

EDMONTON PUBLIC SCHOOLS

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TO: Board of Trustees

FROM: A. McBeath, Superintendent of Schools

SUBJECT: Alberta SuperNet

ORIGINATOR: A. Habinski, Executive Director, School and District Services

RESOURCE
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INFORMATION

What is Alberta SuperNet?

On November 2, 2000 the Government of Alberta announced that they had contracted a consortium of leading global and provincial technology companies to build and implement a high-speed broadband network in the province. The Alberta SuperNet is a private broadband network for government that spans the province and will connect every library, school, hospital and provincial government office. It is essentially a large wide area network that can be segregated into private virtual networks for each organization. Edmonton Public Schools will have a private network for our schools within the Alberta SuperNet. At the same time, all schools in our district will be able to connect to Alberta Learning, other school districts, post-secondary institutions, health, etc. over this secure and private provincial network. Alberta SuperNet is the connecting infrastructure. This will enable high speed access to services available on the Alberta SuperNet such as LearnAlberta resources. The Alberta SuperNet connection provided and funded by the government does not include funding for Internet access. Edmonton Public Schools will need to continue to purchase their Internet connectivity.

Benefits to Edmonton Public Schools

The Alberta SuperNet will replace our existing Wide Area Network (WAN) connection of cable modems and ADSL modems with a high-speed fibre optic/wireless network. The Alberta SuperNet has been engineered and will be provided with service level guarantees that represent a highly reliable network. The network access from schools to the district and to the Internet will be faster, more reliable and more secure than the existing cable modems or ADSL connections.

Timelines

The Alberta SuperNet is scheduled for completion by December, 2004. Installation in our schools will occur over the next 10 months. The detailed schedule for the implementation at each school has not been finalized or communicated to us yet. Bell Canada has the contract

with Alberta Infrastructure to construct the Alberta SuperNet. Once we receive more information from Bell, we will inform schools.

Implementation Process

Phase 1:

Initial site visits to each school are being arranged and include a school representative, a Bell Canada employee or sub-contractor and our district Alberta SuperNet coordinator. Visits have occurred to 206 of our 230 district sites that will be connected to the Alberta SuperNet.

Phase 2:

Bell Canada will install a fibre cable or wireless antenna/receiver into an entry point to each school at no cost to the school. Originally, all of our sites were to have fibre installed but District Technology have recently been informed that 58 of our sites are now planned to be connected via wireless. To-date, five of our sites have had fibre installed to their building.

Phase 3:

Bell Canada will install fibre and conduit from the school's entry point to a point in the school, as close as possible to the Virtual Private Network (VPN) server in the school. To-date three of our sites have had this phase completed.

Phase 4:

Axia will install a network switch called a SuperNet Edge Device (SED) and connect it to the end of the fibre installed in phase 3.

Phase 5:

District Technology staff will connect the SED to the school's VPN server and will reconfigure the school's VPN server in order to route the schools network traffic through the Alberta SuperNet to the district WAN and the Internet.

Costs

The costs for installation of the fibre or the wireless receiver and SuperNet Edge Device in every school will be covered by the province. The ongoing costs for basic Alberta SuperNet access will be funded by Alberta Learning for the next 10 years. The basic access of a 6 megabit-per-second (Mbps) connection is \$503.50 per month. Schools can purchase faster access (e.g. 20 Mbps) at an additional cost of \$193.50 per month. Initially, we recommend schools connect at the basic access rate, which is fully funded by Alberta Learning.

The Alberta SuperNet does not include funding for Internet access. Schools in the district will need to continue to purchase Internet services. District Technology is examining the most cost-effective options to provide schools with Internet access. The higher speed Alberta SuperNet connections will enable faster data exchange within the district and possibly faster access to the Internet than schools have today. District Technology expect to be able to provide Internet access at a cost somewhat similar to what schools are presently paying for their cable modem or ADSL connections. Schools will continue to require a VPN server and will be responsible for those ongoing maintenance costs.

Other Considerations

Edmonton Public Schools is in a unique position compared to other school jurisdictions across the province. As a result of the District initiative several years ago to implement VPN servers and use the public Internet to connect our schools, the district will now be able to connect to the Alberta SuperNet easily and inexpensively. In many other jurisdictions, all schools connecting to the Alberta SuperNet will require an additional piece of equipment called a Customer Edge Device (CED), which could range in cost from \$2,000 to \$3,000 per school. District Technology will be able to reconfigure our VPN servers to perform like the Customer Edge Devices required by Alberta SuperNet. This will save our district between \$460,000 and \$690,000. Our implementation will allow us to take advantage of all the base services and benefits provided by Alberta SuperNet.

The Alberta SuperNet will provide our district and schools with the capacity for high speed broadband capabilities. However, new services which take or which would take advantage of the capacity (e.g. video conferencing) are not included with the Alberta SuperNet and would require additional equipment and costs in order to implement.

Summary

The implementation of Alberta SuperNet in our schools will provide a more reliable and secure connection to the district WAN and to the Internet. The new network will provide faster access than any school's present connection and will be positioned for ease of expansion to meet future requirements. For the majority of schools, it is anticipated the installation of Alberta SuperNet will require no additional costs. The ongoing costs for Alberta SuperNet connectivity to the district WAN and the Internet are expected to be about the same as what schools are presently paying.

As more detailed information including installation schedules becomes available, schools will be kept informed.

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