Broadband comes to Lasqueti – a history.

Now that we have successfully brought a community high speed internet connections to the Island we thought it would be appropriate to set out the story of it's arrival and installation here. It is important , in our opinion , to acknowledge a successful community process and the people who were involved in making it happen.

In 2004, Ray Bruce , who was at the time chair of our Internet Access Society, let Lawrence Fisher know that there was an opportunity through the Provincial Government to get the Island hooked up. He indicated at the time that he would be resigning his position and that this was an opportunity for the Island if there was someone who could put it together , suggesting that Laurence Fisher might be interested. The thought of becoming our own ISP (Internet Service Provider) intrigued Laurence at the time, exciting his sense of independence rather than his desire to get a high speed connection. He had sworn off community projects, trying to get his own life together.

However, in the summer of 2005 Peter Johnson & Laurence Fisher were asked to come and help with a meltdown in the Societies board of directors. This resulted in both becoming members of the board and together with the other board members, managed to help smooth things out and get the Society functioning again. It was during this time that Raine (Lorraine Polaski), who along with Larry Mannahan, were the long time keepers of the Internet Society, came to Laurence with the high speed opportunity again.

Raine pestered Laurence about it until he went to a Network B.C. Information meeting in Nanaimo in November of 2005. This is the main reason broadband came to the Island. We all owe a debt of thanks to Raine for that!

At this information meeting we were given a detailed presentation of the community installation in the Similameen Valley. We also heard from other people who had managed to pull it off, including a fellow from Oona River who had installed a small community system entirely independently . We were also informed about the Provincial objectives and agreements with Telus which had lead to this opportunity. Laurence returned to Lasqueti with the suspicion that if there was enough interest, the community might actually be able to pull it off. Shortly thereafter Irit, Barry & Darzo also attended a Networks B.C. Informational meeting , so now we had a few more informed and inspired folk in the community.

On Laurence's return to Lasqueti, he sent out his first information mailer, putting up a sign – up sheet at the Post Office to determine the level of interest. There turned out to be sufficient interest to prompt the organization of the first meeting of interested people at the school on December 14, 2005.

About three dozen people showed up for that meeting of which a dozen agreed to volunteer for specific tasks and about 25 sites signed up on the sign up sheet. We felt that that was sufficient demonstrated interest and the Society agreed to back the project.

We then held a community meeting with some volunteers from Network BC who explained what we could expect and how to go about starting this project. This meeting was helpful for the technical minded but utterly confusing for the rest of us, however it got the ball rolling and we began our mapping process. The mapping process which was done mainly by Don MacDonald and Larry Mannahan, located all the potential subscribers on an island map; and with special software helped us locate potential antenna sites to reach the people who had requested service.

During this time we made application to Network BC and Telus to become a local ISP. This application was approval for a $20,000. Provincial grant designed to be seed funding for the start of the project. By the time this part of the project had finished we had $2500. in private donations we got the entire project completed! This is a remarkable success story ; we installed our entire system for under $26,000. This was made even more possible because of the volunteer work and donations of numerous members of the community. Fantastic work everyone!

Initially we had planned to locate our POP (pint of presence) within a 1/4 mile radius of the Telus building located behind the school, (the distance Telus would install a length of fibre optic cable for free, to our router or server (POP).

But there were those who were also investigating the possibility of locating the POP on Vancouver Island, initially considering the Fish Plant in French Creek. But upon further investigation , we stumbled upon the Quality Foods warehouse on Alberni Highway, where a fibre optic cable already existed , and where the owners had generously agreed to host our router, and primary AP antenna site.

From the first meeting in December 2005, we continued the community information process. Therefore were major concerns about the health effects of the microwave signals involved in the radio distribution of broadband. Alternative distribution methods, including laying a fibre network on the Island, and asking Telus to provide ADSL via the existing phone lines, were investigated. Fibre was too costly and complex to be accomplished without vast energies – which did not appear to be forthcoming at the time. Telus flatly refused to offer ADSL , saying that ADSL was not their solution or responsibility in fulfilling their agreement with the Government to provide a high speed POP to outlying communities .

Large amounts of research was done on the health effects of the radio signals and by the time we studied it all, determined that our signal output would be no higher than the most conservative estimates of safe exposure. These conservative levels are 1000 times lower than government regulations allow. As a result of this research it was highly recommended that on limit children's use of cell and wireless house phones. There is a great deal of anecdotal evidence of harm and a growing amount of hard evidence to back it up. However when we originally hooked up our first receiving antennas, we found we were already receiving tons of signal from a dozen sites on Vancouver Island!

By the time we gave the full go-ahead to begin purchasing radio equipment we had put out 18 mailers and had at least four meetings ! All was still not smooth. However, we realized we had entered into the community process with the attitude that if there was enough interest we would do it. We did not start the process asking the community if they wanted it, a subtle but important difference. Though in the end it came to the same thing: 75 locations representing 130 – 150 people signed up, and 37 people committed to not having it come.

Karl Darwin & Louie Durchanek set about building and installing an antenna rack on the roof of Quality Foods. We invaded the Quality Foods offices and they were most accommodating as we set up and tested our routers and antennas, topped trees and generally made nuisances of ourselves.

The foregoing set the stage for the actual installation. The opening act was the establishment of a connection between Quality Foods and the Island to find out how well the engineering predictions would play out. A design for a system had been worked out with the technical people on the Island and the manufacturer of the selected equipment. Before any connection was made , the selected equipment had been ordered and received ; some of this was imperative because of the time limit on the Grant.

In July of 2007, testing began in earnest; with very encouraging results. Before a main connection was established, a 2.4 GHZ line of sight signal was beamed to the West, Southwest side of the Island from Quality Foods, using the recommended radio / antennas; performance exceeding expectations. Considering the average distance is in excess of 20 kilometres , and beyond the optimum range of the antennas, this was most encouraging indeed.

The next step involved the installation of “towers” that would provide sufficient elevation for AP's (Access Points /Distribution Points), just as had been done at Quality Foods, according to the design originally set forth in the mapping plan. The main towers were to be located on private property, more or less donated for the project. Namely: The Magic Mountain Co-op property, Ray Lipovsky, and Guy Immega.

Be mindful that all the labour for each step came from volunteers. There were many volunteers involved in the first step of raising the first AP on Co-op property; initially , 60 feet of radio tower, a 150 pound battery charger, associated batteries and a house to put it all in , were grunted up there.

The most important link was then tested; a 5.8 GHZ Point to Point (line of sight) connection from Quality Foods to the tower on Co-op land;performing as expected. The Co-op tower then became a distribution point for signals to other AP's , located on Ray's and Guy's property respectively, as well as a distribution point (AP) for more local users, those within “line of sight” of antennas mounted on the Co-op tower, involving both the 2.4 GHZ and 900 MGZ signals .

The two other AP's were then constructed, one to the mounted on a tree on Ray's land, served by another 5.8GHZ signal, beamed from the Co-op tower; and the other on a tree at Guy's , served by a 2.4 GHZ signal , in turn supplying both 2.4 GHZ and 900 MGHZ signals to local customers.

The word was out . People wanted in, or on . Lots of testing followed, covering a range of results, from certain to good connection possibilities, from difficult to non-existent connection possibilities. It was becoming clear who would and would not get connected, in the initial phase. In the main , all those who wanted High Speed Internet Access, that could receive some kind of signal, are getting on line, while others are waiting in the wings for a solution.

The customer demand has resulted in the construction of more AP's on private land. Dennis Bergin and Bryan Runnings were the first added AP, serving their local area with line of sight connections. Then Cook Bay on Texada Island (considered in the original plan for the East, Northeast side of the island), through the offices of Cathy Sanford and Gordon and Bruce Jones, became an AP, connected via a 5.8 GHZ signal from the Co-op , once again n private land. It didn't stop there.

Lasqueti was approached by the Texada community of Gillies Bay for a possible connect from Lasqueti, as it turned out, from the Co-op tower again. Thus began a new development, or unplanned expanded development of Broadband to Lasqueti Island, whereby The Gillies Bay community is buying signal from LIAS. It is hoped they , in turn, will send a signal back to Lasqueti for covering the otherwise inaccessible area on the North end of the Island.

The development of AP's on Lasqueti continued as well, at Ezra and Melinda Auerbach's to serve their local area with a 900 MGZ signal , and at the Gordon and Bruce Jone's , to serve as another local AP, with an added ricochet of their 900 MGZ signal finding Rabbit Island, as well as themselves, and a possibility for more direct reception of their AP. Additionally, Laurence has added another 20 feet to the Co-op tower; now an 80 foot tower , recently relocating some of the antennas , with prospects for adding yet more antennas, as well as more service.

As time goes on, it is hoped that others will come on board as possible AP sites for places like Oben Road , “Dump Road”, various South end locations, and / or other blind spots.

The original concept involved and anticipated some of what has happened, the volunteer energy, the sharing of signal from private land with neighbours, and difficulties with some locations.

All in all , the system is thought to perform very well. Each major AP is having "fail- safe" devices installed that will do resets, or email , or other notifications, when service voltages fall below a certain level. LIAS is currently served by a Network Operations Manager to constantly monitor the system , advise what needs to done to keep it operating , and equitable; provide recommendations , and / or solutions for upgrading.

As in all community endeavours of this kind there is always a need for volunteers , to climb trees, to work with owners of property where AP's are located, to help maintain and service their sites. The testing will continue; some of the testing will need to be repeated as each AP aims for improved signal, and greater coverage.

Special mention should go to Sean McCooey, who, although he charges for his services , has proved an invaluable asset, as we have relied upon him to do the testing and optimizing while located in trees tops , and to install the antennas in trees, and to connect them properly' Yes!, even while it was snowing last winter.

In summation, one would be obliged to say , "a good first year", and a successful community endeavour.

A necessary word of caution. The system ,and equitable and satisfactory service , may undergo some challenges in the future when the possibility of heavier peer to peer usage increases, both from Lasqueti and Gillies Bay. It may become necessary to apportion signal to each user; or strictly limit the peer to peer usage.

Not to omit those who feel they have been imposed upon by the community by hypothetically exposing them to dangerous electromagnetic radiation. As Laurence said in the beginning , the fibre optic way might been the first choice, both to avoid the radiation factor , and to potentially serve more customers. However the fibre optic option was, and is a very expensive proposition, that , even if it was installed, would require very skilled people to maintain. It contains a possibility of nightmarish problems when measured against what problems we experience everyday with the underground phone lines. And , to provide still the other alternative of ADSL, via the existing phone line , seems inconceivable.

As mentioned earlier, when testing the very first radio, it was immediately apparent, and surprising, how many 2.4 GHZ signals were already present in the airways reaching Lasqueti, originating from Vancouver Island. The obvious question followed: How many other frequencies are there involving radio communications, radar, satellite electronics , cellular phones, pagers, etc. ? Are we overloaded; can we tolerate one more of our own making?

LIAS would still hope those who harbour doubts would reconsider the service. The rewards are there.

Perhaps in the near future, engineering changes may introduce very different communications technologies that will render what we use now, obsolete. Of course, those of us who have invested in the now, would not want to lose that investment; but hey! First you crawl, then you walk.

Not necessarily lastly, we need to note that a number of customers, who live off island , have indicate it is their hope to be able to conduct their business endeavours via the internet , while living on the island. Already we have received confirmation that this is happening.

CHEERS!!! from LIAS