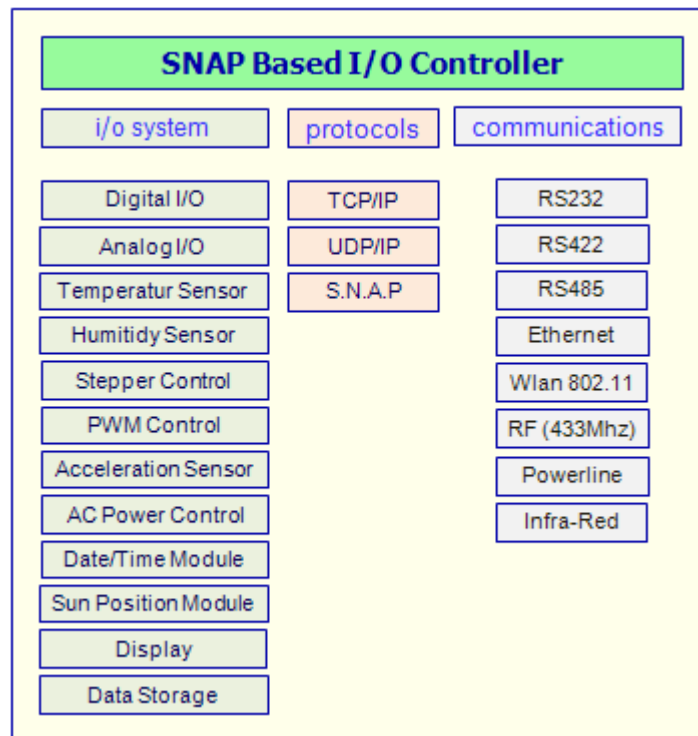The **S.N.A.P.** protocol is lightweight and simple but has very flexible attributes. It is easily transported to small PIC micro architectures and packet size can be trimmed to fit into the smaller PIC micro controllers.

The **S.N.A.P.** based **I/O Controller** uses **S.N.A.P.** packet structure over various physical transmission mediums using PIC based micro controllers. The primary design objective was to achieve a common base layer for low level device support and control. The picture below indicates currently proposed function segments based mainly on my own needs.

Each i/o module has separate data and control structures. The ctrl and data structures are essentially used within the PIC micro controller environment as well as in any control application (ie) under 'Window O/S' or web driven by using the same ctrl and data structures in a 'python' module. Changes in application control and data structures are reflected in the various i/o structures associated with an i/o module.

SNAP Frames	Transmission Unit	RS232
		RS422
I/O Command Translation		RS485
		Ethernet
I/O Control Module		Wlan 802.11
		RF
I/O -> Control and Data Structures		Powerline
		Infra-Red
DS18x20 Temperature Sensor	DS1307 Date/Time	Some I/O Function