ALTOS
COMPUTER SYSTEMS

Preliminary Series 5 Computer System Supplement 5. Altos Utility Programs

Revision D
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ALTOS SERIES 5 COMPUTER SYSTEM

SUPPLEMENT 5. ALTOS UTILITY PROGRAMS

This supplement presents general information related to Altos Utility Programs.

FILE TRANSFER PROGRAM (VERSION 2.5)

The File Transfer Program (FTP) resident on both CP/M and MP/M master distribution diskettes, is used to transfer files between two Altos Computer Systems through an asynchronous serial channel. FTP runs with either the Control Program Monitor (CP/M) or the Multi-Program Monitor (MP/M) Operating System, serving as a useful tool for transferring files between systems with 8 inch hard disks (such as the Altos ACS 8000-10 computers) and systems with 5-1/4 inch hard disks (such as the Altos Series 5 computers). Full error checking and correction is provided through a CRC-16 polynomial.

FTP Version 2.5 corrects the following problems:

1. More than 16 files can now be transferred using FTP under MP/M II.

2. FTP now works correctly with MP/M II V2.1.

The copies of FTP provided on the distribution diskette use the printer port on the Altos computers. The printer ports can be connected to each other with a null modem cable or with two modems. (The null modem cable is a standard RS-232 cable that swaps lines 2 and 3. Such a cable is available from Inmac; part number 270 in the fall '81 catalog.)

NOTE

If you want to re-connect the printer after running FTP, be sure to re-boot the system.

FTP is brought up on both the sending and receiving computers. It does not matter which side is brought up first. Be careful that files transmitted with FTP do not have the Read Only (RO) attribute. If the file is Read Only, FTP will not be able to write it on the receiving side. If an RO file is accidentally received, erase it on the receiving side, change the attribute to Read Write (RW) using the *SET* command under MP/M II on the sending side, and transfer it again using FTP.

Baud Rates

There are several versions of FTP on the distribution diskette. The only difference between the various versions is the baud rate used for the transfer. The file named FTP.COM is the standard one that uses 9600 baud. The file name of each of the other versions indicates its baud rate. Both the sending and receiving sides must run at the same baud rate.

These slower versions may be used under either CP/M or MP/M:

        FTP12 - 1200 bps
        FTP24 - 2400 bps

These faster versions only work in CP/M:

        FTP48 - 4800 bps
        FTP   - 9600 bps
        FTP31K - 31250 bps - max cable length - 75 feet
        FTP41K - 41666 bps - max cable length - 8 feet

Experimentation with 9600 vs. 31250 baud rates has shown that there is very little difference in total transfer time. The experiment has run on floppy disk systems; on hard disk systems, there might be a greater difference.

Experimentation has shown that the maximum baud rate for FTP under MP/M II with one user is 9600. That is, only FTP12, FTP24, FTP48, and FTP (i.e. 9600 baud) work on MP/M II. If more than one user is active, the maximum baud rate could be as low as 1200.

Procedure

The sending side of the transfer is started by the command:

FTP <afn>

where <afn> is an ambiguous file name as described in the CP/M manuals. For example, the command:

FTP *.COM

sends all of the .COM files to the receiving side. Whereas:

FTP FILE.NAM

sends only file FILE.NAM. The sending FTP periodically types an 's' while waiting for the receiver to become active.

The receiving side is started by one of the following commands:

FTP or FTP u:

where 'u' is the drive letter of the destination disk. If no drive letter is specified, the logged disk is the destination disk. The receiving FTP periodically types a 'w' while waiting for the sender to become active. Since the receiving side normally does not exist by itself, enter [CONTROL] C to get back to CP/M.

NOTE

The File Transfer Program is copyrighted by the Balcones Computer Corporation.