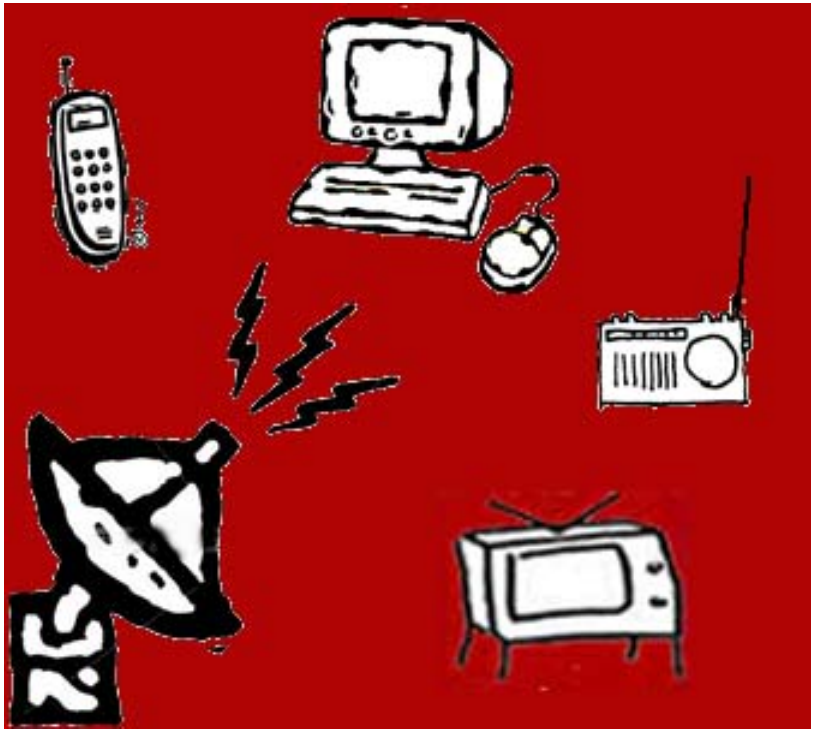
The Transition to Digital Over-the-Air Television:

New Opportunities



June, 2011

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THE DIGITAL TRANSITION IN YOUR COMMUNITY

The way TV signals are delivered over the air is changing in Canada beginning in August 2011. If you have a cable or satellite subscription, your service will be unaffected. If you watch TV using an antenna ("bunny ears") mounted on the TV or on your roof, you will find yourself in one of the following situations:

1. In most major towns and cities, broadcasters are upgrading their signals to digital. You'll need either a digital TV or a digital-to-analog converter box to continue watching over the air with an antenna.

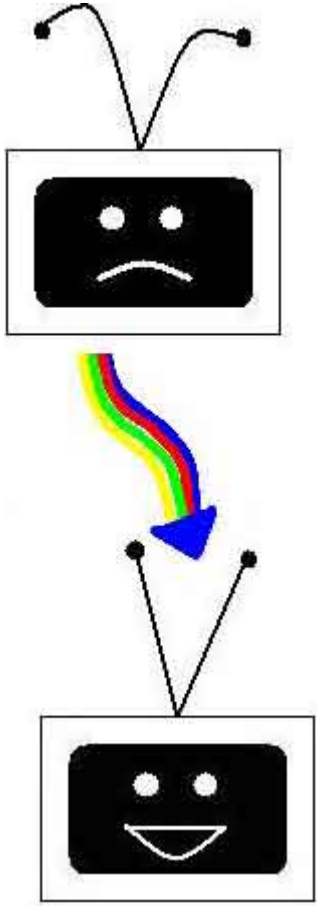
2. In smaller communities, some of your local broadcasters may upgrade their signals to digital (and you'll need a digital TV or converter box). Others may continue broadcasting in analog. In both cases, you can continue watching free TV, for now.

   When the analog transmitters reach the end of their useful life, however, local broadcasters may elect not to replace them. At that time, you and your neighbours may have to subscribe to cable or satellite to continue to watch TV. That could happen next year, or in 5 years.

   For example, the CBC has announced it is likely to phase out analog transmission starting in 2013, affecting more than 600 transmitters serving small- to medium-sized communities across Canada.

3. One or more of your local broadcasters may cease transmitting immediately rather than maintain old analog transmitters. In this case, you and your neighbours may have to cable or satellite right away to continue to watch TV, unless you take matters into your own hands, as many communities have done both here in Canada and south of the border.

To find out whether your community will continue to receive free over-the-air TV signals after August 31st 2011, check the web site on the digital transition maintained by Canadian Heritage at http://digitaltv.gc.ca/. If not, your community has options to maintain these services and to add new ones.



NEW OPPORTUNITIES: COMMUNITY DISTRIBUTION

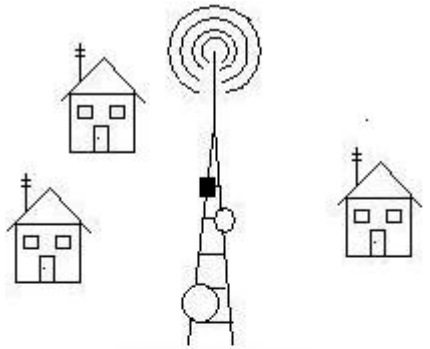
Before satellite TV was introduced into Canada in the late 1990s, many remote Canadian communities had no TV. There were no broadcast transmission towers that reached them and they were too small to attract the attention of cable operators. Many of these communities either:

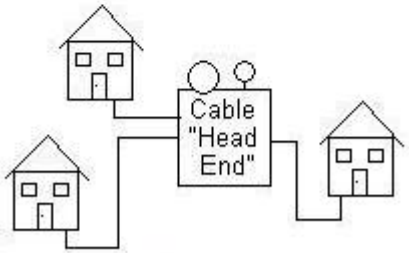
- Built their own transmission towers and paid for microwave or satellite uplinks to obtain remote signals from television broadcasters.

- Laid out their own cable infrastructure from house to house, by which they could distribute remote television signals to local residents.

Many of these communities still enjoy these TV transmission infrastructures. Some have added a community TV service as part of their local package. Others are now adding free wireless Internet, and emergency and weather information services. Many do it for a fraction of the cost per household of subscribing to a commercial cable or satellite service, and have the added benefit of local content.

For example, Valemount BC, with about 1500 households, retransmits 6 remote TV channels and 3 remote radio channels in addition to a local community channel for about $40 per household per year. Residents pay for these services through their local taxes.[1]





Small communities throughout Manitoba and Saskatchewan have cable co-operatives. Like Valemount, they choose the television services they want on the cable network, and they offer a local community channel.

Both options involve some start-up costs, but not as much as you might think. Over-the-air transmission equipment can sometimes be added to existing towers or buildings. By initiating conversations with your local broadcasters now, it may be possible for communities to access their towers, or maintain their towers and transmitters if the broadcaster leaves.

[1] For more information about the community redistribution scheme in Valemount, see the web site of the Valemount Entertainment Society at http://www.vctv.ca.

HOW TO DISTRIBUTE TV & OTHER SERVICES

If your community is considering rebroadcasting or cablecasting remote TV, radio, or Internet into your community (with the option of offering local content in the mix), there are seven steps, as detailed in the sections that follow:

1. **Define Goals**
2. **Consult an Engineer**
3. **Decide whether you need a distribution licence**
4. **Decide whether you need a programming licence**
5. **Build the distribution infrastructure**
6. **Negotiate for the channels you want**
7. **Set up a local production facility** (optional)

More than 100 communities in Canada already act as their own rebroadcasters[2] and approximately 70 are part of cable co-operatives (non-profit, and owned by the community).[3] Many of these communities have only a few hundred residents. Once the infrastructure is set up, it's relatively easy to train a local person to maintain them. In very small communities, volunteers may do it. In larger communities, the venture may employ 1, 2 or up to a dozen individuals.

[2] See http://www.crtc.gc.ca/eng/archive/2000/PB2000-61.htm for a list of communities whose licences were renewed in 2000. It is not exhaustive and may not be to date, since the CRTC no longer requires rebroadcasting licences for transmitters with less than a 12-kilometre radius.)

[3] The majority of cable co-operatives still in existence (there used to be more, but some have been sold to private cable providers in recent years) are located in Saskatchewan (Access Communications) and Manitoba (Westman Communications).

1. DEFINE GOALS

The first step to implement a community distribution scheme is to convene a meeting with the municipality, band council or other civil planning authority, educational institutions, and cultural groups that may have an interest in generating local content. Decide what the goals of the project are:

- **Maintain Service?**
  Is our goal to replace TV services that we can't get anymore because one or more broadcasters have left our community?

- **Expand Services?**

  Do we want to expand the services that we can offer?

  If so, how many?

  Would those services include radio channels? TV channels? Internet or cell phone service?

  How will these municipally-community maintained services compare to services available from commercial providers such as cable or satellite?

- **Offer Local Content?**

  Do we want to include local content, like a community bulletin board? Video programming? Radio programming?

  How would this local content be generated?

- **What Can We Afford?**

  How much would residents be willing to pay for these services to cover the costs?

2. CONSULT AN ENGINEER

The second step to implement a community distribution scheme is to consult an engineer, to determine which technology could best deliver the services you want for the price you can afford. CACTUS can help you find an engineer with experience working with similar communities.

- If you decide to offer a rebroadcasting (over-the-air) service, the engineer will help you prepare an engineering brief to submit to Industry Canada, to request one or more over-the-air channels (e.g. "channel 21" or "channels 21 and 34").

- If you decide to offer a cablecasting service, the engineer will help you design the cable network (where the cables will go).

3. DECIDE WHETHER YOU NEED A DISTRIBUTION LICENCE

The third step to implement a community distribution scheme is to decide whether you require a distribution licence from the Canadian Radio, Television, and Telecommunications Commission (the CRTC). Smaller communities generally do not.

For examples, communities having fewer than 20,000 households generally do not require a cable licence, although there are certain technical and reporting standards they must meet. Similarly, communities that can be served with a low-power over-the-air transmitter (with a maximum radius of 12 kilometres) do not require a licence. CACTUS, working with the engineer, can help you with this process.

4. DECIDE WHETHER YOU NEED A PROGRAMMING LICENCE

The fourth step in implementing a community distribution scheme is to decide whether you want to offer local content. The ability to offer local content is one of the great advantages for communities of owning and operating their own distribution infrastructure.

TV or Radio

If you decide to offer a local community TV or radio service, you will need to obtain a programming licence from the CRTC. CACTUS can assist. The process is straightforward once you have your distribution licence, and the licence itself costs nothing.

The community TV service could be as simple as a text bulletin board service announcing local events, the weather, or promotions for local businesses. At its most complex, it could offer full moving video programming for part or all of the day.

Setting up a community television or radio production facility isn't as hard as it sounds. It could be as simple as a computer server where individuals in the community can upload text event information or home-shot footage, to a small studio or recording booth maintained in the local highschool, college, community centre, or library.

A Community Web Portal

If you've decided to offer Internet services to the community, it's easy to offer an Internet portal with a mix of text, pictures, video or audio about local events, weather, news, or promotions for local businesses. You don't need a licence to create a community web site.

Multimedia Skills Training and Production

The decision to offer local content isn't an either-or decision as far as the medium. For example, Internet portals can offer text, still pictures, audio and video content. The video and audio content could replay on a broadcast or cablecast channel in the community. Similarly, if you already have a community newspaper or are thinking of creating one, the articles could also appear on the web site.

One of CACTUS' roles is to educate communities about the potential for multimedia training and production centres to enhance the communications offerings available in your community. Better communications among residents, the municipality, local businesses, social service organizations, and cultural groups can generate more job opportunities, a richer cultural life, and better responses to environmental, economic, and social challenges faced by the community.

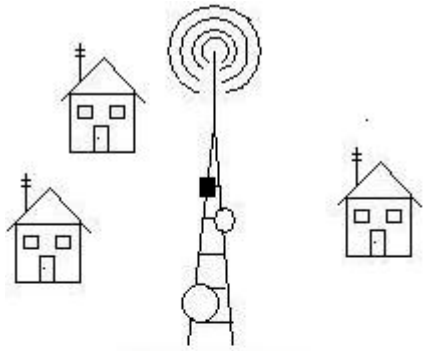
5. BUILD THE DISTRIBUTION INFRASTRUCTURE

The fifth step in implementing a community distribution scheme is to build the distribution infrastructure you designed with the help of the engineer in step 2.

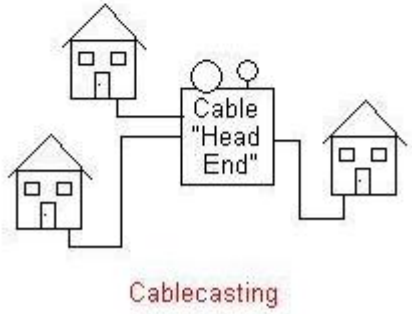
Infrastructure for Rebroadcasting

The infrastructure for rebroadcasting will include:

- A tower (if no existing building is appropriate, and if there is no transmission tower in the community belonging to other entities on which you could obtain space).



- One or more satellite receiving dishes to obtain the remote signals you want.
- One or more digital transmitters and antennae to rebroadcast these signals out to the community.



- Each household that wants to receive the package of rebroadcast channels needs a digital television set (or an analog-to-digital converter for older TVs) and an antenna.

Infrastructure for Cablecasting

The infrastructure for cablecasting will include:

- A centrally located "head end" (a building or a small room within an existing building on which the satellite dish to receive the signals will be installed, and from which the cables carrying these signals will radiate out to the community).
- One or more satellite receiving dishes to obtain the remote signals you want.
- A digital converter in the head end to convert the satellite signal into a format televisions can display.
- Cable to each building in the community that wants to receive the signals. These can either be mounted on telephone or hydro poles or placed underground in public rights of way.

6. NEGOTIATE FOR THE CHANNELS YOU WANT

The sixth step to implement a community distribution scheme is to negotiate for the remote channels you want. In reality, you'll likely be doing this at the same time as you're building the infrastructure (step 5), or even earlier, when you decide whether you need a distribution licence.

TV

If you are implementing a rebroadcasting (over-the-air) scheme, there are no limitations on what channels you can offer. You might just want the CBC, or just APTN (the Aborignal People's Television Network), or just 2 or 3 or a half dozen services residents consider vital.

If you are implementing a cablecasting service on the other hand, the CRTC requires that you offer a minimum number of core Canadian services, whether or not you require a distribution licence.

Generally speaking, channels that are available free over-the-air in other parts of Canada are free; for example, the CBC, CTV and Global. "Specialty services" that are available only on cable or satellite (like the History Channel, the ichannel, or the Discovery Channel) have to be paid for at a set fee per household.

Radio

There are no per-household fees to obtain radio channels that are free to air in other parts of Canada.

Satellite Uplink/Downlink

As a community, you will have to pay a downlink fee to the satellite company for supplying you with the TV and radio signals.

If you are offering a wireless or cable Internet service, you will need to pay both up uplink and downlink fees, so that residents can both send and receive information across the Internet.

For an idea how much these costs might be, see the “Costs” section on page 10.

7. SETTING UP A LOCAL PRODUCTION FACILITY

If you will be offering a local community TV and/or radio service, CACTUS* can help you find an appropriate location, design the facility, and mobilize the community to use it.[4]

Here are a few considerations to get you started:

Choosing a Location

There are three main factors to consider when choosing a location for a production facility:

1. **Proximity to the Transmitter or Head End**

   To play back programs that the community produces, the production facility either needs to be located in the same place as the transmitter or cable head end, or there must be either a line-of-sight microwave link or a cable connection.

2. **Convenience and Visibility**

   It's important that your production facility is easy to access. For example, can you get to it using public transportation? Is there plenty of free parking? Will people pass it on a daily basis?

   You want a location in the heart of your community.

3. **Collocation with Other Community Resources**

   To keep costs down and to leverage synergies with existing community resources, it often makes sense to situate the community production facility inside or close to related resources. For example:

   In a highschool. The highschool language arts curriculum in most provinces requires a module in media literacy. Many schools already have media production facilities in-house, but lack distribution.

   In a library. Many libraries already offer Internet access (some are "CAP" sites; see the link below for more information) and have a mandate to promote community communications.

   In the town hall, municipal council building, a theatre, or community centre. Since community media promotes dialogue about community concerns as well as local culture and events, obvious choices for the production facility are where community meetings and cultural events are held. Then they can be easily broadcast or cablecast for the whole community.

[4] While the main focus of CACTUS is to promote the establishment of multi-media centres that include video production, three organizations focus solely on radio. They are The National Campus and Community Radio Association (the NCRA), l'Alliance de radio communautaire du Canada (ARC du Canada), and l'Association des radiodiffuseurs communautaires du Québec (ARCQ). For help setting up a new radio-only station or to see whether one already exists in your area, consult the web sites of these groups.

With a media co-operative. Approximately 100 media co-ops in Canada already teach media skills and lend equipment, but few cablecast or broadcast.[5]

With an existing community radio channel (if you want to add TV). More than 150 community radio channels are already established across Canada with access to transmission facilities. See the link below* to find out whether one is located near your community.

The second and third criteria often go together. For example, theatres and other community resource buildings often have high visibility in the town centre.

The more challenging criterion may be to link that location to the head end or transmitter for program playback. It's worth some extra effort with this link in order to locate the facility in an appropriate community hub... location, location, location.

Developing an Inclusive Media Centre

One of the most important steps to ensure your community distribution scheme will succeed and gain broad acceptance (especially any local programming component) is to:

- gain broad community support during the initial phases and ensure wide representation of community interests on the board of directors
- develop inclusive goals and operating principles that are understood by the whole community

CACTUS has developed both a suggested board structure as well as suggested goals and operating principles for community media centres, based on research into what works in other communities. For more information, see http://cactus.independentmedia.ca/files/cactus/Boards of Directors for Community Media Centres2.doc.

Setting up a local production facility (if you elect to have one) is the final step to implement your community distribution scheme.

[5] To see a list of media arts co-operatives (members of the Independent Media Arts Alliance), go to http://www.imaa.ca/en/index.php/activity_members.

There are also over 2500 "Community-Access Points" in Canada... free Internet portals, many of which offer additional services and media training. While there is no single list of all of them (since they are administered by provincial and territorial governments), you can find provincial and territorial lists if you google "CAP Sites".

COSTS TO DISTRIBUTE TV & OTHER SERVICES

Typical costs for community rebroadcasting and cablecasting can be divided into four categories (described in the subsections that follow):

- **setup**
- **maintenance**
- **channel subscriptions**
- **satellite downlink**

While the setup costs have to be paid once only—at the beginning—the other three cost categories are on-going, and have to be met either through taxation or via subscription fees. The good news is that these costs can be minimized if you offer a modest number of services; these choices are the community's to make.

In addition to costs associated with maintaining the distribution infrastructure, communities may elect to offer local programming services.

SETUP COSTS

The setup costs for distribution of television, radio, (wireless) Internet and other services can vary enormously, depending on geography, how big your community is, what brands you buy, what quality you want, and whether there are technicians resident in your community that are willing to help you install it at low cost.

The figures provided in the sections that follow are low-end estimates for the major equipment you'll need to rebroadcast or cablecast TV and other services, supplied to us by communities who are currently offering these services. They have often begged, borrowed, and called in favours to arrive at the most economic solution.

Some of the pros and cons of rebroadcasting versus cablecasting include:

1. **Coverage**

   Depending on your geography, you may be able to reach people over a wider area by rebroadcasting with a high-power transmitter. Cable networks tend to be cost-effective in densely populated towns and cities, where houses are close together, or in apartment blocks.

2. **Number of Channels and Services**

   While each digital transmitter can carry a maximum of about a dozen SD TV channels, and you have to keep adding another transmitter to offer more channels--you can carry hundreds of HD channels over a cable network, including broadband Internet.

   Rebroadcasting is therefore a cost-effective way to offer residents a relatively small selection of TV and radio channels, and possibly wireless

Internet. Residents who want more channels and can afford them will still have the option of subscribing to a satellite TV service.

3. Maintenance

While rebroadcasting (because of the geographic and technical complexities) may require more engineering assistance to set up, it requires very little maintenance. If there's a problem with the transmitter, it will affect everyone all at the same time, and can be fixed at one central location.

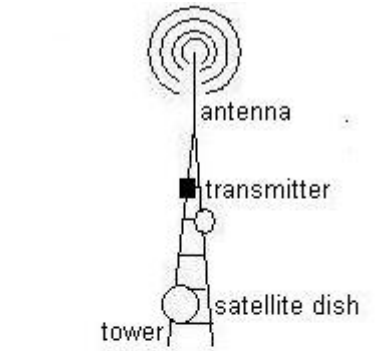
When new residents move into the area, all they have to do is put up an antenna to access the services.

Outages in a cable network, on the other hand, can occur anywhere in the community if the cable is damaged by weather or human activity. When new homes or neighbourhoods are constructed, the network has to be extended.

To pay for such maintenance, cable co-operatives charge residents subscription fees, but they're generally lower than those paid for a comparable offering by a private commercial cable company, since surpluses are reinvested in the service.

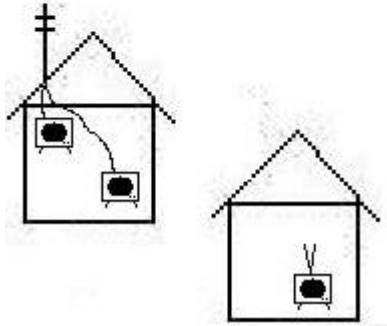
Rebroadcasting Setup Costs and Equipment

The following are low-end cost estimates to set up a community rebroadcasting scheme:



- **engineering consultancy** to determine the best place in your community from which to transmit signals (usually a high place with an unobstructed view of the whole community). You will also need the engineer(s) to help you purchase, install and test your equipment.

  Budget $1500-15,000. (At the low end, many communities have obtained help from local engineers for free, covering only their expenses.)



- **the transmission site**, from which to rebroadcast the services. This could be an existing building, an existing tower belonging to another party to which the community obtains access, or a new tower that the community or municipality builds on land that it owns, leases, or acquires.

  Budget:
  - $0 on an existing building
  - $0-200 for space on the tower of a sympathetic broadcaster (see “Local Broadcasters May Be Able to Help” on page 17.)

- $200-300/month to lease space commercially on a tower belonging to another television or radio broadcaster, cell phone company, dispatch service, oil or gas company

- from a low of about $70,000 up to a couple of hundred thousand to build your own, but this should rarely be necessary; most municipalities have access to or own towers that serve other purposes.

- **one satellite dish and receiver** for each satellite company from whom you want to acquire remote signals at the transmission site.

  Budget $2-500.

- **a digital transmitter and antenna** to rebroadcast these signals to your community.

  A digital transmitter can multiplex together and rebroadcast on a single channel (any channel between 5 and 51) up to a dozen standard definition (SD) television channels. If you want to rebroadcast in HD, you will only be able to fit one or two TV services per channel. This means if you want more than a dozen SD channels or you want to broadcast lots of channels in HD, you may need more than one transmitter.

  Digital transmitters and antennae vary in price from $25,000 to $250,000, depending mainly on how high power they are... that is, how far they can transmit. Whether a cheaper, low-power transmitter would do depends partly on your geography (a lot of trees, hills, and other obstructions) and how spread out it is. As a rough guide, in flat terrain, a low-power transmitter can reach houses up to about 12 kilometers away. If your community is more spread out, you will need a higher power. The highest power transmitters and antennae can reach up to 100 kilometers or more.

- **a receiving antenna** for each TV or radio in the community, (or on each roof with a feed to each TV or radio in the building). Residents near the outer perimeter of your broadcast area may need a bigger antenna. *Budget $50-80 per household for households that don't already have antennae*. (The antennae you used to use to receive analog TV will still work for digital TV. It's the TV itself that has to be upgraded; see below.)

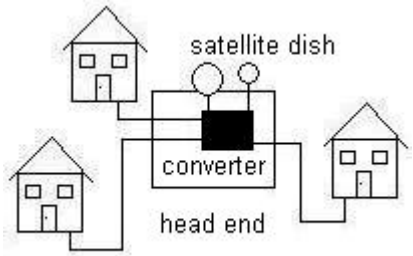
  If you're transmitting a wireless Internet service, residents will need wireless modems, which have their own built-in antennae.

- **an analog-to-digital converter box** for each older (non-digital) TV. Budget $60-80 per household.

Cablecasting Setup Costs and Equipment

Some of the setup costs and equipment of cablecasting are similar to those for rebroadcasting:

- **engineering consultancy** to help plan your cable network and where to locate a satellite dish to receive remote signals from satellite. *Budget $1500-$10,000*.



- **one or more satellite dishes and receivers** to receive the remote signals at the transmission site. You need one dish and receiver per satellite; for example, some

channels may be available on a satellite belonging to Bell, and others may be available from Shaw or Cancom.

Budget $2-500

- **cable converter boxes (one per channel) stored in the cable "head end"** to convert the satellite signal into cable channels that TVs in your community can interpret. The satellite dish is usually mounted on the roof of this head-end facility. The head end could be as small as a closet, and can be located in any community or municipal building. *Budget $500 per remote channel that you want to bring to the community.*

- **cable** to all the houses in the neighbourhood. This cable is usually laid in trenches in public rights of way alongside streets, like underground phone and hydro lines, so you'll need the co-operation of the municipality. (Municipality involvement helps if you're rebroadcasting too, but it's essential for cablecasting.)

  If the phone and hydro lines in your community run from pole to pole in the air, the situation is more complex, because you'll have to obtain permission from the phone or hydro supplier: whoever owns the poles.

  Estimates from other communities suggest that each additional meter of cable added to your network costs about $30, including the cable and labour. If you need about 50 meters of cable for each additional house on a standard city lot (the street-front distance in addition to the run into the house) it might cost about $1500, or just under three years of a commercial cable or satellite subscription.

  The more densely packed your neighbourhoods are (with duplexes or apartment buildings), the cheaper it is. You may also be able to get this figure down if you employ an engineer to oversee the process, but use volunteers (each householder) for some of the manual labour.

  Because of the work involved in laying cable, it's usually cheaper in rural areas to supply both television and Internet services over the air.

MAINTENANCE COSTS

Maintenance costs for the physical equipment in a community distribution scheme can be unpredictable, as they can depend on infrequent events outside the community's control: a storm, flooding, human activity that damages a buried cable line.

In general, maintenance costs amount to relatively little compared to setup, channel subscription and downlink costs.

CHANNEL SUBSCRIPTION COSTS

Generally speaking, channels that are available free over-the-air in other parts of Canada are free; for example, the CBC, CTV and Global.

"Specialty services" that are available only on cable or satellite (like the History Channel, the ichannel, or the Discovery Channel) have to be paid for: a set fee per household. Fees range from a couple of cents per subscriber per month for channels that are less in demand, to over $2 per subscriber per month for services such as TSN.

SATELLITE DOWNLINK COSTS

You have to pay a fee to the satellite provider of the services you want, to cover the costs of maintaining the satellite. This is called a downlink fee. A typical downlink fee might be $130 per channel per month.

If you're planning to offer a wireless Internet service, you'll also to have to pay an uplink fee so that residents can not only access information and web pages from other parts of Canada and the world, but send information back out to the rest of the world. These fees are calculated by the bandwidth you need (how much information residents of your community will be sending and receiving).

While satellite Internet is available direct to individual households in rural Canada already at between $50 and $150 per month from various companies (with a dish), these rates can be brought down significantly by sharing the service. For example, you may be able to get rates down to as low as $20 per household per month, just because not everyone will need to use it at the same time, or equally heavily from one day to the next.

LOCAL PROGRAMMING COSTS

Many communities that undertake rebroadcasting and cablecasting offer a local community TV or radio channel, or a weather or community bulletin board. For some communities, the ability to offer local services is the main driver to set up the distribution infrastructure.

The minimum cost is for a CD, DVD player or computer to connect to your digital transmitter or cable head end to play back music, videos, local text event or weather information. With this basic equipment, people around the community could create their own announcements, videos or music clips for upload to the server for automated playback.

Most communities that elect to have a locally originated service go further than this, however. They create a studio or recording facility in a library, community centre, town hall, or other municipal building. Interviews, cultural events, and

meetings can then be broadcast or cablecast live using multiple cameras.

Thanks to the excellent quality of small consumer camcorders and video editing software, costs can start at a few hundred dollars to a few hundred thousand, depending on how elaborate you want the facilities to be and whether you want to staff them on a full-time basis.

Unlike the distribution infrastructure, which involves minimum fixed costs to "get in the game", local production facilities can be gradually enhanced over time.

BUT HOW DO WE PAY FOR IT?

While communities can at any time consider rebroadcasting or cablecasting as a means to improve their local communications infrastructures (access to more radio, TV, Internet, and phone services), the digital transition presents several unique opportunities (click to find out more):

1. Community distribution is ***less expensive than the alternatives***, if you lose service after the digital transition.

2. The new digital transmitters enable ***more cost-effective*** rebroadcasting (multiplexing) of channels than ever before.

3. You can get ***highspeed Internet*** too.

4. ***Local broadcasters may be able to help.***

COMMUNITY DISTRIBUTION IS LESS EXPENSIVE THAN THE ALTERNATIVES

A Cost-Benefit Analysis:
An average of 10% of Canadians rely on free over-the-air television. This percentage tends to be higher in rural communities, especially in economically repressed areas. According to the CRTC, the average cable and satellite bill in 2009 was $49, or just under $600 for the year.

This means that if a given community finds that it is about to lose one or more over-the-air TV services, it may be cheaper for the community as a whole to explore a rebroadcasting or cablecasting solution than for the final 10% of that community to subscribe to cable or satellite.

For example, London, Ontario, Saskatoon, and Saint John are slated to lose access to the CBC over the air on August 31st of this year, the date of the digital transition. Most other communities with populations under 300,000 may lose CBC over the air by 2014.

According to Statistics Canada, there are an average of 2.5 persons per Canadian household. Therefore London has roughly 200,000 households, or about 20,000 households that rely on free over-the-air TV, who will lose access to the CBC. Those 20,000 households would have to pay 20,000 x $600 per year on average for a satellite or cable service to access the CBC, or $12,000,000. With twelve million dollars, Londoners could pay not only for their own transmission tower, a high-defintiion transmitter for the CBC, but also several community-access TV studios around the city and a staff of dozens! This amount of money could pay for free Wifi city-wide (like the City of Fredericton) and other services too.

But what about a smaller community? Valemount B.C., which has 1400 residents, offers its community 6 over-the-air TV channels, 3 radio channels, and a community-access TV studio staffed by 1 person, all for $70,000 per year, or about $40 per household per year: less than a 10th the cost of a satellite subscription.

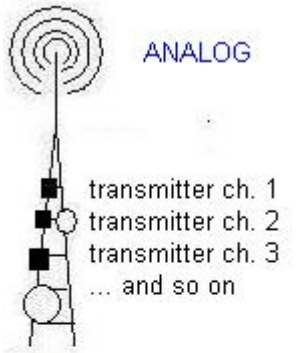
Those are maintenance costs. The cost the first year to establish the transmission or cablecasting infrastructure may be higher, but the yearly savings are so great that such facilities can usually be paid off relatively quickly.

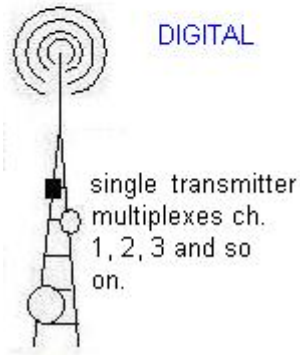
REBROADCASTING IS LESS EXPENSIVE THAN EVER

If you're considering rebroadcasting as a solution, it's less expensive now than ever.

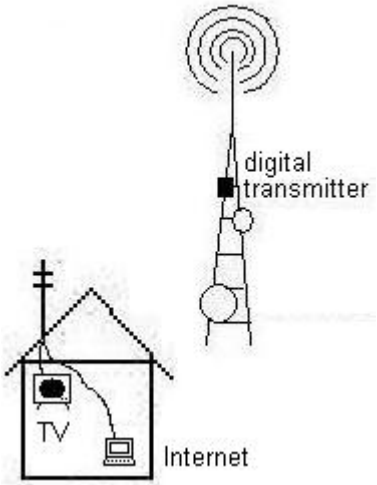
Communities that rebroadcast remote TV services to their communities in the past had to pay for a separate analog transmitter and antenna for each remote channel they wanted to rebroadcast.

Now, a single digital transmitter can multiplex up to a dozen standard definition television channels, so you may only have to buy one for your community.





YOU CAN GET HIGHSPEED INTERNET TOO



Many rural communities lack access to highspeed Internet. Not only can a cable network or a transmission tower bring residents TV (and radio), they can also enable highspeed Internet.

Because broadcasting can blanket a large area, it's generally viewed as the best option for rural broadband Internet. A single digital multiplex can transmit both television and Internet services.

Various programs are available from federal, provincial, and territorial governments to help rural communities obtain highspeed Internet. By investing in a community distribution scheme, your community may be able to 'kill two birds with one stone' (maintain free TV and obtain highspeed Internet at the same time).

LOCAL BROADCASTERS MAY BE ABLE TO HELP

Your local broadcasters may be able to help, either by sharing space on their transmission towers or transmitters (if they continue to transmit over the air in your community), or by leasing or selling their equipment to your community if they cease analog broadcasting.

In particular, as a condition of Shaw Media's purchase of Global Television in September of 2010, Shaw committed to upgrade to digital all of Global's transmitters across Canada, even outside major cities. Shaw was also asked to consider sharing these digital transmitters and towers with other local broadcasters.

This means that if you live in a community that has a Global transmission tower (i.e. you can get Global over the air with an antenna), but your community loses CTV, CBC, or other over-the-air signals, you may be able to use Global's existing facilities to rebroadcast these signals, including a community channel. CACTUS can assist communities to explore such opportunities on a case-by-case basis.

SUPPORT/NEXT STEPS

The Canadian Association of Community Television Users and Stations (CACTUS) is a non-profit association created to help Canadians participate in media production, and to improve media skills and training opportunities in their communities.

We receive no funding from any government or private agency, and rely exclusively on memberships, donations, and consulting to communities and individuals.

If you've read this pamphlet and you'd like more information about rebroadcasting or cablecasting, please call us any Monday through Thursday afternoon between 1 and 4 at (819) 772-2862. Our volunteers can provide you with a quick assessment of whether your community's goals could be met by rebroadcasting or cablecasting.

For a more in-depth conversation to help you develop a plan, estimate costs, fill out applications with Industry Canada or the CRTC, and find engineers to help you design and build the technical infrastructure, we suggest you assemble one or more representatives of your municipality or community that will lead the project, and schedule a conference call with us. A consulting fee will apply, which will enable us to continue to answer this hotline and help others like you!

We look forward to hearing from you and encourage you to find out more about the digital transition... the door to more inclusive, affordable media for all Canadians.

This document has been developed primarily by volunteer members of the
Canadian Association of Community Television Users and Stations (CACTUS),
with support and input from
the Canadian Media Guild.

The information can also be found on our web site at
http://cactus.independentmedia.ca/node/437.

To obtain a printer-friendly copy that can be assembled and stapled as a double-sided booklet, please contact CACTUS at (819) 772-2862.

If you have found the information useful,
please consider making a donation so that we can continue to help communities like yours.