



**STAFF REPORT
ACTION REQUIRED**
with Confidential Attachment

**Agreement between Toronto Hydro Telecom Inc. and the
City of Toronto for the Provision of Telecommunication
Services**

Date:	June 11, 2008
To:	Executive Committee
From:	Deputy City Manager and Chief Financial Officer
Wards:	All
Reason for Confidential Information:	This report involves the security of the property of the City.
Reference Number:	P:\2008\Internal Services\I&T\gm08006I&T (AFS #7602)

SUMMARY

Toronto Hydro Telecom Inc. (THTI) is currently offering the City and its Agencies, Boards and Commissions a favourable competitive rate for lit fibre (i.e. activated) data services based on THTI securing a contract with both the Toronto Catholic and Toronto District School Boards.

City staff have negotiated favourable terms and conditions with Toronto Hydro Corporation which address the lit services offer (competitive long term monthly charges for high speed network services), a long-term allocation of dark fibre which means that it's available but not currently activated for City use. Toronto Hydro Telecom Inc. will provide up to four (4) strands of fibre on the current installed 500 kilometer network on a best efforts basis and will guarantee four (4) strands of fibre on the proposed future build out of 600 kilometers for a ninety-five (95) year term. The renegotiation of THTI's municipal access agreement ("MAA") as per the renegotiation process set out in the original MAA document will provide the City a one time funding source of \$5,034,643 which will be applied to a new reserve to fund future telecommunication infrastructure requirements.

City staff believe that the recommendations contained in this report will allow the City to achieve a beneficial arrangement for the provision of lit fibre services and also provide a basis for establishing a City-controlled dark fibre network to address the City's own needs and assist in advancing public policy initiatives. Examples of public policy initiatives include Safety and Emergency Applications; Education, Knowledge and Public Good Applications; and City Administrative Applications.

The terms and conditions set out in the Memorandum of Understanding (MOU) as negotiated with Toronto Hydro Corporation (THC) and THTI shall be binding.

RECOMMENDATIONS

The Deputy City Manager and Chief Financial Officer recommends that:

1. Funds in the amount of \$5,034,643.00 to be received from Toronto Hydro Telecom Inc. as a result of the transaction contemplated in Recommendation 1 of this report be transferred to the Telecommunication Public Policy Benefits Reserve and that application of those funds be subject to the annual budget process.
2. City Council authorize the Deputy City Manager and Chief Financial Officer, Chief Information Officer and the City Solicitor to further negotiate as necessary and finalize the following:
 - (a) Memorandum of Understanding with Toronto Hydro Corporation and Toronto Hydro Telecom Inc.;
 - (b) Lit Fibre Data Services Agreement with Toronto Hydro Telecom Inc.;
 - (c) Dark Fibre Licence Agreement with Toronto Hydro Telecom Inc.; and
 - (d) Renegotiated Municipal Access Agreement with Toronto Hydro Telecom Inc.,all on the terms and conditions as set out in the Confidential Attachment to this report and such other terms as may be satisfactory to staff.
3. City Council make the following reserve account changes:
 - a. establish a new reserve account group within the Schedule 1-Corporate Reserves, called the "Telecommunications Group", for funding of telecommunications infrastructure improvements (see Attachment #2);
 - b. transfer the existing Telecommunications Development Reserve to the new Telecommunications Reserve Group;

- c. establish within the Telecommunications Reserve Group a new reserve account called the ‘Telecommunication Public Policy Benefits Reserve’ to support telecommunications infrastructure improvements supporting the City’s public policy benefits as may be stated from time to time (see Attachment #3); and
 - d. amend Municipal Code Chapter 227 (Reserves and Reserve Funds) by adding the Telecommunications Group and its component reserves to Schedule #1 – Corporate Reserves.
4. City Council direct that the information in the Confidential Attachment not be disclosed in order to protect the financial interests and competitive position of the City in future negotiations with third parties.
5. City Council authorize the public release of the Memorandum of Understanding (not including the schedules), renegotiated Municipal Access Agreement and the long form dark fibre licence agreement, once fully executed by the parties.
6. The appropriate City Officials be authorized and directed to take the necessary action to give effect thereto, and that leave be granted for the introduction of any necessary bills in Council to give effect thereto.

Financial Impact

The costs to the City for the use of the “Lit Data Services” are contained in the Attachment 1 – Confidential Information as outlined in the Service Agreement Terms. There are two positive financial impacts arising from the adoption of this report.

First, there will be an annualized operating budget reduction potentially totalling \$550,200 in those divisional budgets which include charges for selected monthly data telecommunications services resulting from the Lit Fibre Data Services Agreement once executed by the parties. These reductions will be addressed as part of the 2009 and 2010 Operating Budget process depending on the cutover to the Lit Services contract.

Second, the City will receive a one-time lump sum payment of \$5,034,643 CAD in full and final payment of all “Per Permit Fees” (as defined in the original Municipal Access Agreement and not including normal City permit fees and charges) to be paid by Toronto Hydro Telecom Inc. to the City under the remaining term of the original Municipal Access Agreement (MAA). This funding will help satisfy future public policy objectives relating to improvements to telecommunications infrastructure, to be addressed in future capital budgets.

The Deputy City Manager and Chief Financial Officer has reviewed this report and agrees with the financial impact information.

ISSUE BACKGROUND

City of Toronto's Telecommunication Objectives

There are three (3) primary City of Toronto Telecommunication Objectives. They are:

- **Public Policy Objectives:**
 - Maximize flexibility to support public policy objectives, e.g. telecom-based services to priority neighbourhoods
- **City Telecom Services:**
 - Obtain reliable low cost telecom services
 - Optimize co-ordination amongst the City and its Agencies, Boards and Commissions (ABCs), which is consistent with the Fiscal Review Panel (FRP) recommendations
- **Asset Values/Investments:**
 - Maximize the value of telecom assets.

Municipal Dark Fibre Network for the City of Toronto

Under the direction of the Telecom Steering Committee, City staff was directed in 2000 to hire a management consultant to conduct a feasibility study for a municipal dark fibre network for the City of Toronto. The scope was not limited to City divisions but also extended to include the Agencies, Boards and Commissions.

Lemay-Yates Associates Inc. was retained at that time to conduct the study. The scope of the study was to define the following actions:

- Make Toronto the most connected City in the world,
- Be a leader in the deployment and implementation of municipal services using this connectivity,
- Foster growth in the information and telecommunications cluster which is one of the City's key strategic clusters,
- Further develop telecommunications infrastructure for the purpose of providing the enabling technology to support employment and growth in all sectors, and/or
- Create easier and more affordable access for all of Toronto's citizens, wherever they may be located in the City.

The study was completed October 2001 and detailed the following findings:

- Identified limited City owned fibre assets.
- Next steps were to look at partnering. This included broader public sector such as school boards, hospitals, and universities etc.
- Similar approach has been successfully undertaken in Peel Region.
- Lemay-Yates stated that “Larger municipalities have not generally build large-scale municipal dark fibre networks but tend to rely on securing attractive contractual arrangements with existing carriers.”

Progress to date has shown that no further action was directed from the Telecom Steering Committee and that the City of Toronto and its ABCs still continues to acquire data telecommunication services through a competitive bid process.

In the fall of 2007, the City and Toronto Hydro Telecom Inc. (THTI) began formal discussions with respect to potential synergies from the use of a common infrastructure. On February 15, 2008 THTI offered the City a proposal on Lit Fibre Data Services (activated and for commercial use) based on a response offered to the Toronto Catholic and Toronto District School Boards.

As part of a due diligence process, City staff retained the services of Lemay-Yates Associates Inc. to perform an analysis of the “Lit Fibre Data Services” offered as well as suggested opportunities to advance public policy initiative through the use of the dark fibre strands identified under the current MAA with Toronto Hydro Telecom Inc.

Simultaneously around the same time period but not related to the offer to the City, Toronto Hydro Corporation (THC) publicly announced that it was initiating a process to solicit expressions of interest for the purchase of Toronto Hydro Telecom Inc. (THTI) in order to enable THC to focus on its core business, electricity.

COMMENTS

Public Policy Opportunities to Work Towards

LYA has reconfirmed that the City of Toronto possesses very little of its own private fibre network capacity and has little available for promoting a socio-economic agenda. By accessing the four (4) fibre strands on the terms as set out in the Confidential Attachment, the City could advance these related initiatives. The current THTI fibre network is approximately 500 kilometers. The proposed school board build out including the proposed City facilities would add an estimated additional 600 kilometres to the THTI network. Most of this coverage encompasses the identified priority neighbourhoods located throughout the City. By leveraging this type of expanded network coverage, the City can keep its options open to change the way municipal services are delivered including their reach to residents. The focus of the proposed network is a more effective and efficient means to promote municipal based services and would not under the terms of the negotiated arrangement include any commercial activity (i.e. the sale of

telecommunications services to the public). This approach is consistent with LYA's recommendations as to the appropriate role to be played by government entities in owning and operating their own network facilities.

In reviewing activities currently underway in other cities, LYA have assessed the potential role for the City of Toronto in the context of objectives to become "the most connected City in the World" and a leader in the implementation of municipal services using connectivity.

A Potential Role for the City of Toronto

City of Toronto residents already benefit from significant investments made by many private telecommunication providers in building out network fibre coverage. However, opportunities do exist for the City to further promote broadband connectivity in lower serviced or less saturated jurisdictions by assessing the following initiatives.

1. The feasibility of utilizing some of the funding to finance incentive programs to increase affordability of broadband services for community centers and residents in Toronto Community Housing.
2. Potential benefits result from the expansion of the THTI network beyond the currently installed 500 kilometers. Leveraging the benefits under the Dark Fibre Agreement will assist the City and its Agencies, Boards and Commissions in fulfilling the following public policy opportunities or initiatives identified below over time and with approved funding secured.

Telecommunication Public Policy Benefits Reserve Fund

This Telecommunication Public Policy Benefits Reserve will be a repository to hold funds resulting from the agreements with Toronto Hydro. The initial contribution will be \$5,034,643 once the agreements are signed with Toronto Hydro Telecom Inc. This Fund is to be located in the Telecommunications Reserve Group as per the Telecommunications Group located in Municipal Code 227 Schedule #1-Corporate Reserves

The purpose of this reserve is to support telecommunications infrastructure improvements to support some of the Public Policy Benefits outlined below. The fund will be administered by the Information and Technology Division and for accounting purposes the Deputy City Manager and Chief Financial Officer shall have primary responsibility for the Group.

Funds will be withdrawn from the component reserve accounts as required as part of the operating and capital budgets as approved by Council from time to time. Once the funds in all component accounts have been exhausted the Group will be closed. If in five years funds still remain, the purpose of the fund shall be reviewed.

Public Policy Benefits

Acceptance of the MOU with THTI will assist the City in achieving some if not all of the following public policy benefits by leveraging its future fibre network. Some of these objectives will fulfill socio-economic and administrative applications benefiting the City and its residents.

Opportunities to extend the City's current physical network with a City-wide fibre network can be a major benefit in the deployment of a public wireless infrastructure using technologies such as Wi-Fi by providing the necessary backhaul or fibre network connections needed to implement a wireless network. Unlike the current THTI One Zone network which focuses on the downtown core, a City-wide wireless network would help reduce upfront as well as recurring costs related to the deployment of a city-wide wireless strategy.

LYA has grouped potential benefits into three (3) main categories based on a synopsis of interviews held with the various City staff including the ABC's during March 2008. Although there are a number of potential opportunities, feasibility assessments and return on investment (ROI) analysis should be conducted on each business case before proceeding with a capital budget submission. Some of these applications are currently in use by the City and the ABC's.

Safety and Emergency Applications

To implement many of the safety and emergency based applications will require a meshed or integrated wireless network complementing the current fibre network proposed.

1. Enhance public security with rapid delivery of complex media such as large data, video to police and emergency response personnel in the field, allowing for faster response. For example, this can include providing City officials (such as police officers and firefighters) enhanced remote access to information as well as the ability to file reports from the field. Police officers could access security cameras, blueprints, criminal records and other necessary information. A widespread broadband network could let officers show witnesses mug shots or "virtual line-ups" at the scene of a crime, instead of at a police station, thereby speeding up processes. Firefighters could obtain detailed information on specific buildings, while at the location of an emergency.
2. Provide patient data telemetry data and real-time video feed from accident locations/ ambulances before a patient arrives at hospital, to improve emergency response and provide better care to the patient. This requires ambulances and hospitals to be equipped with secure wireless networks (Wi-Fi Transmitters/Receivers and routers) to enable proper transmission and reception of patient information and a full WiFi network across the City.

3. Enabling the installation of a wide network IP (Internet Protocol)-based video cameras providing real time visibility to help solve crime faster and reduce crime in the City.
4. Other applications include installing IP (Internet Protocol)-based video cameras on Mobile Command Centers with connectivity via Wi-Fi routers for enhanced communications during crises to enhance decision making processes.

Education, Knowledge and Public Good Applications

1. Provide infrastructure to facilitate wired and wireless high-speed Internet access in community rooms in public housing in the priority neighbourhoods. This could be coupled with the provision of computers and other equipment for use by residents in public housing complexes.
2. Provide infrastructure to facilitate wireless access to the internet in all City public libraries, community centers, sports venues as well as City parks or public spaces such as Nathan Phillips Square.
3. Provide infrastructure to facilitate gigabit access for all City public libraries and community centers across city locations. Residents could have access to equipment (PCs, printers and scanners) to exchange multimedia documents quickly and efficiently with the City and its ABCs to help speed up administrative processes.
4. Provide wireless access on transit vehicles as a value added service in promoting public transportation.
5. The establishment of a municipal webcam network that can be accessed by anyone over the internet. These webcam systems, often with some level of remote control from the users, are found in tourist areas or resorts and a few other municipalities. Deploying similar systems by the City could enhance civic information, foster identity with the City and enhance cultural communications. For example, the City of Fredericton has set up a few sites with municipal webcams (<http://www.fredericton.ca/en/webcams.asp>) including examples of a city facility under construction, so residents can actually monitor its progress. While there are many webcams in operation in Toronto, many are related to traffic monitoring on highways or provide general city views (CN Tower, CBC). The City of Toronto currently provides images of key tourist attractions on its website but no webcams. A fibre and wireless backhaul network would be an advantage to deploy city wide webcams for the benefit of both residents and visitors.

City Administrative Applications

1. Reduce costs for leased lines required to monitor and manage traffic lights, thus helping to reduce traffic congestion. Wireless or wired connections could be provided at intersections coupled with video capabilities. This could also provide helpful information for emergency personnel who need to reach a particular location in the fastest possible manner. Video feeds from these cameras could be available online for City residents, a useful tool before starting a cross city trip.
2. Enable field workers such as City building inspectors who could leverage a GIS (Geographic Information System)-based application to reach their information servers and databases over a VPN (Virtual Private Network) connection with wireless devices. They could access a wide range of information about the buildings that they are attending while in the field. This could enable faster processing of building inspections and permits.
3. Track assets such as city-owned vehicles to improve efficiency and response time. For example, such as system could help identify which field workers or crews are nearest to a problem such as potholes or sewer and watermain repairs.

The list of opportunities identified is not exhaustive but to provide insight into the significant socio-economic benefits to all stakeholders within the City of Toronto. Many more other applications may be developed or considered once the network is in place considering its extensive reach throughout the City. To fully utilize the potential of such network will require the coordination and cooperation of all organizations that do not report directly to the City today.

The MOU document contains various schedules. They are the “Renegotiated Municipal Access Agreement” (Schedule A), “Dark Fibre License Agreement” (Schedule B) and Service Agreement Terms (Schedule C) for the Lit Fibre Data Services offered.

The proposed dark fibre arrangement is for a ninety-five (95) year term as opposed to the current licence agreement which expires in 2015. It provides the City with the ability to access up to four (4) strands of dark fibre in the current network and up to approximately 600 kilometers of the proposed build. There is a one-time cash settlement of \$5,034,643 CAD in full and final payment of all “Per Permit Fees” (as defined in the current Municipal Access Agreement) which were to be paid by Toronto Hydro Telecom Inc. to the City under the remaining term of the current Municipal Access Agreement (MAA). The MOU has been approved in principal by the boards of Toronto Hydro Corporation and Toronto Hydro Telecom Inc. and executed by them, pending Council approval for execution by the City. The MOU is not binding on the City until approved by City Council and there is a precondition for some of the services dependent upon the School Board offers. This agreement and the transactions contemplated therein shall be binding upon Toronto Hydro Telecom Inc. if approved by City Council.

Once the agreement has been approved by all parties, it is being recommended that these funds be bundled with other funds that the City is already holding to support initiatives that further develop the City's strategy with respect to telecommunications matters – namely funds in the Telecommunications Development Reserve. Therefore, Council is being asked to set up two accounts a Telecommunications Reserve Group – Attachment #2 - within the Corporate Reserves which will hold both the current Telecommunications Development Reserve monies and the new funds held in the Fibre Agreements Reserve – Attachment #3.

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SIGNATURE

Joseph P. Pennachetti
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ATTACHMENTS

Attachment 1 - THTI Confidential Report - June 9, 2008
Attachment 2 - Telecommunications Reserve Group criteria sheet
Attachment 3 - Fibre Agreements Reserve criteria sheet

ATTACHMENT NO. 2

Telecommunications Group located in Municipal Code 227 Schedule #1-Corporate Reserves

(a) Statement of Purpose:

The Telecommunications Group will provide funding to accumulate funds to support telecommunications infrastructure improvements.

(b) Service Area or Beneficiary Program:

For accounting purposes the Deputy City Manager and Chief Financial Officer shall have primary responsibility for the Group.

(c) Initial Contribution:

The Telecommunications Development Reserve will be transferred into the Group

(d) Contribution Policy:

Funds will be transferred into the various components of the Group from a variety of telecommunication initiatives.

(e) Withdrawal Policy:

Funds to be withdrawn from the component reserve accounts as required as part of the operating and capital budgets as approved by Council from time to time.

(f) Review Cycle:

Once the funds in all component accounts have been exhausted the Group will be closed.

ATTACHMENT NO. 3

Telecommunication Public Policy Benefits Reserve located in the Telecommunications Reserve Group in Schedule #1 – Corporate Reserves

(a) Statement of Purpose:

The Telecommunication Public Policy Benefits Reserve will be used to support telecommunications infrastructure improvements supporting the City's public policy benefits as may be stated from time to time;

(b) Service Area or Beneficiary Program:

For accounting purposes the Information Technology Division shall have primary responsibility for the Reserve.

(c) Initial Contribution:

The initial contribution will be \$5,034,643.00 once the agreements are signed with Toronto Hydro Telecom Inc.

(d) Contribution Policy:

No additional funding is contemplated at this time.

(e) Withdrawal Policy:

Funds to be withdrawn from the component reserve accounts as required as part of the operating and capital budgets as approved by Council from time to time.

(f) Review Cycle:

Once the funds have been exhausted the Reserve will be closed. If in five years funds still remain, the purpose of the fund should be reviewed.