Digi-Lumen Technologies

SentryMDU Implementation for those with Disabilities

February 2020

Assisting those with Physical and Developmental Disabilities

Objective of Presentation

1. Explain what the Sentry MDU System is ……
2. Technology Review
3. Benefits to those with physical and developmental disabilities
4. Where to find more information

AGENDA

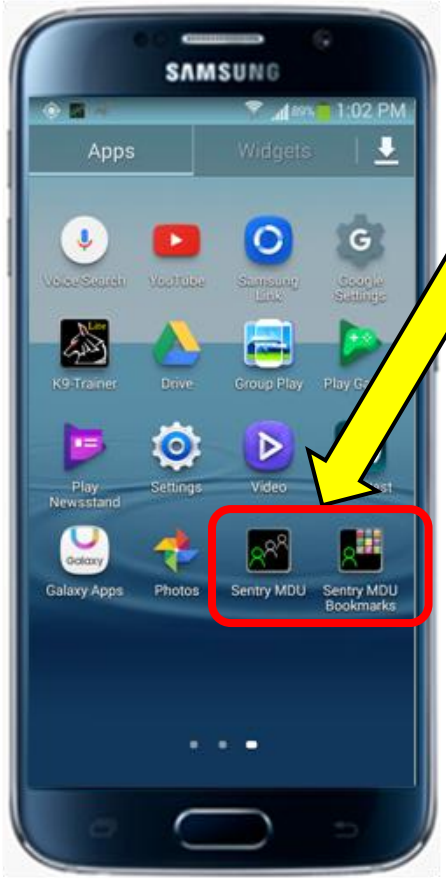
1. Brief Technology Review
2. Features Summary of the Sentry MDU System
3. Screen examples of Key Features
4. Next Steps
5. Appendix

Mission – Independent living in a “connected” world

- **Improve the quality of life**
  We feel it is vital that people with disabilities are afforded the opportunity to live independent lives (within their capability) and are entitled to the dignity and respect that comes with that independence.
- Each person is different and will require different levels of interaction from family, friends and support organizations. Whether it is Down Syndrome, someone on the Autism Spectrum or a physical disability … it may be helpful for a parent/guardian to be “connected” with them in the event assistance is needed.
- The SentryMDU App can be used to improve the quality of life for individuals with disabilities and the families that support them. These tools can enable a more independent living for the disabled while giving families the peace of mind by remaining “connected” to the loved one.

Technology Review

Description of the Sentry MDU System



App on your mobile device

- Sentry MDU (Multi Data Unit) is a Mobile Device / Client Server system that provides real-time video streaming integrated with GPS location tracking, remote access and remote monitoring/control.
- Although the system was designed to be a communications tool for First Responders (Police, Fire, Search & Rescue) the technology has application for those with physical and developmental disabilities.

SentryMDU Business Model

Three different User options are available …

For a typical User of the General Public, the FREE Option should meet their needs.

Free User

No satellite imagery or remote server storage.

No $$ Cost

Subscription User

Limits on satellite imagery and remote server storage.

Level 1 = $4.99/mon

Level 2 = $9.99/mon

Level 3 = $14.99/mon

Licensed Server User

No limits on satellite imagery and remote server storage.

Annual Server License

Annual Desktop License

$ Satellite Imagery usage

$ Cost / User / mon

Equipment Needed to run the SentryMDU System

Family Members and those with a disability only need to carry a Smartphone or Tablet that runs the Android operating system (ver 5.1+). We handle everything else.

Download the App

The App is free to download and install

Install on your Device

Install the App and Register for a “new” User Account.

Create your Group

Create your Family Group and Security Domain.

System Security, Access and Permissions

- Every User on the system must be given specific “access” rights.
- Data encryption (SSL) between mobile device and Server is available. In addition, Diffie-Hellman encryption is available for direct device-to-device communications.
- Security settings can segregate users by levels of what they can “see” and change. Access can be segregated by Parent1, Parent2, Support Group, User, etc.
- Since devices can be CONTROLLED from a remote location, specific safeguards have been provided to:
  1. Allow Users to “turn off” the Sentry MDU App on their Device.
  2. Allow Users to “turn off” the Remote Access feature so others cannot monitor the device.

Why use a Smartphone as the device platform?

- Everyone has a cell phone, available everywhere (**not proprietary**).
- Allows for better performance and multi-use capability that is NOT available in a single purpose camera device.
  - Better specifications (i.e. audio, video, camera, screen resolution)
  - Environmental sensors (GPS, Accelerometer, gyro, proximity, compass, barometer)
  - WiFi 802.11 a/b/g/n/ac, Dual-band (2.4GHz & 5GHz), WiFi Direct, hotspot
  - Cellular 2G, 3G, 4G-LTE capability (5G in the future)
  - Large, high-resolution display screen
- Portable, easy to wear, rugged cases available (Mil / waterproof).
- The use of cell phones expands the potential pool of Users.
  - Family Members
  - Extended Family and Friends
  - Support Organizations
  - Volunteers
- Ease of Use … almost everyone knows how to use a Smartphone.
- Easy to update, software delivery via Digi-Lumen Technologies website.

Sentry MDU Features Summary

Summary of Features

Features of the Sentry MDU System

1. Street Maps and high resolution satellite imagery available.
2. Create “secure” Family Groups to control access.
3. Flexible configuration options depending on individual needs.
4. Can be a stationary camera, Body-Cam or a vehicle “Dash Cam”.
5. Real-time audio & video capability.
6. Geo-Fence alerts if a User moves in/out of designated area.
7. Two-way hands free communication with others (walkie-talkie).
8. Works with both WiFi and Cellular networks.
9. Ability to monitor the GPS location of another User.
10. Video-phone, chat and email capability.
11. Ability to review data History on any sensor (ie GPS, video, audio).
12. Ability to initiate a “live” video chat with a remote device.
13. Variety of device sizes available (tiny devices the size of a Key Fob).
14. And much more …

Example - Monitoring a wheelchair User in a City Park

More than just a Camera …. Audio-Video in real-time

SentryMDU enabled mobile device mounted to the wheelchair

You can see what they see!

Family Members

Caregiver

Friends

Locating the User on a Satellite Image of the Park

If satellite imagery is used, it is possible to locate the User in real-time on the image.

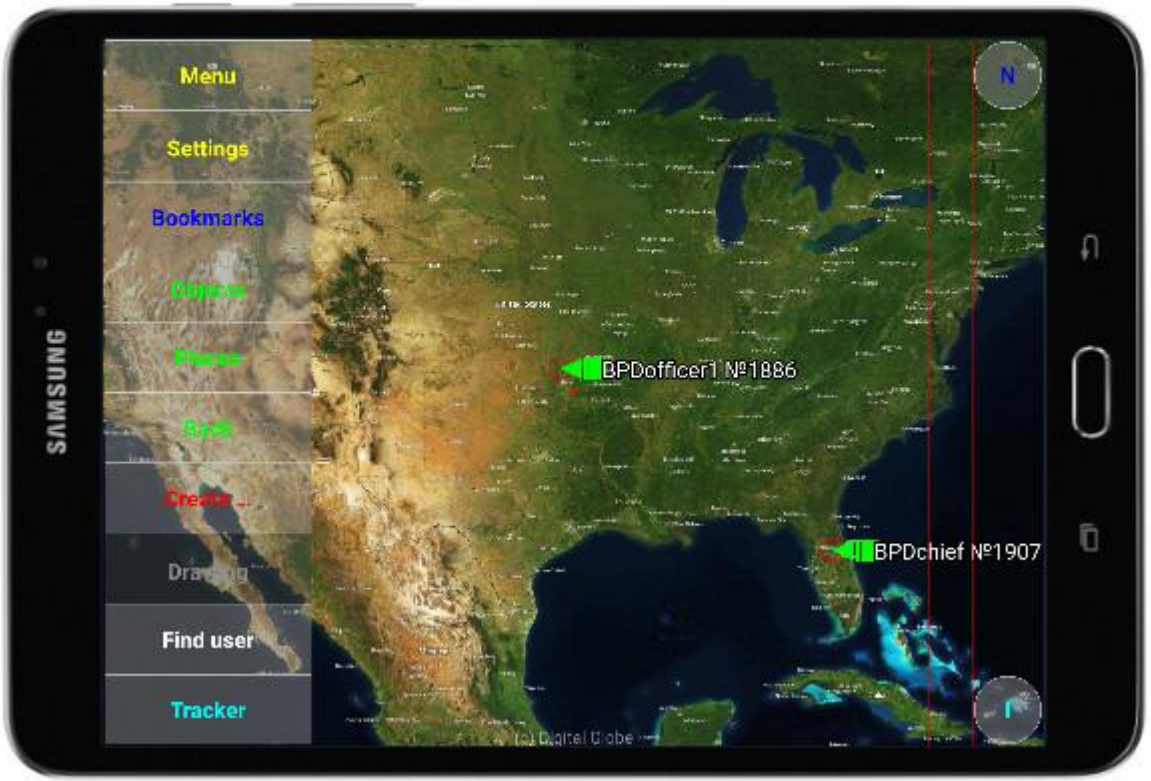
GPS location of Bob Jones and his wheelchair

Screen Examples of Key Features

Sentry MDU Mobile App – Feature Examples

SentryMDU Main Map Screen

Satellite View as displayed on 10" Tablet.
Current GPS location of two users 2000km apart.



Sentry MDU Mobile App – Feature Examples

SentryMDU Worldwide Coverage

Worldwide coverage allows connection to remote devices in ANY location where WiFi or Cellular internet access exists.

Sentry MDU Mobile App – Feature Examples

SentryMDU Mobile Object Panel

Access audio, video, sensors and data on remote devices.
Turn on the camera of the remote device.

Sentry MDU Mobile App – Feature Examples

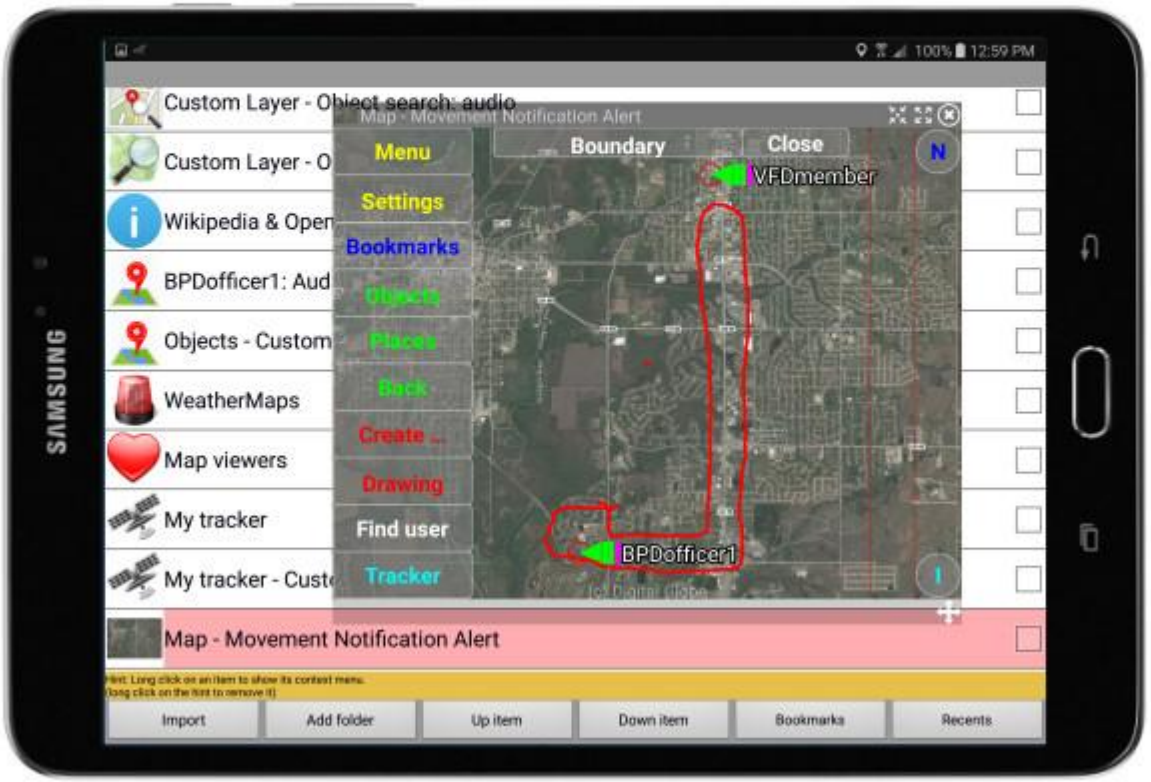
SentryMDU Remote Video Monitoring

Monitor audio-video from remote devices.
Example of a vehicle live streaming a "dash-cam" video.

Sentry MDU Mobile App – Feature Examples

SentryMDU GeoFence Alert

Freestyle draw geofence regions. Trigger alerts for users that go "in" or "out" of the fenced boundary.



Sentry MDU Mobile App – Feature Examples

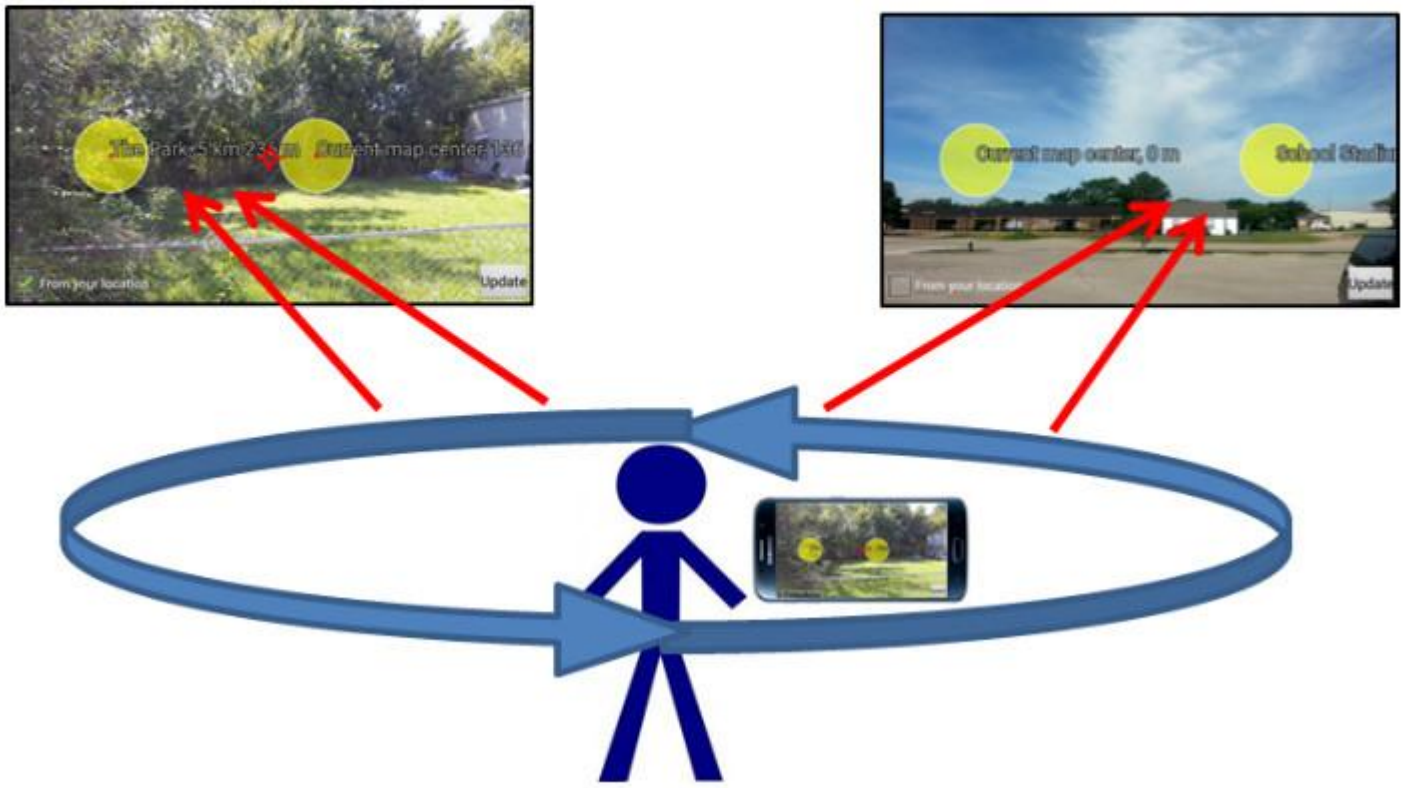
SentryMDU GPS Track History

Display GPS track history of users.
Select specific dates or date range (week, month, quarter, etc.).

Sentry MDU Mobile App – Feature Examples

SentryMDU "Live Search" Feature

Rotate mobile device. As objects come into view, the heading and distance will be displayed.



Sentry MDU Mobile App – Feature Examples

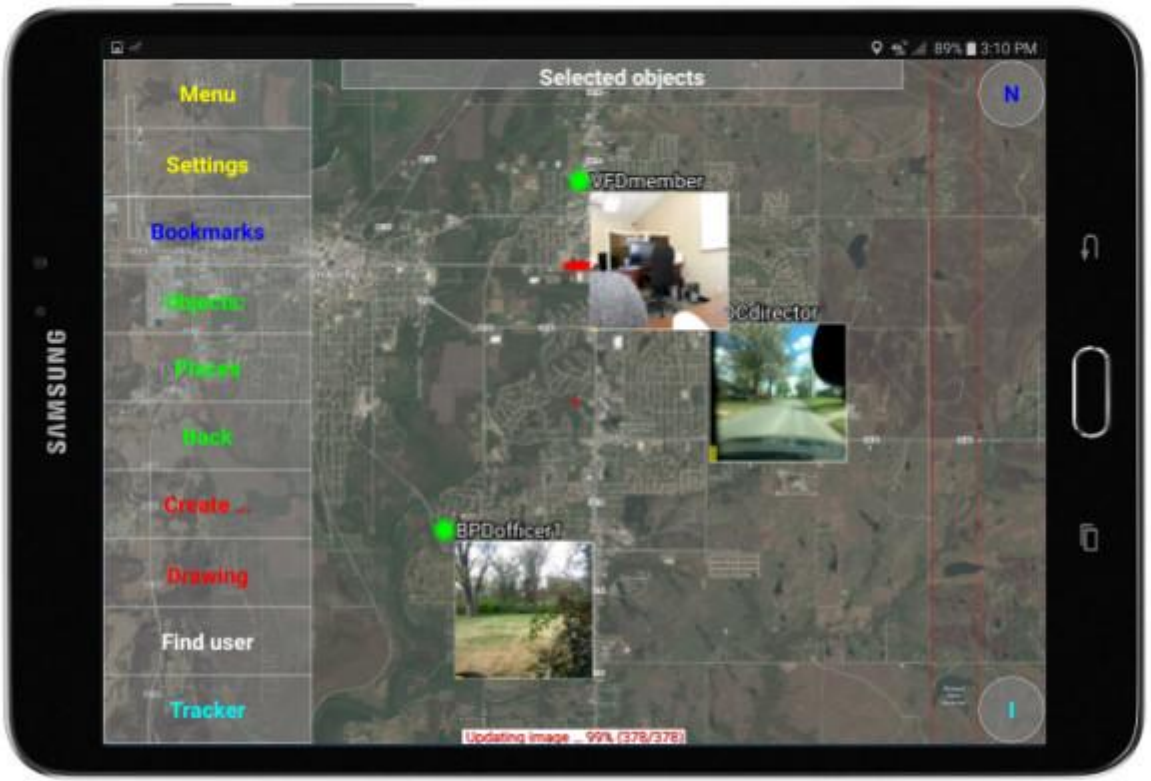
SentryMDU GPS Track + Video

Display real-time GPS track of other Users with live streaming video overlay. Click on video thumbnail to show video at full screen.

Sentry MDU Mobile App – Feature Examples

SentryMDU Multiple Video Feeds

Display multiple audio-video feeds from remote devices.
Click on selected video image to expand "full screen".



Sentry MDU Mobile App – Feature Examples

SentryMDU GPS Track History

Select a date/time and retrieve historical data from your device or other users. Display this data. In the example below we are reviewing the GPS track and dash cam video that was recorded on 2015/12/18 at 12:21:00.

Next Steps

Menu
Settings
Bookmarks
Objects
Places
Back
Create ...
Drawing
Find user
Tracker
TeamLeader
TeamMember1
TeamMember2
(c) Digital Globe
SAMSUNG

Suggested Next Steps

1. Think about it, consult with associates and other potential stakeholders.
2. Visit the ***Digi-Lumen Technologies LLC*** website (www.Digi-Lumen.com).
3. Visit the ***YouTube Website*** and review some of the videos posted on the ***SentryMDU YouTube Channel***.
4. Download the ***SentryMDU Mobile Device User Guide*** and review.
5. Optional – Download and install the SentyMDU App on a mobile device and play around with it. Others may do the same (it is FREE).
6. Review the SentryMDU Features List and determine if your organization can benefit from the use of the SentryMDU System.
7. Decide to implement the SentryMDU System for your Organization.

Appendix

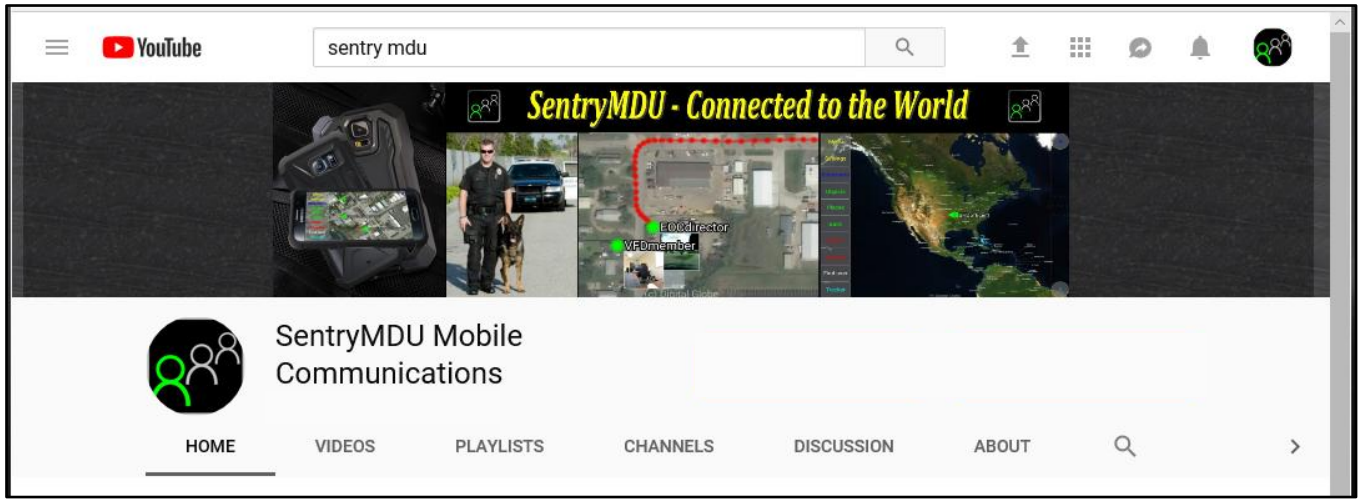
https://www.digi-lumen.com

SentryMDU App on DLT Website

SentryMDU YouTube Channel

YouTube

Search for: SentryMDU



Android devices come in all sizes