

# Hamilton Southeastern School District

Located in Fishers, one of the fastest growing areas of suburban Indianapolis, the Hamilton Southeastern School District is constantly challenged to keep its network infrastructure ahead of the growing needs of its students and faculty. The network connects 17 schools and provides 3,300 Ethernet ports to over 12,000 students.

## THE CHALLENGE

Technology is a key component of the school district's overall policy, and the infrastructure it has created is a reflection of dedication and vision for communications. To keep pace with explosive growth in the student population, Hamilton Southeastern constantly updates its technology, maintaining state-of-the-art communications systems for access to services such as the Internet and to student databases. One of the major challenges for the district is to provide mobility for students and teachers so they can incorporate the power of computers into the classroom.

*"If you make a product that is adaptable, you're almost penalized for doing so—but in our case, that's created the loyalty that's kept us as a customer."*

*Jay R. Denney, Assistant Director of Technology,  
Hamilton Southeastern School District*

## THE SOLUTION

Jay R. Denney is the assistant director of technology for Hamilton Southeastern, and has guided the network through several evolutions—from token ring to ATM, and finally to Gigabit Ethernet—with Alcatel's any-to-any seamless migration path being key to its success.

Hamilton Southeastern School District's current network configuration is easily managed, demonstrating the exceptional availability and reliability of the Alcatel solution while still providing scalability and network intelligence for future needs.

In 1990, the school district's network infrastructure used only token ring on a shared 56K backbone. In 1995, Alcatel addressed the district's upgrade needs with a first generation OmniSwitch to bridge the token ring backbone to Ethernet ports connected to student PCs. When the token ring WAN became saturated, the district built its own fiber infrastructure, using the local power company to install single mode fiber between the schools. Once the fiber backbone was installed, Hamilton Southeastern migrated to an ATM-based metropolitan network (MAN).

Soon, even the ATM backbone was not adequate to implement new technologies over the network. A Gigabit Ethernet MAN was designed and facilitated by installing OmniSwitch 7800 in the core of the network at the district headquarters, and each building in the district received an OmniSwitch 7800 to aggregate the users and connect them to the MAN.

In addition, Hamilton Southeastern wanted to use mobile technologies such as wireless tablet computers to enhance the learning environment for students and to allow more freedom and flexibility for teachers. Hamilton Southeastern looked at several companies, but none of them had the combination of security features, flexibility, and ease of management and installation that was offered



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by the Alcatel solution. Soon Hamilton Southeastern was installing the wireless network consisting of five OmniAccess 4102s using RADIUS authentication and 802.1X with approximately 57 OmniAccess 1200ABG access points spread throughout buildings in the district to provide seamless wireless LAN coverage.

### THE RESULT

Hamilton Southeastern is staying current with advances in technology, seamlessly moving forward to provide their students and faculty fast and reliable access to critical educational, and administrative applications as well as the Internet. A highly available and easily managed data infrastructure provided by the OmniSwitch 7000 and 6600 series switches is keeping them ahead of the expanding needs of the school district.

The Alcatel wireless solution was installed in conjunction with the Gigabit MAN. Since Alcatel's wireless appliances and access points exist within the routed network, there is no impact on the existing network and no need for reconfiguration—such as creating separate VLANs for WLAN traffic. The installation was quick, easy, and had minimal impact on the management of the network.

### WHY ALCATEL?

The ease of migration from one technology to the next has enabled Hamilton Southeastern to keep its network moving forward without having to replace legacy equipment, and created a productive relationship with Alcatel that has lasted over seven years.

Alcatel provides an integrated and easy to use management platform that was a key differentiator. The highly available and scaleable architecture of the OmniSwitch 7000 platform, and dedicated, responsive

field support were also key in the decision making process. According to Mr. Denney, "The redundancy influenced our decision to use the OmniSwitch 7000 series switches. Now we have the network infrastructure in place and people are used to that level of service. Other features that influenced our decision included the ability to have more than one management module, the rollback of the code if you had a code change, the higher port densities, and just that next level of engineering."

Mr. Denney concluded, "It's always nicer to be in the position where you can look back and say 'Yes, I made the right decision.' We've had good help from Alcatel, plus their engineers have helped us keep on the narrow path. We consider Alcatel to be a partner in every sense. We have named Alcatel as our standard, and in every case there's been no reason to reevaluate our relationship with Alcatel."

The main reasons Hamilton Southeastern choose the Alcatel wireless solution over the competition include automatic power management, simple network management, and the solution's ability to recognize rogue access points.

### THE FUTURE

With two elementary schools under construction, a new intermediate school to be started this spring, and a third high school on the horizon, Hamilton Southeastern is pleased to be moving forward with Alcatel. In the future, the district plans to add voice and video to the network and upgrade to a 10 Gigabit backbone. Because of a long history of quality products and support, Alcatel continues to be instrumental in providing the network technology and infrastructure for one of the fastest growing school districts in the country.

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