

## Telus on Denman – Grapevine September 18, 2019

Telus provides internet to Denman in two ways, through two companies, Telus and Telus Mobility. The Telus Mobility offering is new, and important to some, but limited in availability. I will discuss it later.

Telus has a fiber optic cable that comes from their distribution facility at Union Bay to two locations on Denman, and on to three on Hornby. On Denman the two locations, called COs, are at Northwest Road and Kirk (at the top of the ferry hill) and at McFarland and East Road. On Hornby the locations are near the ferry landing, near the Co-Op store, and in the Sandpiper district. Small portable buildings are located at these sites to house interface equipment. This equipment converts signals sent through the fiber optic cables as pulsed light to electrical pulses transmitted over the copper phone lines. It is then converted by a modem at your home or business to a network cable or a wireless router. The development of this technology, ADSL, allowed much more data to be sent over the phone lines than did earlier technologies, more for instance than dial up. However, ADSL too is now obsolete and Telus will not invest any money in improving systems based on copper wiring. They are switching to fiber optic, run right to or near to the point of utilisation, the home or business. This means replacing the existing copper wiring with fiber optic cables, either on the hydro poles or underground.

In ADSL systems the proximity of users to the interface equipment is important. The maximum possible speed that the system can deliver declines rapidly with the length of the copper wire. At a distance of three kilometers the connection is, at best, marginally useful. This is why Telus won't supply internet to all locations. Their system can't.

What speeds can be delivered? In theory, ADSL technology could meet the CRTC's recommended speeds of 50 Mbps (mega or million bits per second) download and 10 Mbps upload. To get this speed the user would have to be very close to one of the COs with good wiring. I haven't been able to confirm that anyone gets this speed or anywhere near it. The survey we took did not show any results that were close to that speed.

The way forward is to utilize fiber optic technology. It does not generate any electrical signals, nor is it vulnerable to interference from any outside sources, such as power lines. The theoretical maximum speeds are many times the CRTC's suggested speeds. In Greater Vancouver, plans are available with download speeds of 200 Mbps. In fibre optic systems the limiting factor is the capability of its interface equipment. As a need to transmit more data emerges, the interface equipment can be replaced, but the fibre cable network shouldn't need to be.

There has been a new development in our area. Telus is working with Telus Mobility, a separate company, with different offices and employees, to determine where Telus Mobility Smart Hubs will work. These are basically cell phones which receive signals from and transmit signals to transmission towers, providing internet either wirelessly (by Wi-Fi) or by Ethernet cable. This is very similar to

tethering a cell phone, but the data is much cheaper. On Denman and Hornby, the Smart Hubs connect to equipment on towers located in Qualicum or behind Cumberland.

This system works best with a clear line of sight to the transmitter/receivers on the towers. It is working very well for many sites located on the west coast of Denman, using cells on the tower behind Cumberland. Some sites on East Road that have no internet available from Telus are getting acceptable Smart Hub results from the tower at Qualicum. I don't know about sites on Hornby, but I expect that some might also get good service from Qualicum.

Download speeds of 24 Mbps and 12 Mbps upload have been clocked on Smart Hubs along Denman's west coast. These speeds are slightly higher than what the satellite-based system, Xplornet, can deliver and the cost of data is also lower. Three levels of service are available: a 100 GB (giga byte) plan, a 500 GB plan, and a 1 TB (terra byte) plan. Current rates are \$60.00/month, \$75.00/month, and \$100.00 respectively. The Smart Hub rental costs \$10.00/month for 24 months. You can visit the Telus Mobility website for more detail.

However, the website will show that this service is not available on Denman or Hornby. But it is. The manager of Telus for Vancouver Island has approved a pilot project in which Telus technicians go to your address and try a Smart Hub. If it works well, they contact a Telus Mobility representative and arrange a connection, right then and there. They are mapping the areas where this technology will work and this information will be used to update the Telus Mobility website and CRTC's mapping of what's available. To access this service call Mike Fiset at 250 203-4396. He's busy, so you may have to leave a message.

For some locations, including some that had no internet availability, this is a big improvement. While a welcome addition, it's only a stopgap measure. What's really needed is the fast reliable service that fiber optic service provides.