This catalogue provides an overview of licensed software features available for Motorola Solutions DIMETRA™ TETRA Systems and TETRA Subscribers.
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SECURITY INFRASTRUCTURE

PROTECT YOUR MISSION CRITICAL RADIO SYSTEM FROM UNAUTHORISED ACCESS OR MALICIOUS DISRUPTION WITH AUTHENTICATION AND ENCRYPTION OF ALL YOUR COMMUNICATION
AIR INTERFACE AUTHENTICATION
FEATURE DESCRIPTION
Air Interface Authentication ensures that only the authorised subscribers can be registered on the network. With DIMETRA X Core, this feature includes the CRYPTR 2 module, which provides secure, tamper-proof storage of key material.

DEPENDENCIES
System Release: From D9.0 and R1.2
System Configuration: DIMETRA X Core and DIMETRA Express

SECURITY GROUP PARTITIONING
FEATURE DESCRIPTION
Security Group Partitioning is an option in DIMETRA, controlled through User Configuration Manager. It allows radios, talkgroups, and other system elements to be allocated to security groups managed by different system managers. Most managers are given access only to their own security groups. Partitioning the system into security groups is done via a single user designated the “super manager”, who has visibility and control of all the system configuration parameters.

DEPENDENCIES
System Release: From D9.0
System Configuration: DIMETRA X Core

AIR INTERFACE ENCRYPTION (AIE)
FEATURE DESCRIPTION
Air Interface Encryption (AIE) enables the encryption of user and signaling data over the air interface, between Mobile Stations (MS) and the network and is supported on all system topologies.

Supported encryption algorithms: TEA1, TEA2 and TEA3

DEPENDENCIES
Requires Air Interface Authentication
System Release: From D9.0 and R1.2
System Configuration: DIMETRA X Core and DIMETRA Express
### Permanent Disable
**Feature Description**
Permanent Disable or Permanent Kill is the ability to “kill” a radio by a remote command. The radio reacts to specific signaling from the Switch and Management Infrastructure (SwMI) to “kill” the radio making it unusable.

When “Killed” the radio will:
- erase ALL encryption key material
- delete the codeplug to remove all personalization
- delete firmware

**Dependencies**
- **System Release:** From D9.0
- **System Configuration:** DIMETRA X Core

### Temporary Disable
**Feature Description**
Temporary Disable or “stun” is the ability to “stun” a radio by a remote command. The radio reacts to specific signaling from the Switch and Management Infrastructure (SwMI) to “stun” the radio making it unusable.

**Dependencies**
- **System Release:** From D9.0 and R1.2
- **System Configuration:** DIMETRA X Core and DIMETRA Express

### Group Cipher Key (GCK)
**Feature Description**
Group Cipher Keys (GCK) provides cryptographic separation between talkgroups (as each talkgroup uses a different Air Interface Encryption key) providing an enhanced level of Air Interface Encryption (AIE).

**Dependencies**
- Requires Air Interface Encryption
- **System Release:** From D9.0
- **System Configuration:** DIMETRA X Core
OVER THE AIR REKEYING (OTAR)
FEATURE DESCRIPTION
Over The Air Rekeying (OTAR) allows keys to be updated without recalling radios. Specific key sets can be updated from the Switch and Management Infrastructure (SwMI).

DEPENDENCIES
Requires Air Interface Encryption
System Release: From D9.0 and R1.1
System Configuration: DIMETRA X Core and DIMETRA Express

SECONDARY AUTHENTICATION CENTER
FEATURE DESCRIPTION
Secondary Authentication Center is a secondary standby Authentication Center, providing enhanced reliability.

DEPENDENCIES
System Release: From D9.0
System Configuration: DIMETRA X Core

KEY MANAGER (KM)
FEATURE DESCRIPTION
The Key Manager (KM) generates the Air Interface Authentication keys for the Mobile Station (MS) as well as providing the Authentication Centre (AuC) and key management functionality for DIMETRA Express.

DEPENDENCIES
System Release: R1.1
System Configuration: DIMETRA Express
SECURITY
SUBSCRIBERS

PROTECT YOUR MISSION CRITICAL RADIO SYSTEM FROM UNAUTHORISED ACCESS OR MALICIOUS DISRUPTION WITH AUTHENTICATION AND ENCRYPTION OF ALL YOUR COMMUNICATION
PERMANENT DISABLE / PERMANENT DISABLE V2
FEATURE DESCRIPTION
Permanent Disable or Kill is the ability to “kill” a radio by a remote command from Switch and Management Infrastructure (SwMI). The Radio reacts to specific signaling from the SwMI to “kill” the radio making the radio unusable.
When “Killed” the radio will:
  • erase ALL encryption key material
  • delete the codeplug to remove all personalization
  • delete firmware

NOTE: There are two options: return to Motorola Solutions to re-enable the radio, or V2 allows customer to re-enable the radio themselves.

DEPENDENCIES
Software Release: From MR5.9
Supported on the following Portable and Mobile radios:
Portables: MTP810Ex, MTP830 FuG, MTP850 FuG, MTP850Ex, MTP8500Ex, MTP8550Ex, MTP3100, MTP3150, MTP3200, MTP3250, MTP3500, MTP3550, MTP6550, MTP6750, MTP6650, ST7000, ST7500, TPG2200
Mobiles: MTM800 FuG ET, MTM800 FuG, MTM5400, MTM5000

TEMPORARY DISABLE
FEATURE DESCRIPTION
Temporary Disable or Stun is the ability to “stun” a radio by a remote command from Switch and Management Infrastructure (SwMI). The Radio reacts to specific signaling from the SwMI to “stun” the radio making the radio unusable.

DEPENDENCIES
Software Release: From MR5.9
Supported on the following Portable and Mobile radios:
Portables: MTP810Ex, MTP830 FuG, MTP850 FuG, MTP850Ex, MTP8500Ex, MTP8550Ex, MTP3100, MTP3150, MTP3200, MTP3250, MTP3500, MTP3550, MTP6550, MTP6750, MTP6650, ST7000, ST7500, TPG2200
Mobiles: MTM800 FuG ET, MTM800 FuG, MTM5400, MTM5000
GROUP CIPHER KEY OVER THE AIR REPROGRAMMING

**FEATURE DESCRIPTION**

Group Cipher Keys (GCK) allow enhanced talkgroup encryption and provides cryptographic separation between talkgroups. Keys can be updated without recalling radios. Specific key sets can be updated from the Switch and Management Infrastructure (SwMI). Provides agency cryptographic separation on a network.

**DEPENDENCIES**

**Software Release:** From MR5.9

**Supported on the following Portable and Mobile radios:**
- **Portables:** MTP810Ex, MTP850 FuG, MTP850Ex, MTP8500Ex, MTP8550Ex, MTP3100, MTP3150, MTP3200, MTP3250, MTP3500, MTP3550, MTP6550, MTP6750, MTP6650, ST7000, ST7500, TPG2200
- **Mobiles:** MTM5200, MTM5400, MTM5500, MTM800 FuG ET, MTM800 FuG

STATIC CIPHER KEYS

**FEATURE DESCRIPTION**

Pre-programmed Static Cipher Keys (SCK) for Direct Mode Operation (DMO) and Trunked Mode Operation (TMO). Talkgroups can be mapped to specific cipher keys for enhanced security and separation of communications.

**DEPENDENCIES**

**Software Release:** From MR5.14.3

**Supported on the following Portable and Mobile radios:**
- **Portables:** MTP850 FuG, MTP830 FuG, MTP8500Ex, MTP8550Ex, MTP3100, MTP3200, MTP3250, MTP3500, MTP3550, MTP6550, MTP6750, ST7000, ST7500, TPG2200
- **Mobiles:** MTM5200, MTM5400, MTM5500, MTM800 FuG ET, MTM800 FuG
**STATIC CIPHER KEYS OVER THE AIR REPROGRAMMING**

**FEATURE DESCRIPTION**
Over the Air provision of Static Cipher Keys (SCK) for Direct Mode Operation (DMO) and Trunked Mode Operation (TMO). Keys can be updated without recalling radios. Specific key sets can be updated from the Switch and Management Infrastructure (SwMI).

**DEPENDENCIES**
- **Software Release:** From MR5.14.3
- **Supported on the following Portable and Mobile radios:**
  - **Portables:** MTP850 FuG, MTP830 FuG, MTP850Ex, MTP8500Ex, MTP8550Ex, MTP3100, MTP3150, MTP3200, MTP3250, MTP3500, MTP3550, MTP6550, MTP6750, MTP6650, ST7000, ST7500, TPG2200
  - **Mobiles:** MTM5200, MTM5400, MTM5500, MTM800 FuG ET, MTM800 FuG

**ENHANCED SECURITY**

**FEATURE DESCRIPTION**
Combined Direct Mode Operation Static Cipher Keys, Group Cipher Keys and Over the Air Rekeying.

**DEPENDENCIES**
- **Software Release:** From MR14
- **Supported on the following Portable and Mobile radios:**
  - **Portables:** MTP850 FuG, MTP830 FuG, MTP850Ex, MTP8500Ex, MTP3100, MTP3150, MTP3200, MTP3250, MTP3500, MTP3550, MTP6550, MTP6750, MTP6650, ST7000, ST7500, TPG2200
  - **Mobiles:** MTM5200, MTM5400, MTM5500, MTM800 FuG ET, MTM800 FuG

**AIR INTERFACE AUTHENTICATION/ENCRYPTION**

**FEATURE DESCRIPTION**
Air Interface Authentication ensures that only the authorised subscribers can be registered on the network. Air Interface Encryption (AIE) enables the encryption of user and signaling data over the air interface, between Mobile Station (MS) and the network and is supported on all system topologies.

**Supported encryption algorithms:** TEA1, TEA2 and TEA3

**DEPENDENCIES**
- **Supported on the following Portable and Mobile radios:**
  - **Portables:** MTP850 FuG, MTP830 FuG, MTP850Ex, MTP8500Ex, MTP8550Ex, MTP3100, MTP3150, MTP3200, MTP3250, MTP3500, MTP3550, MTP6550, MTP6750, MTP6650, ST7000, ST7500, TPG2200
  - **Mobiles:** MTM5200, MTM5400, MTM5500, MTM800 FuG ET, MTM800 FuG
DATA INFRASTRUCTURE

EASILY ENHANCE YOUR MISSION CRITICAL VOICE COMMUNICATIONS TO ENABLE DATA FOR A SAFER QUICKER AND MORE EFFECTIVE RESPONSE
SHORT DATA MESSAGING SERVICE TO GROUP SHORT DATA SERVICE

FEATURE DESCRIPTION
The point to multipoint Short Data Messaging Services (SDS) or ‘Mobile Station-to-Group’ functionality is provided by the Group Message Server (GMS), which is hosted on the Short Data Router (SDR) physical device, together with the Short Data Transfer Service (SDTS) and SDR functionalities. When the Mobile Station sends an Short Data (SD) message to a Group Short Subscriber Identity (GSSI), the SDR intercepts it, and forward it to the GMS, which then convert it into a broadcast SD message that is returned to the SDR and sent. A broadcast region is associated with each GSSI.

A Mobile Station (MS) will receive the SDS to group broadcast message whether it has been sent to its selected talkgroup GSSI or to a GSSI in its scan list. The Base Transmitting Site (BTS) will only send the message on the channels indicated by the SD broadcast message ‘channel selection’-bits (which can be set for Main Control Channel (MCCH) and / or Packet Data Control Channel (PDCH)). These bits are controlled by the data host application.

DEPENDENCIES
System Release: From D9.0 and R1.1
System Configuration: DIMETRA X Core and DIMETRA Express

ENABLE SECONDARY COMMON CONTROL CHANNEL

FEATURE DESCRIPTION
Common Secondary Control Channel (C-SCCH) is the ability to have more than one Control Channel available at a Cell – allowing more control channel activity.

The Control Channel is used for nearly all signalling between radios and infrastructure and has to handle registration, authentication, call control, short data, mobility and many other functions.

This feature is aimed at customers who have high mobility, call-setup or Short Data usage requirements.

DEPENDENCIES
System Release: From D9.0 and R1.1
System Configuration: DIMETRA X Core and DIMETRA Express
3 x ENABLE SECONDARY COMMON CONTROL CHANNEL

**FEATURE DESCRIPTION**
Allows up to 3 timeslots to be configured as Common Secondary Control Channels to provide additional control channel capacity at the site.

**DEPENDENCIES**
- **System Release:** From D9.0
- **System Configuration:** DIMETRA X Core

PACKET DATA SERVICE

**FEATURE DESCRIPTION**
The Packet Data Service (PDS) is a bearer service that allows two parties in a TETRA system to communicate using the IP protocol in three different ways:
- Mobile Station to Mobile Station via fixed host (this transfer is initiated by a Mobile Station (MS) to another MS)
- Mobile Station to fixed host (This transfer is initiated by an MS to a host)
- Fixed host to Mobile Station (This transfer is initiated by a host to an MS)

The PDS is an implementation of the standard TETRA Packet Data Sub Net Dependant Convergence Protocol (SNDCP) allocated to the TETRA air interface. The PDS can be used by IP based applications via a set of interfaces. These interfaces provide transportation service for applications, which needs to use the IP protocol.

Two interfaces exist for the PDS:
- Customer specific Ethernet/WAN connection with VPN from a Customer Enterprise Router to the GPRS Gateway Support Node (Infrastructure Packet Data Interface)
- Peripheral Equipment Interface (PEI) based Point to Point Protocol (PPP) link (Multi-Slot Packet Data Interface)

Packet Data Billing services are available.

**DEPENDENCIES**
- **System Release:** From D9.0 and R1.3
- **System Configuration:** DIMETRA X Core and DIMETRA Express
**INCREASED SHORT DATA CAPACITY**
**FEATURE DESCRIPTION**
This feature enables customers to purchase additional capacity licenses to increase the short data capacity supported. The licenses are in blocks of 50,000 messages per hour.

**DEPENDENCIES**
- **System Release:** From D9.0
- **System Configuration:** DIMETRA X Core

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**SHORT DATA STORE-AND-FORWARD**
**FEATURE DESCRIPTION**
With the Store-and-Forward (S&F) service, even if the destination Mobile Station is not available, the DIMETRA system will ensure that the message will be delivered later, once the destination is available.

The S&F service is hosted on the Short Data Router (SDR) – which is part of the DIMETRA Switch and Management Infrastructure (SwMI).

The operator can prevent the S&F of specific SDS message types, and thereby not have to configure each subscriber. This is achieved by configuring each SDR with a list of barred Protocol Identifiers (PIDs) used in the SDS message. If an SDS message has a PID which is in the list of blocked PIDs and the target Mobile Station (MS) is available, the SDR makes one attempt at sending the message to the target MS. If sending the message has failed, an error report is returned to the originator and the failed delivered message will not be stored on the S&F server.

**DEPENDENCIES**
- **System Release:** From D9.0 and R1.1
- **System Configuration:** DIMETRA X Core and DIMETRA Express
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<th>Feature Description</th>
<th>Dependencies</th>
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| **TETRA ENHANCED DATA SERVICE**  
TETRA Enhanced Data Service (TEDS) gives the ability to provide secure, reliable, higher speed data on a TETRA network. It can be used for enhanced web access, graphic images, and richer data applications.  
**DEPENDENCIES**  
System Release: From D9.0  
System Configuration: DIMETRA X Core |
| **SECONDARY SHORT DATA ROUTER**  
This license is needed to enable the hot standby Short Data Router (SDR) server application.  
In the event of failure of the active SDR application, the service is automatically transferred to the standby SDR. Failure of the SDR application is reported to a network operator using Unified Event Manager (UEM) server.  
**DEPENDENCIES**  
System Release: From D9.0  
System Configuration: DIMETRA X Core  
NOTE: Data resilience is only supported for full data redundancy (short data and packet data). It is not supported to have redundant short data without redundant packet data. |
| **SECONDARY PACKET DATA GATEWAY**  
This license is needed to enable the hot standby Packet Data Router (PDR) and Radio Network Gateway (RNG) server applications.  
In the event of failure of the active PDR or RNG the service is automatically transferred to the standby PDR. Failure of the PDR or RNG application is reported to a network operator using Unified Event Manager (UEM) server.  
**DEPENDENCIES**  
System Release: From D9.0  
System Configuration: DIMETRA X Core  
NOTE: Data resilience is only supported for full data redundancy (short data and packet data). It is not supported to have redundant packet data without redundant short data. |
DATA INFRASTRUCTURE
DATA SUBSCRIBERS

EASILY ENHANCE YOUR MISSION CRITICAL VOICE COMMUNICATIONS TO ENABLE DATA FOR A SAFER QUICKER AND MORE EFFECTIVE RESPONSE
## SDS Remote Control

### Feature Description
This feature allows terminals to receive AT commands (normally sent into the Peripheral Equipment Interface (PEI) port) sent over the air using Short Data Services (SDS) messages.

Security is built in. There is a 6 digit password and commands can only be received from specified controllers. The feature provides the ability for remote radio management and allows users to obtain "live" information from radios.

The full set of commonly used AT commands can be used.

### Dependencies

**Software Release:** From MR5.11

**Supported on the following Portable and Mobile radios:**

- **Portables:** MTP850 FuG, MTP830 FuG, MTP850Ex, MTP8500Ex, MTP8550Ex, MTP810Ex, MTP3100, MTP3150, MTP3200, MTP3250, MTP3500, MTP3550, MTP6550, MTP6750, MTP6650, ST7000, ST7500, TPG2200
- **Mobiles:** MTM5200, MTM5400, MTM5500, MTM800 FuG ET, MTM800 FuG

## SDS Over End-to-End Encryption

### Feature Description
Enables Short Data Services (SDS) messages to be sent over End-to-End Encryption (E2EE) communications.

### Dependencies

**Software Release:** From MR5.9

**Supported on the following Portable and Mobile radios:**

- **Portables:** MTP850 FuG, MTP830 FuG, MTP850Ex, MTP8500Ex, MTP8550Ex, MTP810Ex, MTP3100, MTP3150, MTP3200, MTP3250, MTP3500, MTP3550, MTP6550, MTP6750, MTP6650, ST7000, ST7500, TPG2200
- **Mobiles:** MTM5200, MTM5400, MTM5500, MTM800 FuG ET, MTM800 FuG

## Enable Secondary Common Control Channel

### Feature Description
The Secondary Common Control Channel (SCCH) provides additional capacity in a second channel for location information when many users are in close proximity. SCCH makes a voice channel available to carry additional signaling and data traffic. On a large site with significant GPS and data traffic the single Control Channel can become congested and this will impact on all forms of data and voice traffic.

### Dependencies

**Software Release:** From MR5.9

**Supported on the following Portable and Mobile radios:**

- **Portables:** MTP850 FuG, MTP830 FuG, MTP850Ex, MTP8500Ex, MTP8550Ex, MTP810Ex, MTP3100, MTP3150, MTP3200, MTP3250, MTP3500, MTP3550, MTP6550, MTP6750, MTP6650, ST7000, ST7500, TPG2200
- **Mobiles:** MTM5200, MTM5400, MTM5500, MTM800 FuG ET, MTM800 FuG
MULTI SLOT PACKET DATA
FEATURE DESCRIPTION
Multi Slot Packet Data (MSPD) increases data throughput for users, allowing the radio to use up to 4 slots as allocated.

- Radio can support MSPD for internal or external data applications (Internal WAP or external PEI devices)
- Provides additional Packet Data capacity.
- Must be configured on a 2 or more Base Radio site.
- Different to Dynamic Packet Data channels.

To enable MSPD the feature flag in the radio needs to be selected. No other configuration is required within the radio as this setting means that the radio becomes capable of handling MSPD traffic.

The network has to be configured to support MSPD, and traffic channels allocated. There are a number of other network based parameters that have to be configured to support MSPD.

MSPD provides the ability for additional Packet Data. This does mean that additional channel “spectrum” may be required to balance voice and data traffic channels. MSPD requires network support.

DEPENDENCIES
Software Release:
From MR5.9
Supported on the following Portable and Mobile radios:
Portables: MTP850 FuG, MTP830 FuG, MTP850Ex, MTP8500Ex, MTP8550Ex, MTP810Ex, MTP3100, MTP3150, MTP3200, MTP3250, MTP3500, MTP3550, MTP6550, MTP6750, MTP6850, ST7500
Mobiles: MTM5200, MTM5400, MTM5500, MTM800 FuG ET, MTM800 FuG
**Wireless Application Protocol (WAP) Feature Description**

Wireless Application Protocol (WAP) is a technical standard for accessing information over a wireless network. It allows users to browse the organisation’s database to obtain required information.

**Dependencies**

**Software Release:**
From MR5.9

**Supported on the following Portable and Mobile radios:**
- **Portables:** MTP850 FuG, MTP850Ex, MTP8550Ex, MTP3150, MTP3250, MTP3550, MTP6550, MTP6750
- **Mobiles:** MTM5200, MTM5400, MTM5500, MTM800 FuG ET, MTM800 FuG

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**WAP Push Feature Description**

Wireless Application Protocol (WAP) is a technical standard for accessing information over a wireless network. The Push feature is an addition to WAP – where a Switch and Management Infrastructure (SwMI) connected application can push information from the database to the radio user(s). It avoids the need for users to locate information – it’s pushed to them, giving the receiver access to accurate and up-to-date information in a timely and efficient manner.

Powerful applications can be built to send information to users such as ‘Wanted’ information with pictures or ‘Missing Persons’ with location and picture.

When enabled –
- Data can be text or pictorial
- Data can have a heading, text message and picture
- Data can be sent with different priorities, with highest level of priority the radio user does not need to interact to receive the data
- Multiple users can be sent the same information – limitations only on channel capacity per site

**Dependencies**

**Software Release:**
From MR5.11

**Supported on the following Portable and Mobile radios:**
- **Portables:** MTP850 FuG, MTP850Ex, MTP8550Ex, MTP3150, MTP3250, MTP3550, MTP6550, MTP6750
- **Mobiles:** MTM5200, MTM5400, MTM5500, MTM800 FuG ET, MTM800 FuG
**TETRA ENHANCED DATA SERVICE**

**FEATURE DESCRIPTION**
TETRA Enhanced Data Service (TEDS) gives the ability to provide secure, reliable, higher speed data on a TETRA network. It can be used for enhanced web access, graphic images, and richer data applications.

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<tr>
<td><strong>Supported on the following Mobile radios:</strong></td>
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<tr>
<td>MTM5200, MTM5400, MTM5500, MTM800 FuG ET</td>
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</tbody>
</table>
WORKFORCE MANAGEMENT
INFRASTRUCTURE

MAKE SURE THAT USERS ARE ABLE TO CARRY-OUT THEIR JOB ROLES IN THE MOST EFFICIENT WAYS
BARRING INCOMING CALLS/BARRING OUTGOING CALLS (BIC/BOC)

**FEATURE DESCRIPTION**
The Barring of Incoming Calls / Barring of Outgoing Calls (BIC / BOC) feature provides the ability to control each user’s ability to initiate and receive calls depending on the identity of the other call party. BIC / BOC allows control over talkgroup access from a system console rather than returning each individual radio for reprogramming.

This feature could be used in conjunction with RUA / RUI to further enhance the level of radio pooling. If you want to make sure that security employees are able to communicate on special security object groups, without other users listening, then you need BIC / BOC to exclude all other users.

**Key Benefits:**
- Offers management capability on pooled mobile subscriber devices.
- Offers Fleet Managers’ faster and more flexible talkgroup management.
- Enforces talkgroup discipline; manages system traffic capacity and increases security; and controls private and group calls.

**DEPENDENCIES**
- **System Release:** From D9.0
- **System Configuration:** DIMETRA X Core

DYNAMIC SHARED SERVICE

**FEATURE DESCRIPTION**
The Static Shared Service Algorithm (SSSA) controls the sharing of voice channels between Dispatch and Telephone Interconnect service. The maximum number of simultaneous interconnect calls allowed and the maximum interconnect call length can be adjusted for each two hour time period in the day starting on the hour. Both parameters can be set for each site individually.

The Dynamic Shared Service Algorithm (DSSA) is an optional purchasable feature which supplements the Telephone Interconnect service by dynamically controlling the sharing of voice channels between Dispatch and Interconnect Service. It controls both the maximum number of simultaneous interconnect calls at a given site as well as the maximum length of an interconnect call at that site to ensure adequate access to voice channels for dispatch service. The periodic adjustment of channels available for interconnect is based on traffic loading and customer entered target levels of service.

**DEPENDENCIES**
- **System Release:** From D9.0
- **System Configuration:** DIMETRA X Core
## 10 Call Telephone Interconnect

**Feature Description**

The Telephone Interconnect call service gives full duplex communication between a Mobile Station (MS) and a Private Automatic Branch Exchange (PABX), IP-PABX or Public Switched Telephone Network (PSTN) user. PSTN access is via the PABX. Full duplex means that both parties in the call can transmit and listen at the same time.

The 10 Call Interconnect License allows up to 10 simultaneous full duplex communications at any one time.

The service allows a Mobile Station (MS) to initiate a Telephone Interconnect call by requesting an individual call to the Individual Short Subscriber Identity (ISSI) reserved for the Motorola Telephone Interconnect Gateway (MTIG-E1 or MTIG-IP) and including the required external exchange number in the called request.

During call set up, call-progress tones are provided to the calling party.

An Enhanced Telephone Gateway (ETG) is required to connect more than one PABX.

Both MTIG-E1 and MTIG-IP are allowed to be mixed in a System, at System level or Cluster level, but cannot co-exist in a Zone.

### Dependencies

**System Release:** From D9.0 and R1.1

**System Configuration:** DIMETRA X Core and DIMETRA Express

**NOTE:** DIMETRA Express supports 2 simultaneous calls as standard with 10 calls being supported with the addition of licenses. DIMETRA Express only supports MTIG IP.

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## Agency Priority Matrix

**Feature Description**

Agency Priority Matrix is a DIMETRA system feature that provides agencies, or a subset of agencies, with exclusive use of specific RF channels.

This is accomplished by having the zone controller in the system steer calls to channel resources that are configured with the appropriate agency or user group designation. The use of this feature allows the segregation of users enabling preferential service to a select set or sets of users.

### Dependencies

**System Release:** From D9.0

**System Configuration:** DIMETRA X Core
OBJECT CALL

FEATURE DESCRIPTION
This feature enables radio users to join and call talkgroups without having talkgroups programmed in the radio.

Object call is a feature primarily designed for use in environments where multiple agencies or individuals are engaged in supporting tasks or missions of limited timeframe. For example, in an airport an ‘object’ could be an aircraft arriving at a gate needing servicing, therefore requiring various teams (flight preparations could include baggage handlers, catering teams, mechanics, and the airline staff).

These radio users require collaborative or team communication capabilities, usually for a short period, before moving on to work on another task with potentially different agencies or individuals.

With this feature, individual radio users have the flexibility and freedom to dial-into an “Object Talkgroup” for the duration of the task being worked on, or they can simply dial-in to deliver a single instruction.

Key Benefits:
- Beneficial to radio users who change talkgroups several times a day relating to new tasks without having to reprogram the radio; therefore enhancing collaboration and efficiency.
- Object Call eliminates talkgroup admin and provisioning effort that would otherwise be required for short-duration, task-orientated talkgroups.
- Communication is simplified by identifying talkgroups with a user-defined task code.

DEPENDENCIES
System Release: From D9.0
System Configuration: DIMETRA X Core
### ENERGY ECONOMY MODE
**FEATURE DESCRIPTION**
The Energy Economy Mode feature increases the radio battery life, where supported by the radio, thereby extending the user's operational capabilities.

### RADIO USER IDENTITY / RADIO USER AUTHENTICATION
**FEATURE DESCRIPTION**
Radio User Identity / Radio User Authentication (RUI / RUA) is a DIMETRA Network and Terminal feature that allows an individual to use any radio from a pool of radios and register the radio to their specific identity.

User can pick up and register the radio with their user identity. Individual calls and SDS messages for the user are then sent to the radio.

Restrictions can be placed on the capabilities of radios / users based on the user identity.

### DEPENDENCIES
- **System Release:** From D9.0
- **System Configuration:** DIMETRA X Core
EXTENDED RANGE

FEATURE DESCRIPTION
The Extended Range feature enables longer distance communications between a Base Station and a Mobile Station (MS) to enlarge the coverage area of the Base Station, specifically to facilitate airborne (Air-Ground-Air Communications) and marine (Land-Sea-Land Communications) communications.

The extended range capability allows cell boundaries to be extended from 50 to approximately 83 Km radius.

DEPENDENCIES

System Release: From D9.0
System Configuration: DIMETRA X Core

NOTE: All Motorola Solutions subscriber devices support the signaling for extended range service. However Motorola Solutions does not certify devices for use in airborne or marine applications; such device certifications must be obtained from a third party:

- Certification will always be required for use in aircraft.
- Subscriber Class feature used to control access.
- Local regulations may require certification for use in ship-to-shore-to-ship applications.

Supported by MTS base stations and MTM5400 mobile radios. The MTM5400 requires re-packaging by 3rd party before suitable for aircraft use.
WORKFORCE MANAGEMENT

SUBSCRIBERS

MAKE SURE THAT USERS ARE ABLE TO CARRY-OUT THEIR JOB ROLES IN THE MOST EFFICIENT WAYS
SHADOW GROUPS (ADDRESS BUNDLE)

**FEATURE DESCRIPTION**

Shadow Groups (Address Bundles) allows terminals to be configured, by Customer Programming Software (CPS) or Integrated Terminal Management (ITM) system, to send Status and Emergency alarms, Global Positioning System – Location Information Protocol (LIP), and Radio Messenger Service / Funk Melde System (RMS / FMS) to defined destination addresses replacing the home address. It sends messages to up to four addresses per Talk Group for Trunked Mode Operation (TMO), and to one address per Talk Group for Direct Mode Operation (DMO).

TMO bundles can have up to 4 addresses assigned, and there can be up to 255 Address Bundles. Each Talk Group can have up to 4 different bundles associated to it. This allows multiple dispatchers to simultaneously understand the status and location of team members as they roam between regions. An address bundle can also be specified for Dynamic Group Number Assignment (DGNA) added Talk Groups.

Status / Emergency alarms, GPS-LIP and RMS / FMS Shadow Groups (Address Bundles) can also be different from each other.

Shadow Groups allows different regional command and control centers to obtain information from one radio. When the Shadow Groups (Address Bundles) feature flag is enabled, unsolicited reports will be sent to the destination ISSI addresses defined in the TMO Address Bundles List and DMO Address Bundles List respectively, and associated to a given Talk Group.

**DEPENDENCIES**

**Software Release:**
From MR5.14.10

**Supported on the following Portable and Mobile radios:**

**Portables:** MTP850 FuG, MTP3100, MTP3150, MTP3200, MTP3500, MTP3250, MTP3550, MTP6550, MTP6750, MTP6650, ST7000, ST7750

**Mobiles:** MTM5200, MTM5400, MTM5500, MTM800 FuG ET, MTM890 FuG
GLOBAL NAVIGATION SATELLITE SYSTEM

FEATURE DESCRIPTION
Global Navigation Satellite System (GNSS) capability allows the radio to report positional information.

- Radio supports LIP, Long LIP and LRRP protocols.
- Data can be sent as Short Data or Packet Data
- Normal and High accuracy
- Multiple trigger options available for customer to specify: Distance, event, time, emergency, mode change, transmission, coverage, battery etc
- Flyaway filter reduces “false” readings
- Modification of triggers / reporting over the air
- Multiple applications can send triggers to radio
- Single destinations for reports
- Destination can be changed by a source over the air
- Even with GNSS switched off, Emergency can trigger positional update
- Interaction with Infrastructure (applications) for “throttling”, reporting, mapping etc
- Supports GPS/Glonass/Beidou based on model variation.

DEPENDENCIES
Software Release:
From MR15

Supported on the following Portable and Mobile radios:

Portables: MTP850 FuG, MTP3150, MTP3200, MTP3250, MTP3500, MTP3550, MTP6550, MTP6750, MTP6650, ST7000, ST7500

Mobiles: MTM5200, MTM5400, MTM5500, MTM800 FuG ET, MTM800 FuG
**IMMEDIATE TEXT MESSAGE**

**FEATURE DESCRIPTION**

Immediate Text Message is a safety feature that allows incoming messages to be sent directly to the screen on the terminal, and will remain there until the user presses a soft key. This feature is a major enhancement to the normal Short Data feature, allowing text messages to be immediately sent to the display on the radio.

Radios will always send a Short Data Service (SDS) message acknowledgment for an Immediate Text Message, so sending applications can determine if the message was received successfully.

Message received tones and periodic tones can be played to notify the radio operator that an Immediate Text Message has been received. This means the user does not have to check their radio constantly for messages and can keep their attention focused where it needs to be.

Immediate Text Messages have a higher display priority than most other radio messages and information displays (for example, Dynamic Group Number Assignment, etc.), so the user can rest assured that they will see the most important messages as soon as they are received.

**DEPENDENCIES**

**Software Release:** From MR5.12

**Supported on the following Portable and Mobile radios:**

- **Portables:** MTP850 FuG, MTP830 FuG, MTP850Ex, MTP8500Ex, MTP8550Ex, MTP810Ex, MTP3100, MTP3150, MTP3200, MTP3250, MTP3500, MTP3550, MTP6550, MTP6750, MTP6650, TPG2200
- **Mobiles:** MTM5200, MTM5400, MTM5500, MTM800 FuG ET, MTM800 FuG

**CALL-OUT**

**FEATURE DESCRIPTION**

The Call Out system enables dispatchers to quickly and efficiently organise resources in an emergency situation, as they can immediately identify who is where and send a message to personnel in the right area. In turn, those personnel have to respond by either accepting or declining the message. The dispatcher knows who is available and can swiftly assemble a group to progress to an incident. In order to achieve this Call Out uses Short Data Service (SDS) messages in such a way so that:

The message is immediately displayed on the screen of the terminal

- A loud and distinctive alert tone is generated
- The user has to Accept or Reject the Call Out so the control room knows who is available for deployment
- When a Call Out is accepted the terminal cannot change to another talkgroup unless they reject the Call Out

**DEPENDENCIES**

**Software Release:** From MR5.14.3

**Supported on the following Portable and Mobile radios:**

- **Portables:** MTP850 FuG, MTP830 FuG, MTP850Ex, MTP8500Ex, MTP8550Ex, MTP810Ex, MTP3100, MTP3150, MTP3200, MTP3250, MTP3500, MTP3550, MTP6550, MTP6750, MTP6650, TPG2200
- **Mobiles:** MTM5200, MTM5400, MTM5500, MTM800 FuG ET, MTM800 FuG
Radio Messaging Service (RMS) allows bi-directional messaging and the mutual exchange of certain numeric codes between the radio users and their control rooms. The latest sent or received status message will be displayed on the screen and the feature also provides an in and outbox of previous RMS messages.

When enabled:

- **Update RMS Status** – The radio user can utilise the numeric keypad (0 to 9) for sending one of ten (10) predefined RMS Status to a predefined address.

- **Received RMS Status** – will be displayed in blue colour on 4th line on idle screen. Latest received RMS will normally need to be acknowledged by the radio user.

- **RMS Free Text** – This is a one-directional message from control room to Mobile Station. Received RMS Free Text will be displayed in blue on the 5th line on the idle screen.

Messages are sent using TETRA Short Data and can be used to control or determine a users “status”.

Radios will accept received RMS messages only from the Calling Party Address defined in the Customer Programming Software (CPS) whilst outgoing messages will be sent to the RMS Status Target Address also configured in the CPS.

**DEPENDENCIES**

**Software Release:**
From MR5.11

**Supported on the following Portable and Mobile radios:**

**Portables:** MTP850 FuG, MTP3150, MTP3250, MTP3550, MTP6550, MTP6750, MTP6650

**Mobiles:** MTM5200, MTM5400, MTM5500, MTM800 FuG ET, MTM800 FuG
RADIO MESSAGING SERVICE ENHANCEMENT

FEATURE DESCRIPTION

Radio Messaging Services (RMS) Enhancement allows for the optional use of Status messages rather than Short Data Services (SDS) messages as the transport layer.

RMS via Status is supported on all limited keypad radios.

When enabled, RMS messages are sent as Status's instead of SDS-TL Type 4.

Choosing Status limits the transport options, during which the following SDS options are not supported:

- Free Text RMS.
- Operational Tactical Address (OPTA)
- Message Timestamp
- End-to-End Encryption
- Delivery Status Report (L3 ACK)

RMS Enhancement for Screen Timer - display duration for RMS status message is now configurable in Customer Programming Software (CPS):

- Temporary (1-30 sec)
- Permanent
- Additional Address

Address bundles mask prevents the transmission of specific RMS status messages to the additional target address.

MR16 enhancement adds to the existing RMS capability as follows:

- Extends the RMS message support to 100 user define-able messages.
- Enables customers to send any of the 100 RMS messages through the combination of buttons on the radio keyboard.

MR17 enhancement allows for the addition of a status Location Information Protocol (LIP) trigger to the RMS functionality.

SIMULTANEOUS PHYSICAL EQUIPMENT INTERFACE AND AUDIO

FEATURE DESCRIPTION

Simultaneous Physical Equipment Interface (PEI) and Audio enables the ability to combine audio and data send through the side connector for MTP8000Ex Series, MTP850Ex and MTP810Ex ATEX portable radios.
### RADIO USER IDENTITY / RADIO USER AUTHENTICATION

**FEATURE DESCRIPTION**

Radio User Identity / Radio User Authentication (RUI / RUA) is a DIMETRA Network and Terminal feature that allows an individual to use any radio from a pool of radios and register the radio to their specific identity.

- User can pick up and register the radio as themselves
- Individual calls and SDS messages for the user are sent to the radio
- Restriction can be placed on the capabilities of radios / users

**DEPENDENCIES**

- **Software Release:** From MR5.9
- **Supported on the following Portable and Mobile radios:**
  - **Portables:** MTP850 FuG, MTP3150, MTP3250, MTP3550, MTP6550, MTP6750, MTP6650
  - **Mobiles:** MTM5200, MTM5400, MTM5500, MTM800 FuG ET, MTM800 FuG

### MAN DOWN

**FEATURE DESCRIPTION**

Man Down is a safety feature aimed at providing alert information to the user and controllers in case of an accident. This fully integrated solution triggers an emergency procedure when the carrier of the radio remains motionless for a set period or falls down. Man Down utilises the emergency feature to alert control rooms.

The man down alarm functionality will trigger the radio’s internal software emergency routine if the radio is horizontal for longer than a pre-programmed time. Similarly, alarm will be triggered if the radio is stationary for longer than a pre-programmed time.

When Alarm is triggered an emergency call will be made to alert the control room and as per normal emergency call, hot-mic will be enabled during Man Down, allowing control room to obtain more information about the user. The radio will also emit a loud tone for rescuers to locate the victim.

Third Party Applications can be used to monitor and alert managers about any potential problems for users. Additionally if GNSS is enabled, the radio can report positional information back to control room.

SDS remote control can be used to manage Man Down from the Control Room.

**DEPENDENCIES**

- **Software Release:** From MR5.9
- **Supported on the following Portable radios:** MTP850 FuG, MTP830 FuG, MTP850Ex, MTP8500Ex, MTP8550Ex, MTP810Ex, MTP3500, MTP3550, MTP6550, MTP6750, MTP6650, TPG2200
**INDIVIDUAL (PRIVATE) / DIRECT CALL WITH AUTO ANSWER**

**FEATURE DESCRIPTION**
Provides the ability for user to enable handsfree call auto answering.

- Supports both half duplex and full duplex

**DEPENDENCIES**

**Software Release:**
From MR18a

**Supported on the following Portable and Mobile radios:**

**Portables:** MTP3100, MTP3150, MTP3500, MTP3550, MTP6650, MTP8500Ex, MTP8550Ex, ST7000, ST7500

**Mobiles:** MTM5200, MTM5400, MTM5500, MTM800FuG, MTM800FuG ET
NETWORK OPERATIONS & MANAGEMENT INFRASTRUCTURE

MAXIMISE NETWORK OPERATIONS AND MAINTENANCE WITH BETTER SYSTEM VISIBILITY AND CONTROL OF CRITICAL ASSETS
ZONE PERFORMANCE REPORTS

**FEATURE DESCRIPTION**
Zone Performance Reports allows licensed users to produce reports on historical and dynamic usage of infrastructure and radio resources. These reports present statistical data that is gathered over predefined time intervals for the purpose of monitoring and analyzing zones, sites, channels, talkgroups and Mobile Station (MS) users. Reports can be sent to the monitor screen, a printer, or saved as PDF, XML, HTML or Comma Separated Value (CSV) files. They can be created from data collected over the following time intervals:

- 15 minute intervals for the last 24 hours
- 60 minute intervals for the last 10 days
- 24 hour intervals for the last 2 months
- Monthly intervals for the last 12 months

In addition to the standard reports, custom reports may be created from available historical data. The Crystal Reports application can be used to modify the standard reports or to create a new report from scratch.

**DEPENDENCIES**
- **System Release:** From D9.0
- **System Configuration:** DIMETRA X Core

DYNAMIC REGROUPING WITH RADIO CONTROL MANAGER

**FEATURE DESCRIPTION**
This feature allows a Radio Control Manager (RCM) user to add and remove talkgroups from the talkgroup list of a subscriber.

A Dynamic Regrouping command can also be used to re-name an existing talkgroup, and to assign a new Class of Usage (CoU), a form of priority.

**DEPENDENCIES**
- **System Release:** From D9.0 and R1.1
- **System Configuration:** DIMETRA X Core and DIMETRA Express
CLUSTER PERFORMANCE REPORTS

FEATURE DESCRIPTION

Cluster Performance Reports allows licensed users to produce cluster-level reports on historical usage of infrastructure and radio resources. These reports present statistical data that is gathered over predefined time intervals for the purpose of monitoring and analyzing zones, sites, channels, talkgroups and Mobile Station (MS) users. Reports can be sent to the monitor screen, a printer, or saved as PDF, XML, HTML or Comma Separated Value (CSV) files. They can be created from data collected over the following time intervals:

- 15 minute intervals for the last 24 hours
- 60 minute intervals for the last 10 days
- 24 hour intervals for the last 2 months
- Monthly intervals for the last 12 months

Over 80 standard cluster-wide reports and over 300 zone-level standard reports are available.

In addition to the standard reports, custom reports may be created from available historical data. The Crystal Reports application can be used to modify the standard reports or to create a new report from scratch.

DEPENDENCIES

System Release: From D9.0
System Configuration: DIMETRA X Core
**ZONE WATCH AND AFFILIATION**

**FEATURE DESCRIPTION**
Zone Watch is an application that lets you monitor radio call traffic for an individual zone in real time. This application uses different Watch Windows that allow you to display only the information you want to see.

Examples of trunking activity and radio call traffic displayed in the Watch Windows include the following:

- Radio IDs
- Talkgroup IDs
- Aliases
- Specific call information
- Channel and talkpath (TDMA) assignments

Affiliation Display is an application that displays the association of a radio with a talkgroup and a site, and information about conventional channels, console sites, and consoles. It enables you to monitor how radio users travel between different sites in a zone and how they communicate with other members of their assigned talkgroup and those outside of their talkgroup.

**DEPENDENCIES**
- **System Release:** From D9.0
- **System Configuration:** DIMETRA X Core

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**USER CONFIGURATION SERVER API**

**FEATURE DESCRIPTION**
The User Configuration Server (UCS) API feature provides an interface to the DIMETRA UCS for manipulation of data, including most subscriber data – Mobile Station (MS), Radio User and Talkgroups – plus limited infrastructure configuration data.

In a multi-cluster system, each UCS API only accesses the data in its cluster. In a multi cluster system access is required to each cluster’s UCS API to undertake provisioning of MS and Radio Users according to the Home Zone maps for the system.

The API provides a method of integrating third party provisioning applications and infrastructure management systems with a DIMETRA system.

**DEPENDENCIES**
- **System Release:** From D9.0
- **System Configuration:** DIMETRA X Core
UNIFIED EVENT MANAGER NORTH BOUND API

FEATURE DESCRIPTION
The Unified Event Manager (UEM) North Bound API feature provides Simple Network Management Protocol (SNMP) fault forwarding to a 3rd party “Manager of Managers” for all Zones in a cluster.

The UEM is the primary fault management / troubleshooting tool used in DTMETRA systems.

The UEM application is primarily a fault management application. As background functionalities, the application discovers devices, ensure communications path with them and periodically pools agents on the network to ensure correct functioning. On the primary front, UEM collects traps sent by agents located on network elements and generates events or alarms using the Simple Network Management Protocol.

Events contain information on the status of a device, while alarms indicate a condition which requires an action. Both can be assigned to a specific person to solve and related comments can be entered in the tool.

Each zone is equipped with a UEM server that collects alerts from objects within its zone.

UEM provides the following features:

- Zone Map: This view provides graphical top-level display of the device status and service status.
- Fault Management: This view provides a list of outstanding failures in the system. Both an event view and an active alarm view are available.
- Inventory View (Network Database): This view provides a list of devices and logical elements discovered. This includes current status and properties.
- Administration Tools: Different policies and job status can be accessed from this view.

DEPENDENCIES
System Release: From D9.0
System Configuration: DTMETRA X Core
AIR TRAFFIC INFORMATION ACCESS API

FEATURE DESCRIPTION

The Air Traffic Information Access (ATIA) API feature provides the customer with an access point for raw air traffic call information on the System. ATIA provides a continuous near real time stream of data of call information whenever something significant occurs on a call. Non-call activities such as subscriber rejects, affiliations and radio commands are issued in unique data formats.

The ATIA information can be used by customers to generate detailed billing or management reports from the data provided by the ATIA interface in conjunction with their third-party products and applications.

The ATIA stream also contains information about status messages and another example of an implemented application is to extract the status message to be used as evidence that an officer did a specific action at a specific time.

DEPENDENCIES

System Release: From D9.0 and R1.3
System Configuration: DIMETRA X Core and DIMETRA Express
## NETWORK OPERATIONS & MANAGEMENT INFRASTRUCTURE

### COMPUTER AIDED DISPATCH INTERFACE API

**FEATURE DESCRIPTION**
The Computer Aided Dispatch Interface (CADI) API feature is an application programming interface for use by third-party Computer Aided Dispatch (CAD) applications. CADI provides a high-level, function-based programming interface for performing dispatch actions within a radio system from a custom software application. The CADI API enables third party suppliers to write software application programs, called CADI clients, which monitor radio systems for dispatch purposes.

The API gives the CADI client application direct access to the commands and events used by the radio system and its network management applications.

**DEPENDENCIES**
- **System Release:** From D9.0
- **System Configuration:** DMETRA X Core

### MTS1 STANDBY SITE CONTROLLER

**FEATURE DESCRIPTION**
The MTS1 is a complete Base Station with Site Controller, Base Radio and Radio Frequency Distribution System. Placing two MTS1’s side by side in companion mode will create a two carrier Base Station, with two Base Radios, two power supplies and two Site Controllers.

The “MTS1 Standby Site Controller” license will enable the second site controller as redundant site controller, for full resilience.

**DEPENDENCIES**
- **System Release:** From D9.0 and R1.2
eTETRA

**FEATURE DESCRIPTION**

This feature license enables a Dual Band Capable Base Station. The capacity is therefore expanded into the adjacent spectrum, for example 380-385 MHz (nT) plus 410-415 MHz (eT).

This feature provides backwards compatibility, leveraging existing wideband capable radios, benefitting all users. It addresses customer needs to expand channel capacity in certain geographical areas. This particularly suits customers who need to expand capacity but who are unable to use frequencies in the same band.

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<th>DEPENDENCIES</th>
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<td><strong>System Release:</strong> From D9.0</td>
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<td><strong>System Configuration:</strong> DIMETRA X Core</td>
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CONTROL ROOM INFRASTRUCTURE

TAKE ADVANTAGE OF NEXT GENERATION CONTROL ROOM CAPABILITIES
### DOMAIN CONTROLLERS

**FEATURE DESCRIPTION**

The Zone Domain Controller (ZDC) provides a Domain Name Server (DNS) service for clear and end-to-end encryption MCC 7500 consoles.

Domain Controllers are optional; if they are deployed then they are required only at the zone level. It is recommended that they are deployed if a system includes a control site with ten or more consoles. If the system only has ICCS with no consoles, then Domain Controllers are not required.

In systems where Domain Controllers are deployed, two Domain Controllers are required for each zone containing MCC 7500 Consoles.

The ZDCs handle both DNS and active directory services for the defined active directory domain. The ZDCs handle security and group information for the consoles whereas the cluster DCs handle user accounts. All ZDCs are DNS slaved to the ZDS.

**DEPENDENCIES**

- **System Release:** From D9.0
- **System Configuration:** DIMETRA X Core

### DISPATCH COMMUNICATIONS SERVER

**OPERATOR POSITION**

**FEATURE DESCRIPTION**

The Dispatch Communications Server (DCS) feature enables radio dispatch communications in a Control Room connected to a DIMETRA radio network.

Compared to the previous solutions, such as the MCC 7500 Integrated Command and Communication System (ICCS) Gateway. It consolidates hardware into a single server which offers support for up to 10 dispatch positions. Additionally, audio is offered in Pulse Code Modulation over IP (PCMoIP) format, bringing the solution to full IP support in the interface.

**DEPENDENCIES**

- **System Release:** From D9.0 and R1.2
- **System Configuration:** DIMETRA X Core and DIMETRA Express

**NOTE:** For DIMETRA Express a Maximum of 10 DCS positions supported.
5 CONTROL ROOM HEAD NUMBER
FEATURE DESCRIPTION
The Control Room Head Number (CRHN) feature defines a group of Consoles as a “Head Number” and allows an agency located in a dispatch control room to be uniquely identified in terms of call address, regardless of the Dispatch Consoles assigned to the agency.

The CRHN feature is designed to operate either with Motorola Solutions’ MCC 7500 consoles or via a Dispatch Communication Server (DCS) subsystem or an End-to-End Encrypted (E2EE) Integrated Command and Communication System (ICCS) system, interfaced through the DCS, Secure DCS (S-DCS) or ICCS Gateway (ICCS GW).

From a logical point of view this unique identity materialises in a Head Number ISSI (Individual Short Subscriber Identity) assigned to the agency in that customer dispatch control room. Therefore there are not individual numbers / IDs per dispatcher and it is up to the customer dispatch system to decide which Dispatch Console deals with which call, instead of the individual user calling an individual Dispatch Console.

When the CRHN feature is used directly with Motorola Solutions’ MCC 7500 Dispatch Consoles the Head Number groups a number of consoles in a control room under one unique address and the infrastructure allocates the call to a particular Dispatch Console.

The Head Number ISSI is employed by the radio or console users to place private calls towards an agency in a control room and it is also the number displayed in the radio or console when the user receives a private or a group call from an agency’s console in a specific control room.

DEPENDENCIES
System Release: From D9.0
System Configuration: DIMETRA X Core
DISCREET LISTENING INDIVIDUAL CALLS

FEATURE DESCRIPTION
MCC 7500 Discreet Listening (DL) is a feature that enables real-time listening to one-to-one radio communications and/or telephone calls involving specific radio users. The Discreet Listening application enables the listener to listen to calls involving radio users without their knowledge.

DEPENDENCIES
System Release: From D9.0
System Configuration: DIMETRA X Core
10+10 VOICE CALL LOGGING
FEATURE DESCRIPTION

This license supports logging 10 simultaneous Group calls and 10 simultaneous Private calls / Telephone Interconnect calls.

DIMETRA X Core supports Voice Logging of Group calls (clear / AIE and E2EE); Private calls (clear / AIE and E2EE); and Telephone Interconnect calls (clear / AIE).

Motorola Solutions offers two certified and supported logging solutions* that are integrated into DIMETRA X Core. They both include an Archiving Interface Server (AIS) and one of the following NICE logging solutions:

- The NICE Inform Lite Voice Logging solution that supports clear / AIE logging.
- The NICE Inform Voice Logging solution that supports clear / AIE and E2EE logging.

The Voice Logging feature for Group, Private and Telephone Interconnect calls is license controlled and can be enabled or disabled from the Network Management Terminal (NMT).

*Note: Other 3rd party vendor logging recorder and replay stations are available however they are not integrated into DIMETRA X Core or certified by the DIMETRA Product Group.

DEPENDENCIES

System Release: From D9.0
System Configuration: DIMETRA X Core
SECURE DISPATCH COMMUNICATIONS SERVER OPERATOR POSITION

FEATURE DESCRIPTION

The Secure Dispatch Communications Server (S-DCS) subsystem can be used only at remote Control Sites and is used instead of the MCC 7500S Integrated Command and Communication System (ICCS) Gateway.

The advantage of the S-DCS for larger Control Sites is that it eliminates 50% of the rack mount PCs and replaces them with one server per every ten ICCS positions – Communication Control Entity (CCE) nodes.

The server is similar to the Clear DCS server except that it only runs the CCE function and not the ‘Audio Gateway’ function.

Secure audio is still handled by the rack-mount Audio Processing Entity (APE) and Console CRYPTR. The APE provides analogue audio which may be multiplexed onto an E1 using the same multiplexer as previously used for the MCC 7500S ICCS Gateway.

DEPENDENCIES

System Release: From D9.0
System Configuration: DIMETRA X Core
MOBILITY SUBSCRIBERS

OPTIMISE USE OF THE VALUABLE NETWORK RESOURCES IN YOUR SYSTEM
IGNORE LOCAL SITE TRUNKING

FEATURE DESCRIPTION
Ignore Local Site Trunking (LST) is sometimes called – Do not leave LST cells.

This feature provides ability for radios to ignore the fact that a site has entered Local Site Trunking.

The radio holds a list of up to 8 ranges of site identities which it will apply this feature to. Once this feature has been enabled, the radio codeplug needs some additional configuration.

In the codeplug there is a table of up to 8 ranges that can be configured. These ranges define a start and end Location Area (LA) codes for the sites that are to be considered for remaining attached to if the site goes into LST.

No additional configuration is required and no network application or configuration is needed.

Once the LA codes are programmed into the codeplug, then if the radio is attached to a site that has an LA code that is listed in the table – and that site goes into local Site Trunking – then the radio will not attempt to roam to a Wide Area site.

DEPENDENCIES
Software Release:
From MR5.12

Supported on the following Portable and Mobile radios:
Portables: MTP850 FuG, MTP830 FuG, MTP850Ex, MTP8500Ex, MTP8550Ex, MTP810Ex, MTP3100, MTP3150, MTP3200, MTP3250, MTP3500, MTP3550, MTP6550, MTP6750, MTP6850, ST7000, ST7500, TPG220
Mobiles: MTM5200, MTM5400, MTM5500, MTM800 FuG ET, MTM800 FuG

TOGGLE RADIO FREQUENCY (RF) POWER

FEATURE DESCRIPTION
This feature allows a user to switch a portable radio between 1W and 1.8W power settings.

Operating at 1.8W provides a wider operating range. Operating at 1W provides longer battery life.

DEPENDENCIES
Software Release:
From MR5.9

Supported on the following Portable and Mobile radios:
Portables: MTP850 FuG, MTP830 FuG, MTP3100, MTP3150, MTP3200, MTP3250, MTP3500, MTP3550, MTP6550, MTP6750, TPG220
Mobiles: MTM5200, MTM5400, MTM5500, MTM800 FuG ET, MTM800 FuG
**REPEATER**

**FEATURE DESCRIPTION**
This feature enables a radio when synchronized with a radio operating as a Repeater in Direct Mode Operation (DMO) to communicate with other radios in DMO that are also synchronized with the Repeater.

**DEPENDENCIES**

- **Software Release:** From MR5.13
- **Supported on the following Portable and Mobile radios**
  - **Portables:** MTP850 FuG, MTP3100, MTP3150, MTP3200, MTP3250, MTP3500, MTP3550, MTP6550, MTP6750, MTP6650
  - **Mobiles:** MTM5400, MTM5500, MTM800 FuG ET, MTM800 FuG

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**GATEWAY**

**FEATURE DESCRIPTION**
This feature enables a radio when operating in Trunked Mode Operation (TMO) to communicate with a radio operating as a Gateway. The Gateway can communicate directly between the TMO trunked network and DMO direct mode channels and also in the opposite direction. It also enables radios when operating in DMO to synchronize with a radio operating as a Gateway to communicate directly between DMO direct mode channels and TMO trunked network and also in the opposite direction.

**DEPENDENCIES**

- **Software Release:** From MR10.1
- **Supported on the following Mobile radios:** MTM5400, MTM5500, MTM800 FuG ET, MTM800 FuG
MIGRATION

FEATURE DESCRIPTION

There are three levels of Migration, and the more comprehensive levels include the features of the lower levels.

- Migration – this is the simplified operation of Migration that excludes DNS and Authentication/AIE.
- Migration Dynamic – this is the intermediate operation of Migration that includes DNS but excludes Authentication/AIE.
- Migration Encryption – this is the full version of Migration that allows authorized users to maintain full E2EE whilst migrating between different networks, network operators or countries.

DEPENDENCIES

Software Release: From MR5.14

Supported on the following Portable and Mobile radios:

Portables: MTP850 FuG, MTP830 FuG, MTP850Ex, MTP810Ex, MTP3100, MTP3150, MTP3200, MTP3250, MTP3500, MTP3550, MTP6550, MTP6750, MTP6650

Mobiles: MTM5200, MTM5400, MTM5500, MTM800 FuG ET, MTM800 FuG

EMERGENCY DESTINATION IN LOCAL SITE TRUNKING

FEATURE DESCRIPTION

This is an enablement feature that allows a new Emergency destination to be used when in Local Site Trunking.

DEPENDENCIES

Software Release: From MR18

Supported on the following Portable and Mobile radios:

Portables: MTP850 FuG, MTP830 FuG, MTP850Ex, MTP8500Ex, MTP8550Ex, MTP810Ex, MTP3100, MTP3150, MTP3200, MTP3250, MTP3500, MTP3550, MTP6550, MTP6750, MTP6650, ST7000, ST7500, TPG220

Mobiles: MTM5200, MTM5400, MTM5500, MTM800 FuG ET, MTM800 FuG
CELL SELECT BY GROUP

FEATURE DESCRIPTION

The Cell Select by Group feature allows ranges of talkgroups, or talkgroup folders to be given specific Subscriber Class (SC) values so that when those talkgroups are used, the new SC value is used for cell determination. Base sites have static SC values but the radio has a more dynamic SC. Default radio SC is used when no SC talkgroup is selected.

Cell Select by Group can be used:

- To preserve traffic channel capacity, by ensuring that when two cells that have same coverage and are placed together to multiply traffic capacity. The use of this site is optimised between the groups. For example if all radios attached to Talkgroup 1 are on first cell, and only one radio attached to that talkgroup is on second cell, then group call will use two traffic channels (one on first cell and one on second), reducing the effectiveness of the site capacity.

- To spread Mobile Station population across cells and prohibit them from roaming.

This can be used for major events, when there are many radios in small area with multiple base stations that increases roaming traffic. This feature reduces congestion.

DEPENDENCIES

Software Release:
From MR14

Supported on the following Portable and Mobile radios:

**Portables:** MTP850 FuG, MTP830 FuG, MTP850Ex, MTP8500Ex, MTP8550Ex, MTP810Ex, MTP3100, MTP3150, MTP3200, MTP3250, MTP3500, MTP3550, MTP6550, MTP6750, TPG2200, ST7000, ST7500

**Mobiles:** MTM5200, MTM5400, MTM5500, MTM800 FuG ET, MTM800 FuG
HOME CELL STICKINESS

FEATURE DESCRIPTION

Home Cell Stickiness is a feature that can be enabled to influence the roaming characteristics of the radio. A radio has many ways to determine which base station (cell) to use for service. These include cell capabilities, Subscriber Class and Home Location Areas (HLAs).

In simple terms HLAs are a set of cells that the radio has been programmed to prefer — compared to other cells. A number of Location Area codes may be programmed into a radio (up to 32). When a radio is making a decision about what cell to select (roaming etc), then an HLA will be seen as preferential.

When HLAs are programmed into the radio — and the sellable feature of Home cell stickiness is enabled — the radio’s mobility decisions can be modified by using the Attraction and Retention offset values.

This can reduce the load on a network by reducing the number of unnecessary cell reselection. It can help to keep radios on defined HLAs, managing congestion, roaming and radio distributions.

Feature is in two parts,

• Cell Retention: make the serving cell appear larger and thus encourage the radio to stay on the cell,
• Cell Attraction: make a neighbor cell that is programmed to the radios list of HLAs; appear larger and thus more attractive to roam to.

Once this feature has been enabled, the radio codeplug needs the additional configuration of the HLA’s and the attraction / retention offsets.

DEPENDENCIES

Software Release: From MR14

Supported on the following Portable and Mobile radios:

Portables: MTP850 FuG, MTP830 FuG, MTP850Ex, MTP8500Ex, MTP8550Ex, MTP8100, MTP3100, MTP3150, MTP3200, MTP3250, MTP3500, MTP3550, MTP6550, MTP6750, MTP6650, ST7000, ST7500, TPG220

Mobiles: MTM5200, MTM5400, MTM5500, MTM800 FuG ET, MTM800 FuG
### NETWORK MONITOR

**FEATURE DESCRIPTION**
Enables the monitoring of an available Trunked Mode Operation (TMO) network whilst radio is using the DMO (Direct Mode Operation (DMO)) channels.

When in DMO with “Network Monitor” option enabled, radio is able to:
- Register and authenticate on the TMO Network.
- Indicate to the user the Network Monitor mode.
- Accept TMO incoming individual calls addressed to the Radio.
- Be operational DMO Radio at the same time i.e. PTT press will cause initiating a group call to the selected DMO Talkgroup, can establish individual call in DMO.

It does not support any other TMO services e.g. SDS or other call types.

It does not allow user to change selected DMO Talkgroup.

### DEPENDENCIES

**Software Release:**
From MR15

**Supported on the following Portable and Mobile radios:**

**Portables:** MTP3100, MTP3150, MTP3200, MTP3250, MTP3500, MTP3550, MTP6550, MTP6650, MTP6750, MTP8500Ex, MTP8550Ex

**Mobiles:** MTM5200, MTM5400, MTM5500

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### EMERGENCY ALERT

**FEATURE DESCRIPTION**
Enables radios in talkgroup Trunked Mode Operation (TMO) mode, when out of the network coverage, to alert those radios within the range of direct mode.

Emergency Alert is a feature that supplements existing emergency features to increase the likelihood of receiving Direct Mode Operation (DMO) emergency alert.

It uses a dedicated DMO emergency channel that is being background scanned.

### DEPENDENCIES

**Software Release:**
From MR15

**Supported on the following Portable and Mobile radios:**

**Portables:** MTP3100, MTP3150, MTP3200, MTP3250, MTP3500, MTP3550, MTP6550, MTP6650, MTP6750, MTP8500Ex, MTP8550Ex

**Mobiles:** MTM5200, MTM5400, MTM5500
### INDIVIDUAL CALL MANIPULATION

**FEATURE DESCRIPTION**

This feature adds the following call management options:

- Call Take
- Call Hold
- Call Transfer
- Call Wait
- Call Forwarding

**NOTE:** This feature requires network support from DIMETRA 9.0.

### MULTIPLE RADIO CONTROL (MRC)

**FEATURE DESCRIPTION**

The Multiple Radio Control (MRC) feature enables control of two Radios (Transceivers) with one Control Head.

The configuration supports two Transceivers and one Control Head. The Control Head can be either a standard Remote Ethernet Control Head (ReCH) or a Telephone Style Control Head (TSCH).

Both transceivers require the MRC feature enabled. Transceivers can be different frequency bandwidths.
**ENHANCED DUAL CONTROL HEAD (DCH)**

**FEATURE DESCRIPTION**

New configurable selection for Dual Control Head (DCH) displays:

- **Heads** - the display on both Control Heads, either 2 x Remote Ethernet Control Heads (ReCH) or 2 x Telephone Control Heads (TSCH) will at all times show identical content.

- **Active / Passive** - the information shown on the two control heads depends on the state of the control head. One control head is denoted the active control head, which will display the normal control head content with soft-keys, the other display is denoted the passive control head, which will show the idle display without soft-keys.

- **Backlight Control** - the user can set the backlight level independently for each control head. The assigned One Touch Button (OTB) for each control head will independently control the backlight.

**DEPENDENCIES**

- **Software Release:** From MR15.1
- **Supported on the following Portable and Mobile radios:**
  - Mobiles: MTM5500, MTM800 FuG ET

**OEM CONTROL HEAD RDC PROTOCOL**

**FEATURE DESCRIPTION**

The Original Equipment Manufacturer (OEM) Control Head Remote Display and Control (RDC) protocol extends access to the Motorola Solutions RDC interface. The RDC interface is licensed and made available to 3rd party vendors (via Motorola Solutions Application Partner Program).

Application Solutions for OEM CH will require each mobile radio to have the OEM-CH Feature enabled.

**DEPENDENCIES**

- **Software Release:** From MR15.1
- **Supported on the following Portable and Mobile radios:**
  - Mobiles: MTM5400, MTM5500, MTM800 FuG, MTM800 FuG ET
BLUETOOTH® SUBSCRIBERS

Provide your radio users with a secure wireless link to accessories and collaborative devices to improve safety, efficiency and effectiveness.
BLUETOOTH ENABLEMENT
FEATURE DESCRIPTION
This feature enables generic Bluetooth connectivity and also supports Bluetooth audio and Bluetooth object push.

DEPENDENCIES
Software Release:
From MR14

Supported on the following:
Portable radios: MTP6750, MTP6550, MTP3250, MTP3200, MTP6650, MTP3500, MTP3550, ST7000, ST7500, MTP8500Ex, MTP8550Ex

BLUETOOTH CONNECTIVITY
FEATURE DESCRIPTION
Bluetooth must be enabled before the Bluetooth Connectivity feature can be used.

Bluetooth Connectivity enables the radio terminal to act as a modem for Bluetooth connected devices.

With MR15 and above, up to a maximum of seven sensors can be connected.

DEPENDENCIES
Software Release:
From MR14

Supported on the following:
Portable radios: MTP6750, MTP6550, MTP3250, MTP3200, MTP6650, MTP3500, MTP3550, ST7000, ST7500, MTP8500Ex, MTP8550Ex
### BLUETOOTH RADIO CONTROL
**FEATURE DESCRIPTION**
Bluetooth must be enabled before Bluetooth Radio Control can be used. This feature enables remote control of the radio terminal via AT Commands so devices such as smartphones, PDAs and tablets can be used to control the radio.

### DEPENDENCIES
**Software Release:**
From MR14

**Supported on the following:**
- **Portable radios:** MTP6750, MTP6550, MTP3250, MTP3200, MTP6650, MTP3500, MTP3550, ST7000, ST7500, MTP8500Ex, MTP8550Ex

### BLUETOOTH SMART
**FEATURE DESCRIPTION**
Bluetooth must be enabled before Bluetooth Smart can be used. Bluetooth Smart adds Bluetooth 4.0 and Bluetooth Low Energy (BTLE) for longer sensor battery life and enhanced sensor enablement allowing sensor data to be displayed on the radio. The radio can also be used to monitor the Bluetooth battery level.

### DEPENDENCIES
**Software Release:**
From MR15

**Supported on the following:**
- **Portable radios:** MTP3200, MTP3250, MTP3500, MTP3550, MTP6650, MTP6750, MTP6550, MTP8500Ex, MTP8550Ex, ST7000, ST7500
### BLUETOOTH SMART PROXIMITY PAIRING

**FEATURE DESCRIPTION**
Bluetooth and Bluetooth Smart must be enabled before Bluetooth Smart Proximity Pairing can be used. This feature adds the simple and intuitive ability to proximity pair with Bluetooth capable smart devices.

**DEPENDENCIES**

- **Software Release:** From MR15
- **Supported on the following:**
  - Portable radios: MTP3200, MTP3250, MTP3500, MTP3550, MTP6650, MTP6750, MTP6550, MTP8500Ex, MTP8550Ex, ST7000, ST7500

### BLUETOOTH INDOOR LOCATION

**FEATURE DESCRIPTION**
Enables an extended Short Data Services (SDS) Location Information Protocol (LIP) Report containing Bluetooth Low Energy (BTLE) Location Beacon data via the TETRA network. Supports easy transition between indoor BTLE and outdoor GPS location tracking.

Requires Bluetooth Smart to be enabled.

**DEPENDENCIES**

- **Software Release:** From MR17
- **Supported on the following:**
  - Portable radios: MTP3250, MTP3200, MTP3500, MTP3550, MTP6650, MTP6750, MTP6550, ST7000, ST7500, MTP8500Ex, MTP8550Ex