BIAMP®
SYSTEMS

Case Study: Education

Birmingham Public School District

The Birmingham Public School District implements District-wide paging system upgrade with a Vocia® Networked Public Address System

The facilities of the Birmingham Public School District are made up of 15 separate buildings: eight elementary schools, three middle schools, two high schools, one senior center, and the administration office.

Every building contained an analog public address (PA) system with one microphone in the main office and a Dukane integrated classroom system. These were typically stand-alone systems, independent of each building, with no real standard of consistency throughout the District. This trend continued as new buildings were constructed and new systems were added. The lack of a streamlined approach and unified communication across all facilities was an important challenge for the District to overcome. District administrators also wanted to improve the audio quality by replacing the older systems.

Our confidence in Vocia was confirmed the first week of school when our staff and students could really hear the difference in the bells and announcements.

–Dr. Joseph Hoffman
Executive Director of Technology for Birmingham Public Schools

THE CHALLENGE

The Birmingham Public School District wanted to upgrade the paging systems in all 15 buildings. The goal was to provide a unified communication system that would allow clear, intelligible paging, schedule bells and message announcements in each building, plus the system would act as the platform to deliver emergency messages when needed—in individual buildings as well as district-wide.

The audio solution would have to provide expanded features for current and future requirements, and would need to tie into their existing paging infrastructure located in each classroom. Ease of operation for the IT staff was also important, so a solution that provided online system status monitoring capabilities (standard with Vocia) would be an additional benefit for the District. Up to this point, no attempt at unifying the systems had ever been made and thus, there was inconclusive information about the locations and capabilities of all the speakers. Though it was time-consuming for the integrator in the beginning, it was essential that every speaker line in each building be located and identified, and its viability assessed.

> Once we started digging into the project we found that we needed more amplification channels because of the number of speakers. With any other system we would have had to re-engineer how we were going to do it. With Vocia, you just add on [an amplifier], assign a zone and you don't have to worry about it.
>
> **It just works. Vocia is an elite solution.**
>
> ***–Bob Sullivan***
> President of Advanced Lighting and Sound

THE SOLUTION

While Dean Harris of Integrated Design Solutions acted as the consultant and system designer, Bob Sullivan of Advanced Lighting and Sound was selected to take on the installation. Biamp Systems' Vocia was chosen as the solution to the District's challenges because it provided a robust paging backbone that would reside on the District's wide-area network (WAN), along with exceptional digital sound processing (DSP) and remote supervision of the entire system over the existing WAN. The ability to add audio inputs and remote paging microphones via CobraNet® met the District's current needs and allowed for future expansion.

Because the buildings are located at least a few miles from each other, all are tied together with Vocia through their existing WAN, allowing for inter-building paging, as well as district-wide paging. This feature is what originally attracted the District to Vocia. The email notification system that alerts IT staff to system faults, the ability to monitor the system in real time, and the capability to make adjustments to levels or routing—all from a single remote location—have proven invaluable to the District's operating efficiency.

SYSTEM SPECIFICS

Components:

Vocia: 30 ANC-1 Ambient Noise Compensation devices, 16 DS-10 Desk Station microphones, 15 MS-1 Message Servers, 20 VA-2060se amplifiers, 30 VA-4030se amplifiers, 15 VI-6 Input devices, 8 WS-10 Wall Station microphones.

While most of the work was performed in the main equipment closet, new cabling for the ambient noise compensation (ANC-1) devices used in large gathering areas (e.g. gymnasiums, pool, cafeterias) and new inputs from the main office areas were needed. In addition, the school purchased a new Bell Scheduling system, which included relay outputs for triggering bells and tone playback. This system was required in order to integrate with Vocia, which was accomplished through the use of the Vocia Input (VI-6) device. By programming some of the control input ports in the VI-6 devices to interface with the Bell Scheduler relays, the system was able to trigger bell and tone playback directly from the Vocia MS-1 Message Server. To increase the flexibility of the buildings to communicate effectively and efficiently with their occupants and with each other, Vocia desktop paging stations (DS-10) and wall-mounted paging stations (WS-10) were installed along with audio inputs for iPod® and iPad® connectivity in all the main offices.

The design included Vocia Amplifier models (VA-2060se and VA-4030se) with redundant power supplies. Localized audio inputs were used to drive the existing classroom and hallway speaker zones reliably, efficiently and with just the right amount of power.

FLEXIBILITY AND CONTROL ENABLE SUCCESS

The greatest strength of this audio solution is the District's ability to control the system and play back pre-recorded school messages from a single administration location. Also, the campus-wide scalability of the Vocia system has made paging and bell operations within the District much smoother.

The district also experienced improved environmental benefits all around; students and teachers alike noticed an increase in the clarity and intelligibility of announcements. This increased not just staff confidence in the system, but students also heard messages the first time, decreasing the amount of confusion and lost time due to disruption and questions.

Most school paging systems in use today in the K-12 environment are based on 50-year-old technology that is inflexible and costly to maintain. The flexibility of the Vocia system enables integrators to work with existing analog systems and speaker networks to make cost-effective updates using a phased installation approach, achieving an integrated system with a reduced amount of equipment. The Birmingham Public School District was amazed at the improvement in sound quality and the ease with which they can now make their own minor programming and level adjustments as needed. This campus-wide scalability with localized control and integration is very important for a District with dynamic needs.

ABOUT BIAMP SYSTEMS

Biamp Systems is a leading provider of innovative, networked media systems that power the world's most sophisticated audio/video installations. The company is recognized worldwide for delivering high-quality products and backing each product with a commitment to exceptional customer service.

The award-winning Biamp product suite includes the Tesira® media system for digital audio networking, Audia® Digital Audio Platform, Nexia® digital signal processors, Sona™ AEC algorithm and Vocia® Networked Public Address and Voice Evacuation System. Each has its own specific feature set that can be customized and integrated in a wide range of applications, including corporate boardrooms, conference centers, performing arts venues, courtrooms, hospitals, transportation hubs, campuses and multi-building facilities.

Founded in 1976, Biamp is headquartered in Beaverton, Oregon, USA, with additional engineering operations in Brisbane, Australia. For more information on Biamp, please visit www.biamp.com.