Brian Schmidt
Matthew Welsh

Final Project Checklist

Required Modules

☐ **Internet Protocol (IP) Encoder**

- Should be able to properly encode internet protocol packets as specified by the IPv4 specification in RFC 791.

- This module's functionality will be demonstrated by using a packet sniffer on a computer assuming functionality of the SLIP controller. If the SLIP controller is not functional, packets may be observed on a logic analyzer.

☐ **IP Decoder**

- Should be able to properly decode internet protocol packets including combining fragmented packets.

- This module's functionality will be demonstrated by decoding IP packets transmitted from a computer assuming functionality of the SLIP controller. If the SLIP controller is not functional, packets generated by a computer may be stored in a ROM.

☐ **Serial Line Internet Protocol (SLIP) Controller**

- Encapsulates IP packets for transmission over a serial line connection to a computer.

- Interfaces with a computer using the RS232 port on the labkit.

☐ **Audio Codec**

- Provides down-sampled audio data from AC97 to IP Encoder module and interpolates down-sampled audio data received from complimentary phone system.

- Functionality will be demonstrated in a manner similar to that of Lab 3.

If Time Permits...

☐ **Advanced Audio Codec**

- This module will compress audio data using standard voice compression techniques to increase the data flow over the limited bandwidth.

☐ **Phone Controls**

- Allows for advanced phone options including source IP address specification, phone rings, ring-back tones, and other features present on standard phone systems.