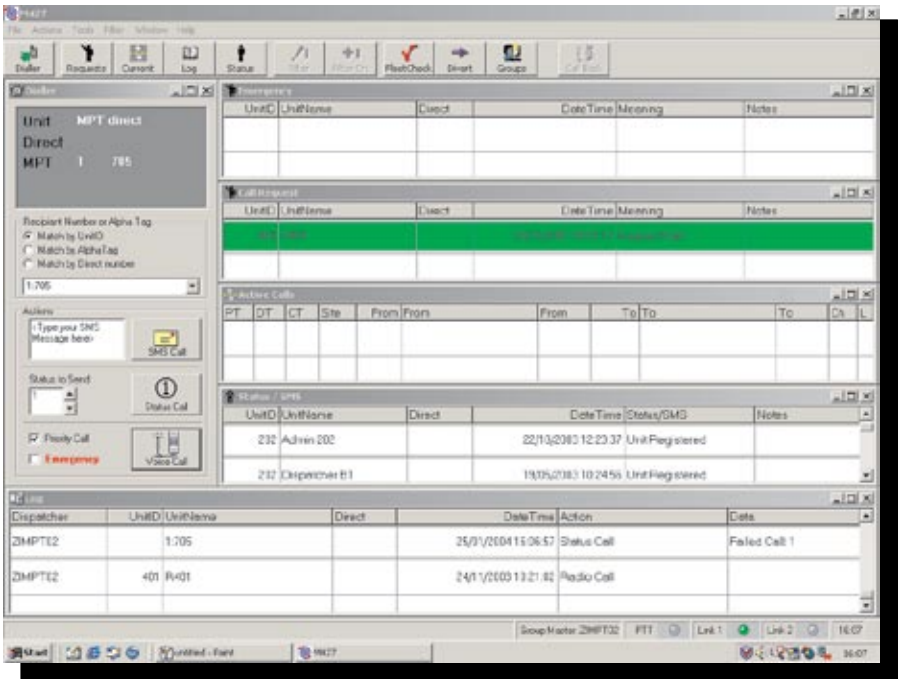
ZIMPT — ZETRON INTEGRATED MPT 1327 LINE DISPATCHER FOR ZETRON TRUNKING NETWORKS



FEATURES

- PC-based operator line dispatcher for direct connection to Zetron's MPT 1327 network
- Windows-based single operator position
- All call types supported, including SMS-type short data messaging
- Dual connection for voice and data access to MPT 1327 network
- Wide choice of operator audio interface options
- MAP27 based interface with extended Zetron command set offers advanced features
- Brings dispatch command and control to MPT 1327 trunking environment

APPLICATIONS

- Radio Dispatch Control Centres
- Fleet Management—traditional dispatch of voice, status and data messages
- Subscriber access to radio network from desktop office environment
- System Management and Supervision
- Public Safety and Emergency Services
- Utilities, Oil, Gas, Water etc.
- Airlines, Road, Railway and Maritime, etc.

INTRODUCTION

The Zetron Integrated MPT 1327 Line Dispatcher, ZiMPT, is a powerful PC-based line dispatcher for Zetron MPT 1327 trunked radio systems. ZiMPT brings operator command and control functionality through an intuitive, menu-based graphical user interface.

The Line Dispatcher makes voice and data communications with radio subscriber units straightforward and efficient. Its use of icons and color make information quick to interpret and allows fleet dispatch management in an ergonomic package.

Designed to work with Zetron MPT 1327 trunking infrastructure via serial data and 4-wire audio interconnection with the Model 427 Peripheral Interface, ZiMPT provides a system-level dispatching solution. The Line Dispatcher is ideal for trunking systems in industry, transport, government and public safety.

PRODUCT OVERVIEW

Each operator position consists of the Windows-based software application running on the mouse or touch-screen controlled PC. A keyboard is used to enter text messages or access other PC-based applications. Operator audio is provided through speakers and/or headset with desk microphone and optional footswitch.

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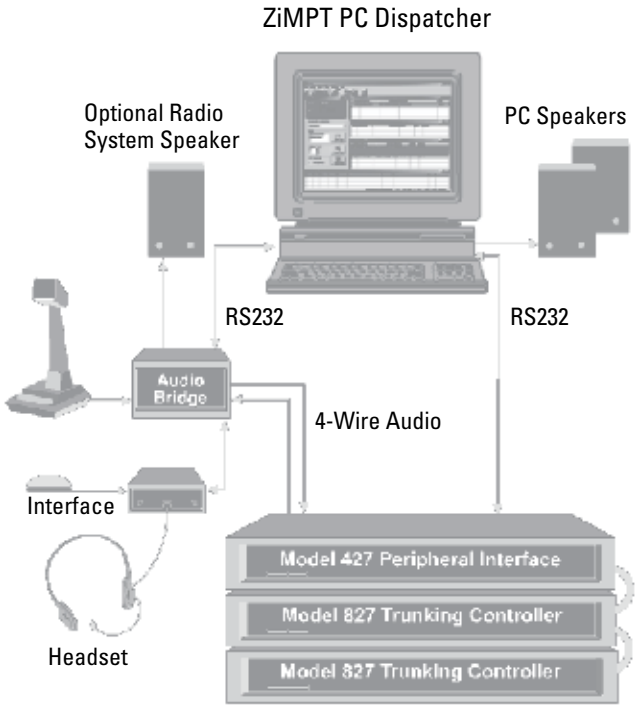
MISSION-CRITICAL COMMUNICATION SYSTEMS

SYSTEM DESCRIPTION

The Line Dispatcher connects to Zetron's Model 827 based trunking systems through the Model 427 Peripheral Interface. The Model 427 offers four 4-wire audio and 4 serial RS232C ports each supporting a standard and an exclusive Zetron extended MAP27 serial data protocol. The number of dispatcher positions is limited only by the number of available audio and data ports at each site.

The Line Dispatcher emulates a radio subscriber unit on the trunking system with a video-based graphical user interface. This "virtual radio" allows transparent access to all subscriber units on the network. In addition to providing all the features and functionality of a radio, it also adds capabilities beyond those normally available to a radio-based subscriber to give the operator supervisory management over the mobile user groups.

Connection between a PC and Model 427 is straightforward. Each Line Dispatcher position may have one or two physical connections each consisting of one four-wire (4W) audio port and up to two RS232C ports at 9600 or 19.2 K bps. When two ports are used, one port emulates a "virtual radio" and is used for voice, data and status calls and process control. This second port provides a data port that is constantly available for data communication with Model 827s forming the trunking site infrastructure.

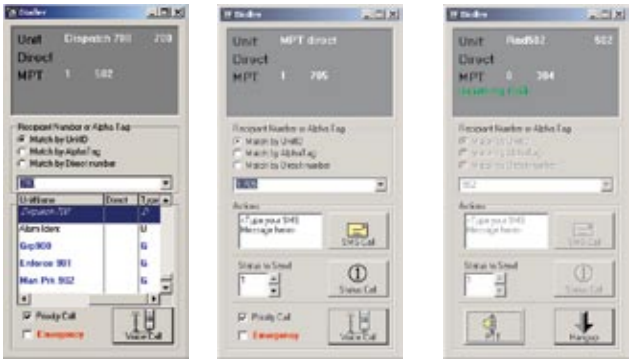


FUNCTIONAL CAPABILITIES

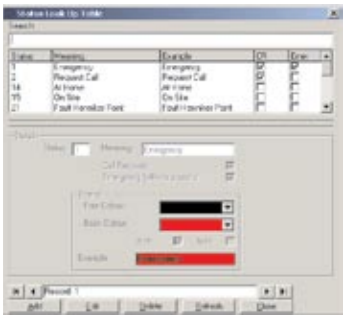
Call Management

As a trunking protocol, MPT1327 is legendary in the robustness of supported call types. ZiMPT provides an excellent interface to select the desired call type as needed for each communication.

ZiMPT provides easy-to-use Dialler menus that provide quick selection of target radio subscribers as well as desired call type (voice, status or text).

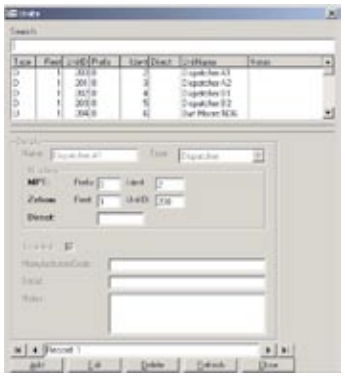


Voice Calls



All standard call types are supported including Voice, Emergency Calls, All-Calls, Include Calls, and Group Calls. Adding Priority or Emergency precedence (pre-emption) to a call can be done at the click of a mouse button and checking the appropriate box.

Status Messaging



This form of messaging is fully supported and a Status Lookup Table allows full entry and editing of meaningful text aliases "tags" to the 32 status numbers supported by MPT 1327. In addition, foreground and background color schemes as well as font formatting is user-selectable. Emergency situations can be associated with a status number that affects sound alerting. This permits customization and status association by color and sound for easier recognition by operators.

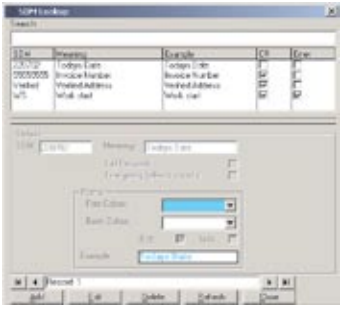
Text Messages

SDM (short data messaging) entry and display is optimized through ZiMPT. Free-form text data messages can be sent via SST (Single-Segment) or MST (Multi-Segment) format.

The Dialer menu provides a text entry field for quick alphanumeric (ASCII) data entry. In addition, the SDM Lookup Table allows tagging alphanumeric text aliases to a decoded SDM data string. In this way, coding of SDMs can be performed allowing "canned" messages. This is convenient for SDM of often-repeated messages, reports or 'check-ins'.

Like Status management explained previously, SDM management also allows color and font customization. Likewise, Emergency situation association to a SDM string is permitted, affecting sound alerting.

SUBSCRIBER AND FLEET MANAGEMENT



Management of radio subscriber units at the individual and group level is simplified by a full-featured user interface. An address book allows quick selection of called unit ID's using alphanumeric text aliases or full MPT1327 numbering.

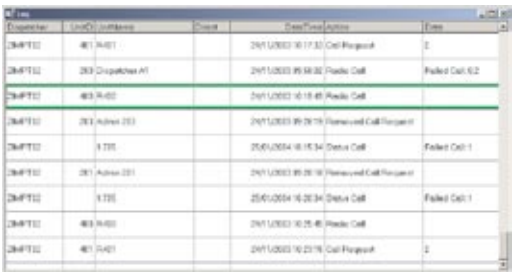
Databases of subscribers can be organized into multiple records, and a personalization field can be maintained for each user, with notation for radio manufacturer code, serial number and comments provided.

CALL LOGGING AND MONITORING

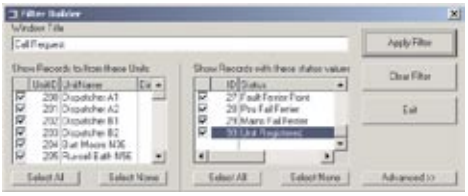
ZiMPT provides a full-featured window to view overall system status and the progress of active calls in real time. Visual feedback of operator actions, channel and call status, as well as subscriber availability is provided. Dispatcher 'break-in' of active calls for instant communications is also possible.

The Active Calls window displays a list of active calls, recent calls, received data messages, and call requests. This includes called unit and calling unit identity.

The recent call list logs and displays up to the most recent 100 calls. Logs are generated daily and store call details for up to 30 days.

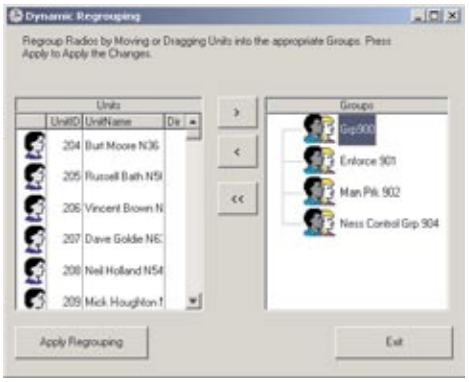


To allow tailoring ZiMPT for viewing detials within a set of calls, a highly configurable call 'Filter" is provided. This allows the operator to selectively monitor only particular call types, or particular individuals or groups. Examples include Call Filtering of Status, Voice, and SST/MST data.



CALL COORDINATION

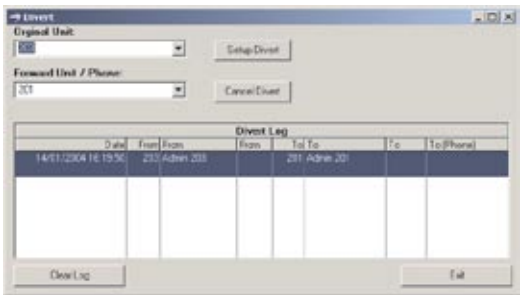
Having the capability to readily identify users, coordinate calling tasks and manage the disposition of radios is essential to the modern dispatch center. The powerful Dynamic Regrouping feature of MPT1327 is a classic example of new fleet creation by a dispatcher 'on-the-fly'.



ZiMPT addresses these needs and more with a capable interface and wide set of call management tools. Some examples of typical capabilities include:

- Talk Group creation with numbering assignment
- Dynamic regroup updating via 'drag and drop' user interface method

Likewise, the Call Diversion feature of MPT1327 allows telephone style forwarding of calls by unavailable units to other units or a dispatcher capable of receiving calls in their absence.



SUBSCRIBER MAINTENANCE

With small or large fleets, the potential for radio communications problems can exist at both the operator or hardware level. Whether as simple as a radio's battery needing recharged, or as complex as mischievous or malicious interference, ZiMPT provides dispatchers with means to deal with answering questions about the disposition of users within their fleets.

The Radio Availability "Fleet Checking" feature of ZiMPT provides an update at the individual level that a MPT 1327 radio transceiver is located within a service coverage area.

OPERATOR PRESENTATION

The user interface is one of a combination of Monitor, Keyboard, trackball and mouse. Windows, icons and tables are used to present an overview of system status and provide intuitive user access to place and receive calls. A shortcut bar provides fast access to commonly performed tasks.

Visual feedback of operator actions, channel and call status, as well as subscriber availability, are provided by means of icon color changes and/or audio alert tones.

The actual dispatcher video screen presentation (windows, icons, tables, etc.) is extensively configurable to meet the needs of the end user. Push-to-talk (PTT) is implemented via selectable keyboard keys (such as the space bar for example), mouse buttons, headset or handset button, or external PTT source (such as a footswitch).

User Access and Security Protection

Different personalities can be configured for each operator position. This allows for different users to have their preferred layouts and screen configurations. Within each personality screen layouts can be selected based upon day, night, emergency or other situations/designations.

Three user login levels exist for security and limiting/controlling access. Basic users cannot change any windows; Standard users can change windows if they have this editing privilege set, Supervisors have access to all functions.

ASSOCIATED PRODUCTS

Model 427 Peripheral Interface

The Model 427 provides direct audio and serial data access into Zetron MPT1327 trunking systems—which are based upon on the legendary Model 827 Trunking Controller. The M427 provides an interface for Zetron or other vendor equipment to connect directly to the MPT1327 network.

Each M427 provides 4 audio ports and 4 serial control ports. The serial data protocol implements the standard MAP27 call control, as well as an additional, enhanced Zetron command set enabling supervisory system management. The standard MAP27 commands enable connection to PC or desktop line controllers to support dispatch functions. The enhanced commands add in supervisory functions, such as multiple talk group monitoring, priority override and changing system parameters. This enables command and control facilities, with dispatchers able to move from subscriber/fleet management to network performance monitoring as conditions demand.

SPECIFICATIONS

Site	At least one Model 427 Peripheral Interface located at the site trunking equipment stack
PC Requirements	Windows® XP (or 2000) 128 MB RAM 20 MB Hard Disk space SVGA video Serial port—minimum one RS232C COM at 9600 bps or faster
Rx audio	600 ohm balanced audio from Model 427 4W audio port
Tx audio	600 ohm balanced audio input to M427 4W audio port
PTT	Available via COM port RS232C, pins RTS, CTS and DTR

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