Project: Data Links

Data links allow aircraft to transmit information in real- or near real-time. A study released by Forecast International, Newtown, Conn., said that the U.S. airborne communications market will be worth some $2.63 billion over the next decade. There are two key communication links (besides the traditional data buses such as MIL-STD-1553, ARINC 429 and ARINC 629) are RS232 and TCP/IP.

- RS232 has been around for a very long time and is typically used to connect the fire control computer on-board the aircraft to the weapon delivery sub-systems (fuzing and release).
- TCP/IP, which has been the driving force behind the internet, and is now being explored for Aircraft use.

Goal:
- Write an Ada95 program that will enable RS232 communication between two computers.
- Write an Ada95 program to allow two computers on the internet to communicate with each other. Use Ada Sockets to establish the connection between the machines.
- Boeing/ Honeywell have been considering using TCP/IP in commercial aircraft. Write a two page memo detailing the advantages/ disadvantages of both serial communication and TCP/IP.

The RS-232 standard can be found at

The AdaSockets package/ usage is present at
http://www.rfc1149.net/devel/adasockets