



IP-based communications platform provides advanced services for Scottish schools

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Network Manager, Voice and Data Networks
Aberdeen City Council

Aberdeen City Council modernises school systems with a BT Versatility solution on an existing broadband infrastructure to save costs, improve communication, and spark innovation.

Executive Summary

Aberdeen City Council is responsible for providing top class education through the system of primary and secondary schools within the city. Communication between, and within, those schools is crucial in order to ensure a consistent level of service for pupils, parents and teachers. The legacy voice switching systems had grown organically over time and consisted of several generations of technology, making them costly to maintain and use.

Working on a recommendation from BT, the Council decided to leverage its recent investment in a new broadband network infrastructure to carry voice as well as data traffic. The chosen BT Versatility IP-based solution ensured a uniform technology platform throughout the Council’s schools, reducing support overheads.

The BT Versatility solution generated an immediate cost saving by enabling free calls between schools over a virtual private network. But, much more than that, the IPbased system is able to offer new advanced features, and its future proof nature means that Aberdeen City Council now has a springboard for innovation.

Case study

Aberdeen City Council

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Marketplace

Employing some 11,000 people, Aberdeen City Council is a significant employer in the city and, in turn, provides services to a large proportion of the population – from housing and refuse collection to education and social care. Within the Council’s education remit, its aim is to provide a quality learning environment and the highest level of education in its primary and secondary schools to ensure that every child develops to its full potential.

This goal sits within the wider framework of the Scottish Schools Digital Network, an initiative that grew out of a report commissioned by the Scottish Executive that highlighted the need for further development in networked IT services. The report specifically called for the deployment of broadband to all schools. Installed during the second half of 2003 and fully operational during the first half of 2004, the first priority was to exploit the educational potential of those broadband connections.

Business opportunity

The schools within the city of Aberdeen are closely linked, with pupils feeding from primary to secondary schools and, increasingly, onwards to tertiary education. This dictates a need to exchange information efficiently and cost effectively and the schools rely heavily on their telephone systems to communicate with teacher, pupil and parent communities and with other schools.

The existing telecommunication systems within each school had grown organically over time and consisted of several generations of technology.

Not only were they expensive to repair but also they were limited in their functionality. Andrew Mein, Aberdeen City Council’s Network Manager for Voice and Data Networks, says: “The voice network had not developed as we had hoped due to limited funding, meaning it was neither coherent nor efficient. However, government initiatives meant that our 2004 budget at last allowed us to contemplate a serious improvement.”

The catalyst for the change came from a simple requirement from schools to prevent people from using the costly directory enquiries transfer option, which puts a caller through to the number requested at a greater-than-normal call rate. As a longstanding partner to the Council, BT was asked to assess the cost of making programming changes across the existing PBX estate to realise this objective. But, creatively, BT suggested that a better approach would be to leverage the new investment in broadband connections: by partitioning them to carry voice as well as data traffic.

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BT solution

Although the original idea came from BT – a longstanding partner to Aberdeen City Council – bids from three other suppliers for the IP-based voice solution were considered. Explaining the final choice of BT, Andrew Mein says: “Price was, of course, an important consideration but we also felt that the interoperability of the BT Versatility solution was more appropriate for our specific needs than other offerings. We were impressed, too, with BT’s overall plan for the project, which was very workable and well managed.”

Work started in March 2004 and the existing legacy switches from various suppliers were replaced with the BT Versatility solution. An IP-based system – that can also offer internet capability to transform itself into a powerful e-business tool – BT Versatility is suitable for sites needing up to twelve exchange lines and 40 extensions. In total BT Versatility systems were installed in 17 schools (15 primary and two secondary). Using the existing data connections, BT was able to create an IP (internet protocol) VPN (virtual private network) to carry voice between the BT Versatility equipped sites, ensuring that telephone calls between the schools would be free.

“BT understands our needs,” comments Andrew Mein. “Its people were well organised and good at keeping us informed of problems on the project, as they arose, as well as communicating with other suppliers.”

Results

In the early stages cost savings cannot be easily quantified (telephone costs were not, historically, centrally accounted), but Andrew Mein is clear about the benefits that the schools are already receiving from the new system:

“As well as free calls between schools, the system also offers features that were not possible with our legacy telephone systems. For example, it is possible to dial directly through to selected extensions, reducing reliance upon office staff out of hours.”

Other features that are particularly relevant to schools are the advanced voicemail functionality of the BT Versatility solution. Such voicemail facilities as did exist were not being used to encourage callers to leave messages but rather the schools were using them as a way of broadcasting announcements, such as a trip being cancelled due to bad weather. That’s a valid use of voicemail messaging, and the BT Versatility solution enables those announcements to be originated and updated remotely, greatly improving accuracy and speed of response.

In addition, by installing the BT Versatility solution in 17 schools, the Council now has a standardised system. This means that upgrade and support costs are decreased and changes to the systems can usually be carried out remotely by BT, making huge savings on the cost of engineering visits. Furthermore, having a standard system means that staff exchanges are easier as they do not have to learn how to use a new system when they change schools.

The future is also easier to plan for with the BT Versatility solution. Andrew Mein concludes: “We now have a future proof system so that when we need to upgrade we know the equipment will take care of foreseeable future requirements. Being IP-based we can also use it as a flexible technical platform, which will make it easier to implement and integrate with concepts such as the virtual classroom.”

Why BT?

- BT is a valued supplier to Aberdeen City Council and was able to offer a price competitive and technically superior solution
- BT Versatility was seen as the right solution for modernising and standardising the Council’s school communication systems
- BT Versatility provided a future proof and versatile platform that would enable more advanced applications as and when they became required

Case study

Aberdeen City Council

Main BT Products & Services

- BT Versatility IP-based voice switching platform
- IP VPN for voice calls between schools
- Direct Dial In over ISDN broadband bearer circuits

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