Research
R E P O R T

A Framework for the Renewal of The CommunityNet Agreement

by A.J. Volk

This report was commissioned by the Saskatchewan School Boards Association to provide direction for the renewal of the CommunityNet contract. The primary objective is to ensure that any contract address the network and access needs of boards of education and is the best interest of the communities they serve. Key concerns and directions for improvement are identified.

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The Saskatchewan School Boards Association commissioned A. J. Volk to develop this briefing paper regarding the renewal of the CommunityNet agreement. The briefing paper is to:

(a) Outline concerns with the current agreement and describe direction for a desired agreement to provide a framework for deliberations.

(b) Consult representatives of three rural and three urban school divisions to elaborate on the concerns and directions for the desired agreement.

(c) Outline the steps in the process for the Association to approve a new agreement.

The Government of Saskatchewan launched the CommunityNet on April 1, 2001 and contracted SaskTel to be the vendor to create the infrastructure of CommunityNet and to provide the services that would link schools, health facilities, libraries and executive government through a provincial wide area network and to the outside world through high speed Internet access. The original contracts had a five-year term, which were subsequently extended to June 2008. In light of this approaching renewal time and because there are contractual improvements that are desired by boards of education, it is important to not only identify these issues and concerns but also to suggest areas in which the contract can be improved to better serve K-12 education.

Background

CommunityNet is a private IP transport network service designed to interconnect Local Area Networks in two or more locations. It is comprised of three Virtual Private Networks, one each for executive Government, Education and Health. SaskTel was to provide this network service and carry this service with a higher priority than public Internet services.

The concept of community-based computer networks arose around 1996 out of a desire of Bell Canada and Lambton College of Applied Arts and Technology in Sarnia, Ontario to develop a network that would enable corporate training for Bell Canada employees and potential employees. To do so, it needed the Sarnia community to fully support the project and with the forthcoming support, a community-based network was initiated.

In Saskatchewan, access to technology became a political and educational issue. Small and remote communities could not gain appropriate access to the Internet and could not utilize modern e-business practices. Similarly, schools in these communities were also frustrated by either the absence of access or the slow speed of it if there was access. Students in these communities were seen to be at an educational disadvantage because of the "the digital divide" between urban and rural communities.

School board members, at the 1998 Saskatchewan School Trustee Convention, put strong pressure on the Minister of Education for provision of high speed Internet to all students in Saskatchewan. A commitment was made to pursue this.

The Government of Saskatchewan's interest was to provide high speed Internet to rural communities as part of its "rural revitalization" initiative. It wanted to establish a communications network that would enable it to engage in e-government – to get every department on line to conduct its business with Saskatchewan citizens in every community. It sought to provide the infrastructure through SaskTel. However, since no one tenant could afford to do this alone, it needed to create community-type networks with anchor tenants to assure its viability and sustainability. These anchor tenants were Executive Government, Education and Health.

The vendor for provision of the CommunityNet infrastructure and service is SaskTel—a crown corporation that is mandated to deliver major communication solutions to the Crown and to be profitable. The CommunityNet client is the Government of Saskatchewan (through Saskatchewan Property Management [SPM]). SPM had an agenda – to bring high speed Internet into rural Saskatchewan. The Saskatchewan Communication Network (SCN) was to provide wireless satellite solutions for Internet access in remote areas where landline access was not possible. Saskatchewan Health, Education and Executive Government became partners in the network. Saskatchewan Learning acted on behalf of boards of education.

In February/March 2001, representatives of SaskTel, the Government of Saskatchewan and Saskatchewan Property Management Corporation signed the 5-year Customized Provincial IP Network Service Agreement. In June 2001, the province began to roll out CommunityNet with a three-year rollout completion projection.

The Promise of CommunityNet

Saskatchewan's CommunityNet consists of three private Virtual Private Networks (VPNs) one each for Health; Saskatchewan Government and Education. Each VPN is independent. The concern of this document is only with the Learning Sector VPN that connects every school and every Board of Education office; Libraries; Regional Colleges; and The Saskatchewan Institute of Applied Arts, Science and Technology (SIAST) -- not just K-12 education.

The perception of what CommunityNet was supposed to do has commonalities and differences. There is general agreement of what CommunityNet was supposed to do but there are some differences and expanded views of this from current educators and IT managers interviewed in the research for this document.

General consensus among those interviewed for this document indicates similarities and differences in perceptions and expectations about what CommunityNet was supposed to do. These similarities and differences were related to the information given or heard during the CommunityNet proposal and sought school division agreement for participation of in it. They also expressed that these presentations varied from one school division to the next. This may have been necessary in that there would be differences in the plan depending on a variety of factors unique to certain communities. There is general agreement that for the Learning Sector, CommunityNet was established to:

- Provide sufficient bandwidth to enable higher speed Internet access for research and network service for all students, teachers and school division employees in the province at affordable prices and at reduced or no cost to boards of education.

- Provide connectivity and opportunity for learners to connect with each other and to the world.

- Get high speed Internet into all schools in Saskatchewan thereby making it more equitable for all children to access global information and to communicate globally.

- Provide a network to allow school-to-school and school-to-school division office connectivity and ability to share resources at reasonable and equitable access to the Internet.

- Provide e-mail services for all school system staff and students.

- Use the capacity of CommunityNet to get teachers to use the available technology in teaching and learning and to help students achieve technology literacy.

- Enable remote management of computers and software within the school division.

- Provide the user and those responsible for support but who had limited background in IT with a wide circle of support.

- Enable improved connectivity with other agencies though C-Net

- Build an infrastructure to enable the community and business to get a point of access.

Other suggested purposes of CommunityNet included:

- Offer a better way of providing distance education and online learning.

- Facilitate a better and cheaper way of doing video conferencing

- Facilitate educational activities in the province and to maximize use of technology in education. (Bulk purchasing opportunities. Databases. IT hardware and software.)

All these services were to be provided at decreased cost to Saskatchewan school divisions. SaskTel was contracted to be the service provider and was to complete the infrastructure to do this over a three-year period of time at an annual cost of 3.73 million for each year during the five-year term of the contract.

Schools wanted Internet and e-mail. "Give us Internet—fast, furiously and cheap."

Missing the Mark

The promise of CommunityNet to provide more and better information and instructional technology than most school divisions had and to do so at less cost through the economies of scale created high expectations for boards of education. It was recognized by most that there would be some growing issues as the infrastructure and services were established and provided. However, as the service was rolled out, the realities of this new world of information technology (IT) came to light and, sometimes the light was dim. Frustrations and disappointment were experienced in almost all school divisions and the degree of disappointment was directly proportional to the school divisions' expectations. Some of these feelings still linger in spite of the positive efforts to address them.

The Saskatchewan Learning Sector opinion leaders on CommunityNet consulted as a part of the research for this document suggested a number of things that the implementation of CommunityNet did not do. The most common items identified were:

- A perceived lack of business-like deliverables and accountability related to the bureaucracy and political relationship of the Saskatchewan government and a crown corporation caused confusion and concern.

- The lack of an articulated vision and goals of CommunityNet led to confusion. School divisions did not know the direction of this initiative and they did not know what to expect.

- CommunityNet did not have the technology to provide school divisions with sufficient bandwidth at affordable prices.

- There was no game plan that modelled best practise for school divisions.

- Expectations varied significantly because school boards did not have access to the contract(s) pertaining to the provision of this service.

- School divisions were not full partners although they were the main contributors through surrender of their technology grant entitlement.

- Standards were neither defined nor measured.

- There was no process for addressing issues regarding standards or services.

- Clear roles and areas of responsibility were not established resulting in many false assumptions and uncertainties.

- The learning sector did not receive appropriate regarding what CommunityNet was and how to use it effectively. Technical expertise was required at the user end. People's sights were not set high enough. "Many saw it only as Internet access. Perhaps 99% of users wanted Internet access. Most people forgot about sharing network services internally." Participant Opinion

- CommunityNet did not provide absolute parity across the province because of the inability to deliver sufficient bandwidth in remote areas.

- Expected commonality of applications on a province-wide basis has only been realized to a limited extent.

- There was a lack of focus on the business case for CommunityNet.

- It did not provide an appropriate vision of CommunityNet. What is the target? What is the gain? Why are we doing it? "A network case by itself will not develop a positive outcome for the province. It is only a utility. What we are after is what is in the best interest of the child in our schools." Participant Opinion

- School divisions realized a loss of autonomy relative to their needs through network access. There was also a loss of bargaining power with IT service providers.

- CommunityNet did not live up to expectations regarding quality of service and increased capacity. Although it has evolved over time it was at increased cost to school divisions.

CommunityNet Issues and Concerns

Consultation with the Saskatchewan opinion leaders on CommunityNet revealed numerous issues and concerns about various aspects of the network and the service provided. While most, particularly those in the rural communities, tended to view the CommunityNet somewhat more positively than their urban counterparts because it provided for them greater access than they previously had, all identified several issues and concerns that needed to be addressed in order to make the network and the associated service better for students, schools and school divisions. All were optimistic that these issues could be addressed satisfactorily. The most prevalent issues are discussed below.

Capacity

The biggest issue with CommunityNet for school divisions is its capacity to provide sufficient bandwidth to enable the network operations and high speed access to the Internet that is required for the instructional, managerial, communication and business needs of school divisions. Bandwidth is a critical issue for school divisions. "The more people use information technology the greater the demand and the more background systems are needed to make it work." Participant Opinion

School divisions have an insatiable appetite for bandwidth. No matter how much is given, it is consumed instantly. There is an exponential increase in demand and use of bandwidth. School divisions are more and more reliant on technology for instruction, office operation and business operations. As schools use high-end programs such as video, graphics, and animation there is a greater need for capacity. Sufficient bandwidth is required for centralized library systems, marks reporting, and student information systems. A centralized management model requires additional bandwidth. Access for school to school and to central office and to the community communication and to the Internet requires additional bandwidth at endpoint. Curriculum software is almost all web-based and, therefore, puts more pressure on the infrastructure. Internal infrastructure is needed because CommunityNet can't handle it.

Bandwidth provision at this point in time is insufficient. It is primarily a money issue—a matter of providing bandwidth at affordable prices. The current schedule of rates, which has been established and distributed, shows that the rates are different for different school divisions and are based on complexity of delivery, ability to recoup costs and competition potential. Schools that have satellite access are limited and access is slow. The discrepancy between urban and rural access and service remains problematic.

Transparency

One of the major frustrations of school divisions with CommunityNet was the contract between the government of Saskatchewan, through Saskatchewan Property Management, and SaskTel, the service provider. The frustration pertained not so much to the nature of the contract but rather in the secrecy of it, especially in the initial stages of the CommunityNet rollout when there were issues of the quality of service. Saskatchewan school divisions, the major partner in this endeavour and contributor to it, did not know the terms of the contract(s) nor were they signatories to it. Yet, they were bound to participation in it. "The way in which the CommunityNet contract was handled and the consequences of the contract are of significant concern to boards of education." Participant Opinion

While it is recognized that Saskatchewan Learning can direct boards of education through legal documents either through The Education Act 1995or through formal agreement (written or verbal) there does not appear to be any evidence of this regarding the CommunityNet contract. Because school divisions cannot reference any contracts or agreements a great deal of vagueness and misconception remains. A contract is a sign of good faith but the lack of transparency raises many questions.

Under what authority was the CommunityNet contract signed? Was there some sort of written or verbal agreement between the Saskatchewan government and school divisions that enabled this contract to be compulsory on school divisions? If so, can it be evidenced?

What are the terms and conditions of participation in CommunityNet? Saskatchewan Learning determines service levels and boards need to know specifically what they are getting. The deliverables are poorly defined and changes are made without notice. If the CommunityNet contract is extended, what are the provisions? What is it that is undefined?

Can the service supplier provide the required service? You can't sell something that you can't deliver. Upon what can school divisions rely? What is the minimum?

CommunityNet is used for student achievement and its impact on them is significant. Is CommunityNet sustainable? What is our return on investment? Do all school children have equitable access?

Can a school division opt out of CommunityNet and receive its appropriate technology funding entitlement?

Has there been a change in thinking with the signatories to the contracts regarding revelation of CommunityNet contracts? Recent contact with Saskatchewan Property Management indicated, "The CommunityNet contracts are not proprietary documents." Participant Opinion Government appears to have a new view of access to contract. School divisions desire access and participation in contracts, not access to contacts.

Vision

One of the most often heard concerns about CommunityNet was the lack of an articulated and communicated vision of the network. The interviewees indicated that there was no clarity regarding what was to be accomplished and how success was to be measured. There is a need for direction through a consultatively developed vision and establishment of appropriate goals. If CommunityNet is a quest for potential, a properly developed vision can provide direction to all participants. The absence of a CommunityNet vision led to many of the problems

that arose since its inception. Without such a vision, the lag in development and responsible utilization of this utility will continue.

"When it comes to technology, you can't expect the requirements and services of year 1 to be adequate for the requirements of year 5. There needs to be provision for improvement and upgrades. We need leadership from Saskatchewan Learning to know what that requirement is. There is a need for vision of technology in education in the future." Participant Opinion

Governance

The governance structure for CommunityNet is undefined. There is a need for school divisions to know and agree on who has the decision-making power, who decides what on given issues and who determines who has access to what information. If Saskatchewan Learning is authorized by *The Education Act 1995* to make decisions regarding CommunityNet, there needs to be a clarification of what is being governed and who can govern it?

Communication

The lack of appropriate communication regarding CommunityNet created frustrations and conflict. Perhaps CommunityNet was more of a political rollout without a clear understanding of what was being provided. Schools didn't fully realize what they could have or should have from the network. Initially, there were problems with the various help desk provisions. Planned network outages and changes to equipment or service were not communicated to those affected by them. Larger school divisions feel frustrated in making the technology changes they would like to make because such changes now need to be coordinated with CommunityNet and SaskTel which requires more planning and time than was required before CommunityNet. School divisions feel that they were unaware of services and changes to them. "Our input has not been sought out. We are reacting to the environment. The voice of Kindergarten to grade twelve needs to be heard." Participant Opinion

School divisions wanted to know the rules around CommunityNet and there was no indication of these. "There are a lot of misconceptions about CommunityNet – what it can and can't do." Participant Opinion

The absence of regular communications or annual reporting led to a lack of understanding and support.

Funding

Boards of education have major concerns about the cost of CommunityNet to the K-12. Many were initially of the impression that the CommunityNet would be provided without additional cost to their school division. In the initial CommunityNet contract (April 2001) Saskatchewan Learning committed $3.73 million hold back from the school divisions' K-12 Operating Grant normally paid to boards of education in each of the next five years of that contract. The expectation was that the cost would initially be less than that in the first years but would balance out over the five-year term of the contract. However, for the 2006-07 and 2007-08 budget years, the amount of the K-12 Operating Grant holdback for this purpose was $6.627 million. Budget changes were made without explanation or consultation. In spite of that increase, the cost of information technology service associated with CommunityNet increased significantly for school divisions directly.

Boards of education funded the majority of the CommunityNet project. Federal government grants from Industry Canada enabled the project to be established.

Boards of education incurred additional costs not identified in the initial roll out of CommunityNet:

- If school divisions have their own technology and infrastructure, they still need to maintain it.

- Boards of education had to spend considerable money to augment CommunityNet. Connecting the schools, e-mail services and additional bandwidth were costs to boards of education.

- Over the past six years, changes were made to the infrastructures that required significant change on school division technology at school division cost. For example, CommunityNet changes to the IP address protocol for CommunityNet required school division changes at their expense. Indeed, those interviewed were critical of SaskTel and CommunityNet in that any service solution from SaskTel had a new high cost. Replacement of SaskTel's antiquated network equipment requires school divisions to pay for the replacement.

- Contract requirements and penalty clauses are often revealed to school divisions after-the-fact.

Some consider this to be "techno-gauging."

In spite of the significant drop in network utilization rates, which is reflected in the newly-published rate schedule, the overall cost of CommunityNet to school divisions has grown in geometric proportions.

"CommunityNet has an elite service rate because it is managed, monitored and serviced." Participant Opinion While this may be true, the quality of these services may not be proportional to the funding provided and administrators do not have a way to assess value for the dollar.

Standards

The boards of education personnel consulted often indicated that the absence of articulated standards creates concern for them. The quest for standards includes such things as:

- Service Delivery Standards that outlines what services are to be provided at what levels.

- CommunityNet Use Standards that indicate what school divisions can and can't be doing;

- Security Standards that outline what is allowed to go through the network and what is restricted; and,

- Reporting Standards that indicate how much bandwidth the individual school division is using.

For some there may be discomfort with establishing standards because they may conflict with the need to teach responsible use of technology. For others, standards can aid in doing that. "There is efficiency and effectiveness in commonality in that it reduces the cost of ownership and expands the potential for other uses." Participant Opinion

Saskatchewan Learning may also be reluctant to mandate standards since that decision raises the question of who will pay for bringing everyone to that level of standard.

Quality of Service

An oft-heard complaint about CommunityNet was the poor quality of service that school divisions were receiving from the service provider and from Saskatchewan Learning. All indicated the apparent absence of a service level agreement. School divisions did not know what bandwidth they were getting. There was a perceived difference between what was supposed to be delivered and what was actually delivered. This also applied to applications and hardware.

The issue of a one-way service "agreement" was expressed with some tension. It was suggested that if the CommunityNet is down, there is no recovery compensation to the school divisions affected. However, if the system is down due

to a school division error, the school division is billed for the repair costs. While it is difficult to quantify the loss of productivity because of network failure, it is critical to have immediate solutions, especially in mission-critical operations of the school divisions instruction and business operations such as electronic payroll. While the mean time for repair is three hours in urban areas and five hours in rural areas there is a need for improvement in this statistic.

Concern was expressed about the process of getting help. The "help" process kept changing. Some suggested that bureaucratic "hoop-jumping" for quality service was sometimes required. The expression of this process being a "gong show" at one point in time indicates the level of frustration experienced.

In many cases, the CommunityNet services provided were not as promised. There is a perception that school boards are paying more for less service. In some cases, the bandwidth provided was less than some school divisions had previously experienced.

Frustration in the quality of service in relation to voice and video transmission was also expressed.

Accountability and Evaluation

One of the perceived weaknesses of CommunityNet is the apparent lack of evaluation and accountability. While there is some monitoring and evaluation of such things as throughput, in-out traffic; use during day and after hours; and spikes in usage, and some reporting of these, there is still an expectation of more evaluation and reporting of the service. School divisions want to know how CommunityNet is working, how it is improving education for the children in their schools, and how it is helping in the management of the school division. There is no indication of what return school divisions are getting on their investment. School divisions govern and decide with data. They use data-driven decision-making at all levels.

Similarly, there is no accountability system for the Saskatchewan Learning spokesperson for the education sector.

Boards will not pay for CommunityNet services without improved communications, improved understanding of governance and decreased frustration with the process of getting help.

Support

One of the chief concerns of school divisions is the insufficient support to school division personnel who aid the thousands of users within their jurisdiction. There is a need for service and support providers to understand that the nature and

business of the Learning Sector, and specifically K-12 education, is quite different than those of business and industry. The environment is multi-user and multidimensional. The users, especially students and staff, have limited experience in using technology in teaching and learning. Yet, as they acquire these skills and understanding of the potential of it and the need for all to be technologically literate, the use increases exponentially. However, they do not have the support that will help them do this. Education technology support is approximately 1 technician per 800 computers in a multi-user environment. Technician support in business and industry is 1-technician/200 computers for sub-standard service. When one considers the multi-user environment, issues often arise that need to be addressed. Appropriate help to school division personnel and to the technicians and IT managers who provide help are crucial to the success of essential technology literacy and smooth function. It can be frustrating when one plans to use technology and things go wrong with twenty-five students awaiting instruction.

Equity

One of the goals of CommunityNet was to provide network services to rural and remote areas of the province so that all Saskatchewan students and communities could have equal and fair access to high speed Internet and to other schools and agencies within the network. This was done to varying degrees to whatever extent possible with due consideration to location and fiscal possibility. Access and improved service has, indeed, been provided but inequity between urban and rural bandwidth allocation and access remains. The challenge of accommodating students in these areas at great expense remains. How much is education willing to pay for equalization? How do you provide parity to less technologically-advanced school divisions?

Security

School divisions need to assure the integrity of electronic information that is brought into its technology network. They need to assure that their systems and information is protected from unwarranted access from within and outside the network. To do this, school divisions have put firewalls in place inside their own network. This security is the same as that needed regarding the outside users but it adds another layer of protection that must be provided. Security is also necessary for back-up systems and servers. At this point in time, the decision was made to filter certain information at the head end of CommunityNet and some at the local school division level. SaskTel will not screen out viruses, spam, and unwanted sites. School divisions and schools are expected to do that.

Network security and risk management will become a greater issue as data warehousing, voice and video technology, web-based curricula, digital accounting and remote access to network practices and capabilities become more prevalent.

Compulsory Participation

The dissatisfaction and frustration with CommunityNet services has led to consideration of opting out of compulsory participation in it. At this point in time, there are three communities that are not using CommunityNet—two are using radio for Internet access and one is using a cable provider. This raises the question of whether a school division can opt out of the CommunityNet. An argument that has been used is that it is the responsibility of the school division to determine the program of studies for their students and to determine the infrastructure to do this. Therefore, they may want to be excluded from CommunityNet but they also want their entitlement for funding it they decide to do so. At least one school division has opted out of participation in CommunityNet and is receiving its normal, proportional technology grant to pay for at least part of it. This has to be addressed, as there is a risk of school divisions, especially large urban school divisions, opting out of CommunityNet.

Competition

The question of whether information communication needs would be better served if the technology needs were open to competition was raised by some of the people interviewed. It was suggested that CommunityNet could be leveraged and core solutions could be created and some acquired. A tendering process might provide a better solution. SaskTel would, of course, have a competitive solution. Competition could provide a better price point and improved service.

What Boards of Education want.

The primary objective of the educational information technology leaders, who reflect the views of their respective school divisions or government departments, is to improve a service and infrastructure that has the potential of offering greater changes to teaching, learning and management of school divisions. Their purpose is not to engage in faultfinding but rather to identify areas that can be improved and to influence those in decision-making positions to move these forward. For each issue and concern identified, suggestions are proffered as follows.

1. Improved capacity

- SaskTel was contracted to provide a provincial Wide Area Network (WAN) to link all schools to each other and to provide Internet access. Bandwidth was allocated according to size of school and ease of technical access. There were different service levels with differing upload and download speeds. Some of these differences continue albeit with some improvement. School divisions desire appropriate provision of high speed Internet connection everywhere.

- Provide better download capacity than at home.

- Provide sufficient bandwidth for WAN connectivity to enable school divisions to consolidate servers.

- "The number 1 problem is bandwidth between schools. This is because most current connections are 1.5MG x 640KB. Yet, we probably have the same amount of information coming out of schools as going into schools created by remote backups, network management tasks and other network services. This is creating potentially severe bottlenecks. Perhaps 1.5MG x 1.5MG or faster connection speeds would make it more reasonable and effective." Participant Opinion

- Increase and keep increasing bandwidth with contracted service levels and appropriate response time. Increase bandwidth as much as possible, especially as people in schools use it more and more and appropriately so.

- There should be 10MG in every site within the next five years to facilitate content delivery, standardization and centralization (connect to central server). Urban school divisions already have this. Centralization would reduce the number of devices that need to be installed and supported and further reduce the cost to the school divisions.

- Increased capacity (bandwidth) will enable boards of education to fulfill their mandate to provide the best possible educational programs and services for students to prepare them for a changing world that can no longer be predicted and to give them the required skills to learn in new environment. It will also enable boards of education to use technology to better manage its business affairs with greater efficiency and effectiveness.

2. Contract Transparency

- Boards of Education require transparent and collaboratively-developed CommunityNet contracts and service agreements including provisions for monitoring of services as well as evidence of agreements between Saskatchewan Learning and individual Boards of Education, or Boards of Education in a collective agreement, so that there can be clarity, understanding and accountability.

- As autonomous, separate entities, school boards want to evidence the Saskatchewan Learning needs to enter into a formal agreement with individual Boards of Education signing on or one contract with all school boards as signatories. Standards of service and penalties (reduced price) if service contracted is not provided need to be spelled out.

- There must be clarity and understanding of the CommunityNet contract and monitoring of the services provided. "A properly constructed contract must address key issues surrounding the delivery of the contracted services, such as consequence of failure to provide the contracted services to the required standard." Participant Opinion

- The CommunityNet contract must specify service level agreements with accountability including uptime availability, performance audits, and lines of communications. "Provision of contracted services must be closely monitored, and any failure to provide a contracted service or failure to provide the service to the required standard must be addressed quickly with the service provider." Participant Opinion

- "CommunityNet must provide upgrade options and flexibility." Participant Opinion

- There must be representation of school divisions in negotiations. School divisions need to have a voice in CommunityNet decisions and they wish to be perceived as clients. This is not the case at this point in time.

3. Articulated CommunityNet Vision

- A consultatively-developed vision of CommunityNet and development of associated goals, particularly for the K to 12 portion of the Learning Sector, will provide direction and capability to measure achievement and impact.

- Define the promise and the service of CommunityNet

- Indicate how CommunityNet success is to be measured and reported.

4. Delineate the Governance Structure

- An established and communicated CommunityNet governance structure that defines authority and decision-making power is needed to provide knowledge and understanding of the channels of communication and processes involved in providing leadership and effective service delivery.

5. Communicate with the CommunityNet partners

- Regular reporting is needed to build understanding and support for CommunityNet.

- Establish clear lines of communications.

- Involve school division representatives in the process.

- Share information with school divisions.

6. Reduce CommunityNet Cost

- Fulfillment of the CommunityNet promise of greater bandwidth, easier and faster access to the Internet and improved services at lower cost to Boards of Education can make school division IT costs fiscally manageable without detracting from other equally important aspects of educational program and service delivery.

- The Foundation Operating Grant should recognize the extra costs for information technology associated with CommunityNet and provide grants to defer these costs.

- The responsibility for maintaining and refreshing the CommunityNet infrastructure equipment lies with the vendor without cost to the school divisions.

- Consider the cost implications to school divisions when changes to CommunityNet are made.

- Re-examine service connection costs.

- Make school divisions aware of the management, monitoring and maintenance services provided by the vendor and Saskatchewan Learning by providing reports of these activities.

- The contract should be phrased in a way to periodically review and reflect current market costs for services.

7. Establish CommunityNet Standards

- The development of appropriate standards in areas of service delivery, network use, security, reporting and other areas of CommunityNet utilization under the leadership of Saskatchewan Learning can lead to more effective and efficient use of this utility.

8. Improve the Quality of Service

- A two-way service contract that makes provision for penalties (reduction of payment) for failure to deliver contracted services is needed to provide accountability and improved services to users.

9. Accountability

- Clear parameters of accountability and evaluation of services that are outlined in a thoughtful contract, collected provincially and shared at the appropriate level of function within CommunityNet are desired for clarity, understanding and responsibility. What is clearly articulated is understood. What is measured gets done Responsible people are accountable for what they do and say.

10. Better Support

- Improved support to the CommunityNet end user through provision of sufficient help desk services and through training school division IT managers and technicians to support school division technology will provide confidence and encouragement to use technology in teaching and learning.

- Provide help desk support that is more oriented to the end user.

- Increase monitoring of services.

- Ensure sufficient personnel at support levels, especially within Saskatchewan Learning Network Services.

- Increase training opportunities for school division support personnel. There is a need to hire and train information technology administrators to manage and support the various applications used in school divisions.

11. Improve Equity

- Provision of equitable technology access for small rural and remote communities through CommunityNet as soon as the technology to do so evolves will provide equal learning opportunities for all Saskatchewan learners.

12. Provide Enhanced Security

- Balanced security measures that enable and protect the users of the technology and the technology infrastructure need to be provided at appropriate levels of CommunityNet.

- The unique multi-user, learning-motivated encouragement to use and explore the Internet and to communicate with others requires a balanced approach to providing security measures that enable exploration and learning while assuring appropriate protection from undesirable sources and from harmful infiltration and a determination of where and how such protection is to be provided.

- Consult with educators regarding determination of what is filtered where in CommunityNet. Education has different needs than business. We encourage students to use technology and the Internet. That increases the need for bandwidth and security.

13. Address Compulsory CommunityNet Participation

- Establishment of a policy for inclusion and exclusion from the CommunityNet is needed to provide clarity, understanding and protocol for boards of education considering alternatives to participation in CommunityNet.

- Consult CommunityNet users to determine the best structure for program delivery. Provide opportunities for school divisions to have a voice in the process and wider input into needs and changes needed.

- Promote an understanding that some sacrifice has to be made by a few for the greater public good.

14. Entertain Competition for Network Provision

- Tendering for CommunityNet services to boards of education and the Learning Sector has the potential of decreasing the cost of such services or improving them.

These concerns and issues are addressed in summary table below.

What school divisions want in the next CommunityNet Agreement

Concerns With Current Community-Net	Desired Community-Net Agreement
Insufficient bandwidth	Provide more bandwidth everywhere to an acceptable minimal standard. Increase bandwidth as technology and needs indicate.
Lack of contract transparency	Establish clear and open contract with articulated services levels and consequences for poor service Monitor service levels Include flexibility provision to accommodate upgrade options Develop a formal agreement with Boards of Education Include school division representation in contract negotiations
Poorly defined deliverables and changes without notice	Define deliverables and change notification/approval process
Lack of articulated vision	Use a consultative process to develop C-Net vision
Governance structure is undefined	Define authority and decision-making power
Poor communications regarding the contract, services, changes and costs.	Establish clear lines of communications with school division representation in the process. Share information with school divisions.
Funding changes without consultation.	Provide for consultation process regarding cost of services. Ensure that infrastructure equipment refreshment is current with costs as the responsibility of the vendor.
Quality of service disproportionate to cost of service.	Improve response time for repair. Improve mechanisms for getting help.
Absence of articulated standards regarding service delivery, use, security and reporting	Assure development of standards in areas of service delivery, network use, security and reporting

Unclear service agreement	Provide two-way service agreements
No annual reporting, audit of performance or monitoring of value for dollar.	Describe ways to measure and report quality of service
No accountability system for the spokesperson for the education sector.	Evidence evaluation and accountability
Insufficient help to support personnel	Provide more help desk support that is oriented to the end user
Inequity of service	Improve bandwidth to an acceptable minimum standard
Insufficient security system	Provide for more appropriate security
Compulsory participation	Address issue of exemption from CommunityNet participation
No competition for services	Explore tendering of network services

Boards of Education will not pay for CommunityNet services without improved communications, improved understanding of governance and decreased frustration with the process of getting help.

The Path for Association Contract Approval

The primary objective of the School Boards Association regarding CommunityNet contracts is to ensure that the contracts address the network and access needs of the provincial boards of education and that they are in their best interest and the interests of the communities that they serve. If this is achieved, the current issues and concerns will have been addressed and the contract can be approved.

This report identifies the major CommunityNet issues and concerns currently experienced by boards of education. It also identifies the changes that should be made to improve the network service to the Learning Sector and, consequently, the students that boards of education serve. It would be prudent to follow a plan of concurrence with this report and to take this forward to various levels of decision-making to influence the recommended changes to the process of contract renewal. The recommended steps for advancing this document and positively effecting change toward an improved contract are given below.

Step 1 – Review of the "Framework for CommunityNet Contract Renewal" document

- Saskatchewan School Boards Association Executive Staff;
- Saskatchewan School Boards Association Executive

Step 2 – Vet document with selected opinion leaders on Information Technology.

Step 3 – Share document with Learning Sector subcommittee (Learning Sector CommunityNet Advisory Committee). Garner support for recommendations and Association position as reflected in document.

Step 4 – Share document with other education partners (Saskatchewan Learning; LEADS; STF; SASBO) and invite feedback.

Step 5 – Share highlights of documents with school board members through established communications channels.

Step 5 – Review issues and boards of educations' desired improvements with interested school board members.

Step 6 – Obtain and review current contracts and outline recommended changes particularly those that are mission-critical to school divisions.

Step 7 – Formulate strategies for achieving major objectives regarding CommunityNet contract renewal. (Formal agreements; participation in negotiations). Consider political strategies that might be beneficial and prudent.

Step 8 – Review governance structure and develop recommendations for modification. Forward these appropriately through established channels.

Step 9 – Identify strategies that might be used to overcome potential roadblocks.

Step 10 – Review the proposed contracts and make final change recommendations or restate positions of the Association.

Step 11 – Decision: Approve the negotiated contracts if satisfactory. Reject proposed contracts that are unacceptable.

APPENDIX 1: BANDWIDTH INCREASE HISTORY

Year	Month	Total Bandwidth	Learning Sector	Health/Government Sectors
2001	June	35 MB		
2004	August	130 MB		
2005	September	140MB	100MB	40MB
	October	160MB	120MB	40MB
	December	200MB	150MB	50MB
2006	June	250MB	200MB	50MB
	June	100MB	50MB	50MB
	September	200MB	150MB	50MB
	November	225MB	150MB	75MB
2007	March	250MB	175MB	75MB
	April	300MB	200MB	100MB
	September	350MB	250MB	100MB

APPENDIX 2: COMMUNITY-NET GOVERNANCE STRUCTURE

Group	Essential Function
Cabinet	Policy decisions regarding funding and expansion of CommunityNet
CommunityNet Steering Committee (CSC)	Management and policy decisions (except those listed above) Act on advice and recommendations of sector sub-committees
Sector Sub-committees (Learning Sector CommunityNet Advisory Committee for Learning (LSCAC))	Identify sector needs and issues Provide input to CSC above regarding service requirements and future needs Influence policy and funding allocation Provide input regarding strategies and policies pertaining to CommunityNet
Technical Advisory Committee (TAG)	Develop and recommend common technical requirements and standards Provide input regarding the network technical architecture Recommend technical change for CSC approval
Information Technology Office (ITO)	Provide leadership and coordination of CommunityNet initiatives Recommend strategies and policies for expansion Support the governance process
Saskatchewan Property Management (SPM)	Manage and administer CommunityNet contracts with SaskTel on behalf of the sector partners Recommend contract changes
SaskTel	Primary provider of network services Change infrastructure in response to sector needs on cost recovery basis Provide core network an architecture Work with the sectors' operation groups

APPENDIX 3: COMMUNITY-NET CONTRACTS

Original contracts in 2001:

Multi-tenant Contract	5-year term
Internet Contract	5-year term
Managed Security Contract	5-year term
Local Area Network Span Contract	5-year term

June 2004:

CommunityNet contract extended to June 2008

Internet Sharing Contract extended to June 2008

Managed Security Contract extended to June 2008

Other Contracts:

Digital Satellite Network Services Contract (with SCN) – ended June 2008

Digital Channel Service – to October 2008

Microlink ISDN – to September 2011

APPENDIX 4: COMMUNITY-NET RESEARCH PROCESS

The research undertaken in this study was to consult various print and online documents pertaining to CommunityNet and to interview opinion leaders on educational technology as it pertains to CommunityNet. Specifically, it sought to determine what Boards of Education would like to see in an improved CommunityNet system. The key questions asked in the interview were:

What was CommunityNet supposed to do?

What did it not do?

What are the issues and concerns with CommunityNet?

How can it be made better?

The following opinion leaders were interviewed:

Gloria Antifaiff, Superintendent of Curriculum and Learning, Prairie Valley School Division #208

Justin Arendt, Manager, Information Technology, South East Cornerstone School Division #209

Barry Bashutski, Senior Director of Education Services, Saskatchewan School Boards Association

Ken Beitel, IBM Education Technology Consultant

Tom Dyck, Coordinator of Technology, Greater Saskatoon Catholic Schools

David Ell, Supervisor of Information Technology, Regina Catholic Schools

Joe Flegel, Consultant & Network Administrator, Saskatchewan Property Management

Todd, Francis, Information Technology Manager, Sun West School Division #207

Ed Geall, Board Member, Prairie Valley School Division #208 (former SaskTel employee involved with initial CommunityNet rollout)

Ben Grebinski, Superintendent of Education Services, Regina Catholic Schools

Ron Klassen, former Consultant, SaskTel

Daryl Koroluk, General Manager, Information Systems, Saskatoon Public Schools

Ron Lawson, Manager, Technology and Services, Network Services, Saskatchewan Learning

Dr. Margaret Lipp, Saskatchewan Literacy Commissioner, (former Assistant Deputy Minister, Saskatchewan Education involved in initial planning and implementation of CommunityNet)

Don Lloyd, Superintendent of Administrative Services, Greater Saskatoon Catholic Schools

Myrna Martyniuk, Director, Network Services, Saskatchewan Learning

Ron McConnell, Manager of Information Technology Services, Chinook School Division #211

Bryan Milne, Manager of Information Technology Services, Regina School Division #4

Bonnie Ozyrny, Director of Legal Services, Saskatchewan School Boards Association

Lyle Stecyk, Coordinator of Information Technology Services, Regina Catholic Schools

Tim Tarala, Assistant Director, South East Cornerstone School Division #209

Keith Tkach, Information Technology Manager, Northern Lights School Division #113

Kevin Tonita, Coordinator, Information Technology, South East Cornerstone School Division #209

Jeff Wood, Information Technology Manager, Prairie Valley School Division #208