



Fermi National Accelerator Laboratory

**FERMILAB-Pub-92/78
(NHM-92/001)**

**HEPnet
NHM TECHNICAL NOTES
Fax through Computer Software**

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March 1992



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Current use of facimile machines is inefficient, time consuming and expensive. A popular fax paradigm says that a company or group of people will have a fax machine, or if it is a large organization, several machines located in a central area for anyone to walk-up and use.

The Problem

Communication by fax is fast. Getting the fax to the intended person is not. All Group 3 fax machines communicate at 9600 bps, making them a very quick and attractive method of sending something anywhere in the world where there is another fax machine. If I am sending a fax to you and you are standing next to your machine you will get it within a minute or two. If you are at your desk you will get it...

At National Hepnet Management our fax setup was one fax machine, which used thermal paper, installed two floors away in a noisy copier room. Sending a fax required getting the documents, writing down the fax number on a post-it note, hiking two flights of steps and looking to see if the fax machine was being used already. If not, the fax was sent. If the machine was busy you either waited for it to finish or you went back to your desk, making another trip up the stairs when you thought that it may be free. Receiving faxes was easier, if not quicker. When a fax arrived it would sit in the bin until a secretary, clerk, or passerby picked them up. Most of the time faxes would be put in our mail boxes, either in the morning or in the afternoon.

Numerous problems with this model concerned us. We were spending too much time just getting back and forth to the fax machine, frequent phone calls were made to inquire whether a fax was sent or not, all of our faxing was being done using prime, day phone rates, our fax machine used thermal paper, faxes sometimes disappeared, and we had no security.

The Solution

Buying a fax machine for our group would eliminate or relieve some of these problems, but not all of them. An alternative was to buy a fax modem and computer software for our Sun Sparc network. It offered us everything that we wanted, and more. We selected a package called Corporate Fax from Computer Signal Corporation which is featured on the Sun Catalyst CD, Volume 2. Along with this software we purchased a CCITT Group III, Class2, 9600 bps facsimile modem.

The Corporate Fax software can be run from an X Terminal, workstation, character based video terminal, or DOS platforms that have DOS to Unix capability thru software such as Locus' PC Interface. It offers an adequate graphical interface when used with an X Terminal or workstation.

The software allows incoming faxes to be answered by the system automatically, flagging an appointed faxmaster when a new one has arrived. From there it is either moved or copied into each user's fax directory and a mail message is generated to let them know that they have a fax. The fax can then be viewed on the screen of your X Terminal or workstation or sent to a local laser printer.

There are a number of ways to send a fax. ASCII or TIFF files resident on the fax server can be input into Corporate Fax. Faxes can be composed by using the GUI to assemble existing TIFF and/or ASCII files. ASCII text may be added to a fax by typing from the GUI. Composing letters, adding signatures, and including headers with company logos are all possible. ASCII and TIFF files can also be sent directly from the command line. Faxes with high priority are put in a sending queue. If it is empty and the modem is not busy with an incoming fax it is sent immediately. Lower priority or very large faxes can be set up to go out overnight when long distance rates are cheaper. Multiple modems are supported. Carbon copy faxing is also possible. A list of name and phone numbers is given to the software and it will automatically send out a copy to everyone on the list with an individual cover page for each person.

We are currently looking into doing remote faxing. With a fax server in a central area (our Sun IPX running Corporate Fax), we can be anywhere in the world and receive a fax, as long as we have access to a phone jack. From a remote location we will be able to login to the server and download any faxes to a notebook pc that we travel with. The pc will have a TIFF viewer or program that will accept TIFF input so that we can view our fax. We have not yet tried this, but we do have Framemaker installed on an Outbound notebook computer that will accept TIFF file input. TIFF viewers for the pcs are being looked into. Sending a fax from a remote terminal is possible, although it must be done from the command line. A TIFF or ACSII file can be sent to the fax server, which can be then be used by Corporate Fax.

Wrapup

We are in the process of installing Version 2 of the Corporate Fax software onto our Sparcstation server. This effort has not been easy, as we have encountered quite a few bugs. Help from the vendor in trying to solve our problems has been less than desired. We have yet to test and explore all of this software, in part because of these bugs. We are currently very frustrated in our efforts to get this product working, but we feel that this is a superior alternative to a conventional fax machine.

Although we have bought Corporate Fax, there are other good products out on the market. Functions differ from package to package. We are still discovering new ways to implement our current fax solution, which offers us far more than our old fax machine.

Appendix A

Corporate Fax Information

Vendor:

Computer Signal Corp
Suite 225
2420 Camino Ramon
San Ramon, CA 94583
(501)551-7190

Items Purchased:

Srvfax-002, Sun server bundle 2-line	\$2495
Modem-101 External Fax Modem	\$499
SRVPS1-001 Postscript File Interpreter	\$350
AFISL-001 Advanced Fax Interface - X-window GUI seat licenses	\$95
One year upgrade contract (maintenance)	\$483

Modem Information:

The Fax modem was purchased from Computer Signal Corp., but it is manufactured by Everex. It is an EverFax 24/96D modem. The address for Everex is:

Everex Systems Inc.
901 Page Avenue
Fremont, CA 94538
(415)498-1111

Other Fax Software (from Sun Catalyst CD)

IsoFax
The Bristol Group Ltd.
100 Larkspur Landing Circle, STE. 200
Larkspur, CA 94939
(415)925-9250