

## Solution features

- Easy-to-use intuitive user interface
- Works on any mobile network
- Works on home/work/public WiFi
- Integrated solution with CAD
- Uses existing mobile data interfaces
- Manage resources from Webmin
- Realtime messaging/acknowledgments
- Security and encryption as standard
- Managed gateway service
- Low cost managed service

## Operational features

- Book-on/Book-off message
- Mobilisation message
- Status messages
- Supports conveyance to hospital
- Standdown message
- Text messages to/from CFR
- Automatic Resource Location (ARL)
- Turn-by-turn navigation and maps

## Network connectivity

- All 2G/3G/4G mobile networks
- WiFi home/work/public

## Supported devices

- Android smartphone 4-7" display
- Android operating system 4.0 or later

## Smartphone based mobilisation application for Community First Responders and Internet mobile data gateway managed service.

Mobilize® CFR is an Android™ application and managed Internet gateway service for Community First Responders and volunteer workers to allow them to receive mobilisation instructions for incidents and interact with Command & Control as a mobile data enabled resource via an Android smartphone that is either privately owned or issued by the Ambulance Trust.

Mobilize CFR allows Ambulance Trusts to leverage the low cost and wide availability of modern smartphones with an intuitive and easy-to-use mobile data application that works via the Internet using any mobile network or a WiFi connection.

Thorcom's innovative approach provides mobile data anywhere that a user's smartphone can connect to the internet avoiding radio coverage problems associated with any single network or radio technology.

Mobilize CFR interacts with CAD in the same way as a traditional Thorcom Mobile Data Terminal (MDT) allowing the CAD system to treat it as a fully operational resource without requiring upgrades to mobile data interfaces.

## Application features

The CFR application has been designed to run on a wide range of Android™ devices and be easy-to-use. Once started the application runs in background in order to receive messages from control.

The application provides a "splash screen" with Trust logo and legal warnings and then proceeds to a book-on screen where the CFR may enter their unique CAD identity. Once booked-on the CFR may be mobilised by CAD sending a standard message to the user. The application allows the CFR to send status messages which include:

- Can attend/Unable to attend
- Mobile to Incident
- Arrived on Scene
- Situation Report
- Request Assistance
- Clear Scene
- Available/Unavailable for work

In addition the application supports Standdown instruction, two-way text messaging and an under duress/emergency function.

“ A Community First Responder mobilisation solution that works over any mobile network or WiFi connection using the responder's existing Android smartphone”



## Technical Specifications

### Device requirements

- Android™ smartphone with 4" to 7" screen
- Operating System Android 4.0 or later
- UK mobile network subscription with GPRS/3G/4G data connection and Internet access.
- WiFi connection 2.4/5.0GHz WPA/WPA2.

### Device management

- Device management via Webmin server.
- Device identification unique phone id (IMEI).
- Device auto-configuration on installation of software but device enable/disable by Trust using Webmin or managed by Thorcom.

### Security features

- Communications employs HTTPS and WebSocket protocol over TLSv1.2 with RSA 2048-bit certificate, ECDHE key exchange and AES-128-GCM or AES-256-GCM cipher (NIST Suite-B) as per CESG recommendations for PSN security.
- Sign-on to CAD required to access application features.
- Automatically deletes all Personally Identifiable Information (PII) data on application exit.

### CAD interfaces

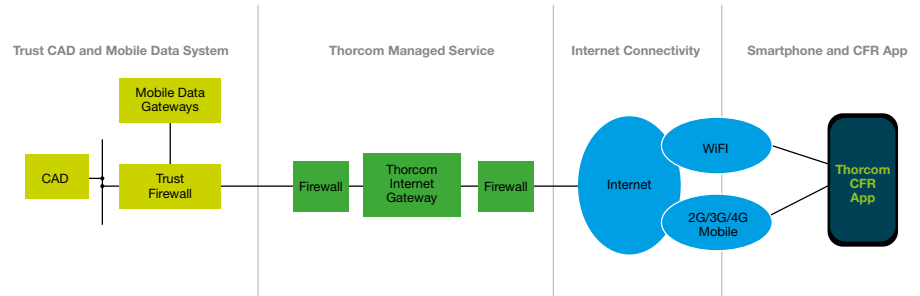
- Simple Vehicle Location Protocol (SVLP)
- Mobile Data Interface Protocol (MDIP)
- JSON Mobile Data Protocol (JMDP)

### Software installation and updates

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### Software installation and updates

- Secure website access to software download and installation page.
- Automatic software updates.



## Managed gateway service

Connectivity for the solution is provided via a managed Internet gateway service that implements the device management, security and data transformation between the Android application and existing CAD mobile data interface(s).

Thorcom operates the gateway service from its server centre at Worcester and delivers data to CAD via a the mobile data gateway at the Trust control site(s).

Connectivity to the Trust is achieved via an IPSEC VPN which meets PSN security requirements.

## Resource location

The application sends resource location updates to control so that despatchers are able to deploy resources efficiently and know which CFRs are able to respond to calls in a given locality or provide assistance.

## Maps and navigation

The application integrates with Google Maps to show the destination and provide turn-by-turn navigation similar to a SatNav.

Google Maps can be used in offline-mode with maps preloaded into the device so they do not have to be fetched while navigating to scene - this can help in rural areas where mobile phone coverage is poor or non-existent

## Device connectivity

By using the Internet as the communications path the smartphone is free to switch between 2G/3G/4G mobile network connections and WiFi.

WiFi connections can be via domestic broadband, work, public WiFi such as hotel or restaurant or mobile 'hot spot' in a car or on public transport.

## Bring your own device (BYOD)

A key feature of the solution is that it allows CFRs to use their existing smartphone - this both saves the expense of acquiring devices and results in a higher likelihood that the device will be looked after and used effectively.

Where Trust policy requires the use of a assets owned by the Trust Thorcom is able to supply devices with airtime as part of the managed service.

## Device management

CFR resources appear in the Web Administration system ("Webmin") where they can be configured, assigned callsigns, enabled or disabled as needed.

## Software installation

Software is installed from a secure URL which Thorcom provides to each Trust and requires a username/password to install the software.

## Software updates

Once installed software updates are automatically detected and downloaded from the Thorcom server when needed.