**Wireless Packet Definition. NSF Collar Project 2016.**

**Wireless Packet/Payload**

This sequence of bytes will be defined in a wireless\_p\_buffer\_def\_pkg.vhd file and written into a dual port ram by flashblock for use by the TXRX system.

All data is little endian.

**Implemented:**

MicroSD ID (CID Product Serial Number) (4 bytes)

Real Time Clock Time (4 bytes)

Time packet was generated. FPGA Time (9 bytes)

Battery Voltage (2 bytes)

Battery Capacity (2 bytes)

Battery Current (2 bytes)

SD Card State – Last block Written (4 bytes)

GPS Position (ECEF Coordinates) (12 Bytes)

GPS Accuracy 3D Position Accuracy (4 Bytes)

GPS Position Associated Time (9 Bytes)

FPGA Status –Devices on/Control Register (4 bytes)

Total = 56 bytes

**Future Ideas:**

IMU Activity Indicator

Audio Activity Indicator

Last command received and time received

Temperature (3 bytes).

Solar Controller State