

CASE STUDY: **HOLY REDEEMER SCHOOL, KENSINGTON, MD**



Wicked Electrical Storm Forces Emergency Upgrade of Phone System & Presents Opportunity to Add Special Security Features

When a powerful storm swept through metropolitan Washington, D.C. early last summer, an electrical strike knocked out the entire communications system at Holy Redeemer School in nearby Kensington, MD, leaving the Catholic school without telephone service. About the only good thing about the incident was that the K-8 students were on summer break and not due to return for a couple of months. Still, the school had to make a series of quick decisions about how to restore phone service.

Everyone knew it didn't make sense to repair the aging phone system, as was evident from replacement planning begun even before disaster struck. The cabling dated back to 1950 when the school was built and was not likely to be reused. It quickly became a question of what kind of phone system to install, and, more importantly, did the school have any special communications needs that could now be addressed?

Matt Brunk, president of Telecomworx of Monrovia, MD, and Patrick Nolan, senior systems engineer for Spectrum Systems of Fairfax, VA, who also serves as the school's network administrator, met with school administrators to determine how many phones and extensions were needed and what they had in mind beyond standard phone features. Fortunately, Telecomworx had installed a fiber-based data network with all new cabling a couple years earlier so the infrastructure for a new communications system was already in place, making it possible to get a new system up and running quickly.

In addition to supporting 13 phones with room for future expansion, the school needed a system that could also bring significant security benefits to the table. The administrators had two capabilities in mind: 1) monitor each of the school's main entry/exit ways from the front office and 2) remotely open each door without leaving the office.

Panasonic KX-NCP1000 to the Rescue

With these criteria in mind, Brunk recommended Panasonic's modular and highly flexible [KX-NCP1000](#) Network Communications Platform as the core business telephone system. In addition to accommodating near-term growth and future expansion—which as it turned out would include moving the rectory's phone system onto the NCP platform at some point—the NCP1000 made it possible to converge disparate phone systems that had been haphazardly cobbled together over the years into a single state-of-the-art IP telephone system. Robust electrical protection was already built in to the NCP to ensure that future thunderstorms would not put the school's converged data and phone network at risk. Finally, the NCP1000's modular architecture would easily accommodate the desired security features with room to expand.

Once they had approval to move forward, Brunk ordered the products and installation began two days later. "I was impressed at how fast Panasonic was able to deliver the equipment," Nolan said. "They knew the situation and really worked with us."

The installation team made room for the main NCP unit behind a locked cabinet in the computer lab, which would now serve as the school's telecommunications control center. Eight [KX-NT366](#) IP desk phones featuring an enlarged six-line LCD

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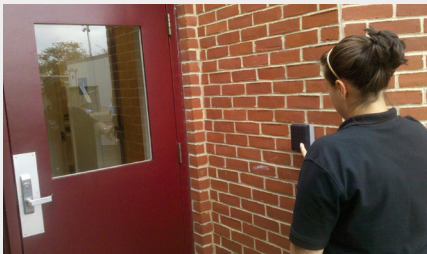


Panasonic KX-NCP1000 to the Rescue

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display were distributed throughout the school's main building to a variety of spaces, including the lunch room, day-care center, nurse's office, kitchen and religion office. The two administrative assistants who run the school's main office each received a [KX-NT343](#) IP desk phone and a [KX-NT305](#) 60-button expansion console, which enables them to quickly transfer calls to teacher mailboxes, among other things. Both model phones offer a multitude of useful features, including speakerphone, ring tone selection and Bluetooth compatibility for those who prefer to wear a wireless headset, to name a few.

Taking communications to the next level, Brunk turned to Panasonic's [KX-TVA50](#) voice processing module and [Communication Assistant Pro](#) software package to make a wealth of special features possible. The TVA50 facilitates an automated attendant feature, enabling parents to dial teachers directly and leave voice messages instead of waiting to speak with someone in the main office. Teachers can pick up their messages on a 48-button KX-NT366 phone in the lounge by simply hitting the virtual button with their name on it.



Cameras and Doorphone Boxes Boost School Security

Panasonic's Communications Assistant Pro software is what makes the NCP1000 system really shine. Besides allowing administrators to visually manage voicemail on their computer screens or use their PCs as "softphones," CA Pro enables security monitoring. A Panasonic [BB-HCM735A](#) outdoor camera is installed above each of three doorways that are not visible from

the main office: the back door near the playground, the entrance to the teacher's lounge and the exit door leading out to the school's magnificent Astro Turf fields. Each door—including the main entrance, which is plainly visible from the front office—is also equipped with a KX-T30865 Doorphone box and an electronic door opener.

When a student (or visitor) walks up to one of these doors and hits the Doorphone button, he can speak with one of the administrative assistants in the main office. Whenever a Doorphone button is pressed, a corresponding video image pops up on the assistant's computer screen so she can see who is at the door. Unlocking the door for that person is a simple matter of hitting a button on the NT343 phone. "The ability to screen and control entry into the school is an important safety feature that brings great peace of mind to the school's staff," Brunk observed.

Room for Expansion and Then Some

Even with the amazing NCP1000 and all of its many features in place, there is still plenty of room for expansion. Brunk and Nolan have already set their sights on future upgrades, starting with adding a few DECT cordless handsets to provide wireless mobility throughout the school and replacing a vintage paging system with a cutting-edge intercom network.

Each classroom will be equipped with a paging phone that can be used to page the whole school or any one of its several zones as well as make outside calls, including 911 in the case of an emergency. "The ability to easily expand was a key reason we went with this system," explained Mary Del Bianco, the school's technology integration specialist. "The goal is to put into each classroom a phone that can be used as an intercom and for paging. When we do lockdown drills now, we have to rely on cell phones because there is no other way for our teachers to talk to each other."

All in all, the Holy Redeemer staff seems to love the new Panasonic Network Communications System and can't wait for the next round of

upgrades—as long as they aren't accompanied by a wicked round of thunder and lightning. As Del Bianco put it, "Being able to see who is at any of the doors before buzzing them in is a big security improvement for the school. Before the cameras and Doorphones were installed, teachers and students were propping doors open to get in and out, which is not very safe. Now they ring a doorbell and a video image pops up in a window on a computer screen in the main office. Our building is much more secure."

Panasonic Communications System at a Glance

- **Panasonic KX-NCP1000 network communication platform**
- **(8) KX-NT366 IP desk phones with enlarged six-line LCD**
- **(2) KX-NT343 IP desk phones, each with 60-key KX-NT305 add-on module**
- **(2) KX-TD7685 cordless 1.9-GHz DECT phone (to be added)**
- **(1) KX-TD7696 ruggedized cordless 1.9-GHz DECT phone (to be added)**
- **(4) KX-T30865 Doorphone modules**
- **(1) KX-TDA0161 4-port Doorphone Card**
- **(3) BB-HCM735A compact outdoor network cameras**
- **(1) KX-TVA50 voice processing module**
- **(1) KX-TVA594 LAN I/F Card for KX-TVA50**
- **(1) KX-NCS2205 Communications Assistant Pro (5 User License)**
- **(1) KX-TDE0111 64-channel VoIP DSP Card**
- **(1) KX-TDA0166 16-port Echo Cancellation Card**
- **(1) KX-NCP1180 4-port Analog Trunk Card**
- **(1) KX-NCP1171 8-port Digital Extension Card**
- **(1) KX-NCP1190 Optional 3-slot Base Card (OPB3)**
- **(1) KX-NCS3910 Activation Key for Enhanced Features**
- **(2) KX-T0155 2-channel DECT Cell Station (Donated – future connection)**