System Release 7.17.2
ASTRO ® 25
INTEGRATED VOICE AND DATA

Glossary

NOVEMBER 2017

MN004337A01-A

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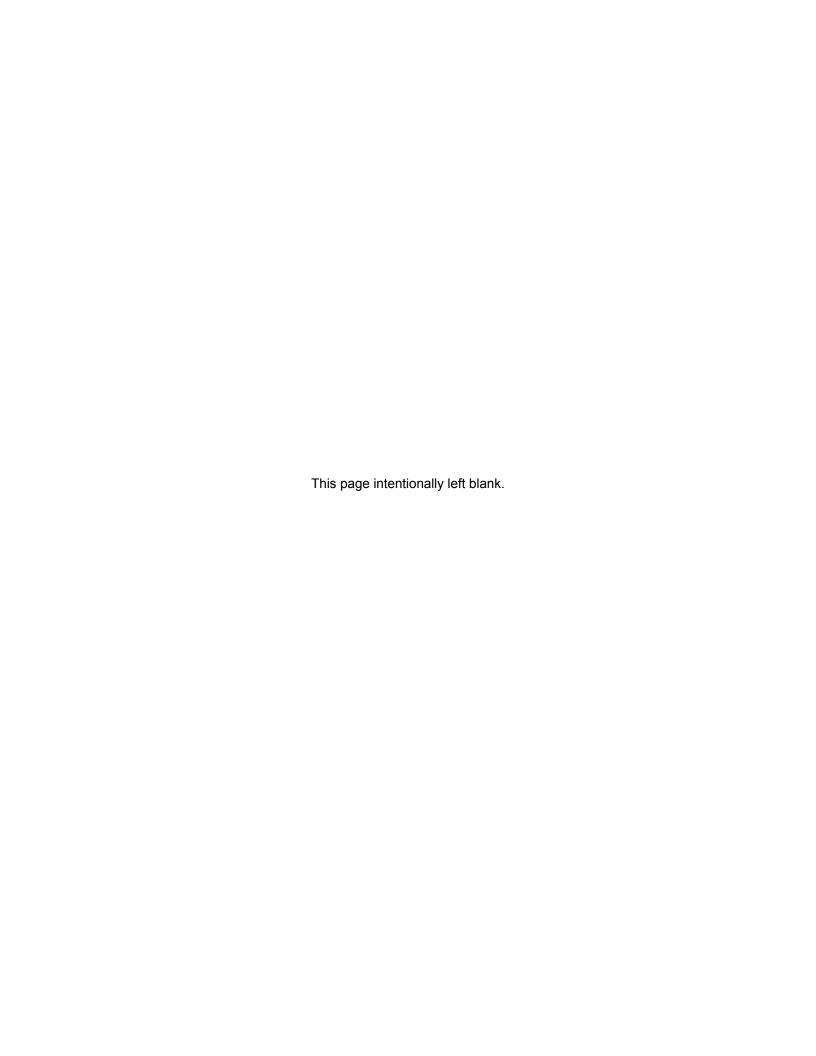
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The European Union's WEEE directive requires that products sold into EU countries must have the crossed out trash bin label on the product (or the package in some cases).

As defined by the WEEE directive, this cross-out trash bin label means that customers and end-users in EU countries should not dispose of electronic and electrical equipment or accessories in household waste.

Customers or end-users in EU countries should contact their local equipment supplier representative or service centre for information about the waste collection system in their country.

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Contact Us

Motorola Solutions Support Center

The Solutions Support Center (SSC) is the primary Motorola Solutions support contact. Call:

- Before any software reload.
- To confirm troubleshooting results and analysis before removing and replacing a Field Replaceable Unit (FRU) and Field Replaceable Entity (FRE) to repair the system.

For...	Phone
United States Calls	**800-221-7144**
International Calls	**302-444-9800**

North America Parts Organization

For assistance in ordering replacement parts or identifying a part number, contact the Motorola Solutions Parts organization. Your first response when troubleshooting your system is to call the Motorola SSC.

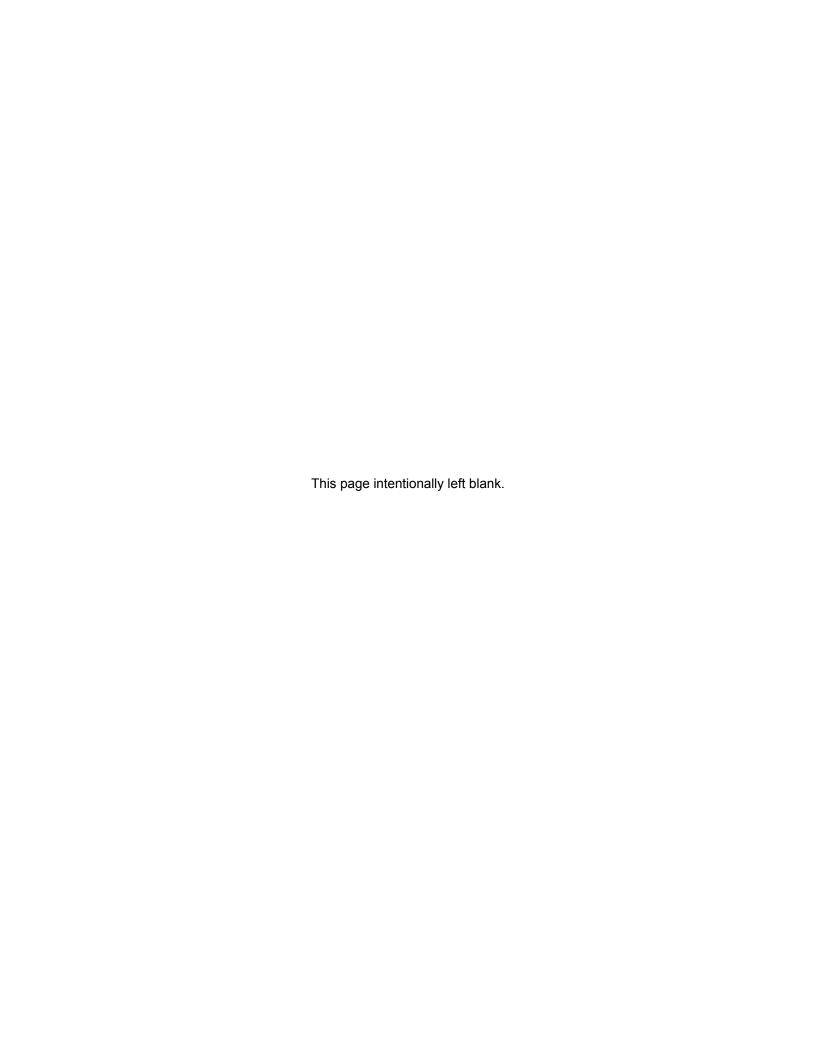| For...	Phone
Phone Orders	**800-422-4210** (US and Canada Orders) For help identifying an item or part number, select choice 3 from the menu.
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Document History

Version	Description	Date
MN004337A01-A	Original release of the ASTRO® 25 *Glossary*	November 2017

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Helpful Background Information

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10/100Base-T A method of connecting Ethernet devices directly to an Ethernet switch/hub. Maximum transfer rate is 10 or 100 Mbps.
See also: Ethernet

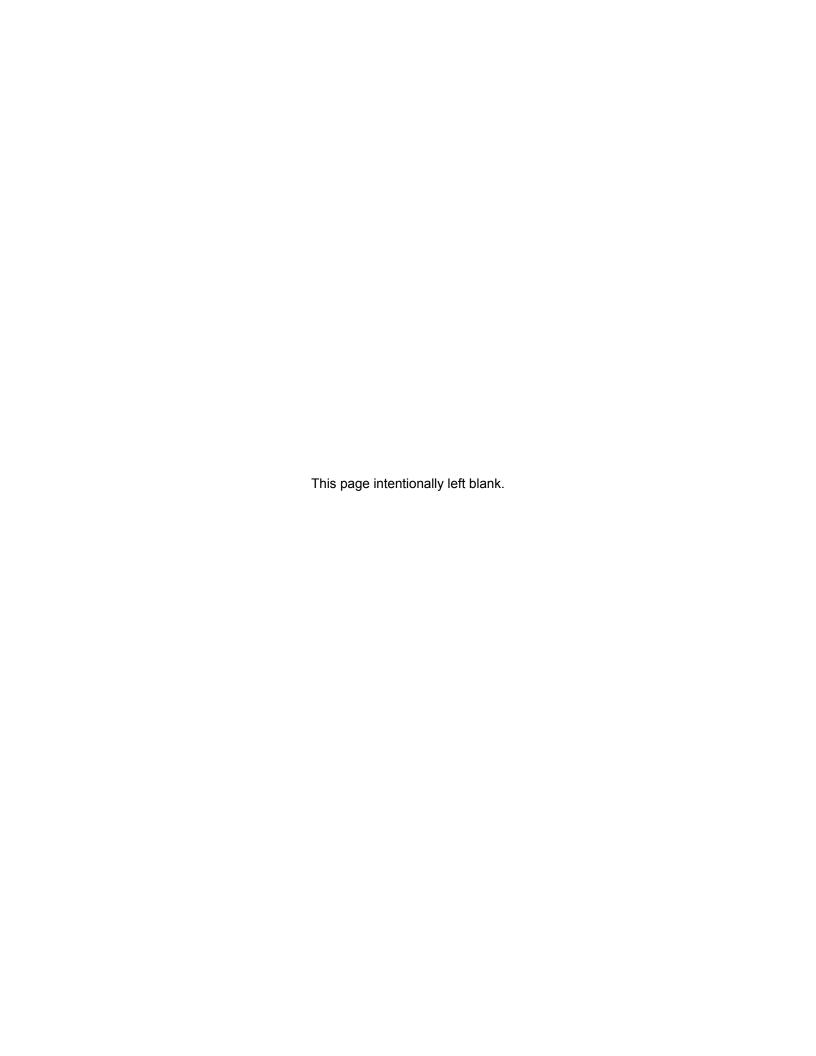**4W Card** One of the cards that turns the gateway into the site gateway (conventional channel interface).

700 MHz STR 3000 ASTRO® 25 Site Repeater The 700 MHz STR 3000 ASTRO® 25 Site Repeater enables you to add extra channels to 800 MHz QUANTAR® ASTRO® 25 Repeater sites by using additional frequencies in the 700 MHz band. It also supports mutual aid. The 700 MHz STR 3000 simulcast base radio operates in the 700 MHz digital band. It can be deployed as an ASTRO® 25 Repeater, simulcast base radio, and conventional mutual aid base radio.

AGC Automatic Gain Control

APCO Project 25 (P25) A suite of digital radio communication standards created by the Association of Public Safety Communications Officials (APCO). Project 25 brings together representatives of federal, state and local government agencies. These agencies and other user organizations evaluate basic technologies in advanced land mobile radio to find solutions that best serve the needs of the public safety marketplace.
Abbreviation: Project 25

ASTRO Control Interface Module (ACIM) The ASTRO Control Interface Module (ACIM) feature adds the serial control protocol to the GGM 8000 to allow exchanging control information between an MCC 7500 console and a Motorola Solutions consolette.

ASTRO-TAC Comparator A device that checks the incoming voice traffic signals, and selects the best signal, or develops a composite signal out of the best ones, for the circuit-based simulcast retransmission. There are ASTRO-

TAC 3000 Comparator and ASTRO-TAC 9600 Comparator products.

ASTRO® 25 Motorola Solutions standard for wireless digital trunked communications.

ASTRO® 25 Repeater A type of base station.
See also: Base Station, 700 MHz STR 3000 ASTRO® 25 Site Repeater

Access A performance measure of a data system. Access is measured from the time a data packet is sent from one of the units using the channel to the time the packet is received by the receiving unit.

Access Code Index (ACI) A digital code that is part of the Network Access Code (NAC). The ACI ensures that a radio communicates with the proper site and not one of its co-channel neighbors.
See also: Dynamic Network Access Code

Access Method The ability and means necessary to store data, retrieve data, or communicate with a system. The examples include Frequency Division Multiple Access (FDMA), Time Division Multiple Access (TDMA), and Code Division Multiple Access (CDMA).

Access Type A talkgroup configuration parameter that specifies a talkgroup as either FDMA-only or Phase 2 TDMA-only.

Acknowledgement A message sent in response to another message to indicate status.
Abbreviation: Ack

Acoustic Crossmute A feature that guards against undesirable effects resulting from the acoustic feedback due to physical console proximity.

Active Directory (AD) Used on Microsoft Windows computers and servers to store information about networks and domains. Active Directory provides information on objects, organizes these objects for easy retrieval and

access, allows users and administrators to access it, and allows the administrator to setup security for the directory.

Active Site Controller A site controller that has control of the external interfaces shared by redundant site controllers. Also referred to as being in the "Active" state or "Online."

Address Resolution Protocol (ARP) A protocol defining the rules for mapping an IP address to a physical machine address that is recognized in the local network.

Adjacent Channel Radio frequencies that are immediately next to, but not overlapping, one another.

Adjacent Control Channel (ACC) Allows a radio to learn about the control channel frequencies and current availability status of sites programmed in the Provisioning Manager (PM) as adjacent sites for the specific radio's site. The radio then uses this information to rank potential control channel candidates. Based on the ranking, the radio selects a control channel to use to communicate within the ASTRO® 25 system if the control channel of the current site becomes too weak for acceptable use.

> **See also:** Provisioning Manager

Adjacent Status Broadcasts (ASBs) Information sent over the Control Channel (CC) about the existence and status of adjacent sites. Information within the ASBs includes site status, site capability information (system service class), and active CC frequency information.

Advanced Configuration and Power Interface (ACPI) Provides an open standard that the operating systems can use for computer hardware discovery, configuration, power management, and monitoring.

Advanced Digital Privacy (ADP) A proprietary Motorola Solutions encryption/ decryption algorithm.

Advanced Encryption Standard (AES) A United States government encryption/ decryption standard. AES is defined in Federal Information Processing Standard 197 (FIPS-197).

Advanced Multi Band Excitation (AMBE) A speech coding standard created by Digital Voice Systems, Inc. that operates at bitrates of between 2000 and 9600 bit/s. The audio data is usually combined with up to 7 bit/s of forward error correction data to produce a total RF bandwidth of approximately 2250 Hz.

Affiliated Zone The zone to which a radio is currently registered.

> **See also:** Zone (area)

Affiliation The process by which a radio identifies its location and talkgroup affiliation to the system as it moves through the coverage area. The radio sends its talkgroup information to the Zone Controller (ZC). The radio registers to a site, sending talkgroup information to the zone controller, and affiliates with a talkgroup.

Affiliation Display A network management application that monitors how radio users travel between different sites in a zone and how they communicate with other members of their assigned talkgroup. This software also monitors how radio users communicate with members outside of their talkgroup within a particular zone. This application is part of the Private Radio Network Management (PRNM) Suite.

Affiliation Group The talkgroup to which a radio is currently attached.

> **See also:** Talkgroup

Agency Group The top-level (root) Security Group for all other Security Groups existing within an Agency.

Agent An agent is a network-management software application that resides in a managed device. An agent has local knowledge of management information and translates that information into a form compatible with Simple Network Management Protocol (SNMP). This software application collects network and terminal information for devices specified in the Management Information Base (MIB).

> **See also:** Management Information Base

Air Traffic Information Access (ATIA)
Data packets that contain talkgroup and site affiliation and deaffiliation information for each radio user in a particular zone. The Air Traffic Router (ATR) collects this radio traffic information from the Zone Controller (ZC) and broadcasts an information stream of these packets on the network.

Air Traffic Router (ATR) A Private Network Management (PNM) server application that receives air traffic information from the Zone Controller, creates Air Traffic Information Access (ATIA) packets, and broadcasts them as the ATIA stream on the network. Various clients listen to this stream to perform their functions. Clients include the Zone Statistics Server (ZSS) and System Statistics Server (SSS), the Radio Control Manager (RCM), Dynamic Reports, ATIA Log Viewer and ZoneWatch applications, Affiliation Display, and other third-party clients. ATR receives, via the Self Managed Network interface, data about Infrastructure, Subscribers and configuration for ZoneWatch, Radio Control Manager (RCM) and Computer Aided Dispatch Interface (CADI).

See also: Zone Controller

Alert Tones Pre-defined tones that can be sent from a Dispatch Console over trunked talkgroups, trunked announcement groups, analog conventional channels, and trunked private calls.

Algebraic Code Excited Linear Prediction (ACELP) A speech coding algorithm in which a limited set of pulses is distributed as excitation to linear prediction filter.

Algorithm Used to encrypt and unencrypt data by data protection protocols.

Algorithm Identifier The name of the encryption algorithm used to encrypt the received information. For example, DES is an algorithm identifier.

Abbreviation: ALGID

Alias Preprogrammable word for representation of a channel (e.g. "Maintenance"). This allows the user to see the group or person's name rather than a unit ID or channel number.

AllStart A talkgroup setting that controls how a call grant is handled. AllStart requires that all affiliated talkgroup members, consoles, Archiving Interface Server (AIS), critical sites, and other required resources are available for a requested call before the call can begin. If some of the affiliated resources are not available, the system returns a busy signal to the initiating radio.

See also: Talkgroup, FASTStart

American National Standards Institute (ANSI) The American National Standards Instituteis a private non-profit organization that oversees the development of voluntary consensus standards for products, services, processes, systems, and personnel in the United States.

American Standard Code for Information Interchange (ASCII) The American Standard Code for Information Interchange is a character-encoding scheme originally based on the English alphabet that encodes 128 specified characters - the numbers 0-9, the letters a-z and A-Z, some basic punctuation symbols, some control codes that originated with Teletype machines, and a blank space - into the 7-bit binary integers

Analog 1.) As applied to an electrical or computer system, the capability of representing data in continuously varying physical phenomena (as in a voltmeter) and converting them into numbers. 2.) In telecommunications, a reference to Advanced Mobile Phone System (AMPS) or Narrowband Advanced Mobile Phone System (NAMPS) capability. Also the method of transmission of voice information used by AMPS and NAMPS phones, as defined by the Bell Spec, IS-88, IS-91, or IS-91A. 3.) A type of measurement in which the "line of measure" is continuous as compared to one which is discretely incremented. For example, a clock with hands is an analog device, as compared to a digital clock which is not.

Analog Conventional Channel for the MCC 7500 Dispatch Console An IP-based analog conventional channel that interfaces to the network subsystem through the site gateway (conventional channel interface). This is different from the circuit-based analog and digital mutual aid that have been in

existence. A functionality that allows analog conventional operation with MCC 7500 Dispatch Consoles.

Anchor Zone The zone in which the telephone interconnect device is connected to the Public Switched Telephone Network (PSTN) for the duration of a telephone interconnect call.

Announcement Group (AG) A special group that is used to address a number of normal groups associated to the announcement group.

Answer Supervision The functionality for a Private Branch Exchange (PBX) to be signaled the exact moment when the called party has answered. Used mainly for billing purposes.

Answer Threshold A timer that is used for determining when a call is considered to be active (in the conversation state). Answer threshold is used when answer supervision is not available.

Application Layer Layer 7 of the OSI model. This layer interfaces directly to, and performs common application services for, the application processes. It also issues requests to the Presentation Layer. The common application services provide semantic conversion between associated application processes. Examples of common application services of general interest include the virtual file, virtual terminal, and job transfer and manipulation protocols.

Application Platform The hardware, operating system, and associated elements that can be combined with the appropriate software and accessories to make either a dispatch console or an Archiving Interface Server (AIS). Also known as a LOGI.

Application Programming Interface (API) An interface implemented by a software program which enables it to interact with other software.

Archiving Interface Server (AIS) The Archiving Interface Server (AIS) is used to serve audio and related information to third-party call logging hardware for audio archiving at a MCC 7500 Dispatch Console site.The AIS comprises

of an Application Platform with the appropriate additional elements [hardware (voice cards) and AIS application software]. The AIS acts as an intermediary between the third-party audio logging solution and the trunking system, hiding the proprietary interfaces from the third-party audio logging solution.

Assigning Zone The zone that assigns a radio request.

Association of Public Safety Communication Officials (APCO) An organization dedicated to the professional development, implementation and operation of law enforcement, fire/rescue, EMS, 911, and other emergency response communications systems.

Asynchronous Communication
Asynchronous communication is the transmission of data between two devices which are not synchronized with one another through a clock or timing mechanism. With asynchronous communication, the receiving device must be ready to accept the communication at any time when it arrives from the transmitting device. For example, asynchronous transmission is used to transmit characters from a keyboard or terminal device as the user periodically presses keys. The receiving device or system waits for the each keypress. Modems are typically asynchronous devices and the console interface ports on the Packet Data Router (PDR) and Radio Network Gateway (RNG) are asynchronous communication ports.

Asynchronous Transfer Mode (ATM)
Asynchronous Transfer Mode is a form of packet-switched data transmission that uses fixed-sized packets called cells. As with other forms of packet switching, an ATM network supports multiple logical connections multiplexed over the same physical links.

Attached RCM A Radio Control Manager (RCM) user who has a radio's primary talkgroup configured as an Attachment Group in the user's parameters.
See also: Attachment Group

Attachment Group Allows Radio Control Manager (RCM) operations to be performed on a

talkgroup by a particular RCM user. RCM users monitor traffic only on their attached talkgroups and communicate with their attached talkgroups and the zones in the system. An attachment list determines how radio events are distributed.

Attachment List List of talkgroups attached to a particular Radio Control Manager (RCM) user. Each RCM user monitors traffic only on attached talkgroups and communicates with their attached talkgroups.

Audio Bridge A bi-directional analog amplifier that allows audio to pass between both types of dispatch consoles and the base station.

Audio Patch (AP) A patch is a generic term that allows one console to tie two or more resources together to share audio transmissions. An audio patch in a trunked system has multiple groups assigned and patched together at the audio plane level.

Audio Rendezvous Point A voice resource that resides on a core router that is assigned and managed by the controlling zone controller for the call.

Audio Session An audio session represents an audio stream that the dispatch console may present to the dispatch console user.

Audio Stream A flow of subscriber or Dispatch Console User audio in the system.

Audio Throughput Delay An audio delay that is measured from a syllable spoken into a microphone of a user interface to the unmuting of that syllable at a speaker of another user interface for an unencrypted call. Transmission delay times are based upon the conditions that a channel and a console resource are available for the call, no other calls are in queue, and adequate bandwidth is available on all links in the system.

Authentication Center (AuC) A Motorola Solutions software application related to the Radio Authentication feature that includes a key management function for authentication in the system and stores the Authentication Keys (K) for all the radios in the system in the database. The AuC includes a client, server, and database.

See also: Encryption Key

Authentication Centre Client A computer used to support the radio authentication feature.

Abbreviation: AuC Client

Authentication Centre Server A server used to support the radio authentication feature.

Abbreviation: AuC Server

Authentication Infrastructure Key (Ki) A key used to encrypt the Key Encryption Keys (KEKm) that are delivered to entities over the system infrastructure. The Authentication Center (AuC) Server is responsible for generating a unique Ki for the Zone Controller (ZC).

Synonym: Infrastructure Key
See also: Key Variable Loader, Key Encryption Key, Authentication Centre

Authentication Key (K) A secret key used to validate a radio's ability to operate on the radio system.

Auto Attendant (AA) A service that plays an appropriate voice announcement when a call is received on a non-Direct Inbound Dialing (DID) interface as part of the telephone interconnect feature.

Auto-KLK A configurable parameter which turns this feature on and off system-wide, as well as per unit.
See also: Key Loss Key Rekeying

Automatic Frequency Control (AFC) An electronic mechanism that maintains the transmitter frequency over time and temperature within a specific tolerance.

Automatic Power Control (APC) An electronic mechanism that controls the RF transmitter power of a subscriber relative to the distance between the subscriber and the fixed receiving site. As the subscriber gets closer to the site, the transmitter power reduces.

Automatic Registration Service (ARS) The protocol used by Intelligent Middleware (IMW) between data-enabled ASTRO subscriber

units and the Presence server, which resides in the Customer Enterprise Network (CEN).

Automatic Retry Request (ARQ) Used to retry corrupted data packets.

Automatic Route Selection (ARS) A private branch exchange (PBX) feature that allows a system to route a telephone call over the most appropriate carrier and service offering based on factors such as the type of call (for example, local, local long distance), the user's class of service (CoS), the time of day, and the day of the week.

Automatic Vehicle Location (AVL) Displays the location of vehicles equipped with GPS units on workstations equipped with map displays.

Automation Library A tool in the EMC Smarts™ Network Configuration Manager that stores system tests, standards, policies, saved commands, templates, and folders used for configuring network devices.

Autonomous Access (AA) A type of access that occurs when a Packet Data Channel (PDCH) is already set up at a specific site controller and the system automatically grants the subscriber unit access to the PDCH. Also, used for Automated Attendant, which allows land-to-mobile calls to be handled without the use of a human attendant position. It is a type of voice announcement used with the Enhanced Telephone Interconnect (ETI) feature.

Auxiliary Input/Outputs Allows your organization to control external devices through relay closures and determine the state of external devices through input buffers from the dispatch console.

Abbreviation: Aux I/O

Auxiliary Pair An element available in the Elite Dispatch application and configurable in the Elite Admin application that is two momentary Auxios of different types that are bonded. Auxiliary Pair is a convenient way of controlling the current state of a device or a feature and the state of an action triggered for this device or feature by a dispatch operator.

Availability Number A parameter that is set in the Multisite Subsystem Remote Site object, which is used to specify the percentage of traffic channels required to malfunction before the subsystem ignores a subsite.

BCH Code (BCH) A binary coding scheme. It is used as an error detection technique based on Cyclic Redundancy Check (CRC).

Backhaul Links Refers to network links outside the boundaries of the ASTRO® network used to transport radio network traffic. They are typically leased from network providers.

Backup Preparation The first part of Network Management (NM) server applications backup process. The second part of the process is transferring the data to the Backup and Restore (BAR) service.

Backup and Recovery Server Provides centralized backup and restore (BAR) services to return the devices to an operational state in an ASTRO® 25 system.

Abbreviation: BAR Server

Backup and Restore (BAR) Refers to the process of backing up data in case of a loss and setting up systems that allow data recovery when a data loss occurs.

Backward Compatibility A feature that makes it possible to use features available in releases previous to the release in which the product was introduced.

Balanced Line Interface A pair of wires is used to carry each signal in the balanced line interface; the data is encoded and decoded as a differential voltage between the two lines. Balanced systems are used by LAN topologies like Ethernet and token ring. They can support line speeds over 100 Mbps and work reliably at distances of several kilometers.

Bandwidth (BW) A measure of the network's capacity to transport data, for example, the amount of data that can be sent through a network connection (wired or wireless) over a period of time, usually expressed in terms of megabits per second (for example 10 Mbps).

Send Feedback

Bandwidth Provisioning Supplying the initial system with adequate bandwidth required to provide an efficient transport for system services, such as voice calls, data service, and network management.

Base Station (BS) A fixed RF transceiver used in wireless voice and data communications.

> **Synonym:** Base Radio, Repeater
> **See also:** Base Transceiver Subsystem

Base Station Identification (BSI) The assigned station identification callsign issued for the system by the local licensing authority. In the U.S., this is the Federal Communications Commission (FCC) for non-federal government customers, and the National Telecommunications and Information Administration (NTIA) for government customers.

Base Station Identifier (BSI) An automatic, recurring transmitted signal from fixed stations that indicates the identity of the base station or system. This identity can then be traced back to the licensee.

Base Transceiver Subsystem (BTS) A Base Station serving as the Radio Frequency (RF) interface between the radios and the system infrastructure.

> **See also:** Radio Frequency

Beginning Of Transmission (BOT) A collection of binary data stored as a single entity in a database management system. Blobs are typically images, audio or other multimedia objects, though sometimes binary executable code is stored as a blob.

Beginning of Mobile Transmit (BOMT) Control message from the zone controller indicating the start of a transmission during a trunked group call.

Bit Error Rate (BER) The percentage of bits received with errors. Characterizes the quality of a digital channel for all traffic on the channel.

Bit Stuffing A method used for synchronizing bit streams that do not necessarily have the same or rationally related bit rates, by adding non-information ("stuffing") bits.

bits per second (bps) Average number of bits passing between equipment per second.

Border Gateway Protocol (BGP) An IP routing protocol.

BranchHub An IP PBX media gateway by NEC that connects to both the ASTRO® 25 radio network and telephone lines. The BranchHub media gateway supports a maximum of six analog loop start trunk lines using a single 50-position connector wired per USOC RJ-21X configuration. This media gateway uses a broadband Ethernet connection to communicate with the rest of the IP Private Branch Exchange (PBX) server/Unified Communications Manager and the ASTRO® 25 system.

> **See also:** IP PBX Media Gateway, COHub

British Thermal Unit (BTU) A measure of thermal (heat) energy.

Broadcast Control Channel (BCCH) This channel, transmitted by the Base Transceiver Subsystem (BTS) at all times, contains cell information. Radios monitor it and can use its power to measure signal strength.

> **See also:** Base Transceiver Subsystem

Broadcast Data Messaging The broadcast data messaging service follows a slightly different trigger for context activating broadcast data registrations. At system start-up, the Packet Data Gateway (PDG) completes context activation for each broadcast ID configured into it after having verified connectivity to the Gateway GPRS Support Node (GGSN).

Bulk Download A feature of the network management system where the Provisioning Manager (PM) builds the configuration files and sends the files to the Unified Network Configurator (UNC). The PM identifies the target devices for each file. When the UNC receives the file, it manages the download of the files to the Zone Controller (ZC). The ZC receives this bulk download of configuration data (RF sites, call parameters, etc.), subscriber data, and Home Zone mapping updates from the UNC. The zone

controller uses this information to populate its Group Home Location Register (GHLR) and Individual Home Location Register (IHLR). This is a method of performing a Full Configuration Distribution (Force Initialize Configuration) or Configuration Change Distribution (Delta Configuration Distribution).

CAI Data Encryption Module (CDEM)

An optional component that provides secure data encryption and decryption services for the ASTRO® 25 Conventional with Integrated Data feature. The CDEM is located in the Radio Network Infrastructure (RNI) and connects to the Radio Network Gateway (RNG) component of the Packet Data Gateway (PDG) virtual machine through an Ethernet crossover cable.

COHub An IP PBX media gateway by NEC that contains the hardware and software to interface a digital Time-Division Multiplexing (TDM) circuit to a private network. T1 Channel Associated Signaling (CAS) and Integrated Services Digital Network (ISDN) Primary Rate Interface (PRI) and E1 PRI circuits are supported. The digital TDM circuit and a network media stream pass 23 ISDN channels, 24 CAS channels, 30 E1 ISDN channels, and 30 E1/R2 channels of voice communication between them in real time. This media gateway uses industry standard RJ48 connector. The COHub media gateway also uses a broadband Ethernet connection to communicate with the rest of the Unified Communications Manager and the ASTRO® 25 system.

See also: IP PBX Media Gateway, BranchHub

Call An event beginning when a user requests voice resources (primarily RF channels), and ending when those resources are released and available for a new request. A call consists of a series of console and radio transmissions. A call is complete when all of the transmissions have ended and the hang time has expired.

Call Congestion A measurement defined as the ratio of calls lost to the total number of calls attempted.

Call Continuation The capability of passing active calls or busy queue designations across zone boundaries.

Synonym: Call Handoff, Call Coordination, Call Reconnect

Call Delay The delay experienced when a call arriving at an automatic switching device finds no idle channel or facility available to process the call immediately.

Call Number A number assigned by the Zone Controller (ZC) to a call on a particular resource.

Call Processing (CP) The end-to-end sequence of operations performed by a network from the instant a call attempt is initiated until the instant the call release is completed.

Call Setup Time The overall length of time required to establish a circuit switched call between users or terminals.

Cancel Inhibit A Radio Control Manager (RCM) radio command that cancels a Selective Inhibit command and reactivates radios that were prevented from using the system with a Selective Inhibit command.

Cancel Lock A Radio Control Manager (RCM) radio command that cancels the last Selector Lock command for a selected radio, unlocking the radio's selector.

Cancel Regroup A Radio Control Manager (RCM) radio command that cancels the last Regroup command for selected radios and removes the radios from the regrouped talkgroup, allowing the radios to return to their original talkgroups.

Cancel Regroup and Lock A Radio Control Manager (RCM) radio command that allows an RCM user to send a Cancel Regroup command and then a Cancel Lock command for all selected radios.

See also: Cancel Regroup, Cancel Lock

Capture Effect An effect associated with the reception of frequency modulated signals in which if two signals are received on or near the same frequency, only the stronger of the two appears at the output.

Carrier Noise Level The noise level resulting from undesired variations of a carrier in the absence of any intended modulation.

Carrier Operated Relay (COR) Another name for the base station's M-Lead. An output from the station indicating it is receiving carrier.

Central Processing Unit (CPU) A central processing unit (CPU) is the electronic circuitry within a computer that carries out the instructions of a computer program by performing the basic arithmetic, logical, control and input/output (I/O) operations specified by the instructions.

Centralized Authentication (CA) Provides one control point for identification, authentication, and authorization services. It also addresses identity management within the ASTRO® 25 network through a centralized user credentials database.

Centralized Event Logging (CEL) An optional security feature available for ASTRO® 25 systems that captures Operating System (OS) events generated by most devices in the Radio Network in the form of event messages.

Centralized UEM Mode In this solution, the enhanced Unified Event Manager (UEM) provides the functionality of Graphical Master Computer (GMC). The UEM supports fault state including directly managed devices and devices managed through SDM3000 Remote Terminal Units (RTUs), therefore the Graphical Workstation (GWS), GMC, and SDM3000 Network Translator (SNT) components are deprecated. It integrates the functionality of MOSCAD® Network Fault Management (NFM) and UEM.

See also: Unified Event Manager, Motorola Supervisory Control and Data Acquisition Network Fault Management

Challenge Handshake Authentication Protocol (CHAP) Authenticates a user or network host to an authenticating entity. That entity may be, for example, an Internet service provider.

ChangeMe Request A Radio Control Manager (RCM) event sent by a radio user, asking the RCM user to send a Cancel Lock command to unlock the selector on the radio, whose selector lock has been locked as part of a Selector Lock command, and who wants to

regain control of talkgroup selection so that the radio user can change talkgroups. This is useful when the radio has been regrouped to an affiliated talkgroup and wants to return to their primary talkgroup.

Channel A group of characteristics such as transmit/receive frequency pair, radio parameters, and potentially encryption encoding.

Channel Associated Signaling (CAS) A signaling method where each call has its own associated signaling channel.

Channel Bank The network infrastructure element that multiplexes channel data from a site or subsystem onto the T1/E1 line for transport. The channel bank allows the system to combine different types of equipment or subsites onto a common T1/E1 line for transport between sites.

Channel Cluster The MLC 8000 Configuration Tool uses this term for a group of devices supporting the same simulcast or non-simulcast voting channel or channels. In the cluster, base radio ports on MLC 8000s at subsites can be associated with an MLC 8000 comparator, or with a GCM 8000 or GRV 8000 digital comparator (for digital conventional IP-based channels).

Channel Marker A distinct, short duration, audible tone heard over the mobile subscriber and console speakers that can be sent over a talkgroup or analog conventional channel. The primary purpose is to inform radio/console users that the conventional channel or the trunked talkgroup is currently involved in a high priority situation.

Channel Rate The data rate at which information is transmitted through the channel, typically stated in bits per second (bps).

Channel Service Unit (CSU) A device used to terminate a DS-1 or DS-0 [56/64 kb/s] digital circuit. The CSU also performs line-conditioning, protection, loop-back, and timing functions.

Channel Spacing A term that describes the frequency difference from the center of one

channel to the center of the next adjacent channel. Typically measured in kilohertz.

Channelized E1 The channelized E1 link supports the ability to have many different serial bit streams of different speeds. Each serial bit stream consists of one or multiple DS0s. The WAN Switch that supports Channelized E1 links is able to split the available physical 30 or 31 channels into groups and treat each group as a separate serial bit stream.

Channelized T1 A digital carrier modulation method in which each T1 link is divided into 24 channels, each having a maximum data speed of 64 Kbps and capable of supporting a unique application that can run concurrently with, but independently of, other applications on different channels.

Cipher Block Chaining (CBC) A mode of operation for DES algorithm.

Cipher Feedback (CFB) A mode of operation for DES algorithm.

Circuit-switching Circuit-switching provides a dedicated path between a sender and receiver for the duration of the communication. The advantages of the circuit-switched networks are dedicated circuits for the call and your organization does not pay for idle bandwidth. Disadvantages are call setup time and potential under-utilization of the communication channel. Circuit-switching is useful for short duration transmissions, for feeders to main sites, or for backup/disaster recovery situations.

Class of Objects A group of objects that represents a hierarchy of class objects.

Clear Calls Non-secure, non-encrypted calls. These calls are not protected from eavesdropping by unauthorized persons.
See also: Encrypted Calls

Client A computer that accesses shared network resources provided by another computer (called a server).

Cloning A way to duplicate a radio record by saving it with a different name, but retaining common parameters. Cloning enables you to

program common parameters into additional radios.

Co-Channel A channel that is on the same frequency as another channel.

Code Division Multiple Access Uses a "spread-spectrum" technique whereby electromagnetic energy is spread to allow for a signal with a wider bandwidth. This allows multiple cell phones to be "multiplexed" over the same channel to share a bandwidth of frequencies.

Codec A device or computer program capable of encoding/decoding a digital data stream. The word is a blend of coder-decoder.

Codeplug A memory chip inside a device that contains various programmable parameters, including frequencies, time-out-timer, and so forth.
See also: Customer Programming Software

Command Radio Control Manager (RCM) outbound functions, such as Selective Inhibit, Regroup, Selector Lock, and the commands to cancel each of these. An RCM user can send a command to one or more radios in the system. Each radio is considered an individual task of a command.

Command Monitor This pane in the Radio Control Manager (RCM) main window allows you to view the progress of all commands that you have submitted to the system.

Common Access Channel (CACH) Part of the Common Air Interface (CAI) for a Time Division Multiple Access (TDMA) system.

Common Air Interface (CAI) An Association of Public Safety Communications Officials (APCO) standard governing the transmission of digital information. Used by Telecommunications Industry Association (TIA) Project 25 standards body to refer to standardized Over The Air (OTA) interface.

Common Home Zone A zone that is the same Home Zone (HZ) for differing talkgroups. Group membership that is restricted to units that share the same Home Zone.

Send Feedback

Common Key Encryption Key (CKEK)
A key assigned to a group of units for encrypting keys within an Over-The-Air Rekeying (OTAR) command delivered using the group OTAR method. It is provisioned on the trunking system but only used for conventional OTAR channels.

Common Key Reference (CKR)
A number used for all secure private calls in the radio system. This setting should correspond with CKR settings in the Key Management Facility (KMF). Subscribers must also be provisioned with this CKR.

Common Operating System (OS)
A Windows-based template image for all Windows-based devices, available in Open Virtualization Format (`OVF`) and Windows Imaging Format (`WIM`) formats. It contains a default Operating System configuration, tools to apply identity, and device drivers.

Comparator
A band-independent device that acts as a subsystem-wide signal collector, voter, and distributor. The comparator is designed for use in simulcast trunking systems that use a 9600 bps control channel. With multiple base stations operating on the same frequency, it is possible for field radios to simultaneously hit multiple sites when transmitting.

Compatible 4-level Frequency Modulation (C4FM)
Digital modulation requiring a non-linear or constant envelope transmitter using Quadrature Phase Shift Keying QPSK-C modulation to work with a Compatible Frequency Discriminator Detection (CFDD) compatible receiver.

Compatible Frequency Discriminator Detection (CFDD)
Refers to a receiver which uses QPSK-C compatible modulation.

Compatible Quadrature Phase Shift Keying (CQPSK)
Compatible Quadrature Phase Shift Keying. The term for an AM transmitter which uses QPSK-C (Quadrature Phase Shift Keying-compatible) modulation.

Linear, Compatible OTA with C4FM, basis of P25 Phase 2 6.25 FDMA.

Computer Aided Dispatch (CAD)
A console feature that allows dynamic reconfiguration of the system via a computer.

Computer Aided Dispatch Interface (CADI)
CADI enables the user to do remote network management through an Application Programming Interface (API).

Configlet Editor
An editor in the Unified Network Configurator (UNC) that modifies one or more devices in an editor window that are then pushed to the network. This is the most common way to edit a configuration file.

Configuration Editor
In the context of the ASTRO® 25 system's Unified Network Configurator (UNC), this editor modifies a full configuration file that can affect one or more devices.

Configuration/Service Software (CSS)
An ASTRO® 25 system software application used to configure, maintain, and troubleshoot individual devices in a radio system, such as a simulcast site controller.

Console Applications Processor (CAP)
An MCC 7500 application that runs transparent to the user.

Console Dispatch Interface (CDI)
The Console Dispatch Interface (CDI) Services API is a set of functions/messages used for overall management and maintenance of the connections between a software application and the dispatch system.

Console Dispatch Status
In an MCC 7100 and 7500E Dispatch Console, the Console Dispatch Status application is used to setup and point to proxy server connections for MCC 7100 and 7500E Dispatch Consoles deployed outside the ASTRO® 25 Radio Network Infrastructure (RNI). For inside the ASTRO® 25 RNI configurations, the Console Dispatch Status is only used for licensing and encryption.

Console Features API A set of functions/
messages allowing for the real-time monitoring
and control of a Motorola Solutions dispatch
communication system.

Console Interface Unit (CIU) Supported
console participation in secure conversations in
SMARTNET™ systems. Similar to the more-
sophisticated Digital Interface Unit (DIU), but not
a trunked resource in itself as the DIU is.

Console Site A collection of dispatch
consoles that are networked from a common
location.

Console Site Proxy Console Site Proxy
enables a connection between WAVE 5000
System and ASTRO Conventional System. The
WAVE to ASTRO Conventional Console Site
Proxy uses the LMR Multicast Proxy (LMP) to
mimic a console site. The LMP has one interface
on the ASTRO console site network and the
other interface connects to the WAVE Radio
Gateway (WRG) via the WAVE 5000 network.

Console Subsystem For the MCC 7500
Dispatch Console subsystem, a collection of
console sites with equipment that includes
dispatch consoles, Archiving Interface Servers,
mass storage units, playback devices,
conventional servers, and ancillary equipment
such as site gateways, etc.

Console Subsystem Interface (CSSI)
The P25 standard for connecting dispatch
console subsystems to a P25 RF subsystem
through a wireline interface.

**Console Subsystem Interface 8000
(CSSI 8000)** An ASTRO® 25 feature that
provides an enhanced interconnectivity solution
for third-party consoles to interface with the
ASTRO® 25 system.

Console Takeover A feature that enables a
dispatch console to interrupt a subscriber audio
source on a call, and take over as the current
audio source for the talkgroup call.

Console Telephony Gateway Console
Telephony Gateway and Console Telephony
Media Gateway are used for NEC Private Branch
Exchange (PBX) solution. The Console

Telephony Gateway is the NEC Univerge 3C IP
PBX Server. The Console Telephony Gateway
and Console Telephony Media Gateway are
used with MCC 7500E Dispatch Console for
sending and receiving telephony calls between
the dispatch console in an ASTRO® 25 system
and the Public Switched Telephone Network
(PSTN). The Console Telephony Gateway
connects to the PSTN via the Console
Telephony Media Gateway.
See also: Console Telephony Media Gateway

Console Telephony Media Gateway
For the Cisco Private Branch Exchange (PBX)
solution, the Console Telephony Media Gateway
is an Integrated Services Router (ISR) router
device with embedded PBX software used with
the MCC 7500 VPM Dispatch Console to provide
an interface to the Public Switched Telephone
Network (PSTN) for sending and receiving
telephone calls to/from the dispatch console in
an ASTRO® 25 system.
For the NEC PBX solution, Console Telephony
Gateway (NEC Univerge 3C IP PBX Server) and
NEC/AudioCodes Console Telephony Media
Gateway are used. They are used with MCC
7500E Dispatch Console for sending and
receiving telephony calls between the dispatch
console in an ASTRO® 25 system and the
PSTN. The Console Telephony Media Gateway
provides the interface to the PSTN.

See also: Console Telephony Gateway

Console User This term is intended to cover
both users of dispatch consoles as well as users
of Archiving Interface Servers (AISs). The term
represents the user of the system's
telecommunications services who attaches to the
network through a dispatch console or AIS, and
receives the relevant telecommunication service
treatment, as specified for dispatch consoles or
archiving interface servers. A user of
telecommunications services that attaches to the
network through a dispatch console and receives
the telecommunication service treatment
specified for dispatch consoles.

Constant Envelope (CE) Refers to
Constant Envelope modulation which "follows"
the sloping waveform, but does not require linear
amplifiers. More limited bit rates than those
possible with linear transmitters.

Send Feedback

Context Activation The process by which data call registration and service activation is implemented by the ASTRO® 25 Integrated Voice and Data (IVD) communication system.

See also: Context Deactivation

Context Deactivation Context deactivation occurs when resource allocation timers, data service timers, or data service configuration parameters dictate that a data call is to be deactivated.

See also: Context Activation

Control Channel (CC) A dedicated channel at a site on which radios send and receive instructions for call processing.

Control RP (CRP) Multicast rendezvous point (RP) for control traffic.

See also: Rendezvous Point

Controlling Zone (CZ) The zone that coordinates the resources for a call. For group calls, the designated Home Zone (HZ) of the group is always the Controlling Zone for the call, regardless of where group members are affiliated. For individual calls, the controlling zone is the zone from which the voice service is being requested.

See also: Home Zone

Controlling Zone Controller (CZC) The Zone Controller responsible for controlling a call throughout its duration.

See also: Zone Controller

Conventional Radio system operation that does not make use of a control channel. A conventional radio system uses non-trunked telecommunications equipment.

Conventional Call Counts The measure of the managed conventional audio traffic at the site. The counts indicate the maximum number of simultaneous conventional calls desired/expected at the site.

Conventional Channel Gateway (CCGW) A site gateway that enables trunked system users to incorporate analog conventional channels into their dispatch operations without the requirement for separate hardware networks

or channel banks. The CCGW provides analog call detection, vocoding and devocoding of audio, station keying and dekeying through Tone Remote Control (TRC) or E&M relay, and tone LOBL (Line Operated Busy Light) detection (for parallel console interoperation). The CCGW can reside on GGM 8000 or DCG 9000 platform.

Conventional Channel Group A Provisioning Manager (PM) parameter that groups a set of conventional channels within the system.

Conventional IP Comparator A device that supports the voting operation of IP conventional channels in the ASTRO® 25 system.

Conventional Site Controller A GCP 8000 site controller with conventional software, which provides a way for console and radio users at the MCC 7500 Dispatch Console site to maintain communications over conventional resources local to that site when the console site is unable to maintain wide area operation.

Conventional Talkgroup Provides group separation of voice communications on digital-only conventional channels. Subscribers and console operators using the same talkgroup can communicate with each other and users of other talkgroups do not hear them. When a transmission is made to a certain talkgroup, only users monitoring that talkgroup hear the transmission. Also, talkgroups provide for separation of emergency alarms. After a talkgroup is assigned to a conventional channel, it cannot be used on a different channel or be used for trunked operation.

Conventional Unit ID A Provisioning Manager (PM) parameter that uniquely identifies the physical console within a conventional channel group.

Cooperative WAN Routing (CWR) Hardware that allows pairs of core and exit routers to interface directly with site and interzone links through a simple, reliable, and passive relay panel. With CWR, the routers work to control an external relay panel to switch a group of 12 non-redundant T1/E1 links between the two routers. Each router is provisioned with two 12-port T1/E1 modules.

See also: T1, E1, Master Site, Radio Frequency

Core Equipment within a zone. Within a two-core master site, there is a primary core for one zone and a backup core for another zone; also there is another two-core master site with the opposite core arrangement. A one-core master site could be a standalone core (for non-Dynamic System Resilience zones), a primary core (for one Dynamic System Resilience zone), or a backup core (for one Dynamic System Resilience zone).

Core Backhaul Switch The core backhaul switch provides a link aggregation point for the network at the master site when Ethernet site and interzone links are implemented. Two core backhaul switches are required at the master site for this functionality.

Core Console Site For the MCC 7500 Dispatch Console subsystem, a console site that is connected to the Master Site LAN. The configuration of the Console Site link type by a Network Management (NM) user determines whether the Console Site is a Remote Console Site or a Core Console Site.

See also: Remote Console Site

Core Security Management Server (CSMS) A virtual machine that functions as a management entity for network security in an ASTRO® 25 system. The CSMS manages the components in the Network Interface Barrier (NIB) and is equipped with anti-malware management software and, optionally, remote user authentication management software.

Coupled Dispatch consoles may be acoustically coupled with each other, which means that the audio is fed from the speaker of one (receiving) console to the microphone of another (transmitting) console. The acoustic feedback, when both consoles are involved in a call on the same resource, can have undesirable audio effects such as echoing at the receiving terminals (consoles/radios).

Coverage The geographic area served by a RF propagation of a cellular system (other any other wireless system), that is, the area in which service is available to users of the system.

Crypto Period The maximum length of time that a key should remain in use.

Current Subscriber A secure subscriber is considered current when its internal state and configuration is known to match the state and configuration defined in the Key Management Facility (KMF) database for that specific subscriber.

Custom Alert Tone An alert tone that you create on your own with an audio file processing software application and with which you can override the default alert tones provided by Motorola Solutions. The custom files must meet the required audio file specifications, file location, and naming conventions.

See also: Default/Predefined Alert Tone, Enhanced Alert Tones

Customer Enterprise Network (CEN) A term used by Motorola Solutions to mean a network that is connected to the Radio Network Infrastructure (RNI) and includes components not defined by Motorola Solutions.

See also: Radio Network Infrastructure

Customer Network Interface (CNI) The common access point between the ASTRO® 25 radio network and the Customer Enterprise Networks (CENs) at the physical and logical layers. The CNI design includes the physical LAN and/or WAN links that provide the connectivity, the routing and IP addressing involved, and the application interaction across the interfaces.

Customer Programming Software (CPS) Computer-based software which allows the programming of the radio's characteristics (for example, frequency, DPL codes, and alias).

Cyclic Redundancy Check (CRC) A method for detecting data transmission errors. Transmitted messages are divided into predetermined lengths that are divided by a fixed divisor. According to the calculation, the remainder is appended onto the message and sent. When the message is received, the computer recalculates the remainder and compares it to the transmitted remainder. If the numbers do not match, an error is detected.

DDM-Capable Site A site capable of operating in Frequency Division Multiple Access (FDMA) or Time Division Multiple Access (TDMA) mode.

See also: Dynamic Dual Mode

DS0 The basic unit in the DSn (T1 and up) and E1 transmission applications. A DS0 carries a 64 Kbps data stream. A T1 line has 24 DS0s and an E1 line has 32 DS0s.

See also: E1, T1

DS1 A T-carrier signaling scheme. It widely used to transmit voice and data between devices with the maximum data transmission rate of 1.544 megabits per second.

Data Agency Group (DAG) An organizational group for Enhanced Data subscribers. All Enhanced Data subscribers must be members of only one Data Agency Group (DAG). Contention for Enhanced Data site utilization is based on DAG membership.

Data Circuit Terminating Equipment (DCE) A device through which the Data Transmission Equipment (DTE) is connected to a network.

Data Collection Device (DCD) Data Collection Device (DCD) can be connected to capture and analyze traffic that passes over the HPD GCP 8000 Site Controller switch ports.

Data Encryption Standard (DES) Data encryption standard is a private key encryption algorithm, where the same key is used for encryption and decryption. The key must be kept secret and distributed securely to maintain system security. DES has been adopted by the National Bureau of Standards and is used extensively in banking. Smart cards are available that can encrypt and decrypt DES messages internally.

Data Encryption Standard – Cipher Feed Back (DES-CFB) A United States government encryption/decryption standard. Defined in Federal Information Processing Standard 81 (FIPS-81).

Data Encryption Standard-XL (DES-XL) A Motorola Solutions proprietary version of a United States government encryption/ decryption standard. "XL" refers to synchronous mode software counter addressing encryption as implemented in ASTRO® digital products.

Data Link Connection Identifier (DLCI) A communications channel identifier used in frame relay communications to identify a Permanent Virtual Circuit (PVC) over the link between the Base Transceiver System (BTS) and the Central Network Equipment.

See also: Base Transceiver Subsystem, Permanent Virtual Circuit

Data Link Layer Layer 2 of the Open Systems Interconnections (OSI) model. This layer responds to service requests from the Network Layer and issues service requests to the Physical Layer. Examples of data link protocols are HDLC and ADCCP for point-to-point or packet-switched networks and LLC for local area networks.

Data Service Unit (DSU) A device used to interface to a digital circuit. Provides termination of a data circuit and is typically combined with a Channel Service Unit (CSU). Performs conversion of your organization's data stream to bipolar format for transmission.

Data Services A feature available for implementation on ASTRO® 25 Integrated Voice and Data systems. It enables radio subscribers to connect mobile data devices to their ASTRO® 25 subscriber units for wireless access to fixed enterprise data networks through the trunking infrastructure.

Data Terminal Equipment (DTE) An end instrument that converts user information into signals or reconverts received signals.

Data Total Area Coverage A low-speed, packet-switched, wireless data network technology deployed in the United States as the ARDIS network. DataTAC transfers data up to 19.2 Kbps in the 800 MHz band.

Abbreviation: DataTAC

Database Persistence A method where user configuration information is shared by the Provisioning Manager (PM) with the Unified Network Configurator (UNC) and Zone Controller (ZC). The user configuration information is sent through a bulk distribution of data between the Provisioning Manager (PM) and the zone controller through the UNC. The PM builds a file for the zone controller. The PM maintains a persistent store of the pending updates in this file. The UNC sends updated configuration data to the PM when an update to the data that is needed by the PM is made. When the PM receives updated configuration data from the UNC, it updates the relevant views automatically. User data that is shared between the UNC and the PM is managed by the UNC. When users initiate a PM database synchronization from the UNC, the UNC sends the common UNC/PM parameters to the PM (e.g., WACN ID, SYSTEM ID, Default Access Permission, Site Access Denial, and so forth). Then, the PM shares the information with the ZC (and other devices).

Datagram Service Service at the network layer in which successive packets may be routed independently from end to end. There is no call setup phase. Datagrams may arrive out of order.

dBm An abbreviation for the power ratio in decibels (dB) of the measured power referenced to one milliwatt (mW).

DCG 9000 (Dynamic Conventional Gateway) An IP based channel gateway that interconnects the console with Base Radios and comparators in ASTRO® 25 Conventional Fixed Radio Subsystems. The DCG 9000 software runs as a docker service within the Shared Scalable Platform deployed on a HPE EL10 Edgeline server. The DCG 9000 replaces the conventional gateway part of the GGM 8000 for MSI IP digital channels and introduces the DFSI IP analog and IP digital channel interface.

De-Key Turn the transmitter off (release the Push-to-Talk switch).

De-Militarized Zone (DMZ) The De-Militarized Zone is a network interconnecting other networks, namely the Radio Network Infrastructure (RNI) and the Customer Enterprise Network (CEN). For routing of traffic between these networks coordinated IP spaces are

required. In an ASTRO® 25 system, the DMZ is an Ethernet switch that connects to the peripheral network router, firewall, and intrusion detection sensor server (IDSS) server on the radio network infrastructure side, and to border gateways on the CEN side.

Synonym: De-Militarized Zone Ethernet Switch
See also: Radio Network Infrastructure, Customer Enterprise Network

Deaffiliation The process by which a radio is deassociated from a talkgroup when it powers down, or when the radio is changing talkgroups or sites.

Decibel A unit of relative voltage or power. One-tenth of a Bel; roughly the smallest change that the human ear can detect.

Decryption Decryption is the decoding and unscrambling of received encrypted data. Also see, Encryption and Key.

Default Record A record that contains basic parameters to define privileges during system initialization and to define privileges for default access to the system. You can use this record to create new records with the same privileges.

Default/Predefined Alert Tone An unconfigurable alert tone provided by Motorola Solutions. The number of the provided custom alert tones can be up to 15.
See also: Custom Alert Tone, Enhanced Alert Tones

Delta Configuration Distribution The distribution of only the changed configuration parameters in the Provisioning Manager (PM) application. A full distribution of the database is called a Force Initialization.
See also: Force Initialization

Deregistration The process by which a radio deassociates from one site and registers to another site, powers down, or is out of range of a system for a designated period of time.

Digital Fixed Station Interface (DFSI)
Standard conventional IP audio protocol interfacing Fix Radio Subsystems to Base Radios. This protocol allows conventional GTR 8000 base radios to communicate with third party dispatch consoles over IP interface, or allows the

Send Feedback

ASTRO 25 system to dispatch third party stations. Base radio with DFSI interface cannot reside within the ASTRO network GTR 8000 base radio supports DFSI for either analog or digital channels (mixed mode is not supported). The ASTRO 25 system also can dispatch either analog or digital third party channels, but not mixed mode.

Device Definition Package (DDP) A set of parameters to discover and manage a device. The Device Definition Package (DDP) files created with Fault Management Toolkit are imported into the Unified Event Manager (UEM) application.

See also: Fault Management Toolkit, Unified Event Manager

Differential Quadrature Phase Shift Keying (DQPSK) A modified Quadrature Phase Shift Keying (QPSK) modulation technique which relies on the difference between successive phases of a signal rather than the absolute phase position.

Digital Access Cross-Connect Switch (DACS) A data concentrator and organizer for T1/E1-based systems.

Digital Conventional Channel Gateway (DCCGW) Provides the interface between the MCC 7500 console and ASTRO® 25 Conventional (digital) base stations for digital conventional operation. The DCCGW is a site gateway with a V.24 module used to support this interface, which translates digital voice to G.728 packets for MCC 7500 Dispatch Consoles.

Digital Data Service (DDS) A 56/64K private line service.

Digital Encryption Standard – Output FeedBack (DES-OFB) A United States government encryption/decryption standard. Defined in Federal Information Processing Standard 81 (FIPS-81).

Digital Interface Unit (DIU) A transcoding device used to convert digital signals to analog signals (and vice versa) between console positions and other components of the system. The DIU can also provide encryption and decryption services to the console or telephone interconnect devices.

Digital Signal Processor (DSP) A microprocessor that is a section of the Voice Processor Module (VPM) used for processing audio signals.

Digital Voice International-XL (DVI-XL) A Motorola Solutions proprietary encryption algorithm. "XL" refers to synchronous mode "software counter addressing" encryption as implemented in ASTRO® 25 system digital products.

Digital Voice Protection (DVP) One of the several encryption algorithms used to provide secure voice radio transmissions.

Digital Voice Protection-XL (DVP-XL) A Motorola Solutions proprietary encryption algorithm. "XL" refers to synchronous mode "software counter addressing" encryption as implemented in ASTRO® digital products.

Direct Attached Storage (DAS) A data storage device or system (for example, an enclosure holding a number of hard disk drives) attached "directly" (without a network device) to a server or workstation.

Direct Inbound Dialing (DID) A select number of digits that are associated with a specific radio user that allows a landline caller to reach the user directly. The IP Private Branch Exchange (PBX) forwards the dialed digits to the Zone Controller (ZC).

Disaster Recovery A set of procedures performed to recover a system or device functionality.

Dispatch Console Equipment consisting of an advanced dispatch system, which provides dispatch capabilities to the trunked system and conventional radio systems including the ability to connect calls between these systems.

Synonym: Console

Dispatch Console User The user of the system's telecommunications services who

attaches to the network through a dispatch console and receives the relevant telecommunication service.

Domain Controller (DC) A Motorola Solutions radio system's network management subsystem contains Domain Controllers, which provide Domain Name Services (DNS), Active Directory, and RADIUS services to all supported devices in the ASTRO® 25 system. Domain Controllers are also referred to as Authentication Servers because they provide authentication services.

Synonym: Authentication Server

Domain Name Service (DNS) A hostname to IP address resolution system used by network devices to find out about other network devices.

Dual Function Tone A Tone Command consisting of a High Level Guard Tone (HLGT), Function Tone 1 (FT1), Function Tone 2 (FT2), and (sometimes) a Low Level Guard Tone (LLGT).

Dual Mode Equipment Equipment which transmits and receives information using either the APCO Project 25 standard digital signals or current analog standard signals without modification or interfacing devices.

Dual-Tone Multi-Frequency (DTMF) A signaling scheme used by the telephone system in which two voice band tones are generated for each keypad key press.

Dynamic Channel A single channel operating in either Frequency Division Multiple Access (FDMA) mode or Time Division Multiple Access (TDMA) mode, depending upon the channel assignment from the zone controller or site controller.

Dynamic Dual Mode (DDM) An ASTRO® 25 radio communication system feature that provides the ability for DDM-capable subscriber radios to "dynamically" operate in either one of two modes of operation (Frequency Division Multiple Access or Time Division Multiple Access) without subscriber radio intervention when roaming and making calls in the system.

Dynamic Dual Mode Talkgroup An access type configuration value that enables you to configure the talkgroup to operate in either Frequency Division Multiple Access (FDMA) or Time Division Multiple Access (TDMA) mode.

Dynamic Frequency Blocking (DFB) Prevents a channel from interfering with another channel. When a channel is in use, any channels listed as interfering with that channel are made unavailable (blocked).

Dynamic Host Configuration Protocol (DHCP) The access point can use Dynamic Host Configuration Protocol (DHCP) to obtain a leased IP address and configuration information from a remote server. DHCP is based on the BOOTP protocol and can coexist or interoperate with BOOTP.

Dynamic Network Access Code (DNAC) A code generated by base radios that contains the System ID and the Access Code Index (ACI). This code ensures that radios or base stations transmit and receive DNAC signals that are different between each site and system. Using different DNACs allows a radio or base station to ignore signals from distant sites or from other systems.

Dynamic Regrouping A Radio Control Manager (RCM) purchasable option that allows a dispatcher to change the talkgroup assignment of any radio to handle unique problems or situations more efficiently. The radios receive reprogramming of certain parameters using signaling over the control channel. The following RCM features are linked to dynamic regroup: regroup commands, selector lock commands, changeme requests, and storm plans.

Dynamic Sub-Band Restriction (D-SBR) A channel utilization method, which determines the appropriate channel to use at an RF site when both 700 MHz and 800 MHz channel resources are available. D-SBR for channel utilization is based on the capabilities of the mobile/portable radios and can improve utilization of 700 MHz channel resources at an RF site providing both 700 MHz and 800 MHz channels.

See also: Static Sub-Band Restriction

Send Feedback

Dynamic System Resilience (DSR) A feature that supports a primary zone core and backup zone core established at two geographically separate master site locations to protect against a catastrophic failure of zone core equipment at a single location. The backup core provides the same level of redundancy as the primary core. If either zone core were to fail, the other zone core would take over. The DSR feature provides redundancy for voice, transport, and other subsystems by establishing two zone cores for a given zone at two geographically separate master site locations.

Dynamic Transcoder A Windows-based virtual machine running on a Virtual Management Server (VMS) host. Dynamic Transcoder virtual machines are deployed on HP ProLiant DL380 Gen9 Virtual Machine Servers (VMS). The Dynamic Transcoder implements a feature called Dynamic Transcoding.

Dynamic Transcoding Allows talkgroup calls and unit-to-unit (private) calls to communicate between TDMA channels and FDMA channels at different sites. Dynamic Transcoding also allows channels in dynamic sites to be granted in TDMA mode in the same call that includes an FDMA-only channel at another site, thus preserving channel bandwidth at the TDMA-capable site.

E&M Signaling In telephony, an arrangement that uses separate leads, called respectively E-lead and M-lead. The near end signals the far end by applying -48 VDC to the M-lead, which results in a ground being applied to the far end's E-lead. When -48 VDC is applied to the far end M-lead, the near end E-lead is grounded. In an MCC 7500 Console subsystem with Analog Conventional capability, the E-Lead is defined from the router's point of view and refers to the router's input closure which is activated by the base station when the base station is receiving a radio call. The M-Lead as defined from the router's perspective, refers to the router's output closure which is connected to the base station. When the router activates its M-Lead closure, it causes the base station to begin transmitting.

E&M Voice Card A channel bank card that uses 2– or 4–wire to convert outgoing analog voice to digital and manages the flow of voice traffic over the network.

E1 An E1 carrier is a telecommunications facility designed to carry digital information at the rate of 2.048 million bits per second (Mbps). The E1 carrier originates from the Conference of European Postal and Telecommunications (CEPT) administration. An E1 has 30 digital channels (64 Kbps) to carry voice or data information, plus two other 64 kpbs digital channels. One carries signalling information and another carries framing (synchronization) and maintenance information. The increased transmission rate is the primary advantage for employing equipment capable of handling E1 carrier transmission signals.

Synonym: E1 Carrier
See also: T1, DS0

EEPROM Electrically-Erasable Programmable Read-Only Memory

EMC Encryption Module Controller

EMC Smarts™ Network Configuration Manager A configuration management application that is part of the Unified Network Configurator (UNC). Formerly known as VoyenceControl and EMC Ionix Network Configuration Manager.

eNB Enhanced Node B

ESYNC Encryption SYNChronization

Ear and Mouth (E&M) Technology that uses a traditional telephone handset with an earphone (or earpiece) for listening to incoming audio and a microphone (or mouthpiece) for transmitting audio. Calls using an E&M interface can be made from, received from, or disconnected by a Private Branch Exchange (PBX) as well as from a VoIP-capable computer.

Edge Availability with Wireline Console A feature in an ASTRO® 25 radio system that provides a Trunking subsystem (Tsub) architecture. The purpose of the Trunking subsystem is to provide continuous operations within local operational areas in the event communication with the master site is lost.

Effective Radiated Power (ERP) A measure of power that is radiated by an antenna that accounts for the delivered RF power to the antenna plus any "antenna gain". The Federal Communications Commission (FCC) uses this number to determine service areas.

Electronic Serial Number A number created by the U.S. Federal Communications Commission (FCC) that uniquely identifies a wireless communications device.

Element Management System (EMS) A system and a set of applications that manages one or more network elements.

Elite Name of the dispatch console user interface.

Elite Admin MCC 7500 Elite Admin Application.

Elite Dispatch MCC 7500 Elite Dispatch Application.

Elite GUI The Elite Graphical User Interface (GUI) software program provides a graphics-based user interface for the dispatchers who use the MCC 7500 Dispatch Console.

Embedded Password Different ASTRO® 25 system applications and administrative scripts use embedded accounts to communicate with other applications, such as databases and Lightweight Directory Access Protocol (LDAP) servers. Motorola Solutions provides the capability to change, back up and restore embedded passwords for non-interactive accounts on specified devices. This functionality is for the local device and does not manage account passwords across devices.

Emergency Alarm Comments A short message associated with a radio that sends an Emergency Alarm. The text is added in the Provisioning Manager (PM).

Emergency Alarms A Radio Control Manager (RCM) event type that is normally sent in an emergency situation or when the radio user needs assistance. When a radio user presses the emergency alarm button, an Emergency Alarm event appears in the RCM, and an audible alarm sounds.

Emergency Call The highest priority service of a talkgroup call. When the emergency button of a subscriber unit (SU) is pressed and a Push-To-Talk (PTT) initiated, an Emergency Call is granted depending on the emergency setup method selected; that is, Top of Queue or Ruthless Pre-emption.
  See also: Push-to-Talk

Enable A Motorola Solutions proprietary Over-The-Air-Rekeying (OTAR) command that reactivates a radio after it has been set to Inhibited.

Encrypted Calls Calls that use an encryption algorithm and an encryption key to prevent unauthorized persons from eavesdropping on the transmitted message. Encrypted calls must be decrypted using the correct encryption key or the message is unintelligible.
  Synonym: Secure Calls
  See also: Clear Calls

Encrypted Integrated Data (EID) A feature that provides data encryption services to ASTRO® 25 Integrated Voice and Data (IVD) IP Bearer services between the Customer Enterprise Network (CEN) and subscriber radios. The encryption service provides data encryption, decryption, and authentication between each EID enabled subscriber radio and a PDEG Encryption Unit (a device in the CEN).

Encryption Using ciphers to alter information before it is transmitted over a network. Encryption ensures, to the greatest extent possible, that messages cannot be read or altered during transmission.

Encryption Algorithm A method of encrypting and decrypting information.
  See also: Encryption, Decryption

Encryption Key A numeric code used in combination with an encryption algorithm, used to encrypt and decrypt data, voice or Over-The-Air-Rekeying (OTAR) messages.
  See also: Encryption

Send Feedback

Encryption Mode The encryption mode determines whether data or keys are transferred in the network as encrypted or unencrypted. The two encryption modes are clear (red) and encrypted (black). For example, keys can be transferred from the Key Variable Loader (KVL) to a subscriber unit in Black mode only if the subscriber unit already has both the (Key Encryption Key) KEK and the Traffic Encryption Key (TEK) in common with the Key Management Facility (KMF). Before the subscriber unit has the KEK and TEK keys, the KVL must once load keys in Red mode, meaning the keys are delivered unencrypted from the KVL to the target unit.

See also: Clear Calls, Encrypted Calls

End of Call (EOC) Control message from the Zone Controller (ZC) indicating the end of a trunked group call.

End of Mobile Transmission (EOMT) Control message from the Zone Controller (ZC) indicating the end of a mobile transmission during a group call.

End-to-End Encryption (E2EE) An overlay service that allows secure (digitally encrypted) communication between consoles and radio units in the field. Encryption/decryption services are provided by the system endpoints: console, logging interface, and field radio units, so communication remains secure between the source and the destination.

Enhanced Alert Tones A feature that increases the number of the alert tones that you can use with the dispatch console. It also provides increased flexibility in using the alert tones as it makes it possible to replace the predefined and unconfigurable alert tones provided by Motorola Solutions with alert tones that you can customize according to your needs.

See also: Custom Alert Tone, Default/Predefined Alert Tone

Enhanced Data A Motorola Solutions proprietary (not P25 standard) inbound-only packet data service optimized for applications that periodically send short messages from a subscriber or attached device to a host in the Customer Enterprise Network (CEN). Enhanced Data introduces a new type of data channel to support short, periodic inbound data messages, such as GPS location. Enhanced Data is only supported on ASTRO® 25 Trunked IVD systems with GTR series site equipment and APX subscriber units. Enhanced data allows a dispatcher to track the location of a subscriber unit, and allows text messaging between the subscriber unit and the dispatcher.

Enhanced Instant Recall Recorder (EIRR) A licensed application that is installed as part of the Dispatch Console software. The IRR software makes it possible to record audio traffic on the dispatch console on which it is installed. By using the IRR application the dispatch operator can replay the recorded audio traffic to, for example, verify a specific piece of information.

Enhanced Patch A patch group that makes it possible to hear audio from all the resources in the patch in your headset or the speaker for selected audio without having to select them manually.

Enhanced Telephone Interconnect (ETI) Provides a way to connect the radio communication system to the Public Switched Telephone Network (PSTN) or an external IP network, so that a subscriber radio user can dial fixed telephones (cellular phones included) and initiate a half duplex phone conversation. Likewise, a landline telephone user can dial ASTRO® 25 system radios when the Enhanced Telephone Interconnect feature is employed on the system.

Entity A managed object that is defined by the Fault Management Toolkit in a Device Definition Package (.ddp file) and loaded into the Unified Event Manager (UEM).

See also: Fault Management Toolkit, Device Definition Package, Unified Event Manager

Entry An acoustic cross mute mapping that has a destination dispatch application field filled in, but the source dispatch console field is not filled in.

Error Vector Magnitude (EVM) A modulation quality measure for digitally modulated transmitters. It is measured by computing the RMS average of the magnitudes

of the error vectors, which describe the difference between the ideal symbol vector, and the transmitted symbol vector at the decision (time) points. This measurement can also report individually the Amplitude Error in percent and the Phase Error in RMS degrees. This measurement is typically done with Digital Signal Processing on a captured data burst.

Essential Remote Site A site where the availability number is set to 100. Remote sites with transmit capabilities in the Single Transmitter/Receiver Voting Radio Frequency subsystem are by default an essential site.

ESU Launchpad ESU Launchpad is a web-based framework that allows for the automation of virtual machine deployment and upgrades in the system plus basic configuration and software installation on the DCG 9000. The ESU Launchpad platform consists of ESU Launchpad web-based interface and VMware Workstation Player, Red Hat Enterprise Linux (64-bit) virtual machine that is used for storing installation files and installation and upgrade orchestration.

See also: DCG 9000 (Dynamic Conventional Gateway)

Ethernet Ethernet technology refers to a Local Area Network (LAN) used to connect computers and peripheral devices (such as printers and modems), so they can be shared by users of the network. Originally developed to run at 10 Mbps, Ethernet networks can now run at 100 Mbps. Ethernet can use twisted pair, coaxial, or fiber optic cabling with BNC, RJ45, or fiber optic connectors.

Synonym: Ethernet Technology
See also: Local Area Network

Event An unsolicited inbound message sent from a radio or a solicited command viewable from the Radio Control Manager (RCM).

Synonym: Radio Event

Expansion Hub A non-intelligent switching and interface module that connects to the GCP 8000 site controller to provide support for additional GTR 8000 base radios beyond what the site controller can support on its own. One expansion hub (XHub) can support up to six GTR 8000 base radios.

Abbreviation: XHub

Explicit Other Band Trunking The ASTRO® 25 system uses two methods for defining transmit and receive frequencies on a given channel: explicit and implicit. Channels defined as explicit enable the use of two very different frequencies for transmitting and receiving. When transmitting on a channel using an explicitly-defined frequency, the site sends the Tx and Rx frequencies. Trunking systems typically use a standard 800 MHz full range of Tx/Rx pairs of frequencies. Other band trunking uses frequencies outside of this standard trunking range.

See also: Implicit Other Band Trunking

External Paging Encoder Port The External Paging Encoder Port feature allows an external tone paging encoder to be used with an MCC 7500 Dispatch Console to provide tone-paging services.

FDMA-Only Site A site that supports the Frequency Division Multiple Access (FDMA) mode of operation, which provides one voice call per channel resource.

FDMA-Only Talkgroup An access type configuration value, which configures the talkgroup to operate only in the FDMA-Only Talkgroup (FDMA) mode that provides one voice call per channel.

FDMA/TDMA Frequency Division Mulitple Access and Phase 2 Time Division Multiple Access mode of operation in the ASTRO® 25 system used for the Dynamic Dual Mode feature.

See also: Dynamic Dual Mode

FIPS-140-1 A Federal Information Processing Standard (FIPS) that assures that cryptographic modules are effectively designed to meet specific security objectives.

Failsoft A fallback method of communication used if a site or subsystem cannot perform wide area or site trunking operations (for simulcast subsystems, this includes scenarios when a subsite cannot connect to the prime site). In failsoft mode, each channel works as a single-channel, conventional repeater.

Failure Random Holdoff Time (FRHOT) The maximum amount of time that

radios are told to wait when a site fails before registering to a new site.

Failure Random Holdoff Time - Group (FRHOT-G)
Time generated by the zone controller sent to radios after a site level failure has occurred at WA sites that are adjacent to the failed site. A radio that detects a site level failure and is able to lock to a WA site, shall register in a random time period up to the time specified by FRHOT-G. If no site level failures are occurring at sites adjacent to a WA site, the WA site shall broadcast the minimal FRHOT-Norm.

Failure Random Holdoff Time - Individual Unit (FRHOT-IU)
Time generated by Zone Controller (ZC) sent to radios after a site level failure has occurred at WA sites that are adjacent to the failed site. A radio that detects a site level failure, and is able to lock to a WA site shall register in a random time period up to the time specified by FRHOT-IU. If no site level failures are occurring at sites adjacent to a WA site, the WA site shall broadcast the minimal FRHOT-Norm.

Fallback Zone Controller (ZC)
A Zone Controller in a Trunking subsystem.

FASTStart
A feature that allows a talkgroup call to start as long as resources programmed as critical are available. Non critical resources are added to a call in progress as they become available. This means that the call is granted as soon as critical resources are available, but some affiliated members might not receive the call until additional resources become available.
See also: Resources

Fault Configuration Accounting Performance Security (FCAPS)
An International Organization for Standardization (ISO) standard for organizing these network management activities: Fault Management, Configuration Management, Accounting Management, Performance Management, and Security Management.

Fault Management
A feature that allows the user to monitor operation status, display fault information, perform diagnostics on the system, and provide notification of managed object malfunctions.

See also: Unified Event Manager

Fault Management Toolkit
A Windows-based, standalone, offline software application used to establish the device definition, which includes set of parameters to discover and manage a device. The Device Definition Package (DDP) files created with Fault Management Toolkit are imported into the Unified Event Manager (UEM) application. The Fault Management Toolkit supports Simple Network Management Protocol (SNMP) v1 and v3 messaging and requires devices to be MIB-2 compliant.
See also: Device Definition Package, Unified Event Manager, Management Information Base, Simple Network Management Protocol

Federal Communications Commission (FCC)
Regulates interstate and international communications by radio, television, wire, satellite and cable in all 50 states, the District of Columbia, and U.S. territories. It was established by the Communications Act of 1934 and operates as an independent U.S. government agency overseen by Congress. The commission is committed to being a responsive, efficient and effective agency capable of facing the technological and economic opportunities of the new millennium.

Federal Information Processing Standard (FIPS)
Standards used by the US federal government to ensure common security and communications guidelines across agencies.

Fiber Optic Cable
An optical fiber can be used to carry data signals in the form of modulated light beams. In practice, a number of individual optical fibers are often bound together into a fiber optic cable, with all of the individual fibers surrounded by a protective sheath. Fiber optic cables have the potential for supporting very high transmission rates. Transmission rates of up to 565 Mbps are routinely employed in commercially available systems, and data rates of up to 200,000 Mbps have been demonstrated. Signals transmitted over fiber optic cables are not subject to electrical interference. A fiber optic cable is also typically smaller in size and lighter in weight than electrical cable. Fiber optic cable is sometimes used in an Ethernet LAN to tie

together hubs and switches when relatively long distances separate them.

Field Programmable Gate Array (FPGA) In the Voice Processor Module (VPM) hardware, the FPGA is responsible for routing audio and control data between the MACE Integrated Circuits (ICs) and the Digital Signal Processors (DSPs).

Field Replaceable Entity (FRE) An entire assembly (for example, a server) that can be removed in the field and replaced with a new assembly in the case of a malfunction. An assembly typically consists of a self-contained chassis and all of the cards within the chassis.

Field Replaceable Unit (FRU) A circuit board, part or assembly that can be quickly and easily removed from a computer or other piece of electronic equipment, and replaced by the user or a technician without having to send the entire product or system to a repair facility.

File Transfer Protocol (FTP) A standard network protocol used to transfer files from one host or to another host over a TCP-based network.

Filter A parameter that allows you to set criteria for a selection to limit the data that appears in a screen or is returned for a report.

FireWire® An IEEE 1394 bus that moves large amounts of data between computers and peripheral equipment.

Firewall (FW) A network security device providing network boundary enforcement and attack detection features.

Fixed Network Equipment (FNE) Base stations and repeaters.

Fleetmap A document listing configuration information for all users in the system.

Flexible Site and InterZone Links (FSIL) A feature that provides an alternative backhaul solutions for the dedicated T1/E1 links

used for network transport in Motorola's ASTRO® 25 site and InterZone links.

Flow Control A mechanism for managing the rate of data transmission between devices or nodes in a network so that the receiver can handle all the incoming data. Flow control is used to manage the flow of data/packets in cases where the sending device can send data much faster than the receiver can handle it.

Force Initialization A full configuration distribution in the Provisioning Manager (PM) application. The distribution of only the changed configuration parameters is called a Delta Configuration Distribution.
> **See also:** Delta Configuration Distribution

FortiToken A solution that provides two-factor authentication for remote service users through the use of hard or mobile tokens. The tokens are configured on the Fortinet RNI-DMZ firewall by using the firewall's web-based user interface. With FortiToken enabled, service users who remotely log on to the system are asked to provide their domain credentials and a one-time password generated by their token.
> **See also:** Fortinet Firewall Manager

Fortinet Firewall Manager Firewall manager for Fortinet FortiGate firewalls in the ASTRO® 25 system. Provides the security feature of logging and reporting traffic. In the ASTRO® 25 system, firewall management may be performed locally at the Fortinet firewall, or using a Fortinet FortiManager, depending on the type of firewalls implemented in the system and the system configuration.
> **Synonym:** FortiManager
> **See also:** FortiToken

Four Wire E&M 4-wire (2-pair) transmission path for the voice signal.
> **Abbreviation:** 4W E&M

Four-Wire Interface (4W) Transmit and receive on the different copper pair.

Fractional E1 (FE1) The Fractional E1 link supports the ability to use only a part of the available time slots. The serial bit stream consists of one or multiple DS0s. The X.21 - E1 converter supports fractional E1.

See also: E1

Fractional T1 (FT1) A telecommunications line that allows customers to use only a certain number of the 24 available channels on a T1 line. FT1 supports transmission rates less than 1.544 Mbps.

See also: T1

Frame Relay Frame Relay is a simplified form of connection-based, packet-switching service in which synchronous frames of data are routed to destinations indicated on the header information. Frame Relay assumes an error-free physical link and therefore does not guarantee data integrity. Error detection and correction responsibility is left with the end devices. Frame Relay uses the synchronous High-level Data Link Control (HDLC) frame format up to 4096 octets in length. Each frame contains a start flag, two octets that contain the information required for multiplexing across the link, the data information (payload), two octets generated by a Cyclic Redundancy Check (CRC) of the rest of the octets between the flags, and the end flag.

Frequency Division Multiple Access (FDMA) Access method that divides a communication channel in the frequency domain into two or more individual channels. This access method for ASTRO® 25 systems provides one voice call per channel resource.

Frequency Reference Holdover Provides an optional backup for the frequency and time references supplied to the base radios either through a TRAK 8835-3 SSR or a TRAK 9100 SSR at IP simulcast remote sites with high availability.

Full-duplex (FD) A two-way communications method in which the communication may occur in both directions simultaneously.

Fully Qualified Domain Name (FQDN) An address that consists of a host and domain name, including top-level domain.

Function Tone The short tone bursts that follow the High Level Guard Tone (HLGT). These bursts are mapped to functions in the station. For instance, setting the repeat mode, choosing a frequency, etc. Typically function tone is 40 ms in length. Dual function tone is needed if encryption is supported. MCC 7500 Dispatch Console does not support encrypted analog conventional stations, thus only single function tone is required.

See also: Dual Function Tone

Functional Coexistence A term meaning that the features must continue to operate (in a mixed-console system) as they do in a homogenous system of only one console type.

Functional Interoperation A term meaning that the users must not perceive any functional difference when invoking the console interoperability feature from either console type and when monitoring the status of the feature from either console type.

G.728 START An audio plane message defined in the XIS protocol indicating that audio packets are about to start for a transmission on a particular station.

G.728 STOP An audio plane message defined in the XIS protocol indicating that audio packets associated with a transmission on particular station have all been sent.

GGM 8000 A modular multi-purpose network communications platform, designed to interconnect devices and networks within ASTRO® 25 system. This hardware replaces the MNR S6000 and MNR S2500 platforms.

GPB 8000 The GPB 8000 Reference Distribution Modules (RDM) provide integrated Ethernet LAN switching, eliminating the external LAN switches. The RDM also provides redundant integrated site reference distribution utilizing two GPS receivers as timing reference sources to all the base radios at the remote site, eliminating the need for the Simulcast Site Reference at the remote site.

GPRS Tunneling Protocol (GTP) A UDP/IP based protocol used to carry packet data traffic between the Packet Data Router (PDR) and Gateway GPRS Support Node (GGSN).

GPW 8000 Receiver A receive-only conventional (digital) base radio.

Gateway GPRS Support Node (GGSN)
Provides general packet radio service (GPRS) network access to external hosts to communicate with mobile subscribers. The GGSN acts as a fixed relay point between the external hosts and the mobile subscribers.

General Packet Radio Service (GPRS)
A packet-switched mobile data service on the 2G and 3G cellular communication system's global system for mobile communications (GSM).

General Purpose Input/Output Module (GPIOM)
A connection interface device that interfaces peripheral ports for console microphones, speakers, footswitch, and so on. The GPIOM device connects to the console PC through an IEEE 1394 cable. The MCC7500/MCC7100 Dispatch Consoles replace the GPIOM-based console in an ASTRO® 25 system.

See also: Dispatch Console

Global Positioning System
Method of location based on reception of multiple satellite signals by a device on the ground or in an airplane.

See also: Global Navigation Satellite System (GNSS), GLONASS, BeiDou

Global Positioning System Receiver (GPSR)
Supplies frequency and time reference for equipment at the system core and simulcast sites.

Abbreviation: GPS Receiver

Graphical User Interface (GUI)
A type of user interface that allows users to interact with electronic devices with images rather than text commands. An icon-based user interface.

Group Call (GC)
A call addressed to talkgroups or multigroups.

Group Call Service Timeout
In message trunking, this is the time that an assigned channel resource remains active and keyed up.

Synonym: Hang Time

Group Home Location Register
The Group HLR that stores information for talkgroups that are home to that zone.

See also: Home Location Register, Talkgroup

Group Home Zone
The controlling zone for calls originated by a zone's talkgroup members, regardless of where they are located in the system at the time they originate the call.

See also: Talkgroup, Zone (area)

Group Radio Set Identifier
Group-delivered Over-The-Air-Rekeying (OTAR) messages are addressed to the Group RSI shared by the group of units. Group RSI is provisioned or changed in units through Unit OTAR Full Updates to each unit in the group.

Abbreviation: Group RSI
See also: Radio Set Identifier

Group Updates
Over-the-air-rekeying (OTAR) messages targeted to groups of radios such as Common Key Reference (CKR) update or Radio Group Update.

Group-Based Service
Talkgroup voice-based services, includes Talkgroup Calls, Multigroup Calls, Emergency Calls, and Group Regrouping.

See also: Talkgroup, Multigroup

GRV 8000 Comparator
A device that supports multi mode IP conventional channels in the ASTRO® 25 system or conventional analog channel, either IP-based and/or circuit (4 Wire) based.
When operating in circuit mode, GRV 8000 needs a G-Series Subsite Link Converter (GSLC) to communicate with base radios.

See also: G-Series Subsite Link Converter (GSLC)

G-Series Subsite Link Converter (GSLC)
Converter used to translate between the IP interface of GRV 8000 Comparator in analog mode and the 4 Wire interface of base radios in analog voting/simulcast system.

See also: GRV 8000 Comparator

Guard Tone
The frequency used to inform the base station that it is going to receive a Tone Remote Control (TRC) command. Also the frequency used to tell the base station to remain keyed. There are multiple different frequencies

used throughout the world. It is typically 2175 Hz in North America.

See also: Tone Remote Control

HPD Broadcast Data A feature that provides broadcast data message distribution to all HPD registered modems that are part of an agency Broadcast Group instead of generating a separate message for each individual recipient.

Half-duplex A two-way communications method in which the communication may occur only in one direction at a time.

Hang Time The time a repeater transmitter remains keyed (on-the-air) after detecting loss of signal from the repeater receiver.

Header Compression A mechanism that compresses the IP header in a data packet before the packet is transmitted. Header compression reduces network overhead and speeds up the transmission of data packets.

Heart Saver Tone An alarm where the volume grows increasingly loud over time. Heart saver tones are devised to protect the health of the responders. This kind of alert lessens the risk of a heart attack caused by a sudden, loud alert.

Heartbeat Authentication (HA) An encryption method used in the Packet Data Gateway (PDG). The primary core Packet Data Router (PDR) and backup core PDR exchange authenticated heartbeats after a key is set on both active and backup PDRs. The heartbeat message contains the number of sites connected to the RNG and the operational health of the PDR itself. Status is verified by monitoring the HA link.

Heartbeat Authentication Link A status for the Packet Data Router (PDR) that indicates whether the Heartbeat Authentication (HA) link is up or down.

Abbreviation: HA Link

Hexadecimal Refers to the base-16 number system, which consists of 16 unique symbols using the numbers 0 to 9 and the letters A to F. For example, the decimal number 15 is represented as F in the hexadecimal numbering system.

High Availability for Trunked IVD and HPD An optional feature which introduces redundant components into the data subsystem to ensure maximum service reliability for Classic Data (IVD), Enhanced Data, and HPD in case of hardware failure. This feature provides redundancy for the Packet Data Gateway (PDG), Gateway GPRS Support Node (GGSN), and Customer Network Interface (CNI) path equipment.

Abbreviation: HA Data

High Level Data Link Control (HDLC) The international standard for data link control developed by International Organization for Standardization (ISO). HDLC is responsible for the error-free movement of data between network nodes. The job of the HDLC layer is to ensure that data passed up to the next OSI layer has been received exactly as transmitted, error free, without loss and in the correct order.

High Level Guard Tone (HLGT) The initial tone of a Tone Remote Control (TRC) sequence begins with a HLGT. Typically a 120 ms burst of guard tone at an elevated level.

See also: Tone Remote Control

High Performance Data (HPD) A system that provides an efficient and reliable wireless transport medium for standard IP packet transfer, with raw data rates up to 96 kbps. This data rate allows service for medium bandwidth applications, such as still image transfers, vehicle location services, and constrained web browsing services. An HPD system may be colocated with an existing Integrated Voice and Data (IVD) system or as a standalone system.

High Speed Unit Data Card A T1/E1 interface card that resides in a channel bank for T1/E1 access.

Abbreviation: HSU Data Card

High-Speed Serial Interface (HSSI) An interface that is commonly used to interconnect routing and switching devices on Local Area Networks (LANs) with the higher-speed lines of a Wide Area Network (WAN). It is capable of speeds up to 52 Mbit/s.

Home Location Register (HLR) The database located in each zone that receives a master copy of individual and talkgroup information from the User Configuration Server (UCS) for call processing. The HLR also contains mobility information for individuals and talkgroups on a per zone level.

See also: Group Home Location Register

Home Zone (HZ) The zone in which a radio or talkgroup is primarily located. This zone is designated to be the zone where the radio user and talkgroups are most active. The home zone is the controlling zone for group calls.

See also: Group Home Zone, Individual Home Zone

Host A computer which provides services to other computers, such as database access.

Host Name The name (usually an alias) given to a machine.

Hybrid Site Links When a site link pair used to support site link redundancy is of two different site link types (for example, T1/E1 and Ethernet) the links are identified as hybrid site links. For hybrid site links, two redundant site link connections are allocated across two separate (physically independent) transport devices such that each physically independent transport device (router or gateway) only supports one physical Ethernet connection or up to two physical T1/E1 connections (which are bundled together to provide one logical connection), but not both. Employing both T1/E1 and Ethernet site connections on the same transport device (router or site gateway) is not supported.

IP Link Converter (IPLC) The (conventional) IP Link Converter is a device based on the GGM 8000 hardware platform that allows users with fielded CENTRACOM Gold Elite and MCC 5500 consoles to replace circuit connectivity with IP connectivity and transition digital/mixed mode RF channels to G series RF channels. The Conventional IP to Circuit Link Converter to allow ASTRO® 25 3.x customers the ability to replace V.24 digital/mixed mode RF channels with G-Series and/or MLC 8000 devices while still employing existing ASTRO® 25 3.x core equipment.

IP PBX Media Gateway Hardware that converts signals (both signaling and voice) between IP and non-IP networks, under the control of the IP PBX server. Multiple media gateways may be required based on the capacity your ASTRO® 25 system requires, and each one takes one Rack Unit (RU) of space. An IP PBX media gateway is not needed if landline telephones are connected through an IP network, for example, a non-NEC media gateway or your enterprise IP PBX media gateway.

See also: IP PBX Media Gateway, COHub, BranchHub

IP PBX Server The Internet Protocol (IP) Private Branch Exchange (PBX) server provides call control and administration through a network management application that provides configuration and fault management of the IP PBX server and IP PBX media gateways.

Synonym: NEC Unified Communications Manager
See also: IP PBX Media Gateway

IP Packet Capture An application that captures transactions between network elements in an ASTRO® 25 system and collects performance data for Virtual Management Servers (VMSs) in the zone where IP Packet Capture is located. The application captures network activity in the form of IP packets that pass through the designated devices and gathers statistics for the monitored servers. IP Packet Capture provides easy access to current and historical records of network traffic and server performance statistics for diagnostic purposes and timely system repair. The application ensures minimal issue investigation times.

Abbreviation: IPCAP

IP Packet Loss Ratio (IPLR) The ratio of total lost IP packet outcomes to total transmitted IP packets in a population of interest.

IP Packet Transfer Delay (IPTD) Time necessary for the packet to reach its destination.

IP Simulcast Prime Site Backhaul Switch The prime site backhaul switch provides a link aggregation point for the network when Ethernet links are implemented between an IP Simulcast prime site and IP Simulcast subsites. Two prime site backhaul switches are

required for each IP simulcast prime site that utilizes Ethernet links.

ISSI.1 Gateway Module A component of the ISSI.1 Network Gateway application, which resides on a Generic Application Server (GAS).

ISSI.1 Network Gateway An application that consists of two components: Site Link Relay Module and ISSI.1 Gateway Module.

Implicit Other Band Trunking The ASTRO® 25 system uses two methods for defining transmit and receive frequencies on a given channel: explicit and implicit. When transmitting on a channel using an implicitly-defined frequency, the site sends only the transmit frequency, with the receive frequency being a standard calculated offset from the transmit frequency. Trunking systems typically use a standard 800 MHz full range of frequencies. Other band trunking uses frequencies outside of this standard trunking range.
See also: Explicit Other Band Trunking

Improved Multi Band Excitation (IMBE) A voice coding technique based on Sinusoidal Transform Coding (analog to digital voice conversion).

Improved Multi-Band Encoder (IMBE) APCO standard vocoding algorithm used in the conversion of voice from analog to digital.

In-Call User Alert A feature that provides the ability to send a call alert signal from a console or radio to a target radio regardless of which service the radios may be in when the alert signal is sent.

Inbound Call A call generated from a subscriber and destined to monitoring dispatch consoles or other subscribers.

Inbound Event A request made by a radio user and sent to the Radio Control Manager (RCM).

Inbound Message Number Period This number indicates the acceptable inbound message number range that the Key Management Facility (KMF) defined to validate

inbound a Key Management Message (KMM) number.

Inbound Signaling Packet (ISP) A data packet from the radio to the zone controller that contains identification information for accessing the system, zone, and one or more specific talkgroups.

Individual Call A private call or a telephone interconnect call between two units, a radio and a console, or a radio and a landline.
See also: Individual-Based Service

Individual Home Location Register (IHLR) The database that stores information for individual radios that are home to that zone.

Individual Home Zone Each radio in the system has an individual home zone. This should be the zone that the radio is located in most of the time and is configured in the Provisioning Manager (PM).

Individual-Based Service Individual voice-based services which include Private Calls, Landline-to-Radio Interconnect Calls and Radio-to-Landline Interconnect Calls.

InfoVista® A customizable performance management application that reports and graphs a wide variety of data from multiple devices, such as gateways, the Ethernet LAN switch, and the WAN switch. InfoVista® resides on the Transport Network Performance Server (TNPS).

Information Assurance (IA)

Instant Recall Recorder Port Allows an instant recall recorder to be connected to a Dispatch Console.

Institute of Electrical and Electronic Engineers (IEEE) A professional association headquartered in New York City that is dedicated to advancing technological innovation and excellence.

Integrated Circuit (IC) An integrated circuit (IC) is a set of electronic circuits on one small plate (or chip) of semiconductor material, normally silicon. Sometimes refered to as a

"microchip", an IC can integrate of large numbers of tiny transistors onto a single chip. A memory chip is an IC that stores data. Radio frequency identification (RFID) tags, cell phones, computers and numerous devices contain integrated circuits (ICs).

Synonym: Chip

Integrated Paging The Integrated Paging feature provides the ability for MCC 7500 Dispatch Console users to manage and send manually created and pre-defined pages to radio users. Pages may be analog tone pages or system pages (trunked call alerts are an example of a system page).

Integrated Services Digital Network (ISDN) Integrated Services for Digital Network (ISDN) is a set of CCITT/ITU communication standards for simultaneous digital transmission of voice, video, data, and other network services over the traditional circuits as well as other media. It is commonly run on digital telephone systems that were already in place.

Integrated Voice and Data (IVD) A feature of a Motorola Solutions ASTRO® 25 trunked communication system providing voice and data communication services integrated into one trunked communication system. IVD involves the IP transport of voice and data over trunked data channels.

Intelligent Middleware (IMW) A communication platform and data processing solution for the integration of Customer Enterprise Network (CEN) services and subscriber radio networks. It provides translation, format, and interface services between the CEN applications and associated radio systems.

Inter-RF Subsystem Interface (ISSI) Inter-RF Subsystem Interface. An inter-system network gateway interface for Project 25, which utilizes an available ASTRO® 25 Zone Controller site link to connect over a wireline P25 ISSI interface, to another network with another site gateway similarly connected.

Inter-RF Subsystem Interface 8000 (ISSI 8000) An ASTRO® 25 feature that provides an enhanced interconnectivity solution for P25 compatible systems to interface with the ASTRO® 25 system.

Inter-RF System Gateway (ISGW) An Inter-RF System Gateway (server application) providing support for the ASTRO® 25 ISSI 8000/ CSSI 8000 feature(s). The ISSI 8000 feature provides an enhanced interconnectivity solution for P25 compatible systems to interface with the ASTRO® 25 system while the CSSI feature provides an enhanced interconnectivity solution for third-party consoles to interface with the ASTRO® 25 system.

InterZone (IZ) Refers to call processing that involves more than one zone in the system.

InterZone Control Path (IZCP) A communications path between a zone controller in one zone and a zone controller in another zone.

InterZone Trunking The state when calls are trunked between a pair of zones. The following must be in place for InterZone trunking: users in each zone, an active InterZone control path, group home zone maps entered in both zones, and an active and enabled audio rendezvous point in each zone.

See also: Ambassador Electronics Bank, Zone Controller

Interconnect Subsystem The telephone interconnect equipment in the zone. Telephone interconnect capability allows radio users to access the Public Switched Telephone Network (PSTN).

Interfering Channel Any RF channel whose frequency interferes with another channel.

Internal radio Random Hold Off Time (IRHOT) Internal to the radio, this time represents how long a radio waits to register after certain failures and recoveries of RF sites. This timer is a last resort in controlling radio registrations during certain failures and recoveries of RF sites.

International Organization for Standardization (ISO) A network of national standards institutes from 163 countries

working in partnership with international organizations, governments, industry, business, and consumer representatives. A bridge between public and private sectors. ISO has published standards covering almost every industry, from technology, to food safety, to agriculture and healthcare.

International Telecommunication Union
The specialized agency of the United Nations responsible for information and communication technologies. International Organization for Standardization coordinates the shared global use of the radio spectrum, promotes international cooperation in assigning satellite orbits, works to improve telecommunication infrastructure in the developing world and establishes worldwide standards.

International Telecommunications Union (ITU)
A specialized agency of the United Nations which is responsible for information and communication technologies.

Internet Control Message Protocol (ICMP)
Internet Control Message Protocol (ICMP) is tightly integrated with internet protocol. ICMP messages are used for out-of-band error-reporting messages related to network operation. ICMP packet delivery is unreliable.

Internet Engineering Task Force (IETF)
Develops and promotes voluntary Internet standards, in particular the standards that comprise the Internet protocol suite (in the area of routing, transport, security, and so on). It is an open standards organization, with no formal membership or membership requirements.

Internet Protocol (IP)
A protocol used for exchanging packets/datagram within a single network or between interconnected networks. The Internet Protocol (IP) is used by both User Datagram Protocol (UDP) and Transmission Control Protocol (TCP). IP is a Layer 3 protocol and operates below UDP and TCP in the OSI layer. IP performs packet segmentation and reassembly functions.

Intra-Prime Site Link
The extended Ethernet LAN link between the Primary Prime Site and Secondary Prime Site for a Simulcast Subsystem supporting geographically redundant prime sites. The Intra-Prime Site link is supported by two Ethernet LAN Switches operating over a Layer 2 network employing dual transport links with full end-to-end link redundancy.

Intrusion Detection Sensor Server (IDSS)
A server that is part of the optional Network Interface Barrier (NIB). The IDSS provides intrusion traffic monitoring of network traffic through the network security firewall, and works with the firewall to detect anomalies and protect against potential attacks.

J state
USB "Bus idle" state.

Joint Interoperability Task Command (JITC)
Defines interoperability between switching equipment and other IT-based equipment from different manufacturers.

Just a Bunch of Disks/Just a Bunch of Drives (JBOD)
Computer hard disks that have not been configured according to the Redundant Array of Independent Disks (RAID) system.

K core
The K core designates the Conventional Hub Site in a K core Conventional System where the conventional site controller is located. The K core supports the other conventional hub sites and conventional base radio sites in this conventional system. The K1 Core is the non-redundant configuration that (minimally) includes one Conventional GCP 8000 Site Controller, one GGM 8000 Core Gateway, one Core LAN Switch, and one Configuration Manager workstation. The K2 Core is the redundant configuration that (minimally) includes redundant (two) Conventional GCP 8000 Site Controllers, redundant GGM 8000 Core Gateways, two Core LAN Switches and a Configuration Manager workstation.

KMF Client
Provides the main user interface in the KMF system.
See also: Key Management Facility

KMF CryptR
A hardware device connected by Ethernet to the Key Management Facility

(KMF) Server to provide encryption services for the KMF.

See also: Key Management Facility

KMF Server Hosts the KMF Server application, handles key management messages (KMMs), manages Over- The-Air Rekeying (OTAR) operations, and stores all key material and configuration settings.

See also: Key Management Facility

Key A piece of data, which when used with a particular cryptographic algorithm, allows unencrypted information to be encrypted and encrypted information to be decrypted.

Key Encryption Key (KEK) A key used to encrypt traffic keys when they are delivered over the air.

See also: Encryption

Key ID An ID number associated with a key. This enables the system to use a key when encrypting or decrypting voice, data, or over-the-air-rekeying (OTAR) commands, without revealing the actual key variable.

Key IDentification (KID) Identifies the encryption key in systems with multiple encryption keys.

Key Loss Key (KLK) A key that enables a Key Management Facility (KMF) to restore a unit's Unique Key Encryption Key (UKEK) after it has been erased by using the unit's KLK to receive Over-The-Air Rekeying (OTAR) commands.

Key Loss Key Rekeying This Motorola Solutions proprietary feature enables a Key Management Facility (KMF) to restore a unit's Unique Key Encryption Key (UKEK) after it has been erased by using the units Key Loss Key (KLK) to receive Over-The-Air-Rekeying (OTAR) commands. A proprietary warm-start and proprietary modify key OTAR command are used to restore the UKEK.

Key Management Facility (KMF) The central repository of encryption keys and provides a strategic method for managing all of the secure resources in an ASTRO® 25 system. The KMF allows you to manage the keys and

secure data used by all of the devices in the system.

See also: KMF CryptR, KMF Server, KMF Client, Small Fleet KMF

Key Management Message (KMM) A series of commands and responses between a Key Management Facility (KMF) and secure devices, such as subscribers. The commands and responses carry out the key management and secure configuration of the devices.

Key Variable Loader (KVL) A portable, handheld, rugged device whose most basic function is to transfer encryption keys to a target device. Encryption keys can be entered manually by the KVL user, auto-generated by the KVL, obtained from or shared with another KVL, or downloaded from a Key Management Facility (KMF). Keys can be transferred to secure mobile and portable radios, infrastructure devices, and system test equipment.

See also: Authentication Centre, Personal Digital Assistant, Security Adapter

Keyindex A number that identifies a particular version of a key within a cryptogroup.

Keyset A keyset is a group of keys that secure devices use for the same crypto period. This allows you to manage the keys in the keyset as a single entity. The keys in the keyset share a common keyindex.

Synonym: Indexset
See also: Keyindex

KiloHertz One thousand hertz (one hertz equals one cycle per second).

Abbreviation: kHz

Kilobits per second (Kbps) Kilobits (1024 bits) per second. In telecommunications, data transfer rate is the average number of bits (bitrate), characters or symbols (baudrate), or blocks per unit time passing between equipment in a data transmission system. Kbps is commonly used to express data transfer rate.

L core The designator for a single zone, small scale, non-redundant (L1) or redundant (L2) zone core.

LAN Switch A Local Area Network (LAN) device that forwards packets (incoming frame data) from one interface out through another interface based on the OSI model's layer 2 frame switch data.

Latched Alert Tone An alert tone that is sent for a predefined period of time after you press the Alert Tone button on the toolbar of the Elite Dispatch application. You can stop sending the latched alert tone before the predefined time ends by pressing the Alert Tone button again.

Leased Lines Provide a dedicated single path through a telephone company from one location to another. Speeds range from 56 kbps to 1.544 Mbps (T1). Fractional T1 speeds are between 128 kbps and 768 kbps. Leased lines provide dedicated service and no call setup time, but the bandwidth is not flexible. A 4-wire analog leased line provides slower speeds, generally up to 33.6 kbps.

License Manager The License Manager hosts and serves licenses to enable usage of features and functionalities in the ASTRO® 25 system. One License Manager is deployed per zone to manage and serve licenses for that zone.

License Server A Web server that generates a license file to activate an MCC 7100 IP Dispatch Console and PRX 7000 Console Proxy during installation.

Light-Emitting Diode (LED) A semiconductor device that emits infrared or visible light when charged with an electric current. A small LED can fit on a display panel and illuminated to indicate the status of another device and larger LEDs can be used as light bulbs for illumination.

Lightweight Directory Access Protocol (LDAP) The Lightweight Directory Access Protocol (LDAP) is a software protocol for enabling anyone to locate organizations, individuals, and other resources such as files and devices in a network, whether on the public Internet or on a corporate intranet.

Line Operated Busy Light (LOBL) A circuit that inhibits transmission by parallel consoles on a shared conventional radio resource. Parallel consoles interpret the LOBL signal as an indication that another console is transmitting on the resource and, as a result, do not allow simultaneous transmissions on the resource. Interoperability between Gold Elite Dispatch Consoles and MCC 7500 Dispatch Consoles is provided by LOBLs and an audio bridge. LOBLs indicate the parallel console transmit status of each interoperable conventional resource assigned to the console.

Linear Amplifier A radio final amplifier in which the output is linearly proportional to the input, usually a class A amplifier.

Linear Simulcast Modulation (LSM) Motorola Solutions-developed modulation for 12.5 kHz P25 simulcast transmitters.

Linearized Amplifier A radio final amplifier in which the output is mostly linearly proportional to the input, usually a class AB amplifier.

Link Access Procedure for D channel (LAPD) A data transmission procedure used in Integrated Services Digital Network (ISDN) systems on the D channel.

See also: Integrated Services Digital Network

Link Control (LC) Control sublayer of the OSI data link layer.

Link Op Dispatch console at a console site responsible for the Netcomm2 link to the Zone Controller (ZC).

Local Area Network (LAN) A computer network that interconnects computers within a limited area such as a home, school, computer laboratory, or office building, using network media. The defining characteristics of LANs, in contrast to wide area networks (WANs), include their smaller geographic area, and non-inclusion of leased telecommunication lines.

Local Management Interface (LMI) A set of enhancements to the Frame Relay standard that were designed to provide information about the status of Frame Relay networks, and extend the technology's capabilities.

Logging Server A device that captures and forwards call control information and audio information to the logging recorder where it is recorded for later playback.

Logical Channel Identifier (LCH_ID) Uniquely identifies a Base Radio (BR) at the Site.

Logical Link Control (LLC) Sublayer of the Open Systems Interconnection (OSI) Data Link layer.

Loop Start A common type of service found in residential and dial-up modem applications. Commonly referred to as a Plain Old Telephone Service (POTS) line.

Lost Key Encryption Key (LKEK) A lost key used to encrypt traffic keys when they are delivered over the air.

Low Level Guard Tone (LLGT) Part of a Tone Remote Control (TRC) sequence. In conventional systems, if the base station is to remain keyed, the last function tone is followed by low level guard tone. As long as an LLGT is present, the station remains keyed. When voice is transmitted, the voice is summed with low level guard tone before routing it to the station in order to keep the station keyed.

See also: Tone Remote Control

Low Speed Data (LSD) Data embedded in digital voice.

Low-DropOut Regulator A DC linear voltage regulator that operates with a very small input–output differential voltage.

Abbreviation: LDO Regulator

M1/M2 or M3 Zone Core M1/M2 designates a single zone, non-redundant or redundant zone core. The M3 designator indicates a multi-zone capable, redundant zone core.

MABK MAC Address Access Block

MAC Port Lockdown Provides the capability to lock an Ethernet switch port to the MAC addresses that are expected in the normal system configuration, so that unexpected MAC addresses cannot use the port.

MAC Signaling Block (MSBK) The basic transport unit on the air interface that is used to carry data MAC Signaling Messages (MSMs).

MCC 7100 IP Dispatch Console A software-based dispatch console that requires no external hardware connections to perform dispatch operations. The MCC 7100 IP Dispatch Console can be located inside the ASTRO® 25 Radio Network Infrastructure (RNI) at a console site or conventional subsystem. It can also be deployed outside the ASTRO® 25 RNI and connected over the Internet through a firewall to a console proxy located inside the ASTRO® 25 RNI.

MCC 7500 Archiving Interface Server The MCC 7500 AIS is used with a third-party recorder system.

Abbreviation: MCC 7500 AIS

MCC 7500 Dispatch Console Motorola Solutions IP-based dispatch console system.

MCC 7500 Enhanced Console Telephony A feature that provides radio system dispatchers the ability to answer and initiate phone calls from an MCC 7500 Dispatch Console with Voice Processor Module (VPM). This feature allows a dispatcher to patch a radio user in the field to a phone caller, talk with emergency and support personnel, or contact other agencies over the phone.

MCC 7500E Dispatch Console A software-based dispatch console that requires no external hardware connections to perform dispatch operations. The MCC 7500E IP Dispatch Console can be located inside the ASTRO® 25 Radio Network Infrastructure (RNI) at a console site or conventional subsystem. It can also be deployed outside the ASTRO® 25 RNI and connected over the Internet through a firewall to a console proxy located inside the ASTRO® 25 RNI.e

MCC 7500E Improved Telephony A feature that provides radio system dispatchers the ability to answer and initiate phone calls from

an MCCE Dispatch Console. This feature allows a dispatcher to patch a radio user in the field to a phone caller, talk with emergency and support personnel, or contact other agencies over the phone.

This solution utilizes Console PC Host and WAVE 5000 engine. The WAVE 5000 engine acts as Session Initiation Protocol (SIP) user agent to the telephony gateway in order to initiate and receive phone calls.

MIB Browser A tool in the Fault Management Toolkit that is useful to read Management Information Bases (MIBs) and navigate the MIB tree structure.

See also: Fault Management Toolkit, Management Information Base

MKM 7000 Console Alias Manager An optional feature that provides a site-level method for creating, editing and distributing the Radio Unit ID Aliases used on the MCC 7500 Dispatch Console.

Abbreviation: MKM 7000 CAM

MOSCAD Remote Terminal Unit The MOSCAD Remote Terminal Unit (RTU) servers are used to provide the Aux I/O feature for the MCC 7500 Dispatch Consoles. The MCC 7500 Dispatch Console communicates to the RTU servers to perform the Aux I/O function.

Abbreviation: MOSCAD RTU

MOTOPATCH A Motorola Solutions-certified release of OS updates for Windows, Linux, or Solaris devices within the ASTRO® 25 radio system.

MPPS Millions of Pulses Per Second
See also: Pulse Per Second

MSCDI Motorola Solutions Console Dispatch Interface

MZ Multizone

Malware Malicious software intended to damage or disable a computer system.

Managed Device A managed device is a network node that contains a Simple Network Management Protocol (SNMP) agent and resides on a managed network. Managed

devices collect and store management information and make this information available to the network management system using SNMP. Managed devices, sometimes called network elements, can be gateways, access servers, switches, bridges, hubs, computer hosts, or printers.

Management Information Base (MIB)
 A Management Information Base (MIB) is a formal description of a set of network objects that can be managed using the Simple Network Management Protocol (SNMP). The format of the MIB is defined as part of the SNMP.

Manager of Managers (MoM) A high-level network management system that gathers and correlates alarms and alerts from multiple element management systems.

Manchester Encoding Self-clocking encoding scheme in which each bit period is divided into two complementary halves. The direction of the transition in the middle of the period determines the binary representation. Links supporting Manchester encoding are occasionally used in place of T1 and E1 links.

Manufacturer's Identity (MFID) An eight-bit field identifying manufacturer of the radio equipment.

Master Site A building that houses the ASTRO® 25 core equipment and any colocated equipment from another subsystem, such as command and control. Cores for two zones or more can be colocated at a master site. For the Dynamic System Resilience (DSR) feature, a master site also refers to two zone cores that are colocated and sharing transport equipment.

Media Access Control (MAC)

Media Access Control Address A unique identifier assigned to each physical network element or node for communications on the physical network segment. MAC addresses are used as a network address for most IEEE 802 network technologies, including Ethernet. MAC addresses are used in the Media Access Control Protocol sublayer of the OSI reference model.

Abbreviation: MAC Address

Media Gateway (MG) A device that converts digital media streams between different types of networks.

Media Module The MM710 (digital) and MM711 (analog) media cards used for telephone interconnect.

Megabits per second (Mbps) In telecommunications, data transfer rate is the average number of bits (bitrate), characters or symbols (baudrate), or blocks per unit time passing between equipment in a data transmission system. Mbps is commonly used to express data transfer rate. Mbps is commonly used to express data transfer rate.

Megahertz (MHz) Radio wave frequencies used for wireless communications are measured in megahertz. It is commonly used to express microprocessor clock speed. One MHz is equal to one million cycles per second (hertz).

Message Indicator (MI) Used to initialize encryption.

Message Trunking Trunking mode where resources for each message (or call) are individually requested and allocated across the control channel, with the ability to hold the working channel for multiple transmissions between call participants.
See also: Talkgroup

Metallic Service Unit Card The MSU card provides the physical access connections and the switching capability to test active DS1 lines and DS0 channels.
Abbreviation: MSU Card

Mobile Data Terminal

Mobile Radio A mobile or portable subscriber unit.

Mobile Station A mobile radio such as the XTL 5000 Digital Mobile Radio.

Mobile Switching Office (MSO) A physical location that houses one or more master sites.

See also: Wide Area Network, Frame Relay, Local Area Network

Mobility Synchronization Key (MSK)
When a console site goes in service, it reports up the MSK for each Operator (OP). The Zone Controller (ZC) compares this with its stored value and if it matches, the ZC and console OP are considered in sync with their mobility and the OP doesn't need to affiliate anything that was previously affiliated. A new MSK is generated each time an OP affiliates. There are two MSKs, one for the console's trunking affiliations and one for the console's conventional affiliations.

Module A circuit board. Also called daughterboard, hardware, device, or card.

Momentary Alert Tone An alert tone that is sent only when you press the Alert Tone button on the toolbar of the Elite Dispatch application.

Momentary Override A Provisioning Manager (PM) parameter that provides the console with the ability to momentarily override a default Common Key Reference (CKR) used to make a secure transmission (encryption) by allowing utilization and selection of other CKRs from a list of preconfigured CKRs.

Monitored PDR-GGSN Link This link has at least one active mobile context associated with it. When a monitored link is UP, echo requests are sent from the Packet Data Router (PDR) to the Gateway GPRS Support Node (GGSN) and from the GGSN to the PDR.

Motorola Advanced Crypto Engine (MACE) Processors responsible for encrypting and decrypting audio in the Voice Processor Module (VPM) hardware.

Motorola Configuration Console An application installed on the Key Management Facility (KMF) Server and Authentication Center (AuC) Server and Client used to perform various management tasks for the server and client.

Motorola Online (MOL) A Motorola Solutions Web site that provides log-in access to information about your system components, including system documentation.

Send Feedback

Motorola Redundancy Manager A redundancy solution used in the KMF (Key Management Facility) and AuC (Authentication Center) servers, providing replication, synchronization, and monitoring of data between the main and standby servers.

Motorola Supervisory Control and Data Acquisition Network Fault Management (MOSCAD NFM) An integrated solution that provides the operator and network engineer with the required tools to configure, monitor, and control devices in ASTRO® 25 communication sites.

See also: Centralized UEM Mode

motosec The local Windows administrator account set up by Motorola Solutions supplemental configuration for devices operating on Windows Server 2012.

Multigroup Two or more talkgroups that are combined into a permanent multigroup in trunked systems. Calls to the multigroup reach all members of the talkgroups that comprise the multigroup.

See also: Talkgroup

Multigroup Call A call addressed to all radios of a specific multigroup and its associated talkgroups.

Multilink Frame Relay Used to bundle multiple T1/E1 links together providing one logical link.

Multiselect (MSEL) A console feature that allows the console operator to select multiple talkgroups and transmit to all of them simultaneously.

Multisite Subsystem For system configuration, the simulcast subsystems and single transmit receiver voting subsystems are part of a multisite subsystem.

Multizone Capable A multizone capable (which can be used as a single zone as well) master site configuration with up to five virtual management servers, a redundant Zone Controller (ZC), and transport equipment.

Multizone-Level Operation or function that operates across zone boundaries.

NEC Unified Communications Manager (UCM) Also called the IP PBX server in the Enhanced Telephone Interconnect feature in an ASTRO® 25 system.

Synonym: IP PBX Server

Narrow Band (NB) Federal Communications Commission (FCC) term to refer to one voice path in 12.5kHz of spectrum.

Network Address Translation (NAT) A functional process used to coordinate the radio network infrastructure IP plan with IP plans used outside the radio network infrastructure.

Network Attached Storage (NAS) A hardware storage device used to support Backup and Restore services providing an off-site archive for backing up Virtual Management Server platforms.

Network Element (NE) A physical component of the system that is managed.

Network Fault Management (NFM) Refers to processes and technologies that provide the operator and system manager with tools needed to identify and possibly correct faults within the communication system and recover from network failures.

Network Interface Barrier (NIB) The set of hardware and software components providing boundary enforcement and attack detection network security features. The NIBs safely enable use of the system's defined interfaces for integrated data, network management, computer-aided dispatch, and billing.

See also: Customer Enterprise Network, Radio Network Infrastructure

Network Interface Card (NIC) A generic term for a networking interface card used to connect a device to a network. The NIC is where the physical connection to the network occurs. MCC 7500E Dispatch Console installed on HP Z2 mini platform supports external USB 3.0 NIC attached to the console computer. Dual NIC can

be used in both redundant and non-redundant switch configuration

Network Layer Layer 3 of the Open Systems Interconnection (OSI) model. This layer responds to service requests from the Transport Layer and issues service requests to the Data Link Layer. The Network Layer provides the functional and procedural means of transferring variable length data sequences from a source to a destination through one or more networks while maintaining the quality of service requested by the Transport Layer. The Network Layer performs network routing, flow control, segmentation/de-segmentation, and error control functions.

Network Management (NM) Network Management consists of a set of software tools that supports the management of a complex radio communications system and its component parts, which include radios, computers, and internet working components.

Network Management Client The Network Management Client is a Windows based PC running the various network management client applications accessing the network management servers

| **Abbreviation:** NM Client

Network Management Server Applications Private Network Management Servers that reside in virtual containers. The term "Network Management Server" applies to the application rather than the physical hardware. These server applications include: UNC, UEM, ZDS, ZSS, and SSS.

| **Abbreviation:** NM Server Applications
| **Synonym:** NM Servers

Network Management Subsystem (NMS) A collection of equipment whose function is to help provide for the management of the overall system. This would include the servers that support fault management, contain the databases and data distribution elements used for the system configuration information, and support performance and security elements of the network management solution. In addition, this includes the client software used to access the above servers and, which can typically be run from various locations in the system.

| **Abbreviation:** NM Subsystem

| **Synonym:** Network Management System

Network Management User A person who helps to administer the system through exercising of the FCAPS functionality of the Network Management Subsystem (NMS) from one of the appropriate Network Management (NM) client applications.

| **Abbreviation:** NM User

Network Policy Server (NPS) A server used for Remote Access Dial In User Service (RADIUS) authentication.

Network Time Protocol (NTP) A protocol designed to time synchronize devices on a network. Network Time Protocol (NTP) can be used to provide a time and date reference to all IP connected network elements (NTP clients) that support the NTP protocol. NTP can manage time and/or network clock synchronization in an access point-managed network environment.

Non-Tactical Mode A mode of radio operation that determines how a radio behaves in an emergency situation. In non-tactical mode (also called revertive mode), the radio reverts to a pre-configured "emergency" talkgroup to issue an emergency alarm or call.

| **Synonym:** Revertive Mode

Non-Volatile Memory (NVM) Non-volatile memory, nonvolatile memory is computer memory that can get back stored information even when not powered.

Object A logical component of the system that is managed. For example, the Radio Network Gateway (RNG) is an object associated with the Packet Data Gateway (PDG) Network Element. Objects can represent a system device (such as a radio) or device connectivity (such as InterZone Control Path).

Object IDentifier (OID) Uniquely identifies managed objects in a Management Information Base hierarchy. Generally, an OID is a long sequence of numbers, coding the nodes, separated by dots used for the creation of Device Definition Package (.ddp) files. Top-level MIB object IDs (OIDs) belong to different standard organizations. Vendors define private branches,

including managed objects, for their own products.

OmniLink Any system that utilizes the 3600 control channel protocol in a system that consists of multiple zones. OmniLink systems require a SmartX Site Converter and site gateway to interface with a current ASTRO® 25 radio system.

Open Shortest Path First (OSPF) A routing protocol that uses link state routing algorithm to advertise routing tables to other devices in the network.

Open Systems Interconnection Reference Model (OSI) The Open Systems Interconnection model (OSI) is a conceptual model that characterizes and standardizes the internal functions of a communication system (typically a network communication system) by partitioning it into abstraction layers. The model is a product of the Open Systems Interconnection project at the International Organization for Standardization (ISO). The model groups communication functions into seven logical layers.

Operating System (OS) A complex set of programs that control, assist and supervise all other programs run on a computer.

Operations Support System (OSS) Servers and applications for centrally managing the network infrastructure.

Optocoupler A passive device that combines a light source and a photosensitive detector. In the optocoupler, or photon coupled pair, the coupling is achieved by light being generated on one side of a transparent insulating gap and being detected on the other side of the gap.

Other Band Trunking (OBT) A channel assignment protocol used in the VHF and UHF bands where there is no fixed Tx to Rx repeater offset frequency. Trunking systems typically use a standard 800 MHz full range of frequencies. Other band trunking uses frequencies outside of this standard trunking range. These other frequency ranges include: 700 MHz, VHF (136-174 MHz) and UHF (380-470 MHz and 450-520 MHz).

Out-of-Band Management Provides serial access (RS-232) to network devices through the console ports for maintenance purposes.

Outbound Call A call generated from dispatch consoles and destined outbound to a Mobile Subscriber (MS).

Outbound Function Initiated by the Radio Control Manager (RCM) user from the RCM and sent to a target radio.

Outbound Signaling Packet (OSP) A data packet sent from the Zone Controller (ZC) to the radio, which contains the channel assignment and service information for the radio to access a site within the zone.

Over The Air (OTA) Another term for wireless communication.

Over-The-Air-Programming (OTAP) An ASTRO® 25 Integrated Voice and Data (IVD) service for programming subscriber units over the ASTRO® 25 IVD air interface.

Over-The-Air-Rekeying (OTAR) ASTRO® 25 systems with the OTAR feature enable you to rekey subscribers at their current physical location by using over-the-air commands. This means that you do not have to obtain the subscriber and connect it directly to the Key Variable Loader (KVL) for rekeying.

Over-The-Ethernet-Keying (OTEK) ASTRO® 25 systems with the OTEK feature provide key management for consoles through the Key Management Facility (KMF), which is installed on a Customer Enterprise Network (CEN).

p/4 Differential Quadrature Phase Shift Keying A modulation technique; p/4 indicates 90° out of phase angles.

Abbreviation: p/4 DQPSK

P25 Phase 1 A deployment phase for a suite of standards established by APCO for the manufacturing of interoperable digital two-way wireless communications products. Phase 1 standards focuses on FDMA operation for a 12.5 kHz bandwidth.

P25 Phase 2 A deployment phase for a suite of standards established by APCO for the manufacturing of interoperable digital two-way wireless communications products. Phase 2 standards focuses on FDMA operation for a 12.5 kHz bandwidth and TDMA operation for a 6.25 kHz bandwidth for improved radio frequency spectrum utilization.

PDEG Encryption Unit A device that provides two network interfaces, which effectively splits the Customer Enterprise Network (CEN) into two subnets: the CEN red subnet and the CEN black subnet. The CEN's red subnet is considered the trusted subnet and the black subnet is considered untrusted. Thus, data is encrypted when passing through the black subnet. The PDEG is therefore a multi-homed device in that it supports two unique IP addresses for its red subnet interface and on its black subnet interface for Encrypted Integrated Data (EID) services. A separate unique IP address for each redundant PDEG is also supported on either the black or red subnet interface (as configured) for key management services with a Key Management Facility (KMF).

PROM Programmable Read-Only Memory

PRX 7000 Console Dispatch Status In a PRX 7000 Console Proxy, the Console Dispatch Status application displays a list of MCC 7100 or 7500E Dispatch Consoles connected to the PRX 7000 Console Proxy, along with the quality of their connection (link health).

PRX 7000 Console Proxy An application that converts multicast audio packets (delivered inside the ASTRO® 25 RNI) to unicast audio packets and sends them outside of the ASTRO® 25 RNI to an MCC 7100 or 7500E Dispatch Console.

PTT-ID Access The form of access to a new or existing (for example, group) call where it is required that the accessing Mobile Subscriber (MS) send a Push-to-Talk (PTT) request with UNIT ID (on the control channel) before it may be granted access.

Packet Data Channel (PDCH) The radio frequency resources used for the IP transport of data in an ASTRO® 25 trunked communication system.

Packet Data Gateway (PDG) An optional device that supports packet data services for the radio system. The PDG includes cards that provide an interface between the ASTRO® 25 infrastructure and a packet data host network. The PDG is made up of two applications: Packet Data Router (PDR) and Radio Network Gateway (RNG).

> **See also:** Packet Data Router, Radio Network Gateway

Packet Data Router (PDR) The Packet Data Router ia an application that provides a logical interface between the GPRS Gateway Support Node (GGSN) router and the Radio Network Gateway (RNG). The PDR forwards outbound data traffic to the RNG.

> **See also:** Radio Network Gateway, Packet Data Gateway

Packet Switching The process of routing and transferring data by means of addressed packets so that a channel is occupied during the transmission of the packet only, and upon completion of the transmission the channel is made available for the transfer of other traffic.

Packet-Switched Networks Packet-switched networks break messages apart into packets and tag each packet with source and destination addresses. Packet-switching has several advantages: packets can be routed around network problems, they can maximize link efficiency by making optimal use of bandwidth, and they can be more cost effective than leased lines.

Paging (Integrated) The Integrated Paging feature provides the ability for MCC 7500 Dispatch Console users to manage and send manually-created and pre-defined pages to radio users. Pages may be analog tone pages or system pages (trunked call alerts are an example of a system page).

Send Feedback

Participating Zone This type of zone contains one or more users who are involved in a call that is controlled by another zone.
|See also: Controlling Zone

Participating Zone Controller A Zone Controller (ZC) that is active in a call or busy, but that does not necessarily have overall control of the call.
|See also: Zone Controller

Patch A console feature that permits resources of different types to communicate directly.
|See also: Patch Call

Patch Call The act of routing a voice call from one group or conventional channel to other groups and/or dispatch console private calls or conventional channels. The patch operation is done through a dispatch console. For trunking talkgroups, the patch can be either regrouping (talkgroups in the patch are regrouped into a common supergroup) or non-regrouped (all talkgroups are assigned a separate RF resource) or a combination of both. Note that the "regroupable" capability is selectable on a talkgroup basis.

Patch Call Patch Reserve Mechanism that enables the console to add a talkgroup to the patch group.

Path Diversity A term used to describe the capability of a system to route information through alternate or multiple network paths to assure reliability. An example of a system that uses alternate paths is a system with redundant gateways. ASTRO® 25 systems use redundant gateways at the zone core and, as an option, the design can also implement redundant site gateways at the subsystem level. Redundant site gateways, together with redundant transport paths (T1s), provide higher reliability than the single gateway and single T1 implementation.

Peak Rate A probabilistic expectation of the number of arrivals in a specified amount of time. Both the probability and time period must be specified for this rate to be interpreted.

Peripheral Configuration Tool
Configures the audio input and audio output

devices used by the MCC 7100 IP Dispatch Console.

Permanent Virtual Circuit (PVC) A virtual circuit that is permanently available. The only difference between a PVC and a switched virtual circuit is that a switched virtual circuit must be re-established each time data is to be sent. When the data is sent, the circuit disappears. PVCs are more efficient for connections between hosts that communicate frequently.
|See also: Virtual Circuit

Personal Digital Assistant (PDA) The host component of the KVL 4000, responsible for controlling all operations of the device. It is a Motorola Solutions rugged hand-held computer operating Windows Mobile 6.5. The PDA model used as part of the KVL 4000 is MC55A0.
|See also: Key Variable Loader, Security Adapter

Personal Identification Number (PIN)
A unique number used to identify a customer when using credit and debit cards in ATMs, etc. PINs are normally four-to-six digits long and are to be kept secret by the user.

Physical Identifier (PID) A physical memory slot where a key variable is stored.

Physical Layer Layer 1 of the OSI model, the lowest of seven hierarchical layers. The Physical layer performs services requested by the Data Link Layer. The major functions and services performed by the physical layer are: a.) establishment and termination of a connection to a communications medium. b.) participation in the process whereby the communication resources are effectively shared among multiple users, for example, contention resolution and flow control. c.) conversion between the representation of digital data in user equipment and the corresponding signals transmitted over a communications channel.

Point to Point (PTP) A broadband wireless connectivity solution that is deployed in the ASTRO® 25 system. It is used to create a wireless bridge between sites and/or devices where T1/E1 cables would normally be used.

Point-to-Point Protocol (PPP)

Point-to-Point Protocol over Ethernet (PPPoE) A network protocol for encapsulating PPP frames inside Ethernet frames. PPPoE provides authentication, encryption, and compression.

Abbreviation: PPP over Ethernet

Polling Sends what is known as a "hello" command to each device in the system as a way to cause subscribers to transmit delayed acknowledgements of group-delivered, Over-The-Air-Rekeying (OTAR) messages rather than waiting for the subscribers to respond on their own with Push-To-Talk (PTT) commands.

Power Efficiency Package Available for supported GTR 8000 base radios and GPW 8000 receivers, provides low standby power consumption functionality designed for deployments using power generated from alternate energy sources such as solar or wind. The Power Efficiency Package hardware includes a modified transceiver, power amplifier, power supply, fan, and optional TCXO transceiver option card along with additional software configurations through the Configuration/Service Software (CSS).

Power Supply (PS) Electronic device that supplies electric energy to an electrical load.

Presence Entity A subscriber unit Device ID and User Name. That is, they are entities for which a Watcher may want presence status and attribute information including the IP address with which the Presence Entity is associated.

Presence Service A service that provides the ability for applications in a network to obtain and dynamically track information about the attributes and status of subscriber units.

Presentation Layer Layer 6 of the OSI model. This layer responds to service requests from the Application Layer and issues service requests to the Session Layer. The Presentation Layer relieves the Application Layer of concern regarding syntactical differences in data representation within the end-user systems.

Primary Prime Site The prime site in a Simulcast Subsystem where two site controllers resides in a geographically separate and redundant (primary) prime site to support the geographically redundant prime site feature where the primary prime site and secondary prime site interface over an Intra-Prime Site link to ensure wide area trunking operation is still possible upon possible failure of the entire Primary Prime Site.

Primary Talkgroup A talkgroup to which a radio is attached by default. This is the talkgroup that the radio user primarily uses for communication. The primary talkgroup is assigned in the Provisioning Manager (PM).

Private Branch eXchange (PBX) A telephone switch that is operated privately within a confined setting, instead of publicly. Most large offices have a PBX to handle intraoffice calls and to connect calls to and from the Public Switched Telephone Network (PSTN).

Synonym: Private Automatic Branch Exchange

Private Call Ring The maximum length of time in seconds that the target radio is given to respond to a private call request.

Synonym: Ring Time

Private Radio Network Management Suite The PRNM Suite is a set of software applications or tools developed by Motorola Solutions to manage the radio system and its components, such as resources, users, and infrastructure.

Abbreviation: PRNM Suite

Profile In the Provisioning Manager (PM), this object maps a group of attributes or data common to a number of users who perform a particular function. Profiles can also act as templates to create new records.

Programming Over Project 25 (POP25) The Programming Over Project 25 feature allows an organization to configure a radio remotely from the enterprise network by sending a sequence of commands over-the-air through the ASTRO® 25 Integrated Voice and Data (IVD) system.

Protocol Data Unit (PDU) The unit of data in the OSI Reference Model containing both

protocol-control information and user data from the layer above.

Protocol Independent Multicast (PIM)
A type of IP multicasting routing.

Provisioning Manager (PM)
A network management application that creates and configures radio, console, group and user objects, and conventionally configures and provisions the ASTRO® 25 network devices.

Provisioning Manager Auditing
A feature that provides a convenient way of recording configuration changes in the system, which allows the administrator to track configuration data modifications and audit the system configuration data and its users. In the Provisioning Manager, audit records store the details of a user action, such as a description of the event, the time and date of the action, its initiator, source, type, or agency, providing the values from before and after the action.

PuTTY
A utility certified for initiating interactive sessions in Secure SHell (SSH) or other protocols. PuTTY can be installed on Windows-based devices.

Public Switched Telephone Network (PSTN)
The telephone network, traditionally the wired network, that requires the public user to address or dial the destination using a "telephone number" for a temporary connection.

Pulse Code Modulation (PCM)
A form of modulation in which the modulating signal is sequentially sampled, quantized, and coded into a binary form for transmission over a digital link.

See also: E1, T1

Pulse Per Second
Number of times per second that a pulse is transmitted. Used to measure Pulse Repetition Frequency (PRF).

Abbreviation: PPS

Pulse Width Modulator Converter
Used to a digitally encode analog signal levels.

Abbreviation: PWM Converter

Pure ALOHA
A random access technique developed by the University of Hawaii in the early 1970s. In this scheme, a user wishing to transmit does so at will. Collisions are resolved by retransmitting after a random period of time.

Push-to-Talk (PTT)
A method by which a radio user initiates or joins a call. When the user presses the PTT button (also known as keying up), the radio sends data to the network infrastructure to request call services.

Push-to-Talk ID
An 8-digit alphanumeric ID sent to the zone controller to identify the radio and its permissions on the system.

Abbreviation: PTT ID

QPSKC Family
A form of digital modulation which can use a C4FM FM transmitter or a CQPSK AM transmitter with a Compatible Frequency Discriminator Detection (CFDD) compatible receiver. This modulation method is a blend of 4level Frequency Shift Keying (FSK) and p/4 DQPSK, which allows operation using either a transmitter with a frequency modulator using a class C power amplifier or a transmitter with an AM modulator using a linear class AB power amplifier. The CFDD compatible receiver is used for either transmitter.

QUad Integrated Communications Controller (QUICC)
The main processor for the Voice Processor Module (VPM), which serves as the main switching engine for the Network Interface Card (NIC). The PowerQUICC switches the 100BaseT Ethernet bus IP packets to/from the serial buses to the MACE devices. The QUICC is also responsible for receiving and sending control packets to/from a radio network.

Quadrature Amplitude Modulation (QAM)
A modulation method which transmits two message signals, or two digital bit streams, by changing (modulating) the amplitudes of two carrier waves, using the Amplitude Shift Keying (ASK) digital modulation or amplitude modulation (AM) Analog Modulation.

Quadrature Phase Shift Keying (QPSK)
A digital modulation technique using linear transmitter, a Phase Shift Keying (PSK) using four phase states.

Quadrature Phase Shift Keying – Compatible (QPSK-C) The fusion of linear Quadrature Phase Shift Keying (QPSK) and constant envelope Frequency Modulation (FM) for over the air compatibility and interoperability.

Quality of Service (QoS) Refers to the ability to provide differentiated priorities to applications, users, or data flows, or to guarantee a certain level of performance to a data flow. QoS may refer to certain characteristics of a network connection as observed between end points.

RAA Remote Analog Access

Synonym: Analog Remote Access

RF Cross Busy An RF Cross Busy condition exists when two repeaters or conventional channel stations with the same transmit frequency are physically too close to each other. If both transmit at the same time, their transmissions would interfere and the subscribers would receive unintelligible audio. The RF Cross Busy feature prohibits this condition by preventing two stations with the same transmit frequencies in overlapping coverage areas from transmitting at the same time.

RF Cross Mute Provides the dispatch console user with a way to specify and control what receive frequencies should be muted at an operator position when a transmit frequency on another conventional channel is the same as the receive frequency of the conventional channel being listened to, and the coverage area of the two conventional channels overlap.

Rack Unit (RU) A space 1.75 inches high in a mounting system, or rack, which is used to house electronic equipment. Standard rack widths are 19, 23, or 30 inches.

Radio A two-way communication device used for voice and data.

Radio Application Programming Interface (RAPI) A proprietary Motorola Solutions application programming interface used to communicate with, and control, a radio modem. RAPI supports Mobile Data

Communication (MDC) compatible services including Short Fixed Message, Long Fixed Message, and Emergency messages.

See also: Application Programming Interface

Radio Authentication A feature that prevents unwanted (and potentially dangerous) subscribers from accessing the network. Each subscriber radio attempting to access the network is verified by the system infrastructure to prove that they are genuine.

Radio Check A Radio Control Manager (RCM) command that checks the affiliation status of the radio in order to obtain current information, including the talkgroup, site, and zone of the radio. The Radio Check feature operates over the air and across zone boundaries.

Radio Command An outbound function initiated by a Radio Control Manager (RCM) user. Radio commands affect the behavior of or request information from the target radios and can control the behavior of radios anywhere in the system.

Radio Control Manager (RCM) A network management application that issues commands to radios and monitor events from radios. It can also be used to create, view, print, schedule, and export standard reports on RCM activity. This application is part of the Motorola Solutions Private Radio Network Management (PRNM) Suite.

See also: Private Radio Network Management Suite of Applications

Radio Frequency (RF) Part of the general frequency spectrum between the audio and infrared light regions (about 10 kHz to 10,000,000 MHz).

Radio Frequency SubSystem (RFSS) The RF infrastructure that is bounded by the five open APCO Project 25 interfaces and three standard computer network gateway interfaces. It is the RF equipment and related nonstandard peripheral equipment that provides a standardized RF communication channel. One of the APCO Project 25 interfaces is the Common Air Interface (CAI). For Motorola Solutions systems, the RF-Subsystem, or RFSS, equates to a "zone".

Radio ID A unique, individual ID that refers to a specific radio within a specific ASTRO/P25 system. Devices which are provisioned in different systems can have the same Radio ID. To provide a globally unique identifier for an ASTRO/P25 device, the WACN ID and System ID of the device's home system are used to create the device's SUID (Subscriber Unit Identifier). Radios must have a unique ID in order to communicate with other radios in the system. The assignable range is from 1 to 16,777,211.

Radio ID Filter Object An object in the Provisioning Manager (PM) that filters data based on the radios that a ZoneWatch user wants to monitor.

Radio Network Gateway (RNG) A processing module in the Packet Data Gateway (PDG) which provides a logical interface between the Packet Data Router (PDR) and radio frequency subsystem within a zone to support data calls to subscriber radios.

See also: Packet Data Gateway, Packet Data Router

Radio Network Infrastructure (RNI) Devices that constitute the Motorola Solutions radio network system excluding the De-Militarized Zone (DMZ) and the Customer Enterprise Network (CEN).

See also: Customer Enterprise Network, De-Militarized Zone

Radio Serial Number The unique serial number assigned to a specific radio on the system. This unique serial number is part of the radio's programming.

Radio Set Identifier (RSI) Each radio needs a unique RSI assigned to it in order for Over-the-Air-Rekeying (OTAR) messages to be directed to the proper radio.

Radio Viewer A window used in the Affiliation Display application to display the current affiliation and deaffiliation information for an individual radio by ID or alias.

Random Access Memory (RAM) Computer memory used to store data and programs on a temporary basis. Data in RAM can be accessed in random order, and quickly written and read.

Random Seed (RS) A random number used to generate authentication keys.

RapidIO (RIO) An architecture that defines a high-performance, packet-switched, interconnect technology designed for passing data and control information between microprocessors, Digital Signal Processors (DSPs), communication and network processors, system memory, and peripheral devices within a system.

Real-time Transport Control Protocol (RTCP) Real-time Transport Control Protocol

Real-time Transport Protocol (RTP) A UDP-based protocol for transporting media streams.

Receive Autokey A feature used on trunking systems to allow a device to automatically select the proper key from between two keysets for use in decrypting a received call.

Receive Diversity An option available for APCO 25 TDMA operation. It uses two antennas (Branch A and Branch B) to improve the inbound (receiver) signal quality to the GTR 8000 base radios for incoming TDMA calls.

Synonym: Dual Branch Receive Diversity

Received Signal Strength Indication (RSSI) A value representing the power level in a received radio signal strength measured in dBm.

Receiver (Rx) An electronic device that converts a signal from a modulated radio wave into usable information.

Receiving Zone The zone that receives a radio request. This zone may or may not become the controlling zone for a call.

Receiving Zone Controller The Zone Controller (ZC) that receives a call request.

See also: Zone Controller

**Recovery Random Holdoff Time
(RRHOT)** Time sent by the Zone Controller
(ZC) to radios after a site returns to (Wide Area)
WA trunking at WA sites that are adjacent to the
site returning to the WA trunking mode. A radio
that detects a site level recovery is allowed to
roam back to the recovered site in a random time
period up to the time specified by this timer.

Redundant Refers to two pieces of hardware
that operate in an active/standby configuration
for protection against a single point of failure in
the system.

Reference Distribution Module The
GPB 8000 Reference Distribution Modules
(RDM) provide integrated Ethernet LAN
switching, eliminating the external LAN switches.
The RDM also provides redundant integrated site
reference distribution utilizing two GPS receivers
as timing reference sources to all the base radios
at the remote site, eliminating the need for the
Simulcast Site Reference at the remote site.

Reference Vocoder The particular
implementation of the APCO Project Vocoder
available from Digital Voice Systems
Incorporated as Model VC-20-PRJ25. This is the
agreed upon reference implementation of the
APCO Project 25 Vocoder.

Refresh A command used to update data on a
window.

Registration The process by which a radio
sends radio site information to the Zone
Controller (ZC) when powering up or moving
between sites.

Registration Area (RA) The location in
which a subscriber radio registers with the
system.

Regroup The act of consolidating multiple
groups into a single, temporary group
(supergroup) so that all talkgroups in the
supergroup share the same RF resource and,
hear a common audio stream.

Rekeying Loading of a key into a subscriber
or group of subscribers. Rekeying is done using
either the Key Variable Loader (KVL) or Over-

the-Air-Rekeying (OTAR) through a Rekey
command in a Full Update.

Remote Access Server A network access
component device typically providing remote
access to a master site.

Remote Console Site For the MCC 7500
Dispatch Console subsystem, this is a console
site that is not connected to the Master Switching
Office (MSO) core transitional LAN. The remote
console site can be connected to the MSO
through one of a variety of possible WAN link
types such as X.21 links, T1 links, and E1 links.
The configuration of the console site's link type
by a Network Management (NM) User
determines whether the console site is a remote
console site or a core console site.

Remote Site A remote site could be an RF
site, OSS site, NMS site, console site, or Mobile
Switching Office (MSO).

Remote Terminal Unit (RTU) An
electronic device that is controlled by a
microprocessor. It is used to transmit data to
Supervisory Control and Data Acquisition
(SCADA) systems.

Rendezvous Point (RP) A router in the
network that is managing a particular multicast
group.

Repeat The act where the system retransmits
a Mobile Subscriber's (MS's) audio signal.

Replication Sharing data between redundant
resources, such as software or hardware
components, so as to ensure consistency
between redundant resources. Replication
involves copying the entire database or subsets
of the database to other servers in the network.

Requested Access (RA) Requested
access by a subscriber radio for a Packet Data
Channel (PDCH) is necessary when a PDCH is
not already set up and available for the site, and
therefore, a request for a PDCH is established.

Requesting Radio A radio requesting
service on the system.

Requesting Zone The zone to which a radio sending inbound event information or requesting a call or service is currently affiliated.

Resource A general term that refers to a radio channel and its associated feature set as grouped and arranged into a graphic tile on the computer monitor. A resource may be a talkgroup or private call window.

Resource Configuration API The Resource Configuration API is a set of functions used to retrieve configuration and aliasing information pertaining to the dispatch system.

Resource IDentifier (RID) A logical construct used to uniquely identify communications systems resources.

| See also: Universal Resource IDentifier

Resource Manager Essentials (RME) A suite of Web-based applications that manage the LAN switches and the Multilayer Switch Feature Card (MSFC) router cards on the LAN switch.

Resource Voting The process of determining which simulcast subsystem channels are in service and which channels are out of service.

Resource Window For the MCC 7500 Dispatch Console subsystem, the place in the Graphical User Interface (GUI) where the user may choose to monitor a resource.

Retry Opportunities This feature guarantees the delivery of an Over-the-Air-Rekeying (OTAR) command that was not acknowledged by a secure device when it was originally sent. When a non current subscriber with OTAR commands pending registers on the system, the Key Management Facility (KMF) retries sending the pending commands.

Router A router (network router) is a device used to forward data packets between computer networks and are used to direct network data traffic on the internet. A router can choose the best path for directing network traffic based on data found in the Network Layer (layer 3) of the OSI network architecture model. Routers connect networks together, extend the cabling range of a network, and organize the topology of a network into subnets.

Ruthless Preemption An emergency handling mode that allows an emergency call to terminate the call with the lowest priority at all sites involved to handle the emergency.

S2500 Site router that can support up to four 4-wire interfaces.

SCI Serial Communications Interface

SDM3000 A hardware platform used for the SDM3000 Network Translator (SNT), SDM3000 Remote Terminal Unit (SDM3000 RTU), and the MCC 7500 Aux I/O Server.

SNT SDM3000 Network Translator
| See also: SDM3000

SMARTNET® (SN) Any system that utilizes the 3600 control channel protocol, but does not have a zone core. Instead, this solution provides for a single site controlled by a single site controller. SMARTNET® systems must be upgraded to a SmartZone® system and connect to a SmartX Site Converter and site gateway to interface with a current ASTRO® 25 radio system.

SNMP Community Strings An SNMP community string is a text string that acts as a password. It is used to authenticate messages that are sent between the management station (the SNMP manager) and the device (the SNMP agent). The community string is included in every packet that is transmitted between the SNMP manager and the SNMP agent. After receiving an SNMP request, the SNMP agent compares the community string in the request to the community strings that are configured for the agent.

SP Service Pack

SPI Serial Peripheral Interface

SPROUT A folder that is populated if a device is unable to be discovered within the Unified Network Configurator (UNC). When all devices are configured properly, nothing appears in this folder. The Unified Network Configurator Wizard

(UNCW) features a Reprocess Lost and Found feature used to troubleshoot device configurations.

STR 3000 Base Radio Subsystem A rack of equipment containing power supplies, distribution panels, and STR 3000 simulcast base radios.

STR 3000 Simulcast Base Radios A base station capable of linear simulcast operations.

Scalable Adaptive Modulation (SAM) Telecommunications Industry Association (TIA) standard modulation that supports 700MHz High Speed Data; 50-150kHz.

Schedule Manager A tool in EMC Smarts™ Network Configuration Manager that approves any remedy jobs that have been created as part of the configuration of devices within the network.

secmoto The Windows administrator account set up by Motorola Solutions for Windows 7 and Windows 10-based devices.

Secondary Control channel Broadcast (SCB) Information sent over the control channel at a specific site. Information within the site control boards inform the subscriber units about the existence, and status of secondary control channels at the current site.

Secondary Prime Site The prime site in a Simulcast Subsystem where one site controller resides in a geographically separate and redundant (secondary) prime site to support the geographically redundant prime site feature where the primary prime site and secondary prime site interface over an Intra-Prime Site link to ensure wide area trunking operation is still possible upon possible failure of the entire Primary Prime Site.

Secure Database A database in encryption mode which holds all of the encryption keys.

Secure File Transfer Protocol (SFTP) A program that uses Secure SHell (SSH) to transfer files. Unlike standard FTP, it encrypts both commands and data, preventing passwords and sensitive information from being transmitted in the clear over the network. There are two ways you can use SFTP: graphical SFTP clients and command line SFTP.

Secure Protocol Operation Refers to the usage of SSH, SCP, or SFTP protocols.

Secure Voice (SV) Secure Voice is an overlay service that allows secure (digitally encrypted) communication between dispatch consoles and radio units in the field. Encryption/decryption services are provided by the system endpoints: console, logging interface, and field radio units, so communication remains secure between the source and the destination.

Security Adapter An integral component of the KVL 4000, providing secure storage of encryption keys, cryptographic operations, and port access for the KVL 4000.
> **See also:** Key Variable Loader, Personal Digital Assistant

Security ID (SID) A value used to authenticate access to an application.

Select Audio Destination The select speaker on a dispatch console on which audio is presented. Select Audio Destination is determined on a talkgroup by talkgroup basis.

Select Speaker The speaker at a dispatch console where audio from the selected trunking talkgroup or conventional channel is heard (the selected talkgroup/channel is the one that the dispatcher would transmit on).

Selective Inhibit A Radio Control Manager (RCM) command that inhibits a radio so that it cannot communicate on the system.

Selector Lock A Radio Control Manager (RCM) command that locks the selector on a radio so that the radio user cannot change talkgroups.

Sending Loudness Rating (SLR) An International Telecommunications Union (ITU) specification that defines the level input to the system, taking into account variations and gains from the user interface point.

Service Interface Barrier Hardware and software components providing user authentication and access control for service personnel to network resources.
| **See also:** Core Security Management Server

Service Request Any voice or non-voice request on the control channel such as Push-to-Talk (PTT), call alert, or status.

Serving GPRS Support Node A node that is responsible for the delivery of data packets from and to the mobile stations within its geographical service area. Its tasks include packet routing and transfer, mobility management (attach/detach and location management), logical link management, and authentication and charging functions.
| **See also:** Packet Data Gateway, General Packet Radio Service, Gateway GPRS Support Node

Session Authentication Information (SAI) Session authentication material that contains the Session Authentication Key (KS) and Random Seed (RS).

Session Authentication Key (KS) A key used to authenticate a radio by the system.

Session Initiation Protocol (SIP) A protocol used for setting up, tearing down, or modifying an existing media connection for VoIP calls. Note that Real-time Transport Protocol (RTP) is used for media.

Session Layer Layer 5 of the OSI model. This layer responds to service requests from the Presentation Layer and issues service requests to the Transport Layer. The Session Layer provides the mechanism for managing the dialogue between end user application processes. It provides for either duplex or half-duplex operation, and establishes checkpointing, adjournment, termination and restart procedures.

Shared Ethernet LAN A shared Ethernet LAN (10Base-2 LAN) is a system in which all transmitting stations on the LAN share the same common transmission facility. Stations transmit when they have data to send and recover from the failures that occur when two stations transmit simultaneously. Because of the contention that results when a number of stations share the

same transmission facility, all the transmission capacity is not always available to two stations that need to communicate.

Short Subscriber Identity (SSI) The network specific portion of a TETRA Subscriber Identity. An SSI is only unique within one TETRA subdomain (one TETRA network).

Signal-to-noise ratio A measure that compares the level of a desired signal to the level of background noise. It is defined as the ratio of signal power to the noise power, often expressed in decibels.
| **Abbreviation:** s/n

Simple Network Management Protocol (SNMP) An application-layer protocol that facilitates the exchange of management information between network devices. It is part of the Transmission Control Protocol/Internet Protocol (TCP/IP) protocol suite.

Simple Network Time Protocol (SNTP) An adaptation of the Network Time Protocol (NTP), which is used to synchronize computer clocks in the Internet.

Simplex Operation of a radio system in only one direction at a time i.e. transmit or receive. Most common with conventional radio use.

Simulcast A two-way radio system topology that uses multiple transmitters on the same frequency in separate locations to transmit the same signal. The simulcast topology is desirable in areas where frequencies are scarce, and in areas where physical barriers (e.g., mountains and buildings) can cause deficiencies in signal coverage. This system may contain circuit-based or IP-based simulcast technology. Also known as simultaneous broadcasting.

Simulcast Prime Site The site where audio information is received and distributed in a simulcast subsystem. The main equipment includes the site controller and comparator.

Simulcast Remote Site The sites where the simulcast base stations are located.
| **Synonym:** Subsite

Simulcast Site A simulcast subsystem. The simulcast site is functionally equivalent to a single site as viewed by the master site.

Single Sign-On (SSO) A property of access control of multiple related but independent software systems. With this property, a user logs in once and gains access to all systems without being prompted to log in again at each of them.

Single Site (SS) A single radio site

Single Transmit Receiver Voting Subsystem A radio frequency subsystem providing radio communication support in the VHF/UHF frequency bands. An STRV subsystem contains a single transmit site and at least one or more STRV remote sites. An STRV subsystem must include an STRV prime site, an STRV transmit remote site (if not already colocated with the STRV prime site), and STRV receive-only remote sites.

Abbreviation: STRV Subsystem

Single Zone Non-Redundant A single zone master site configuration with a single Virtual Management Server (VMS) containing the non-redundant Zone Controller (ZC) and Network Management (NM) applications. This configuration is equipped in non-redundant transport equipment.

Single Zone Redundant A single zone master site configuration with a second Virtual Management Server (VMS) containing the redundant Zone Controller (ZC), and added redundant transport equipment.

Site A physical location that contains equipment to receive, process, and transmit calls in an RF system. Typically, equipment at a site includes a controller, base stations, and T1/E1 multiplexers.

Site Access Denial Rejection that occurs when a radio or its affiliation group do not have access to a site.

Site Control Path (SCP) The path between the Zone Controller (ZC) and the Site Controllers (SC). Also a Unix command used to copy files and directories securely between remote hosts without starting an FTP session or logging into the remote systems explicitly.

Site Controller (SC) The control interface between a site and the zone controller. The site controller manages and controls the site and channels, administers broadcasts, provides a time and frequency reference signals to the base radios, monitors the base radios and RFDS equipment. It can also provide redundant site control support to the site.

See also: Base Transceiver Subsystem

Site Gateway Interconnects devices and networks within a system.

Site Link Relay Module A component of the ISSI.1 Network Gateway application, which resides on a Generic Application Server (GAS).

Site Reference Signal An output signal generated from a highly stable oscillator.

Site Viewer A window used in the Affiliation Display application to display the current affiliation and deaffiliation information for each site within a zone.

Site Trunking Local trunking operations after remote site and audio link failures. The site controller performs all call processing. No communication links exist to other sites.

Slotted ALOHA A random access technique extending pure ALOHA to the case in which messages may only be transmitted in slotted intervals of time.

See also: Pure ALOHA

Small Fleet KMF A smaller version KMF that is installed on a PC running Windows 7. Small Fleet KMF can support up to 500 Radios and/or Secure Phones, 3 Agencies, and 3 simultaneous user connections.

See also: Key Management Facility

SmartX Site Converter A device based on Voice Processor Module (VPM) hardware designed to allow communication between subscriber radios at existing 3600 RF sites and an ASTRO® 25 Integrated Voice and Data (IVD) system. It enables the continued use of 3600 RF

sites and subscriber radios on an ASTRO® 25 system, which allows for the gradual replacement of equipment that is at or near end of life with the newer technology and operational capabilities of an ASTRO® 25 system.

SmartZone® (SZ) Any system that utilizes the 3600 control channel protocol in a system that consists of a zone core and at least one RF site. Audio format can include both ASTRO® 25 Common Air Interface (CAI) and analog. SmartZone® systems require a SmartX Site Converter and site gateway to interface with a current ASTRO® 25 radio system.

SnapShot A Radio Control Manager (RCM) command that issues a database inquiry to the RCM database to retrieve the last known status of a radio, including site, zone, talkgroup, and recent commands to the radio. SnapShot does not initiate a direct communication with the radio.

Software Download Manager (SWDL) An application that can transfer only, install only, or transfer and install new software to devices in either clear or secure mode. The new software can be installed either locally at a site or on the Network Management Subsystem (NMS).

Solutions Support Center (SSC) The Solutions Support Center uses tools and remote diagnostics to monitor and support customer solutions. Motorola SSC uses specialized monitoring tools and remote diagnostics. The Network Monitoring System manages/filters/correlates event volume to 10-15% of raw alarm data and identifies important alarms out of the large number of alarms generated from today's networks. The specialized tools allow MSI to view the actual device that is malfunctioning and capture a log summary of date, time and possible cause of the event.

Sound Pressure Level (SPL) Loudness of speech, defined in dB.

Source Dispatch Application The dispatch application that is interfering with the audio at the destination dispatch application (i.e. the source of the undesired audio).

Spanning Tree Protocol (STP) Spanning Tree Protocol is a network protocol that prevents

bridge loops and the resulting broadcast traffic that potentially could degrade or halt traffic by ensuring a loop-free topology by assigning traffic to go through only one bridge to handle a message sent between two computers within the network.

Standalone Core An unpopulated zone which is present when devices are shared between a primary core and a backup core at a master site. The unpopulated second zone is the "standalone core" due to the second zone's IP address space being utilized even though there are no zone controllers, RF sites, consoles, etc. in that zone. Also called a phantom zone. The Standalone Core terminology is preferred to phantom zone.

Synonym: Phantom Zone

Standby Site Controller A site controller that does not have control of the external interfaces shared by redundant site controllers. Also referred to as being in the "Standby" or "Offline" state.

Star Topology Another type of LAN topology, generally known as a star topology (also referred to as 10/100Base-T), is one in which the end points on a network are connected to a common central device by point-to-point links. The information arriving at the common device is broadcast to all the end point devices; each device is responsible for determining whether the information is intended for it or not. Characteristics of the star topology include: twisted pair cable is used for the links between the central and end devices, link isolation is used —if a fault occurs on one link, the other links remain unaffected, a hub serves as the central device, and the end devices share the available bandwidth.

Static RP Statistically configured set of Rendezvous Points (RPs) in the Protocol Independent Multicast (PIM) routing system of a multizone system. A single file maintained by Network Management describes all possible IP multicast ranges and their assigned RPs, ensuring consistency of the static RP set across the entire system. Each router executes the commands in this file at initialization time. The file is called "staticRP.cfg."

See also: Rendezvous Point

Static Random Access Memory (SRAM)
A type of RAM that holds data in a static form, that is, as long as the memory has power. Unlike dynamic RAM, it does not need to be refreshed. Static RAM

Abbreviation: Static RAM

Static Routing
Static routing is often used in simple networks in which routes can be pre-configured and do not change during system operation. When static routing is used, routing tables in the routers are pre-configured and are not dynamically updated. Static routing is often used in the routers that are connected to the intrazone site links.

Static Sub-Band Restriction (S-SBR)
A channel utilization method that determines the appropriate channel to use at an RF site when both 700 MHz and 800 MHz channel resources are available and is based on the SBR status of the talkgroup. To support talkgroup calls for SBR radios, you can configure a talkgroup to use S-SBR for channel selection (utilization).

Station Control
A capability that allows the MCC 7500 Dispatch Console to command an entity such as a base station, attached to a conventional channel to perform some function, for example, turn repeat on.

Status Commands
Radio Control Manager (RCM) outbound functions that request information from the Zone Controller (ZC) or radios, include Radio Check and Zone Status.

Status Event
A Radio Control Manager (RCM) event type that allows a radio user to send a predefined radio status message over the air without talking. This event quickly informs the user of the radio's current operating condition without interrupting normal talkgroup communication. (A properly configured radio is required.)

Steady State
The average arrival rate of some event. The distribution of the inter-arrival times of the events is exponentially distributed.

Store and Forward (S&F)
This feature enables the Key Variable Loader (KVL) to store responses to Key Management Messages (KMM) commands it receives from the Key Management Facility (KMF). The messages are forwarded to the KMF the next time the KVL connects to the KMF.

See also: Key Management Facility, Key Variable Loader

Storm Plan
A Radio Control Manager (RCM) command that issues a set of predefined commands, which are easily executed in an emergency or expected situation, such as a parade. The details of Storm Plans are defined and set up using the Provisioning Manager (PM) and distributed to the RCM.

See also: Radio Control Manager

Sub-Band Restricted (SBR)
Subscriber radios that can only operate in a portion of a frequency band or a specific frequency band are considered "restricted" to that portion of the frequency band. While actually not "sub-band" restricted, subscriber radios that only operate in the 800 MHz band in systems that provide both 700 MHz and 800 MHz channel resources may be considered "restricted" to that band and identified as SBR radios. There are static and dynamic SBR radios.

Subnet Discovery Wizard
A tool used to simplify the process of discovering devices in the network by creating Unified Network Configurator (UNC) discovery jobs based on Discovery Types.

Subnet Mask
A 32-bit number expressed as four octets used to identify and separate the network portion and host portion of a 32 bit IP address. For example, a subnet mask of 255.0.0.0 identifes the first octet (255) as the network portion and the last three octets (0.0.0) as the host portion for a Class A IP address. This subnet mask for the Class A IP address (255.0.0.0) designates a relatively larger number hosts when compared with the subnet mask for the Class C IP address (255.255.255.0) which designates a relatively larger number of networks and a smaller number of hosts. To extend the network portion of an IP address of given Class, subnetting can be used to divide the host portion of the IP address into two or more subnets where part of the host address is reserved to identify the particular subnet. For example, if you want to use the entire third octet of an IP address to represent the subnet-number, you need to specify a subnet mask of 255.255.255.0.

Subscriber A user of telecommunications services who attaches to the network through a MS and receives the telecommunication service treatment specified for subscribers.

Subscriber Access Code (SAC) MAC layer MSU address, 12 bits.

Subscriber Group IDentifier (SGID) A subscription used by a group of users when it is authenticated by the infrastructure. It consists of the Wide Area Communications Network (WACN) ID, System ID, and Group ID, 48 bits.

Subscriber Unit (SU) A terminal unit that typically communicates wirelessly with the fixed network.

Synonym: Mobile Subscriber, Mobile Subscriber Unit

Subscriber Unit Identifier (SUID) A programmed subscription used by the Subscriber Unit (SU) when it is authenticated by the infrastructure. It consists of the Wide Area Communications Network (WACN) ID, System ID, and Subscriber ID.

Supervisor Takeover A feature that allows a supervisor in a dispatch room to control whether or not a non-MCC 7500 Dispatch Console, (for example, a deskset) can access an analog conventional base station that is controlled by an MCC 7500 Dispatch Console.

Supplementary Service (SS) A service which modifies or supplements a bearer service or a teleservice. A supplementary service cannot be offered to a customer as a stand alone service. It should be offered in combination with a bearer service or a teleservice.

Switched Ethernet Switched Ethernet is a 10Base-T system in which all devices are connected to a central distribution point through their own cable. With switched Ethernet, the central, passive hubs used to form conventional Ethernet unshielded twisted pair (UTP) LANs are replaced with intelligent switches. The switches allow each sending computer to be temporarily directly connected to a single receiving computer. The switch acts as the central point of a star topology network. Therefore, the two computers do not experience collisions, and the full bandwidth of the transmission medium is available to any two stations that wish to communicate.

Switching and Routing Center (SRC) A rack containing the Cooperative WAN Routing (CWR) components, the LAN switches, and gateway routers. The SRC is built in the factory under a single model number with options for increased capacity, redundant site links, and interzone capability.

Switchover A transition between zone controllers in the master site or between the master sites in an ASTRO® 25 system.

Synchronous Communication Synchronous communication, in contrast to asynchronous communication, is a communication method where the data transmission is timed precisely into a stream and the start of the communication is identified using a clock or timing mechanism. In synchronous communications, information is sent as frames of large data blocks. Frame sizes vary from a few bytes through 1500 bytes for Ethernet or 4096 bytes for most Frame Relay systems. The clock is embedded in the data stream encoding, or provided on separate clock lines such that the sender and receiver are always in synchronization during a frame transmission.
See also: Asynchronous Communication

Synchronous DRAM (SDRAM) Dynamic Random Access Memory (DRAM) that is synchronized with the clock speed that the microprocessor is optimized for.

Syslog A server used for Centralized Event Logging (CEL).
See also: Centralized Event Logging

Syslog Viewer A Web-based application with a simple user interface, developed by Motorola Solutions to enable accessing and viewing logs in the ASTRO® 25 system.

System ID Registration Area within a Wide Area Communications Network (WACN), 12 bits.

System Manager A person or set of people who have the highest level of system permissions and can basically do anything to any

part of the system. System Manager has configuration and fault information for all zones.

System Service Broadcast (SSB)

Information sent over the control channel at or about a specific site. Information within the SSBs include site status and site capability information.

System Statistics Server (SSS)

A server application that provides data storage for statistics data. For systems having more than one zone, this statistics server collects and stores system-wide statistical information from each Air Traffic Router (ATR).

T1 A digital carrier facility used to transmit digital signals at 1.544 megabits per second. Includes 24 digital (user) channels of 64 Kbps for voice/data calls. In conventional telecommunications, the most common use for a T1 carrier is to connect central offices within an individual telephone company. Telephone companies also lease T1 carriers to their customers for their own private purposes.

Synonym: T1 Carrier
See also: E1, DS0

TDMA-only Talkgroup An access type configuration value that configures the talkgroup to operate only in the Time Division Multiple Access (TDMA) mode, which can provide two voice calls per channel.

Tactical Mode A mode of radio operation that determines how a radio behaves in an emergency situation. In tactical mode, the radio sends an emergency alarm on the currently affiliated talkgroup. This setting is pre-configured in the radio through Radio Service Software (RSS).

Talk Permit Tone (TPT) A sound produced by a user's radio when the request to transmit has been granted by the site controller.

Talkgroup A uniquely named group of radios that can share calls and messages. A talkgroup's normal communications do not require interfacing with other talkgroups. Typically, the majority of a radio user's communications are within their own talkgroup.

Talkgroup Call A call addressed to all radios in a specific talkgroup.

Talkgroup ID A unique number that refers to a specific talkgroup defined on the system. The assignable range is from 80000001 to 80065534.

Talkgroup Viewer A window used in the Affiliation Display application to display the current affiliation and deaffiliation information for a talkgroup or multigroup by ID or alias.

Talkpath The alternating division of time used for APCO 25 TDMA voice calls within a 12.5 kHz radio frequency.

Tandem Vocoding A situation in which an audio stream is vocoded using vocoder A, de-vocoded, re-vocoded using vocoder B, and de-vocoded again. Although it usually results in the degradation of the audio signal when lossy-compression vocoders are used, it may be unavoidable when communications span differing system types.

Target Radio The radio whose operation is affected by an outbound radio command function or a radio selected to receive a call, Call Alert, or telephone interconnect call is being initiated.

Target Zone The zone to which a radio that is the target of a call, command, or service is currently affiliated.

Telecommunications Industry Association (TIA)

An organization representing the global information and communications technology (ICT) industry that develops and publishes telecommunication standards.

Telecommunications Systems Bulletin (TSB)

Telecommunications Industry Association (TIA) document vehicle for distributing technical information.

Telemetry A technology that allows the remote measurement and reporting of information of interest to the system designer or operator when using a radio frequency system to implement the data link. This can also refer to data transfer over other media, such as a telephone, computer network, or an optical link.

Send Feedback

Telephone Media Gateway (TMG) A device based on the Voice Processor Module (VPM) hardware that translates audio between the ASTRO® 25 AMBE audio and IP PBX server G.711 audio. The Telephone Media Gateway supports both encrypted and clear audio to and from the ASTRO® 25 network. All audio exchanged with the IP PBX server is clear.

Telephony Firewall An optional firewall used for secure IP network connectivity between a Customer Enterprise Network (CEN) and the Enhanced Telephone Interconnect (ETI) subsystem.

Terminal Emulator A program that emulates a "dumb" video terminal within some other display architecture, for example, HyperTerminal or ProComm.

Terminal Server Hardware that provides serial access to Network Management (NM) servers and network transport equipment in the zone. The terminal server has a separate direct RS-232 connection to each of its supported devices. When used to support remote analog access, the terminal server is often referred to as the Remote Access Server (RAS) or Analog Remote Access (ARA) server . When used to support out-of-band management, the terminal server is often referred to as the Out-of-Band management server.

Throttle A term that refers to controlling the pace at which messages are launched. For example, when throttled, one trunked system page (call alert) may be launched every 300 mSec. The term is similar to that used for power generators, in which the engine is throttled down during periods of low or reduced demand and runs at full throttle only during periods of peak demand.

Throughput Delay The total time in ms between the initiation of a voice or data signal, i.e., push-to-talk, until the reception, and identification of the identical signal at the received output speaker or other device.

TAR Time Advance Resolution

TAV Time Advance Value

Time Division Multiple Access (TDMA) A channel access method to allow several users to share the same frequency channel by dividing the signal into different time slots.

Time Division Multiplexing (TDM) A method of transmitting and receiving independent signals over a common signal path by means of synchronized switches at each end of the transmission line so that each signal appears on the line only a fraction of time in an alternating pattern.

Time Synchronization The ability of a group of devices to synchronize their internal clock with a single time source.

Tone Remote Control (TRC) A Motorola Solutions control sequence used in keying transmitters. The TRC sequence comprises three basic elements: High Level Guard Tone (HLGT), Function Tone (FT), and Low Level Guard Tone (LLGT).

Top Level Domain (TLD) The top of the DNS hierarchy. On the Internet, TLDs include ".arpa.", ".com.", ".edu.", ".gov.", etc.

Top of Queue An emergency queue mode that indicates emergency calls have highest priority and receives the next available repeater.

Traffic Encryption Key (TEK) A symmetric key that is used to encrypt voice, data, or Over-The-Air Rekeying (OTAR) messages and is assigned to Common Key References (CKRs). For OTAR, the TEK is used to outer layer encrypt the Key Management Messages (KMMs).

Trak A system providing ultrastable frequency time and reference signals, referenced to the GPS satellite system.
See also: Global Positioning System

Transceiver A radio transmitter and receiver combined in one unit.
Abbreviation: XCVR

Transmission Sending and propagating an analog or digital information signal from one location to another.

Transmission Control Protocol (TCP)
One of the core protocols of the Internet protocol suite (IP). TCP is so common that the entire suite is often called TCP/IP. TCP provides reliable, ordered and error-checked delivery of a stream of octets between programs running on computers connected to a local area network, intranet or the public Internet. It resides at the transport layer.

Transmission Control Protocol/ Internet Protocol
The Transmission Control Protocol / Internet Protocol (TCP/IP) is one of the core protocols of the Internet protocol (IP) suite. TCP/IP provides reliable, ordered and error-checked delivery of a stream of octets between programs running on computers connected to a local area network, intranet or the public Internet. It resides at the transport layer.

See also: Transmission Control Protocol, Internet Protocol

Transmission Delay
The time in ms required for transmission of a voice frame or data packet through a communication channel.

Transmission Trunking
The trunking mode where a call session is ended upon releasing of Push-to-Talk (PTT).

See also: Push-to-Talk, Control Channel

Transmitter (Tx)
An electronic device that generates and amplifies a radio-frequency carrier, modulates the carrier with information, and radiates the resulting signal from an antenna.

Transport Layer
Layer 4 of the OSI model. This layer responds to service requests from the Session Layer and issues service requests to the Network Layer. The purpose of the Transport Layer is to provide transparent transfer of data between end users, thus relieving the upper layers from any concern with providing reliable, and cost-effective data transfer.

Transport Network Management (TNM)
The applications, such as InfoVista®, that manage the transport network.

Transport Network Performance Server (TNPS)
Known as the InfoVista server. The name of the server where the InfoVista® application resides.

Synonym: InfoVista server

Trivial File Transfer Protocol (TFTP)
The Trivial File Transfer Protocol is a simplified version of the FTP (File Transfer Protocol) used for transferring files between network devices. TFTP uses client and server software to make connections between two devices. Individual files from a TFTP client can be copied (uploaded) to or downloaded from the server. TFTP uses UDP for transporting data. TFTP is commonly used to read and write files to or from a remote server. TFTP has no directory or password capability.

Trunked Simulcast Prime Site Geographic Redundancy (TPSGR)
A TPSGR supports redundancy to protect against single points of failure that may occur within the prime site. A TPSGR configuration geographically separates a Redundant Comparator prime site (15 or 32 capacity) into two separate locations. Each half of the prime site is referred to as a split-prime site.

Trunking Call Counts
The measure of the managed trunked audio traffic at the site. The counts indicate the maximum number of simultaneous trunked calls desired/expected at the site.

Trunking Signaling Block (TSBK)
A specific P25 Common Air Interface (CAI) block of data used to send non-voice information.

Trunking State
Defines the ability of a system or site to perform normal trunking operations. Each site has a trunking state and a pair of zones have trunking states relative to each other.

Trunking Subsystem
An ASTRO® 25 subsystem architecture that provides dispatch and mobility services within a local area when normal system-wide area communication is not possible. Under normal operation, all calls are processed under the zone core Zone Controller (ZC) control. The remote site devices (Trunking site controllers, consoles, conventional channel gateways) utilize the ZCs in the zone core. When

connectivity to the zone core is lost, a fallback ZC located in the Trunking Subsystem (Tsub ZC) automatically provides the necessary call control for voice services.

Trunking Voice Access Time Trunking voice access time is measured from a user (subscriber unit) initiating a Push-to-Talk (PTT) on the system until a resource has been granted and transmission on that assigned resource has begun. Trunking voice access times are based upon the conditions that a channel and a console resource are available for the call, no other calls are in queue, and adequate bandwidth is available on all links in the system.

Tsub A Trunking subsystem architecture.

Tsub Server The Tsub Zone Controller, IP Packet Capture device, Domain Controller, and an optional Dynamic Transcoder (XCDR) reside in the same Virtual Management Server (VMS).

Two-Wire Interface (2W) Transmit and receive on the same copper pair.

UNIVERGE 3C Third-party software application developed by NEC for use with the Enhanced Telephone Interconnect feature in an ASTRO® 25 system.

USB Audio Interface Module (USB AIM) The USB AIM is an external device that interfaces an MCC 7100 IP Dispatch Console with various peripheral devices such as a headset, microphone, footswitch, external paging encoder, local logging recorder, and so forth. The USB AIM also supports generic local auxiliary outputs.

| **Synonym:** Audio Interface Module

Ultra High Frequency (UHF) The term for the International Telecommunication Union (ITU) Radio Band with a frequency range of 300 to 3000 MHz.

Unchannelized E1 The line supports a 2.048 Mbps bit stream with 1 or 2 time slots (Time slots 0 and optionally 16) used for framing and alarm and control signaling. Slot 16 may or may not be available depending on the Service Provider. In the unchannelized case, 30 or 31 of the 32 DS0s are used as a single serial bit

stream of 1.920 Mbps or 1.984 Mbps respectively.

Unconfirmed Message Delivery Unconfirmed message delivery enables a more efficient use of packet data channels by reducing the size of messages to fit within an allocated transmission time slot. The reduction in size is accomplished by removing the retry and acknowledgment phase of confirmed messaging.

Unified Event Manager (UEM)

Unified Network Configurator (UNC) A configuration management application for the ASTRO® 25 radio system that manages the following devices: gateways/routers, switches, terminal servers, base radios, site controllers, comparators, Voice Processor Modules, SmartX Site Converters, and Telephone Media Gateways. The UNC provides two applications for network management: EMC Smarts™ and Unified Network Configurator Wizard. These applications are launched through a Web browser. Updates made in the Provisioning Manager (PM) application must be distributed to the UNC before they are active in the system.

Unified Network Configurator Device Server (UNCDS) Part of the High Capacity Unified Network Configurator (UNC) configuration, which allows the UNC to manage up to 15000 devices.

| **See also:** Unified Network Configurator

Unified Network Configurator Wizard (UNCW) A configuration management application that is part of the Unified Network Configurator (UNC). It automates configuration file changes by providing forms that are filled out according to specified system parameters.

Uniform Resource Identifier (URI) A Session Initiation Protocol (SIP) URI is used to identify an entity to be addressed through SIP, much like an e-mail address identifies the e-mail recipient.

Unique Key Encryption Key (UKEK) A multi-character key typically assigned by the Crypto/Security Officer for the system, which is used to communicate with other secure

equipment such as a Key Management Facility (KMF).

See also: Key Variable Loader, Encryption

Unit ID (UID) An identifier that is used to deliver a telecommunication service to a specific subscriber, mobile service unit, or dispatch console. It can be used to direct telecommunication services to the specific device irrespective of the current association of the device to a user. Also known as Working Unit ID (WUID).

Universal Mobile Telecommunications System (UMTS) A third generation mobile cellular technology for networks based on the GSM standard. Developed by the 3GPP (3rd Generation Partnership Project), UMTS is a component of the International Telecommunications Union IMT-2000 standard set.

Universal Resource IDentifier (URID) A logical construct used to uniquely identify communications systems resources.

Universal Time/Greenwich Mean Time (UT/GMT) Used when setting the date and time in the system.

Unmonitored Refers to a link that does not have active mobile context associated with it. When a monitored link is UP, echo requests are sent from the Packet Data Router (PDR) to the Gateway GPRS Support Node (GGSN) and from the GGSN to the PDR.
See also: Monitored PDR-GGSN Link

Unselect Audio Destination The unselect speaker on a dispatch console on which audio is presented. Unselect Audio Destination is determined on a talkgroup by talkgroup basis.

Unselect Speaker The speaker at a dispatch console where audio from monitored groups and conventional channels is heard (this excludes the selected talkgroup/channel that the dispatcher would transmit on).

User A person or group of people who utilize the services and functions of a system. Users include individual radio users, console operators,

management users (administrators and those who maintain the system), the system manager, technicians, and engineers.

UAC User Account Control (for Windows® Vista only)

User Alias An identifier of a subscriber or dispatch console user that is assigned in the User Configuration Server (UCS).

User Configuration Server (UCS) The server that contains the network database and stores information on system users.

User Datagram Protocol (UDP) A protocol within the IP protocol suite that offers a way to directly connect, send and receive datagrams over an IP network with minimum protocol overhead. With UDP, there is no acknowledgment or checking for missing, out-of-sequence, or duplicate packets. UDP is often used in place of the TCP (Transfer Control Protocol) when reliable, guaranteed delivery is not required. For example, when UDP is used for real-time audio and video traffic where lost packets are simply ignored. Like TCP, UDP runs on top of Internet Protocol (IP) networks.

User Requested Standby (URS) The state applied by the Unified Network Configurator (UNC) that disables automatic switchover, which is used for Dynamic System Resilience (DSR) feature support. Conversely, the Standby state enables automatic switchover.

User-Based Security Model (USM) The security model related to SNMPv3. Security is based on users who are assigned specific names, credentials, and privileges.

Values Window A window that allows you to search for information at a field-entry level rather than a record level.

Vector Sum Excited Linear Prediction (VSELP) In communications, a system is wideband when the message bandwidth significantly exceeds the coherence bandwidth of the channel.

Very High Frequency (VHF) The term for spectrum bandwidth occupied by 136 - 174 MHz.

View A feature of the Unified Network Configurator (UNC) that allows you to select devices and group them together without a dependency on site type, logical connections, or physical location.

Virtual Appliance A virtual machine that is hosted on a virtual server.

Virtual Circuit A Virtual Circuit is a logical, bi-directional, end-to-end connection that appears to the user as a dedicated link. Permanent Virtual Circuits (PVCs) are used to form a connection between any two devices attached to a Frame Relay cloud.
See also: Permanent Virtual Circuit

Virtual Local Area Network (VLAN)

Virtual Management Server (VMS) A Virtual Management Server (VMS), hosts virtual machines on an ESXi–based server platform. Each VMS acts as a standalone device with its own operating system, configuration, and applications.

Virtual Router Redundancy Protocol (VRRP) An Internet protocol that provides a way to have one or more backup routers using a statically configured router on a local area network (LAN) to increase availability and reliability of routing paths. A virtual IP address is shared among the routers, with one designated as the master router and the others as backups. In case the master fails, the virtual IP address is mapped to a backup router's IP address. (This backup becomes the master router.)

Virtualization The act of creating a virtual machine that acts like a computer or server so that multiple applications can reside on a reduced number of hardware platforms.

Visited PLMN (VPLMN) VPLMN is a network where a Public Safety subscriber is operating, when the subscriber is located inside its network coverage area, but outside of the coverage area of the subscriber's Home PLMN.

Visitor Location Register (VLR) A database containing information on all radios currently in the zone that are based in another zone. The VLR manages a local copy of zone-specific information for individuals and VLR talkgroups. This includes subscriber database information and site location information for both the individual and the talkgroup. Each zone has a VLR.

VistaPortal A web interface provided with InfoVista® that is used to view reports from the web. You can view offline reports or connect to view online reports.

Vocoder A type of voice coder usually consisting of a speech analyzer and a speech synthesizer, which convert analog speech into digital signals for transmission, and digital signals back into artificial speech sounds for reception.

Voice Card Embedded card containing Digital Signal Processor (DSP) resources for the processing of clear (unencrypted) audio. The Voice Card provides vocoding and audio processing services.

Voice Channel (VCH) A channel used to provide voice communications on a radio system.

Voice Operated eXchange (VOX) A switch that operates when a sound is detected and exceeds a certain threshold. It is used in voice transmission to automatically switch on a transmitter when a user speaks and switch off when the user stops speaking.
Synonym: Voice Operated Switch

Voice Processor Module (VPM) A device that combines the functionality of a voice card, an encryption card, dedicated auxiliary input/output ports, and line interface circuitry (T1/E1 interfaces) in one chassis. It is designed as a flexible platform that can be used in different subsystems by changing the software.

Voice over IP (VoIP) A term used to describe using IP as a transport mechanism for voice applications.

Voltage Standing Wave Ratio (VSWR)
Voltage Standing Wave Ratio (VSWR) is the ratio of maximum voltage to minimum voltage along the line. Expresses the degree of match between the transmission line and the terminating element (antenna). When VSWR is 1:1 the match is perfect, a VSWR of 1.5:1 corresponds to 96% power efficiency.

Volume Unit Meter
Provides the dispatch console user with a visual indication of voice activity on the MCC 7500 dispatch console.

Abbreviation: VU Meter

Voting
A method of improving talk-back range from a portable or mobile subscriber unit (MSU). The signal sent from the devices is picked up by more than one receiver, which are connected to a device called a comparator. The comparator performs an evaluation of all received signals and selects the signal with the best quality for distribution to the rest of the system.

WAVE 5000
A software platform and suite of applications that supports secure instant communications across any IP network.

Warm Start
A procedure that is initiated by the Key Management Facility (KMF) when there is a need to communicate securely with a unit that does not have any Traffic Encryption Keys (TEKs) in common with the KMF. This procedure sends a TEK to the unit that is common with one in the KMF so they can communicate securely. When a protected communications session is established, the KMF rekeys the radio.

Waste Electrical and Electronic Equipment (WEEE)
Directive governing the recycling of electrical and electronic products, originated in Europe.

Watcher
An application program that interfaces with the Intelligent Middleware (IMW) to obtain status and attribute information about Presence Entities.

Wide Area Communications Network ID (WACN ID)
A number that references a specific network of systems that are connected to one another.

Wide Area Network (WAN)
A computer or communications network that covers a large geographic area.

Wide Area Trunking
The normal trunking state of a site. The following must be in place for wide area trunking: an active site control path to the site, an enabled control channel at the site, an enabled voice channel at the site, and an enabled audio rendezvous point at the master site.

Wide Operation
In a multiple site or multiple zone communication system, it describes the normal operation when remote sites can access the controlling point (Zone Controller).

Wideband (WB)
In communications, a system is wideband when the message bandwidth significantly exceeds the coherence bandwidth of the channel.

Wideband Air Interface (WAI)
The interface between the Fixed Network Equipment (FNE) and the Mobile Radio (MR), or directly between MRs in a wideband system. This protocol is used in HPD systems as the equivalent of the Common Air Interface (CAI) in Integrated Voice and Data (IVD) ASTRO® 25 radio systems.

Wild Card
A keyboard character that can be used to represent one or many characters, such as * or ?.

Windows Install Framework
The application used to install files that are located on the Windows Supplemental media for the BAR client, Logging client, and also PuTTY.

Wireless Wide Area Network (WWAN)
A form of wireless network and is the larger size of a wide area network compared to a local area network requires differences in technology. Wireless networks of all sizes deliver data in the form of telephone calls, web pages, and streaming video.

Working Group ID (WGID)
Unique ID within a Registration Area (for example, within a System ID).

X-Zone Infrastructure Signaling (XIS)
An audio protocol. The Telephone Media Gateway (TMG) is responsible for translating XIS packets with AMBE encoded audio into RTP packets with G.711 (A-law or u-law) voice encoding.

ZMDS Zone Manager Database Server

Zeroize An Over-the-Air-Rekeying (OTAR) command sent to an individual subscriber which erases all of the keys in the subscriber. The subscriber must be serviced directly with a Key Variable Loader (KVL) to restore secure operations.

Zone A geographical region covered by the system. The zone design comprises sites to allow intra-zone communications and roaming between sites/subsystems within a zone.

Zone Controller (ZC) A redundant server application that provides call processing for wide area radio communications and telephone interconnect calls.

Zone Core The equipment in a master site that is not part of radio access, command and control, or network connectivity. Only one core (sometimes referred to as a master site) exists per zone. The L core is a small scale version of M1/M2 zone core. The term "small scale" is used to distinguish this zone core from the larger M1/M2 zone core. The K core is labeled as "conventional-only" zone core as this core contains the conventional site controller (does not contain a zone controller).
See also: Base Transceiver Subsystem, Zone Controller

Zone Core Protection (ZCP) A feature that requires additional firewalls and Mediation LAN switches. The core routers and exit routers connect to Mediation LAN switches. These connections allow traffic from remote sites into the ZCP firewalls at the master site. The firewall monitors traffic and applies policies and rules to determine what traffic is safe to allow into the zone core. A Centralized Event Logging (CEL) server can be added to collect Syslog messages from Event Logging clients in the remote sites and Mediation LAN, and an Intrusion Detection System (IDS) switch can be added to monitor

traffic from both the Mediation LAN switch and the Demilitarized Zone (DMZ) switch.

Zone Database Server (ZDS) A Private Network Management (PNM) server that functions as a low-level Lightweight Directory Access Protocol (LDAP) server for the LDAP clients in MCC 7500 console sites and site gateway (conventional channel interface) sites. The LDAP server on each ZDS is active at all times, so ZDS LDAP clients can pull configuration data from either ZDS in a zone.

Zone Manager (ZM) Contains configuration and fault information for the zone it in which it resides.

Zone Network Management An ASTRO® 25 subsystem that includes Virtual Management Server (VMS)1 (ZC1, Zone Statistics Server, Air Traffic Router), VMS2 (ZC2, Unified Event Manager), Network Management Client, CSMS, and more.

Zone Only Operation within a single zone using one Zone Controller (ZC) and its coverage area only.
See also: Zone Controller

Zone Statistics Server (ZSS) A server application that collects and stores zone-wide statistical information regarding call processing traffic. This traffic is derived from the Air Traffic Information Access (ATIA) stream supplied by the Air Traffic Router (ATR). Historical Reports and Dynamic Reports applications use this information to create reports on resource usage and performance.

Zone Status A Radio Control Manager (RCM) command that checks the status of the zones and displays if the zone is enabled or disabled and provides link status for trunking.

ZoneWatch (ZW) A network management application that monitors trunking activity and radio call traffic for an individual zone in near real time. This application is part of the Private Radio Network Management (PRNM) suite.
See also: Zone (area), Private Radio Network Management Suite

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