

The Impact of New Technology on Community Television

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Note to readers: this report was completed on March 31st, 2008. Between that time and its current publication, a number of changes have taken place in the

community element of the broadcasting system. For example, the Campbell River Cooperative cable system, extensively described in this report, was purchased by Shaw Cable and is no longer operating. The general points made by the paper, however, remain a valid basis for further discussion.

David Keeble, September 22nd, 2009

The Community Television Sector

This report was commissioned by the Canadian Radio–Television and Telecommunications Commission (CRTC) as an assessment of the current and potential impact of new technology on the community television sector. The sector is considered to include a number of different entities: the community channel operations run by broadcast distribution undertakings, the community groups which provide programming for, and sometimes manage, community channels, and community–owned low–power television services, broadcasting over–the–air under licence from the Commission.

These make up the television portion of the “community” sector as described in the *Broadcasting Act*, which divides the Canadian Broadcasting System into three elements, “*public, private and community*”. While the community element is much smaller in economic importance, it shares the responsibility stated in the *Act* to provide, “*through its programming, a public service essential to the maintenance and enhancement of national identity and cultural sovereignty.*”

In this report, the discussion of “impact” will focus on changes in the ability of the sector to fulfill its functions, both as defined above in the *Act* and in Commission policies.

Impacts and the Purpose of the Community–based Media Policy

The function of the community television in the system has been articulated at different times in policies published by the Commission. In 2002, for example, *Broadcasting Public Notice CRTC 2002–61* (10 October 2002), a “*Policy framework for community–based media*”, described its objectives in a new policy. These were:

- *to ensure the creation and exhibition of more locally–produced, locally–reflective community programming.*
- *to foster a greater diversity of voices and alternative choices by facilitating the entrance of new participants at the local level.*

In evaluating impact, this report will look at those two objectives, but also at two others not explicitly stated in the above Public Notice but prominent in the

minds of respondents involved in the community sector, and which aid in the performance of the stated objectives.

The first of these is to reach significant audiences, which contributes to attracting new programmers. This goal leads programmers to strive for high quality images in order to compete with other offerings on television.

The second is the use of television to develop community, both in the programs and the process of making them. Several community groups noted that the community channel originated as a tool not simply to reflect community, but, through the process of creation, to develop stronger community ties, self-awareness and cohesion. This objective supports the objective of alternative choices and new participants, and also corresponds closely with the wording of the *Act*, in the sense that national identity may be built on local identities.

In this report, then, technology will be considered in terms of its impact on the performance of four objectives:

- more locally-produced and locally-reflective community programming
- greater diversity of voices and alternative choices
- building audiences
- building community

Technologies and their Potential Impacts

Four new technical developments are considered in this study.

- The general availability of “prosumer” production technology.
- High-definition production and distribution.
- BDU-delivered video-on-demand.
- Internet-delivered video-on-demand.

In this section of the report, we consider the potential of these technologies to change community television. In the next section we will evaluate the reality as perceived by a number of different players in the community sector. In that section, a fifth development – over-the-air digital transmission – will also be considered in relation to low-power community operations.

Prosumer Production Technology

Community television has always lacked the economic resources of the public and private sectors, and consequently has always had to deal with a tension between the quality of an acceptable image and the cost of equipment.

In the early 1970s, cable community channels dealt with the tension by being largely studio-bound, though some mobile recording facilities were used. They took advantage of the first generations of low-end professional equipment – using 1 inch tape when 2 inch tape was the professional standard, and even ½ inch “Porta-Paks” for handheld video capture, though these had trouble producing a stable image. They were late into colour, and often had quite primitive editing and post-production facilities.

Over time, and as cable consolidated, the facilities and technical quality of community programming improved enormously, but it should be noted that even in the early stages, the content of the programming made up for any absence of image quality. Indeed, this has been a theme throughout television – one must remember that such top-rated commercial programs as *America’s Funniest Home Videos* were largely composed of amateur footage shot originally on VHS tape, a low-quality home format.

And it should also be noted that fully professional television production generally requires the use of very expensive equipment. Professional cameras have high-quality lenses and imaging elements; professional on-line editing equipment may have similar interfaces to PC-based editing systems, but uses faster, more reliable hardware. Professional studios have more, and more expensive, lighting gear, and also high-quality microphones and sound recording. All of this gear is very much more durable than the equipment offered to consumers for home video shooting and editing, and is usually more complex to use, so that professional training is a requirement.

However, the gear available to consumers has increased markedly in quality in recent years, to create a new category called “prosumer”. This gear is at the high end of what a consumer might spend, but it can produce a quality that in many cases is acceptable for the capture of news or documentary footage for use in broadcast television. While it is not as durable as fully professional gear, and consequently unlikely to be used in day-to-day operations at a television station, it can produce useable images, even in the hands of non-professionals.

Prosumer equipment is in general use, and even lower quality material is being consumed widely. Much lower quality images, such as those produced by Webcams, are already common in Internet-delivered video. The new digital video recorders, some of which can record in high-definition resolutions, when combined with video editing software that can run on the new more powerful personal computers, allow individual users to create polished and finished video productions in their own homes.

The question raised by prosumer equipment is not whether it can be used in community television – clearly, community television has always made use of equipment in this price range, and has found its quality useful. The question is whether this equipment can remove community production from the constraints of a central “community channel” facility and put it in the hands of individuals.

Clearly, this equipment offers the potential to change the way in which community television is made. Community groups can be freed from the constraints of studio production and the limits of available time in a central facility. Community events could be covered with handheld digital cameras, which can now provide quality comparable to multi-camera “mobile” trailers. Editing and post-production can be done at home, working around the need to find time on the cable company’s editing facilities.

And it is also clear that if an individual is sufficiently dedicated, the group is now only needed in front of the camera. The constraint is now time, not the availability or even the cost of equipment.

In summary, prosumer technology, by putting production power in the hands of more people, carries with it the potential to increase diversity of voices and alternative choices, and consequently to increase the amount of locally-produced programming.

Up to this point in the discussion, we have been using the language of possibility. As will become clear in the description of respondents’ reports in the next sections, some of this potential has actually been realized, but there have been countervailing pressures and also unexpected implications.

High-definition Television

The most obvious countervailing pressure is the expectation of yet higher quality. Most community television operations have restricted resources (except for those cases where cable companies have chosen to increase the operating

budgets of their own operations), so while they may benefit from cheaper equipment, the industry standard for image quality has undergone a quantum leap from the introduction of high-definition television.

This change is not a matter of incrementally increased quality. While the basic difference is easily described – a widescreen picture and more lines of resolution in each frame – in fact delivering these new images requires the replacement of almost every piece of equipment in the television chain of production. Even before it reaches the camera, the image must be improved, with better makeup and finer detail in sets.

Nonetheless, the adoption of HD quality is not completely out of reach for cost reasons for all players. Final Cut Studio can edit high-definition tape formats and costs \$1,300.00. HD-capable camcorders are available for \$2,500.00. It is thus quite possible for an individual to create and edit an HD program and deliver the tape to a BDU – assuming that its community channel is otherwise equipped to originate and distribute high-definition programming. It is, of course, much more expensive for those operations which include studios, master controls, and transmission facilities.

HDTV in itself might then have a modest impact on the number of people capable of producing community programming – certainly individuals and groups would have to re-equip themselves over a period of time. Over that same period of time, however, it could also be seen as necessary to maintaining audiences, as the overall broadcast “standard” moves toward HD.

BDU-Delivered Video on Demand

A third technology of real interest for community television is BDU-delivered video-on-demand. VoD makes some sense as a delivery method, since access programming is frequently produced by groups who have a message to get across, and it is likely to appeal most to narrow niche audiences. Since all the members of the potential audience may not be available at a given time in the schedule, they may miss the broadcast on the linear community channel. Making the program available at all times through VoD can therefore maximize its audience – if the target audience is equipped with digital boxes and is knowledgeable about the use of VoD. If not, VoD could only be useful as an addition to, not a replacement of, the linear analog community channel.

A more subtle impact of VoD may be on the objective of community-building. Under some circumstances, the “collective” event of viewing a program at the same time, and the ensuing discussion of the subject in a community, can have a value that is not replicable when the experience is fragmented in time.

Internet Video on Demand

The natural extension of the VoD concept on BDUs is to make the programming available on a website. In this way, the programming becomes available

- outside the universe of cable subscribers (though only within the universe of high-speed Internet subscribers),
- at all times, and
- outside the limited geographical universe of the BDU. It can be available around the world.

This idea therefore raises the question, “Is a linear community channel actually necessary? If citizens can produce their own programming and distribute it themselves over the Internet, perhaps the community sector of the broadcasting system can achieve its goals without the intervention of BDUs?”

Potentially, then (and assuming the general availability of prosumer production equipment) the number of contributors to community programming is no longer limited, and all of those in the community can have access. Both diversity and audience-building, and theoretically the amount of programming, could potentially be aided by this technology.

However, there are countervailing arguments.

First, while high-speed Internet is widespread, it is not as widespread as community cable, nor is the practice of watching video on the Net as common as television viewing. Second, community television may be at its most valuable in remote communities, where high-speed Internet may be more difficult to implement than over-the-air television or even cable. Third, the resources required to distribute video properly over the Internet may not be available to all groups, and finally, in the absence of a focus of support and resources for community television, such as the cable community channel, this kind of activity may be more difficult to sustain.

Impacts as Perceived by Respondents

In this section we will report on the actual impacts of these technologies, as perceived by players in the system, and compare these to the potential impacts described above.

The Commercial BDU Community Channels

Interviews with Rogers, Videotron and Sasktel present an interesting picture of the sector, a picture that is not exactly what would be expected from the potentials inherent in the technologies. The cablecos have a different history and philosophy, so Sasktel will be described separately.

In both cases, the operators of the cable community channel see the necessity for ensuring that the community channel is not seen as “one generation behind” in terms of technology. They believe that the historical image of the channel as amateurish, from a technical point of view, will not help it reach viewers. Rogers notes a 50% loss of audience to the community channel in recent years – though there has been an increase in access requests.

“The viewer is sophisticated. In the age of YouTube there is a tolerance for non-polished production but it's tighter than it was in the past. In the past, the novelty of TV was enough.”

Consequently their emphasis in recent years has been on acquiring and maintaining the most professional equipment affordable. “Prosumer” equipment may be used by access groups contributing programs to the channel, but is not generally seen as being of sufficient quality and durability for the productions produced by the channel in its studios and mobiles.

Moreover, Rogers notes that the volunteers who help create their studio and mobile productions are often students from community colleges and other training programs, and these students expect to work with fully professional gear – they will not volunteer if the cable company does not have equipment that equals what is available on-campus. When a high school may own three AVID editors (an anecdote described by one channel operator) the cable company must at least keep pace.

The cable operators see professional development as part of the historical role of community television. While it is not considered here as a formal objective of the sector, training is clearly instrumental to the success of the cable community channels. Technology which impacts negatively on the performance of this role

would therefore impact negatively on other objectives, such as encouraging local, community-based programming that depends on volunteers.

Vidéotron goes even farther in this respect, since it is able to pay some of the on-air talent on the channels it operates directly¹. In Montreal, its volunteers are often recent graduates of training programs and “up-and-coming” talent. They believe that the commitment that Vidéotron has made to the professionalism of its Montreal-based “Vox” channel has resulted in an increase in viewers.

In that sense, one may say that the technical choices of the cable operators tend toward fulfillment of the audience goal, not the goals of greater diversity and a greater number of participants. This can be seen in their attitudes toward HDTV. Rogers’ approach acknowledges the importance of HD, while recognizing that its financial demands are such that it may take a very long time, perhaps 10 or 15 years, before all of their cable channel operations have made the conversion. However, it is using its normal capital replacement cycle to ensure that more and more HD-compatible equipment is in the system, even though it may not have complete HD plants in most places for some time to come.

Vidéotron is more aggressive. Its Montreal cable channel is already distributed in HD; while HD production (at the time of the interview) amounted to only a few hours each week, the goal was to reach 15 hours per week by the autumn of 2008. Still, its other community production centres around the province will take a long time to convert.

Both of these cable companies are making some part of the community offering available on video on demand, though the amount they can make available is apparently limited by regulation that controls what percentage of VoD programming can be made by the licensee. Both see it as a logical way to extend viewing of content in time and geographic reach, but neither sees it as a replacement for the linear channel. They report that in some ways the community channel audience may be somewhat less aware, and less likely to use, new technology.

Internet distribution is not practised by these community channels, though it is seen as the “elephant in the room” that cannot be ignored. That is, the programmers see the importance of the public’s use of the Internet and believe they will have to adjust to it in the medium term. However, both operations see

¹ Vidéotron reports that it operates nine of the local channels directly. Others in the province are carried on its system but operated by provincially-authorized community groups with financial support from Vidéotron.

the community channel as a source of competitive advantage for cable versus other BDUs. While they use the Internet to promote the community channel, they reserve its content for cable subscribers (with the exception of some election material).

It was also noted that the community channel is likely to achieve better audiences within the more limited offering of cable than it could in the infinite offering of the Internet. Therefore Internet distribution is not seen as a replacement for BDU distribution.

Sasktel

While Sasktel's community operation is entirely on-demand, and differs from the co-axial cable-based BDUs, Sasktel agrees on this point – it is not inclined to make program material available on the Web, for the same reason. “Max Local-on-Demand” is a competitive differentiator and they are not inclined to share it, though they have a portal page on “mysask.com” which offers promotional clips from the service.

Sasktel's operation is quite different from cable in other respects, however:

- Sasktel offers no linear community channel. Max-local-on-demand is offered only on the VoD platform.
- The access programming on Max Local-on-Demand is produced by community groups using their own equipment and facilities. This is also the case for most access programming carried by other BDUs, but unlike cablecos, Sasktel does not produce its own programming and has no studios, though it has hired an independent producer from Saskatoon to create a number of non-access shows which reflect the province, including news magazines, a Roughriders show, several exercise shows, a music show etc.
- Sasktel provides no studios or hands-on training, though they have on-line resources that groups may consult.
- They have little interest in high-definition for the community operation at present.

One might expect that this approach would lead to a “YouTube-like” community VoD channel, but Sasktel reports that this is not the case. The great majority of programs submitted come from groups wishing to celebrate some event in their community, and not from individuals.

The typical “user-generated-content” forms may have been discouraged by Sasktel’s criteria for acceptable programming:

- a firm stand against the use of material copyrighted by people outside the submitting group.
- programs must be community focused and for a general audience.
- no religious content, because the service works with sponsorship and Sasktel won’t accept religious sponsorships.

Summary of BDU situation

In general, speaking of the BDU sub-sector, one could note that:

- The use of prosumer equipment is common for complete programs submitted by access groups, thus potentially increasing diversity.
- Within the cable operations’ programming, the technology focus is on greater professionalism and higher image quality for audience building. Gradual HD conversion is part of this strategy (though not for Sasktel).
- VoD is seen by conventional cable as an adjunct for audience building but not a replacement; Sasktel is the clear exception to this philosophy.
- Internet distribution is not seen as advantageous by any of the operators, except as a promotional device.

Co-operative Cable

An even greater contrast arises when one looks at the operations of a community-owned English-language cable system, i.e. the Campbell River TV Association, on Vancouver Island.

This report is not concerned with issues of access programming and the relationship of access groups to the cable company, but in this case it must be noted that the relationship makes a difference. While with the larger cable companies it is common for access groups to make their own programs using their own equipment, in Campbell River such programs come in “once in a blue moon”, largely because all access groups still use the facilities and equipment of the cable company itself to make their own programs, and the cable company trains them directly in the use of equipment.

Consequently prosumer equipment has a smaller impact in this case, though some cameras of this kind may still be used for location shooting. The cable co-

operative's gear is otherwise fully professional. In general, the cableco sees the new, lighter, and less expensive digital equipment as a big improvement in its ability to cover the community.

HDTV, however, is still financially out of reach for the community channel, though its support base is good – management reports spending about 6.5% of revenues on the cable channel, more than the mandated 5%. Since the cable company sees itself as “the local broadcaster”, this service is part of its competitive advantage against satellite-delivered BDUs. (If its estimates are accurate, satellite has significantly lower penetration in its area than in other similar parts of the country.) Like other operations, it will buy HD-compatible equipment when the price is right, within the normal capital replacement cycle.

The cable company itself has not implemented a video-on-demand service, because of the general difficulty that small cable companies have in obtaining the rights for attractive product, not for any technical reason. Consequently no community programming is currently offered on VoD.

Nor is it providing content via Internet delivery, for similar reasons to other cable companies. In addition, CRTV cable is not itself an ISP, though it offers third-party access to the cable plant for independent ISPs to offer service to its customers.

The principal difference between CRTV and other cable operations is the lack of access programming made by access groups using their own facilities. It provides a community channel built on the classic Canadian style, with groups working within its facilities.

Clearly, the “community-building” objective of community programming is prominent in this case, and the use of studio production may have a significant effect on this objective. That is, when productions are made outside, by individuals or small groups working in isolation from each other, there is little of the social interaction that occurs around a central facility and around the work itself, which necessarily involves larger numbers of people (robotic cameras are not a factor in community programming). This social interaction and the need to discuss the content and make decisions about how to portray situations were always a prominent part of community programming. To the extent that the use of prosumer equipment – as a replacement for studio work – detracts from the social process, it may detract from the community development objective as well.

Community Access Groups and “Independent Producers”

This last point was made strongly by a representative of the Community Media Education Society, one of a number of access groups involved with the community channel in Vancouver. The Vancouver situation appears to be a hybrid, in which both the access groups and Shaw Cable take part in making programs and running studios.² The community channel studio on Commercial Drive, complete with its equipment, was apparently handed over to the CMES by Rogers as an alternative to closing it down. As a result many programs are made by access groups, using the studio, the mobile, or handheld equipment, on something close to the classic community channel model.

The access groups use more prosumer equipment now than they used to, because they have little access to sources of money for capital replacement, but the model of program making is still a “social” one. Richard Ward of CMES notes that the “lone wolf” style of program making produces a different result. He notes that there is a process of inclusion, in which volunteers join, and then help out on someone else’s show. “And if you prove to be reliable and non-slanderous, after a while you get to do your own show, and others help you with it.” The volunteers develop through mentoring, and learn content judgment, in addition to technical skills, “There was always a large enough group that there was a social standard set. To get something on, you had to work your way up to it – it had a filtering effect so that what got on was congenial to a large audience – but without the advertising imperative.”

Evidently then, this is not primarily a technical question. Prosumer equipment can fit within a “community development” approach, but the feeling of access groups is that, if used to create an isolated production environment, the programming and the experience will be different.

By contrast, the “mosaic” (i.e. multicultural) groups which make programs to play on the community channel in Toronto refer to themselves as “independent producers”. Some producers report that they have little contact with one another or with the cable channel itself, but simply make the programs and deliver the finished tape as agreed.

² Shaw declined the opportunity to be interviewed, so its description of its operation and the relationship with access groups was not available as background for this report.

This is not the case for a group in Toronto known as the Horizon Interfaith Council, which believes itself to be the last group using the cable company's studios to make programs. Horizon has existed for thirty years, and consists of a large variety of religious groups who wish to make and air community programming. Its function is to ensure that airtime blocked out by Rogers is allocated fairly among the different groups. Because of the availability of consumer equipment, some of its members have their own equipment and can deliver finished tapes, but 27 groups reportedly make programs at Rogers – usually two in a year.

On the other side of the coin, the situation of the community “independent producers” varies greatly. Some are well funded and technically sophisticated. Victor Neskorozeny works with a small group to produce *Pro Ukraine*, using a professional camera and editing on Final Cut Pro on a Macintosh. He noted that if Rogers wanted high-definition programming, he would be happy to supply it. On the “wish list” was a facility that would allow them to upload the program to Rogers on the Internet for broadcast, so physical delivery of tapes would not be necessary.

On the other hand, Pobeda Piskaceva, of *Macedonian Edition*, is basically a one-person shop, using prosumer equipment, finding some sponsorship to cover costs but largely self-funding the program in order to support the community. Without access to low-cost equipment of acceptable quality, this program would likely not be possible.

In these cases, it can be seen that prosumer equipment has increased the variety of groups able to provide community programming, when an alternative must be found to use of the cable company's studios – in a way, it could be said that diversity has been increased by moving the cost of capital equipment outside the cable company's operation. Of course, this only applies to groups who are able and willing to acquire the equipment and the knowledge to run it.

Access groups report a mixed attitude to video-on-demand. They can see its benefits but do not see it as a replacement for the community channel in any way. For their purposes, reaching their audience requires the linear analog community channel, which brings with it the benefits of a well-known and familiar model for the viewer.

Both of the independent producers, however, post part of their programming on the Internet, on their own websites. *Macedonian Edition* is also uploaded to YouTube. For their own sites, however, programs such as these cannot afford

the services of a Content Delivery Network like Akamai, so the quality of the experience on the Internet may be poor. Nonetheless, it is felt to be an important part of the service they provide to their communities, and a way of attracting additional support. Since they are not cable companies, and are receiving no capital or production support from cable subscriptions, there is no automatic conflict of economic interest, as there would be for programs produced by the cable channel itself.

At the same time, there is some evidence – though anecdotal – that use of the cable channel brings benefits in the sense that audience support may increase the stability of the activity. That is, it may be that programmers who attempt to provide their service only on the Internet cannot attract the kind of response that permits their service to become self-sustaining, through the assistance of other volunteers or through sponsorship.

One example is *Indian Head Today and This Week* – a website produced by Chester McBain – which contains a ten minute (approximately) weekly video. The show listed seven or eight sponsors. The website's archives list weekly shows for most of 2006. However, the last video on the site is from Sept. 27, 2007. In that program, Mr. McBain announced that he wanted to receive emails from viewers – at least ten – or he would discontinue the show. As he said, "If I'm doing this for one person, I'm wasting everybody's time." A notice on the site says that he received seven emails over 29 days.

A different model is www.sootoday.com, which is basically an online newspaper for Sault Ste. Marie. Most of its content is text, though it contains occasional video clips, posted on a YouTube Sootoday page and linked individually into stories on the site (concerts, local hockey, etc.) As a text-based site, it is quite rich in content; but it is not clear that the sporadic use of video puts it into the community television sector. It is perhaps better characterized as an example of the convergence of local newspapers and local television on the online content platform.

The conclusion is that Canadian community access groups have not migrated their activities to the Web, and are not inclined to do so. Clearly many community groups use the Web – as a text-based medium – to provide information that others might have put on community television, but those who have used television are not inclined to move that activity to the Web, though they use it as a minor supplement to television distribution.

Better examples may be found abroad. The DenverOpenMedia project provides archived programs, live streaming of the access channel and the chance for viewers to vote and comment on programs.

(<http://www.denveropenmedia.org/livestream>) Since voting is an important part of how they evaluate and choose programs, this site is integral to the group's process, as well as an alternative mode of distribution, and in that sense, they are also trying to use the community-building potential of the Web.

Provincially-Authorized Community Access Groups

In this model, which exists in Québec, community groups which meet provincially-established criteria are authorized to run the community channel in their area. 44 groups make up the Fédération des télévisions communautaires autonomes du Québec. These groups distribute their channel over the services of the cable company, and in many cases, work within a schedule that is shared with "network" programming produced by the cableco - Vidéotron or Gogeco.

As in other sectors, there is a range of economic circumstances within the Federation. Resources are drawn from the province, which funds basic operations, and, for a few stations, from the cable companies, who provide some money in respect of programming. Televised bingo is also a source of much-needed cash. Production of approximately ten hours a week of original programming is typical, and is made by a very small team of paid staff and by volunteers.

Some groups are very well equipped with fully professional equipment, but all struggle with the need to replace equipment that rapidly becomes out-of-date. Digital technology is gradually permeating the sector: non-linear editing using computers is commonplace, and is sufficiently standard that groups can exchange clips and programs. Solo production using prosumer equipment is not generally practised; studio/remote production using teams of camera, on-air talent and producer is the norm.

A small number of stations have acquired an HD camera and the president of the Federation, Alain Manning, believes that cable may offer the opportunity to members to provide programming for HD distribution in the near future. However, it is not at all obvious how that is to be afforded, as telebingo will only cover the cost of operations.

Because of the importance of this source of financing, BDU-distributed video-on-demand as a replacement for the community channel is not an option in this environment – at least, not unless the productions are paid for by the VOD operator, and that in turn could run contrary to the principle of keeping the community channel free from special charges to the subscriber.

Internet distribution is a different matter. As with other groups who are not bound by a commercial conflict of interest, Internet distribution is seen by these community TV stations as a good way of bringing programming to audiences at different times and outside the immediate locale. According to the Federation, about 15 stations have websites, and two or three actually broadcast on the Internet. A transition to the Internet raises many questions of financing, however.

Low Power Over-the-Air Community Television

This sub-sector of the community “element” of the broadcasting system delivers its services via over-the-air television transmission. As such, the sub-sector has an additional issue to contend with: the transition to DTV, or digital over-the-air transmission. This is scheduled for 2011 in Canada, though it can be delayed in remote areas – and some of these stations are in remote areas.

In any case, this is a transition that will disrupt audience reception and cost the transmitter operator real capital dollars, which may not be easy to find. There is also a potential question of spectrum resources.

The transition to digital has resulted in the creation of a whole new frequency plan, which gives over-the-air stations a second frequency during the transition. After August, 2011, they must give up their analog channel, and channels 52–69 will no longer be available for television broadcasting.

Low power stations use a television channel, but have no channel protection. They cannot cause transmission interference to others, and must accept interference to their signal from protected users. Consequently, the new frequency plan does not officially take their needs into account, and it is possible that they may find no channels available after the transition. However, they will be dealt with on a case by case basis, and Industry Canada officials do not foresee any problem in accommodating them as long as they are prepared to accept what they get. Those in remote areas, of course, do not experience spectrum congestion and will have few difficulties in that respect.

With respect to other issues, however, one must note that these operations have no support from cable revenues, and have difficulty in finding access to capital funding. As with other sectors, there is a great variety of circumstance. Sometimes they are able to access provincial government grants, or municipal support, and in some cases, advertising sales may be the principal means of support. Consequently, there is a range from the fully professional operation – full studios and paid staff, like Télé-Mag in Québec – to operations so small that they must use neither professional nor prosumer equipment, but actual consumer equipment such as personal computers and consumer VCRs, as is the case for Valemout, a very small community in British Columbia.

For Télé-Mag, as with the larger cable companies, volunteers – or “artisans” as they call them – who are training at colleges (Laval) are a considerable help on the technical side of program operations. In the smaller communities, high school students may help out, but it is a struggle to keep going at all. Production there may amount to a few hours a week. Selling DVD copies of programs (burned one by one on a PC) to those who have difficult reception conditions can be a source of revenue.

At the same time, the sense of community involvement and mission can be very strong. Whether the motivation is to improve media literacy or simply disseminate the kind of information needed in a small rural community, the work and devotion required to keep an operation of this kind going is impressive. They are probably the greatest beneficiaries of cheaper digital technology made for the consumer market, because they can afford nothing else. On the other hand, technologies like VoD have no bearing, HD is simply unaffordable, and the Internet is seen as a supplement to manage difficult over-the-air conditions.

Télé-Mag considers its digital equipment to be the equivalent of a broadcast network like TQS. It has two digital editing suites and HD-editing capability and is preparing for the transition to digital transmission.

It also makes heavy use of the Web, reporting that 95% of its programming is available by that means. Nonetheless it considers this to be a complement to its broadcast activities, since its real audience comes through the traditional broadcast channels, through which it reaches 235,000 viewers.

It is difficult to summarize conditions for this sub-sector since the circumstances of different players are so radically different, and there are not a large number of such stations to begin with.

Conclusions

There are several conclusions that appear to be quite evident from the interviews and the analysis of the different technologies' potential.

- Low-cost technology has indeed made it possible for a number of small players to contribute to community television programming, since they can afford nothing else, and since it can allow a single person to make programming.
- However, everyone who has access to the financial resources makes use of professional equipment, in order to be competitive for audiences by matching the image quality and technique of broadcast TV. While cablecos accept the quality of what they receive from “independent community producers”, they do not rely on this gear themselves.
- Likewise, access players who have been around for some time see great value in the use of studio production, using professional gear, since it draws in volunteers and creates the kind of social interaction that in their view is essential to the “community” element of community programming. Solitary production may be done inexpensively, and may constitute access programming and local reflection, but is not community programming in the sense of creating a greater social cohesion or awareness in a community.
- Keeping studios and equipment up-to-date is a costly business. Given that the sources of financing for community television are varied and generally small, it is quite possible that a number of players will find themselves unable to be competitive in the near future. If no other source of financing is found, these players will have to remake themselves or leave the field, thus reducing the number of alternative sources of programming.
- The Internet is not seen as a replacement for the community channel by any player, though reasons vary. Some reject it as for competitive reasons; some because it does not attract an audience or allow the programming to attract a community's focus in the same way that television does. It is seen as a useful complement.
- Video-on-demand is seen as useful by the BDUs, particularly Sasktel, though again, not a replacement. Access programmers agree with that assessment, though with the additional apprehension that it might be seen as a replacement, since they are not confident of their audience's ability or willingness to follow the programming to this new technology in the current

circumstances. Sasktel has not been operating its pure on-demand system long enough that any clear assessment can be made of its success.

- “User-generated-content”, as seen on the Internet, has not taken over community TV, and has a very small presence.

This last point raises one other question that is more subtle and difficult to articulate – largely because the terms “community programming”, “access”, and “volunteer” are not clearly defined but are understood differently by different players. Some consider that interviews and performances by people from the community on a daily newsmagazine constitute access programming – in that sense the cable company’s own facilities are still being used for access. Others consider, however, that this kind of programming is closer to what a local television station might do. Such disagreements make it difficult to understand the boundaries of the “community” sector of the broadcasting system.

That said, within the terms of the latter definition, it would be concluded that the technologies discussed in this paper, while allowing more players to take part in community television, have also permitted the cable companies to effectively “outsource” access, and convert their studio operations, and the bulk of the channel’s schedule, to something closer to a professional operation, whose value is chiefly to provide a commercial advantage, rather than community development.

It is not the role of this paper to determine which definition should apply, though the definition makes a difference when looking at the impact of technology on the goals of the community policy. However, one can certainly note the relative absence of the solo community “prosumer” producer in those places where access groups still engage in studio production in the cable facilities. This absence may be an indicator that access groups generally prefer the traditional technology models for community production, and that home-based production is a second choice, not a preferred option that is opening up opportunities for a diverse array of community programmers.