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PROPONENT SELECTION TO PROVIDE A MANAGED INTEGRATED VOICE AND DATA NETWORK

The e-Government Sub-Committee recommends:

- 1. the presentation by Louis Shallal, Director Information Technology Services and Jeff Ivers, CM Inc. be received; and**
- 2. the adoption of the recommendations contained in the following report, May 24, 2005, from the Commissioner of Finance:**

1. RECOMMENDATIONS

It is recommended that:

1. Council approve the award of contract to Bell/Infostream for provision of the following:
 - Wide Area Network (WAN) links and WAN management services for data communications among Region sites;
 - Local Area Network (LAN) management services at Region sites;
 - Enterprise Voice Mail management services;
 - Migration from PBX based phone technology to Voice over Internet Protocol (VoIP) based phone technology; and
 - The supply and installation of equipment and software associated with the above services.
2. The Chair and Clerk be authorized to execute the contract for a term of five years with an option to renew for an additional two years subject to the ability to integrate with OneYork when that service becomes available and subject to prior approval of the contract by Legal Services.
3. The 2006 capital budget include provision of \$1,200,000 plus applicable taxes for the acquisition of hardware, software and one time implementation costs recoverable by the third year of the contract.

2. PURPOSE

The purpose of this report is to present the business case to obtain Regional Council approval to award a contract for the converged network services requested in RFP P-04-94 to Bell Canada/Infostream and to obtain approval to enter into contractual agreements with Bell Canada/Infostream for these services. The converged network services requested are for Wide Area Networking (WAN services) commonly known as site to site data communications links, Local Area Networking (LAN services) which apply to in-building data networks, Enterprise Voice Mail and Voice Processing services and Telephone services on a converged network using Voice over Internet Protocol (VoIP)

technology together with hardware, software and implementation services. Not included in the scope of services are the main connections to the Public Switched Telephone network and Long Distance telephone network services. These services are being provided under other recent contract awards.

3. BACKGROUND

York Region has grown rapidly over the past several years and will continue to do so for the foreseeable future. Regional departments are increasingly reliant on technology as a cost effective enabler for service delivery. A key component of this technology is an effective voice and data communications network.

Today the Region implements separate data networks and telephone networks, usually with different suppliers. Many of the components of these voice and data network are older devices. Some are becoming increasingly unreliable and their maintenance costs are growing. Others require significant upgrades to bring them up to recommended technology standards. Most of these devices are on 5-year term leases. Leases for significant pieces of this technology infrastructure are up for renewal at the end of 2005 and in 2006. This equipment should be replaced when these leases come due.

New technology, such as Voice over Internet Protocol (VoIP), now offers the Region greater functionality at equal or less cost. VoIP technology allows the Region to use its data network for both voice and data communications, eliminating the need for and the costs of the separate telephone network that it maintains today. However, using the data network for voice communications requires that the Region move to a WAN service that offers Quality of Service (QoS) functionality on most data communications lines. Without this functionality, VoIP telephone conversations with callers will sound “choppy” and incoherent.

Increasing competition in the network services marketplace offers new WAN site-to-site and Virtual Private Network (VPN) communications services at lower than current costs. Virtual Private Networks allows the Region to use internet based services to cost effectively connect small Regional sites to the Region’s networks. As well, vendors are now offering monitoring and maintenance services that the Region requires at costs that the Region cannot match even with increased in-house services and resources.

To address this situation, the Region issued an RFP to pre-qualified proponents to obtain proposals to provide the Region with replacement technology, robust solutions and cost effective services. The expected outcomes of adopting a proponent’s solution is to obtain existing services at less cost than the Region pays today, to increase reliability and availability of the network infrastructure and to provide needed services without causing the Region to increase staff.

3.1 Requested Solutions and Services

The services requested were in four categories:

- 1) Site to site communications, commonly known as wide area networking (WAN) which include:
 - a. Quality of Service (QoS), which is essential functionality on the WAN to enable reliable voice communications over the converged voice and data network;
 - b. Virtual Private Networking (VPN) which is essential to connect small Regional sites to the Region's main network.
- 2) In-building network infrastructure, commonly known as Local Area Networking (LAN), consisting of network switches and routers to replace those coming off lease in 2005 and beyond.
- 3) Enterprise Voice Mail services, which include:
 - a. Services that integrate the private branch exchange (PBX) and the voice over internet protocol (VoIP) telephone equipment;
 - b. Text to Speech (TTS), fax and unified messaging;
 - c. Auto attendant, audio conferencing, voice recognition functionality;
 - d. Automated call distribution (ACD) contact centre functionality.
- 4) VoIP telephone infrastructure and services to migrate the Region's separate voice and data networks to a single converged voice and data network using VoIP telephone technology.

3.2 RFP Responses

Five pre-qualified proponents responded to RFP P-04-94. Bell Canada/Infostream, FCI Broadband, QUIETTOUCH and TELUS qualified to respond to all four services. NEC qualified to respond to only Voice Mail and VoIP services.

4. ANALYSIS AND OPTIONS

The Region evaluated the RFP responses using an evaluation team made up of Information Technology Services resources and external consultants. The evaluation was led by a consultant from CM Inc. Another consultant from Graycom Analysis provided process oversight and an independent review of the team findings.

4.1 Evaluation Process

The evaluation team followed a four step methodology to evaluate the responses.

Step 1: An initial screen of the responses to determine whether viable proposals with sufficient data to enable evaluation had been received. The TELUS response was screened out since it did not provide required costing information to enable an evaluation.

Step 2: A second screening to check for compliance with the Region's tendering processes as presented in the RFP document. The QUIETTOUCH proposal did not comply with requirements of the Region's tendering policies and procedures. This was verified with Supply and Services and with Legal Services.

As a result both the TELUS proposal and the QUIETTOUCH proposal were not evaluated further.

The proponents whose responses were evaluated further were:

Bell Canada/Infostream
FCI Broadband
NEC

Two out of three of the above proponents qualified to respond to all four service categories, and the third qualified to respond to two out of four. This was determined as a result of the RFQ which was issued and completed in October 2004. The proponents could bid on as few as one or as many as all of the four service categories for which they qualified. The table below indicates the pattern of proponent response.

Table 1

Proponent	Services Requested by the Region			
	WAN Services	LAN Service	Enterprise Voice Mail and Messaging Services	VoIP Infrastructure Services
<i>BELL / InfoStream</i>	Responded	Responded	Responded	Responded
<i>FCI Broadband</i>	Responded/But Not with QoS – an RFP Requirement	No Response for this service	Responded	Responded
<i>NEC Unified Systems</i>	Did Not Qualify to Respond	Did Not Qualify to Respond	Responded	Responded

Step 3: This was a points-based evaluation of proponent service offerings and capabilities which scored each of the following:

- Qualifications & Experience
- Financial Strength
- Procurement/Implementation
- Operations/Change Control
- Asset Management
- Problem Determination
- Billing
- Network Operations Centre
- Reporting
- Network Capacity & Security
- Single Point of Contact
- Provision of the four services requested

A thorough points-based allocation was completed which specifically allocated a pre-determined number of points for each component of the proponents proposals. The points assigned for each technical category were such that a proposal meeting all requirements and expectations of the Region perfectly would have a score of 553 points for the technical aspects. In the financial scoring, the proponent with the least cost price for a service received 70 points. Proponents whose prices were proportionally higher received proportionally less points for the financial aspects. The RFP allowed for a proponent to receive additional points for significantly exceeding the Region's requirements; however no proponent's response was evaluated as exceeding requirements. The total score therefore for a proposed service meeting all requirements (but not exceeding) was 623 points. The technical, financial and total scores for the three proponents responses for each service requested are shown in Table 2 below.

Table 2

		WAN	LAN	Voice Mail	VoIP
Bell / Infostream	Price (mthy operating costs comparable to existing service)	\$39,439.	\$87,782.	\$13,219.	\$69,722.
	Technical Score	454	489	474	489
	Financial Score	63	70	70	70
	Total Score	517	559	544	559
FCI Broadband	Price (mthy operating costs comparable to existing service)	\$35,705 ^Δ	*	\$21,800.	\$76,256.
	Technical Score	307	*	267	297
	Financial Score	70	*	68	45
	Total Score	377	*	335	342
NEC	Price (mthy operating costs comparable to existing service)	**	**	Combined with VoIP Price	\$92,000 ^Φ
	Technical Score	**	**	258	258
	Financial Score	**	**	65	48
	Total Score	**	**	323	306

Note: Prices shown in Table 2 above are normalized monthly operating costs for a service similar to what the Region has today. In most cases the monthly price is a combination of one time capital costs, one time implementation costs and monthly operating costs and was calculated from the unit rates proponents provided in their RFP responses.

Δ Proponent's solution does not include the required functionality of QoS

* Proponent chose not to bid this service

** Proponent did not qualify to bid this service

Φ Proponent's solution does not allow a phased move of telephone services which was a requirement of the RFP

Step 4: This step consisted of building a transition cash flow model for the five-year term to illustrate the true savings. This model is necessary because while some existing services such as WAN can be converted to the proponent's solution immediately, others such as LAN and the move of telephones from PBX to VoIP technology have existing

equipment with lease expiry dates in future years. As well, there are a number of one-time implementation costs that must be modelled into the 5-year view to understand the total savings.

The initial cost comparison of the responses of Bell/Infostream, FCI Broadband and NEC, showed that the Bell/Infostream proposal was least cost for all services except WAN services. FCI Broadband's bid for WAN services was lower than the Bell/Infostream bid (\$35,705 versus \$39,439 monthly). However the FCI WAN service does not offer the QoS functionality required in the RFP. The QoS functionality is essential to migrate to a converged network. Experience elsewhere (Hamilton for example) demonstrated that without QoS functionality callers will experience unacceptable telephone service.

Therefore, the evaluation team concentrated on building a transition cash flow model for the Bell/Infostream proposal. The results of this analysis are shown in section 5 - Financial Implications.

As part of its analysis, the evaluation team also looked at the alternative of purchasing the equipment that made up the Bell/Infostream solution and contracting just for the operations services. However, due to the type of equipment and services required and the leases that expire in future years for network equipment, it was concluded that the Bell/Infostream proposal is most appropriate for current requirements. A fully services based approach provides the maximum amount of flexibility to integrate with future alternatives such as One York.

4.2 Overview of the Bell/Infostream Proposal

The following summarizes the Bell/Infostream proposal and provides an overview of the services being offered to replace and improve existing services.

4.2.1 WAN Service

- All major buildings with a concentration of staff (17 locations) will have site to site QoS functionality. Today, there is no QoS functionality on the WAN and no ability to move to a reliable converged network.
- Service Level Agreement of 99.99% availability of WAN network compared to no service level guarantees at present. The track record for the current service level is less than 98% availability today. In a continuous service environment which relies on technology on a 7/24 basis, a 99.99% availability represents service outages totalling no more than 53 minutes per year of downtime versus a 98% availability where service outages can total approximately 175 hours per year of downtime.
- One time charge for installation of the new WAN service.
- Single point of contact for WAN services compared to the current situation of multiple vendors, multiple bills and multiple contact points resulting in time consuming accounting and administration on the part of the Region.

4.2.2 LAN Service

- Replacement of LAN components coming off lease in 2005 with latest Cisco Systems technology and the latest software upgrade – a software upgrade that is needed regardless of whether the equipment is replaced.
- Utility pricing so that costs are proportional to the number of users and not the quantity of hardware and software in the network as is the case today.
- Monitoring of all LAN equipment compared to no monitoring capability today to check for failing components and deteriorating service.
- Minimal interruptions in service for maintenance purposes compared to the large number of service outages that are needed today to maintain the existing equipment.
- Service level metrics collected and available to the Region. No such metrics are available today.

4.2.3 Enterprise Voice Mail Service

- A single integrated enterprise voice mail and unified messaging system for the entire Region based on the Cisco Systems Unity VoIP Voice Mail product instead of the existing seven, non integrated voice mail systems (hardware and software), most of it obsolete technology.
- Voice mail will be stored on the Region's existing Microsoft E-mail servers thereby integrating it for Unified Messaging functionality as compared to existing systems in which voice mail messages are stored on seven separate voice mail servers and Unified Messaging is other separate systems. Today there is no fail-over to a backup system if a primary voice mail system fails (this is a major concern of the Provincial Courts who use these systems). As well, today voice messages for users on one system cannot be forwarded to users on another system (this is a major concern for Community Services and Housing). The Bell/Infostream service will alleviate these restrictions.
- Backup of voice mail reduced from backing up seven systems to backing up one system saving both time and cost.
- PBX telephone users and VoIP telephone users can both use the Bell/Infostream converged network system enabling an eventual smooth transition from PBX based phones to VoIP phones compared to separate voice mail systems for PBX phone users and for VoIP phone users today.
- Contact centre software (IPCC Express) will run on the above mentioned Unity Voice Mail servers, replacing the existing three separate Symposium contact centre servers that can be re-deployed within the Region to other uses.
- IPCC Express will allow contact centre operators to be located at any location in the Region, even from home with appropriate equipment whereas today they must reside beside the contact centre phone equipment.

4.2.4 PBX Phones to VoIP Phones Migration

- Bell/Infostream will utilize the two Cisco Call Managers that the Region already owns as the operational components for the migration to VoIP telephone services.

These two call manager devices will replace the 11 PBX's that the Region already owns/leases and maintains for telephone services today.

- The Bell/Infostream proposal will eliminate the voice trunk lines to over one dozen Region sites and consolidate them into the existing voice trunk lines at the Admin Centre and the South Services Centre reducing the costs on access to the public telephone network.
- Migration to VoIP can be completed for the cost of new VoIP phone sets
- VoIP phones removes the need for Moves, Adds and Changes commonly referred to as MACs, phone administration by Bell and ITS involvement in Department moves. Today, Information Technology Services staff spend considerable time involved in department moves. Also Bell Canada invoices the Region significant amounts annually to administer changes to the PBX's to accommodate Moves, Adds and Changes to the telephone services.
- VoIP phones enable the new e-911 service which will "pin-point" the location of callers within a building – a service important to all emergency services agencies.

4.2.5 Value Added Services at No Additional Cost

Bell Canada/InfoStream propose to administer their services using their Enterprise Workflow Management (EWM) framework. This tool will allow the Region to tap into a powerful set of automated process and workflows, providing the capability for the Region to effectively oversee the services, manage the assets and contracts and ensure data and billing accuracy through a single point of accountability.

The Enterprise Workflow Management (EWM) service provides the following IT related benefits to the Region:

- Single Point of Contact for all services
- Proponent Management for all other vendors the Region's deals with
- Contract Management for all contracts other than Bell / InfoStream
- Event Management – Tracking of events and problems
- Asset Management
- Service Level Management
- Billing Reconciliation

4.3 Relationship to Vision 2026

The converged network initiative will improve on the Region's network technology capabilities and will assist departments in providing Regional services to York Region businesses and constituents. Additionally, the infrastructure implemented under this initiative will lay the foundation for future offerings of e-government services.

A strong network infrastructure directly supports the Region's Vision 2026 Goals by putting in place technology that can be used to *Respond to the Needs of Our Residents*, and to better *Engage Communities*. As well the converged network continues support for the Departmental direct services as they implement the Regions' vision. Moving to a

converged network at this time is in line with the guiding principles and project plans contained in the York Region Information Technology Strategy (YRITS).

4.4 Summary of the Business Case

The factors that contribute to the business case for recommending the Bell / Infostream Proposal may be summarized as follows:

- Significant cost savings and value added network services
- Avoiding obsolete technology of many of the existing equipment requiring refresh and upgrade
- Maintaining quality network services, with improved capacity to use and administer as well as reduced down time to enable customer service by operating departments
- Providing long term network services in accordance with Vision 2026 goals and the Information Technology Strategy directions.
- Reducing the need to increase IT Staff resources as a result of Regional growth
- A single point of responsibility for all network performance **issues**.

5. FINANCIAL IMPLICATIONS

The following section shows a comparison of the Region's existing costs compared to the costs anticipated in moving to the Bell/Infostream proposal.

5.1 Existing Services Model Extrapolated for Five Years

Table 3 below illustrates the Region's existing costs extrapolated over the five year term for comparison purposes in table 4.

Table 3						
	2006	2007	2008	2009	2010	5-Year Total
WAN	\$775,716	\$775,716	\$775,716	\$775,716	\$775,716	\$3,878,580
LAN	\$1,298,877	\$1,301,126	\$1,351,234	\$1,608,229	\$1,606,243	\$7,165,708
Voice Mail	\$126,988	\$126,792	\$126,792	\$126,918	\$126,792	\$634,281
Telephone	\$835,145	\$732,548	\$660,154	\$652,930	\$652,930	\$3,533,706
Lease and Services Totals	\$3,036,725	\$2,936,182	\$2,913,895	\$3,163,793	\$3,161,681	\$15,212,275

5.2 Implementation Transition Model for Proposed Solution

The table below illustrates services costs and the one time capital and implementation costs of moving to the Bell/Infostream proposal. Since some existing equipment is still on lease, it is not possible to move entirely to the Bell/Infostream proposal in the first year of the contract. In the early years of the contract, the costs shown in Table 4 are a mix of existing lease costs for services not yet transitioned plus Bell/Infostream costs for services that are transitioned. As the services transition entirely to the Bell/Infostream solution in later years of the contract, costs are seen to diminish over the five year period.

Table 4

	2006	2007	2008	2009	2010	5-Year Total
WAN	\$606,202	\$542,809	\$542,809	\$542,809	\$542,809	\$2,777,439
LAN	\$1,193,188	\$1,193,855	\$1,163,524	\$1,058,273	\$1,067,772	\$5,676,612
Voice Mail	\$114,536	\$93,564	\$93,564	\$88,422	\$81,192	\$471,279
Telephone	\$711,766	\$585,158	\$549,758	\$549,758	\$549,758	\$2,946,196
Bell/Infostream Services Total	\$2,625,693	\$2,415,386	\$2,349,654	\$2,239,262	\$2,241,531	\$11,871,526
Capital & Implementation	\$1,093,454	\$71,833	\$22,050	\$0	\$0	\$1,187,387
Grand Total	\$3,719,147	\$2,487,269	\$2,371,704	\$2,239,262	\$2,241,531	\$13,058,914
Total Projected Existing Costs (From Table 3)	\$3,036,725	\$2,936,182	\$2,913,895	\$3,163,793	\$3,161,681	\$15,212,275
Savings (Existing – Grand Total)	\$(682,422)	\$448,913	\$542,191	\$924,531	\$920,150	\$2,153,361

The above table shows that on average, the Region's operating costs will be reduced by approximately 20% over the five year term exclusive of the capital and one time implementation costs. However these costs are recovered by year three of the contract. Therefore the five year savings, combining one time and operating costs would be approximately \$2 million. Should the option to renew for an additional two years be exercised, the total savings shown above will increase substantially.

Funding for the operating costs of this proposal is included in the annual budget of the Information Technology Services Branch. Funding for the one time capital and implementation costs will need to be included in the 2006, 2007 and 2008. It should be noted that the operating costs shown as Services Totals in Table 4 do not reflect growth. Changes in the Region such as additional staff, new sites and additional applications will increase these costs.

5.3 Transition Schedule for Converged Network Services

Table 5 below illustrates an expected installation schedule by showing the percentage of completion of the transition to each Bell/Infostream service.

Table 5

	2006	2007	2008	2009	2010
WAN	100 %	100%	100%	100%	100%
VOICE/MAIL	95%	100%	100%	100%	100%
LAN	28%	34%	84%	100%	100%
TELEPHONY/VOIP	80%	98%	100%	100%	100%

The transition period reflects current lease expiration date commitments. All services are planned to be transitioned by the end of 2008.

6. LOCAL MUNICIPAL IMPACT

It is intended that the converged voice and data network will be an integral part of the OneYork broadband network in the future. Furthermore, through contractual negotiations with the proponent, staff believes that the lower costs of the proposed services will be extended to interested local municipalities where appropriate.

Currently the majority of York Region, York Regional Police and the 911 telephone services are all handled by a large PBX at the Administrative Centre and a mid-sized PBX at the South Services Centre. Additional PBX's are maintained for disaster backup and to service smaller sites. As the Region migrates from PBX based telephone service to lower cost VoIP based telephone services, these PBX's would become available exclusively for the Police and for 911 services. This separation of Region, Police and 911 telephone services is the direction being implemented by most other regions and municipalities in the GTA area. A separate report to the E-Government sub-committee on 911 telecommunications requirements is included with this agenda.

7. CONCLUSION

A business case for a significant cost savings to the Region over the next 5-7 years has been presented. The Bell/Infostream proposal will provide York Region with a higher level of voice and data network service, at less cost and with a single point of accountability for all the Region's telecommunications needs.

The Senior Management Group has reviewed this report.