

How to Modernize Your School's Bells, Overhead Paging, and Mass Notification in Times of Austerity

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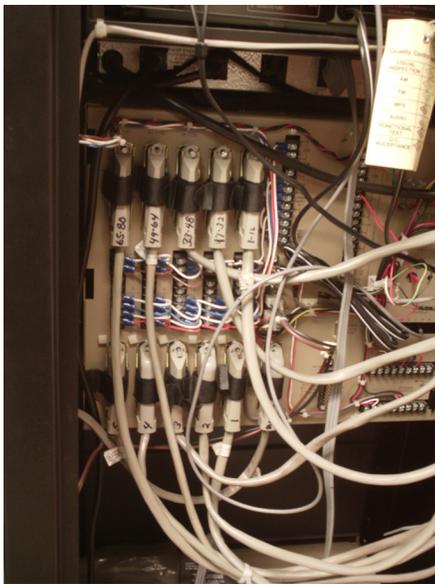
How to Modernize Your School's Bells, Overhead Paging, and Mass Notification in Times of Austerity

Cut costs, improve safety, and realize efficiencies by combining passing bells, overhead paging, and emergency notification into one system

At a time when many schools are facing budget constraints, larger teacher-to-student ratios in classrooms, smaller staff sizes, and aging school buildings, administrators are being asked to do more with less. To compound this problem, there is a growing expectation to provide quick and effective communication with staff, students, and parents in the event of a school emergency. Knowing where, how, and when to make improvements to address these needs can be challenging. In the following pages, we'll look at the ways you can modernize and consolidate your school's bells, overhead paging system, and emergency communication system to save money and time.

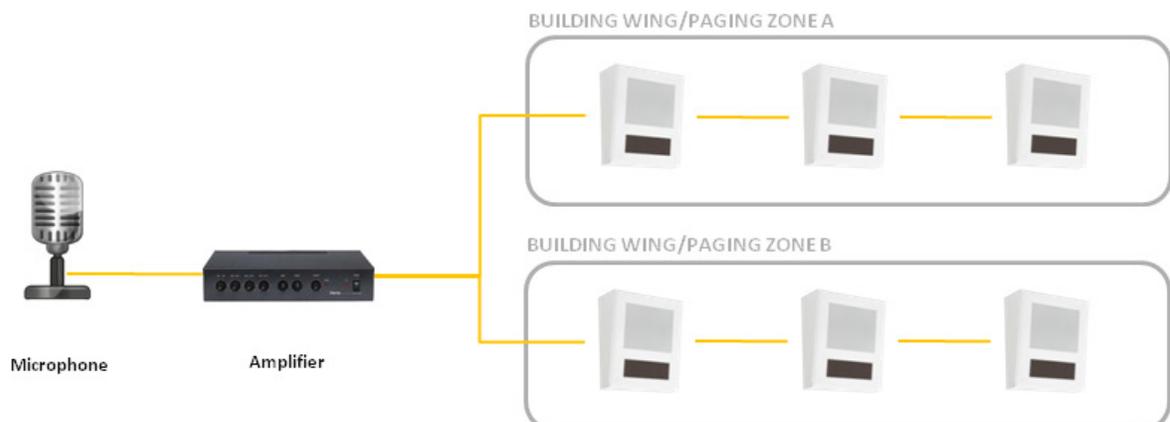


Old Buildings, Old Infrastructure, and Old Ways of Thinking



Have you ever looked above one of the false ceilings in the hallway of your school? Chances are good that they're a mess. There's everything from electrical conduit and wires for lights, to wires for the overhead paging system and paging amplifiers, to wires and equipment for the bell system and the fire alarm system, to IP-data network cabling equipment, coaxial cable, amplifiers for closed circuit television, to a phone line running to each individual phone. Each system has its own network and specific needs for operating correctly.

When we consider just the overhead paging system, we typically see an implementation similar to the following diagram. There's a microphone--typically located somewhere in the office--that's plugged into an amplifier. From the amplifier, there are several wires that run to different wings in the building where speakers are located. In some cases, these speakers may be grouped into a zone, allowing staff to send an overhead announcement to just the gymnasium or the cafeteria, or to an entire wing of the school. Anyone wishing to make an announcement would need to go the office, make sure the right zone was selected, and speak into the microphone.



The Needs and Challenges of the Modern Day School

The modern-day classroom brings with it a whole new set of needs, such as larger class sizes and new technologies. This places a burden on the facilities, infrastructure, and personnel of a school. For example, if a situation arises where a student has a medical emergency, the administration needs to know immediately to send help. Protecting the safety of the students and the staff is important. Having an easy-to-reach panic button in the classroom that can be worn by a teacher or accessed by hitting a button on a computer keyboard is becoming a necessity.



In the event of a weather emergency, an overhead page can be made to announce the storm, but how do you tell each wing of the school what to do or where to go? Calling each school in the district to verify that each of them is aware of the weather situation takes time. How can notification be sent to all locations at one time? For many schools, an emergency notification system simply doesn't exist.

There's also a new expectation with parents. With cell phones, email, and the Internet, they expect to know the minute something's happening at the school. If there's a water main break in one of the buildings, how do you notify parents quickly to inform them that classes have been canceled? Calling trees typically don't work well when it's an emergency. Getting the correct information to the right people can be a real challenge.

With aging school buildings, many districts are looking for ways to upgrade a system already in place, or add a

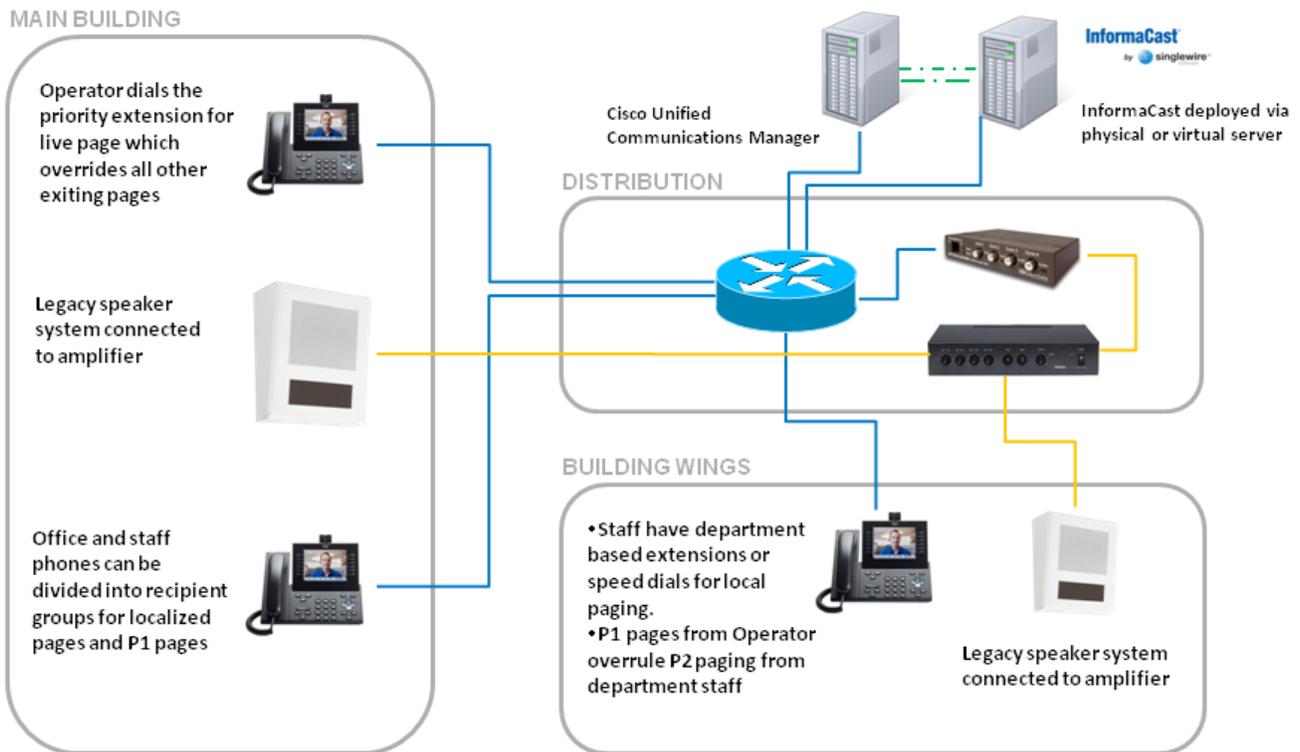
wing onto an existing building. Extending the bells, clocks, and overhead paging system can be an expensive and complicated process, especially when the existing legacy systems are out of date and offer limited features.

How Implementing a New Solution can Save Time and Money

Addressing these needs doesn't have to be an all-or-nothing proposition. Seamlessly integrating your existing legacy systems and staff together with new technologies and processes can be a logical and cost-effective way to move forward.

Many schools now have an IP data network in place to support computers in classrooms. In some cases, the IP network already provides phones to the classrooms too. Consolidating your other systems—like bells, overhead paging, and clocks—into the IP data network means that you can focus on supporting one network and one infrastructure versus several.

You're also able to leverage the knowledge of your network administrator who's already on staff. By moving bells, clocks, overhead paging, and mass notification onto the data network, it becomes a network system that can be managed and accessed along with any other application. Security protocols that are already in place for things like email access, distribution lists, file share folders, and building security, can be easily extended and added to the application that manages your bells and sends your emergency notifications. For your network administrator, who is already familiar with setting up security on these other systems, this is an easy thing to do.



While the network administrator may be good at managing the network, he or she is less in a position of knowing everyone's class schedules or when to send an emergency announcement. In this case, access can be given to individuals or groups in the school who are in the best position to make a needed change or make an announcement. Individuals with granted access can simply log into a web portal with their credentials, make the changes, and save them. For example, you could give your maintenance staff access to change the bell schedules while principals and administrators are allowed to make overhead announcements.



For staff needing to make an overhead page to the building's public address system, they simply need to pick up a phone, dial an extension, and speak the announcement into the phone. A voice prompt from the system requires that a secret passcode be entered prior to the message being sent, ensuring that unauthorized individuals can't access the system.

Pre-recorded messages and announcements can also be loaded and sent via a phone or web interface. Many organizations already plan for emergency situations like a building lockdown, weather emergency, or an unplanned school assembly. By having these messages pre-loaded, staff can react quickly with the appropriate message to keep people safe.

Integration between existing overhead paging systems and new IP-based bell systems is also easy and simple to do. To retrofit to an existing paging system, a small device called a zone controller plugs into the IP network via a Cat 5 network cable and outputs line level audio to the PA system. The number of zone controllers used depends on the number of zones that you have set up or want to set up in any given building.

Remodeled or new schools now have the option of using IP-based speakers that plug directly into the IP data network as well. The IP speakers get their electricity directly from the single Cat 5 network cable that is plugged into the speaker. There's no need to run AC power to the speaker or run additional audio cable to the speaker. The only requirement is that the switch/router in your network room has Power over Ethernet (PoE) capabilities, common now on many of the newer network devices.

IP speakers also provide an additional advantage to building managers as volume can be controlled remotely via a web interface. This allows you to set the volume levels for each speaker individually. General announcements can be broadcast at a lower volume while emergency announcements can be configured to broadcast at a louder volume to get the attention of anyone in range of the speaker.

A full range of IP-based speakers is now available from many speaker vendors, including options with attached digital or analog clocks, two-way intercom systems, strobe lights, and more. Indoor speakers can be placed in ceilings and on walls of classrooms or on the exterior of the building to broadcast announcements to playgrounds or athletic fields.

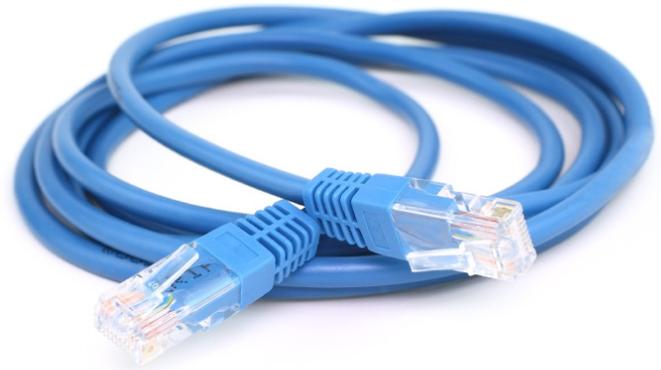
Setting the bell schedules in schools has become much easier and less intimidating. Gone are the days of complex manual systems with buttons and levers. Staff simply log into the system, set the schedules on a simple web interface, and click to apply. Any changes made to the system are implemented immediately. Schedules can be established and stored for regular school days versus days with late arrivals/early releases or planned school assemblies that change the typical class schedule.

When it Daylight Saving Time arrives and the time shifts by an hour, for network-based clocks it gets even easier: they synchronize automatically with the time on your application servers. The clocks update their time immediately and automatically without the intervention of staff.

Examples of Other Uses: Further Extend your Return on Investment

Modernizing and consolidating your ability to reach people through mass notification has other benefits as well:

- **Protect Property from Vandalism After Hours.** An unauthorized individual enters your school facility after hours. A video camera or motion detector connected to the IP network detects the intrusion and triggers a notification. A notification, in the form of an audio announcement, is sent to the overhead speakers in the building where the incident is taking place: "Attention, you are trespassing on school property. Authorities have been notified." Meanwhile email and phone notifications are sent to the building management.
- **Notify Schools of a Weather Emergency.** Your campus is spread out across several buildings and a weather emergency has been issued. Notification, automatically triggered by an alert from the National Weather Service, is sent to the display screens on all your phones. Additionally, notification with location-specific instructions on where to go and what to do are also sent.
- **Initiate a Campus-wide Lockdown.** Local protests taking place in your community are marching close to your school. You need to lockdown your building to keep staff and students safe without causing panic. You send an overhead page to all classrooms, instructing teachers to go to their phones and read a text message with information about the event.



What's Next? Where to start?

Modernizing your school's bell, overhead paging, and emergency communications into a single system improves safety and saves time and money; it's an effort every school district should consider. Having a full understanding of the costs, timeline, and issues in addition to the return on investment is the next step to more fully understanding if this solution is right for you.

Take these next steps:

- **Learn More.** View online videos, demonstrations, and technical documentation.
- **Get Your Questions Answered.** Sign up for a personalized, one-on-one webinar.
- **Try a Solution for Free.** Request a 30-day, free trial of InformaCast.

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