Assessing the feasibility of

THE STATION TELECOMMUNICATIONS PROJECT

Submitted by:

kpmg
144 Pine Street
Sudbury, Ontario
June 1, 2001

Mr. Jim Rule
Chief Administrative Officer
The City of Greater Sudbury
Tom Davies Square
200 Brady Street
Sudbury Ontario P3A 5P3

June 1, 2001

Dear Mr. Rule

The Station Telecommunications Project

KPMG is pleased to provide our comments concerning our review of the Station Telecommunications Project (the "Station"). We understand that our review was requested in order to assist Council in determining whether to allocate $1 million of funding towards the project.

The Station represents a unique concept for the City, one in which fibre optic capabilities will be made available to individual residents. The potential benefits of the Station, if successful, could be significant – improved and expanded telecommunications services for residents and increased utilization (and corresponding returns) on existing fibre optic investments made by the City are among a few of the benefits envisioned.

Despite these benefits, our review of the Station's business case has left us with significant concerns about its feasibility. Our research indicates that the Station would not only fall substantially short of the projected revenue and customer levels outlined in the business case, but would also be challenged to generate any form of profit at all. As a result, the establishment of the Station would result in an initiative that provides no appreciable return to its investors, consisting primarily of government agencies (the degree to which the private sector contributes financially towards the Station is limited). Our projections also indicate that the Station, if pursued, would generate ongoing deficits of $200,000 annually into the future – deficits that would likely be financed, in one form or another, by the City.

Mr. Jim Rule
City of Greater Sudbury
June 1, 2001

While our research indicates that, from a financial perspective, the Station does not represent a viable initiative, we believe this is not reflective of the concept per se, but rather the high cost of the technology involved in delivering fibre optic services to residential users and the limited market size of the Station's service area. The financial feasibility of the Station notwithstanding, we believe that current trends in the telecommunications and broadcasting industries do provide general support for the concept. A number of cable companies have received licenses for the delivery of video on demand services and Bell Canada has announced plans to introduce set top boxes that will allow users to access the internet over their televisions. These instances demonstrate that the industry is already investigating and implementing the services envisioned for the Station, but on a much larger scale than that envisioned by the Station and without the need to incur the significant costs associated with the delivery of fibre optic services directly to homes.

Based on this, we believe that the City's efforts may be better directed by encouraging cable and telecommunications companies to deliver those services included in the concept of the Station. This form of cooperation provides significant advantages to the City – it allows for the services to be delivered throughout Greater Sudbury (as opposed to individual sections as envisioned by the Station) without the need for municipal investment, both for initial capital costs and ongoing deficits.

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Should you have any questions concerning our report or the results of our review, we would be pleased to discuss them with you at your convenience.

Yours very truly

James G. Corless, FCA Oscar A. Poloni, CA, CBV

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EXECUTIVE SUMMARY

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THE CONCEPT

The Station represents an initiative designed to bring fibre optic capabilities to individual homes. Currently, both Regional Cablesystems Inc. ("Regional") and Bell Canada ("Bell") use fibre optics for their local networks but do not provide fibre optic connections to homes directly.

The initial groundwork for the Station began just over four years ago, when Capreol Hydro invested surplus funds into the development of a fibre optic network in the community. Intended to provide a range of benefits by attracting employment to the community and improving local service levels, the Station anticipates building on this initial investment by improving both the quality and quantity of telecommunication services available to residents. In addition, it is hoped that the Station will act as a test case for other communities and telecommunication companies, who will look to Sudbury as a place to test new products and technologies.

PRODUCTS AND SERVICES

As envisioned in the business case, the Station will form a fibre optic network through which a variety of services will be offered. Our review of the business case indicates that the Station does not intend to deliver these services themselves – rather, its goal is to facilitate the delivery of services to residents by providing the necessary fibre optic infrastructure through which the services will be delivered by other parties.

We understand that the Station intends to offer the following services.

Internet access

Internet service providers ("ISP's") represent the main contact between residential users and the internet. Access to residential customers is gained through the existing networks of Regional or Bell. The Station intends to provide ISP's with a third alternative for accessing these customers, one that would be superior to both of the existing systems due to the higher speed provided by fibre optic cable[1].

Under the Station concept, access to the internet would be provided through the use of either traditional methods (i.e. personal computer and modem) or set top boxes, a relatively new technology that allows television sets to act as internet interfaces.

As proposed in the business case, existing ISP's in Sudbury would continue to provide internet services to residents. In exchange for using the fibre optic network established by the Station, the ISP's would pay the Station a fixed monthly fee per customer. This arrangement is similar to those currently in place between the ISP's and Regional and Bell.

Video on demand

Unlike traditional pay-per-view services, which provide first run movies to customers at set times, video on demand allows customers the opportunity to view movies at any time. As video on demand provides movies in digital format, additional options such as rewind and fast forward capabilities are also available.

Through the Station's infrastructure, existing video rental businesses would deliver video on demand services to residents. In keeping with its intended mandate, the Station's involvement in video on demand would be limited to providing the fibre optic infrastructure through which the videos would be provided.

[1] The ability of fibre optic services to the home to improve the speed of internet services is debatable, as a potential bottleneck exists in the main telecommunications lines (which are separate from the Station's infrastructure) used by ISP's to connect local networks, such as the Station, to the internet.

Alarm monitoring services

The monitoring of smoke and carbon monoxide alarms would be another service made available through the Station. Consistent with the other services noted, these services would be offered by a private alarm monitoring company, who would use the Station's infrastructure to connect the alarms to the monitoring station.

Commercial services

While the majority of services provided through the Station are intended to be directed to residential customers, the business case also includes commercial revenue derived from:

- Local business advertising – Businesses in Sudbury would have the opportunity to place advertising on the website established by the Station.
- E-commerce – Depending on the advertising package selected, businesses would also have the opportunity to use the Station for e-commerce transactions.
- National business advertising – The Station will also provide advertising to national accounts, such as Sears. This advertising will most likely be in the form of so-called banner advertising, which will link customers to the sites of the national advertisers.

SERVICE AREA

Initially, the Station is intended to be introduced as a pilot project, whereby the provision of fibre optic services to homes will be limited to:

- 1,000 single family dwellings in the former Town of Capreol; and
- Ten apartment buildings (200 units each) in the former City of Sudbury.

Following this initial deployment of fibre optic services, it is anticipated that installations will continue in other parts of the City of Greater Sudbury. Specifically, we have been informed that communities such as Coniston and Levack would be the next choice for the expansion of the Station.

FUNDING PARTNERS

The estimated cost of establishing the Station is estimated to be in the order of $10.8 million, as follows:

Projected Station start-up costs

Type of Expenditure	Total Cost
Equipment and installation	$ 8,984,000
Computer servers and software	812,000
Start-up costs	1,000,000
Total	$ 10,796,000

The funds necessary to finance the establishment of the Station are intended to come from a mix of private and public sector organizations.

Projected Station financing

Funding Partner	Form of Contribution			
	Cash	Purchase Discounts	Inkind Contributions	Total
Northern Ontario Heritage Fund	$ 4,627,000	–	–	4,627,000
City of Greater Sudbury	1,000,000	–	–	1,000,000
FedNor	500,000	–	–	500,000
Greater Sudbury Telecommunications Inc.	200,000	–	250,000	450,000
Alcatel	–	3,298,000	–	3,298,000
IBM Canada Ltd.	–	764,000	–	764,000
Urbana.ca	–	157,000	–	157,000
Total	$ 6,327,000	4,219,000	250,000	10,796,000

FINANCIAL PERFORMANCE

Included in the business case are financial projections outlining the anticipated financial performance of the Station for a three year period following inception. The business case anticipates that after a breakeven performance during the first year, the Station will generate approximately $17.1 million of profits over the three year projection period.

Projected financial performance

	2002	2003	2004	Total
Set top boxes installed	1,400	10,100	17,200	17,200
Total revenue	$ 1,971,000	10,412,000	16,599,000	28,982,000
Total expenditures (excluding start-up costs)	1,990,000	4,321,000	6,434,000	12,745,000
Net profit (loss)	$ (19,000)	6,091,000	10,165,000	16,237,000

GOALS AND OBJECTIVES

On April 10, 2001, Council for the City of Greater Sudbury passed a resolution providing support for an investment in the Station of $1 million, contingent upon the following:

- Provincial and Federal funding of $5.5 million
- Private sector commitments of $6 million
- A review of the viability of the project and the business case to be undertaken by an independent consultant

Based on this resolution, we have structured our report to provide an overall assessment of the business case prepared by GSTI and the viability of the Station which includes:

- An analysis of the legislative and regulatory issues surrounding the establishment of the Station
- An assessment of the degree to which the private sector has committed to the project
- A review of the financial projections contained within the business case, as well as an indication of the potential financial performance of the Station if alternative assumptions were used

PROCEDURES PERFORMED

In undertaking our review, we have performed the following procedures:

1. Meetings were held with representatives of the City and GSTI who were involved in the development of the business case for the Station. The purpose of these meetings was to complement our understanding of the Station and identify key assumptions and critical success factors for the project.
2. Discussions were held with representatives of the CRTC to identify regulatory factors and licensing issues relating to the establishment of the Station. In addition, various regulations and statutes that could be relevant to the Station were reviewed, including:
    - The Canadian Radio-television and Telecommunications Commission Act
    - The Broadcasting Act
    - Public Notice 1997-83 – Licensing of New Video On Demand Undertakings
    - Public Notice 1997-150 – Broadcasting Distribution Regulations

3. Discussions were held with representatives of the Canadian Motion Pictures Distributors Association concerning non-proprietary rights for video on demand services.
4. The proposed funding for the Station was summarized and reviewed to determine the value of the contributions made by private sector funding partners and the intended use of the funds invested by the City.
5. Information concerning the Canadian telecommunications and cable industries was reviewed and summarized to gain an understanding of the total market size and cost structures for the following services:
   - Internet services
   - Internet advertising
   - Video on demand

   This information was obtained from a number of sources, including:
   - The Cable Industry Update prepared by Scotia Capital Equity Research, dated April 19, 2001
   - The Cable Industry in Canada – Year End Update prepared by Dominion Bond Rating Service Ltd., dated March 2000
   - The 2000 Annual Reports for the following cable and telecommunications companies:
     - Rogers Communications Inc.
     - Shaw Communications Inc.
     - Cogeco Cable Inc.
     - Regional Cablesystems Inc.
5. Information concerning alarm monitoring services was obtained through the Canadian Alarm and Security Association and the National Burglar and Fire Alarm Association.
6. Information concerning e-commerce and internet based advertising levels was reviewed and summarized to gain an understanding of the total market size for these services. This information was obtained from the following sources:
   - Profile of the Canadian Multimedia Industry, prepared by the Interactive Media Producers Association of Canada, dated January 2001
   - Internet Shopping in Canada, prepared by Statistics Canada, dated February 2001
7. The assumptions supporting the financial projections included in the business case were analyzed and compared to the information obtained through the above procedures. Where the assumptions contained in the business case were considered unreasonable, the financial projections were revised to reflect the results of our research.
8. Based on the results of the above procedures, an overall conclusion was made as to the feasibility of the Station.

THE STATION BUSINESS CASE

When our engagement first commenced, we understood that the business case for the Station represented a formal business plan. However, as our discussions with the proponents of the Station progressed, we were informed that the business case was not intended to be a formal business plan but rather a definition of the concept and an outline of how the Station could function, if a decision was made to proceed with the project. The proponents clearly indicated that the existing business case would require more work if it were to truly represent a formal business plan for the Station.

Based on this understanding, we have structured our study so as to "fill in any gaps" that may exist in the business case. Specifically, our procedures have been designed to test a number of key assumptions contained in the business case, including estimates of potential market demand for the Station's services and regulatory and legislative requirements relating to the services to be offered by the Station. In light of the nature of the business case and its intended purpose (defining concept rather than demonstrating feasibility), it is understandable that our procedures have, in a number of instances, yielded significant differences from the assumptions contained in the business case. Our comments and findings should be interpreted accordingly.

RELIANCE ON LOCAL INPUT

Our overall mandate for this engagement was to provide Council with an independent and objective review of the Station to be used in determining if the requested $1 million should be invested in the Station. This required our analysis and conclusions to be based on accurate information which was free from any potential bias, either real or perceived.

While we have discussed the Station with representatives of Bell, Regional, ISP's, alarm monitoring companies and video rental companies, we have not relied to a significant extent on the information provided by these parties due to potential concerns over the objectivity of the information provided. Rather, we have used these meetings to identify areas of significant concern and have attempted to gather independent information from other sources that either supports or disproves the assumptions made in the business case. As a result, we believe that our review, while reflecting the concerns of local businesses, has not been influenced by these concerns.

RESTRICTIONS

Our role in this engagement has been to evaluate the feasibility of the Station based on its perceived ability to meet certain legislative and regulatory requirements, as well as the extent to which it can operate profitably. As with any exercise involving an estimate of future performance, there exist any number of uncontrollable political, social, technological and internal factors that could affect the viability of the Station. As a result, our findings should be viewed in the context of being estimates based on sound information, which may or may not be influenced by unforeseen or uncontrollable events. We caution the reader that the ultimate feasibility of the Station (both from a regulatory and financial standpoint) can vary significantly from the findings outlined in this report due to future decisions of the City, regulatory changes imposed by senior levels of government, unexpected expenditures and strategies introduced by potential competitors. Accordingly, we will assume no responsibility or liability for any losses, damages or expenses incurred by any party, including the City of Greater Sudbury or Greater Sudbury Telecommunications Inc., as a result of their reliance on our report.

We have no intention of updating this report as new information becomes available.

SUMMARY OF FINDINGS

Our review of the business case indicates a lack of discussion relating to regulatory or legislative issues pertinent to the Station. Through our discussions with the proponents of the Station, we were informed that CRTC approval for the Station would not be required as the existing status of the GSTI as a non-dominant carrier would enable the Station to offer its services without further CRTC licensing.

Our research has indicated that while the Station would not require approval by the CRTC for internet and alarm monitoring services, video on demand services would require a CRTC license. The ability of the Station to obtain this license is questionable, given that at least one local organization has indicated it will challenge any such application.

The Station would also be required to purchase or otherwise secure non-proprietary exhibition rights for those films included in its video on demand services. However, our research indicates that it will be extremely difficult, if not impossible, for the Station to obtain these rights due to concerns over the potential piracy of films

Our conclusions concerning the licensing and regulatory requirements associated with the services to be offered by the Station have been confirmed by both the CRTC and the Canadian Motion Pictures Distributors Association.

CANADIAN RADIO-TELEVISION AND TELECOMMUNICATIONS REGULATIONS

Introduction

The CRTC is a Federal agency responsible for the regulation and supervision of all aspects of the Canadian broadcasting system, as well as regulating telecommunications providers. This authority is provided through a number of Federal Acts, including the Broadcasting Act, the Telecommunications Act and the Canadian Radio-television and Telecommunications Commission Act.

Licensing requirements

Under Section 9(1) of the Broadcasting Act, the CRTC is authorized to establish and issue licenses for broadcasting in Canada. Later sections of the Broadcasting Act contain relatively large penalties that can be imposed on persons or companies involved in broadcasting activities without a license.

32. *(1)* ***Broadcasting without or contrary to a license –*** *Every person who, not being exempt from the requirement to hold a license, carries on a broadcasting undertaking without a license therefore is guilty of an offence punishable on summary conviction and is liable*

(a) in the case of an individual, to a fine not exceeding twenty thousand dollars for each day that the offence continues; or

(b) in the case of a corporation, to a fine not exceeding two hundred thousand dollars for each day that the offence continues.

The Telecommunications Act provides the CRTC with the authority to regulate and license telecommunications services, defined as *"the emission, transmission or reception of intelligence by any wire, cable, radio, optical or other electromagnetic system, or by any similar technical system"*. As with the Broadcasting Act, the Telecommunications Act contains significant penalties for non-compliance.

The fundamental issue for the Station is whether a CRTC license is required for the services to be provided.

Internet services

Based on our discussions with representatives of the CRTC, the current status of GSTI as a non-dominant carrier[2] will be sufficient to allow the Station to provide the internet services anticipated in the business case. As a result, we do not anticipate any need for additional regulatory approval from the CRTC for these services assuming that the Station is owned or otherwise controlled by GSTI.

Video on demand services

The authority of the CRTC to license video on demand services is established in Public Notice 1997-83 – Licensing of New Video on Demand Programming Undertakings[3]. This authority is further demonstrated by the fact that the CRTC has already issued nine video on demand licenses, the most recent being issued on November 24, 2000.

The business case for the Station does not anticipate requiring CRTC approval for the provision of video on demand services. This is based on the assumption that the current status of GSTI as a non-dominant carrier will permit it to carry video on demand services without additional CRTC approval.

Our review of applicable legislation indicates that video on demand services fall under the regulations of the Broadcasting Act, while GSTI's status as a non-dominant carrier relates to telecommunications services, which are covered under the Telecommunications Act. As a result, GSTI's status as a non-dominant carrier has no relevance to the delivery of video on demand services. Accordingly, CRTC approval would be required before video on demand services could be offered.

In the event that the Station does pursue a video on demand license from the CRTC, we anticipate that its efforts would be challenged by at least one local company which indicated that it would "strongly oppose" any attempt by the Station to obtain a license for video on demand services. At this time, however, we cannot determine the effect of such challenges on the outcome of the licensing process.

Alarm monitoring services

We do not anticipate any requirement for the Station to obtain additional CRTC approval for the alarm monitoring services envisioned in the business case.

[2] A non-dominant carrier represents a provider of telecommunications facilities that does not enjoy market dominance.

[3] The CRTC does provide licensing exemptions for experimental video on demand systems. In order for a system to be considered experimental, it must be used to test and develop video on demand technology. As the Station intends to introduce video on demand services as a commercial product, it would not qualify for this exemption.

NON-PROPRIETARY RIGHTS

The issue of non-proprietary rights relates primarily to video on demand services. Specifically, the Station will require some form of agreement from the motion picture studios that hold the rights to those movies to be distributed over the video on demand system.

As outlined in the business case, the Station intends to offer video on demand services through an agreement with a local video rental company. In exchange for a fixed price per movie shown, the video rental company would make available to the Station movies in digital format to be distributed over the video on demand system. However, the video rental company would need to obtain the non-proprietary rights to distribute the films in digital format over a video on demand network.

While the requirement does exist to obtain the non-proprietary rights for the films to be distributed by the Station's video on demand services, we do not anticipate that the Station will be successful in doing so. Our discussions with representatives of the Canadian Motion Pictures Distributors Association indicate that non-proprietary rights for films to be shown through video on demand services are currently not available due to security concerns. As video on demand entails transmitting movies in digital format, a significant risk of video piracy exists since digital movies can be stored on computers and distributed free of charge over the internet. Video on demand technology is not perceived as being sufficiently advanced to allay this concern and until the technology does provide sufficient security, non-proprietary rights will not be forthcoming.

Our discussions with the Station's proponents indicates that they are aware of both the need to obtain non-proprietary rights for movies to be distributed over a video on demand network and the potential difficulties that may be experienced in obtaining these rights.

SUMMARY OF FINDINGS

Based on our review of the business plan and the proposed financing of the capital and start-up costs of the Station, we have determined the amount of "true" private sector investment in the Station to be approximately $1.6 million. While the business case indicates total private sector investment of $4.2 million, this contribution is in the form of discounts from the list price of equipment to be purchased. Given that a significant portion of these discounts appear to be available to any customer, they cannot be considered as a real contribution to the Station. In addition, two of the companies providing the discounts are expected to sell additional equipment to the Station. These subsequent sales may allow the companies in question to recover some or all of the purchase discounts provided.

As a result of the above, we do not believe that Council's requirement for $6 million of private sector commitment, as outlined in the motion, has been met.

ANALYSIS OF FUNDING CONTRIBUTIONS

In order to finance the projected total start-up costs of $10.8 million (which include capital and developmental costs), the Station intends to rely on a combination of public and private sector contributions.

Public sector contributions

The business case anticipates a total of $6.6 million of public sector funding, the majority of this representing cash contributions[4].

The Northern Ontario Heritage Fund is expected to be the largest public sector contributor. As presented in the business case, $4.6 million of funding will be sought from the Heritage Fund.

The City contribution, amounting to $1 million, is not intended to finance capital costs but rather is required to fund the operating costs incurred during the establishment of the Station, including any costs incurred prior to the Station's revenue generating activities becoming operational.

[4] GSTI is projected to contribute $250,000 of fibre optic infrastructure already purchased by the company. This represents the only inkind contribution from the public sector.

Private sector contributions

The business case identifies total private sector contributions amounting to $4.2 million to be provided by three companies:

- Alcatel - $3.3 million
- IBM Canada Ltd. ("IBM") - $764,000
- Urbana.ca - $157,000

In all instances, these contributions represent discounts provided by the companies on the sale of equipment or software to the Station. In the case of Alcatel and IBM, these contributions represent a percentage discount from the list price of the equipment to be purchased by the Station (68% from Alcatel and 30% from IBM). The Urbana.ca contribution represents the waiving of a licensing fee in connection with software to be sold by Urbana.ca to the Station.

Based on our discussions with representatives of the computer industry, we understand that it is common practice for computer and telecommunications companies to provide discounts from list prices to all customers. Our research indicates that the standard discount from list price offered to government agencies is normally in the range of 30% to 40%. Based on this finding, it would be reasonable to assume that a significant portion of the private sector contributions (60%) represent discounts that are available to any customer and, as such, do not represent incremental contributions to the project.

Summary of routine vs. incremental purchase price discounts

	List Price of Equipment	Standard Discount[5] (A)	Actual Discount (B)	Incremental Contribution (B) – (A)
Alcatel	$ 4,825,000	1,689,000	3,298,000	1,609,000
IBM	2,546,000	891,000	764,000	–
Total	$ 7,371,000	2,580,000	4,062,000	1,609,000

In addition, we note that both IBM and Urbana.ca will be involved in additional equipment sales or leasing arrangements with the Station. These subsequent transactions, which we understand have no associated discounts, could provide these companies with the opportunity to recover some or all of the initial discounts provided. Specifically, IBM is expected to sell to the Station computer servers with a selling price of $485,000, while Urbana.ca will lease set top boxes to the Station at a monthly lease cost of $11.16 per unit.

[5] Represents the estimated discount that is provided to all customers. For the purpose of our analysis, we have assumed that the standard discount is 35% of list price (representing the average of 30% and 40%).

SUMMARY OF FINDINGS

As a result of our review, we have significant concerns over the future financial performance of the Station, due primarily to the small market demand for the services to be offered. Overall, our analysis indicates that the Station will experience total deficits in the order of $200,000 in each of the three years following its inception.

This conclusion differs significantly from the financial projections contained in the business case, which estimates that the Station will generate more than $16 million in profits over three years. A large part of this difference may be due to the intended purpose of the business case, which was to define the concept rather than act as a formal business plan.

As a result of our review, we have concluded that, from a financial standpoint, the Station does not represent a viable initiative. Should the City and GSTI proceed with the project, we caution that the operations of the Station would be characterized by ongoing deficits totaling over $600,000 over a three year period. Responsibility for financing these deficits would likely rest with the City or its wholly-owned subsidiary, GSTI.

ANALYSIS OF FINANCIAL ASSUMPTIONS

Introduction

Included in the business case for the Station are financial projections outlining the anticipated financial performance of the Station over a three year period. As noted earlier, the business case estimates that the Station will generate $16 million of profits over three years.

Our assessment of the likely financial performance of the Station involved a detailed review of the assumptions supporting the financial projections, and we have outlined our findings below.

Projected revenue

The business case anticipates that total revenues for the Station will increase from just under $2 million in its first year of operations to $16.6 million within three years, consisting of the following:

Projected revenues by service line

	2002	2003	2004	Total
Internet services	$ 1,311,000	5,535,000	8,074,000	14,920,000
Video on demand services	97,000	931,000	1,585,000	2,613,000
Alarm monitoring services	64,000	611,000	1,040,000	1,715,000
Local business advertising	136,000	566,000	1,133,000	1,835,000
E-commerce commissions	11,000	46,000	83,000	140,000
National business advertising	352,000	2,723,000	4,684,000	7,759,000
Total	$ 1,971,000	10,412,000	16,599,000	28,982,000

Internet services

Internet services are expected to represent the largest source of revenue for the Station, accounting for more than 50% of total revenues.

As a result of our review of the financial projections, we make the following observations.

- **Capacity levels** – The financial projections are based on the assumption that the number of internet customers will increase to 27,600 customers over the three year projection period, despite the fact that the Station's computer servers have a maximum capacity of 10,000 users, as noted in the business case[6].

Projected internet customers

	2002	2003	2004
Accessing through set top boxes	1,400	10,100	17,200
Accessing through personal computers	2,600	5,300	10,400
Total internet customers	4,000	15,400	27,600

[6] See Table 5.2 of the business case (page 22). These capacity levels have been confirmed by proponents of the Station.

- **Penetration rates –** The business case calls for the installation of fibre optic services to 3,000 in the City of Greater Sudbury (consisting of 1,000 homes in Capreol and 2,000 apartment units in Sudbury). Based on 4,000 internet customers in the first year of operations, this results in a penetration rate of 133% (4,000 customers ÷ 3,000 homes). In comparison, the average penetration rate for high-speed internet services in Canada, while growing, is 11.4% for cable companies and 5.7% for telecommunication companies such as Bell Canada.

National high speed internet penetration rates – cable companies[7]

	1999	2000	2001
Number of high speed internet customers (A)	392,398	796,061	934,270
High speed internet ready homes (B)	6,224,175	7,423,272	8,204,338
Penetration rate (A) ÷ (B)	6.3%	10.7%	11.4%

National high speed internet penetration rates – telecommunications companies[8]

	1999	2000	2001
Number of high speed internet customers (A)	94,037	392,195	n.a.
High speed internet ready homes (B)	3,994,248	6,840,351	n.a.

- **Pricing –** Projected revenues from internet services are calculated based on a monthly customer charge of $29.95 per month. In comparison, other providers of high speed internet services are currently charging $39.95 per month[9].

[7] Source – Scotia Capital Cable Industry Update. Figures for 2001 are for the first quarter only.

[8] Source – Scotia Capital Cable Industry Update. Data for 2001 was not available.

[9] We understand that fees paid by customers for internet service will not be paid to the Station but rather the ISP, who will then pay a third party access fee for the use of the Station's fibre optic network. However, the financial projections are based on the assumption that the Station will collect the revenues from internet customers and forward a commission to the ISP's on a per customer basis. We have therefore structured our comments accordingly.

Based on these observations, we do not believe that the projected internet revenues outlined in the business case are attainable. Rather, we have estimated the total market for high speed internet services in the Station's service area (3,000 households) to be between 363 and 411 customers.

Estimated high speed internet customers in the Station's service area

	2002	2003	2004
Number of homes serviced by the Station	3,000	3,000	3,000
Internet penetration rate[10]	12.1%	12.9%	13.7%
Total high speed internet customers in the Station's service area	363	387	411

As this represents the total number of high speed internet customers in the Station's service area, we anticipate that the actual number of internet customers will be lower than this amount, as it will be extremely difficult for the Station to achieve 100% market share. Based on an assumed market share of 80% (which was arbitrarily determined by us) and a revised customer fee of $39.95 per month (which is consistent with the current pricing structure for high speed internet access), we estimate that the maximum revenue from internet services for the Station will be in the range of $139,000 to $158,000, compared to the $1.3 million to $8.1 million indicated in the business case.

Estimated internet service revenue

	2002	2003	2004
Total high speed internet customers in the Stations service area	363	387	411
Projected market share	80%	80%	80%
Total internet customers	290	310	329
Monthly fee	$ 39.95	$ 39.95	$ 39.95
Projected annual internet service revenue	$ 139,000	149,000	158,000

[10] Based on the average high speed internet penetration rate for Canadian cable companies in 2001, adjusted for annual growth of 6.5% per year (representing the growth in penetration rates from 2000 to 2001).

Video on demand services

Video on demand services are expected to represent a significant portion of the Station's revenues, amounting to $1.6 million in the third year of operations, or 10% of total revenues.

Our review of the business case and the assumptions supporting the financial projection indicate that the Station anticipates a significant increase in the number of movies viewed through its video on demand system.

Estimated annual movie viewings through video on demand services

	2002	2003	2004
Total set top boxes installed	1,400	10,100	17,200
Percentage of set top box customers using video on demand services	60%	60%	60%
Number of video on demand customers	840	6,060	10,320
Monthly movies viewed	8	8	8
Annual movie viewings through video on demand	6,720	48,480	82,560

The business plan anticipates charging customers $4.00 per movie viewed, with 60% of this amount, or $2.40, paid to the local movie rental company. The remaining 40% would be retained by the Station.

As a result of our research, we make the following observations concerning the projected video on demand revenues.

- **Capacity levels** – As with internet services, the business case appears to overestimate the number of video on demand customers by overstating the number of set top boxes installed. The capital expenditures anticipated in the business plan allow for the provision of fibre optic services to 3,000 households. As a result, the maximum number of video on demand customers would likely not exceed this amount without additional capital expenditures. The sole exception would be instances where homes have more than one television and request multiple set top boxes.

- **Penetration rates –** The business case anticipates that 60% of households would utilize video on demand services. This penetration rate appears to be inconsistent with pay per view penetration rates experienced by large cable companies, which average 7% of all households in their service areas.

Estimated pay per view penetration rates

	Digital Cable Customers[11]	Homes in Service Area[12]	Penetration Rate
Rogers Communications Inc.	201,000	2,804,000	7.2%
Shaw Communications Ltd.	131,000	2,008,000	6.5%
Cogeco Cable Inc.	79,000	1,103,000	7.2%
Total/average	411,000	5,915,000	6.9%

- **Pricing –** The projected pricing for the Station's video on demand services of $4.00 per movie viewed appears to be consistent with current pricing for pay per view services.
- **Royalty costs –** While we are unaware of any agreements relating to non-proprietary rights for movies to be distributed through video on demand services, we understand that the anticipated royalty for these rights will likely be in the range of 50% of total revenues[13]. Given that the royalty to be paid by the Station will need to offset both the cost of the non-proprietary rights associated with the films and provide a profit to the video rental company, the 60% royalty cost anticipated by the Station may be too low.
- **Viewing frequency –** While the business case anticipates eight viewings per video on demand customer, our research indicates that a viewing frequency of 2.5 movies per month per customer may be more reasonable[14].

[11] Source – Company annual reports for the 2000 fiscal year. Digital cable customers have been used as an indicator of pay per view customers as access to pay per view services is only available through digital cable.

[12] Source – Dominion Bond Rating Service Cable Industry in Canada Year-end Update.

[13] Source – Canadian Motion Picture Distributors Association.

[14] Source – Scotia Equity Cable Industry Update.

Based on these observations, we question the ability of the Station to achieve the projected video on demand revenues included in the business case. Rather, we have estimated the maximum video on demand revenues that would likely be realized by the Station (net of royalty fees) to be in the order of $6,000 annually.

Estimated video on demand revenue

	2002	2003	2004
Number of homes serviced by the Station	3,000	3,000	3,000
Projected penetration rate	7.0%	7.0%	7.0%
Number of video on demand customers	210	210	210
Number of monthly viewings per customer	2.5	2.5	2.5
Annual viewings	6,300	6,300	6,300
Revenue per viewing, before royalty payments	$ 4.00	$ 4.00	$ 4.00
Projected video on demand revenue, before royalty payments	$ 25,000	25,000	25,000
Projected royalty provision[15]	75%	75%	75%
Projected video on demand revenue, after royalty payments	$ 6,000	6,000	6,000

The ability of the Station to generate this level of video on demand revenue is contingent upon its success in obtaining a video on demand license from the CRTC. Without this approval, no revenue could be earned from video on demand services.

[15] For the purpose of our analysis, we have assumed that 50% of video on demand revenues would be paid for non-proprietary rights, while the remaining 50% would be divided equally between the Station and the movie rental company.

Alarm monitoring services

Revenues from the monitoring of smoke and carbon monoxide alarms are projected to grow significantly in the three years following the establishment of the Station. Overall, alarm monitoring revenues are projected to increase from $64,000 in the first year of operations to $1.04 million by the third year.

The projected level of alarm monitoring revenue is based on penetration rates of 60% and 30% for smoke and carbon monoxide monitoring services, respectively. The business case establishes a price of $7.00 per month for each type of monitoring service and assumes that a royalty of $4.20 per month will be paid to a third party monitoring company for each carbon monoxide monitoring customer[16].

As a result of our research, we make the following observations concerning the projected alarm monitoring revenue:

- **Penetration rates –** Our research indicates that the average Canadian penetration rate for all residential alarm monitoring services (security, smoke and carbon monoxide detection included) is in the range of 15% to 17%[17]. We further understand that approximately 10% of customers with some form of alarm monitoring services have smoke and carbon monoxide monitoring services[18]. Accordingly, the penetration rate for smoke and carbon monoxide monitoring services is approximately 2% (10% of 17%).
- **Pricing –** In order to provide smoke and carbon monoxide monitoring services to residents, the Station would need to compete with current alarm monitoring companies. Based on inquiries with local alarm companies, we understand that smoke and carbon monoxide monitoring services are provided free of charge by alarm monitoring customers (i.e. customers receiving smoke and carbon monoxide monitoring services pay the regular security monitoring fee).

In light of the extreme competitive advantage faced by the Station with respect to the pricing of alarm monitoring services, we do not anticipate that the Station will be able to generate any revenue from the alarm monitoring services outlined in the business case.

[16] The business case does not mention a royalty for smoke detector monitoring customers.

[17] Source – The Canadian Alarm and Security Association.

[18] Source – The Canadian Alarm and Security Association.

Local business advertising

When set top box customers access the Station, they would first view a community portal that would include, among other items, advertising from local businesses. The business case anticipates generating between $136,000 and $1.13 million in local business advertising revenue. Advertising on the community portal would be available to local businesses through two packages:

- Standard advertising packages – Consisting of a three page business website and banner advertising, the monthly cost of standard advertising packages would be $39.95.
- Enhanced advertising packages – Enhanced advertising packages would have the same content as the standard packages, but would also include an e-commerce capability. The projected cost of the enhanced advertising packages is projected to be $49.95 per month.

While the business case does not indicate the number of local businesses advertising on the Station, it does indicate that two-thirds of all customers would purchase standard packages while the remaining one-third of customers would purchase enhanced packages. Based on this breakdown and the monthly fees listed in the business case, we have determined the number of local businesses expected to advertise on the Station to be as follows:

Projected local business advertising customers

	2002	2003	2004
Total local business advertising revenue	136,000	566,000	1,133,000
Weighted average advertising rate (two-thirds at $39.95 and one-third at $49.95)	$ 43.28	$ 43.28	$ 43.28
Number of local businesses expected to advertise on the Station	3,142	13,078	26,178

While we have been unable to obtain any information relating to local advertising expenditures, we do note that there are only 6,500 businesses in the City of Greater Sudbury[19]. As a result, we do not expect the Station to achieve the levels of projected local business advertising revenue as the number of customers anticipated in the business case exceeds the number of businesses in Sudbury. Based on a projected penetration rate of 2% (which has been arbitrarily selected by us), the Station would generate $68,000 in annual revenues from local business advertising.

Revised local business advertising revenue

	2002	2003	2004
Total local businesses	6,500	6,500	6,500
Penetration rate	2%	2%	2%
Local businesses advertising on the Station	130	130	130
Weighted average advertising rate (two-thirds at $39.95 and one-third at $49.95)	$ 43.28	$ 43.28	$ 43.28
Projected local business advertising revenue	$ 68,000	68,000	68,000

E-commerce commissions

In conjunction with the e-commerce capabilities offered through its enhanced local advertising packages, the Station will levy a commission equal to 2% of the value of e-commerce transactions processed. This commission structure is expected to result in commission revenue of $11,000 in the first year of operations, increasing to $83,000 by the third year.

In order to generate these levels of commission revenues at a 2% commission rate, the total value of e-commerce transactions undertaken through the community portal will need to be in the range of $550,000 to $4.1 million annually.

Projected e-commerce transaction volume

	2002	2003	2004
Total value of e-commerce transactions	$ 550,000	2,300,000	4,150,000
Commission rate	2%	2%	2%
Projected e-commerce commission revenue	$ 11,000	46,000	83,000

[19] Source – Sudbury Regional Development Corporation.

Based on our understanding of e-commerce in Canada, we make the following comments concerning the projected e-commerce commission revenues of the Station.

- **Transaction value per internet user –** The business case anticipates that the Station's internet customers will complete e-commerce transactions with an average value of $137 to $150 per customer.

Projected value of e-commerce transactions per internet customers

	2002	2003	2004
Total internet customers	4,000	15,400	27,600
Total value of e-commerce transactions	$ 550,000	2,300,000	4,150,000
Average value of e-commerce transactions per internet customer	$ 137.50	149.35	150.36

In comparison, the average value of e-commerce transactions in Canada is $517.00 per internet user[20].

- **Number of internet customers –** As noted earlier in our report, we believe that the business case overstates the Station's internet customers, resulting in a corresponding overstatement of e-commerce commission revenue.

Based on these observations, we have revised the Station's projected e-commerce commission revenue to $3,000 per year, calculated as follows:

Projected e-commerce commission revenue

	2002	2003	2004
Projected internet customers	290	310	329
Projected value of e-commerce transactions per internet customer	$ 517.00	$ 517.00	$ 517.00
Projected value of e-commerce transactions processed by the Station	$ 149,900	160,300	170,100
Commission rate	2%	2%	2%
Projected e-commerce commission revenue	$ 3,000	3,000	3,000

[20] Source – Internet Shopping in Canada, published by Statistics Canada.

National business advertising

In addition to generating revenue from local businesses advertising on the Station's community portal, the business case also envisions revenue from national business advertising. This advertising, most likely from companies such as Sears and Canadian Tire, will be calculated based on the number of times the company's advertising banner is viewed by an internet user.

National business advertising is expected to represent a significant source of revenue for the Station, second only to internet service revenues. As outlined in the business case, national business advertising revenues are projected to increase from $352,000 in the first year of operations to almost $4.7 million in the third year, representing 28% of the projected revenue for the Station.

Based on our review, we make the following comments regarding the national advertising revenue projected in the business case.

- **National advertising revenue per internet user –** Given that national business advertising is dependent on the number of times internet pages are viewed by users, it is reasonable to assume that some correlation exists between national business advertising revenue and the number of internet users. Based on this logic, we have calculated that the business plan anticipates national business advertising revenue will range from $88.00 per customer in the first year of operations to $170.00 per customer in the third year following inception.

Projected national advertising revenue per internet user

	2002	2003	2004
Total internet customers	4,000	15,400	27,600
Total national advertising revenue	$ 352,000	2,723,000	4,684,000
Average national advertising revenue per internet customer	$ 88.00	177.00	170.00

The total value of national internet advertising in 2000 was in the order of $109 million[21]. Based on a total of 4.9 million internet users in Canada[22], this translates into an average national advertising revenue of $22.00 per internet user.

- **Number of internet customers –** As noted earlier in our report, we believe that the business case overstates the Station's internet customers.

[21] Source – Profile of the Canadian Multimedia Industry, published by the Interactive Media Producers Association of Canada.

[22] Source – Internet Shopping in Canada, published by Statistics Canada.

Based on the above-noted observations, we believe that the Station will be unable to achieve the projected levels of national advertising revenue indicated in the business case. Our research indicates that a more reasonable estimate of national business advertising revenues would be in the range of $6,000 to $7,000 per year, as follows:

Projected national business advertising revenues

	2002	2003	2004
Projected internet customers	290	310	329
Projected national advertising revenue per internet user	$ 22.00	22.00	22.00
Projected national advertising revenue	$ 6,000	7,000	7,000

Projected expenses

Total expenses for the Station are projected to increase from just under $2 million in the first year of its operations to more than $6.4 million in the third year. Variable costs (such as lease payments on the set top boxes installed and commission payments to ISP's) and wages and benefits represent the largest expenditures for the Station.

Projected expenditures by type

	2002	2003	2004	Total
Commission payments to ISP's	$ 263,000	1,109,000	1,987,000	3,359,000
Lease payments for set top boxes	141,000	1,353,000	2,303,000	3,797,000
Wages, benefits and commissions	1,167,000	1,394,000	1,629,000	4,190,000
Advertising and promotional costs	354,000	400,000	450,000	1,204,000
Other costs	65,000	65,000	65,000	195,000
Total	$ 1,990,000	4,321,000	6,434,000	12,745,000

Commission payments to internet service providers

Commission payments to ISP's are expected to represent a significant cost to the Station. The increase in these costs, from $263,000 in the first year of operations to just under $2 million in the third, is a reflection of the Station's assumption that it could generate a significant increase in the number of high speed internet customers.

With respect to the ISP commission expense, we make the following comments:

- **Number of internet customers –** As noted earlier in our report, we believe that the business case overstates the Station's internet customers. In light of this, the amount of commissions to be paid to ISP's is also overstated.
- **Commission amount -** As outlined in the business plan, the Station anticipates providing a commission to ISP's equal to $6.00 per month per internet customer. However, our research indicates that ISP's are currently receiving commissions in the range of $20.00 per month per customer[23]. In order for the Station to obtain any internet customers, it would need to increase the amount paid to the ISP's to at least this amount (as ISP's would continue to use Regional or Bell's networks if the commission were not increased). The ability to increase the per customer commission amount is facilitated by increasing the monthly charge for internet services from the projected level of $29.95 per month to the industry standard of $39.95 per month.

In light of these assumptions, we have determined that future commission costs to the Station will be significantly lower than those projected, despite the increase in the monthly commission rate from $6.00 per customer to $20.00 per customer. Overall, we estimate that commission costs paid to ISP's will range from $70,000 to $79,000 per year.

Estimated ISP commission expense

	2002	2003	2004
Projected internet customers	290	310	329
Monthly commission paid to ISP's	$ 20.00	20.00	20.00
Projected annual internet service revenue	$ 70,000	74,000	79,000

[23] The 2000 annual report for Regional indicates that Regional receives approximately 50% of the amount charged for high speed internet services. Based on a monthly rate of $39.95, Regional would receive approximately $20.00 per month while the ISP would receive $20.00 per month. In comparison, the Cogeco 2000 annual report indicates that the cable company receives $21.50 per high speed internet customer per month.

Lease payments for set top boxes

We were informed that the set top boxes to be used by the Station can be leased for a monthly rate of $11.16 per set top box. These lease costs are contingent upon the number of set top boxes installed and are projected to increase from $141,000 to $2.3 million as the number of set top boxes installed increases.

As noted earlier in our report, we have determined that the business case overstates the Station's internet and video on demand customers, both of which will use set top boxes to access the Station's services. However, given that the same customer could use set top boxes for internet and video on demand services, the number of set top boxes installed will not be equal to the sum of the internet and video on demand customers. In addition, customers may obtain internet services from the Station via their personal computers and not the set top boxes, further reducing the number of set top boxes installed.

For the purpose of our analysis, we have estimated the number of set top boxes to be installed by the Station will be equal to the number of video on demand customers, based on the following assumptions:

- All video on demand customers will be internet customers; and
- The remaining internet customers will access the Station through their personal computers and not set top boxes.

Projected set top box leasing costs

	2002	2003	2004
Total set top boxes installed (equal to number of video on demand customers)	210	210	210
Monthly lease cost per set top box	$ 11.16	$ 11.16	$ 11.16
Set top box leasing costs	$ 28,000	28,000	28,000

Wages, benefits and commissions

The Station is intended to employ a mix of its own employees and commissioned salespeople. The financial projections envision an initial staffing level of 14 employees, plus a commissioned salesperson paid a rate of 20% of local advertising revenue earned. Benefits are projected to be 35% of wages and commissions paid.

To this point in our report, our research has indicated that the level of activity to be undertaken by the Station, both in terms of customers and revenues, has been significantly overstated. In light of our estimates of the reduced number of customers that will be obtained by the Station (which we believe are a more reasonable representation of future operations), we do not anticipate the Station requiring a staffing complement of 14 employees. Rather, our view is that the Station would be able to deliver its services using a much reduced staffing complement or through contracted services with either GSTI or private companies.

While the ultimate cost of the reduced staffing levels/contracted services cannot be accurately determined at this time, we have considered an amount of $200,000, representing the estimated annual cost of performing customer support and administrative functions.

Advertising and promotional costs

As with wages, benefits and commissions, we consider the projected level of advertising costs to be excessive in light of expected customer levels for the Station. While the Station will need to incur ongoing advertising expenses to maintain its existing customer base and obtain new customers, an annual advertising budget of $350,000 to $450,000 appears to be excessive. As a result, we have projected advertising and promotional costs to be in the order of $75,000 per year.

Other costs

Other expenses, which include such items as office supplies, insurance and professional fees, are projected to be $65,000 per annum.

In addition to those costs noted above, we have identified certain costs which appear to be excluded from the business case, including:

- Service costs arising from the need to repair the fibre optic infrastructure provided to the households
- Contributions (equal to 5% of video on demand revenue) to Canadian film production funds as required by CRTC licensing regulations for video on demand providers

For the purpose of our analysis, we have assumed that these costs would amount to $5,000 per year. As a result, we have increased the projected amount of other costs to $70,000 per year.

Overall conclusion concerning the financial projections

Throughout our report, we have identified instances where we believe the assumptions supporting the financial projections for the Station may be unreasonable when compared to:

- The estimated size of the market for the services to be provided by the Station
- Pricing and cost structures for the telecommunications and broadcasting industries

If the financial projections were adjusted to reflect assumptions which are considered by us to be more reasonable, the expected financial performance of the Station would be altered significantly. For information purposes, we have included as an appendix to this report, revised financial projections for the Station which incorporate the findings contained in our report. As noted below, the use of different assumptions has a significant effect on the projected financial performance of the Station.

Projected vs. revised financial performance – 2002 to 2004

	As Projected	Revised	Difference
Total revenue	$ 28,982,000	697,000	(28,285,000)
Total expenditures (excluding start-up costs)	12,745,000	1,342,000	(11,403,000)
Net profit (loss)	$ 16,237,000	(645,000)	(16,882,000)

The majority of the revisions to the financial projections reflect the reduced customer levels resulting from both capacity issues and market demand for the Station's services. While the Station could attempt to overcome these limitations by expanding to areas other than Capreol, such a strategy would require a significant increase in capital expenditures. As outlined in the business case, the cost of providing fibre optic services to 3,000 households (homes and apartment units) is approximately $10.8 million. Any attempt to expand the service area of the Station would therefore be accompanied by an increase in capital expenditures of $3,600 per household ($10.8 million ÷ 3,000 homes), with a corresponding increase in the City's contribution as well.

OTHER FINDINGS

During the course of our review, we became aware that services similar to those proposed by the Station are either being contemplated or will be introduced by private sector companies. Specifically, we note that a number of cable companies have received licenses for both national and regional video on demand systems with expectations of commercial video on demand services becoming operational in 2002[24]. In addition, 2002 will mark Bell's introduction of set top boxes similar to those proposed by the Station for satellite customers.

The fact that private sector companies are contemplating or will be introducing services similar to those proposed by the Station indicates, in our view, that the concept of the Station is valid. However, it appears that the private sector will be introducing these services to a larger service area in a more cost effective manner than that proposed by the Station (by not providing fibre optic capabilities directly to the home).

In light of this, and given the fact that the Station does not appear to be a financially viable initiative, the City may wish to consider redirecting its efforts with respect to the vision of the Station and the services that it would offer. Instead of attempting to develop a third telecommunications network in Sudbury, Council may wish to encourage and cooperate with companies such as Bell and Regional to expand and improve services for residents of the City. This would provide the City with the opportunity to attain a number of the benefits envisioned by the Station without the need for either an initial capital investment or the assumption of financial risks into the future.

[24] Source – Scotia Equity Cable Industry Update.