

802.11 was used in the Green Bay Cellcom Race in 2014 as well as an subsequent Airport Exercise.

APRS was also used for the tracking of the Prevea mini vans and a bus to pick up for the 'fallen' runners.

APRS digipeaters were placed on top of the Security Building at St. Norbert and the other one on top of Bellin. These was setup on a separate frequency (a nice quiet channel). These APRS nodes operated with a solar panel, marine battery, Motorola M100 radio, Argent Data Tracker 3 Mini, all enclosed in a plastic tub, and copper pipe J-pole in a cement bucket.

The Raspberry Pi ran APRSC and APRX for I-gate and APRS-IS functionality. This was connected to WRT-54G mesh node for network connectivity. This provided an 802.11 link between the APRS I-gate and the network at the communications tent. This link allowed the APRS software on the computers (uiview, aprsis32) to connect just like connecting to the APRS-IS global network. There was also a Java app running on the I-gates pi that took the aprs stream and provided a live updating Google Earth KML file.



Parts List:

Raspberry Pi

<http://www.newark.com/raspberry-pi/raspberry-pi-8gb-usd/model-b-8gb-sdcard-w-noobs-pre/dp/04X5042>

Tnc-Pi: <http://tnc-x.com/TNCPI.htm>

Plastic Pi case from Amazon (many colors available):

http://www.amazon.com/gp/product/B00APO31PM/ref=oh_details_o03_s00_i00?ie=UTF8&psc=1

12v/5v converter: <http://dx.com/p/8s-5a-switch-mode-ultimate-bec-ubec-45214>
(shipping takes forever)

I liked the higher amp capability of this 5v converter for future expansion options; old cell phone car chargers would work too.

RP-TNC Jumpers <http://www.ebay.com/itm/WIFI-router-extension-cable-RP-TNC-male-to-RP-TNC-female-pigtail-RG316-15cm-/281126502168>

