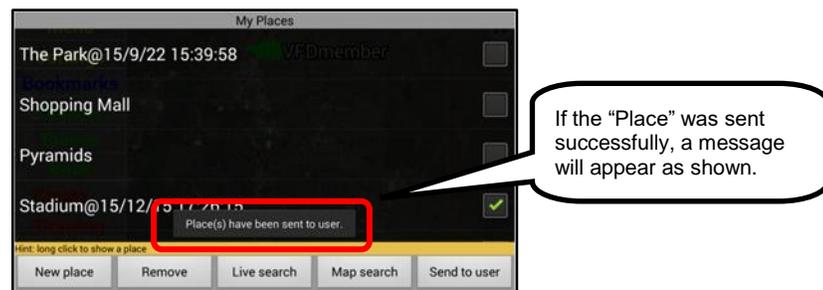


A list of Users will now appear on the screen. Scroll through the list until you find the User that you want to send the “place” to. If the user is NOT in the available listing, enter a name (part of a name) in the blank at the bottom of the screen and click on the “Search for users by name” button.



**Important Note:** To search for other users, they must be in the same Security Domain (and the same or lower hierarchical level) and located on the same SentryMDU Data Server. In addition, YOU must have security credentials that allow you to send data to their device.

If the transfer of the “place” location was successful, a message will appear on the screen. You are now finished.



The "Place" location has now been sent to the user you have selected. A "pop-up" message will appear on the other user's Main Map screen describing what is being sent and who is sending it. The other user has the option to accept or reject the "new" Place that is being sent to them.



This confirmation screen will appear on other users mobile device.

To accept the new "Place" file, the User receiving the new place location must click the "Yes" button. The new "Place" will now be immediately displayed on the Users Main Map screen and also stored in the users "My Places" database.



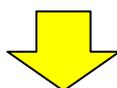
Click "Yes" to accept the new Place.

The "place" will be displayed with a message indicating it has been added to the user's list of places on file.



Note that the "Place" location has a timestamp of the date-time that the place image was created.

After reviewing the “new” place location, the User may click the “Back” button of the Main Menu screen to return to the regular screen display.



## 12. The “Create ...” Button features

### 12.1. Overview of the New Object Gallery panel

#### Overview:

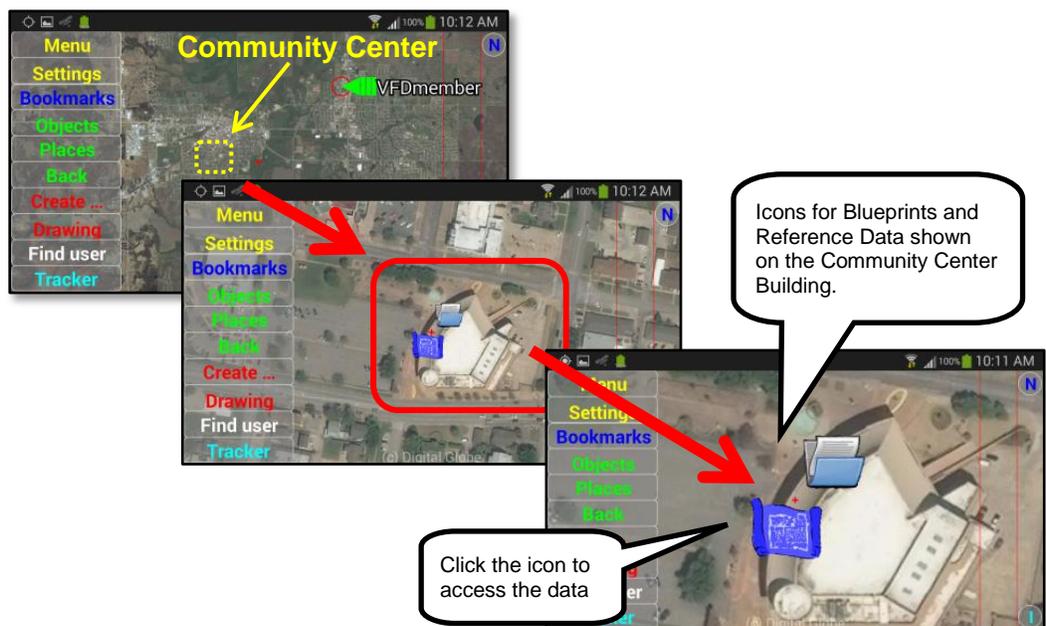
The “Create ...” feature allows a user to **create regions on the map where information can be stored**. This data can include pictures, video files, audio files, reference information, etc. The stored reference information may be shared among other devices on the network (Default) or it may be designated as “Private” (only the user that created it can see it). In the default configuration, one person may create a reference document (shown by an icon on the map) and other users will see this same icon reference on their device (assuming security credentials allow).

The supported file formats are as follows:

1. txt
2. mp3
3. mp4
4. 3gp
5. aac
6. wma
7. xml
8. pdf (assuming a PDF viewer is installed on the mobile device)
9. ... and other formats native to the Android OS

#### Screen example of reference data overlay on Main Map Screen:

This example shows the results of using the “Create ...” Button and the “New Object Gallery” Panel to place reference data (Blueprints and Security Contact lists) about a building structure as an overlay on the Main Map Screen. This data will be made available to other users on the SentryMDU Network. In this illustration, we show a Community Center building.



## Sentry MDU “New Object Gallery” Panel:

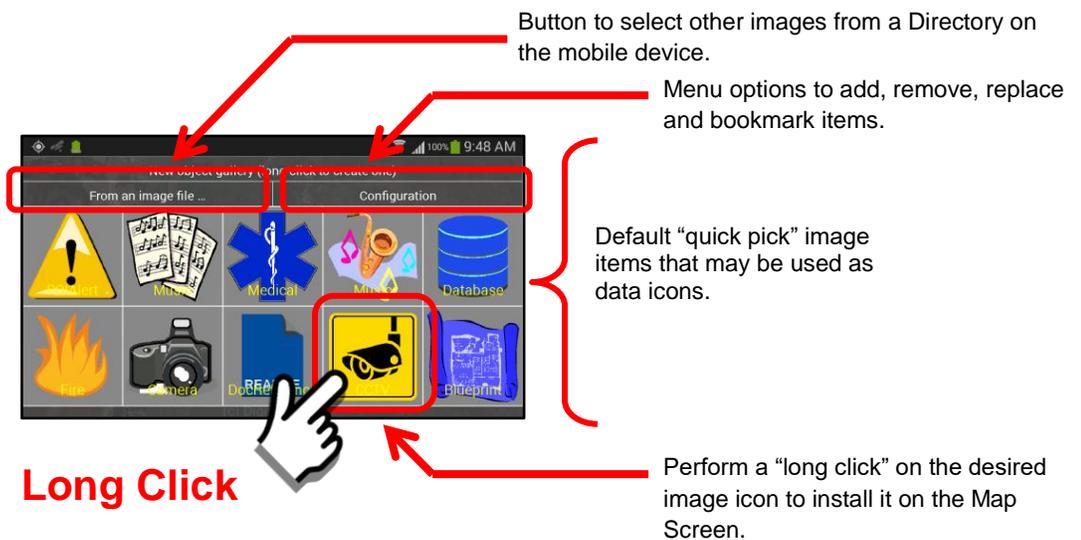
The “New Object Gallery” Panel is shown below. Click on the “Create ...” Button to launch the *New Object Gallery* panel.



## Description of the New Object Gallery buttons and features:

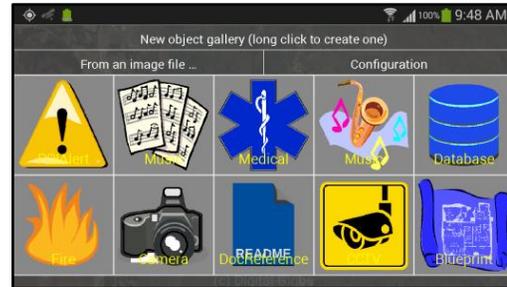
### 1. Parts of the New Object Gallery Panel

This section will describe the screen layout and parts of the Panel.



## 2. Review of the “quick pick” panel items

The default configuration of the New Object Gallery panel shows ten (10) “quick pick” image items. These images (subject categories) should cover the requirements for most users. For those customers that have licensed a SentryMDU Data Server instance, these “quick pick” items may use custom images of your choosing and you may have as many as you like. Please contact your DLT Account Representative if you need additional information.



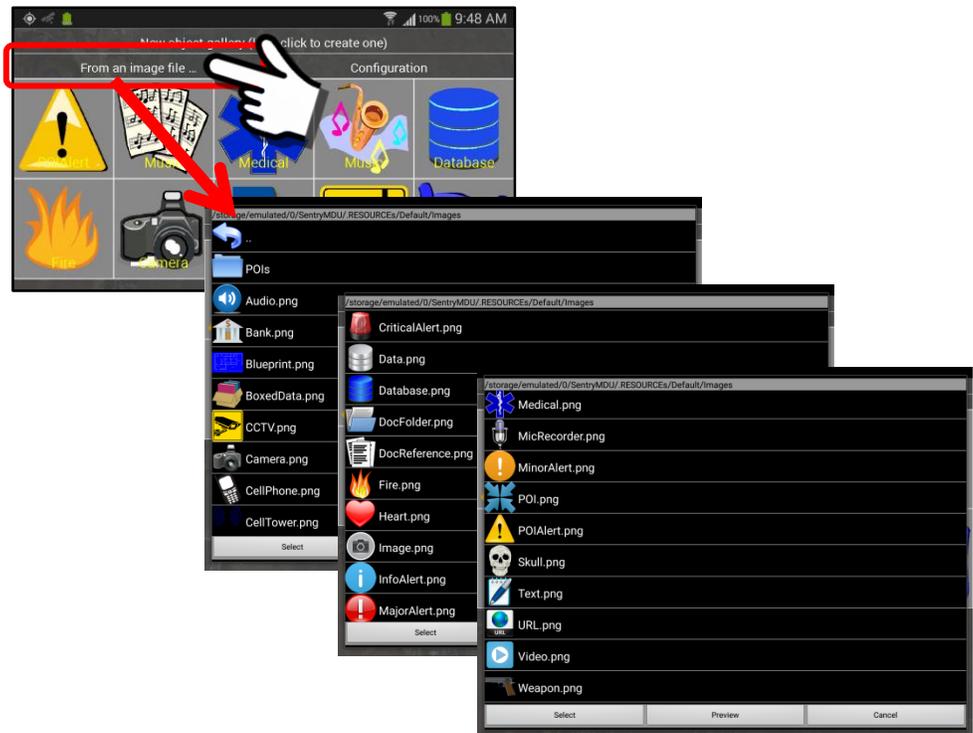
Default “quick pick” image items that may be used as data icons.

## 3. Additional panel items installed by default

In addition to the default “quick pick” images, the SentryMDU system allows a user to select images from any directory on the mobile device. We have installed several dozen images that will cover most of the data requirements that would be used by First Responders. User created images (png format) may also be installed into this directory.

**Directory:** *SentryMDU/.RESOURCES/Default/Images*

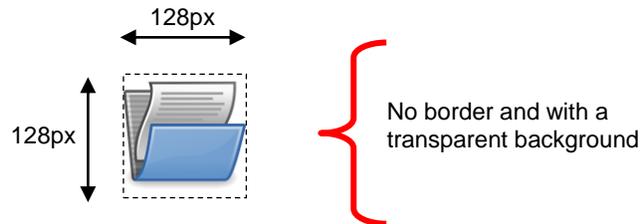
Click on the “From an image file ...” Button to see a review of the additional panel items that are installed by default.



#### 4. Specifications for “User Installed” graphic items

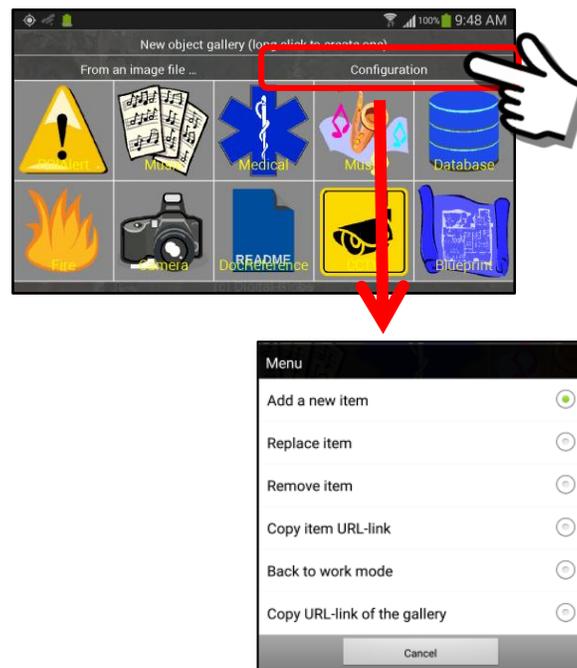
For best results, any user installed graphic items (icons) should have the following size and format specifications.

1. PNG file format
2. Background transparency
3. 128x128 pixels in size
4. Resolution of 200 – 300dpi



#### 5. Configuration Menu

The “New Object Gallery” Panel has a Configuration Button which opens a pop-up menu with

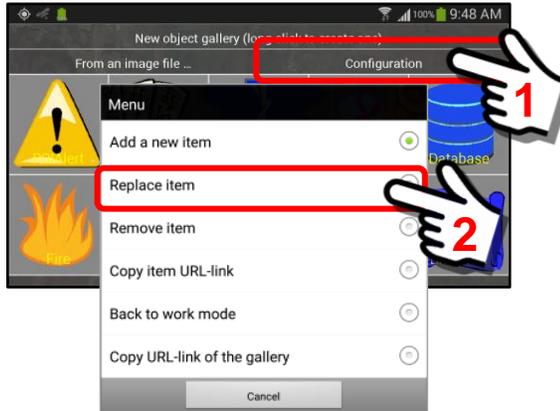


#### Add a new Item

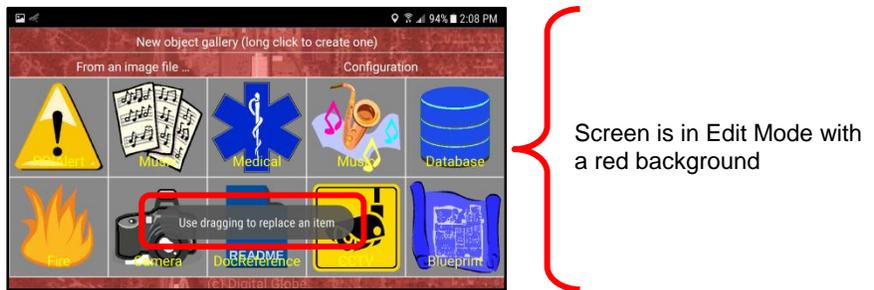
This menu item allows a user to “add” a new “quick pick” image category to the listing. This feature would be used by Developers and IT Admin Personnel that have access to the SentryMDU Data Server instance. DLT Technical Support will provide instructions for the correct “TypeID” codes to use in configuration.

### Replace Item

The “Replace Item” Menu option allows a user to move the gallery images and reorder the list. In our screen example, we show 10 gallery images. When the *Replace Item* option is selected, the screen reverts to “edit mode” (red background) and a brief message is displayed that instructs the user to “drag” the desired image to a new location in the gallery grid.



Selecting the “Replace Item” option puts the screen into Edit Mode (red color).



Click on the object to be moved and drag it to a new location in the Gallery Grid.

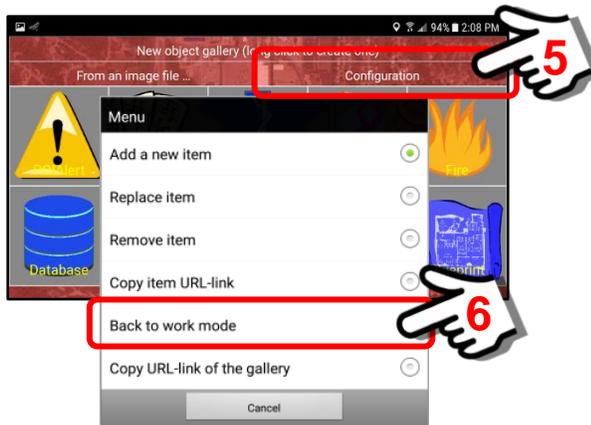


The two objects will now trade places as shown below.



Screen is in Edit Mode with a red background

To exit the **Edit Mode**, use the Back Button (on the device) or open the Configuration Options menu and select the “Back to work mode” option.



### Remove Item

This menu item allows a user to “remove” one of the ten (10) default image topic icons from the New Object Gallery panel.

### Copy item URL-link

This menu item allows a user to “copy” a specific image icon URL-link to the clipboard (.TEMP file) for further processing. This link may then be imported as a Bookmark, installed on a Foreground Layer or sent to other Users.

### Back to work mode

This option “exits” from the Edit Mode (red background) and returns to the Gallery Panel.

### Copy URL-link of the Gallery

This menu item allows a user to “copy” the URL-link for the *New Object Gallery Panel* to the clipboard (.TEMP file) for further processing. This link may then be imported as a Bookmark, installed on a Foreground Layer or sent to other Users.

# 13. The “Drawing” Button features

## 13.1. Two functions of the Drawing Button

### Overview – Short Click and Long Click feature:

This section will highlight the difference between the Short Click and Long Click action.

#### The Short Click option

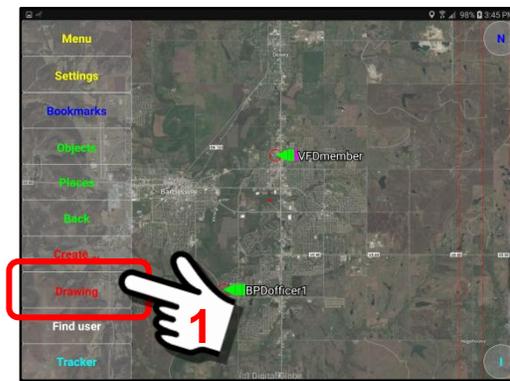
Will create a duplicate custom layer of the Main Map Screen with an overlay of the Drawing Tools. This option will copy the map screen WITH the Object Markers showing (if they are activated) and the Main Menu Headings. Will also provide an additional 13 sub-menu options for building custom maps.

#### The Long Click option

Will make a static copy (picture) of the current map screen WITHOUT showing any Object Markers (blank map) and provide an additional 6 sub-menu options.

### Drawing Button – Short Click feature:

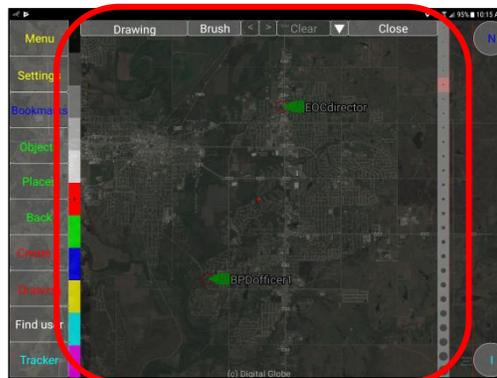
The Drawing Button on the Main Map Screen has both a “Short click” and “Long click” action. This section shall describe what happens when a user performs a “Short click” on the Drawing Button.



### Short Click

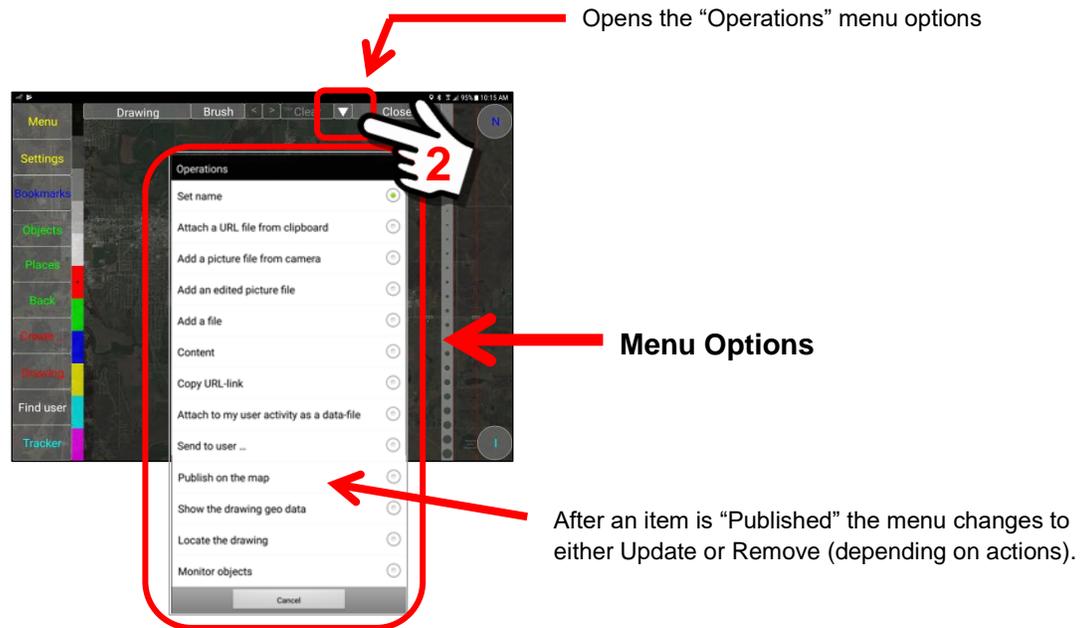
Main Map Screen showing the Object Markers of two Users.

By performing a “Short Click” the Drawing Module will launch and display the Drawing Tool Set as an overlay on the Main Menu Screen.



The Drawing Module tool set.

To open the available menu options, click on the Operations Button (▽). An Operations Menu with 13 options will appear.



The following section will briefly describe the 13 available menu options.

#### Set name

Provides ability to enter a name (rename) for a Drawing Object.

#### Attach a URL file from clipboard

A URL that has been temporarily stored on the "clipboard" (.TEMP directory) may be attached to the Drawing Object.

#### Add a picture file from camera

The camera on the mobile device may be used to take a picture that will be attached to the drawing data file.

#### Add an edited picture file

The camera on the mobile device may be used to take a picture that may then be edited with Drawing Tools. In addition, existing image files may be retrieved and edited. This edited picture will be attached to the drawing data file.

#### Add a file

A user may add/attach a "file" (reference data, documents, etc.) to the Drawing Data Set. When stored as Content, these reference files are available to the User (or all Users, depending on Security Credentials).

### Content

Content associated with the Drawing Object is available for review.

### Copy URL - link

The URL link for the Drawing (and associated data) may be copied, saved, imported and/or sent to other users.

### Attach to my user activity as a data-file

The Drawing and associated data may be attached to the Current Activity of the User, as Content.

### Send to user ...

The Drawing Object URL may be sent to other users on the network.

### Publish on the map ( also “Update on the map” and “Remove from the map”)

This feature is used to display drawing marks and URL links on the map screen. If you have large attachments, do not use the “Publish” option. A drawing that is to be “published” on a map may only attach URL links and must not have attached data that exceeds 256kb or an error message will occur. The **Update** and **Remove** functions are made available after an item is “Published” and is in the Editing Mode.

### Show the drawing geo data

This feature will allow a User to measure distances on the screen of a mobile device.

### Locate the drawing

The “Locate the drawing” menu item is used to display a drawing file (such as a trail route) that has been stored in device memory. The User may then locate the drawing on the Map Screen so it may be compared to their current GPS location.

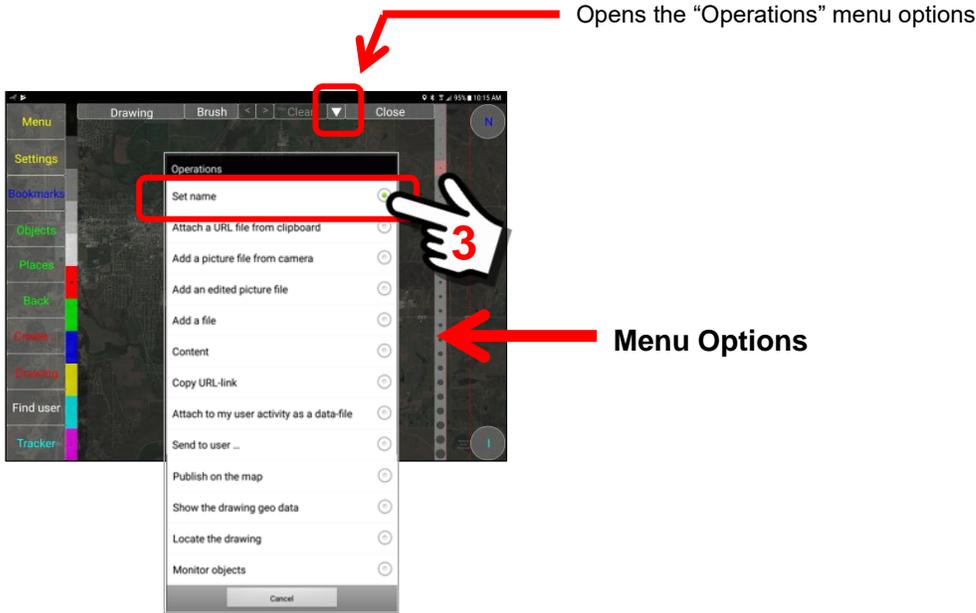
This feature (Locate the drawing) is most often used when the mobile device is “off-line” and not in contact with the SentryMDU Data Server. Typically, this would be in remote locations without cellular service.

### Monitor objects

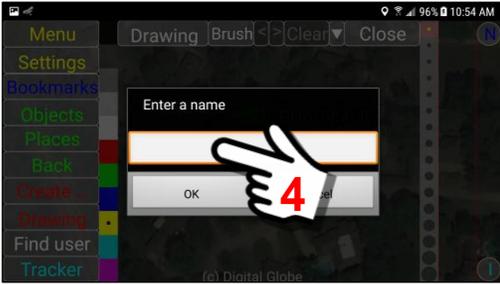
The “Monitor Objects” option is part of the Notification Alert feature that turns on geo-fence monitoring of remote devices. When activated, monitoring is turned on for the selected user devices. If any user crosses a geo-fence boundary (in or out) a notification alert signal will be sent to your mobile device.

In this example we will illustrate how to create a drawing and save it in our Current Activity folder. Since we want to “save” a Drawing File, we first need to select NAME for our file. We do this by selecting the “Set name” menu option from the list.

Open the Operations Menu (∇) and locate the “Set name” option.



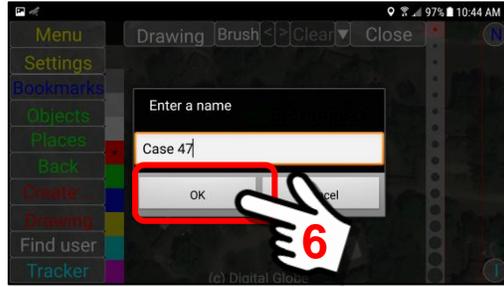
Clicking the “Set name” menu option will launch and display a data entry box asking for a “name” for the drawing. Click inside the box to open the on-screen keyboard panel.



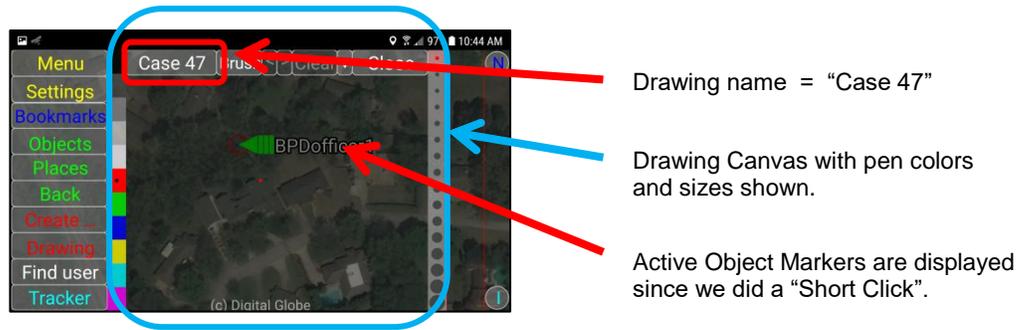
Enter a name for the Drawing File. In this example, we have entered “Case 47” as the name.



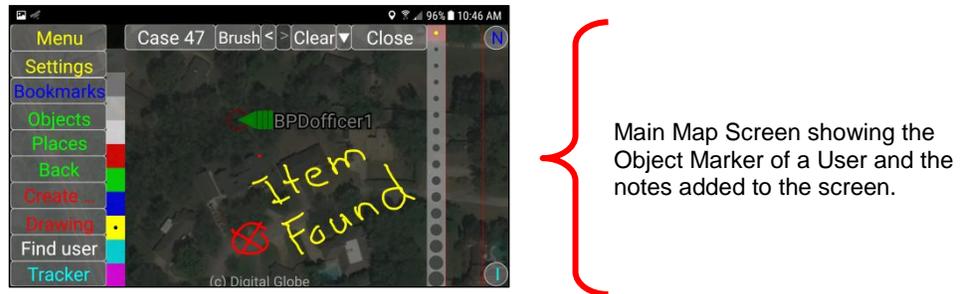
We may click on the Done Button ... or the “back” button on the phone to return to the data entry box. Click the “OK” Button to save the filename.



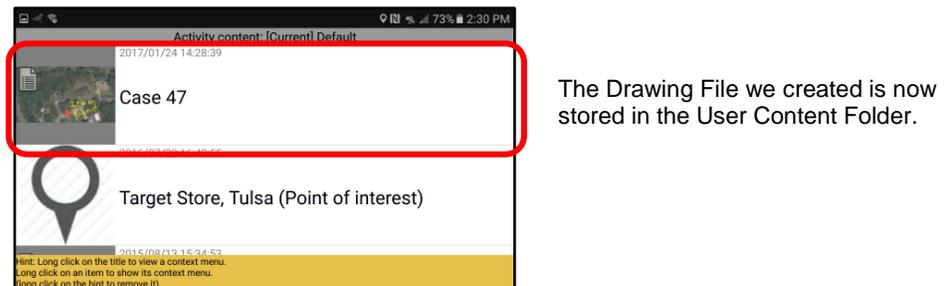
We now have a Drawing Canvas showing on the screen which includes the Object Marker that we set as “active” (Case 47).



We may now edit/write on the screen and make notes, as shown below. See other sections of this guide for the Drawing Tools available and how to SAVE the file.

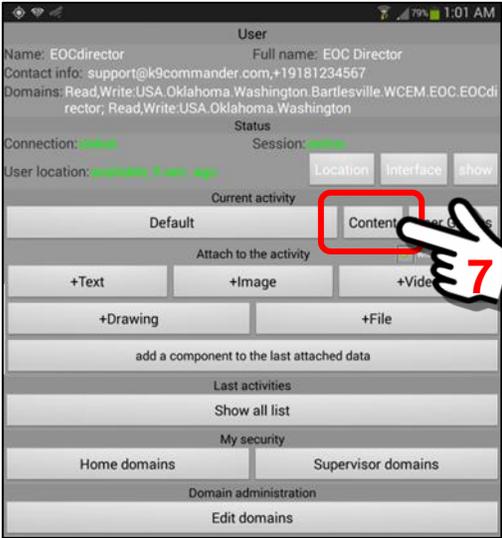


When the file (Case 47) is saved in the Current Activity content folder, it will be displayed as follows.



To retrieve the “Case 47” drawing file, navigate to the **User Information Panel**. The file will be stored under the Current Activity (Default, in this case).

Click on the Content Button.



Clicking on the Content Button will result in a listing of all files in the Content Folder for this current activity. Select the “Case 47” File.



We now see the “Case 47” File Drawing displayed. When finished with the review, click on the Close Button to remove the drawing from the screen.



See other parts of this Drawing Section to see available menus for options of sending the file to others, changing security settings, removing the file, etc.

### The Drawing Button – Long Click feature:

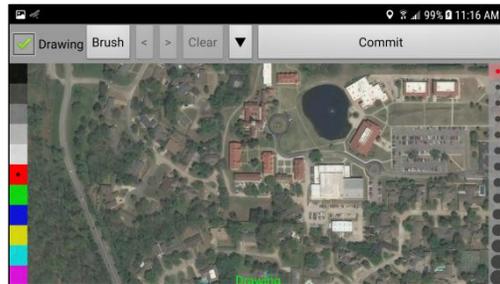
The Drawing Button on the Main Map Screen has both a “Short click” and “Long click” action. The following section, **Section 13.2**, will provide a detailed description of what happens when a user performs a “Long click” on the Drawing Button.



### Long Click

Main Map Screen showing the Object Marker of a User.

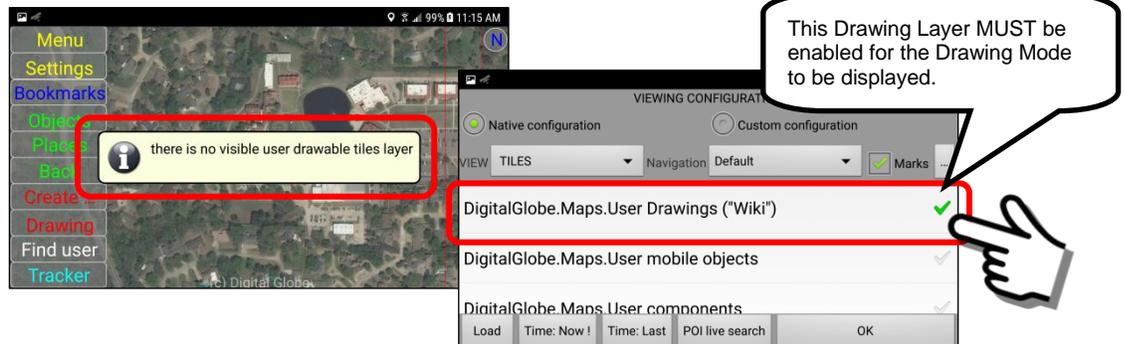
Performing a “Long click” will launch the Drawing Module WITHOUT the display of any Object Markers or menu headings. This would be the typical way a User would access and use the Drawing Module.



The following parts of the Drawing Section will focus on access to the Drawing Mode via a “Long click” action and a detailed review of the Drawing Tools.

### Reminder

If you attempt to launch the Drawing Mode and get the following error message, this means you have “disabled” the Drawing Mode Layer on the mobile device. Go to the Settings Tab and enable this option.



## 13.2. Overview of the Drawing features (Long Click mode)

### Overview:

The Drawing feature set allows a user to “draw” on the map screen, add icons, text, pictures and audio/video into an image compilation and “save” it for future reference. This section will describe the general layout of the panel and the features available.

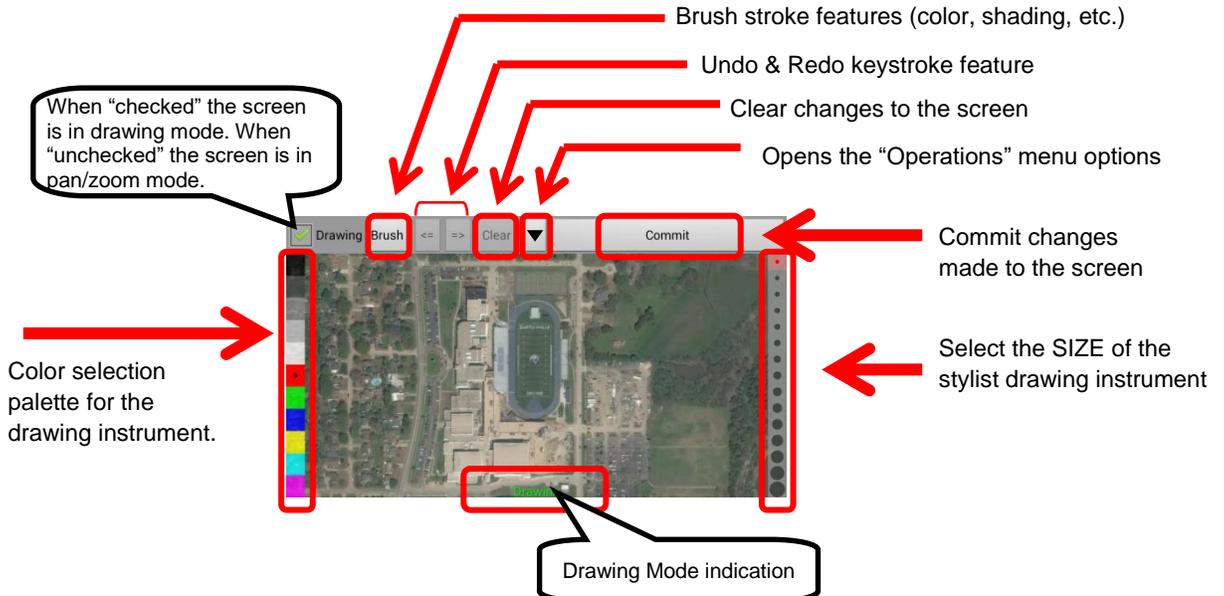


**Long Click**

It is important to remember that a user should navigate to the screen location and zoom level of detail they desire BEFORE clicking on the “Drawing” Button. The Drawing menu item will capture whatever screen is currently being displayed at the time the Drawing Button is “Long clicked”.

### General layout of the Drawing Panel:

The Drawing Panel has a set of buttons and editing features that are available to the User. These are detailed below.



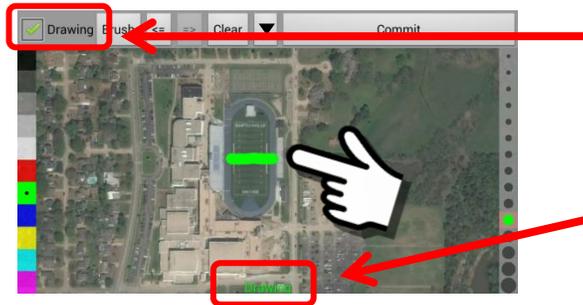
## Description of the button functions and features:

### 1. "Drawing" checkbox

The default setting is for the "Drawing" checkbox to be checked. This means that the screen is active to the touch of a finger and any touch/movement on the screen will result in "marks" on the screen as shown below.

In the "Moving" Mode (unchecked) the screen may be "moved" by dragging a user's finger around on the screen. This feature is useful to reposition the drawing surface to the precise spot desired.

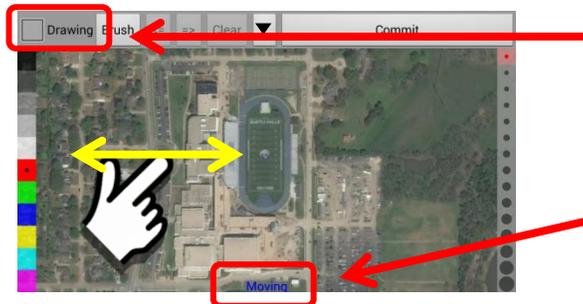
#### Drawing Mode (Drawing checkbox "checked")



The "Drawing" checkbox is checked, we are in drawing mode

Note at the bottom of the screen it indicates we are in the "Drawing" Mode.

#### Moving Mode (Drawing checkbox "unchecked")



The "Drawing" checkbox is unchecked, we are in moving mode

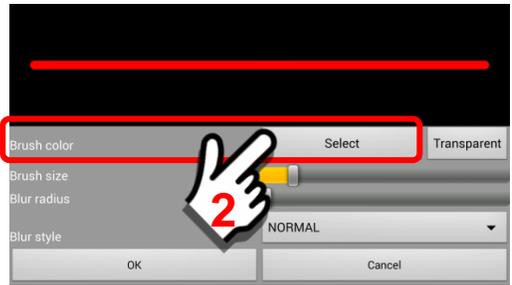
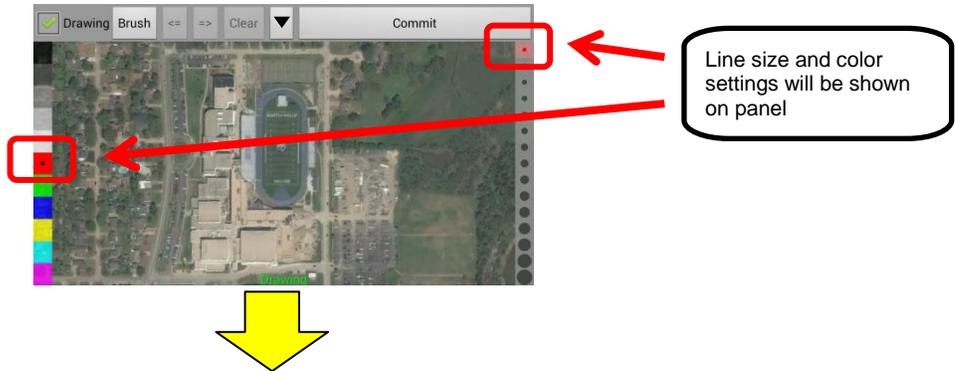
Note at the bottom of the screen it indicates we are in the "Moving" Mode.

### 2. Brush button

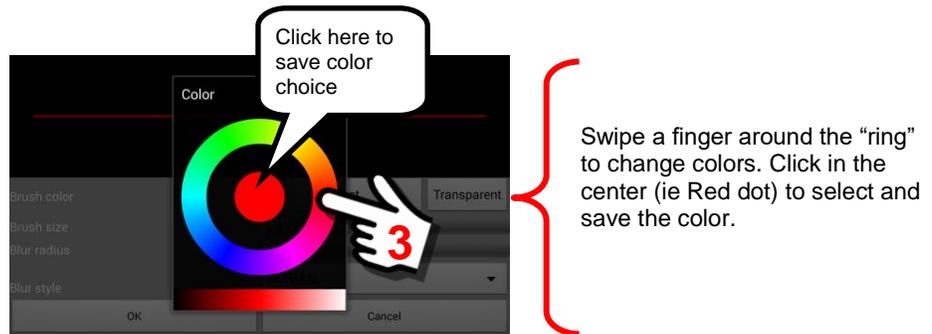
The "Brush" Button allows a user to change the width, shading and blur of the drawing marks when using a finger as the stylist. To access these options, click on the Brush Button at the top of the screen panel.



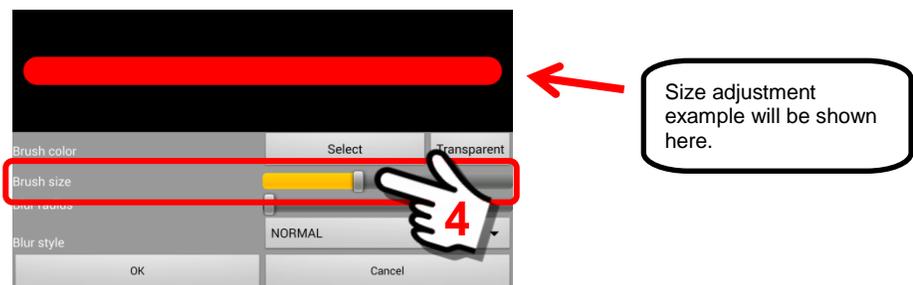
When the Brush Button is clicked, a panel opens with the current selected color and width size of the drawing instrument. In this example, the default settings are a “red” color and a small line width.



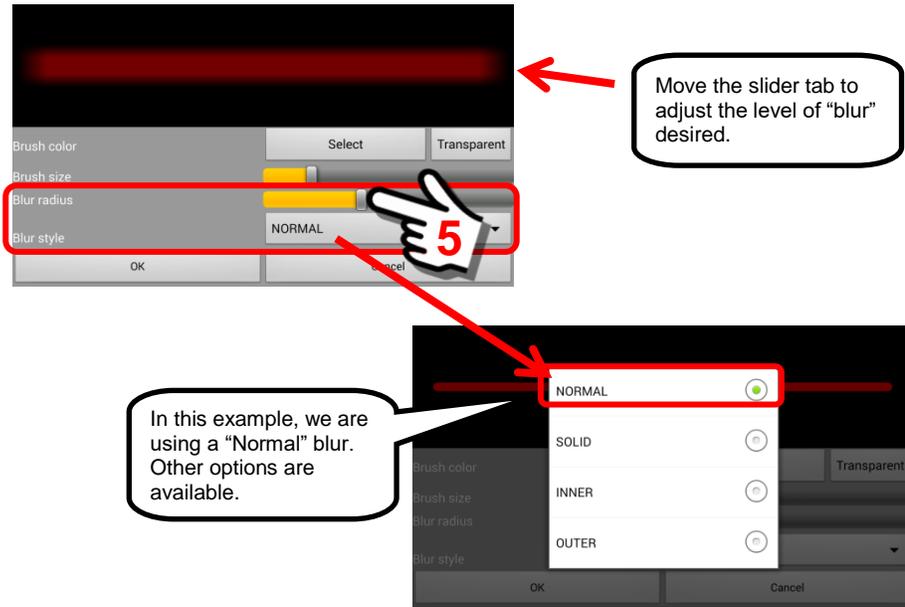
To select a NEW color (or change the color) click on the brush color “Select” button. A color selection panel will open.



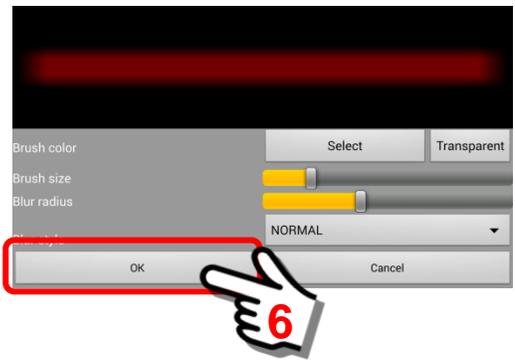
To change the brush “size”, drag the slider bar to the desired size.



Users may also make the line “blurry” by setting a Blur Radius and Blur Style using the features shown below.

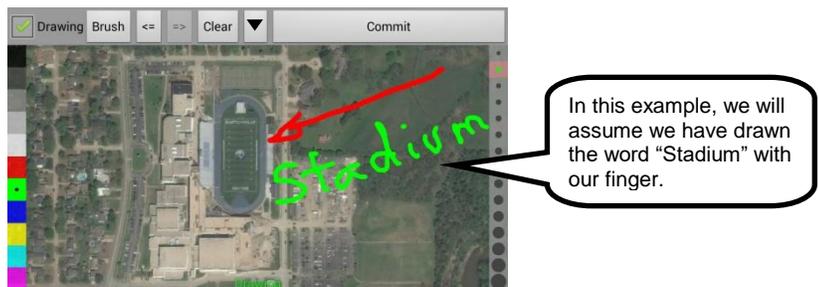


After making the desired selections, click the “OK” Button to save the changes and return to the Drawing Screen.



### 3. **Undo & Redo keystroke feature**

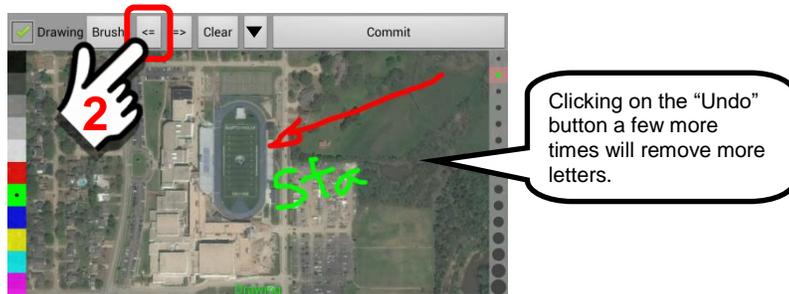
In the Drawing Mode the program will remember the screen touch events (as keystrokes) used to create/draw an object. The Undo/Redo buttons will allow a user to remove/add previous keystroke entries, one keystroke at a time. This feature will be illustrated below.



By clicking on the “Undo Button” one time, we remove the “m” from the word Stadium.



Clicking a few more times, and we remove more letters.



Notice that the “Redo” Button is now active (not grayed out). This means that the letters we removed are stored in the queue and may be reinstalled by clicking on the “Redo” Button.



#### 4. Clear button

Click on the “Clear” Button to remove ALL drawing entries from the drawing panel. Click “Yes” to confirm clearing the screen.

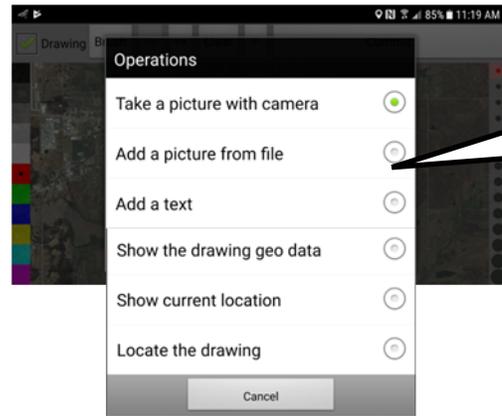


### 5. "Operations" Menu Options

The Operations Menu is accessed by clicking on the Operations Button (▼). This provides a set of options to enhance the drawing, measure distances and include pictures in the drawing. See **Section 13.4** for a discussion of available options.



Click on the Operations Button to access additional options.



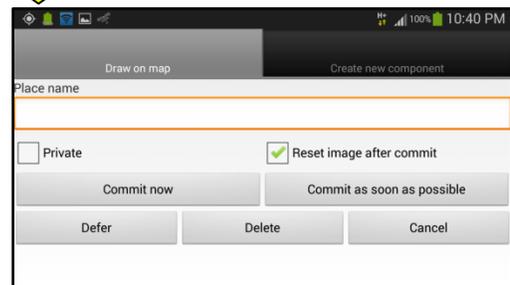
User options available in the Operations Menu

### 6. Commit button

The "Commit" Button will commit all changes to the SentryMDU Data Server. Clicking the "Commit" Button will save/send the drawing panel.



When saving the drawing, enter a "name" and whether or not the drawing should be "private" (only for you) or "public" (available to anyone with adequate security access).



**7. Color selection palette**

Users have the ability to select the “color” they would like to use while drawing. Simply click on the desired color box and that color becomes active. During any drawing session, multiple colors may be selected and used.



In this illustration, multiple colors are shown next to the selection box.

**8. Drawing stylist size**

Users have the ability to change the “size” of the drawing stylist as they use their finger to draw. The example below shows a mid-size line width.



# 14. The “Find user” Button features

## 14.1. Overview of the “Select a User” panel

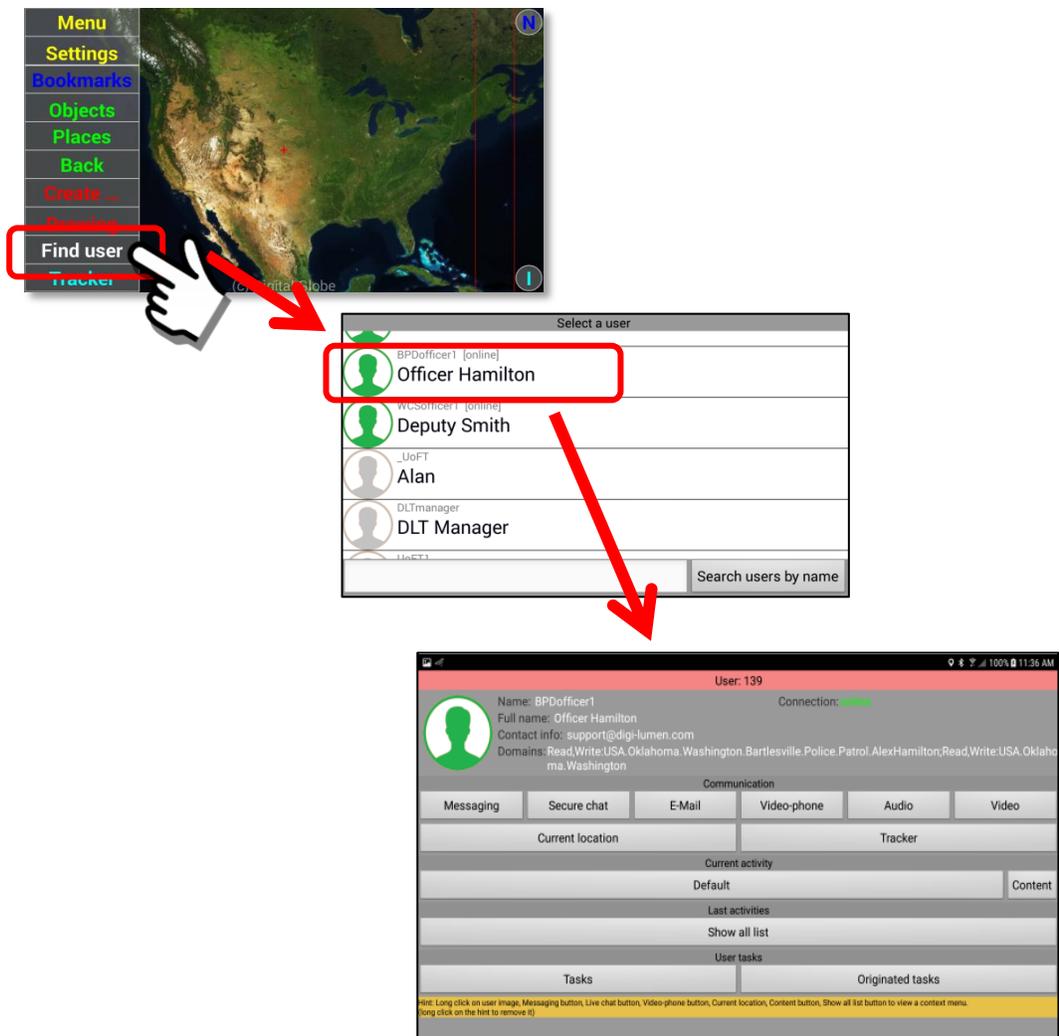
### Overview:

The Find User feature allows users to search for other users in the network and then connect via text messaging, live chat or video-phone. In addition, users may view/review the stored content (audio, video, images, places) of other users (assuming permissions allow). The panel will maintain a list of frequently accessed users.

**Important Note:** To search for other users, they **must be in the same Security Domain** (and the same or lower hierarchical level) and located on the same SentryMDU Data Server. In addition, YOU must have security credentials that allow you to send data to their device.

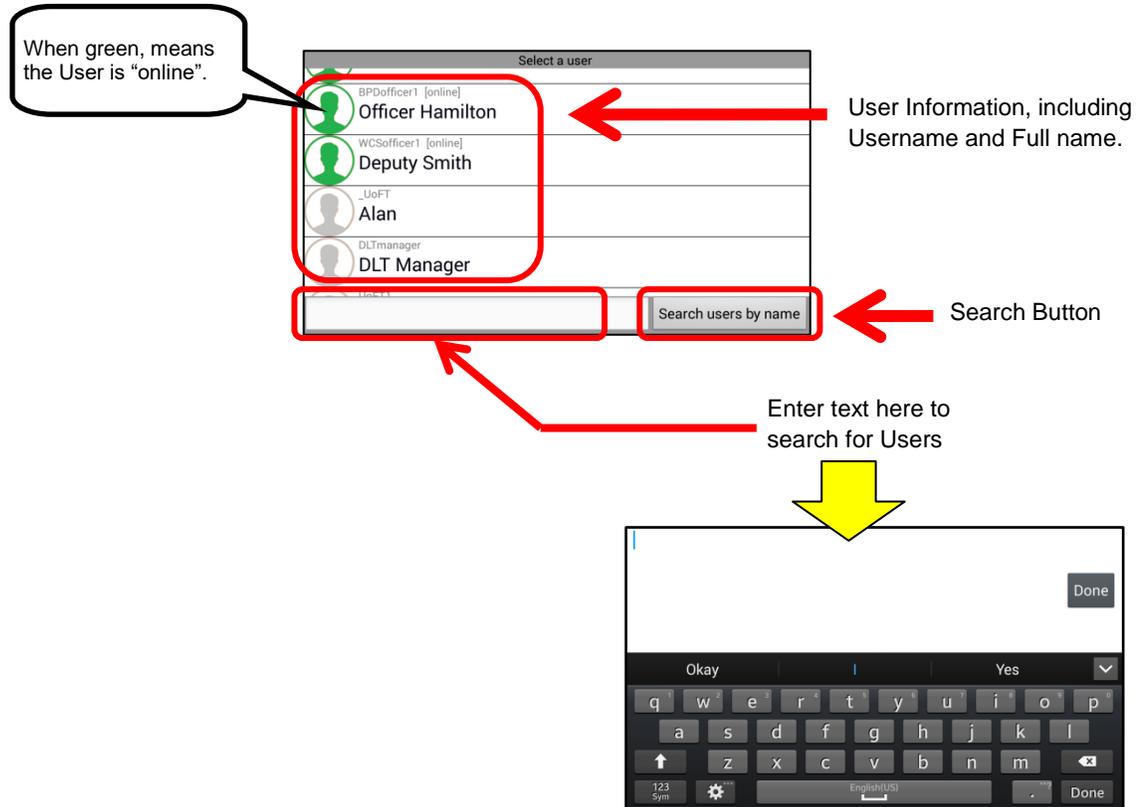
### SentryMDU “Select a user” Panel:

The “Find user” Button opens a listing of available Users in the Security Domain. It also provides a means to “search” for users that may not be on the current list.



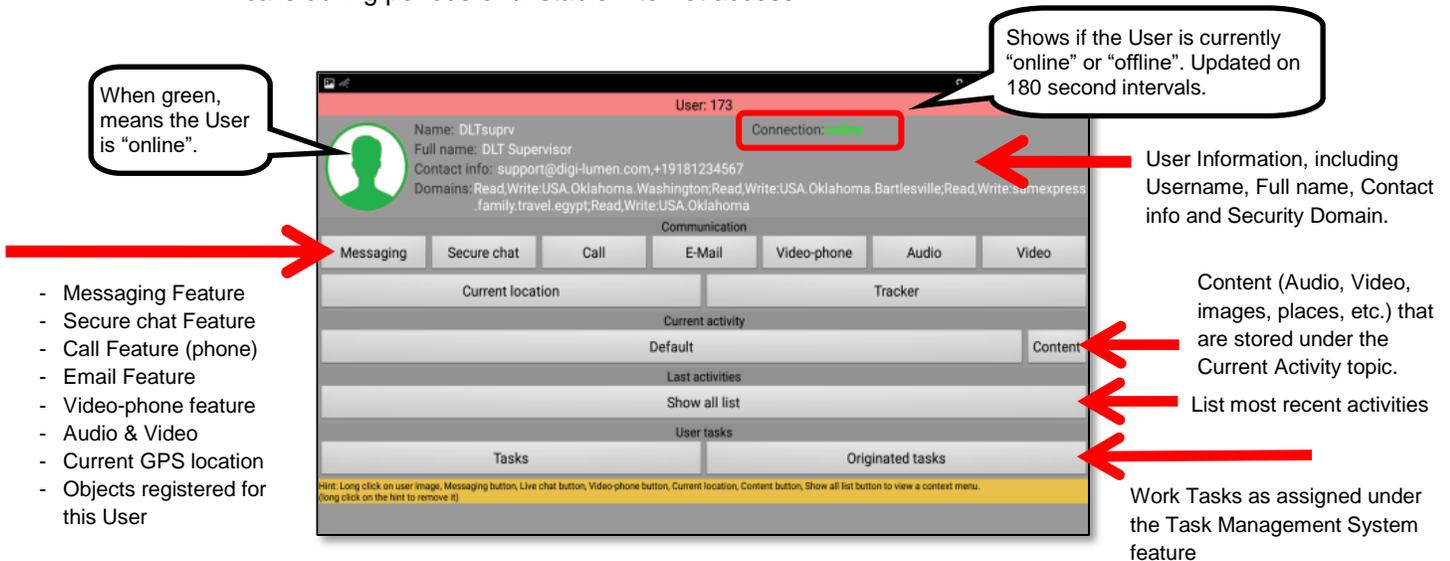
## General layout of the “Select a user” Panel:

The “Select a user” Panel has a listing of other users on the network that have been saved on the mobile device for easy access. In addition, the panel has a “search” button that will search for another user by name (partial names).

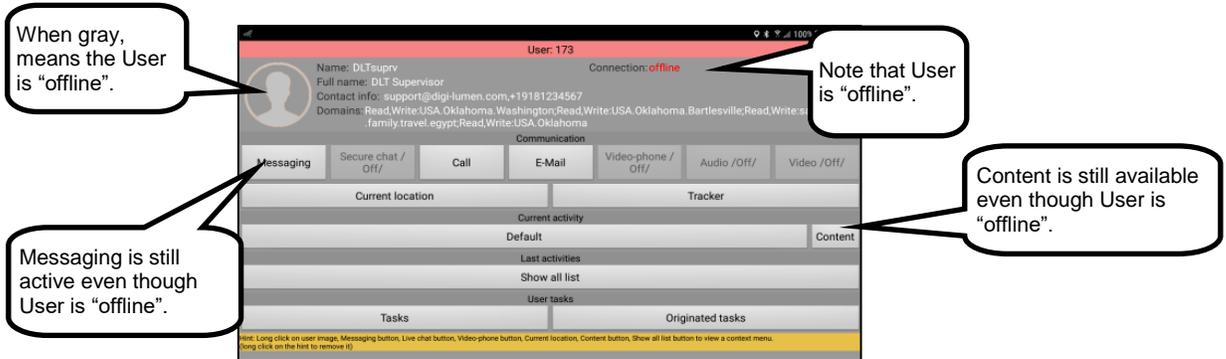


## General layout of the User Data Panel:

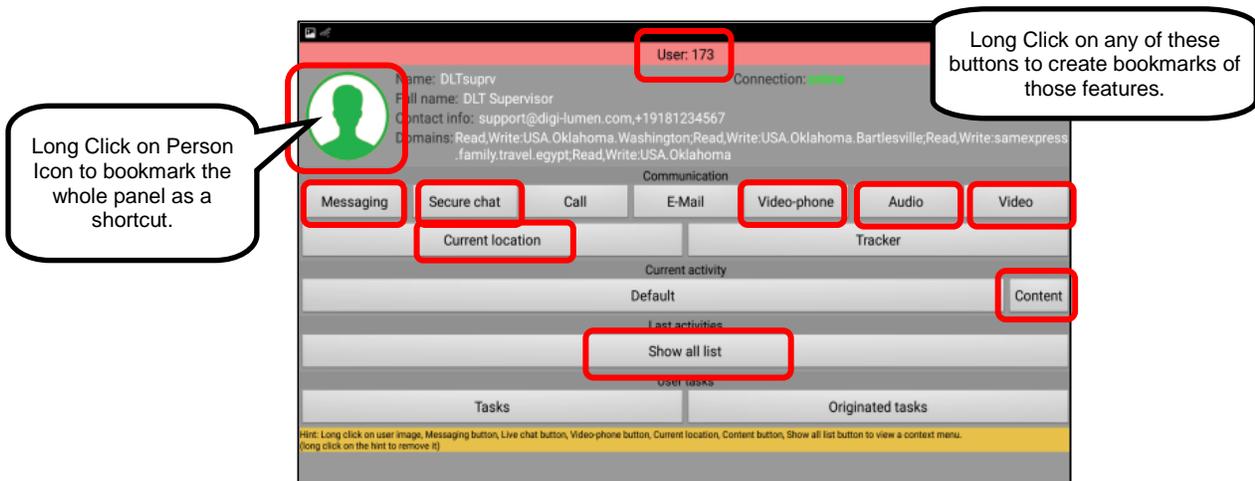
The User Data Panel has a series of buttons arranged under different topics. See the illustration below. The server connection status (online or offline) is updated once every 3 minutes (180 seconds). We do a time period between status checks to minimize server calls during periods of unstable internet access.



If a User is “offline” (not connected to the Sentry Data Server) the User Data Panel will have several grayed out sections as shown below. Note that if another user is “offline” you can still use the Messaging Feature even though they will not receive the message until they are back online. In additional, you may still review Content and Activities.



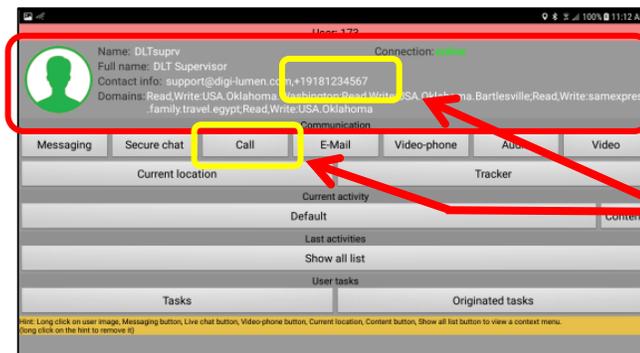
The User Data Panel has the capability to be bookmarked in a variety of locations as shown below.



## Description of the button functions and features:

### 1. User Information

The User information includes the Name, Full name, Contact Info and Security Domain.



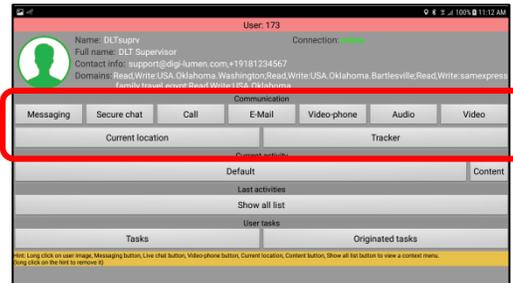
### User Information Section

#### Note:

If a phone number was provided during initial registration a “Call” Button will also be displayed on the User Panel. Clicking on this button will place a phone call to the User.

## 2. Communications

The Communications Section of the User Data Panel has 9 feature buttons that will be described in this section.



- Messaging Feature
- Secure Chat Feature
- Call Feature (phone)
- Email Feature
- Video-phone Feature
- Audio Feature
- Video Feature
- Current GPS location
- Mobile Object Panel for this User

### Messaging Feature

The Messaging Feature is similar to native “Text Messaging” on a smartphone in that the other party does not have to be “online” at the time. The Sentry MDU System will send a notification signal to the mobile device. The device will emit a “beep/tone” and display a SentryMDU Icon in the notification bar when a message is received. The messaging feature has a 10MB limit. Keep this in mind if you will be attaching “pictures” to the message.

All SentryMDU messaging is secured using end-to-end Diffie-Hellman (DH) as a method of exchanging cryptography keys for use in symmetric encryption algorithms (such as AES). The application will automatically update/replace session encryption keys at 15 minute intervals.

The Messaging Feature may combine text entry with drawings and with pictures taken with the camera. In addition, active content (streaming video) may be embedded into text messages. Examples below will show how this is done.

### Secure chat

The “Secure Chat” Feature will require that BOTH users are online. It is called “secure chat” because the Sentry MDU System will establish a “live” encrypted connection between the two devices.

Secure chat is secured using end-to-end Diffie-Hellman (DH) as a method of exchanging cryptography keys for use in symmetric encryption algorithms. The application will automatically update/replace session encryption keys at 15 minute intervals during the live chat session.

### Call Feature

The Call Feature is “optional” since the button will not appear unless a phone number has been entered during registration. This feature simply uses the native “Phone App” on the mobile device to place a phone call. The phone number that will be called is the number the User entered during initial registration of the Sentry MDU system.

### Email Feature

The Email Feature simply uses the native “Email App” on the mobile device to compose and send an email. The email address that will be used is the address the User entered during initial registration of the SentryMDU system.

### Video Phone Feature

The “Video Phone” feature will establish an audio- video communications channel between two mobile devices. The feature will allow video from the remote device and face camera video from the local device.

### Audio Feature

The Audio Button on a User’s Panel will activate the microphone on the mobile device of a remote user. You will receive an audio feed from the remote device.

### Video Feature

The Video Button on a User’s Panel will activate the camera on the mobile device of a remote user. You will receive a video feed from the remote device.

### Current Location Feature

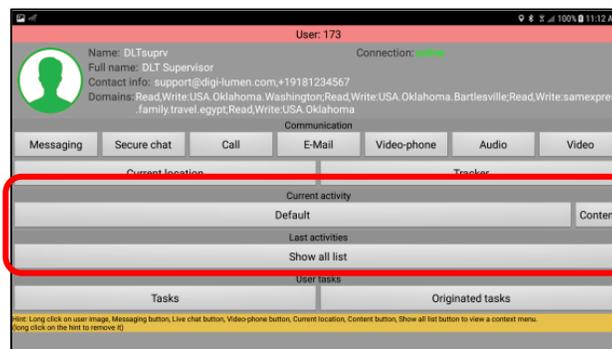
The “Current Location” Button will contact the mobile device and retrieve a new GPS reading from the sensor. This will display the current GPS location of the user selected. The main map screen will be displayed with the screen centered (red “+” mark) over the location of the user.

### Tracker Feature

The “Tracker Button” opens the Mobile Object Panel for the selected remote device. The mobile object panel provides access to sensors, recorders, data archive and tracking history for other users.

## **3. Current Activity and Last Activity**

This section has Category tile blocks for both the “Current” and “Last” activities and a Content button. The current activity category, marked “Default” in the example below, is where current “content” is stored. This section will review how to gain access to the content on a mobile device.

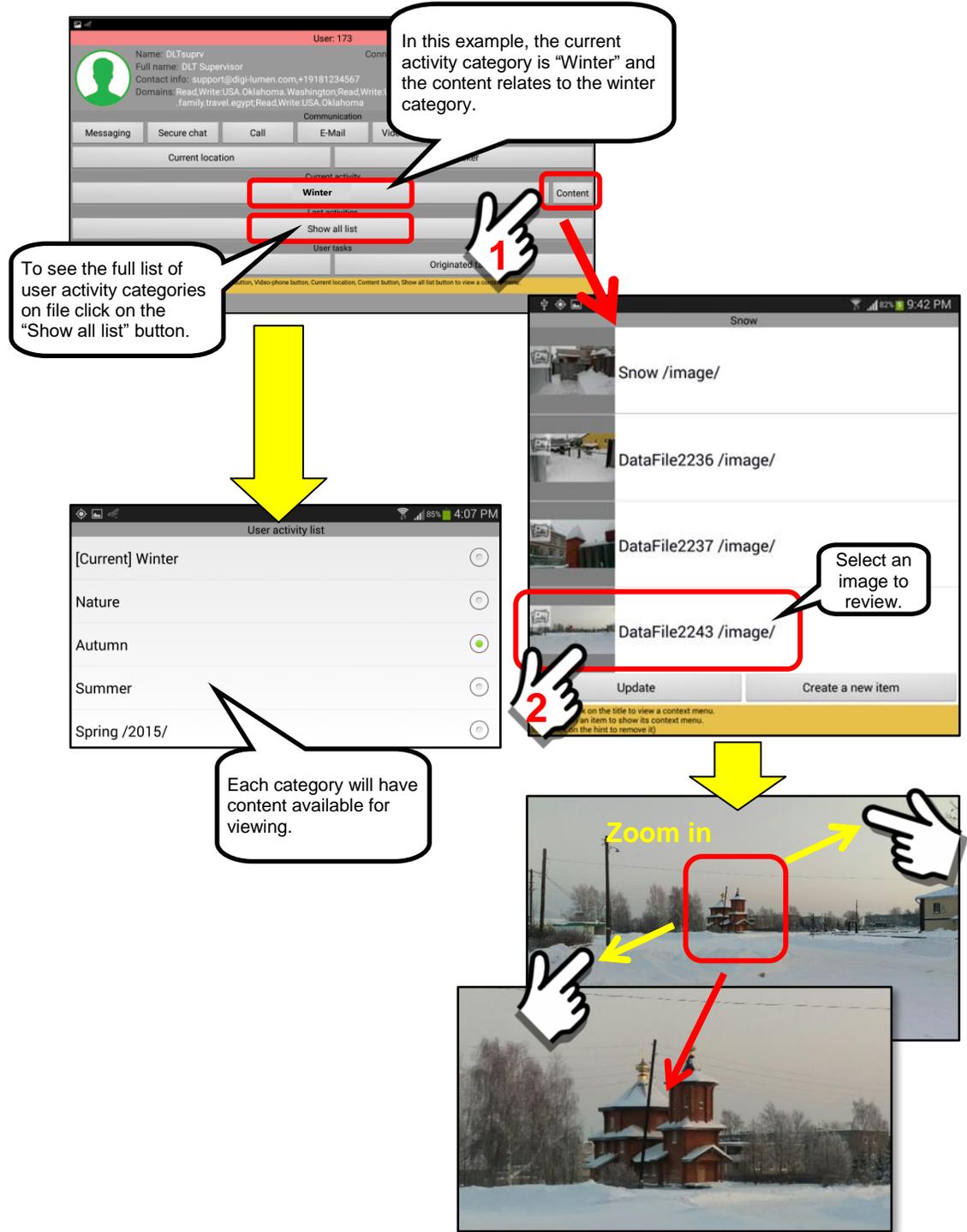


Content may include the following data types:

1. Pictures
2. Videos
3. Telemetry (GPS) data
4. Points-of-Interest
5. Audio Files
6. Places
7. Imported Data Files

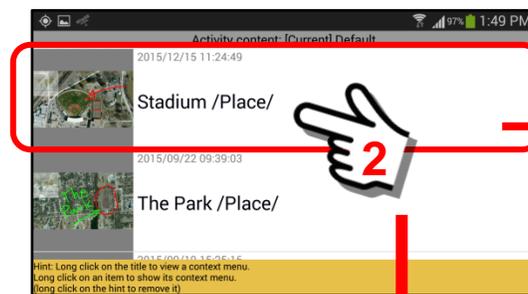
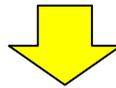
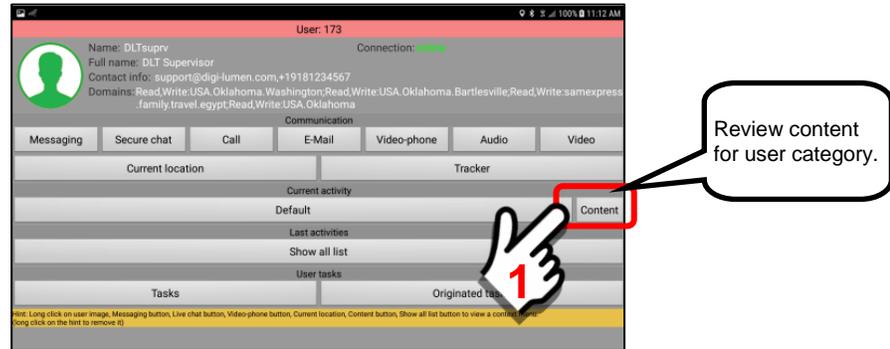
In the example above, content that is created by the User will be stored in the current activity (shown as Default). To access the content, click on the "Content" button which allows access to data within the current activity.

Users have the ability to create a variety of "Activity Categories". In the following example, notice that the "Current activity" is shown as "Winter". In this example, the stored content all relates to the "Winter" category.

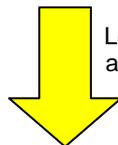


#### 4. Reviewing User Content

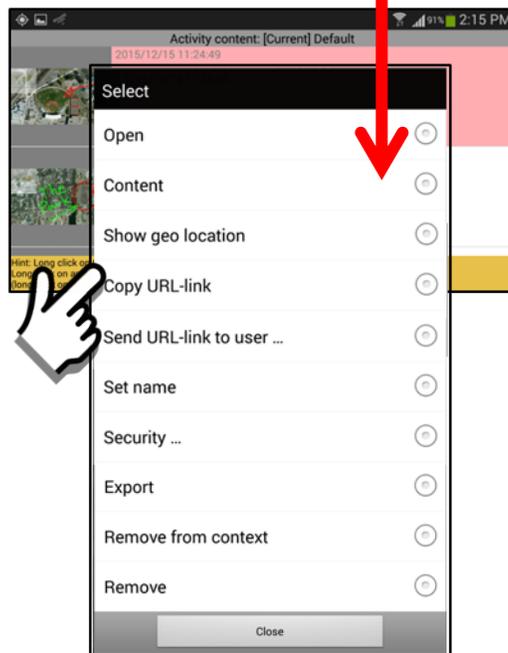
The "Content" Button allows a user to review a variety of data stored on the mobile device (and associated Data Server). This section will outline the features and options available.



Short-Click will display the "Place"



Long-Click will display an options menu for a "Place" Item



The drop-down menus will be the same for all data types.

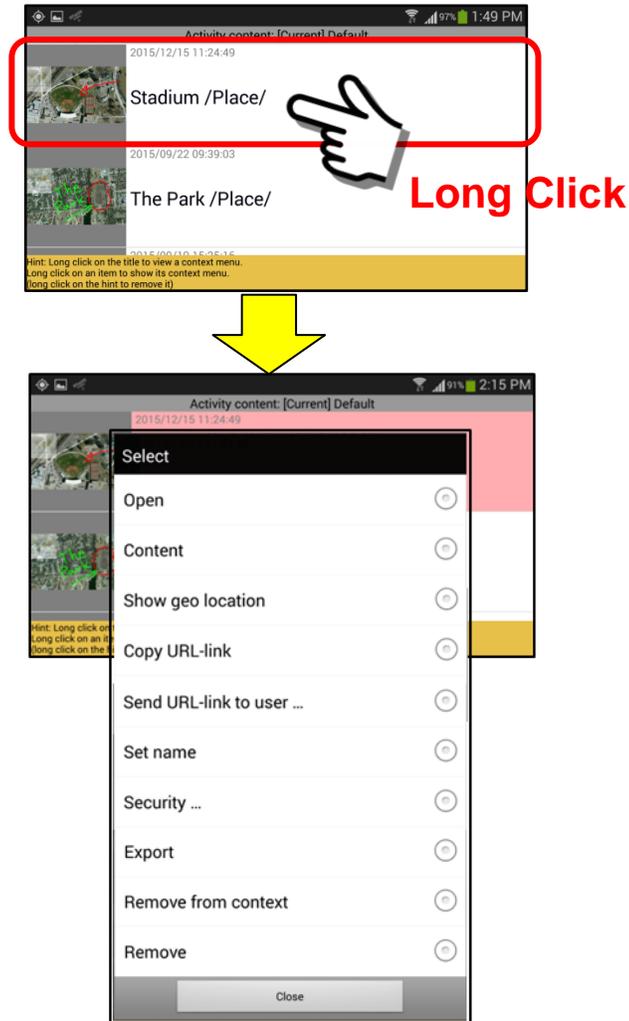
This example will show that ten (10) menu options are available to the User.

These menu options will be explained in more detail in the following sections.

### 5. User Content Menu Options – Map Item

When a “Long-Click” is performed on User Panel content data a series of menu options are available.

The menu listing below will illustrate using a “Place” data item.



The 10 menu items are explained in detail below.

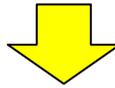
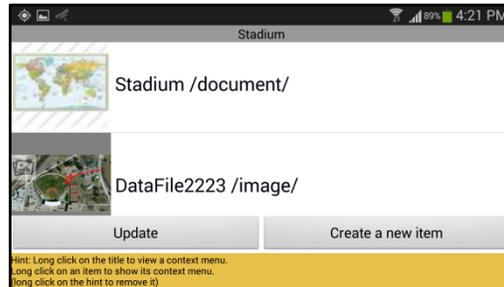
#### Open

The “Open” menu option will open the file and display the contents, In the case of our example, it will display the satellite image view of the “Place” which is a Stadium.



## Content

The “Content” menu option will display the components of the data that make up the item. In the example of the Stadium, “Place” content, the Place item has two components ... a document item and an image item. They are shown below.



Clicking on the Stadium /document/ data will give us the “map” image of the Place item.



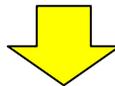
Map image of “Place” data



Clicking on the DataFile2223 /image/ data will give us the raw picture/image of the Place item on the satellite image.

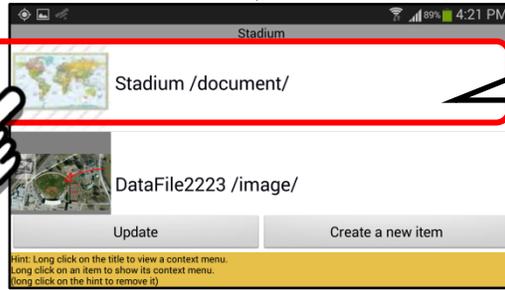


Raw picture image of “Place” location

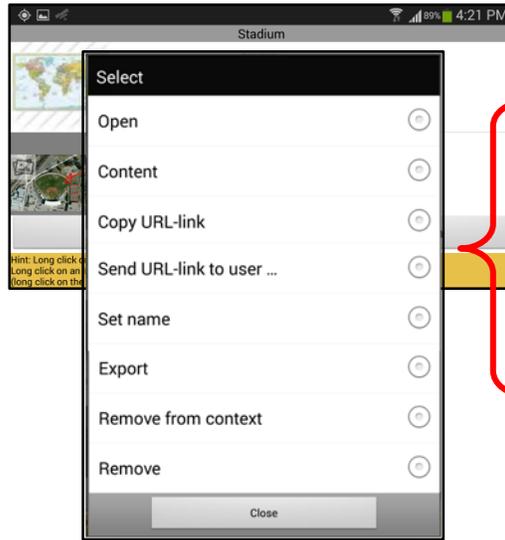


The Content menu item also allows a user to perform additional operations on the data elements. The following section will show how additional data files may be added to the existing group.

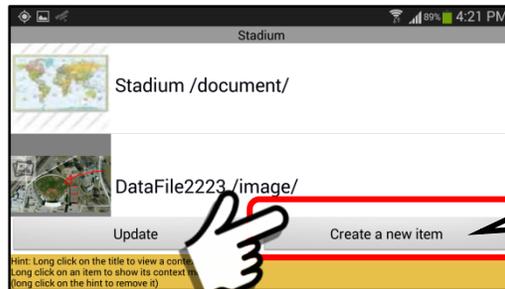
Long Click



A long-click on any of the components will open another set of menu options.



This secondary set of drop-down menus will be the same for all data types.  
This example shows eight (8) menu options are available to the User.

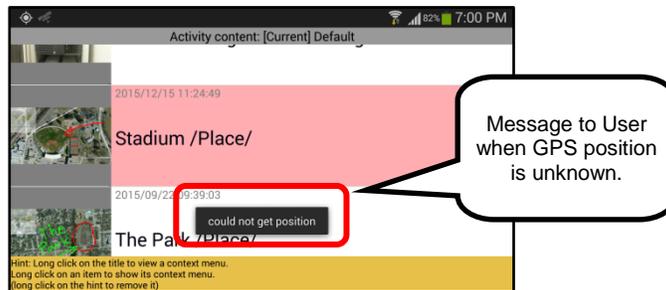


### Show geo location

The “Show geo location” menu option will display a map view (Satellite image) of the location of where the data was gathered. The GPS location will be derived from a geo-tagged picture or video. If the GPS data is not available a message will be provided indicating that no position is known.



If a GPS location is NOT available for the data item, a message will say “could not get position”.



### Copy URL – link

The “Copy URL – link” menu option is provided to allow the user to “bookmark” data from their own content or other user content.

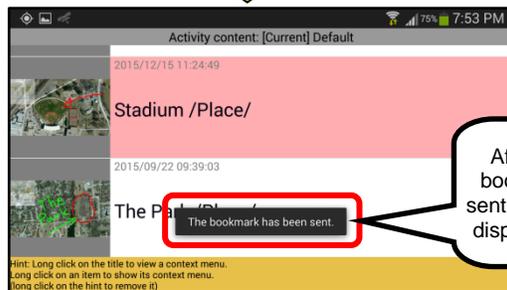
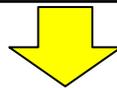
Once the URL link is copied into the TEMP file system on the local device, it may be imported and saved.



### Send URL – link to user ...

The “Send URL – link to user” menu option is provided to allow a user to send another user a bookmark link to this specific data.

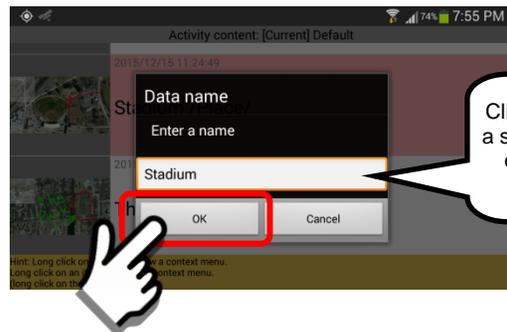
Select a User to send the information to.



### Set name

The “Set name” menu option allows a user to change the name that is attached to a particular data element. When we click on the “Set name” menu option, we are presented with a data entry box to edit/change the name.

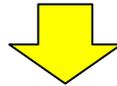
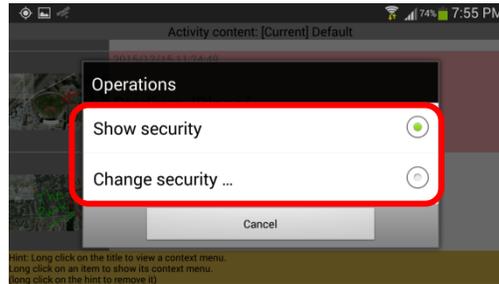
When the changes are complete, click “OK” to finish the operation.



## Security ...

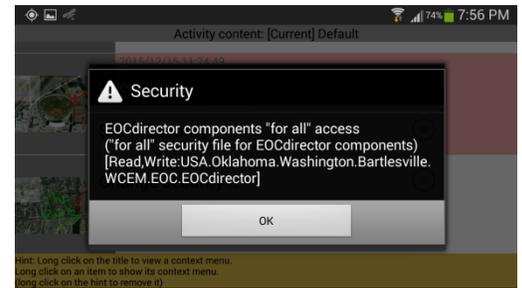
The “Security ...” menu option allows a user to view and change the security settings and access for the information stored on the mobile devices.

On clicking the “Security” menu option, another set of menus provide options to show or change the security settings.



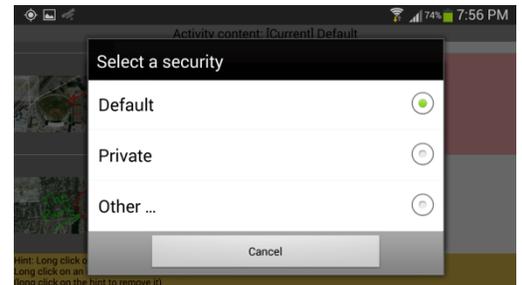
Clicking on the “Show security” option of the Operations menu gives us the security settings of the data element under review.

Show security



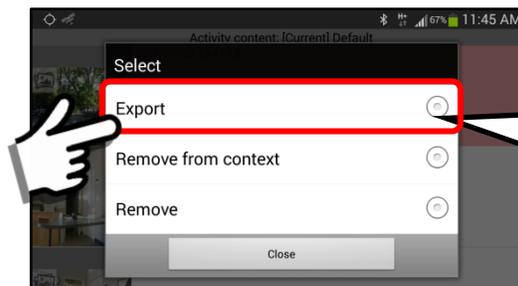
To change the security settings from default (everyone) to private, click on the menu options provided here.

Change security ...



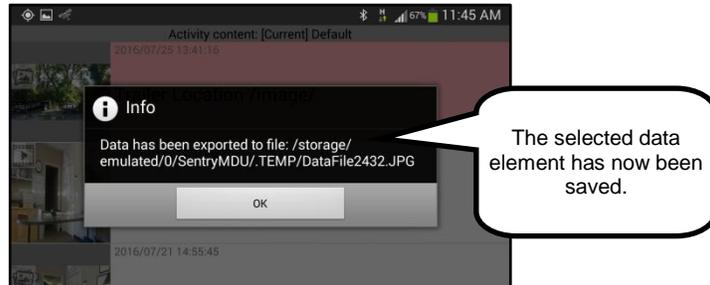
## Export

The “Export” menu option allows a user to save a copy of the file in a “temporary” folder location where it is available to send to other users or transfer from the mobile device to another device.



Click “Export” to save the selected data element.

The data element will be saved in the “TEMP” folder. Note that the data element (in this example, an image) has been saved using the DataFile2432.jpg name as assigned by the SentryMDU System. From the TEMP Folder the file may be renamed and moved to other systems.

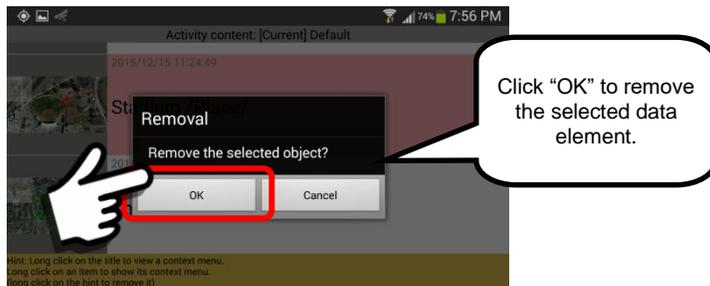


### Remove from context

This menu option removes content from the .CONTEXT folder on the local device. This situation will occur if a user downloads a long video and plays it. This video would be stored in a memory “cache” on the local device. If some time later, the user wanted to view the video again, it would not be downloaded again because it is already resident on the device. It would be played immediately because it is stored locally. This option allows a user to “remove” the video from the local device memory if they do not want to view it any more.

### Remove

The “Remove” menu option allows a user the ability to remove data elements no longer needed.

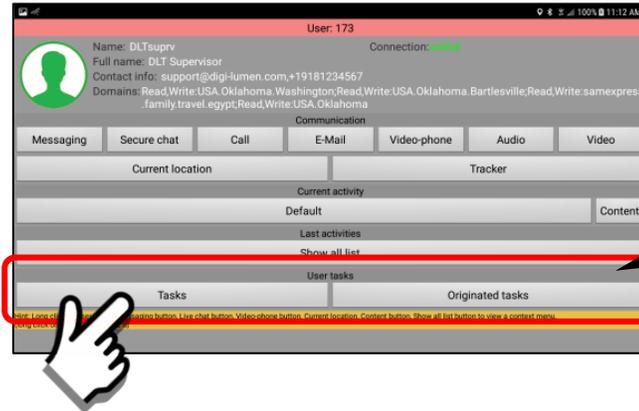


**Important Note:** The removal of content data from the mobile device **may or may not remove the same data from the Sentry MDU Data Server** if it is also stored there. This will depend on the specific configuration settings of your organization. See your System Administrator for your company policies.

## 6. User Tasks

The “User Tasks” buttons are part of the SentryMDU Task Management System. This requires access to the Sentry MDU Desktop client application to properly use this feature.

These buttons provide a listing of Tasks for the User.



# 15. The “Tracker” Button features

## 15.1. Overview of the Tracker panel

### Overview:

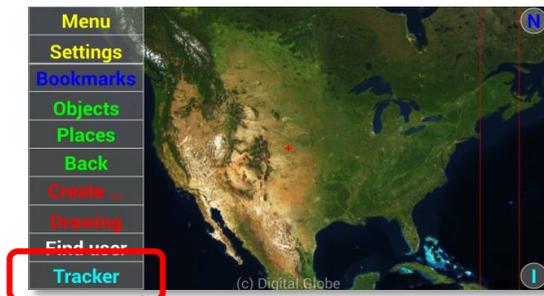
The Tracker feature provides for audio/video recording, body cam capability, setting of POI's, monitoring environmental sensors and setting alarm parameters. **The Tracker Panel will be the most used menu item.** It is important that you become very familiar with the features of this panel as this is the core functionality of the SentryMDU System. This is the primary GPS tracking feature panel.

**The “Tracker Panel” can only be accessed by the user of the mobile device (cannot be remotely accessed by others).** However, several of the functions on the panel, such as sensors, recorders and archive can be accessed by others via the Mobile Object Panel.

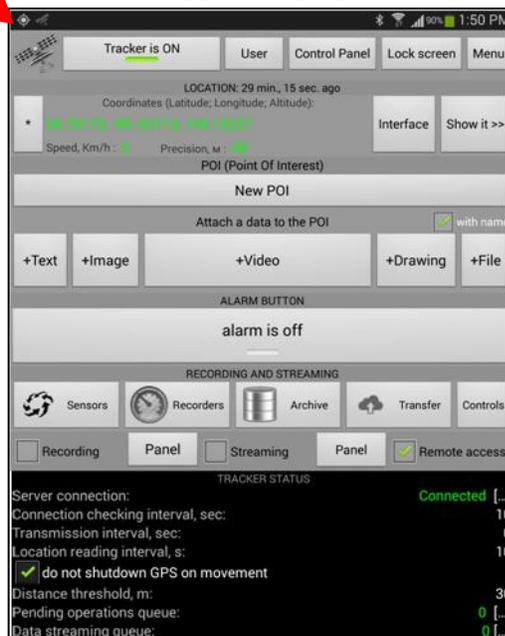
This section will describe the features and functions of the Tracker Panel.

### General layout of the Tracker Panel:

The Tracker Panel is accessed from the Main Menu Screen by clicking on the “Tracker” Button.



### Tracker Panel



## General operation of the Tracker Panel:

### 1. Screen “dimmed” on Tracker Panel after 30 seconds.

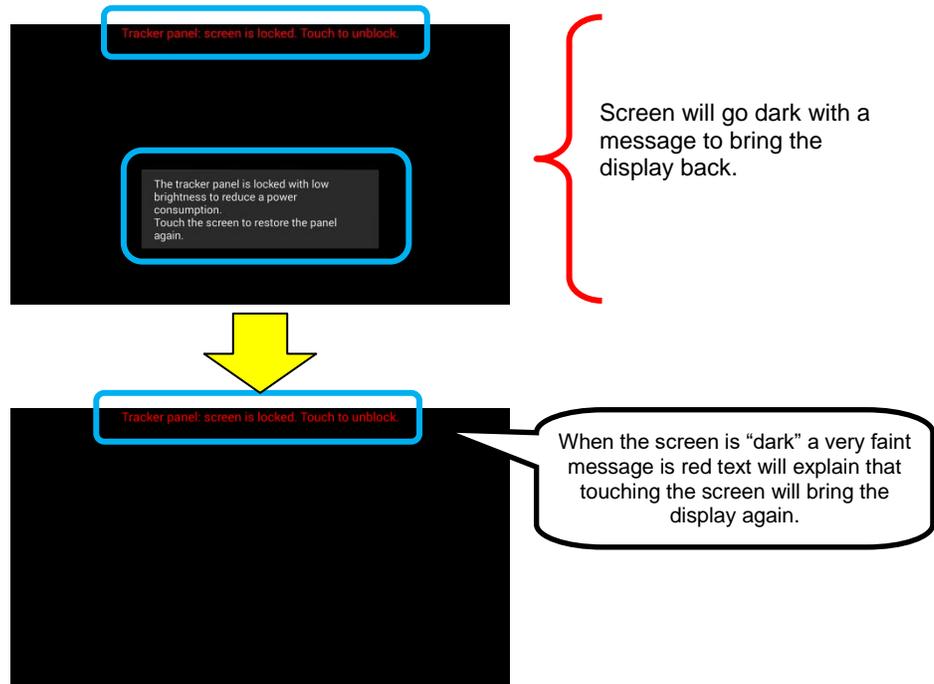
The Tracker Panel contains most of the controls and configuration settings for the SentryMDU mobile device. Many features are “launched” from this panel. In most cases after a feature is started (ie recorder started) the user does not want the display screen on the mobile device to remain “on”. For this reason, the Tracker Panel (and subordinate screens) will be **dimmed to black after 30 seconds of non-use**. To re-establish the Tracker screen simply “tap” the screen on the mobile device and the screen will return.

The process is shown below.

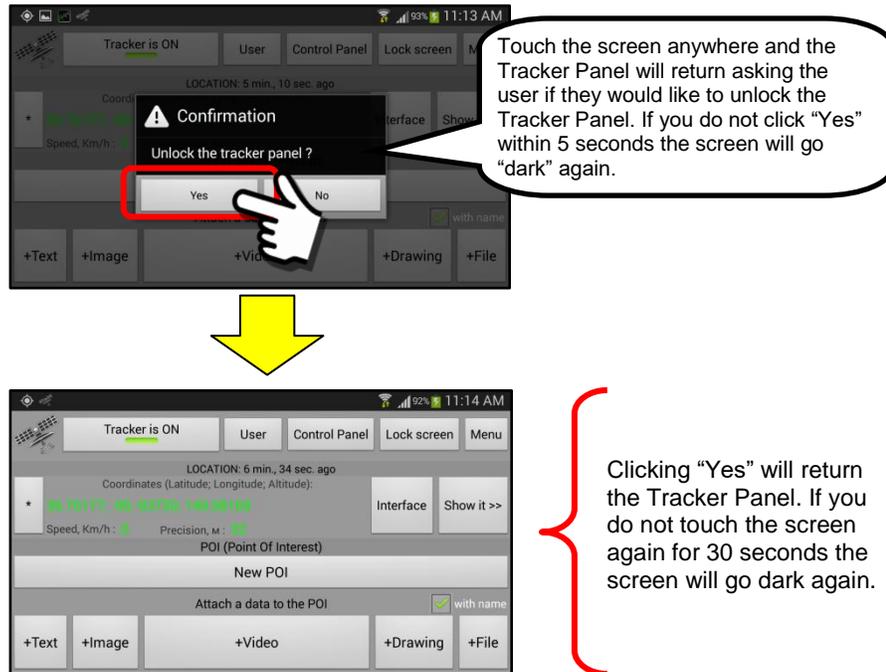
#### Open the Tracker Panel



After 30 seconds the screen will go dark (or 30 seconds of non-use)

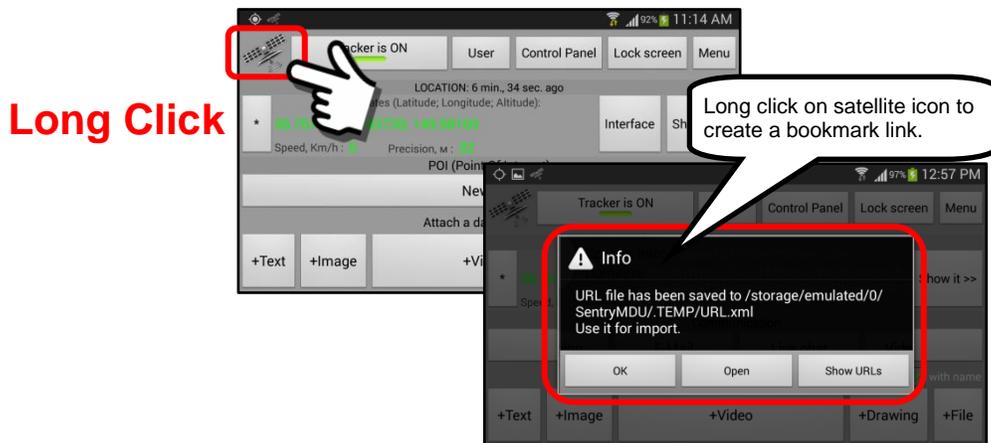


To restore the Tracker Panel display, touch the screen



## 2. A bookmark may be created for the Tracker Panel.

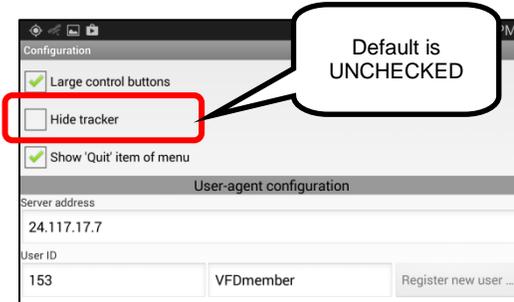
The Tracker Panel allows a User to "bookmark" the panel. This will allow rapid access to those features used most often. A "long click" on the satellite icon in the upper left corner of the screen will create a bookmark link to the panel.



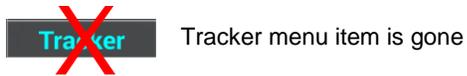
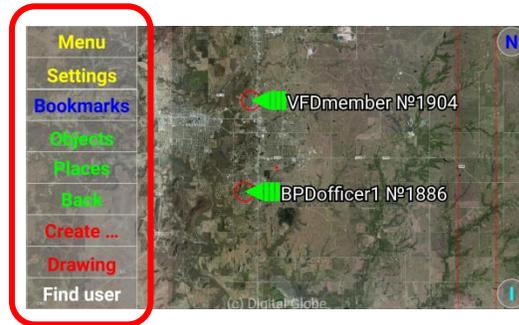
Once the link is created, navigate to the Bookmark Section and "import" the bookmark into your current bookmark list. See **Section 9** for details on the Bookmark feature.

### 3. *Hiding the Tracker Panel.*

The Tracker Panel may be “hidden” from user view by a Configuration Setting. See **Section 5.4** for details. The “Hide Tracker” configuration setting allows a user to hide the Tracker Panel so that the menu choice does NOT appear on the Main Screen.



If CHECKED, notice that the Tracker menu item does NOT appear on the menu



Tracker menu item is gone

## 15.2. Description of buttons and features

### 15.2.1. Location data (Latitude, Longitude, Altitude, Speed)

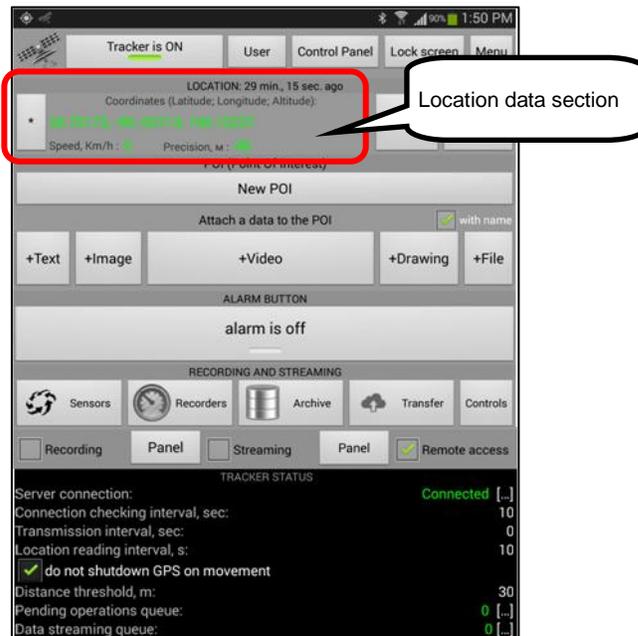
#### Overview:

The Tracker Panel implements the location acquisition services for the SentryMDU System on the mobile device. The system uses GPS/GLONASS satellite scans to determine the physical location of the mobile device anywhere in the world. The GPS tracking feature may be “turned off” (**Section 15.2.2**) and then the device location will not be reported to the Data Server.

**Important Note:** The location of the mobile device is reported to the SentryMDU Data Server on a periodic basis. The “default” time interval is to report the mobile device location once every 300 seconds (5 minutes). For most Users this is adequate. For those users that have jobs where more frequent updates are necessary (ie First Responders, Police, Fire, etc.) we recommend a time interval of 10 seconds or shorter. See Section 5.4 for details.

#### Location data on the Tracker Panel:

The location data is centered in the upper middle portion of the Tracker Panel.



#### Description of the location features:

##### 1. Screen display of location features

This section will describe the location information that is available on the Tracker Panel.

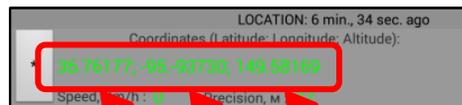


## Location



This describes the timeframe since the last location scan of data from the GPS/GLONASS satellites.

## GPS Coordinates



Altitude above sea level

Longitude coordinate

Latitude coordinate

These are the GPS coordinates as returned by the satellite receiver in the mobile device.

## Speed and Precision



Precision is the measurement tolerance of the GPS location. In this example it is shown as 32 meters. This means the actual location is somewhere between 0 -32 meters from the point shown. **This precision setting may be changed via the Sentry Manager Desktop application.**

Speed is shown in Km/hr

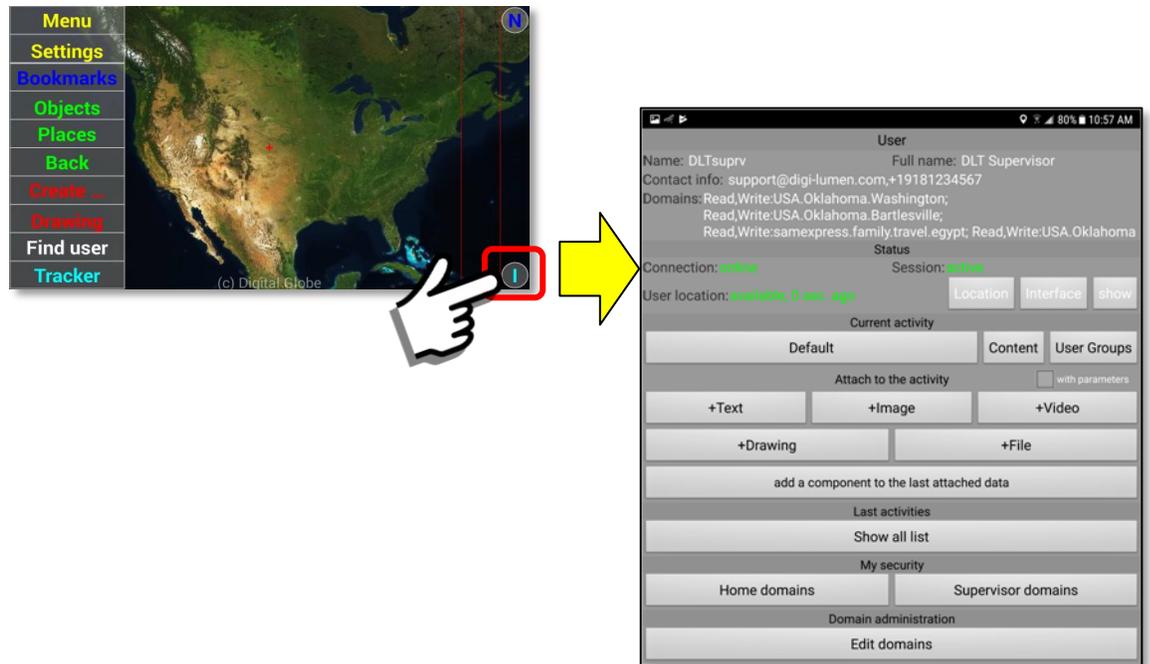
The GPS coordinates, speed and precision are all affected by the user location, the number of satellites that are "visible" to the mobile device, the signal strength, and the quality of hardware on the mobile device. Generally, higher quality mobile devices will have better antennae design and more sensitive GPS receivers.

# 16. The “Information” Button features

## 16.1. Overview of the User Information panel

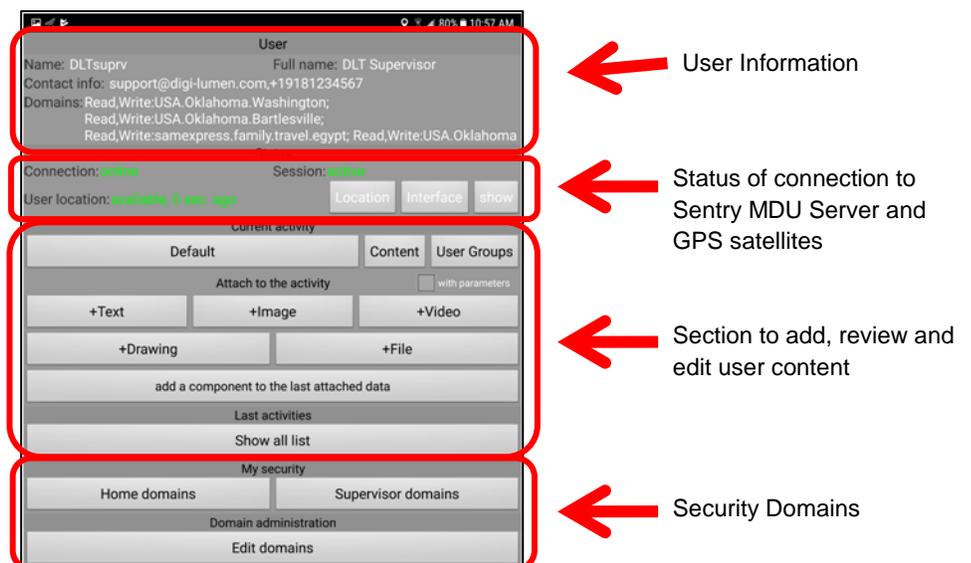
### Overview:

The User Information Panel will provide the user a gateway from which to add content such as text, pictures, video, drawings and files. This section will describe the general layout of the panel and the features available.



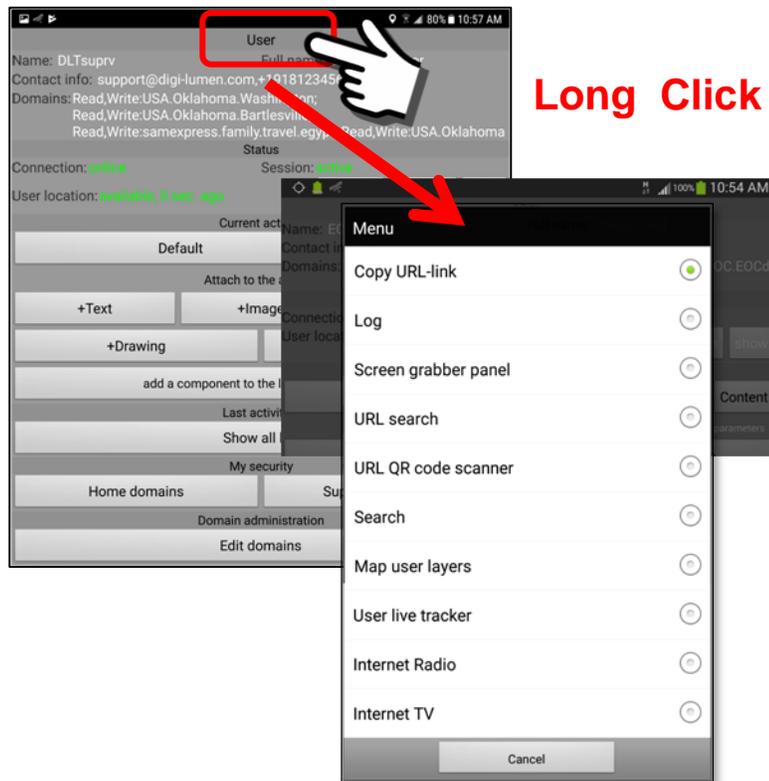
### General layout of the User Information Panel:

The User Information Panel has a set of buttons and features that are available to the User. These are detailed below.



## Description of User Panel options:

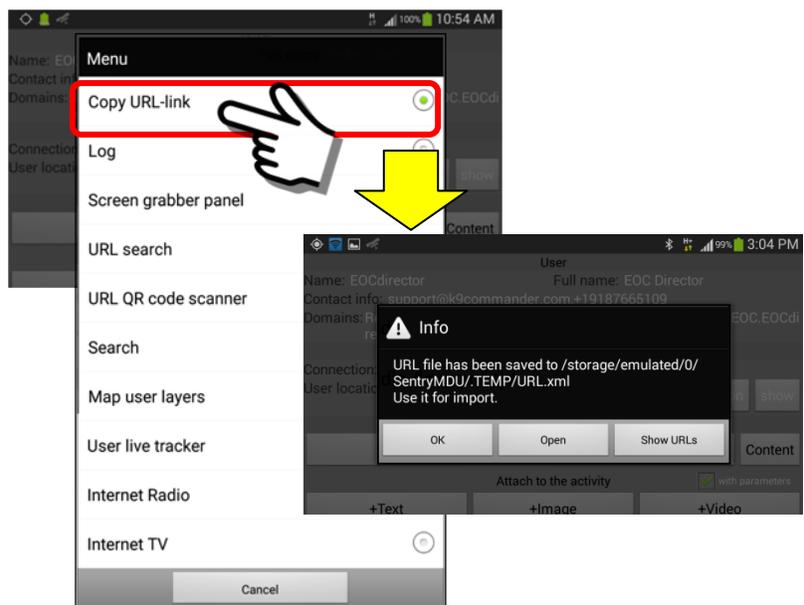
The User Information panel has 10 menu options that are available by performing a “long click” on the “User” name located at the top of the panel.



Long Click

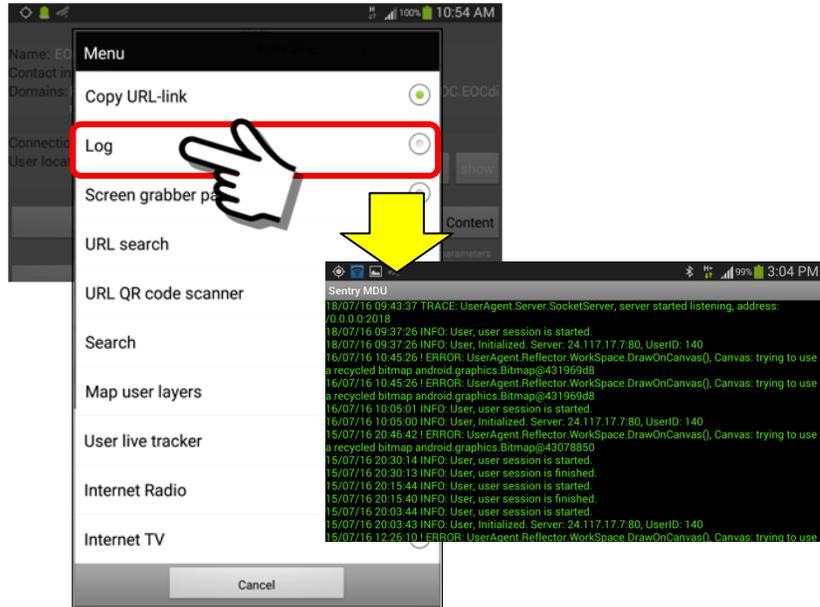
### Copy URL – link

This option creates a URL link that may be imported into a Bookmark to provide a user shortcut to the User Information panel. See the Bookmark section for details.



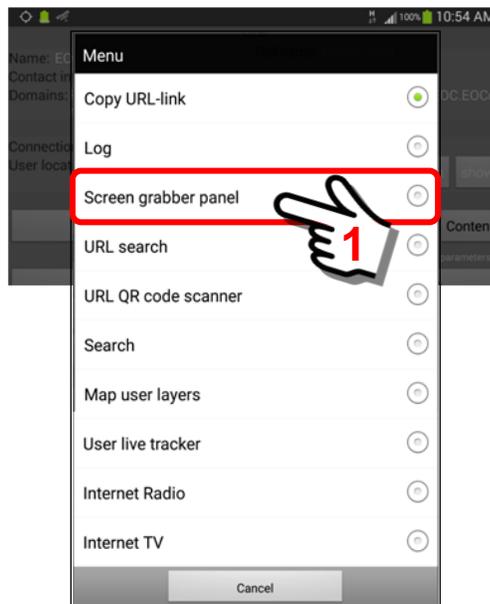
## Log

This option provides a set of log messages that detail the operation of the Sentry MDU App. These log messages are generally used for troubleshooting and development activities.



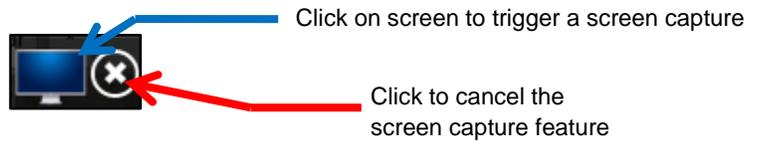
## Screen grabber panel

The screen grabber option provides a floating icon which is a screen capture button. This feature can be used to capture any of the Sentry MDU screens displayed on the mobile device.

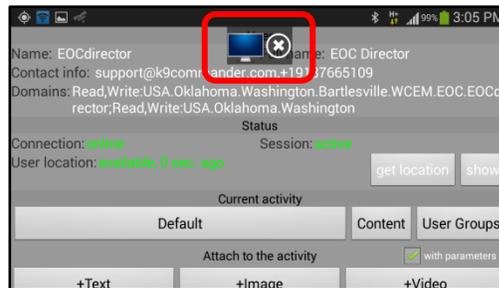


Click on the “Screen grabber panel” option to launch this feature.

The Screen grabber icon will be displayed as a “floating” icon on your screen. You may navigate other Sentry MDU menu items and the floating window will remain in position. The actions are as follows.



Since the “Screen Grabber” is launched from the User Information menu options, this is where the icon is first displayed.

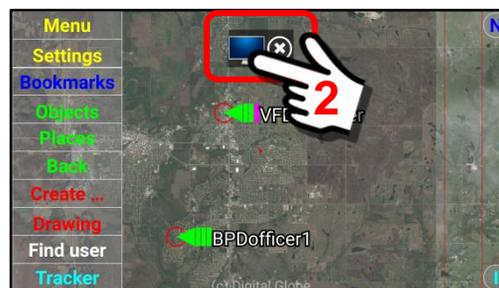


Once you see the screen grabber icon, you can navigate to any/all other SentryMDU App screens and the floating icon will stay in position.

This example will illustrate how to capture the Main Map Screen in two different formats.

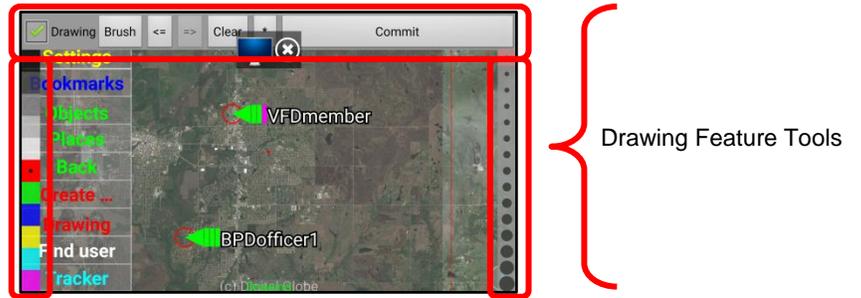
1. Short click ... captures screen **WITH** all menus and object marker overlays.
2. Long click ... captures screen **WITHOUT** menus and object markers (ie blank map)

#### Short Click Action

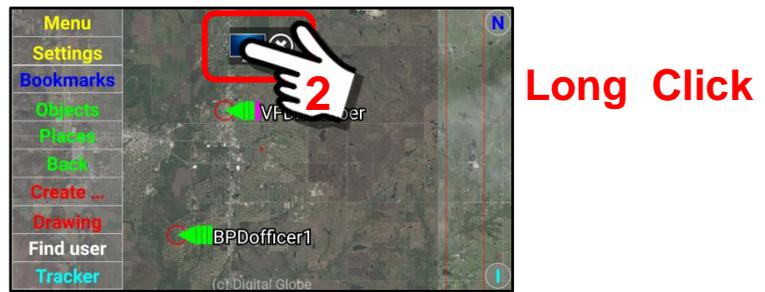


**Short Click**

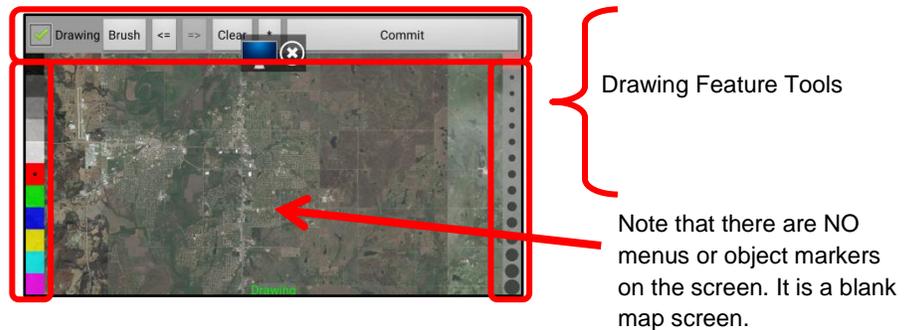
A short click action will capture the main map screen WITH all menus and user icon markers. Notice the screen is now bounded by the Drawing Features (ie pen colors, pen sizes, brush strokes, etc.). See **Section 13** for detailed instructions on the Drawing Module.



Long Click Action



A “Long click” action will capture the main map screen WITHOUT menus and user icon markers. Notice the screen is now bounded by the Drawing Features (ie pen colors, pen sizes, brush strokes, etc.). See **Section 13** for detailed instructions on the Drawing Module.



Since we are done with the screen capture, click to remove the screen capture icon. We can now “draw” on the screen and make notations.

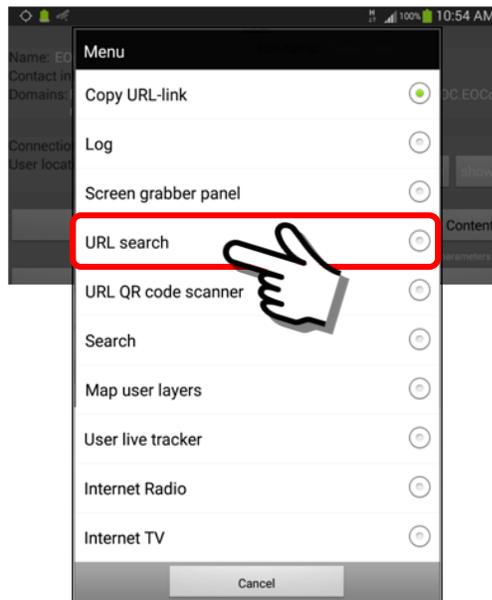


When finished, “Commit” changes and store the edited drawing.



### URL Search

This option provides a Floating Window panel with a “target” button that can launch bookmarks and URL search functions across the SentryMDU App. See **Section 16.2** for a detailed discussion of the URL Search Panel.



This is an example of the “target panel button” that is launched by the URL Search function.



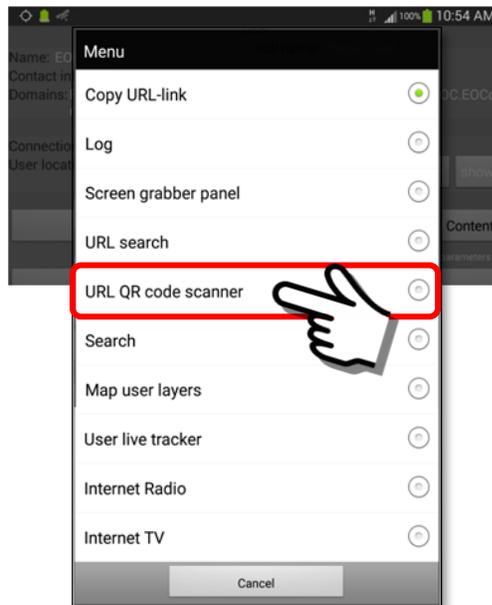
The following is an example of a floating window that is a result of using the Target Button.



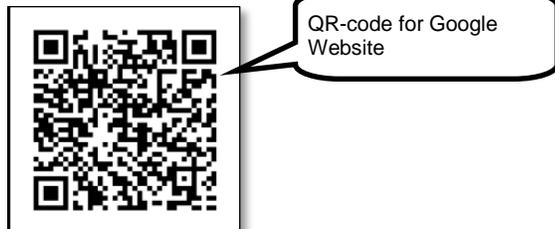
Typical result of a URL Search Panel floating window

### URL QR code scanner

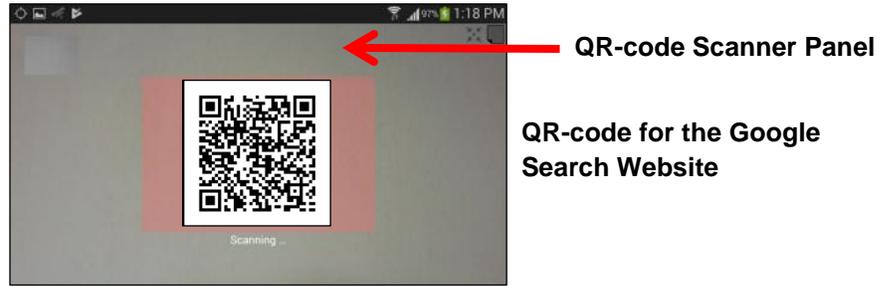
The “URL QR-code scanner” Menu item launches a QR-code scanner application that will enable a User to “scan” a QR-code of an internet website or another floating window bookmark. The website (or bookmark URL) will then “open” on the mobile device.



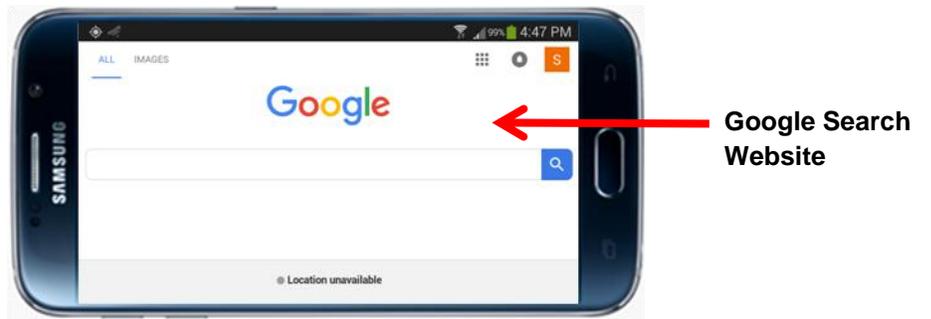
In this example, we will scan the QR-code for Google’s Search Website.



Click on the QR-code scanner Menu item, you will be viewing through the camera lens. Place the “red box” over the QR-code, hold the phone still until the scanner has locked on to the image.



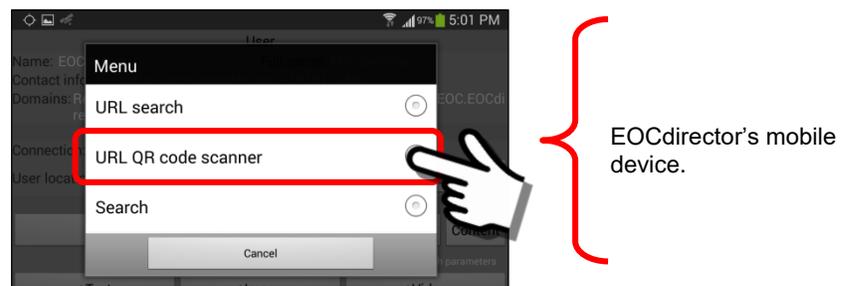
The Google Website will launch on your mobile device.



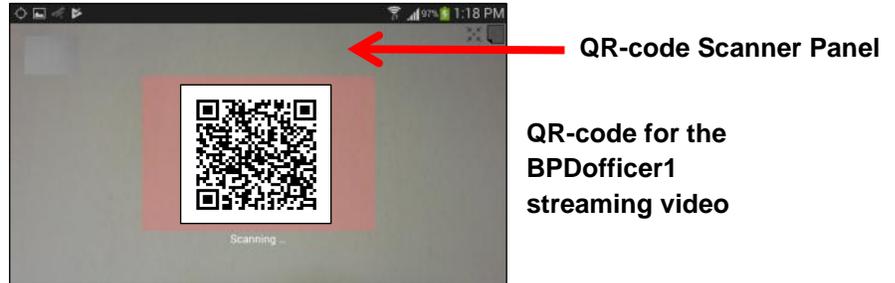
In addition, we can scan a QR Code for a user created bookmark URL and it will launch a floating window. For example, the following QR Code is for a URL that will display a live streaming video.



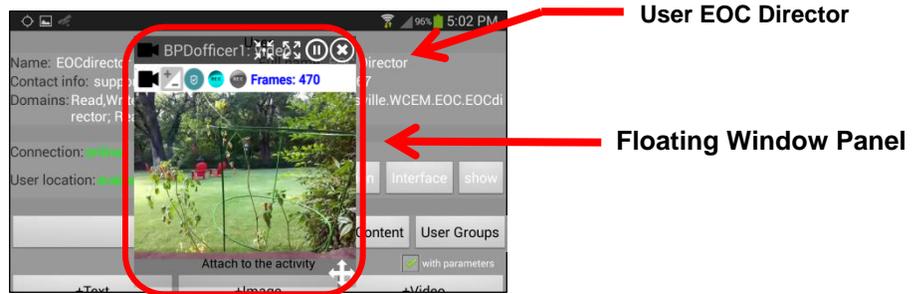
For this exercise, we will assume user EOCdirector will select a QR Code for a streaming video panel of user BPDofficer1. Select the “URL QR code scanner” menu item from the menu.



The QR Code Scanner panel will open. You will be viewing through the camera lens. Place the “red box” over the QR-code, hold the phone still until the scanner has locked on to the image.



The QR code will launch a streaming video floating window panel on the EOCdirector’s mobile device, as shown below.

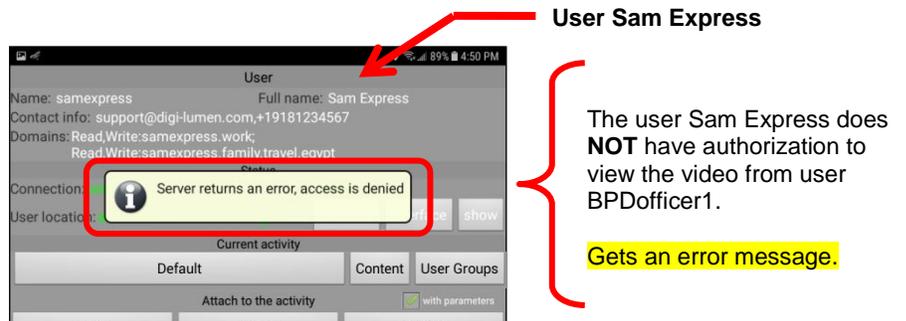


The floating window panel may now be “resized”, moved on the display canvas or minimized to the notification bar.

**Important Note:**

EOCdirector was able to access the BPDofficer1 streaming video because BOTH were in the SAME security domain AND the EOCdirector mobile device had security credentials to view the video.

If a User does NOT have adequate security credentials when they scan the QR Code, they will receive an error message as shown below.

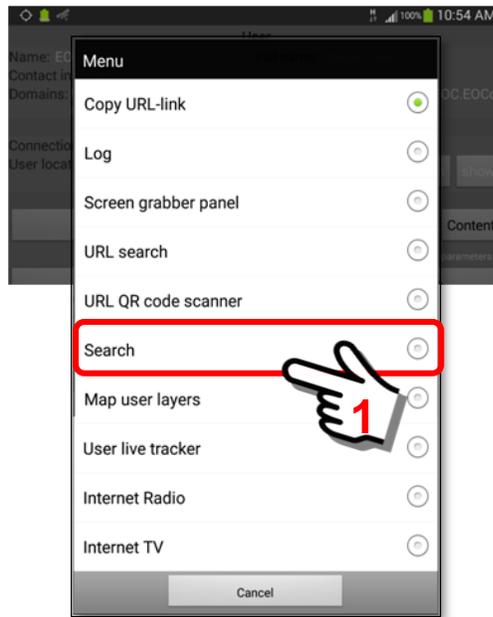


## Search

The search option provides the ability to search for content by “text search”. This feature can be used to sort through **ALL data of ALL USERS** on the particular Sentry MDU Server instance. The data can be on another user’s mobile device or stored on the Data Server.

**Important Note:** To search for data from other users, they must be in the same Security Domain (or the same or lower hierarchical level) and located on the same SentryMDU Data Server. In addition, YOU must have security credentials that allow you to search for data from their device.

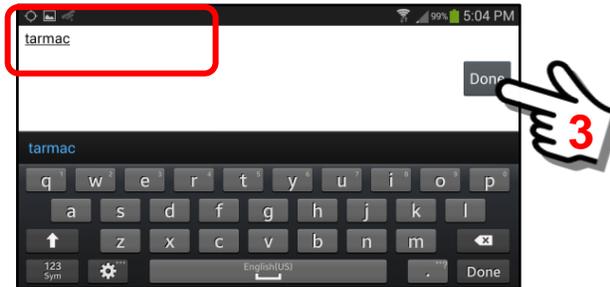
In this example, we will search for all data that has “tarmac” in the name ... as in “Airport tarmac”.



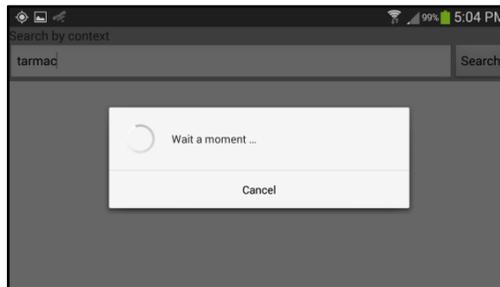
Click on the Search Option to open the “Search by Context” data entry panel.



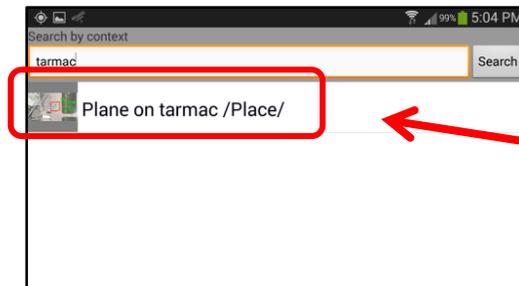
Click in the data entry box and the on-screen keyboard will be displayed. Enter a text string. This text string will be matched against all files, of all users, on the particular Sentry MDU Server instance.



When finished, click “Done” and the system will search for a match. If a file is found with the selected “text string” (ie tarmac), the file(s) will be listed below.

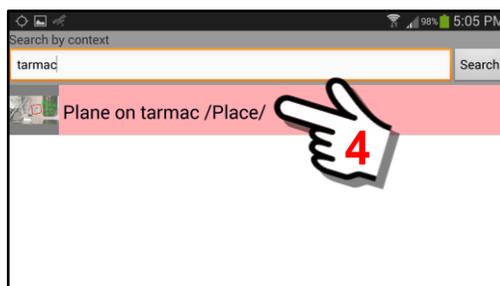


In our example, one file was found. This file is a “Place” point-of-interest map image that was edited in the Drawing Module and saved ( /Place/ ).



File was found. The text string “tarmac” was found in a file name.

To display this “Place” drawing, click on the file name and the image will be shown.

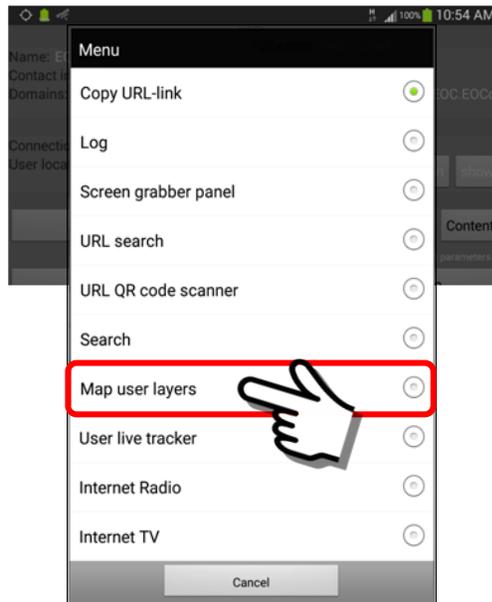


The system will retrieve and display the “Place” image that was saved on the system.

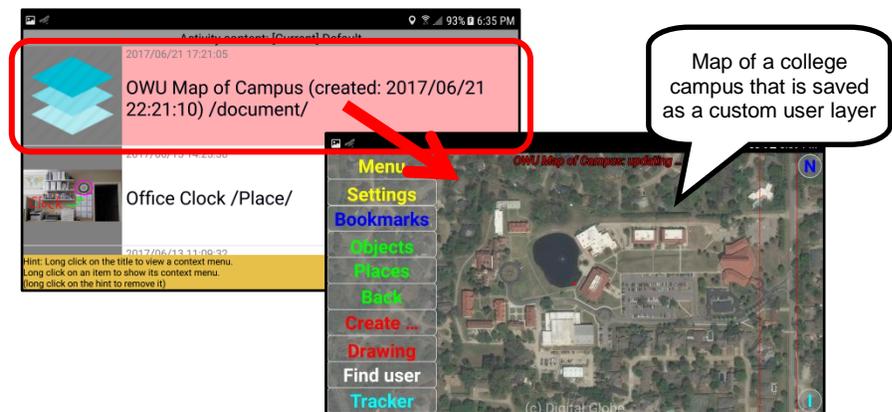


### Map user layers

This option allows a user to create custom Map Layers of specific regions of a satellite (Map) view and populate this map with custom objects. See Section 16.3 for a detailed discussion of the “Map user layers” Feature.



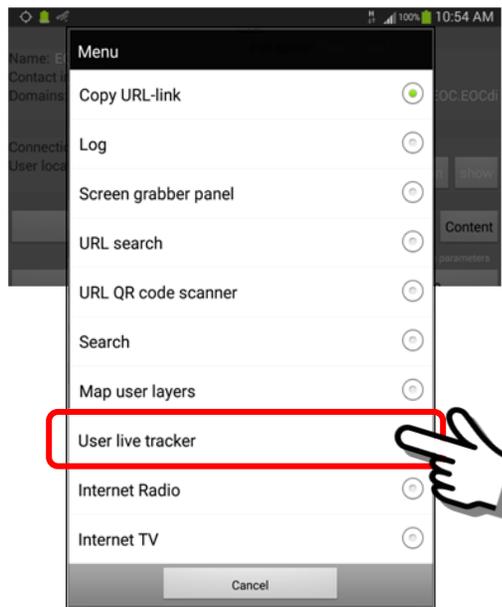
The following is an example of a “Map user layer” screen that has been saved.



### User live tracker

This option allows a user to link his own Mobile Object bookmark URL to a “User live tracker” function. The live tracker function uses a motion calculation algorithm to smooth the movement and rotation of GPS enabled mobile objects. It shows object “motion” and position with a 10 second delay. This feature is for Mobile Objects that are embedded in a Custom Map Layer.

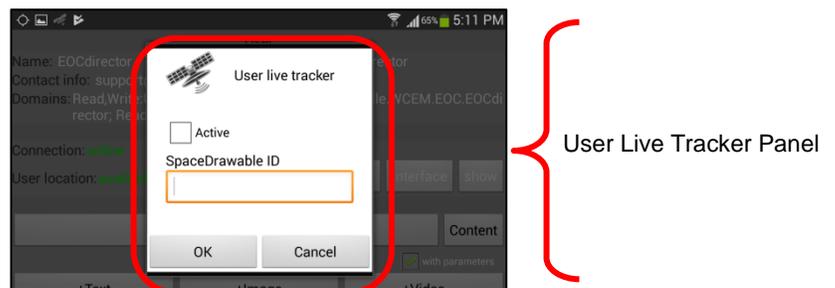
The “User live tracker” function should be “deactivated” when not being used because it sends data to the server every 10 seconds. This may result in increased use of resources and battery drain on the mobile device.



### ***The SpaceDrawable ID value (integer number)***

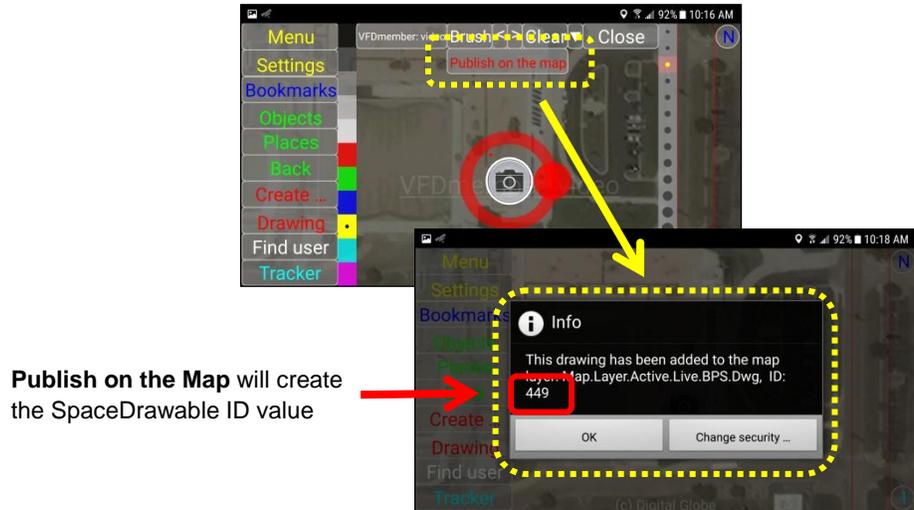
When a User embeds a “Mobile Object” into a map layer, the resulting pop-up dialog box will display a SpaceDrawable ID value that is assigned to the object (for this feature it will be YOUR mobile object that is being monitored).

To use the **User Live Tracker** feature, you will need to know the SpaceDrawable “Map” ID of the object you want to track.

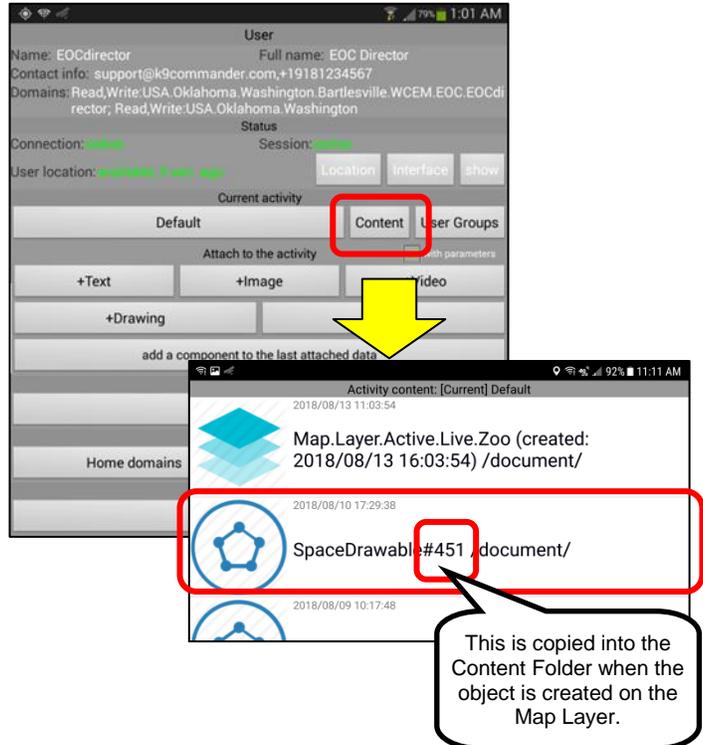


The SpaceDrawable ID value may be found in the following locations.

- (1) When you embed a “new” object in a Map Layer you will receive a confirmation pop-up panel.



- (2) Listed in the Content Folder of the originator of the Map Layer. Copied there after the object is created.



To launch the **User Live Tracker** feature, enter the SpaceDrawable ID value, check the “Active” box and click “OK”.



As you open the Custom Map Layer (usually a Foreground Layer) the Mobile Object URL “marker” associated with the SpaceDrawable ID number, should start moving (if it is a moving object). The movement should be smooth as the object motion position is updated every 10 seconds.

**Important Note:** The user Live Tracker feature is typically used on a “temporary” basis. Since it provides a continuous GPS adjustment update, it can be very resource intensive. **Do not leave it active all the time.**

In typical operation, once you have created a Foreground Layer that contains YOUR mobile object URL ... AND you have identified and SET the SpaceDrawable ID number for that Map Object ... you will not need to adjust it further. Simply “activate” the User Live Tracker feature whenever you need to know exactly where you are.

See **Section 16.7** for details on embedding mobile object URLs into a Custom Map Layer. In most cases, for this application, you will want to create/use a specific “icon” to represent your Mobile Object Marker. Usually, graphic “arrows” work best as they indicate direction of movement.

## Internet Radio

This option allows a user to access online live-stream Radio Stations from around the world. See **Section 16.4** for a detailed discussion of the “Internet Radio” Feature.



## Internet TV

This option allows a user to access online live-stream TV Stations from around the world. See **Section 16.5** for a detailed discussion of the “Internet TV” Feature.

