Two-way Campus Communications Improves University Safety

WEST VIRGINIA UNIVERSITY AT PARKERSBURG

Parkersburg, WV

The Challenge

- Provide campus-wide, indoor/outdoor emergency paging system where none exists

- Enable two-way as well as broadcast communications with classrooms

- Transmit essential information quickly and efficiently to single or multiple locations

The Situation

Located on the outskirts of Parkersburg, a city of 33,000 nestled on the banks of the Ohio River in central West Virginia, West Virginia University at Parkersburg is a bustling commuter campus with a student population of 4000. Despite its idyllic location, however, WVU at Parkersburg is keenly aware of the potential for trouble on campus in light of the 2007 tragedy at Virginia Tech and other recent school emergencies nationwide.

Determined to provide the best possible security for its students, the administration at WVU-P looked at what it would take to provide its campus with reliable, effective two-way communication for its three major buildings – the main administrative and classroom building, the Caperton Center for Applied Technology, and the Center for Corporate & Community Education – spaced about 1500 feet apart on their rolling campus grounds. As part of a comprehensive safety plan, WVU-P determined they needed an emergency paging system that enabled two-way communication between all of the university's buildings, classrooms, and administration offices. University officials believed that an integrated, campus-wide communications system would be a critical feature of its new safety plan.

The Solution

To implement this comprehensive two-way communications system, WVU-P turned to ProComm Technologies of Parkersburg, which selected Bogen's Multicom 2000 Administrative Communication System (MC2K). This multifaceted communications system was the campus' first true paging system – it's designed specifically for the needs of schools and other institutions with many rooms and combines private telephone communications with public broadcast capabilities, switching seamlessly between the two without breaking contact. The MC2K was particularly appealing because programming is handled through a Bogen Administrative Display Telephone (MCDS3) which features an LCD information panel using plain English language to walk the user through programming with simple, step-by-step instructions. The MC2K multi-faceted communications system provides WVU-P with a variety of broadcast and paging features with three capability levels – staff, enhanced staff, and administrative – that enable a variety of programmable communications between individual classrooms, administrative stations, and the campus police station.

"The MC2K was the right product for the right job," commented Steve Backus, operations manager for ProComm and project head, noting the system's flexibility and ease-of-use – ideally suited for WVU-P's introduction to a comprehensive paging system.

The installation utilized two MC2K systems. "In the main campus building we rack-mounted a 144-port Multicom system (MC2KR-144) and in the Caperton Center we installed a smaller, 48-port unit (MC2KR-48) in a wall-mounted rack. WVU-P ended up going with 4 administrative-level telephone stations (MCDS3) located in the police station, administration offices, and the two other buildings, with Wall Display Stations (MCWD) installed above them," added Backus. Approximately 120 call-in switches (CA15C) were installed in various individual classrooms, along with 180 Ceiling Speakers (S86T725PG8W) and 12 Bogen 15-watt Horn Loudspeakers (SPT15A).

BOGEN

The Solution (cont.)

In addition, the comprehensive paging system utilizes a digital clock system featuring a programmable Bogen Master Clock (BCMC300-00K-1) and 18 digital hallway clocks (BCBD103-404-4) to coordinate scheduled time period chimes across the three-building campus. The Master Clock also enables scheduling of pre-programmed, automated alerts and messages as needed. The speakers are powered by a Bogen HTA Series Power Amplifier (HTA125A) located in the main campus building. This 125-watt amplifier was selected in part for its ability to operate continuously at its rated power without overheating or distorting.

According to Backus, the system was divided into six separate zones. "The main campus building has four floors, so we made each floor a separate zone, along with a zone each for the Caperton building and the business building; this way they don't disrupt the whole campus or even a whole building when they page," he added. The entire system runs over existing copper cabling between buildings, with ProComm pulling additional 22-2 and 18-2 twisted pair speaker cabling in each of the buildings to accommodate the newly-installed Bogen speakers.

What makes the system well-suited for emergencies is its flexible functionality. The four administrative phones feature different rings for normal, urgent, and emergency calls. The LCD wall displays installed with each of the 4 phones flash the word "HELP" during emergency calls and ring until there is a response, automatically switching to a speaker-equipped station after a programmed period of time to ensure timely attention. A campus-wide emergency page can be transmitted from any of the 4 administrative phones.

The Results

With the installation of its Bogen Multicom 2000 system, WVU-P immediately gained a fully-functional, multi-purpose, easy-to-use, comprehensive communications network linking classrooms, offices and the campus police station with two-way public and private communications and emergency signaling capabilities. As their student population and facilities grow, their Multicom system can grow too, with the ability to add zones, rooms and stations as needed.

"Before installing our Multicom system, we basically didn't have a system at all," observed WVU-P facilities director Dave White. "With this installation, we now have a comprehensive emergency communications system for safety and security, with a switch in every classroom. If there's a security problem, or even a health emergency, just the push of a button will alert the administration and campus police. There's not even a need to speak."

"We're so pleased with our Multicom system, we've just installed another one in one of our facilities 45 miles away," White added.

System Highlights

Bogen's versatile Multicom Communications System provides WVU-P with a turn-key, comprehensive, flexible, campus-wide paging and communications system. Multicom enables the campus administration to provide notifications via selected zone as well as point-to-point communications, including voice messages, pre-recorded messages, and alarm tones. Each Multicom system includes a built-in master clock and fully-featured telecommunications capabilities, including call forward, call transfer, and call conference.

Password-protected system programming is easy, using an administrative display phone and the simple, step-by-step instructions that appear on the phone's LCD display. The master clock can be programmed with up to 800 scheduled events, zoned and synchronized with digital clocks throughout the campus.

As WVU-P's needs change and grow, Multicom is designed to grow with it. The system can be scaled up as needs grow by adding station cards or equipment. In addition, multi-location campuses are able to be connected using Bogen's Quantum Multicom IP.

System Expansion

Build upon your investment with Multicom Quantum IP

Multicom Quantum IP is a sophisticated, IP-based communications tool that enables users to easily control and modify their Bogen Administrative Communication System using a web browser and any computer.

Quantum IP enhancements:
- **Remote deployment** – not just campus-wide, but across multiple campuses using existing LAN infrastructure.
- **Hardware can be distributed** – locate Quantum nodes where needed, then interconnect all nodes into a single system using the existing facility LAN.
- **Highly scalable** – from 25 to over 15,000 stations per facility. Interconnect up to 99 facilities to provide point-to-point communications between any two stations or from any station to any zone. Also make All-Call pages into any one or all facilities at once. Add more buildings, campuses, or facilities just by adding Quantum cards and equipment.
- **Quantum is backwards compatible** – no need to scrap an MC2K system and replace it – just add Quantum processor nodes.

With Quantum IP, there's no need for extensive hardware upgrades – Quantum IP easily installs on existing Multicom 2000 hardware. Simply replace a plug-in processor card and it's ready to provide immediate enhanced capacity and performance.

Quantum is ideal for expanding communications capabilities, especially for multi-campus institutions. Quantum enables individuals to communicate with any specific station on any connected campus. In addition, broadcast announcements, such as general student body announcements or emergency directives, can be made to any or all campuses and any combination of zones and stations within the system.

That's the benefit of Quantum – unparalleled flexibility for both specific and general communications, across one campus or several.

Product Highlights

Equipment

Rack-Mount Multicom System

The MC2K Administrative Communication System (MC2K) is specifically designed for use in educational, institutional, and industrial facilities. The comprehensive, easily-programmable system combines private telephone communications with a paging and program-distribution system featuring emergency call capabilities and programmable bell schedules. The system is fully field-programmable using the keypad of an administrative telephone station (MCDS3). The Multicom rack-mount version (MC2KR-144) supports up to 144 stations in the WVU-P installation – rack-mounted system capacities range from 24 to 240 in increments of 24. Multicom is built into a standard 19-inch rack and may be from 44 to 77 inches high, depending on customer requirements.

Wall-Mount Multicom System

The space-saving wall-mount unit (MC2KR-48) supports up to 48 stations in a 24 x 32 x 10-inch cabinet. The compact size of the unit allows for more flexible placement within any facility. Wall-mounted systems are available with capacities for 24, 48, 72, 96, and 120 stations.

Administrative Display Telephones

The administrative telephone (MCDS3) is a versatile communications and programming station featuring an LCD display panel showing time-of-day and day-of-week, the current time signaling schedule, and the station numbers and call-in priority of programmed staff stations that have called that particular administrative station. Depending upon the system access level, an administrative station can use display menus to activate zone pages, alarm signals and external functions, as well as select program sources and distribute or cancel a program to any or all speakers or zones.

LCD Displays

Wall Display Stations (MCWD) are used above the four administrative phone stations to display key call information and emergency messages.

Amplifier

The rack-mounted 125-watt Bogen Power Amplifier (HTA125A) is a paging system amplification workhorse, providing continuous operation at its rated power with thermal protection and automatic electronic overload protection.

Speakers

Low profile Ceiling Speakers (S86T725PG8W) feature an 8″ cone speaker for excellent audio quality. They were installed using tile bridges for easy drop ceiling mounting.

Weatherproof Horn Loudspeakers (SPT15A) were used to provide campus-wide outdoor coverage. Rugged, all-metal construction and a tilt and swivel base make these speakers ideal for strategic outdoor placement to provide clear, full coverage.

Key Products

S86T725PG8W
Low Profile
Ceiling Speaker, 4W

SPT15A
Weatherproof Horn
Loudspeaker, 15W

HTA125A
Rack-mounted
Power Amplifier, 125W

MCDS3
Administrative
Display Telephone

MCWD
Wall Display
Station

MC2K
Rack-mount
Multicom System