

Technical Specifications:

Model: MOTOROLA TLK100 WAVE POC, Long range Handheld Radios with all standard accessories (License free walkie talkie press to talk over cellular)

MCPTT:

The offered PoC should be compliant to MCPTT with future proof solution meeting features for Mission Critical users' requirements. (The phrase "mission-critical push-to-talk" or "MCPTT" refers to a push-to-talk product functionality that meets the requirements for public safety mission-critical voice communication).

3GPP:

The MCPTT solution should include 3GPP standards compliance for MCPTT, MCDATA and MCVideo. The bidder should be able to provide 3GPP MCPTT standards compliance. The 3rd Generation Partnership Project (3GPP) is an umbrella term for a number of standards organizations which develop protocols for mobile telecommunications. Its best known work is the development and maintenance of MCDATA (mission critical data).

SEAMLESS INTEROPERABILITY:

The MCPTT solution should support seamless interoperability with Land Mobile Radio system. The provision of Wire-line interfaces should be available for interoperation. The offered system should also have provision for High end VOIP interface to connect Land Mobile Radio on any manufacturer to on Cloud PoC system to work through LTE SIM.

FEATURES:

The offered system should be able to support Android and Apple phones by downloading application from respective Play store. The offered solution should provide following features:

- Option of Application Modes: Standard or PTT type
- Encrypted talk groups
- Emergency group calls
- End to end talker id
- Emergency alarm/knock down
- Group regrouping (Supergroups)
- LMR hierarchical multi-group support
- Private calls
- Priority/pre-emption across Land Mobile Radio & Broadband
- Scanning with priority
- Call priority
- Broadcast call/message
- Background calling
- Remote user monitoring (Lone Worker)
- User roles
- User profile, group, group profile
- Real-time presence
- Location services

- Text messaging
- Push videos, image, and files
- Voice message fallback
- Communication history
- Soft or hard PTT buttons
- Emergency service should support by holding designated hard or soft button on device, or button on accessory to enter emergency state
- Emergency call initiated to select talk-group or contact
- Manual - user presses PTT button
- Automatic - floor held automatically for 10 seconds
- Remotely - by dispatcher or authorized user

The solution must support an integrated 3GPP 33.180 compliant KMF which distributes key material using MIKEY SAKKE Identity Based Encryption over the secure TLS v1.2 signaling connection to each client.

Security features include:

- Secure authentication & authorization (OIDC, identity management with federation & MFA) openIDconnect
- Data in transit encryption using industry standard (FIPS compliant) cryptography Federal Information processing standard
- Data at rest encryption including in application databases

Subscriber Handset Device: Discrete LED Display model:

- The device should be offered with Embedded SIM card compatible with 3G & 4G to work on all available Indian frequencies and should be able to work on all telecom operator's SIM cards of 3G & 4G services.
- The device must have external antenna for 3G, 4G & LTE bands available in India for better coverage
- The device must have inbuilt Wi-Fi to operate on 802.11, a, b, g, n, a (2.4 & 5.0 GHz) band
- The device must be approved by WPC with Equipment Type Approval and BIS certification for set, charger and battery
- The device must have inbuilt Low Energy Bluetooth of 4.2 and above to work with Bluetooth accessory with PTT of same company.
- The device must have inbuilt GPS (GNSS/A-GNSS, GLONASS and Galileo to provide transmit Location to Dispatcher and Supervisor
- The device must be rugged with IP54 rating and above, also complying to IEC60529
- The device must have inbuilt AES 256 encryption
- The device _must meet Mil Standard 810 for Humidity, low pressure, High pressure, Solar radiation, blowing dust, Blowing Rain, Shock and Vibration. It should also comply to Electrostatic standards IEC 61000-1-4
- The set must have visual indication for GSM/LTE: Presence & Signal level, Wi-Fi: Presence & Signal level, Bluetooth On/Off, Volume level, Contacts list.
- Should also be able to announce current connection status of GSM/LTE, Wi-Fi and Battery level
- The device should have capability to operate in Cloud environment

Features:

- Device should have 2-year warranty
- Voice Announcements
- Priority Interrupt
- Priority Scan
- Out of Range Notice Tone
- Force to Join
- Self Serviceability through QR code

- Audio Performance:
- Loudness@
 - Max Volume: 96.3db
 - PESQ Quality: 2.7
 - Uses OPUS Vocoder & A

Eligibility Criteria:

- Service provider should have direct service presence in Bangalore – Karnataka.
- Offered Hardware and Software solution should be meeting Global standard and should be deployed in at least 5 developed countries.
- Should have a minimum and active installed base of 50000 subscribers base in similar wireless communication products
- Service provider should have an experience of managing/ handling city wide networks OEM certification for participation for specific bid is mandatory
- OEM should have repair facility in India
- Server set up should meet redundancy planning criteria