Moncton Area MESH Network by Steve VE9SF

You may have heard by now that we are working on getting a MESH network up and running in the Greater Moncton area. For the benefit of those who are hearing of this for the first time, I will give you a brief overview of what a MESH network is and direct you to some links where you can learn more about it.

Basically a MESH network is like packet radio on steroids. Unlike packet, which is limited to text and very slow file transfers, the MESH can be used for IRC chat, voice over IP, POP3mail servers, file and web-servers, video, and pretty much anything you can do over the regular internet.

The radio and TNC is replaced by an off the shelf wireless router (certain Linksys types) which have had their firmware replaced by custom software which has been modified for amateur radio use. All you need to access the MESH is one of these routers, a computer and some way of getting the antenna up in the air. This usually involves putting the router in a weather proof enclosure and sticking it on top of the tower. It will have to be fed with 12V and the antennas (2 of them) may be replaced with higher gain verticals or directional antennas.

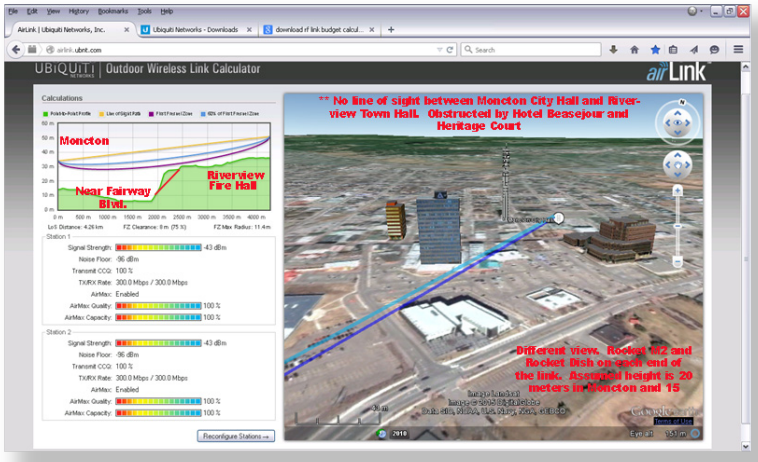
A couple of years ago, some amateurs in the Moncton area including myself, wanted to get a MESH network up and running but the lack of availability of the specific routers needed was a major hurdle and the project died. Recently, we were fortunate to have acquired 65 of these routers and the project is back on the front burner. Thanks guys for grabbing these routers (you know who you are).

As an alternative to the linksys routers, there are better commercial products that can be used. They are made by Ubiquiti Networks https://www.ubnt.com/ and unlike the linksys routers, they are made to be installed outdoors. The firmware still has to be replaced as in the routers. Heres where you can get it: http://www.broadband-ham-net.org/. Follow the software download link and navigate to the appro-

priate firmware for the specific hardware you have.

Although they are very affordable they are not free. If you want to access the MESH for free, these routers are available provided you live in the area, are a licenced amateur and will undertake to install the router so that it becomes part of the network. It doesn't do the rest of us any good if your router ends up in the junkbox. If you need help installing it, there is no shortage of people willing to help including me. For more information on the MESH networks, the authoritative source is http://www.broadband-hamnet.org/.

Here is where we are at so far. Jack VE1AIR and myself have been spreading the word to various groups such as MAARC and TCARC and also the Codiac group. We have an IRC server running on one of the routers and demonstrated how to do file transfers. The city of Moncton is showing some interest in the project as it has great benefits for their emergency preparedness operations. With this in mind, I have been putting together a link budget analysis with the goal of connecting Dieppe, Moncton, and Riverview emergency operations centers. The picture below shows part of that analysis of a link between Moncton and Riverview.



We have a MESH committee of nine amateurs and we keep in touch via an email list. On Tuesday May 5th, we have scheduled a meeting over coffee to discuss strategies of rolling out the network to the local amateur community. At this stage, we

are looking for interested amateurs especially in the tri community area who would like to contribute to the network by simply installing the equipment at your QTH. Remember, each router (Node) installed is another link that builds the network. If you are interested in being a user of the MESH or are willing to have a node installed at your location, please contact me 382 6572 or Jack VE1AIR at johnchisholm2@bellaliant.net.