

MARKET BRIEF

IP/VoIP Provides Mobile, Flexible Communications for K-12

When most people think of K-12 education, they think of one teacher talking to students in one classroom. But primary school educators and staff are highly mobile, and require flexible, cost-effective communications both within and outside of the physical school setting.

IP (Internet Protocol) networks running applications such as videoconferencing and VoIP (Voice over IP) can help faculty and staff with everything from disaster planning to keeping in touch with parents and colleagues. Hosted VoIP services can even help teachers and staff stay in touch when a man-made or natural disaster destroys the school's phone system.

The key to all these capabilities is the use of converged IP networks to carry both data and voice for K-12 schools and school districts. Internet Protocol (IP) is the networking protocol that governs the transmission of data over the World Wide Web. Increasingly, it is also the protocol of choice for private data networks, such as those that link school districts to schools and schools to the Internet. These converged IP voice and data networks not only help to hold down costs, but facilitate everything from disaster planning to teacher recruitment.

Disaster Planning and Response

IP networks can carry the videoconferences used to create and update disaster response and recovery plans. Hosted VoIP services provide continued communications even if a disaster destroys the school building, since they don't require a PBX on the school premises. In the wake of an emergency (or just a snow day) teachers and staff can reroute calls from school to another school or their home from any computer linked to the Internet.

Distance Learning

Audio and Web conferencing allow students to participate in distance learning, teachers to access professional development and administrators to interview job candidates without the time and cost of in-person interviews.

Remote Communications

Using a software-based telephone on their school laptop, teachers or staff can make calls from home at no charge to them. To protect the teachers' privacy, the school number – not the teacher's home number – appears on the recipient's caller ID.



Mobile Workers

Many teachers, nurses or other staff move among rooms or even among buildings during the day. The "Find Me/Follow Me" feature in some hosted VoIP solutions routes incoming calls to the user no matter where he or she roams or what type of device they are using (such as a home, business, or mobile phone).

Messaging Archiving

VoIP systems can save voicemail messages as .wav files which can be archived and emailed for legal, administrative or other reasons.

Productivity Applications

VoIP can also be the foundation for new, productivity-enhancing capabilities such as phone-based attendance tracking systems, giving teachers more time to teach.

Hosted VoIP solutions, where the VoIP infrastructure is owned and managed by a service provider, are especially attractive for school districts because they receive Priority 1 consideration for funding



through the federal E-Rate program, which subsidizes computer and Internet technology and services for schools.

AT&T at Work

In Kentucky as in other states, schools require technology and additional network bandwidth to enhance each student's educational experience and to better prepare them for college and the workforce. AT&T is helping to meet these needs with the completion of the Kentucky Education Network (KEN), a \$140 million service that has been added to AT&T's Kentucky Information Highway contract with the Commonwealth of Kentucky Education Cabinet.

KEN will bring high-bandwidth broadband services and Internet access to 174 school districts in 120 counties, and allow students and teachers to access information from post-secondary institutions in the state. In addition to the local and long distance voice service currently provided by AT&T, KEN will provide Virtual Private Network (VPN) services for state school operations across Kentucky. Its flexible network infrastructure will enable the state to scale its network services as its needs grow, and to leverage advanced performance and security features.

"AT&T's network services are helping us address the different learning and teaching styles of students and teachers by providing educational content in the forms of video, audio and text," said David Couch, commissioner of Education, Commonwealth of Kentucky Office of Education Technology. "This content can now be delivered much better and faster to each classroom throughout our K-12 system."

Other major benefits include the analysis and improvement of student test scores online using Web-based diagnostic tools and the development of electronic individual learning plans for more than 300,000 students. These electronic plans can be accessed and reviewed at home by parents who are interested in their children's school activities.

With AT&T's services, Kentucky is also establishing a K-12 "data warehouse" that is expected to become a one-stop shop for assessment data, curriculum guidance and instructional tools, accessible in close to real-time by students, parents, teachers and administrators.

IP networks provide the cost-effectiveness and flexibility primary schools need to deliver the highest quality education and to take full advantage of the information resources available on the World Wide Web. AT&T provides a wide variety of IP-enabled products and services that enable schools, and school districts, to enjoy the flexibility of IP-based networks and make information sharing, and education, easier and more effective.

AT&T's network-based VPNs provide high levels of flexibility and control over network performance and functionality. Utilizing MPLS (Multiprotocol Label Switching) these services address the need to connect all of an organization's locations to a single network, while integrating both legacy and leading-edge applications.

Key Benefits

IP/VoIP Provides Schools With:

- **The flexibility to use converged IP networks for data and voice**
- **The advantages of VoIP such as Find Me/Follow Me and remote call rerouting**
- **A platform for advanced applications such as videoconferencing for disaster recovery, distance learning and other requirements**
- **Possible cost savings through the federal E-Rate program**

AT&T is one of the world's largest providers of IP-based communications services for businesses, with an extensive portfolio of Virtual Private Network (VPN), Voice over IP (VoIP) and other offerings, all backed by innovative security and customer support capabilities.

AT&T helps agencies meet their security needs with its MPLS IP Virtual Private Networks (VPNs). Because these VPNs are provisioned over the AT&T IP network, customers don't need to purchase additional VPN equipment for their sites.

AT&T IP Telephony Service provides consistent service for agency employees regardless of their location. These products and services range from premises-based IP PBXs to centralized network-based IP Telephony platforms.

AT&T IP Audio Conferencing Service is a network-based, reservationless conferencing solution providing schools and districts with enhanced features, optimized call flows, strengthened reliability and availability, advanced Web-based tools and integration with Web-based collaboration applications.

AT&T Voice DNASM is a network-hosted VoIP solution that delivers enhanced communications. This service eliminates the need for a key system, TDM PBX or IP PBX at the school or district.

Because schools must comply with regulations protecting student privacy such as the Family Educational Rights and Privacy Act (FERPA), AT&T provides a variety of IP-based security services to ensure student information is protected from misuse.

For more information contact your AT&T Representative or visit us at <http://www.corp.att.com/edu/k12>.



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