

COMMITTEE OF THE WHOLE (WORKING SESSION) – MARCH 1ST, 2005

BROADBAND NETWORK SERVICES EXTENSION OF CURRENT AGREEMENT

Recommendation

The Commissioner of Economic/Technology Development and Communications, in consultation with the Director of Information Technology (IT) Services, Commissioner of Legal and Administrative Services, and the Director of Legal Services, recommends:

1. That a presentation by the Director of Information Technology (IT) Services in respect to this matter be received; and
2. That staff proceed to negotiate with the incumbent broadband network services provider for an extension of services until year 2007, and
3. That staff issue a Request for Proposal (RFP) for a converged data/voice network in year 2007, in conjunction with the Converged Data/Voice Network Strategy.

Purpose

The City, Vaughan Public Library (VPL) and PowerStream (Hydro) operations rely on the current broadband network for data and telephone connectivity between administrative buildings, operations centers, community centers and libraries. The broadband network has been implemented and managed for the City by Futureway Communications Inc. (FCI) as part of a five (5) year agreement. The agreement expired on July 31st, 2004.

The purpose of this report is to inform Council of the current status of the broadband network, its relationship to the data/voice network strategy, and to seek Council approval to secure broadband network services in conjunction with the strategy.

Background - Analysis and Options

Legacy Data Network

In late 1998 / early 1999, a comprehensive review of the City's data network environment was conducted. The review focused on the reliability of the data network, its effectiveness to deliver data services to all City, VPL and Hydro locations, and associated network costs. Due to a lack of network service providers at the time, the network design options were limited. As a result, the City's data network was implemented with inconsistent segments (dial-up, low bandwidth, and wireless) to achieve some level of connectivity. Because many of the network segments were slow, file servers and application servers were moved out into various facilities in order to address network performance issues. Moving servers out into distributed facilities put pressure on technology costs, increased the risk of security and extended down times when equipment required servicing. As a result, the network was inherently unreliable, ineffective, and increasingly expensive. To address these issues, a data network strategy was developed.

Data Network Strategy

In early 1999, a new Data Network Strategy was developed by the Information Technology (IT) Services department to address reliability, effectiveness and cost issues of the old network. Part of the new data network design was the implementation of a broadband (high speed) network with consistent segments to City, VPL and Hydro facilities. The new network topology would create direct high-speed lines between remote facilities and the data center. This would allow

centralization and consolidation of servers. This would lead to lower costs of technology, and provide reliable and effective access to shared files and applications from remote facilities.

In 1999, Vaughan Hydro-Electric Commission and FCI entered into a five (5) year agreement that resulted in FCI occupying space on Hydro's distribution system. To move the Data Network Strategy forward, one of the conditions of this agreement was for FCI to provide the City with access to 4 pairs (8 strands) of fiber-optic cables between specific City, VPL and Hydro facilities. In addition to installing fiber-optic cables, FCI installed termination and switching equipment to comply with the City's data network requirements. Furthermore, the implementation and network management costs of the data network would be the responsibility of FCI for the duration of the agreement. If the City was to pay for such services, the cost over five (5) years would have been approximately \$1 million. In addition, by dismantling the old data network infrastructure, the City saved an additional \$385,000 over the five (5) years. This agreement expired on July 31st, 2004. Even though the agreement expired, FCI continues to provide data network services to the City in good faith in anticipation of negotiations to extend the agreement.

Voice Network Strategy

In 2002, a review of voice communications network was conducted by Economic/Technology Development and Communications department (Telecommunications Section). The voice communications network enables the delivery of telephone services between City and VPL facilities. The focus of the review was on cost, capacity and reliability of the voice communications network. The results of this review indicated that the voice communications network was becoming increasingly expensive, lacked adequate capacity, and was becoming increasingly unreliable.

A Voice Network Strategy was developed to address the issues of cost, capacity and reliability. The strategy focused on leveraging the unused fiber-optic cables, previously installed in support of the Data Network Strategy, to provide less expensive voice communications services while increasing network capacity and reliability.

In September of 2002, the City and FCI entered into a separate five (5) year voice communications agreement to implement the Voice Network Strategy. As part of the agreement, FCI would use the previously installed unused ("dark") fiber-optic cables to provide voice communications services to select facilities, implement redundant "out-bound" lines, replace single business lines in select facilities, and provide extended local distance calling. The total cost of these services is approximately \$99,000 per year. However, the implementation of a fiber-based voice network allowed the City to realize annual cost savings of about \$77,000. Additionally, the Voice Network Strategy effectively addressed the issues of capacity and reliability.

Converged Data/Voice Network Strategy

In late 2002, the Telecommunications Section was transferred to the IT Services department. Soon after, a review of both data and voice networks was undertaken to identify opportunities for increased efficiencies and synergies. Around the same time, the emergence of "Voice over Internet Protocol" (VoIP) technology offered some options for synergies. As a result, the IT Services department developed an Integrated Data/Voice Network Strategy to take advantage of VoIP technology. VoIP technology allows the transmission of data and voice messages over a common conduit (fiber or copper). This requires less network infrastructure to facilitate data/voice networks. Common infrastructure has a positive effect on network management and administration costs.

For VoIP to work, appropriate equipment needs to be placed in all facilities to enable convergence of voice and data networks. This requires partnership with a single service provider. A voice network managed by one service provider cannot be converged with a data network

managed by another service provider. Renewal of service contracts needs to be carefully timed to allow a service provider to assume voice and data services on a converged network.

Strategy Timelines

The data network services agreement expired in July 2004. The voice network services agreement will expire in September 2007. It would be ideal to solicit proposals for converged network services when both agreements expire. To accomplish this, the data network services agreement should be extended to coincide with the expiration of the voice network services agreement. Once expired, a Request for Proposals (RFP) can be issued for converged voice/data network services.

Business Case – Extension of Current Agreement

Service providers capable of providing network services that meet the City's requirements were asked to provide quotations for such services. Only FCI and Bell are capable of meeting the City's requirements in terms of bandwidth and connected facilities. FCI's pricing for such services is considerably less than that of Bell.

Financially, it is advantageous to extend the agreement with FCI.

Other Service Providers

FCI is the only service provider that can immediately meet the City's requirements for bandwidth and facilities. Bell can partially meet the City's requirements, without extensive and costly upgrades to its network.

(Note: The Regional Municipality of York recently issued an RFP for managed integrated voice and data network. The RFP includes supply of equipment, software, peripherals, and various maintenance services. Although seventeen (17) proponents submitted proposals for various aspects of the RFP, only FCI and Bell offered broadband services in selected areas of the Region that would meet Vaughan's requirements.)

Relationship to Vaughan Vision 2007

Planning and Managing Growth – continual renewal and scalability of computing facilities, driven by municipal growth, enables staff to achieve higher levels of efficiency, effectiveness and customer service;

Technology and Innovation – use of information technology enables staff to effectively address various business and citizens service issues.

The recommendations made in this report and related initiatives are consistent with the priorities previously set by Council and the necessary resources have been allocated.

Conclusion

The current agreement with FCI for provision of broadband network services has expired. Such services are essential for City, Vaughan Public Library and PowerStream operations. All options for securing broadband services were explored.

Renewal of the data network services agreement with the City's current incumbent (FCI) is the most cost-effective option. The expiration of the renewed agreement should coincide with the expiration of the voice network agreement currently in place.

Upon expiration of both agreements in year 2007, an RFP should be issued for converged data/voice network services in conjunction with the Converged Data/Voice Network Strategy.

Necessary provisions in the Information Technology (IT) Services department 2005 budget have been made and approved by Council.

Attachments

None

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Respectfully submitted,

FRANK MIELE, Commissioner
Economic/Technology Development
and Communications