



## Section 4C. Consoles, Consolettes & NICE Recorders with Drawings

Motorola is pleased to propose an IP-based MCC7500 console system to DuPage County. This console system will meet the DuPage County dispatchers' current and future communication needs. A description of the features, benefits, system architecture, and hardware components of the MCC7500 console system are provided in this system description.

Furniture is not included as part of this proposal

### 4C.1 Project Overview

DuPage County has requested that Motorola presents a proposal for a console upgrade which will be integrated into the existing STARCOM21 system, a Motorola P25 Trunked Radio System for Illinois's public safety agencies.

Software release in Q1 2011 for MCC7500 consoles will support the MDC1200 signaling functionality. To accommodate the Stat-Alert/MDC1200 signaling features of various Conventional resources in DuPage County, this proposal is based on the software release of Q1 2011.

Table 4-1 is a general layout of the DuPage County's PSAPs' proposal:

**Table 4-1: General Layout of DuPage County PSAPs**

PSAP Agency	Number of OP Positions	Number of Consolettes	Console Type
DU-COMM	23	10	MCC7500
DuPage Wireless PSAP	10	2	MCC7500
DuPage North	5	4	MCC7500
DuPage South	17	9	MCC7500

Consolette only PSAPs			
Bloomingtondale Fire		2	
DuPage Forest Police		1	
Tri-State		1	
Wood Dale		2	

## DU-COMM

Referring to the system drawing at the end of this section, the following equipment is included in the proposal for the DU-COMM PSAP:

- ◆ 23 Operator positions PCs and VPMs with Instant Recall Recorder (IRR)
  - 19" Flat screen monitor per operator position
  - Encryption (ADP and DES-OFB) for all 23 console positions
  - 1 Keyboard per operator position
  - 1 Optical wheel mouse per operator position
  - 2 Desktop speakers per operator position
  - 1 Footswitch per operator position
  - 1 Gooseneck microphone per operator position
  - 2 Headset jacks per operator position (Headset bases & tops are not included)
- ◆ 6 GGM8000 Conventional Channel Gateways (CCGW) to connect to 24 conventional analog radio channels or 12 Stat-Alert channels
- ◆ 1 SDM3000 Aux I/O box with an expansion chassis to provide 32 output relays and 96 input buffers
- ◆ 2 Dispatch Site Gateways (providing redundant links to STARCOM21 ZONE 1 Master Site)
- ◆ 2 LAN Switches
- ◆ 1 GCP8000 Conventional Site controller (recommended in case of T1 link failure)
- ◆ Surge protection equipment
- ◆ 10 APX 7500 Consolettes with ADP & DES-OFB encryptions and with combiner/antenna system
- ◆ Consolettes will be available to the Operator positions via the MC2000 Desksets. Consolettes can be connected to the MCC7500 console system if DU-COMM doesn't go over the permissible number of Conventional resources.
- ◆ 1 KVL with ADP and DES-OFB encryptions (to program encryption keys in the Consoles and Consolettes)
- ◆ Network Management Terminal for Zone Watch application
- ◆ 1 set of spares is included

Please refer to DU-COMM drawing at the end of this section.

### **PSAP located at DU-COMM will have following Logging components:**

- ◆ One Primary 120 channels NICE IP Logging Recorder with storage
- ◆ One Primary 120 channels AIS server
- ◆ One 40 channels NiceLog Analog Recorder
- ◆ One CLS Server
- ◆ One 200 channels storage center
- ◆ One 360 channels NICE Inform Server
- ◆ Three Inform Client Workstations



## DuPage South

Referring to the system drawing at the end of this section, the following equipment is included in the proposal for the DuPage South PSAP:

- ◆ 17 Operator positions PCs and VPMs with Instant Recall Recorder (IRR)
  - 19" Flat screen monitor per operator position
  - Encryption (ADP and DES-OFB) for all 17 console positions
  - 1 Keyboard per operator position
  - 1 Optical wheel mouse per operator position
  - 2 Desktop speakers per operator position
  - 1 Footswitch per operator position
  - 1 Gooseneck microphone per operator position
  - 2 Headset jacks per operator position (Headset bases & tops are not included)
- ◆ 6 GGM8000 Conventional Channel Gateways (CCGW) to connect to 24 conventional analog radio channels or 12 Stat-Alert channels
- ◆ 1 SDM3000 Aux I/O box with expansion chassis to provide 32 output relays and 96 input buffers
- ◆ 2 Dispatch Site Gateways (providing redundant links to STARCOM21 ZONE 1 Master Site)
- ◆ 2 LAN Switches
- ◆ 1 GCP8000 Conventional Site controller (recommended in case of T1 link failure)
- ◆ Surge protection equipment
- ◆ 9 APX 7500 Consolettes with ADP & DES-OFB encryptions and with combiner/antenna system
- ◆ Consolettes will be available to the Operator positions via the MC2000 Desksets. Consolettes can be connected to the MCC7500 console system if DuPage South doesn't go over the permissible number of Conventional resources.
- ◆ 1 set of spares is included

Please refer to DuPage South drawing at the end of this section.

## PSAP located at DuPage South will have following Logging components:

- ◆ One Backup 120 channels NICE IP Logging Recorder with storage
- ◆ One Backup 120 channels AIS server
- ◆ One 32 channels NiceLog Analog Recorder
- ◆ One CLS Server
- ◆ One 200 channels storage center
- ◆ One 360 channels NICE Inform Server
- ◆ Three Inform Client Workstations



## DuPage Wireless PSAP

Referring to the system drawing at the end of this section, the following equipment is included in the proposal for the DuPage Wireless PSAP:

- ◆ 10 Operator positions PCs and VPMs with Instant Recall Recorder (IRR)
  - 19" Flat screen monitor per operator position
  - Encryption (ADP and DES-OFB) for all 10 console positions
  - 1 Keyboard per operator position
  - 1 Optical wheel mouse per operator position
  - 2 Desktop speakers per operator position
  - 1 Footswitch per operator position
  - 1 Gooseneck microphone per operator position
  - 2 Headset jacks per operator position (Headset bases & tops are not included)
- ◆ 2 GGM8000 Conventional Channel Gateways (CCGW) to connect to 8 conventional analog radio channels or 4 Stat-Alert channels
- ◆ 1 SDM3000 Aux I/O box to provide 16 output relays and 48 input buffers
- ◆ 2 Dispatch Site Gateways (providing redundant links to STARCOM21 ZONE 1 Master Site)
- ◆ 2 LAN Switches
- ◆ 1 GCP8000 Conventional Site controller (recommended in case of T1 link failure)
- ◆ Surge protection equipment
- ◆ 2 APX 7500 Consolettes with ADP & DES-OFB encryptions and with combiner/antenna system
- ◆ Consolettes will be available to the Operator positions via the MC2000 Desksets. Consolettes can be connected to the MCC7500 console system if DuPage Wireless doesn't go over the permissible number of Conventional resources.
- ◆ 1 set of spares is included

Please refer to DuPage Wireless PSAP drawing at the end of this section.

## PSAP located at DuPage Wireless PSAP will have following Logging components:

- ◆ One 16 channels NiceLog Analog Recorder
- ◆ One 360 channels NICE Inform Server
- ◆ Two Inform Client Workstations



## DuPage North

Referring to the system drawing at the end of this section, the following equipment is included in the proposal for the DuPage North PSAP:

- ◆ 5 Operator positions PCs and VPMs with Instant Recall Recorder (IRR)
  - 19" Flat screen monitor per operator position
  - Encryption (ADP and DES-OFB) for all 5 console positions
  - 1 Keyboard per operator position
  - 1 Optical wheel mouse per operator position
  - 2 Desktop speakers per operator position
  - 1 Footswitch per operator position
  - 1 Gooseneck microphone per operator position
  - 2 Headset jacks per operator position (Headset bases & tops are not included)
- ◆ 2 GGM8000 Conventional Channel Gateways (CCGW) to connect to 8 conventional analog radio channels or 4 Stat-Alert channels
- ◆ 1 SDM3000 Aux I/O box to provide 16 output relays and 48 input buffers
- ◆ 2 Dispatch Site Gateways (providing redundant links to STARCOM21 ZONE 1 Master Site)
- ◆ 2 LAN Switches
- ◆ 1 GCP8000 Conventional Site controller (recommended in case of T1 link failure)
- ◆ Surge protection equipment
- ◆ 4 APX 7500 Consolettes with ADP & DES-OFB encryptions and with combiner/antenna system
- ◆ Consolettes will be available to the Operator positions via the MC2000 Desksets. Consolettes can be connected to the MCC7500 console system if DuPage North doesn't go over the permissible number of Conventional resources.
- ◆ 1 set of spares is included

Please refer to DuPage North drawing at the end of this section.

## PSAP located at DuPage North will have following Logging components:

- ◆ One 32 channels NiceLog Analog Recorder
- ◆ One 360 channels NICE Inform Server
- ◆ Two Inform Client Workstations

More detailed information about NICE Logging components is provided in a separate section of this document.

To allow communication between the NICE IP Loggers and AISs (located inside the Motorola Radio Network) and Inform Servers & NiceLog analog recorders (located inside the DuPage Network) separate networking and firewall equipment will be required at DU-COMM and DuPage South PSAPs.



## Consolette-Only PSAPs

The Bloomingdale Fire PSAP will have 2 APX 7500 Consolettes with ADP & DES-OFB encryptions and with antenna system. The Consolettes will be connected to the existing Zetron console system.

The Wood Dale / Bensenville PSAP will have 2 APX 7500 Consolettes with ADP & DES-OFB encryptions and with antenna system. The Consolettes will be connected to the existing Gold Elite console system.

The DuPage Forest Police PSAP will have 1 APX 7500 Consolette with ADP & DES-OFB encryptions and with antenna system. The Consolette will be connected to the existing MIP 5000 console system.

The Tri-State PSAP will have 1 APX7500 Consolette with ADP & DES-OFB encryptions with antenna system. The Consolette will be connected to the existing Zetron console system.

The MCC7500 console has an integrated paging encoder and also supports connection to an external paging encoder. DuPage County's paging sites can be connected to GGM8000 Conventional Channel Gateways (CCGW) ports of the desired PSAPs and paging tones can be sent via integrated or external paging encoders. The "Integrated Paging Encoder" section of this document talks in detail about the paging tones/formats supported by the MCC7500 consoles. If the MCC7500 console's integrated paging encoder is used, the OP position that owns/creates a Patch can not send any page out on the resources that are in that Patch.

## APX 7000 User Radios

Motorola is proposing APX 7000 radios to meet DuPage County's current and future (P25 APCO Phase 2 TDMA) communications needs. APX is Motorola's 4th generation Public Safety Project 25 radio capable of multi-band operation (700MHz, 800 MHz and VHF), backwards and forwards compatibility (Analog/Digital, FDMA/TDMA), and integrated GPS for outdoor location. As part of Motorola's MOTOA4™ portfolio, the APX portable is the first multi-band radio to meet and exceed public safety specifications for mission critical communications while being 15 percent smaller and 50 percent louder than the flagship Motorola XTS 5000 high tier portable.

APX introduces instant multi-agency interoperability for mission critical first responders in a form factor that was designed specifically for Public Safety and Law Enforcement agencies. Designed specifically for first responders by applying the science of High Velocity Human Factors (HVHF), the dual-sided portable radio has both an audio and data side providing optimal functionality and loud and clear audio in a compact rugged form factor, which amplifies public safety officials' ability to keep their communities safer than ever before.



## 4C.2 DuPage PSAPs Power & Cooling Requirements

PSAP	# of OPs	AC Power (Watts) in Console room	BTUs/hr in Console room	AC Power (Watts) in Backroom	BTUs/hr in Backroom	Rack footprints (see Note 4)	OP8 Electrical Panels (see Note 3)
DuComm	23	6785	23,150	5887	20,086	3	3
DuPage South	17	5015	17,111	5852	19,967	3	3
DuPage Wireless	10	2950	10,065	2409	8,220	2	2
DuPage North	5	1475	5,033	2479	8,458	2	2

Each PSAP location will provide the following space, electrical, grounding and HVAC requirements.

Note 1: For each Console position, one electrical outlet is needed for a surge suppressor outlet strip.

Note 2: Per R56 manual, the site HVAC system shall be capable of maintaining interior conditions of 17.8° to 24° C (64° to 75° F) and reduce humidity

to a level of 30 to 55% relative humidity (RH) (per ANSI/TIA/EIA-569-B or other applicable Standards body design requirements).

Note 3: Hardwire four circuits into the 1 Transtector OP8 outlet panel (wire two outlets to each circuit)

Note 4: This includes one footprint required for NICE logging system's 4 Post cabinet.

Note 5: Ensure all internal and external facility grounding systems are compliant with R56 standards.

And provide a single point ground system that includes an internal master ground point and sub-system ground points, when applicable, located within three feet of the Motorola supplied equipment.

Note 6: Each PSAP will be responsible for its backup (UPS) power system.

## 4C.3 The MCC 7500 Dispatch Console

The Motorola MCC 7500 Dispatch Console is Motorola's mission critical IP (Internet Protocol) high-tier radio dispatch console system. The MCC 7500 Dispatch Console features an intuitive, easy-to-use Graphical User Interface (GUI) that runs under a Microsoft Windows® operating system, utilizing the industry standard PC platform. MCC 7500's highly recognizable icons are designed to reduce user training time, and allow dispatchers to manage information more productively.



## 4C.3.1 Features and Benefits

Designed for effective, flexible dispatch communications, the MCC 7500 Dispatch Console provides a range of valuable features:

- ◆ **Seamless integration** with ASTRO® 25 trunking systems
- ◆ **IP Network** – The MCC 7500 supports the IP protocols of the ASTRO 25 system's transport network
- ◆ **End-to-End Encryption** – Encryption and decryption occurs in the dispatch consoles, allowing true end-to-end encryption in the radio system.
- ◆ **Centralized System Management** – The MCC 7500 console system is configured and managed by the ASTRO 25 system's configuration manager, fault manager, and performance reporting applications. This provides a single point for configuring and managing the entire radio system, including the console portion.
- ◆ **User Friendly** – MCC 7500's environment features the familiar standards used by other Windows programs worldwide.
  - Screen layout, menus, and icons are easy to understand and quickly recognizable by users.
  - Each dispatcher's configuration can be customized via the Elite Admin application.
  - Elite Dispatch GUI uses a simple point-and-click response. The dispatcher has the choice of using a mouse, trackball, or optional touch screen, and the keyboard.
- ◆ **Agency Partitioning** – Allows multiple agencies to use a common system while maintaining control over their console resources

Telephone Interconnect is not available in the current MCC7500 consoles but this feature is planned for future release. Applications which are not being certified yet in MCC7500 consoles for co-habitation include 911 applications and computer aided dispatch (CAD) applications. These may be certified in later releases.

## 4C.4 System Design

The MCC 7500 console site consists of a collection of MCC 7500 dispatch consoles and/or MCC 7500 Archiving Interface Servers (AIS) and related equipment networked together from a common location.

There are two software programs that comprise the MCC 7500 - the Elite Dispatch graphical user interface (the dispatching software used to operate the dispatch position) and the Elite Admin application (the administrative software used to define the layout of the Elite dispatch screens).



## 4C.4.1 Architecture

Following are the main components of a typical Motorola MCC 7500 console system:

- ◆ Dispatch Console
- ◆ GGM8000 Conventional Channel Gateway (CCGW)
- ◆ Conventional Site Controller
- ◆ Auxiliary Inputs and Outputs
- ◆ Archiving Interface Server

Various combinations of these components are connected together and to the rest of the ASTRO 25 system via console site routers and switches on an IP network.

Motorola MCC 7500 console equipment connects directly to the radio system's IP transport network. It uses the IP packet protocols for passing call control data and call audio through the system. Figure 4-1 shows a high level diagram of how typical Motorola MCC 7500 equipment fits into the system.



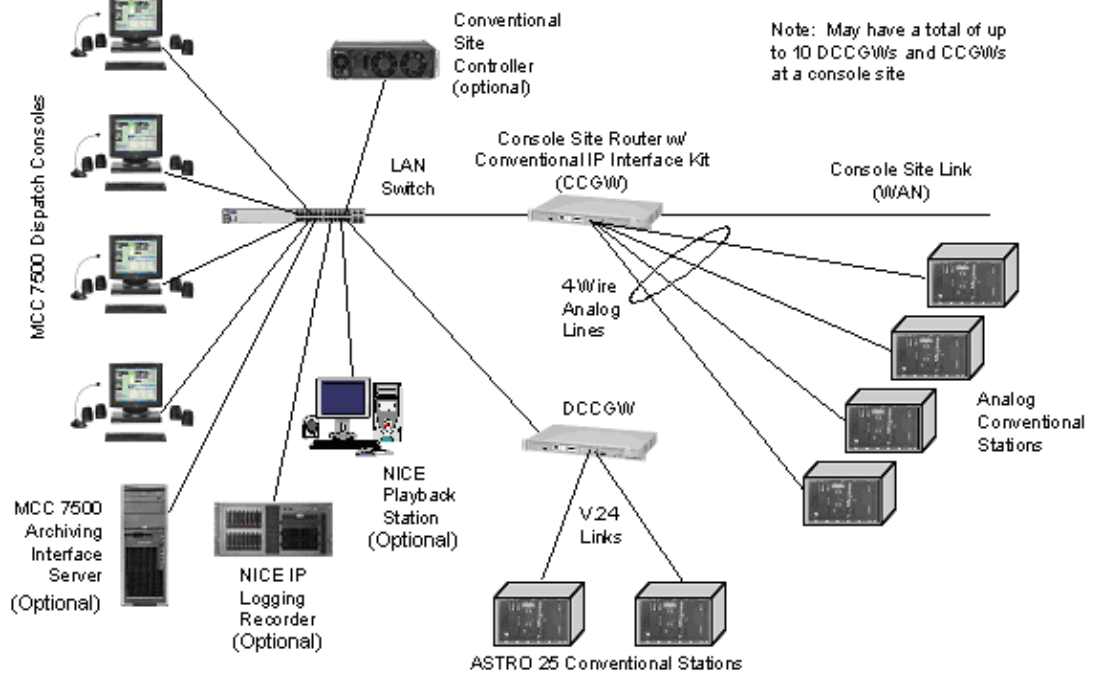


Figure 4-1: Typical Motorola MCC 7500 Dispatch Site Components

## 4C.4.2 Overview of the MCC 7500 Dispatch Console

The dispatch console is based on a commercially available personal computer with Motorola provided hardware and software. The dispatch console software consists of the Elite Dispatch graphical user interface (GUI).

The Motorola provided hardware includes (refer to Figure 4-2):

- ◆ A Motorola-certified personal computer
- ◆ A Voice Processor Module (VPM)
- ◆ Desktop speakers (up to 8)
- ◆ Headset jacks (up to 2)
- ◆ A desktop microphone
- ◆ A footswitch



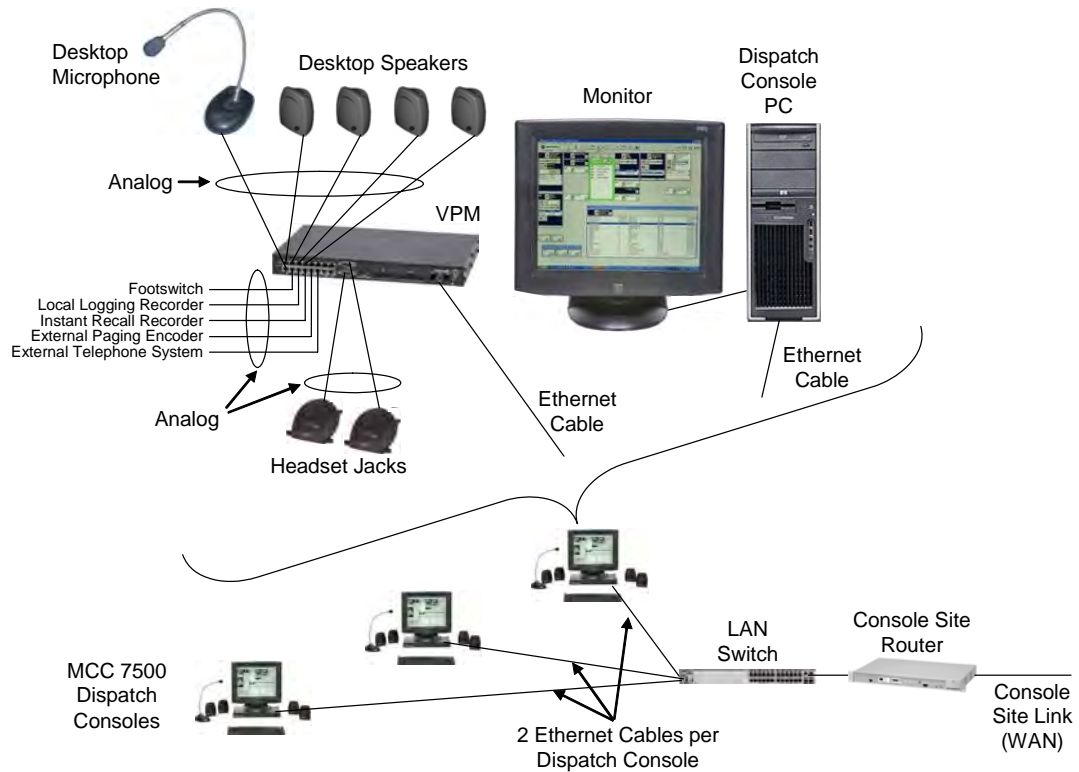


Figure 4-2: Typical Motorola MCC 7500 Dispatch Console Hardware Architecture

### 4C.4.3 Concept of NICE Architectural Approach

Below is an overview of the concept of the Architectural Approach for the DuPage solution. The proposed solution architecture can be broken down into four logical areas of functionality:

- ◆ System Users or “Clients”
- ◆ The Inform Server/Application Suite
- ◆ Audio/Data Logging & Storage Sub-Systems
- ◆ Audio & Data Sources

**Clients:** Various personnel within DuPage County perform many different roles, each role requiring access to differing types of data and interactions between the public and the DuPage County staff. NICE Inform provides a single conduit through which all of the different types of data can be viewed, manipulated and maintained as required.

**Inform Application Suite:** At the heart of the proposed solution is NICE Inform (“Inform”). Inform consists of a suite of client applications that provide user access and system administrative services for the entire logging system. A detailed



discussion of the Inform application suite is provided in a separate section of this document.

**Audio/Data Logging & Storage Sub-Systems:** These systems are the fundamental building blocks of the DVR system. They interface to the individual audio and data sources of the DuPage County System. They capture the audio/data and serve as short/medium term repositories. Subsequent to capture, all radio (centrally captured) audio is transferred from the short term storage of the logging devices to much larger, more efficient mass storage devices for long term storage and retrieval. NiceLog as the audio capture platform and Interaction Server as the data capture platform. Though not offered, the proposed infrastructure is also capable of supporting Video, Screen and other types of multimedia capture platforms.

**Audio & Data Sources:** The DuPage County system has three primary sources of audio:

- ◆ Analog Telephony/Console– This audio source provides all audio from the positions channels (recorded at each site)
- ◆ Analog Conventional Radio audio: Two wire analog audio is provided for each frequency on the local radio system (recorded at each site).
- ◆ IP Radio audio: Native IP audio packets are provided for each talk group on the trunked radio system (recorded centrally)

The proposed architecture provides the following general benefits:

- ◆ Minimizes potential network issues by consolidating access
- ◆ Simplifies upgrades and maintenance through the use of .NET services
- ◆ Simplifies Administration by providing uniform system administration and access control
- ◆ Maximizes availability by providing integrated failover and redundancy support
- ◆ Protects DuPage County's investment by providing state-of-the-art software capable of integrating future industry enhancements (i.e. NG911)

## 4C.5 System Components (System Building Blocks)

### 4C.5.1 NiceLog Logging Recorders – Analog Audio Logging and Capture

The analog capture platform proposed to DuPage County is the NiceLog Digital Voice Recorder. The NiceLog is based upon the proven MS Windows 2003 Server Appliance Edition operating system. The operating system is limited in functionality and tailored to meet the requirements of the NiceLog's recording engine while providing a highly efficient, secure, and robust operating system on which to run.



Access to the recorder is via remote workstations, leaving the operating system and the hardware resources to focus on recording – the primary function of any recorder. Only a monitor/mouse/keyboard connected directly to the recorder mainframe [or via KVM] is required for maintenance functions and are not needed on a day-to-day basis. All access is from a remote workstation PC via the LAN/WAN which has the benefit of making access more convenient for system administrators and preventing unauthorized tampering of the recorder at the mainframe itself.



**Nice Logging Recorders**

At the core of the recorder is an efficient token based recording engine. Token based recording is the preferred method of capturing voice traffic across multiple channels, offering efficiencies that cannot be matched by file-based systems. Token Based recording makes best use of storage and archiving devices, ensuring that a minimum of files (or tokens) are open at any one time. A token consists of a snap-shot of activity across all channels, so at any one time only one frame is open and being stored to the hard drive. This minimizes head movement within the hard disk drive, preventing wear and tear on the mechanism and therefore maximizing drive life and increasing system reliability and longevity. Tokens are stored to an un-partitioned area of the recorder's hard disk drive. This adds to the overall security of the recorder system. Even if the recorder was hacked into, without NICE System's applications, all recorded audio is secure and unreachable.

Recordings are initially stored onto the logger's internal hard disk drives. The proposed solution offers 3 hard disk drives in a RAID 5 configuration in each logger. This ensures integrity of the recorder operating system as well as the captured audio. Messages are automatically date and time stamped at the time of recording. Time synchronization is from a NTP clock source via the LAN.

The proposed system provides G.729A compression for all telephone, console and conventional analog radio. This provides a compression of 8Kpbs which optimizes storage space while maintaining high quality audio during replay.

## 4C.5.2 Motorola MCC7500 Logging System

The MCC7500 Logging system provides audio call recording and archiving for the Proposed Motorola IP infrastructure. It provides a reliable and robust solution for customer audio recording requirements. It is an innovative recording solution that allows public safety organizations to record their radio system communications. The logging recorder utilizes a Pentium Xeon based server platform with two hard drives (providing 75,000 channel hours of storage), dual DVD-RAM drives, and Windows



2003 Server operating system. The recorder is scalable with the ability to add capacity with the purchase of additional licensing.

The MCC7500 Logging Recorder works in conjunction with an Archiving Interface Server (AIS) utilizing an API that allows the recording system to specify which talkgroups and conventional channels will be recorded. Because this API allows call control data to be passed to the recorder system, Motorola's recording solution provides unique capabilities.

Below the four primary components of the MCC7500 Logging System are discussed:

#### 4C.5.2.1 The Archive Interface Server (AIS)

The MCC 7500 Archiving Interface Server (AIS) supplied by Motorola provides an interface between the NICE ASTRO 25 IP radio system and the logging recorder. The interaction between the AIS and the logging recorder is based on the MCC 7500 console API. The AIS uses the API to specify which talkgroups, conventional channels, telephone and individual calls it will record. The AIS uses the API to pass call control information and vocoded audio packets associated with radio calls to the recorder system via the LAN for storage and retrieval. Archiving interface servers may be located at any dispatch console site or may be located at the zone's core site.

#### 4C.5.2.2 The IP Logging Recorder

The MCC7500 IP Logging Recorder supplied by NICE is a server running the NICE VoIP Logger software, NICE Call Logging Server (CLS) database and NICE AIS Support software. NICE AIS Support software is installed on the Logging Recorder to allow recording calls from the AIS. It consists of CLS database modifications and the NICE AIS Audio Capture and NICE AIS Channel Manager components.

The logging recorder has the same capacity as the archiving interface server (AIS), up to 120 simultaneous calls. The simultaneous call capacity of a recorder includes all the trunked radio channels being recorded via the AIS.

#### 4C.5.2.3 The Administrator Workstation

The NICE logging recorders and playback stations used in the MCC7500 Logging system are configured and managed by a common administration application. This application is typically run on a replay workstation PC. In some instances, it can be installed on a dedicated PC. The Nice Administration application is used to configure the Loggers, create User Accounts and to check the status of the Logger.



#### 4C.5.2.4 The Replay Client

The Replay Workstation provided by Motorola is a networked computer equipped with a keyboard, mouse, a monitor, a speaker and runs the NICE Inform browser based client or the Scenario Replay client software. The replay station's user interface named NICE Inform displays information such as logged events and call data such as audio/event starting time and duration of transmission. The replay workstation software allows the user to search for calls and events through a graphical user interface and initiate playback of the chosen calls. The replay workstation can access recordings on multiple NICE recording devices, even ones that are not being used with MCC 7500 Archiving Interface Servers. This provides the user with a complete view of everything being recorded at a particular site (i.e. Telephony, console, etc in addition to radio transmissions).

#### 4C.5.3 Nice Inform Servers

The NICE Inform Server hosts the NICE Inform database, the NICE Inform Server software services and the web interface used by the clients to start the NICE Inform Applications. The NICE Inform Server software provides a single entry point into the underlying logging systems, giving a unified view across the parallel recording systems.

##### 4C.5.3.1 Call Logging Server (CLS) Application

The CLS is the system component responsible for call data handling. At its core the MS SQL 2005 Database Engine. SQL is used as the repository for all call data records. All *non-Motorola IP Radio* call data for DuPage County (Telephony, Console and analog radio) will be generated by the VOX driver. The VOX driver is the facility within the Interaction Server that constantly polls all associated NiceLog audio logging recorders for call activity. As calls (radio, console or telephone) are recorded, a call record consisting of CHANNEL, START TIME and STOP TIME is created and entered into the Interaction Server database. Storing the data in a SQL database provides for extremely fast search and retrieval times as well as the ability to use standardized third party backup and restore tools (SQL Backup, etc.).

The NICE Inform application can integrate a virtually limitless number of Loggers, Interaction Server Servers and Storage Center Servers together, abstracting the end users from being required to know which logger, Interaction Server or mass storage device a call was recorded/stored on or where the audio for a particular call currently resides on the system.



### 4C.5.3.2 Storage Center (SC) Application

Storage Center is provided as part of the DuPage County solution to provide the mechanism that controls long term, on-line storage of IP radio call audio. Storage Center performs two main tasks:

- ◆ The application constantly polls the CLS Server DB for calls that have been designated for transfer to the Storage Center long term repository.
- ◆ As calls requiring transfer are identified, the application transfers the files from the appropriate logger in real time or can be configured to transfer the audio at a time or frequency desired by DuPage County.

### 4C.5.4 Alarm Management Application (Administration Servers)

The primary mechanism of alarming for the proposed system is via the SNMP protocol. Hardware and software components are SNMP compliant (each with a custom MIB file) and provide real-time system monitoring and alerting to the provided Castle Rock SNMP Management Application.

### 4C.5.5 Nice Inform

The NICE Inform suite of applications has been developed in support of Public Safety and First Responder users. NICE Inform uses Microsoft's .NET Windows Forms technology to provide automatic updates from the NICE Inform web server. This helps NICE combine low desktop support costs with feature-rich, high quality graphical user interfaces. Users benefit as well – for example, user preferences and settings, including window sizes and locations, preferred search fields and many other options, are all stored centrally. Users can share workstations, or use different workstations from day to day, and their own personal preferences will be applied as soon as they log on to NICE Inform.

NICE Inform includes the following applications described in Table 4-2

**Table 4-2: NICE Inform Applications**

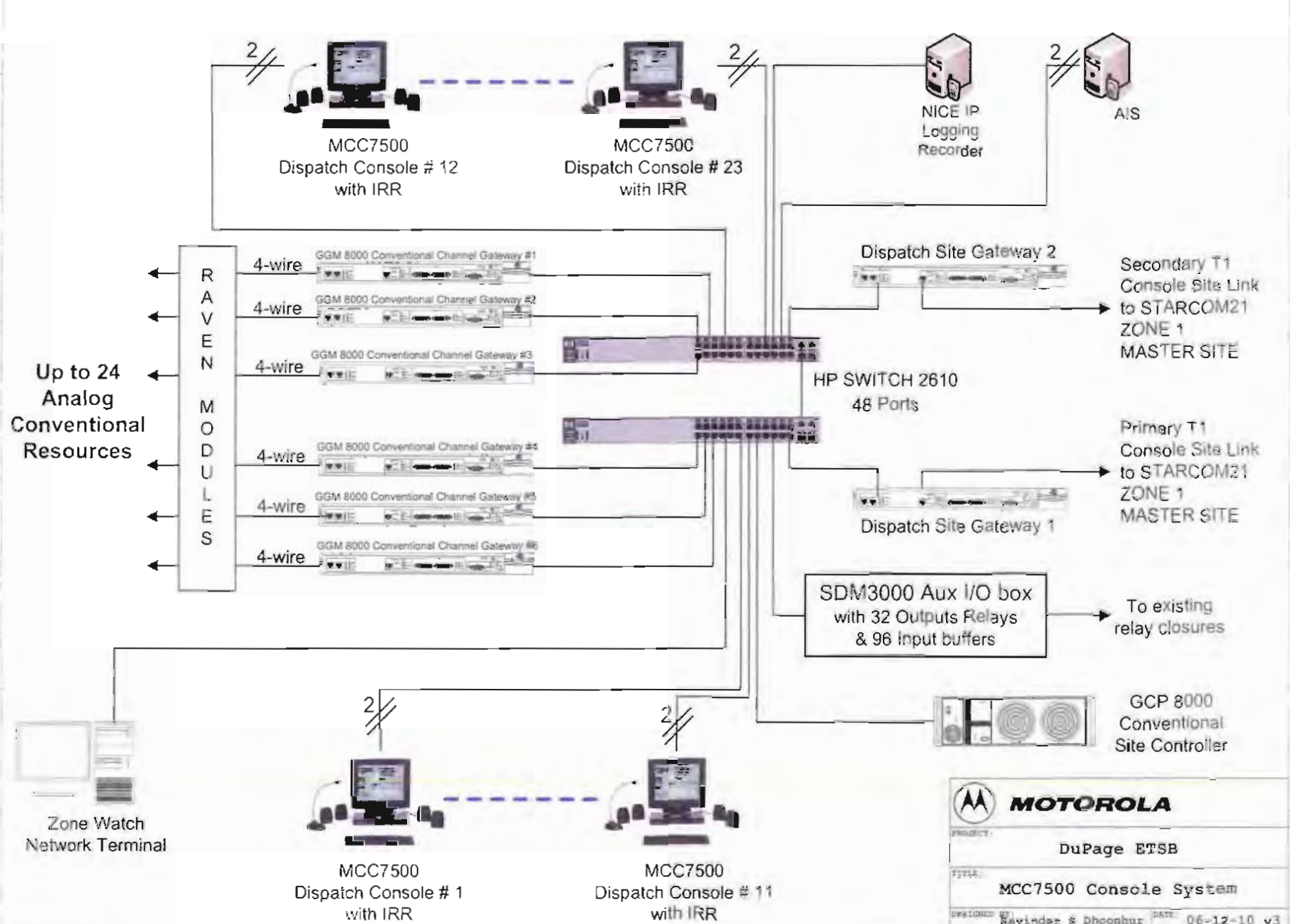
Application	Description
Reconstruction	The tool for search and replay of audio across the system. Familiar in appearance to users of Scenario Replay, Reconstruction includes many features and enhancements to increase user satisfaction and productivity.
Organizer	The tool for the management and distribution of recordings and ancillary material. Organizer is an application that streamlines the recording distribution process, increasing responsiveness to requests and improving the reliability and repeatability of results. Organizer operates within the NICE Inform audit and security model, ensuring traceability of actions and strict access control to sensitive material.




Application	Description
Monitor	<p>This tool provides real time access to ongoing calls. The NICE Inform Monitor application provides a way to view real time activity on a group of channels. One or more channels can be selected for monitoring. The monitored channels are mixed together to provide a local audio output on the workstation which is only a few seconds behind the actual conversation.</p> <p>Monitor also includes rapid access to recent calls on one or more channels, providing an easy way for a supervisor to quickly come up to speed on a developing situation.</p>
Audit Trail	<p>The NICE Inform Audit Trail viewer provides access to the detailed audit history of user actions stored within the NICE Inform server, including security events, administrative changes and user actions such as playback of audio.</p>
User Administration	<p>NICE Inform is built around a logical, tree-based user security model that enables independent control of all actions, such as replaying a call, saving a call, monitoring call, etc as well as restricting access to individual channels or groups of channels.</p>
System Administration	<p>Control of the recording systems running under the NICE Inform server, including the configuration of channel pairs to support the automatic matching of primary and secondary recorder channels.</p>

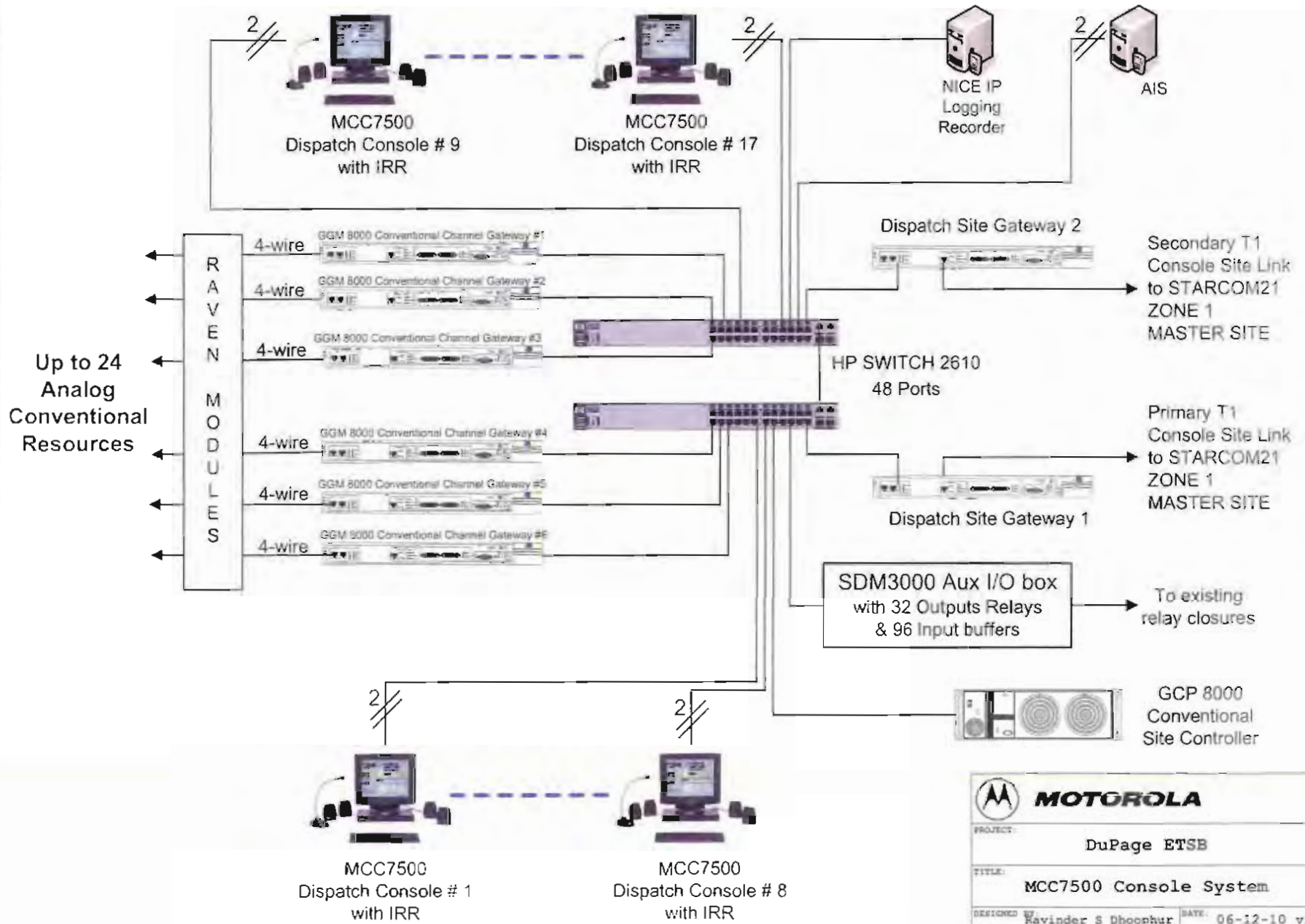



# ETSB DuComm – 23 OP positions



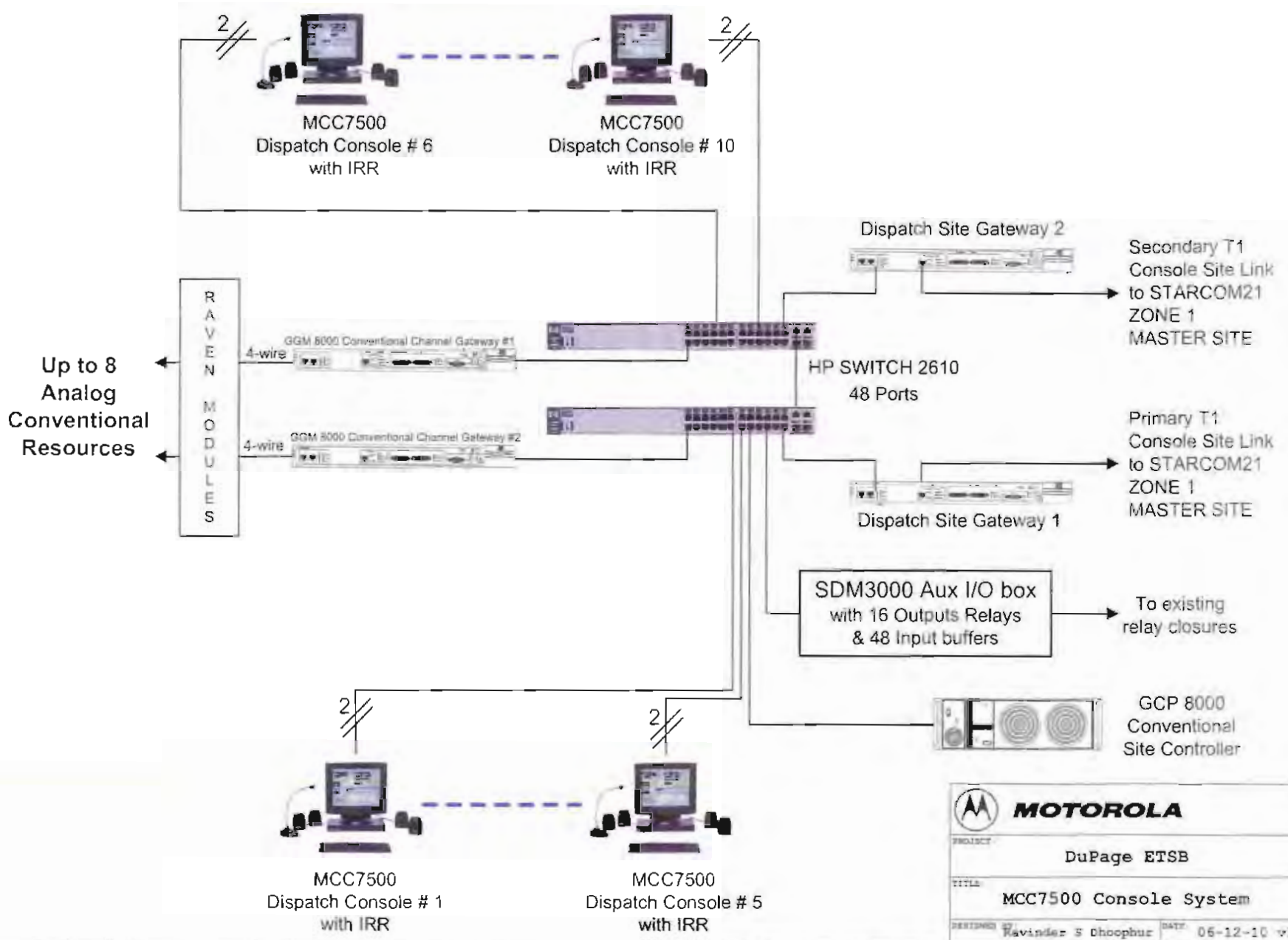
 <b>MOTOROLA</b>	
PROJECT:	DuPage ETSB
TITLE:	MCC7500 Console System
DESIGNED BY:	Navinder & Dhoothur
DATE:	06-12-10 v3


# ETSB DuPage South – 17 OP positions



 <b>MOTOROLA</b>	
PROJECT:	DuPage ETSB
TITLE:	MCC7500 Console System
DESIGNED BY:	Navinder S Dhoophur
DATE:	06-12-10 v3

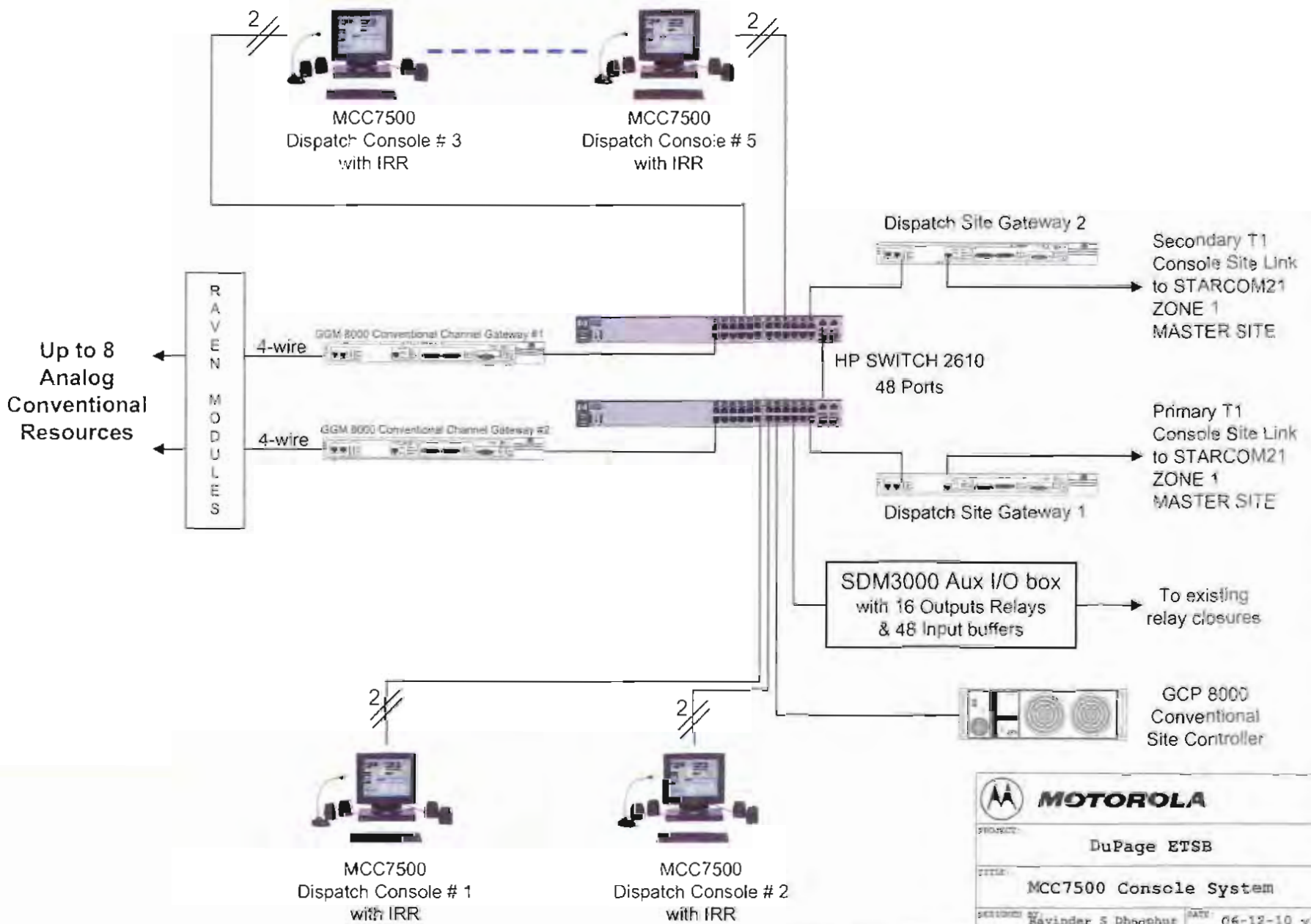
# DuPage Wireless PSAP – 10 OP positions




 <b>MOTOROLA</b>	
PROJECT:	DuPage ETSB
TITLE:	MCC7500 Console System
DESIGNED BY: Ravinder S Choopbur	DATE: 06-12-10 v3

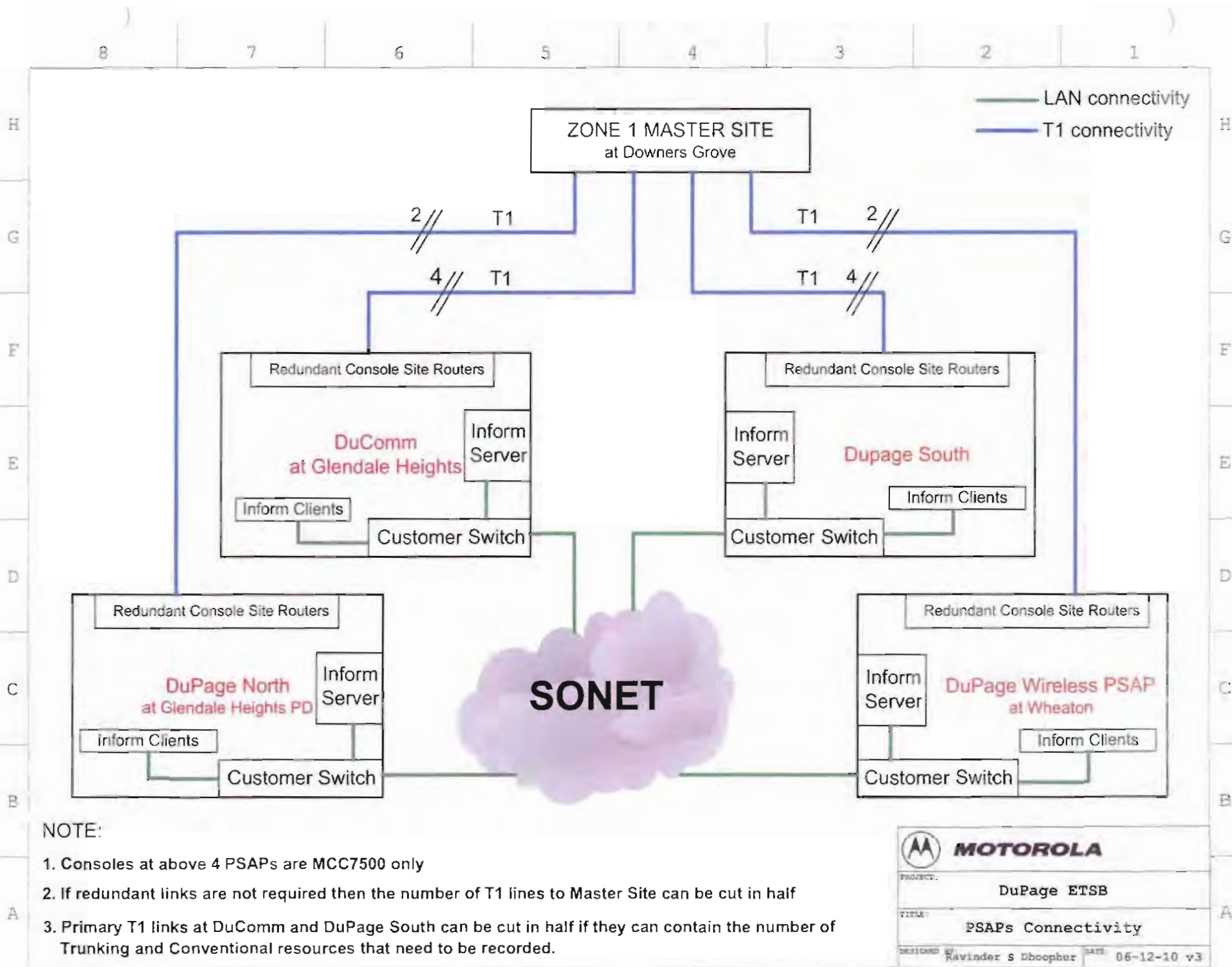
ORIGINAL DOCUMENT SIZE IS 8.5x11; CORRECT SCALE IS NOT GUARANTEED IF REDUCED OR ENLARGED

# ETSB DuPage North – 5 OP positions




 <b>MOTOROLA</b>	
PROJECT:	DuPage ETSB
TITLE:	MCC7500 Console System
DESIGNED BY:	Navinder S Dhoopar
DATE:	06-12-10 v3

ORIGINAL DOCUMENT SIZE IS 9.5X11. CORRECT SCALE IS NOT GUARANTEED IF REDUCED OR ENLARGED



**NOTE:**

1. Consoles at above 4 PSAPs are MCC7500 only
2. If redundant links are not required then the number of T1 lines to Master Site can be cut in half
3. Primary T1 links at DuComm and DuPage South can be cut in half if they can contain the number of Trunking and Conventional resources that need to be recorded.

 <b>MOTOROLA</b>	
PROJECT:	DuPage ETSB
TITLE:	PSAPs Connectivity
DESIGNED BY:	Ravinder S Dhoopur
DATE:	06-12-10 v3