



DIMETRA™

APPLICATION PROGRAMMING INTERFACE (API)

OVERVIEW

VERSION 01.02



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API cross reference table

API	DIPScalable	DIPCompact	DIPMicro	Subscriber iTM
Alarm Reporting API	X	X	X	
Computer Aided Dispatch Interface (CADI / MultiCADI) API	X	X	X	
User Configuration Subsystem (UCS)	X	X	X	
MCC7500 Dispatcher Communication Server API	X	X	X	
MCC 7500 Voice Logging API	X	X	X	
Short Data Transport Service (SDTS) API	X	X	X	X
SDTS Logging API	X			
Packet Data API	X	X	X	X
MS-GPS API				X
Bluetooth Interfaces Programmers Guide				X
Remote Display and Control API				X
iTM Interfaces Programmers Guide				X
iTM PICS Interfaces Programmers Guide				X
Intelligent Middleware (IMW) Software Development Kit	X			

Alarm Reporting API

This API enables application providers to develop specific applications which reports alarms to monitor a DIMETRA™ systems. It is a method of network management which allows users to receive events from network elements, process them, correlate events to alarms and present them to the operator. This is achieved via the use of the Unified Event Manager (UEM) which supports an interface to send these events to North Bound Managers (like Network Management Systems). In addition to event notification interface, UEM also supports interface to access information in its data-store. This interface is termed as North Bound Interface (NBI).

Computer Aided Dispatch Interface (CADI) / MultiCADI API

The CADI API provides access to radio traffic information plus some control functions (related to the actual DIMETRA™ IP release). The CADI API feature is an interface for use by third-party computer aided dispatch (CAD) applications. This feature provides a high-level, function-based programming interface for performing dispatcher actions within a radio system and with individual radios from a custom software application. CADI API enables you to write software application programs, called CADI clients, which can 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. The CADI API feature uses application software that runs on the radio system's network management system. The CADI server application responds to commands issued from the CADI client application, representing different dispatcher actions. The application sends radio system acknowledgments, command responses, and real-time radio system activity events to the client application. The CADI client program can be created using any programming language that supports Remote Procedure Calls (RPCs) of Open Network Computing (ONC™).

MultiCADI, similar to the CADI, provides additional capabilities. The additional capabilities are mainly an interface to the Alias Integrated Solution (AIS) for aliasing information plus an ISSI filtering function i.e. MultiCADI clients only manage events and commands for ISSIs over which they have control. Also a forwarding feature is implemented for events/commands to MultiCADI clients in the home zone of the ISSI associated with the actual event/command.

User Configuration Subsystem (UCS)

The Configuration Subsystem API (UCS API) provides access to most UCS configuration data from client programs. The UCS API will be available from DIMETRA™ Release 5.1. The API supports most types of subscriber data (such as Radio, Radio User and Talkgroup), plus a few types of infrastructure data (such as home zone maps and telephone interconnect call routes). The UCS allows Costumer Care or Provisioning systems to be integrated with DIMETRA™, providing seamless integration between the operators administrative systems and the DIMETRA™ radio system. The API allows new subscribers to be inserted, old ones can have their properties changed, and it is also possible to delete unused subscribers.

MCC7500 Dispatcher Communication Server API

The purpose of this API is to specify the DIMETRA™ IP Integrated Command and Control System (ICCS) Audio Interface (ICCSAI) and the recommended ICCS performance with the objective of enabling third parties to develop and connect ICCS equipment that interwork successfully with the ICCSAI and TETRA terminals.

MCC 7500 Voice Logging API

The API provides accesses to the logging interface of the Archiving Interface Server. It is required to also purchase MCC7500 Console. The API does not include end-to-end-encryption (E2EE).

Short Data Transport Service (SDTS) API

This API covers all aspects of sending short data messages in a DIMETRA™ system. Furthermore it includes the control of radio terminals via the PEI (AT Commands and TNP1) or over-the-air using the SDS Remote Control.

- **Short Data Transport Service**

The Short Data Transport Service (SDTS) bearer service is Motorola's DIMETRA™ implementation of the TETRA SDS Type-4, Layer-3 service, together with the TETRA SDS-Transport Layer (SDS-TL) layer 4 service. The SDTS bearer service is terminated at the layer 4 SDS-TL protocol. This protocol is a simple method to transfer a short data message from a Mobile Station (MS) or a fixed host to another MS or fixed host.

- **TNP1 Programmers Guide**

The TETRA Network Protocol type 1 (TNP1) specifies a protocol to be used over the PEI which has been designed to allow the terminals to have control over the TETRA services. This includes mobility management, call control, QoS, SDS and supplementary services. The API describes the required information to develop the TNP1 Software Application for the Terminal Equipment.

- **AT-Commands**

This API provides a list and description of the AT commands supported by the Motorola Solutions DIMETRA™ Terminals, as well as examples. It is aimed at helping Application Developers design & implement PEI Applications using the AT commands interface. It allows a data terminal to control a modem over a serial data communication link (RS232).

- **Status Remote Control**

This API provides the specification of the Status Remote Control Protocol allowing an application to remotely control a Motorola Tetra Terminal over the air via the status bearer service. The services supported via Status Remote Control are "Play loud tone until user interaction", "Send firmware version and TEI" and "Send birth OPTA and TEI". Status Remote Control applies to release MR15.0 and subsequent MR5.x or higher only.

- **Short Data Service Remote Control Programmers Guide**

SDS Remote Control enables user to control a TETRA Mobile Terminal over the air interface using SDS-TL4 bearer service. Remote Control messages are sent by a controlling Terminal which can be a Controlling Mobile Terminal or Switching and Management Infrastructure (SwMI) Controlling Terminal. SDS Remote Control functionality works in both TMO and DMO.

- **Short Data Transport Service Billing System:**

The SDTS Billing System allows charging of transmitted Short Data message in the DIMETRA™ system. This includes delivery on the air interface and the core network. So MS-to-MS, MS to-Host, Host-to-MS and Host-to-Host transfers are billed. The Short Data Router (SDR) incorporates the billing functionality and is therefore regarded as a Billing Node of the Billing System. A Billing Node generates billing information and stores it as billing files on its Hard Disk Drive (HDD). A billing file provides structured billing information with a fixed format

(Billing Blocks and Billing Records). These billing files can be accessed by the Billing Processor which is part of the customer's billing equipment.

SDTS Logging API

Applies only to DIMETRA™ infrastructure system release 8.x and higher!

Short Data Logging is a feature introduced in 8.2. The feature primarily provides a group of APIs to the operator. Short Data Logging API allows authenticated users to request transparent inspection of selected Short Data messages. The inspection will be addressed based i.e. based on SSI address contained in the Short Data Message header. A copy of the inspected message will be used to relay the user data portion and selected parameters from the headers of the short data message to the client application.

Packet Data API

It enables IP Packet Data to be deployed across the TETRA network, including TEDS. The Packet Data Service is designed to take care of all mobility aspects for the users of the service. This means that a host connected either to a Mobile Station (MS) or to the LAN access point does not need to worry about the whereabouts of the destination when sending a datagram. If e.g. a Mobile Station is assigned address x.y.z.x, then sending a datagram to this MS can be achieved from the fixed network by sending a datagram to that address, regardless of the current location of the Mobile Station.

MS-GPS API

The purpose of this API is to provide external vendors with information on how to connect their Location Server Applications (or Location Servers) to Motorola Solutions DIMETRA™ Infrastructure and communicate with terminals supporting:

1. ETSI Location Interface Protocol (LIP) air interface protocol for location services.
LIP provides a more data efficient protocol than LRRP but has less flexibility.
2. Motorola proprietary LRRP air interface protocol for location services.
LRRP provides a more flexible protocol than LIP.

Bluetooth Interfaces Programmers Guide

Provides access to the following services:

1. Transmitting and receiving raw sensor data between the remote Bluetooth device and a Short Data Services (SDS) host
2. A remote Bluetooth device can control Motorola portable radios
3. A remote Bluetooth device can gain access to TETRA packet data services
4. Describes a mechanism for throttling the data that is sent over the TETRA infrastructure to ensure network integrity.

Remote Display and Control API

It describes the Remote Display & Control (RDC) interface, supported by the Motorola Solutions Terminals, and how a 3rd party control head, henceforth referred to as an OEM control head, made by a 3rd party vendor, can interface to a Motorola mobile radios.

iTM Interfaces Programmers Guide

It allows 3rd party vendors to develop a custom application (e.g., asset management application) that uses the information stored in iTM (i.e. device details, status, etc.).

iTM PICS Interfaces Programmers Guide

It permits 3rd party vendors to develop a custom application that allows them to manage the images downloaded from MTP6750 radios and allows them to push the content to MTP6000 series radios via an iTM solution

Intelligent Middleware (IMW) Software Development Kit

- Web-services based interface providing following capabilities:
 - Location & Mapping Service
- Group Management Service
- Text Messaging
- Context Service
- Security

DIMETRA™ API License Fee Price List

The available API's are royalty-bearing! It will be differentiated between a new – means first request – for an API and a renewal of an existing license which will or has already expired.

Please note:

The price for renewals of API's will **ONLY** apply if the expiration date of the old license agreement which covered the API's is **NOT older than 6 month!**

DIMETRA™ API License Fee Price List		
DIMETRA™ API	Price New API (for first time request) In US\$	Price Renewals (API was already licensed in an older agreement) in US\$
Alarm Reporting	2,100.-	560.-
CADI / Multi CADI incl. UCS	2,100.-	560.-
MCC7500 Dispatcher Communication Server API	2,800.-	560.-
MCC 7500 Voice Logging API	2,100.-	560.-
Short Data Transport Service (SDTS) API	2,100.-	560.-
SDTS Logging API	2,100.-	560.-
Packet Data API	2,100.-	560.-
MS-GPS	2,100.-	560.-
Bluetooth Interfaces Programmers Guide	250.-	250.-
Remote Display and Control API	2,100.-	560.-
iTM Interfaces Programmers Guide	100.-	100.-
iTM PICS Interfaces Programmers Guide	250.-	250.-
Intelligent Middleware (IMW) Software Development Kit	0	0

Revision History

Version	Date	Page	Section	Notes
01.00	23/03/2017			First Version
01.01	05/07/2017			UCS added to CADI

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