HYLAFAX FREQUENTLY ASKED QUESTIONS

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Master FTP Site: sgi.com (192.48.153.1), directory sgi/fax
Home Page: http://www.vix.com/hylafax/

This is a living list of frequently asked questions about the FlexFAX/HylaFAX fax software system. The point of this document is to circulate existing information, and to avoid rehashing old answers. Better to build on top than start again. Please read this document before ever posting to the HylaFAX mailing list. Alternatively, a PostScript copy of a snapshot of this documentation is available by public ftp in the directory ftp://ftp.sgi.com/sgi/fax/doc.

The HylaFAX software and this FAQ were created by Sam Leffler. Since Nov. 1995 the FAQ is maintained by me, Matthias Apitz.

Your comments, additions and fixes to the **FAQ** are welcome: please send them to flexfaq@softcon.de by electronic mail. You can also give feedback on specific questions through links provided on each individual page.
But note: I'm only the maintainer of the FAQ and I'm also trying to answer questions in the mailing–list about the binary distribution for SVR4.2, about the modems I've (ZyXEL 1496 and 2864I) and about other things I'm familar with. I can't answer all questions; so you should not ask me, you should ask for help in in the HylaFAX mailing list.

You may want to search for strings. The search is case–insensitive and there is no support for wildcards but the string *pattern* matches any HylaFAQ question containing **pattern**. Thanks to Jens Lippenberger. for this nice and usefull addon.

HylaFAQ Search:

Legend:
- old (*unchanged* since 03:18:54 PM 05/18/96)
- new (*added* since 03:18:54 PM 05/18/96)
- updated (*modified* since 03:18:54 PM 05/18/96)

INTRODUCTORY

- Q1. What is HylaFAX?
- Q2. Why should I use HylaFAX instead of some other fax package?
- Q3. Which modems can be used with HylaFAX
- Q4. What machines does HylaFAX run on?

Q5. What is the current version/status of HylaFAX?
Q6. What are the differences between v4.0pl0 and v4.0pl1
Q7. Where can I get a binary/source distribution of HylaFAX?
Q8. What documentation exist for HylaFAX?
Q9. What other related software is available?
Q10. What should I do if I have a problem?
Q11. What version of HylaFAX do I have?
Q12. How should I report bugs?
Q13. How do subscribe to the HylaFAX mailing list?
Q14. Volunteers to do binary distributions wanted!
Q15. How is HylaFAX actually maintained?
Q16. Where are the HylaFAX mailing list archives now?
Q17. HylaFAX Mailing List Archive is back
Q18. FAQ: Modem AT+Fxxx commands?
Q19. Can I run HylaFax on my NT 4.0 Server?
Q20. T.30 T2 timeout errors – where I can get more info on?

BUILDING HYLAFAX FROM SOURCE

Q21. Problems compiling HylaFAX on SCO Unix?
Q22. Why is faxq maxing out CPU?
Q23. Building Hylafax For Unixware?
Q24. SendPage – Parity options, where?
Q25. Building HylaFAX with LD_RUN_PATH
Q26. Re: calling last chance on bug fixes ?
Q27. adding the g++ include path?
Q28. Howto send fixes?
Q29. I seem to be missing file "new.h"?
Q30. Build error on Solaris 2.5 with –pedantic–errors ?
Q31. Compiling Hylafax v4.0beta018 under Sun Solaris with DSO ?
Q32. Problems with socket.h on AIX, ...?
Q33. Why CGI_BIN didn't get properly replaced?
Q34. Looking for /bin/test file?

HYLAFAX CLIENT APPLICATIONS

Q35. How do I view received facsimile?
Q36. How do I create a fax cover page template?
Q37. How to do broadcasting faxes?
Q38. Sendfax doesn't put the company name and location on my cover pages?
Q39. sendfax option –D not working?
Q40. How do I keep private information off the cover page?
Q41. How do I send WordPerfect files from a DOS machine?
Q42. Document file is not valid TIFF ...?
Q43. Faxing TIFF G4 images?
Q44. textfmt – No Font Metric Information found ...
Q45. Howto set Email notification when done?

Q46. Was is the idea behind SNPP?
Q47. Re: faxmail from hylafax Beta 18 ?
Q48. Re: Question concerning faxcover and the "−f"
Q49. Howto send HTML files?
Q50. Problems with killtime of the job?
Q51. Simple Mail−to−fax gateway?
Q52. v4.0beta015 and fax broadcasting ?
Q53. Is there a table describing the one character codes used by faxstat?
Q54. Sending a few lines without cover page?
Q55. Howto use WinFlex ?
Q56. Can I run the old WinFlex with HylaFAX v4.x?
Q57. Winhfax client − format of phone book?
Q58. Problem connecting with MAc Client?
Q59. Connecting−Problem with whfc under Windows NT 4.0?
Q60. Sendpage and Mail?
Q61. Where to find mailfax.sh for sendmail?
Q62. Howto Numeric−only paging?
Q63. Where to set default notifying level for sendfax?

RUNNING A HYLAFAX SERVER

Q64. Service not available, remote server closed connection?
Q65. How do I use modems connected to a Telebit NetBlazer?
Q66. Do I have to restart a server after changing the modem config file?
Q67. How do I make a prototype config file from a working config file?
Q68. How do I change HylaFAX to use mailx instead of sendmail?
Q69. [Dell SVR4] No trace logging under Dell SVR4?
Q70. Problems sending a PostScript file
Q71. Ghostscript−imaged fonts look funny?
Q72. How do I get a line of text across the top of each outgoing page?
Q73. [PC] Why can't I get HylaFAX to use RTS/CTS on a Digiboard port?
Q74. [Sun] How do I get HylaFAX to use RTS/CTS on a Sun serial port?
Q75. How do I force HylaFAX to set the tty device to mode 664?
Q76. How do I get faxd to print everytime I receive a facsimile?
Q77. No answer from remote (extending the connect time)?
Q78. Help with etc/dialrules?
Q79. How these dialrules work?
Q80. Why have fax user?
Q81. What is the purpose of putting '@' at the end of the dial string?
Q82. Retrain negative (pages lost during transmit)?
Q83. [SunOS] Utmp/motd not updated on SunOS−4.1.3_U1?
Q84. Should I use Class1 modems?
Q85. Howto Forward Incoming Faxes using E−mail?
Q86. NoCarrierRetrys, MaxDials or MaxTries variables...
Q87. How to config ModemClass?
Q88. No regular expression for modem class?
Q89. Re: Logging in HylaFAX v4.0beta18 ?

- Q90. RFC for Sam’s funky new c/s protocol?
- Q91. Is T.30 Sub–Addressing support in HylaFAX?
- Q92. UnixWare 4.2 general permission scheme & HylaFAX v4.x
- Q93. Experience from using HylaFAX regarding sending 1000 per day?
- Q94. Is there a way to re–init the modem after some time?
- Q95. MultiTech ZDX2834 modems?
- Q96. USRobotics Courier modem and class2.0 standard
- Q97. Howto set 7–E–1 instead of N–8–1 for paging?
- Q98. Sending Very Large Files gives Job time limit exceeded?
- Q99. Howto deinstalling HylaFAX
- Q100. Re: BUG when device has name ’xxx_yy’ ?
- Q101. Re: Distinctive Ring Support ?
- Q102. Re: Faxing from a PC?
- Q103. Re: Files in /var/spool/fax/docq ?
- Q104. Problem accessing fax services by clients?
- Q105. How to set passwd for remote users ?
- Q106. Installing the v4 pl0 Binary dist under Linux Slackware 3.0?
- Q107. Where is the file pagermap?
- Q108. Howto set pagerMaxMsgLength?
- Q109. HylaFAX and Short Message Service in Germany?
- Q110. Howto restrict outbound usage in v4.0?
- Q111. Howto re–use failed jobs from the docq?
- Q112. Howto setting up the syslog daemon?
- Q113. Howto distinguish which files have been received on which devices
- Q114. UUCP locking in Solaris x86, ...
- Q115. AT+FAP=? gives ERROR?
- Q116. Fonts for HylaFAX?
- Q117. Howto prevent modem data connection for security?
- Q118. FIFO Permission problem with faxanswer?
- Q119. Start faxserver if reboot?
- Q120. I can’t remove a job?
- Q121. modem state for other programs?
- Q122. Where to get "egetty" for FAXSETUP?
- Q123. The truth about egetty/vgetty
- Q124. Anyone done a faxback system?
- Q125. faxgetty and ringback?
- Q126. Waiting for modem to come available?

CONTRIBUTED SOFTWARE

- Q127. terminal–based sendfax interface available
- Q128. Dirk’s fax mail gateway package
- Q129. TCL/Tk GUI front–end to FlexFAX/HylaFAX
- Q130. Macintosh client for HylaFAX
- Q131. Announce: (Mac users: lw360f)
- Q132. Windows 3.1 client for FlexFAX/HylaFAX

Q133. HylaFAX client for Win95?

TROUBLESHOOTING

Q134. What does it mean to get CONNECT 19200 when I try to send a fax...?
Q135. Encoding errors in facsimile received with my Everex 24/96E?
Q136. Converting received facsimile with fax2ps generates warnings?
Q137. What does +FHNG:2 mean?
Q138. [SunOS 4.1.x] Getty aborts with Interrupted system call?
Q139. What do I need to do to share a tty line between fax and data calls?
Q140. How do I diagnose the following PostScript conversion problem?
Q141. Why do my transmitted faxes appear squished at the receiver?
Q142. Need help with phase error while receiving?
Q143. Unrecognized Transparent data command (code 44)?
Q144. Unspecified Transmit Phase C error (code 40)?
Q145. Where I can get a list of all the error codes?
Q146. Troubleshooting
Q147. Can't send FAX from ZyXEL to some machines?
Q148. faxaddmodem problems on Linux
Q149. Certain faxmachines can't receive?
Q150. Problems while sending a PS document generated by Frame, word 7.0, ...
Q151. Unable to set session parameters on INDY
Q152. Courier V.everything – 2DMR encoding
Q153. Problems with FAA=1 ?
Q154. I couldn't find it anywhere howto specify the FAXSERVER
Q155. Problems with HylaFAX and incomming data call
Q156. Problem with BOCA MV.34E modems AT+FCLASS=?
Q157. I've problems with data inbound calls
Q158. I've access problems for files in the spooling area
Q159. Unable to set RT scheduling parameters ...
Q160. ReTrainNegative Problem with some FAX–machines
Q161. I have a problem with TSI in HylaFax
Q162. Winflex does not put COMMENTs on my cover page?
Q163. Problems sending PS from WinFlex in Win95 ?
Q164. Bad EOP response to blank page ?
Q165. Communication between WinFlex and HylaFAX
Q166. chown(2) problems in HylaFAX on SCO, HP–UX, ...
Q167. I got code50 during send operation?
Q168. Waiting for modem to come ready?
Q169. Do I _have_ to install BSD printf?
Q170. document conversion script was not found?
Q171. Faxgetty dies with signal 15?
Q172. faxgetty is spawning too rapidly?
Q173. Access problems in the spooling area?
Q174. Why are my tiff files corrupted?
Q175. Problems after Un–taring a binary distributions?
Q176. Bad exit status 0400 for "bin/faxrcvd ..."

- Q177. Problems with TAP service provider?
- Q178. [Linux:] can't load library 'libg++.so.27'
- Q179. Waiting for modem to come ready?
- Q180. Can I still run HylaFax without mawk?
- Q181. Linux: hfaxd children dying with signal 11?
- Q182. Rockwell chipset (Zoom modems)

MISCELLANEOUS STUFF

- Q183. Re: Fax to FAx through Internet ?
- Q184. PPP autodetection in faxgetty ?
- Q185. Serial Port Scanner for Unix??
- Q186. Where can I get CCITT test patterns?
- Q187. Where did FlexFAX/HylaFAX come from (and other comments)?
- Q188. HylaFAX Use and Copyright

Q1: What is HylaFAX?

Q1. *What is HylaFAX?*

A1. HylaFAX is a facsimile system for UNIX systems. It supports:

- sending facsimile
- receiving facsimile
- polled retrieval of facsimile
- transparent shared data use of the modem
- sending messages to pagers

Facsimile can be any size (e.g. A4, B4), either 98 or 196 lpi, and transmitted/received as either 1D–encoded or 2D–encoded facsimile data (2D–encoded data is frequently more compact and hence takes a shorter time to communicate). Any modem that supports one of the standard interfaces for facsimile operation can be used; i.e. any Class 1, Class 2, or Class 2.0 modem.

Outgoing documents can be any format; the sendfax program uses a rule–based definition file similar to the System V **/etc/magic** file to deduce document types and to decide how to convert each document to a form suitable for transmission (either PostScript or TIFF/F). Automatic cover page generation is supported and users can easily tailor cover pages to their environment. A simple text–based phonebook database is supported by *sendfax*. Information is also provided on how to trivially setup an email to fax gateway service.

Incoming facsimile are stored in a receiving area as TIFF/F (read ‘‘*TIFF Class F*’’) files and may be automatically delivered by mail and/or printed. A fax server status program, faxstat, can be used to monitor the send and receive queues, as well as the state of facsimile servers.

Fax modems may be shared with outgoing data communication applications that honor the "UUCP locking protocol". These applications typically include: *cu*, *tip*, *kermit*, *uucp*, *slip*, and *ppp*. The system can also be configured so that incoming data calls cause the system to invoke the standard system getty or ttymon programs.

The software is structured around a client−server architecture. Fax modems may reside on a single machine on a network and clients can submit an outbound job from any machine that can communicate with the machine on which the modems reside. Client software is designed to be lightweight and easy to port; imaging can be offloaded to the server or done on the client. (Imaging is, however, typically done on the server because it simplifies administration.)

Clients and server communicate over a protocol which is similar to *ftp* and you may also use *ftp* or *telnet* to communicate to the server directly. Actually there are clients for **Unix**, **WIN−3.x**, **Win95** and **Mac**.

An access control mechanism is included to control which users on which machines may submit jobs.

Multiple modems on a single server machine are effectively scheduled for high throughput. Broadcast faxing is well−supported through optimal imaging of transmitted documents and the effective scheduling of modem resources. Support is provided for scheduling jobs during off−peak hours based on the destination phone numbers (e.g. long distance calls may be scheduled for off−peak phone rates). An access control mechanism can be used to restrict the class of phone numbers called so that, for example, calls to emergency services such as 911 can be rejected out of hand.

The server requires a PostScript to facsimile imaging utility for useful operation (otherwise, only pre−imaged facsimile may be transmitted.) A Display PostScript−based imager is provided for IRIX 4.x− and 5.x−based systems. For other systems, a Ghostscript−based version can be built from the GNU sources.

HylaFAX is freely available under copyright in complete source form. It may be used in commercial applications in part or in whole without charge. There are binary distribution packages or other formats for several Unixes.

BTW: You should call it **‘‘HylaFAX’’** and not something like Hylafax, HYLAFAX, HYLAFax, HYLAfax, HyLaFAX, HylaFaX, HylaFax, Hylafax, hylaFAX, hylaFAx, hylaFax, hylafax ...

Do you know the movie *Barb Wire*, what Barb said and what happend with the guy who called she Baby :−) ?

Q2: Why should I use HylaFAX instead of some other fax package?

Q2. *Why should I use HylaFAX instead of some other fax package?*

A2. HylaFAX is designed to be very robust and reliable. The fax server is designed to guard against unexpected failures in the software, in the configuration, in the hardware, and in general use. HylaFAX uses an intelligent scheduling policy that attempts to recognize different types of failures and optimize retry attempts. An important design goal is that users must never worry about transmit jobs being lost or mishandled: jobs are either completed successfully or the submitter is notified what happened to their job *and why the job failed*. If you are willing to shepherd your facsimile transmissions then other software packages may be more suitable for you.

HylaFAX supports a wide variety of modems and is designed to support **any** Class 1, Class 2, or Class 2.0 modem *without modification to the source code*. If you have a modem that provides only a Class 1 interface then HylaFAX is likely to be the only freely available software package that will work with your modem.

HylaFAX supports multiple modems and heavy traffic load. If you expect to send or receive more than 1 or 2 facsimile a day, then HylaFAX is likely to be the best package for you to use.

HylaFAX is expressly designed to be highly configurable *without modification or access to the source code*. The software comes with extensive documentation to assist in understanding how the software functions and how to configure it.

HylaFAX is freely available. There is no GNU copyleft policy. There are no requests for remuneration, constraints on use, or constraints on incorporation into products (compare this with other ‘‘*freely available fax packages*’’). The software copyright only restricts the use of the author’s name and/or Silicon Graphics’ name in any advertising; consult the copyright text for details. There are binary distribution packages or other formats for several Unixes.

Q3: Which modems can be used with HylaFAX

Q3. *Which modems can be used with HylaFAX*

A3. HylaFAX is intended to be used with fax modems. Fax modems are not the same as data modems though most contemporary data modems also include support for fax communication. HylaFAX should work with any Class 1, Class 2, or Class 2.0 fax modem. Wherever possible HylaFAX works around known modem problems or restricts modem usage in order to provide a functioning system.

The following is a list of modems that have been used with HylaFAX. There are likely others modems that have been tried and/or are being used with HylaFAX; this list shows only those that have some form of support in the software or that have been publicly reported as *functional* (though beware that what is functional to one person may not be functional to you). Consult the Modems section of this documentation for known modem bugs and gotchas or follow the links in the table to find information for a particular modem.

Note that modems based on off–the–shelf parts (as opposed to custom DSP–based implementations) such as those produced by Rockwell are usually plug compatible when it comes to fax usage. HylaFAX includes configuration files for modems based on modem parts from Rockwell: RC96AC, RC144AC, RC144DP, RC32ACL, RC224A, and RC288DPI parts; Exar; and Cirrus Logic. Writing a configuration file for a modem that is not directly supported is straightforward.

Manufacturer	Model	Notes	Class
AT&T Paradyne	DataPort 14.4	+	1,2
Boca Research	M1440E		1,2
Boca Research	M1440E/RC32ACL	@	1,2
CPI	ViVa 14.4/FAX		2
Creatix	LC 144 VF	o	2.0
Digicom	Scout+	+	1
Dynalink	Dynalink 1414VE		2
E–Tech, Inc.	P1496MX 5.06–SWE		2
Everex	EverFax 24/96D, 24/96E		2
GVC	MaxTech 28800		1,2
Hayes	Optima 144, Optima 28800		1
Hayes	Optima 2400+Fax96		2
Intel	SatisFAXtion 400e		1
Logicode	Quicktel Xeba 14.4		2
Motorola	Lifestyle Series 28.8		1
Multi–Tech	MT1432BA, MT224BA, MT2834BA	+,*	2
Multi–Tech	MT1432BG	+	2
Multi–Tech	MT1932ZDX, MT2834ZDX	+	2
Nuvo	Voyager 96424PFX		1
Olitec France	Olicom Poche Fax Modem 2400		2
PPI	PM14400FXMT, PM14400FXSA		2
PPI	PM28800XFMT		2
Supra	SupraFAX v.32bis		1,2
Supra	SupraFAX v.32bis/RC32ACL	@	1,2
Telebit	T3000, WorldBlazer	+	2
Telebit	QBlazer		2
Tricom	Tornado28/42		1
Twincom	144/DF		1,2
UDS	FasTalk Fax32		1
USRobotics	Courier		1,2.0

USRobotics	Sportster		1,2.0
Yocom	1414E		2
Zoom	VFX		1,2
Zero One Net.	ZyXEL U1496	+	2,2.0
Zero One Net.	Elite 2864		1, 2, 2.0

Legend:

* There are apparently many variants of the MT1432BA, the following models are known to work: MT1432BA, MT1432BA/A, MT1432MK, MT1432PCS.
@ /RC32ACL refers to second−generation products made with the Rockwell RC32ACL part and different firmware.
+ *Modem is recommended for use with this software.*
o *Use ModemWaitForConnect.*
1 Modem supports the TIA/EIA−578 "Class 1" specification (see Class 1 Support for **important information on system requirements for this support**).
2 Modem supports the TIA/EIA−592 draft SP−2388−A of August 30, 1991 (see Class 2 Support for caveats).
2.0 Modem supports the TIA/EIA−592 "Class 2.0" specification (see Class 2.0 Support).

Q4: What machines does HylaFAX run on?

Q4. *What machines does HylaFAX run on?*

A4. HylaFAX is intended to run on any UNIX system that supports a particular set of features: FIFO special files, BSD−style sockets and the TCP/IP communication protocols, BSD−style file locking (flock) or equivalent functionality from which it can be emulated (fcntl, lockf), and POSIX 1003.1−style interfaces, including termios for manipulating tty devices.

The following systems are known to have these features: AIX v3.x, v4.x BSD/386, FreeBSD, HP−UX 9.x, 10.x IRIX, ISC4.0, Linux, OSF/1 V1.3 and V3.0, SCO 3.2v4 with TCP/IP, SCO ODT 3, SCO 5.0, Solaris 2.x, SunOS 4.1.x, SVR4.x on an Intel x86 and MIPS (UnixWare, Onsite, SINIX, ...), Ultrix 4.4.

There are binary (precompiled) versions available for some of these machines, see the HOWTO.

Q5: What is the current version/status of HylaFAX?

Q5. *What is the current version/status of HylaFAX?*

A5. HylaFAX is distributed in two versions: a *released version* with patch levels to fix small bugs or problems and a *beta version*. The current released version is **v4.0pl1**; actually there is no beta version.

Released versions represent software that has been carefully tested on all supported platforms and is believed to compile, install, and function correctly (except where noted in the distribution documentation). Released versions take a long time to create. The last few released versions have been at least 6 months apart.

Beta versions are test versions of the software that are distributed more frequently than released versions. These versions include new facilities and/or support for new systems. They are typically tested on one or two systems, but not as thoroughly as released versions and not on all supported systems.

The current released and beta versions are always displayed on the HylaFAX home page.

See also here for how to identify which version of HylaFAX you have.

Q6: What are the differences between v4.0pl0 and v4.0pl1

Q6. *What are the differences between v4.0pl0 and v4.0pl1*

A6. **Date**: *Fri, 27 Dec 1996 13:04:27 +1300 (NZDT)*
From: *Jonathan Chen <jonc@pinnacle.co.nz>*
Subject: *Re: Differences?*

```
On Fri, 20 Dec 1996, Ralph Jennings wrote:

> What are the differences in hylafax4.0p0, and hylafax4.0p1 ?
>  Just bug fixes, or more feature changes?  What was added?
>  What was lost?
>
> Or,
>
> Where can I find this info myself, so that I don't have to
>  bug you guys?  I can't find a CHANGES file, or anything.
>  Am I just looking in the wrong place?

It's located in the accompanying HTML documentation in the source
release. For V4.0pl1, this is .../html/v4.0beta22.html. Alternatively,
you get it off the net from:
```

```
        http://www.vix.com/hylafax/
and follow the link on "Latest Release:"
--
Jonathan Chen                        e-mail : jonc@pinnacle.co.nz
```

Q7: Where can I get a binary/source distribution of HylaFAX?

Q7. *Where to get HylaFAX*

A7. HylaFAX is typically obtained by public FTP on the Internet. It is also available on a number of public domain and shareware−style CD−ROMs. The master distribution site for HylaFAX is the host ftp.sgi.com.

- Obtaining the Software by FTP on the Internet
- Obtaining the Software by Electronic Mail
- Obtaining the Software Within Silicon Graphics

All the HylaFAX documentation is online on the WWW. Installation (source distribution) describes how to unpack and install the source distribution images. Installation (binary distribution) describes what to do with a binary distribution. The HylaFAX home page is the place to go for *all* the HylaFAX documentation.

There are several mailing lists for HylaFAX users; see here for how to subscribe.

Using public FTP on the Internet

From ftp.sgi.com (master distribution site)

The *source code* is available for public FTP on

ftp.sgi.com[192.48.153.1]:
sgi/fax/source/

For example,

```
% ftp -n ftp.sgi.com
....
ftp> user ftp
...
ftp> cd sgi/fax/source
ftp> binary
ftp> get hylafax-v4.0pl1-tar.gz
```

Software is available in *released form* and in *beta form*, (*none presently* *available*). Beta software differs from released software mainly in the level of testing that has been done on non−Silicon Graphics platforms. Any files in the **source** directory of the form:

```
hylafax-<version>-patch-<XX>
```

are shell scripts that can be used to apply patches to the specified <*version*>. Files with the suffix ".Z" are compressed with compress, files with the suffix ".gz" are compressed with GNU gzip.

If you are uncertain about what a patch script does just look at its contents; there is a comment at the top that says what version of the software the script is intended to patch. The HylaFAX home page also contains a link to release notes for the latest patch file.

The <*XX*> sequence numbers in the patch filenames indicate the order in which the patches must be applied; e.g. hylafax−v3.0−patch−01 must be applied *before* hylafax−v3.0−patch−02.

Binary distributions and alternate sites

Many binary distributions are available on the master FTP site:

`ftp.sgi.com[192.48.153.1]:`
`sgi/fax/binary/`

These include:

- Silicon Graphics *inst'able images*
- SVR4 *pkg images* for x86 systems
- HPUX−9.01 for HP9000/7xx systems
- Ultrix 4.4 for DecStation−5000 systems
- SunOS 4.1.x for SPARC systems

Actually there are binary distributions for the following list of systems. Each of them comes with an installation guide (**INSTALL−***):

```
INSTALL-hylafax-i386-linux-v4.0pl1
hylafax-i386-linux-v4.0pl1-1.tar.gz

INSTALL-irix5-v4.0pl1
hylafax-irix5-v4.0pl1-inst.tar

INSTALL-irix6.2-v4.0pl1
hylafax-irix6.2-v4.0pl1-inst.tar

INSTALL-hylafax-v4.0-sco3.2v4.2
hylafax-sco3.2v4.2-v4.0pl1-cpio.gz

INSTALL-hylafax-sco3.2v5.0-v4.0pl1
hylafax-sco3.2v5.0-v4.0pl1-cpio.gz
```

```
INSTALL-sparc-sunos5.5-v4.0pl1
hylafax-sparc-sunos5.5-v4.0pl1-pkg.gz

INSTALL-sunos4.1.4-v4.0pl1.html
hylafax-sunos4.1.4-v4.0pl1-tar.gz

INSTALL-x86-svr4.2-v4.0pl1.html
hylafax-x86-svr4.2-v4.0pl1-pkg.tar.gz

INSTALL-mips-sinix5.42-v4.0beta018.html
hylafax-mips-sinix5.42-v4.0beta018-pkg.tar.gz
```

[*This list may be out of date, check the FTP directory.*]

Alternate sites that either mirror the master FTP site or that have specific binary distributions are:

Some of these sites had binary distributions of FlexFAX, they will presumably have HylaFAX distributions soon.

SunOS 4.1.x binary distributions are available from:

remarque.berkeley.edu[128.32.152.164] (???)
/pub/shipley

ftp.celestial.com[192.136.111.2]
/pub/flexfax/sun-ports

SCO binary distributions are available from:

ftp.celestial.com[192.136.111.2]
/pub/sco-ports/unix

FreeBSD binary distributions are available from:

freebsd.cdrom.com[192.216.191.11] (???)
/pub/FreeBSD/packages

NetBSD binary distributions are available from:

ftp.netbsd.org[128.32.138.88] (???)
pub/NetBSD/packages/binaries/NetBSD-current/i386

If you are unable to locate the materials you want at one of the above sites, consult the archie resource location service to find copies close to your system.

Obtaining the Software by Electronic Mail

If you cannot use FTP at all, there is a service called ‘‘*ftpmail*’’ available through a variety of systems including **decwrl.dec.com**: you can send electronic mail to one of these machines and the host will retrieve the requested files using FTP and then send you the files via electronic mail. To find out more about the ftpmail service, send a message to ftpmail@decwrl.dec.com whose body consists of the single line ‘‘*help*’’ or check out this sample response to the help query.

Obtaining the Software Within Silicon Graphics

Internal to Silicon Graphics there are inst’able images on the host **dist.engr** in the directory **/sgi/hacks**. Thus you can do something like:

```
% inst -f dist.engr.sgi.com:/sgi/hacks/hylafax
```

to install the latest version of the software on your machine.

Q8: What documentation exist for HylaFAX?

Q8. *What references exist for HylaFAX?*

A8. HylaFAX comes with lots of documentation that is also available via the World Wide Web: http://www.vix.com/hylafax/.

A collected version of the FAQ is available from hylafaq.tar.gz. Unpack the FAQ and follow the hints in the README file.

There is also a mailing list of HylaFAX users; see the chapter in the documentation for information on joining the list.

Q9: What other related software is available?

Q9. *What other HylaFAX software is available?*

A9. HylaFAX is purely a command−line−based facsimile transport system; much like mail transport packages such as sendmail and MMDF. There are several freely available packages that provide a front−end to the HylaFAX software for sending facsimile and/or for monitoring the HylaFAX send and receive queues:

- faxtool is a GUI package written by Tom Corson for Sun systems; it requires XView.
- viewfax is an excellent viewfax program written by Frank Cringle.
- winflex is a Windows 3 client written by Peter Bentley

- faxmgr2 is a successor to *faxmgr* written by Chris Beekhuis; it too is available only in a binary installable for for SGI systems. faxmgr2 is available in a variety of locations including several CD–ROMS distributed to SGI customers (Developers Toolkit, IndiZone, etc.)
- tkhylafax is a TCL/Tk–based GUI package written by Andy Moskoff.
- sfax is a simple, terminal based interface to the HylaFAX sendfax program written by Ken Hornstein.
- macflex is a Macintosh client written by Rob Newberry.
- whfc is a client for Win95 written by Ulrich Eckhardt.

A bit unrelated, but perhaps interesting, is the "Remote Printing Experiment" being conducted by folks on the Internet. This provides a distributed fax delivery service that uses email to relay facsimile to a local site for delivery. For info about that stuff send mail to tpcfaq@info.tpc.int or visit their WWW site http://www.tpc.int/.

Q10: What should I do if I have a problem?

Q10.
What should I do if I have problems?

A10.
Read (again) the **README** file and the HTML–based documentation included in the HylaFAX distribution (this information is provided online through the HylaFAX Home Page.) In particular, read the Troubleshooting section in the documentation.

Check this FAQ.

See if a similar problem is listed in the HylaFAX mailing list archives. Summary lists of articles sent to the mailing list are posted periodically and there is an on–line interface to the mailing list archives that supports searching.

As a last resort: submit your problems to other users:

- To the HylaFAX mailing list; see here for information on submitting bug reports.
- To the USENET newsgroup comp.dcom.modems or comp.dcom.fax, but only if it a problem with the modem or a fax machine.

Q11: What version of HylaFAX do I have?

Q11.

How to tell which HylaFAX version you have

A11.

If you have need to refer to this specific software, you should identify it as:

```
HylaFAX v<version><n>
```

where <*version*> is found in the file **VERSION** and <*n*> is the number recorded in **dist/hylfax.alpha**. This string is also prominently displayed when you run the configure script to setup the software for compilation and each time the faxq scheduler process is started (look in the file where syslog messages are recorded).

If you have a binary distribution for a Silicon Graphics machine, <*version*> and <*n*> are displayed in "`versions -n hylafax.sw`"; for example:

```
I = Installed, R = Removed

   Name                 Version     Description

I  hylafax              1006004075  HylaFAX Facsimile Software, Version 3.0beta
I  hylafax.sw           1006004075  HylaFAX Software
I  hylafax.sw.client    1006004075  HylaFAX Client Software
I  hylafax.sw.server    1006004075  HylaFAX Server Software
```

Here <*version*> = 3.0beta and <*n*> = 075 (the right three digits in the Version column), so this is HylaFAX v3.0beta075.

If you have a binary distribution for a SVR4.x you can use the pkginfo(1M) command to get the version number and the PSTAMP.

Q12: How should I report bugs?

Q12.

How should I report bugs?

A12.

HylaFAX bugs and questions should be sent by mail to the HylaFAX mailing list flexfax@sgi.com. When corresponding about the software please always specify:

- What version of HylaFAX you have
- What compiler (including version) your are using
- What system you are running on: system type and OS version
- What kind of modem and the modem firmware revision
- A description on how to reproduce the problem
- A minimal trace log that shows your problem

For example: "HylaFAX v4.0pl1 under Solaris 2.3 with gcc 2.6.3; ZyXEL 1496E with 6.11a firmware."

Do not send large trace log or PostScript files to the mailing list; the list is quite large.

Do not send traces with binary i/o or timer tracing.

Do not send traces without time−stamps and do not remove lines in the trace.

Please read the documentation about Troubleshooting problems.

Q13: How do subscribe to the HylaFAX mailing list?

Q13.

How to subscribe to the HylaFAX Mailing List

A13.

There are two mailing lists for users of the HylaFAX software:

- flexfax@sgi.com, a public list for all users of the HylaFAX software;
- flexfax−announce@sgi.com, a low volume list where announcements of new versions of HylaFAX are posted.

Note that `flexfax@sgi.com` tends to have a fair amount of traffic about the server−side software; if you are not running a fax server it may not be worth joining. Beware also that this mailing list has many people on it. Please take this into consideration when posting notes to it; i.e. *avoid posting large trace logs and the such*. Also, when corresponding about this software please always specify:

- what version you have (check here if you are unsure of your software version),
- what system you're running on, and,
- if the problem is modem−related, identify the modem and the firmware revision.

For example: "HylaFAX v2.3.0alpha99 under Solaris 2.3 with gcc 2.5.7; ZyXEL 1496E with 6.11a firmware."

Note that there is no need to subscribe to both the `flexfax` and `flexfax−announce` mailing lists; postings to the announcement list are automatically fed to the normal `flexfax` list.

If you want to subscribe to any of these lists, send electronic mail to flexfax−request@sgi.com.

Q14: Volunteers to do binary distributions wanted!

Q14.

Volunteers to do binary distributions wanted!

A14.

Date: *Tue, 20 Aug 1996 15:29:24 −0700*
From: Sam Leffler <sam@hyla.chez.sgi.com>
Subject: *volunteers to do binary distributions?*

```
The v4.0 release is coming real soon and some of the folks that did
binary distributions of v3.0 are unavailable to help out for v4.0.  If
you are interested in helping other folks out by putting together a
binary distribution of HylaFAX v4.0 and can answer yes to the following
questions then please send me mail.

1. Do you run one of the following systems:
   o AIX
   o FreeBSD
   o HPUX
   o NetBSD
   o Ultrix
   o something other than IRIX, SunOS, or Solaris
2. Are you running a recent v4.0 beta distribution that you built from
   source code?
3. Do you have reasonable connectivity for electronic mail (if you ring
   up to receive mail you get it at least twice a day)?
4. Do you have time and feel comfortable acting as a "first contact" for
   problems specific to a binary distribution?

Remember that the goal here is to provide folks with binary distributions
that are simple to install and use.  I can provide an FTP site for the
distribution or you can keep it where you want it and I'll provide a link
to your site.  I don't tell you how to put your distribution together,
that's up to you--though I'm willing to offer advise if requested.  My
only requirements are that:

1. You must include installation instructions specific to your distribution.
2. You must identify yourself as the author and primary contact for problems
   specific to the distribution (HylaFAX problems should go the mailing
   list unless you care to answer questions yourself).
3. You must be willing to update your distribution if a serious problem is
   found (either that or not be insulted if someone takes over for you if
   you are unable to comply).

Basically all the above just comes down to packaging up a running system,
writing some simple notes (easy to crib from existing installation notes),
and then doing some low-key testing to make sure you've got something that
works.

I track FTP statistics on ftp.sgi.com and I can assure you that binary
distributions of HylaFAX are a hot item.  Putting together a binary
distribution is easy and really helps out folks so consider this your
opportunity to pay me back for the all the free work you've gotten from me!
```

```
BTW, I'm assuming that the folks presently doing Solaris and SunOS
distributions intend to do a v4.0 released version--if this is wrong
please let me know asap.

        Sam
```

Q15: How is HylaFAX actually maintained?

Q15.

How is HylaFAX actually maintained?

A15.

Date: *Thu, 7 Nov 1996 19:20:30 −0700 (MST)*
From: Steve Williams <steve@genie96.com>
Subject: *Re: Little−endian tiff fails silently in sendfax*

```
Hi All,

As the creator of the binary hylafax v4.0pl0 distribution for AIX, I can
say that the software is still being maintained.  There is communication
between those of us who have put together the binary distributions for
varios platforms.

There should shortly be a patch to bring v4.0pl0 up one patch level.  It
is currently being tested by those of us that have put together the
binary distributions.  ( Don't ask me, I don't have physical access  to
what the patches fix at this moment -- I am at home ).

I believe that Sam no longer subscribes to the general mailing list... thus
his silence.  It might be old age, but I am sure that I saw a statement to
that effect come across this list.  As for patches..., I am not sure what
should be done.

        ....

--
        Steve Williams, Calgary, Alberta, Canada
        Genie Computer Systems Inc.
        steve@genie96.com
```

Q16: Where are the HylaFAX mailing list archives now?

Q16.

Where are the HylaFAX mailing list archives now?

A16.

Date: *Fri, 7 Jun 1996 09:43:50 −0700 (PDT)*
From: Bill Campbell <bill@celestial.com >
Subject: *Re: Mailing list archive*

```
>
>Hello,
>Can anybody tell me the locatation of the flex(hyla)fax mailing list archive
>(ftp or http access)?
>
We have maintained archives of the list on ftp.celestial.com in the
/pub/mailing-lists/YYMM directories for several years.  We switched to
majordomo to maintain the list in April and the archives from April
1996 through the present are available directly by sending commands to
majordomo@celestial.com or flexfax-request@celestial.com.

Ftp is probably the best way to get the back archives rather than
e-mail since the files for each month are quite large.  Our past
policy has been to gzip the archives at the end of each month, but I'm
planning on uncompressing all our mailing list archives so that we can
build WAIS indices (when this happens depends on disk capacity an my
time to play with it).

To get an index of documents send mail to majordomo@celestial.com with
this in the body of the message:

index flexfax
end

Bill
```

Q17: HylaFAX Mailing List Archive is back

Q17.

HylaFAX Mailing List Archive is back

A17.

Date: *Wed, 23 Oct 1996 11:47:53 −0700*
From: Sam Leffler <sam@melange.engr.sgi.com>
Subject: *HylaFAX Mailing List Archive is back*

```
The searchable online archives of the mailing list are once again
operational.  This facility can be found at:

    http://www.vix.com/cgi-bin/mlaform/hylafax/Archives/?

as well as through a link on the HylaFAX home page:

    http://www.vix.com/hylafax/
```

```
The archive is updated directly from the mailing list traffic (i.e.
as soon each message reaches www.vix.com it is entered into the
database).  Searches are still only possible over message headers
but this usually is sufficient.  I'm aware of some problems in the
logic that determines whether one message is related to another;
if you encounter other problems please send me a note.

The MLA tools that support this facility are not presently available;
please do not send me mail asking for them.  If you're interested in
this stuff there will be a paper about them in the next Usenix conference.

        Sam
```

Q18: FAQ: Modem AT+Fxxx commands?

Q18.

FAQ: Modem AT+Fxxx commands?

A18.

Date: *Thu, 14 Nov 96 15:21:46 +0100*
From: Howard Schultens <hs@demeter.neuro−physiol.med.uni−goettingen.de >
Subject: *FAQ: Modem AT+Fxxx commands*

```
David Fordyce wrote, and he isn't alone:

>> BTW... Does anyone know the whereabouts of an online reference listing
>> and describing all the +Fxxx commands?  I've found bits and pieces at Hayes
>> and a few other places, but no "complete" list.  Thanks.

Try http://www.modems.com  an amazing, selflessly compiled (well, probably
somebody wants to earn money somewhere), useful web site with gobs of
information about modems.

Good luck,
```

Q19: Can I run HylaFax on my NT 4.0 Server?

Q19.

Can I run HylaFax on my NT 4.0 Server?

A19.

Date: *Tue, 10 Dec 1996 07:49:56 +0100 (MET)*
From: Matthias Apitz <guru@softcon.de >

Subject: *Re: HylaFax*

```
Mark Bradley wrote:

    Can I run HylaFax on my NT 4.0 Server?
    S.Mark Bradley
    Compucare Services

NO. (NT is not the answer, it's the question and the answer is NO :-))

        matthias
```

Q20: T.30 T2 timeout errors – where I can get more info on?

Q20.

T.30 T2 timeout errors – where I can get more info on?

A20.

Date: *Mon, 21 Oct 96 09:55:38 EDT*
From: *Glenn Burkhardt <glenn@aoi.ultranet.com >*
Subject: *Re: REMOTE HANGUP: T.30 T2 timeout errors*

```
> From: John T Wilder 312C M 209387
> To: flexfax@sgi.com
> Subject: REMOTE HANGUP: T.30 T2 timeout errors
>
> We've had a few instances of T2 timeout errors when receiving
> faxes.  Can someone explain what these timeout codes mean and
> tell me where I can get more info on them?
>
>       .....
>
>
The error codes are documented in the TIA/EIA-592 spec (Asynchronous Facsimile
DCE Control Standard - Service Class II), available from Global Engineering
Documents (800 854 7179)

You can also try to get the file "tr29fax.txt" on MultiTech's bulletin board.
However, there's really not a lot of infomation other than the text that
Hylafax prints out.  To really understand what's happened, you also need to
be familiar with the CCITT T.30 spec (also available from Global).

Even then, when I was having this problem with the ZDX, it took a MultiTech
engineer to figure out what the problem was and how to correct it.

You should contact MultiTech support, and determine if you can adjust the
carrier detect threshold on the MT1932ZDX in the same way you can on the
MT2834ZDX (viz., atS38=35), and see if it helps.
```

```
Also, they might have a firmware upgrade that will let you use 2D encoding.
```

Q21: Problems compiling HylaFAX on SCO Unix?

Q21.

Problems compiling HylaFAX on SCO Unix?

I'm having some problems compiling FlexFax on SCO Unix − in particular, I don't seem to have a **netdb.h** file, which means **FaxClient.c++** and **SendFaxClient.c++** won't compile. (This is with latest versions of SCO, TCP/IP and the SCO dev sys with gcc 2.4.5).

A211.

netdb.h is part of the TCP/IP DevSys from SCO and include in the Open Desktop Development System. It is not part of the standard Unix devsys.

I built flexfax−2.2 here with libg++−2.5.3 with no problems. I haven't tried the latest beta yet.

I have modified some of the system header files, and have patch files necessary to create these available on ftp.celestial.com. We also have flexfax−2.2 compiled there for SCO.

A212.

Date: *Tue, 06 Feb 1996 23:51:06 +0100*
From: *Torkel Hasle <torkel@bibsyst.no >*

SCO Unix 3.2.4.2 with TCP/IP 1.2.1 including TCP/IP dev.sys.

When compiling faxsend, I get unresolved refs. to tcdrain() and tcflow(). By include termio.h instead of terminos.h the two fuctions is redefines to ioctl, and the program links OK.

−regards
Torkel Hasle

Q22: Why is faxq maxing out CPU?

Q22.

Why is faxq maxing out CPU?

... I’m running Solaris 2.4 X86. Compiled hylafax with gcc/g++ 2.7.0. When I first run faxq it does not max out the CPU until I send the first fax. From then on it uses 99% of the CPU.

A22.

Solaris 2.4 X86 (as some other Unixes) has the FIFO−select bug. This bug causes faxq looping select(2) after the proc writing the FIFO has terminated. The workaround is setting

```
CONFIG_OPENFIFO="O_RDWR"
```

in config.site, **removing port.h**, re−configuring and re−building the faxserver.

BTW: There also other systems having this bug; e.g.: Linux kernels post 1.3.78

Q23: Building Hylafax For Unixware?

Q23.

Building Hylafax For Unixware

Does HylaFAX will compile on UnixWare 2.x with the CC / C++ ?

A23.

Date: *Fri, 10 Nov 1995 22:12:45 +0100 (MET)*
From: Matthias Apitz <guru@softcon.de >

The problem is that port/syslog.c does not compile on svr4.2. But port/syslog.c is not needed. I’ve had to change two things to compile v3.0pl1 on UnixWare2.0x:

I’ve created :

```
osfcn.h as "#include <unistd.h>"
```

to use the CC of UnixWare2.0x;

the syslog problem went away with MACHDEPLIBS="−lgen" in config.site

---

Q24: SendPage − Parity options, where?

Q24.

SendPage − Parity options, where?

I am looking for assistance with getting paging to work with a provider whose paging terminal is 8 bits no parity. I have read in the archives that it is possible to hack the code to make this work but I did not find a reference with the actual code.

A24.

Date: *Thu, 21 Dec 1995 12:17:00 −0600*
From: *Robert Moyer <Rob.Moyer@MHDI.COM >*

The following answer to my recent question about setting parity for pagesend was right on the money, thanks to Tom Szybist and thanks to others whose answers I may not have received yet.

−−−−− Begin Included Message −−−−−

I didn't cc the list because I haven't tried this but line 794 of faxd/pageSendApp.c++ has:

```
        return (ModemServer::setupModem() && setParity(EVEN));
```

I believe if you change EVEN to NONE that will do what you want.

Check out ModemServer.c++ for the setParity routine and ModemServer.h for values of EVEN, ODD, and NONE.

This table is also in ModemServer.c++ so that also gives me some confidence:

```
static const char* parityNames[] = {
        "8 bits, no parity",    // NONE
        "7 bits, even parity",  // EVEN
        "7 bits, odd parity",   // ODD
};
```

Hope that helps

Tom Szybist
szybist@boxhill.com

−−−−− End Included Message −−−−−

Q25: Building HylaFAX with LD_RUN_PATH

Q25.

LD_RUN_PATH (Re: hylafax with gs/tiff drivers)?

A25.

Date: *Thu, 28 Sep 1995 09:18:22 −0500*
From: *Jeff A Stephens 312C M 402424 <j_stephe@tolstoy.mdc.com>*
Subject: *Re: hylafax with gs/tiff drivers*

```
Thanx alot,

The -R option was just what the doctor ordered.  For those of you with
a sun/solaris setup, this is the best option!!  And, watch out for the
sparcworks/ansi c compiler with ghostscript...I used gcc with no problems.
Thanx again

Jeff

> On Sep 27, 21:31, raoul@MIT.EDU wrote:
> > Subject: Re: hylafax with gs/tiff drivers
> >
> > When you compile ghostscript, add -L/usr/openwin/lib to your load
> > flags. I find that this works much better.
>
> Also, some folks may like to prepend:
>
>    LD_RUN_PATH=/usr/openwin/lib ...
>
> or append:
>
>   -R/usr/openwin/lib
>
> to the link command.  This reduces the need for setting $LD_LIBRARY_PATH,
> such as is needed when using this Sun-patched version of clock for OW3.0:
>
>     sjk@novelty> ldd $OPENWINHOME/bin/clock
>           -lxview.3 => not found
>           -lolgx.3 => not found
>           -ldeskset.0 => not found
>           -lX11.4 => /usr/lib/libX11.so.4.11
>           -lc.1 => /usr/lib/libc.so.1.9.8
>           -lce.0 => not found
>           -ldl.1 => /usr/lib/libdl.so.1.0
>
> I typically leave LD_LIBRARY_PATH unset and prepend:
>
>   env LD_LIBRARY_PATH=
>
> as needed for applications with library files in "non-standard" directories,
> or to override defaults.  Something to consider if you have the luxury in
> your environment.
>
> -sjk
>
> --
> Scott J. Kramer                                       Cisco Systems, Inc.
> UNIX Systems Administrator                    Advanced Customer Systems
>                                       170 W. Tasman Drive
> +1.408.526.8738                                       San Jose, CA  95134-1706
```

Q26: Re: calling last chance on bug fixes ?

Q26.

Re: calling last chance on bug fixes ?

A26.

Date: *Fri, 26 Jul 1996 18:43:42 −0700*
From: Sam Leffler <sam@hyla.chez.sgi.com>
Subject: *Re: calling last chance on bug fixes*

```
    To:  Sam Leffler
    Subject:  Re: calling last chance on bug fixes
    Cc:  flexfax@sgi.com
    Date: Sat, 27 Jul 1996 08:11:55 +0800
    From:  The Doctor

    I am sorry but I don't see how you can say "I know of no problems".  I
    still haven't managed to build it for Linux.  What about other people,
    has anyone managed to build it and got it working for Linux.

I have seen many notes from people that have built the software under
Linux.  As I said before if you don't provide a way for me to reproduce
or diagnose a problem then I have no option but to ignore it.  Given
that I don't use Linux and that other folks have told me they compile
the code under Linux I consider any complaint of this sort to be a local
configuration problem.  Please understand that it's not my responsibility
to diagnose other folks problems.  I'm simply trying to get stuff in
good shape for general distribution.  If folks using non-SGI systems
don't contribute towards this goal then the software will go out not
working on their systems (period).  As I alluded to in my original
posting I intend to severely reduce my involvement in this software
once v4.0 is released.  Specifically I intend to respond only to bug
*fixes* that are sent to me.  Folks will be on their own to diagnose
problems and come up with fixes.  I've been supporting this software
for many years now and I've decided that it's time to stop doing this.
Hopefully other folks will step up and help fill in.  The bottom line
is I'm giving folks one last chance to get help from me before I go away.
But if you want help then you've have to provide me with enough
information to diagnose a problem--I don't have time to waste chasing
down every vague complaint.

        Sam
```

Q27: adding the g++ include path?

Q27.

adding the g++ include path ?

A27.

Date: *Mon, 26 Aug 1996 09:00:58 −0700*
From: *Sam Leffler <sam@hyla.chez.sgi.com>*
Subject: *Re: hylafax−v4.0beta020*

```
    To:  Peter Mastren
    Subject:  Re: hylafax-v4.0beta020
    Cc:  flexfax@sgi.com
    Date: Sun, 25 Aug 1996 21:14:15 PDT
    From:  Mike Broxterman


    Peter, I had the same problem with my Linux system, I got around it by
    adding the g++ include path in the "defs.in" file.

    line 207: GC++INCS   = -I. -I${DEPTH} -I${SRCDIR} -I/usr/g++-include \
                                                  ^^^^^^^^^^^^^^^^^^

To the best of my knowledge, any gcc driver configured to support C++
automatically searches the target location for the g++-include directory
when compiling C++ code.  If you have to explicitly add this to the
search path then it indicates to me that gcc was incorrectly built or
is improperly configured.

BTW, the intended way to add includes and the like is not by editing the
input files used by configure but rather to set configuration parameters
prior to running configure--consult the documentation for specifics.

        Sam
```

Q28: Howto send fixes?

Q28.

Howto send fixes?

A28.

Date: *Mon, 19 Aug 1996 08:25:34 −0700*
From: *Sam Leffler <sam@hyla.chez.sgi.com>*
Subject: *Re: Sun Solaris, gcc and LD_LIBRARY_PATH*

```
If you, or anyone else, wants something added to configure then you need
to send me a patch.  I don't use AIX, Solaris, SunOS, HPUX, Linux, NetBSD,
FreeBSD, etc. so if I don't receive a patch to fix problems w/ these or
other systems then nothing happens.

Beware however that if you send me a patch to configure then be sure it
is either tied to the exact OS release or you are sure that it works for
all releases.  Sometimes the best thing to do is just document the change;
in which case a patch to the HTML documentation might be the right way to
go.
```

```
When sending patches I appreciate it if they are done against the latest
distribution.

        Sam
```

Q29: I seem to be missing file "new.h"?

Q29.

I seem to be missing file "new.h"?

A29.

Date: *Sun, 25 Aug 1996 17:40:50 −0700*
From: *"Scott J. Kramer" <sjk@cisco.com>*
Subject: *Re: hylafax−v4.0beta020*

```
On Aug 25, 18:35, Peter Mastren wrote:
> Subject: hylafax-v4.0beta020

> I seem to be missing file "new.h".  I can get by the configure problem by
> simply creating an empty "new.h" but then the build fails later while
> trying to build the 'util' subdirectory.  BTW, "make" doesn't stop after
> the compile failures in the 'util' subdirectory.

Looks like you're missing the libg++ header files, which include "new.h".
On my system:

    sjk@halo> locate new.h | fgrep g++-include
    /opt/gnu/lib/g++-include/new.h
    /opt/gnu/lib/g++-include/std/new.h

I'm not sure where they're normally installed on Linux... likely either in
/usr/lib/g++-include or /usr/local/lib/g++-include.

-sjk

--
Scott J. Kramer                                 Cisco Systems, Inc.
```

Q30: Build error on Solaris 2.5 with −pedantic−errors ?

Q30.

Build error on Solaris 2.5 with −pedantic−errors ?

A30.

Date: *Mon, 19 Aug 1996 09:12:38 −0700*
From: *Sam Leffler <sam@hyla.chez.sgi.com>*
Subject: *Re: Build error on Solaris 2.5*

```
    To:  flexfax@sgi.com
    Subject:  Build error on Solaris 2.5
    Date: Mon, 19 Aug 1996 10:01:56 CDT
    From:  David Birnbaum

        ...

    The second, however, is a more serious error which I am not able to fix:

    = util
    /usr/local/bin/gcc      -I.././zlib  -D__ANSI_CPP__ -I. -I.. -I.././util
    -I.././util -I/usr/local/include -I.././regex -O -pedantic-errors -O -x
c++ -c
    InetTransport.c++
    Socket.h: In function `static int Socket::bind(int, const void *, int)':
    In file included from InetTransport.c++:41:
    Socket.h:54: passing `const sockaddr *' as argument 2 of `bind(int,
sockaddr
    *, int)' discards const
    Socket.h: In function `static int Socket::connect(int, const void *, int)':
    Socket.h:56: passing `const sockaddr *' as argument 2 of `connect(int,
    sockaddr *, int)' discards const
    InetTransport.c++: In method `unsigned char InetTransport::abortCmd(class
    fxStr &)':
    InetTransport.c++:218: warning: overflow in implicit constant conversion
    InetTransport.c++:218: warning: overflow in implicit constant conversion
    InetTransport.c++:218: warning: overflow in implicit constant conversion
    InetTransport.c++:218: warning: overflow in implicit constant conversion
    *** Error code 1

    The very strange thing is that I build 4.0b018 without problems -
everything
    ultimately compiled.  Now, however, 4.0b20 has this error, and when I go
back,
    4.0b018 won't build either!  It craps out with the same problem, which
leads
    me to think that something on my system has changed flavors, and I have no
    idea what.

    Since I list built 4.0b018, the only change which I can recall is using
gcc
    2.7.2.1 instead of 2.7.2.  I'm pretty sure that nothing else on the system
has
    changed.  I don't have 2.7.2 around anymore - the docs indicated it had
    several "serious bugs", so we moved up.  It builds every other application
I
    have without complaint, including things like perl 5.003, etc.

    I am running Solaris 2.5.  Any suggestions/help?

You have set -pedantic-errors when compiling; your problem has nothing
to do with changes between beta018 and beta020.

        Sam
```

Q31: Compiling Hylafax v4.0beta018 under Sun Solaris with DSO ?

Q31.

Compiling Hylafax v4.0beta018 under Sun Solaris with DSO ?

A31.

Date: *Mon, 19 Aug 1996 10:46:33 +0900*
From: *Kenji Okamoto <okamoto@earth.cias.osakafu−u.ac.jp>*
Subject: *Re: Compiling Hylafax v4.0beta018 under Sun Solaris*

```
I just returned from my summer vacation, and saw many querries around
Solaris 2.x shered library.

Please loook at the permission of hfaxd file, it has suid bit set to root.
In this case, Solaris 2.x does look only at default library path,
that is /usr/lib.  Therefore, you should make symbolic link from
/usr/local/lib/libtiff.so to /usr/lib/libtiff.so.

Kenji
```

Q32: Problems with socket.h on AIX, ...?

Q32.

Problems with socket.h on AIX, ...?

A32.

Date: *Sun, 28 Jul 1996 10:05:15 −0700*
From: *Sam Leffler <sam@hyla.chez.sgi.com>*
Subject: *Re: calling last chance on bug fixes*

```
    To:  flexfax@sgi.com
    Subject:  Re: calling last chance on bug fixes
    Date: Fri, 26 Jul 1996 18:09:47 CDT
    From:  Bob Jackiewicz 312-413-1258

    I have the following problem when trying to compile beta018. I'm using AIX
    4.2, gcc 2.7.2, and libg++ 2.7.2. in util/InetTransport.c++, I get the
    following errors:

    Socket.h: In function 'static int Socket::accept(int, void *, int *)':
    In file included from InetTransport.c++:41:
```

```
    Socket.h:52: passing `int *' as argument 3 of `accept(int, sockaddr *,
    long unsigned int *)'
    Socket.h: In function `static int Socket::getpeername(int, void *, int
    *)':
    Socket.h:58: passing `int *' as argument 3 of `getpeername(int, sockaddr
    *, long unsigned int *)'
    Socket.h: In function `static int Socket::getsockname(int, void *, int
    *)':
    Socket.h:60: passing `int *' as argument 3 of `getsockname(int, sockaddr
    *, long unsigned int *)'
    Socket.h: In function `static int Socket::getsockopt(int, int, int, void
    *, int *)':
    Socket.h:62: passing `int *' as argument 5 of `getsockopt(int, int, int,
    void *, long unsigned int *)'
    make[3]: *** [InetTransport.o] Error 1

    I also get the same (or similar) errors in hfaxd/Parser.c++.  Has anyone
    successfully compiled beta018 on AIX 4.2? Just to be sure that I got all
    of the headers fixed, I reinstalled gcc-2.7.2 and libg++-2.7.2. Thanks for
    any response!

This has been discussed previously on this list.  Your system include
file defines these socket calls with a different API than is expected
(I hesitate to say standard).  You must either change the include files
or alter the code in util/Socket.h.

        Sam
```

Q33: Why CGI_BIN didn't get properly replaced?

Q33.

Why CGI_BIN didn't get properly replaced?

Also, for some reason, the html files didn't get CGI_BIN properly replaced. This makes them a bit awkward to read, with CGI_BIN scattered through them.

A33.

Date: *Thu, 14 Nov 1996 13:34:31 −0500 (EST)*
From: Matthew Rice <Matthew.Rice@ftlsol.com>
Subject: *Re: Minor patches for dialrules and non SysV installations*

```
Read the section "Configuring the HTML Documentation" in building.html.
You have to change these values yourself.

Regards,
--
Matthew Rice                             e-mail: matthew.rice@ftlsol.com
```

Q34: Looking for /bin/test file?

Q34.

Looking for /bin/test file?

A34.

Date: *Thu, 19 Dec 1996 09:34:10 +1300 (NZDT)*
From: Jonathan Chen <jonc@pinnacle.co.nz>
Subject: *Re: Looking for /bin/test file?*

```
On Wed, 18 Dec 1996, Cheng-Jye Luh wrote:

> Hi,
> I have difficulty in getting a copy of /bin/test file mentioned in
> the HylaFAX Before You Start section. Does anyone know the exact path of
> /bin/test file at ftp.uu.net or other mirror site? Please help.

If you're using a recent UNIX, it's *VERY* likely that 'test' already
exists on your system. Look for it in the std places, /bin and
/usr/bin; or use your shell to found out:

    $ type test                     # Bourne shell
    % which test                    # C-Shell (varies)
    > which test                    # TC-Shell
--
Jonathan Chen                          e-mail : jonc@pinnacle.co.nz
```

Q35: How do I view received facsimile?

Q35.

How do I view received facsimile?

Just a quick question – what do you use to view incoming faxes? xv wants to allocate an 8 bit/pixel bitmap, and takes forever to display an image on my linux box. It also doesn't seem to be able to display anything other than the first page (not that I've looked real hard). I had a look through the archives, and found xtiff. It loads faster, and I hacked it to display lowres faxes in the right aspect ratio, but it doesn't have a page preview mode (ie, you can only see a small part of the page at any one time), and it periodically dumps core in XCreateImage(). What other choices are available?

A35.

There are at least three solutions:

Many people use the fax2ps or tiff2ps programs together with GNU ghostview; e.g.

```
fax2ps /var/spool/fax/recvq/faxVAAa0051G | ghostview
```

There is also faxview, an unfinished, but usable, X−based viewer in the contributed software area on sgi.com

Frank Cringle wrote an excellent viewfax program. This is not part of the HylaFAX distribution. From the author:

Date: *Sun, 17 Nov 1996 07:09:34 −0800*
From: *Frank D. Cringle <fdc@cliwe.ping.de >*
Subject: *viewfax−2.4 released*

```
A new version that fixes some minor bugs is available at

ftp://ftp.sgi.com/sgi/fax/contrib/viewfax-2.4.tar.gz

and at

ftp://ftp.leo.org/pub/comp/networking/communication/modem/mgetty/

in the frontends/X11 subdirectory of the latest mgetty beta.

If you are using version 2.3 without problems there is no need to
upgrade.  Error recovery has been improved and a bug that caused
garbled displays on certain X-servers has been fixed.
```

A35.

Date: *Fri, 09 Aug 1996 07:54:18 −0700*
From: *Sam Leffler <sam@hyla.chez.sgi.com>*
Subject: *Re: FAQ Suggestion − RE:Q20: How do I view received facsimile?*

```
    To:  shay@turtle.demon.co.uk (Andrew C Scheele)
    Subject:  Re: FAQ Suggestion - RE:Q20: How do I view received facsimile?
    Cc:  sam@cthulhu.engr.sgi.com
    Date: Fri, 09 Aug 1996 11:29:24 +0200
    From:  Matthias.Apitz@SOFTCON.de (Matthias Apitz)

    Andrew C Scheele wrote:

    [cc'ed: Sam Leffler]

        ...

        Anyway I reckon I've come up with a nice little solution, which may be
        useful here:

        >From mgetty the faxes get processed by a shell script called new_fax,
I
        assume that hylafax has something similar.

    Yes, see man faxrcvd(1M);

        In this shell script I convert the faxes into a gif and keep them in
the
```

```
        spool directory - It needs two programs from the pbm set, something
like
        g3topbm | pnmtogif.

    Received faxes are stored in the spooling area ($SPOOL/recv/) as
    files like fax0004711.tif (until they get purged by faxcron(1M)).
    The format is TIFF/F.

        That's great but now we need to access them.  This is my little trick.

    To access received files there are the following options:

    - you may just want a list of all received files in the spooling area:
      $ faxstat -r
      HylaFAX scheduler on kant: Running
      Modem ttyFN01 (+49.89.6130883): Running and idle
      Modem ttyFN02 (+49.89.61308xxx): Running and idle

      Protect Page  Owner        Sender/TSI  Recvd@ Filename
      -rw-r--    3  5        49 711 9xxxxxx 02Aug96 fax00049.tif
      -rw-r--    1  5        +49 89 3xxxxxx Fri01PM fax00050.tif
      -rw-r--    4  5        +49 89 5xxxxxx Mon10AM fax00051.tif
      -rw-r--    2  5        +49 341 xxxxxx Tue05PM fax00052.tif
      -rw-r--   11  5        +49 89 5xxxxxx Wed12PM fax00053.tif
      -rw-r--    5  5        +49 6221xxxxxx Thu03PM fax00054.tif
      -rw-r--    3  5        +49 341 xxxxxx Thu04PM fax00055.tif

    - you may view them with tools like xv(1), fax2ps(1), ...
      $ faxview /usr/local/lib/HylaFAX-v4.0/spool/recvq/fax00055.tif

    - you may copy them to your own system using the HylaFAX
      client server protocol (as descibed in man hfaxd(1M));

If you setup the RECVFMT string that controls the format of output
from doing a LIST on the recvq directory then you can view use a
WWW browser to view and retrieve files from the directory.  man hfaxd(1M).

        I have created a cgi script in perl that will query the directory and
        write an html wrapper for all faxes in the directory and then output a
        nice tabularised summary of the faxes available.

        Click on the link and hey presto there's your fax!

Sure, I believe several other folks have done similar things.

        A second cgi script is available to print selected faxes & rotate them
        permanently (I haven't yet come across a web browser that will let you
        rotate graphics).

        I'm currently working on getting this to add a thumbnail of the first
        page and keep track of comments eg who from, recipient etc.

        So now I can get at my faxes from anywhere in the company, from
        virtually any browser (lynx doesn't do that well) and from home with a
        slip connection.

Yes, this was the intent.  In fact there are hooks for hfaxd to directly
implement an HTTP spigot that provides access to the all the functionality
of the fax service via a forms-aware browser.
```

```
    Sounds good.

        It would need some modification to work with hylafax, mainly to detect
        the resolution and caller id, which are embedded in the mgetty file
        name, but if anyone wants a go e-mail me.

    This information is part of the TIFF/F file in the spooling area and
    may be printed to stdout with faxinfo(1M):
    $ sbin/faxinfo *55.tif
    fax00055.tif:
        Sender: +49 341 xxxxxxx
         Pages: 3
       Quality: Fine
          Page: North American Letter
      Received: 1996:08:08 16:44:44
    TimeToRecv: 2:29
    SignalRate: 9600 bit/s
    DataFormat: 2-D MR

Actually there is much more info than the above.  Everything you
should need is stored *inside* the file.  Using filenames to store
information is a mistake (in my experience).

    Thanks for your feedback anyway. Please post your hints to
    the HylaFAX mailing-list. If you have some tools available
    for HylaFAX send me a pointer (URL) and I'll include this
    pointer into the FAQ.

If you package up your scripts and/or tools and put them in the
incoming directory in ftp.sgi.com then I can create a place for
them in the contrib area.  If you do this please be sure to include
a README file that identifies you as the contact.

         Sam
```

Q36: How do I create a fax cover page template?

Q36.

How do I create a fax cover page template?

I'd like to create a new cover template page as I would prefer for our faxes to *not* go out with the Silicon Graphics logo. :)

Does anyone have experience doing this? Can someone point me toward the proper instructions? I've read the faxcover man page, which tells me how to use an alternative template, but I can't figure out how to create one.

A36.

Look on sgi.com in the directory ~ftp/pub/sgi/fax/contrib/covers. This contains (among other things) a compressed and tarred file called make_faxcover.tar.Z It contains instructions as well as a script for converting a "tgif" eps file to a fax cover template. It was put together by Thomas Erskine.

A36.

(From Randy Davis) Here's how I did mine, and it works great. But, please note, I do *not* know postscript, I just figured out a good deal of it by trial and error and playing with modifying postscript source files.

Here's what you do:

1. create a postscript file that contains your customized cover sheet that looks exactly as you like it, WITH sample text in each of the fields that you want the package to replace with the real text in actual use.

   I used FrameMaker to make ours, complete with company logo, and had FrameMaker output a postscript file. I suppose you could even use troff and use a troff–to–postscript converter if you like. The key part is to get a postscript file that looks as you like, and has sample text in each of the fields to be filled in by the program, each sample text of which is unique to each field so you can find each one buried in the postscript later on.
2. Make a copy of this postscript file (just to be safe :–), and start modifying the copy this way:

   a)

   Modify the prologue (the first part of the postscript file prior to the actual pages) to add the following macros – I added them immediately after the first block comments at the top of the file (comments are denoted by a % at the beginning of the line).

```
--------------------------------------------------------------------------
1 setlinejoin
/nullstring () def
/IS {
    dup where {
        pop
        load dup nullstring ne {S} {pop} ifelse
    } {pop} ifelse
} bind def
/M  { moveto } bind def
/S { show  } bind def
--------------------------------------------------------------------------
```

   You will have to see if the /M, /S, or /IS macros are redefined later on in the prologue, and if they are, you may have to make some decisions and do some work outside of the scope of this short instruction sheet. As I recall, the postscript file output by the version of FrameMaker *did* redefine one of them, yet I could not find it used anywhere in the rest of the document, so I just removed it with no ill effects. In any event, it is a good idea to have a postscript printer or working version of ghostscript handy so you can check your work after each modification to make sure the file still works (and backtrack if it breaks).

b)

Find your sample text strings in the postscript file (they will be enclosed in paranthesis) and change them to use the IS macro and M macros:

This is the hard–to–explain part. Let me preface it with a quick intro into postscript text drawing. Each text string is enclosed in parenthesis, and either in front or after the text string on the same line is a macro and a set of coordinates detailing where to "draw" the text on the page. In addition, some packages, like FrameMaker, will sometimes break a string into two or more separate strings in the postscript document, for no reason that I can find. For instance, the phrase "Now is the time for all good men to come to the..." might all be on one line, not broken, in whatever utility you use to generate the postscript, etc, but your output postscript file may "draw" it in three sections, and even out of order, e.g.:

```
(e for all good men to co) 120 523.33 T
(Now is the tim) 72 523.33 T
(me to the...) 173.5 523.33 T
```

But, note that you can combine this into one string by just using the coordinates for the string that began the line (look for the smallest "x" coordinate, which is the first of the two coordinates), e.g.:

```
(Now is the time for all good men to come to the...) 72 523.33 T
```

And you should be unable to tell the difference on the output page.

OK, so you need to find the sample text you put in to mark the location of the fields. This is best explained by example. For instance, in my template page straight from FrameMaker after I combined any broken strings, I have the following lines (which happen to be in order):

```
(Please deliver to:) 72 523.33 T
(Name:) 206.71 505.33 T
(to-name) 270 505.33 T
(Company:) 180.04 487.33 T
(to-company) 270 487.33 T
(Recipient\325s Extension:) 99.35 469.33 T
(to-voice-number) 270 469.33 T
(FAX Number:) 154.15 451.33 T
(to-fax-number) 270 451.33 T
```

(In each of these cases, it turns out that FrameMaker put the text strings preceding the coordinates, ending the line with "T", which turns out to be a macro which is defined in the prologue with a line or group of lines begining with "/T {" and which expects this line ordering.)

If you will notice in my sample postscript exerpt above, you can identify the sample strings I put in to determine the exact coordinates of where I wanted the fields to be. Those sample strings are "to–name" (on the third line), "to–company" (on the fifth line), etc...

Now, what you want to do is to convert each sample text line to the format expected by the faxcover EPSI wrapper. This involves changing, in my case, the format of:

```
(text) <x-coord> <y-coord> T
```

to the new format of:

```
<x-coord> <y-coord> M /<parameter name> IS
```

All you really need is the x/y coordinates and to know which parameter should go at these coordinates. Note that you only have to change JUST the lines that you want the program to fill the text in for – you don't have to change any other text lines, and should probably leave them alone. The s are defined on the faxcover man page. In my case, the modified exerpt becomes:

```
(Please deliver to:) 72 523.33 T
(Name:) 206.71 505.33 T
270 505.33 M /to IS
(Company:) 180.04 487.33 T
270 487.33 M /to-company IS
(Recipient\325s Extension:) 99.35 469.33 T
270 469.33 M /to-voice-number IS
(FAX Number:) 154.15 451.33 T
270 451.33 M /to-fax-number IS
```

Thats basically all there is to it, or was to it for me. Hope this helps – feel free to ask me more if I missed something. Note that I only installed the package about four weeks ago, yet it all works fine, including the cover sheet. :–)

A36.

Date: *Fri, 23 Feb 96 13:12 EST*
From: *David Gilbert <dgilbert@pci.on.ca >*

I submitted the following to the FAQ maintainer. In short, with Frame4.0, the instructions were enough to get me started, but were not the whole answer. So... the FAQ needs updating... but I'm prefixing my question with a helpful hints in hopes of encouraging someone to be similarly helpful.

From the instructions in the FAQ, I was not able to modify the postscript output of either Word or Corel (which are what the current fax cover pages at our company are done with). I finally caved in and created a duplicate of our cover page with Frame. After much tearing out–of–hair, I figured out that the line inserted by faxcover that is '100 dict begin' is too small for the frame output. Changing it to 200 dict begin makes it work.

I did this with emacs on the binary (since I havn't been able to get hylafax to compile on our SGI with either gcc 2–7–2 or the SGI provided CC). I also had to modify the windows client since it seems to do it's own cover sheet and also puts in the '100 dict begin'

With that modification, Framemaker 4.0 cover sheets can be made to print. However, the /M /S AND /IS macros are all defined and used by the Framemaker postscript. I fixed them by changing them to /MY /MS and /MIS (no particular reason). Note that /S is used by /MIS (in the {}'s) and must be changed there.

A36.

Date: *Mon, 16 Dec 1996 15:22:52 +0100*
From: *Rainer Krienke <krienke@mailhost.uni–koblenz.de>*
Subject: *Announcment: new version of latex–cover*

```
I uploaded a new version (1.03) of latex-cover to ftp.sgi.com.

This version contains a small bug-fix over the previous one. People who have no
trouble running 1.02 need not get this version. The bug was in the template file
lcover.tex . This file contained a command \today that should have been
\todaysdate instead. Thats all!


For people who do not know about latex-cover:
---------------------------------------------

latex-cover.sty offers a way to create custom coverpage templates for use
with the faxcover application from the hylafax distribution.

The advantage of latex-cover.sty for creating a coverpage template
compared with
the possibility of changing the original faxcover.ps template file is
that latex-cover.sty allows the design of the coverpage to be made in
latex(2e). On the other hand the file faxcover.ps contains pure
postscript making it rather difficult for a user to design a new
coverpage template.
Using latex-cover.sty in conjunction with latex and dvips
the user can now write a plain latex file and insert commands defined in
latex-cover.sty at those places where he wants to insert parameters
actually filled in by faxcover when a fax is beeing send.
The latex source can be comiled by latex and converted to the Postscript
template file via dvips. Thats all!

Rainer
---------------------------------------------------------------------------
Rainer Krienke                        krienke@informatik.uni-koblenz.de
Universitaet Koblenz,                 http://www.uni-koblenz.de/~krienke
```

A36.

Date: *Thu, 14 Nov 1996 11:17:48 –0600*
From: *Afan Ottenheimer <afan@www.jeonet.com >*
Subject: *Cover letter template*

```
I didn't see an easy template for creating a fax cover sheet and
trying to program in postscript really didn't appeal to me.
So, I created a tgif template file (faxcover-template.obj)
which makes creating a cover page easy.

To create a cover page.
0) Get the make_faxcover script
        ....
1) Get tgif (I used 3.0 patchlevel 10)
   (see http://bourbon.cs.columbia.edu:8001/tgif)
2) Download the tgif template obj file
  (submitted to: ftp://ftp.sgi.com/sgi/fax/contrib/covers/faxcover-template.obj)
3) "Open" the above file in tgif and replace our logos with your own
   or move stuff around. It is important that each text variable
   field be unique.
4) Print to file as eps. It will automatically be named faxcover-template.eps
5) #make_faxcover faxcover-template.eps > faxcover.ps
     (or to whatever the FAXCOVER variable is set)
6) Replace your old cover-sheet template with the one you created in step 5

My thanks to the creators of HylaFAX, tgif, and make_faxcover who
made this possible.

Afan Ottenheimer
http://www.jeonet.com
afan@www.jeonet.com
```

A36.

Date: *Fri, 11 Oct 1996 11:20:48 +1300 (NZDT)*
From: *Jonathan Chen <jonc@pinnacle.co.nz>*
Subject: *Re: Making Cover Pages*

```
On Tue, 8 Oct 1996, Eric Poole wrote:

> Well, I've looked throughout all the documentation I can find including the
> man pages and the online web-based docs, and I can't find it anywhere ...

Hmm. I used to remember a FAQ entry somewhere detailing just how do this..

> How do I generate cover pages, i.e. how do I make one that replaces the
> default one with the Silicon Graphics logo?

If you just want to remove the logo, you'll have to change the
faxcover postscript file. It's located in /usr/local/lib/fax/faxcover.ps.
Before making any changes, I'd make a copy of it first. You don't really
have to know Postscript to make these changes (I don't), but if you've
done any programming you can make reasonable guesses.

Look for "drawlogo". There'll be 2 instances of it. One is the function
definition, the other the invocation. You can remove the function:
    /drawlogo {
        ...
    } def

and the invocation

    drawlogo
```

```
If you want to put in your Company name, look in the function /drawtext
and make an educated guess.. (It ain't too hard)

> I've managed to get as far as to generate a postscript file and use it as a
> cover sheet, but if I do that it won't insert the standard cover sheet info
> such as To:, Fax Number:, Company:, From:, # Pages:, etc.

If you look further down the default faxcover file, you'll see entry points
for putting in external info. These are:
    /to
    /to-fax-number
    /to-company
    /from
    /regarding
    /todays-date
    /page-count

If you've made your own cover page, you'll have to edit the resultant
Postscript file and put these entry points in. My guess is that you'll
have to put in something of the form:

    nnn mmm M /to-fax-number IS

where "nnn" and "mmm" are movement parameters.
--
Jonathan Chen                          e-mail : jonc@pinnacle.co.nz
```

Q37: How to do broadcasting faxes?

Q37.

How to do broadcasting faxes?

I need to broadcast a fax to a large number of people. Each needs a personalized cover sheet, of course.

A37.

Date: *Thu, 26 Oct 95 15:45:00 PDT*
From: *Richard Baldwin <richard.baldwin@attws.com >*

Using 'faxcover' to pipe to 'sendfax –n', you can send a fax with a unique coverpage. Do that within a loop, and you could send many faxes, each with a different coverpage to a different destination.

This is documented in man pages:

1. hylafax
2. sendfax
3. faxcover

A37.

Date: *Mar 11, 96 07:54:46*
From: *Sam Leffler <sam@sgi.com >*

The technique described in the answer results in no sharing of imaged documents. It is better to replace faxcover with an application that uses the destination identity to select among one of many cover pages. With the new protocol the technique described can be used and you can still get sharing−−you just reference an existing document on the server−−but with the old client−server protocol used by the current software you get sub−standard performance.

Q38: Sendfax doesn’t put the company name and location on my cover pages?

Q38.

Sendfax doesn’t put the company name and location on my cover pages?

I noticed yesterday that the parameter order for sendfax can make a difference in the cover sheet. If the "−x" is specified after the "−d", the company name gets dropped from the cover sheet.

```
sendfax -c"aaa" -r"bbb" -D -d"Greg Rowe@482-4001" -x"Metaphase" file
```

Since I always put the −d last in the command line, I never noticed it before. Is this a known problem or do I have a problem with my cover sheet?(It’s the SGI one with my logo) I’m running the new beta release on a SGI box.Thanks.

A38.

I prefer to call it a ‘‘*feature*’’ . The −d flag causes a new destination to be recorded using the current specifications for company and location (the −x and −y options). You can see this in the code. I’ll see about clarifying this in the manual page.

Q39: sendfax option −D not working?

Q39.

sendfax option −D not working?

A39.

Date: *Thu, 18 Jul 1996 09:25:35 +1200 (NZST)*

From: Phil Abercrombie <phil@comp.vuw.ac.nz>
Subject: *Re: −D not working*

```
Good morning Tanya Ruttenberg (re: "-D not working")

> I just installed hylafax-v4.0beta015 on a solaris 2.4 machine.
> I built it using gcc-2.7.2.
>
> Apparently the sendfax -D flag is not working.  We are using an
> email -> fax gateway (a la dirk and bob's faxmailer with our own
> revisions), but just a plain old
>
> sendfax -d 'Someone@14283342080' -f '  (+1 707 829 0104)' -h 'ruby.ora.com' -r 'Steves Trip'   -m -D filename.ps
>
> does not work either.
>
> Has this problem been seen/fixed yet?  I looked in the archives and didn't
> find any reference to it.
>
> Thanks for any pointers,
> Tanya

How about the man page for sendfax(1)?

  The order of options on the command line is significant.  Each fax to be
  transmitted is assigned the current value of parameters specified on the
  command line; e.g. whether or not to generate a cover page.  This means
  that options that specify parameters for a particular destination must pre-
  cede the dialstring specified with the -d option.  For example,

       sendfax -n -d 5551212 /etc/passwd

  submits a fax to 5551212 that has no cover page while

       sendfax -d 5551212 -n /etc/passwd


In other words, you'd better put the -d 'Someone@14283342080' AFTER
all the other switches.

Cheers
        -phil
```

Q40: How do I keep private information off the cover page?

Q40.

How do I keep private information off the cover page?

```
> This is probably a simple question, but I haven't been able to figure
> out an answer to it yet....... We have a 6 digit ID that needs to
```

```
> be plugged in for long distance calls (like a calling card). When I
> use "sendfax -d "John Doe@4157779999,123456" the faxcover sheet has
> my id number in the Fax Number field. What do I need to do to
> prevent this ? Thanks.
```

Good question!!! We have the same sort of calling card number for long distance calls and users around here are concerned about making these numbers visible. They're supposed to be kept secret. We also want to prevent these numbers from appearing in any log files.

A40.

To keep private information off of the fax cover sheet and out of the publicly displayed information (such as the queue listings shown by faxstat) you need to create a dialrules file that's used on systems where HylaFAX client applications are run.

For example, if calling card information is specified as a trailing comma–prefixed number string (perhaps with trailing whitespace) then the following rules would strip it off when creating an *displayable representation* of the dial string:

```
DisplayNumber = [
    ",[0-9]+[ ]*" =     ! strip calling card info and trailing ws
]
```

Using the dialtest program to test out the rules:

```
% /var/spool/fax/bin/dialtest -v dialrules
Define AreaCode = "415"
Define CountryCode = "1"
Define InternationalPrefix = "011"
Define LongDistancePrefix = "1"
DisplayNumber := [
  ",[0-9]+[ ]*" = ""
]
Warning, no "CanonicalNumber" rules.
Warning, no "DialString" rules.
ready> 4157779999,123456
input = "4157779999,123456"
canonical = "4157779999,123456"
dial-string = "4157779999,123456"
display = "4157779999"
ready>^D
%
```

The above rules must be placed in the HylaFAX client application library area on each client machine; for example, in the file **/usr/local/lib/fax/dialrules**.

Note that on the server the session logs **must be protected** to insure the unadulterated dialstrings are not readable by normal users. This is done using the **LogFileMode** configuration parameter; e.g.

```
LogFileMode: 600        # protect logs with calling card info
```

If the faxcron administrative script is run on the fax server machine, then it's also a good idea to shorten the **AGELOG** parameter that controls how long session logs are kept around. Either that, or the script could be changed to automatically strip privileged information once it's no longer needed for debugging failed calls.

Q41: How do I send WordPerfect files from a DOS machine?

Q41.

How do I send WordPerfect files from a DOS machine?

I have a user who uploads Wordperfect text−output files from his PC to our network, and then attempts to fax the files. The files have a trailing ^Z (DOS EOF marker?), so sendfax doesn't recognize the files as ascii and aborts.

We can clean up the files manually using a dos2unix filter, but what can I use as a typerule to automate this? The EOF marker is not at any fixed offset, and the file won't match ascii only because of the EOF marker. Has anyone already done this for me?

A41.

Date: *Wed, 16 Mar 94 15:17:31 MST*
From: *morrow@cns.ucalgary.ca (Bill Morrow)*
Subject: *SUMMARY: faxing Wordperfect files directly*

last week I asked about how to get sendfax to handle Wordperfect format files directly, so that users would not have to convert their WP files to text or Postscript by hand. The following is what I came up with.

I've attached the "source" below, it's fairly simple and short.

Note that this requires Unix Wordperfect, we have version 5.0.

Thanks to les@fb.com (Les Mikesell) for hints, and the wptops script.

First add this rule to your typerules:

```
---------------------- cut here ----------------------------------
0       byte            0xff            error   WordPerfect document
>1      string          WPC             ps      /usr/local/bin/wpr %i >%o
---------------------- cut here ----------------------------------
```

the wpr script converts WP format to Postscript by running Wordperfect's wprint, which WP cleverly did not make a filter.

```
---------------------- cut here ----------------------------------
#!/bin/sh
# wpr - output Postscript from a WP file

infile=/tmp/WP2PSin$$;
```

```
outfile=/tmp/WP2PSout$$;
cat $1 > $infile
/usr/local/wp/sun4/bin/wprint -i$outfile $infile  > /dev/null 2>&1
# wait for wprint to finish
while [ ! -f $outfile ]; do
        sleep 1
done
/usr/local/etc/wptops < $outfile
/bin/rm -f $infile $outfile
---------------------- cut here ----------------------------------
```

wptops is Les Miksell's perl script which cleans up Word Perfect's corrupt Postscript files.

```
---------------------- cut here ----------------------------------
#!/usr/local/bin/perl
# Original version came from Angus Duggans's psutils
# modified version from les@fb.com (Les Mikesell )
# fixwpps: get semi-conforming PostScript out of WordPerfect 5.[01] file
# feed this into perl

#eval 'exec perl -S $0 "$@"'
#   if $running_under_some_shell;
$page = 0;
while (<>) {
        s/^ *%!/%!/;
        s/\015//;
        s/\004//;
#   s/(_[a-zA-Z]+)([0-9]+)/\1 \2/g;
   if (/^_bp/) {
      $page++;
      print STDOUT "%%Page: $page $page\n";
      print STDOUT $_;
   } elsif (/^([^\/].*\S.*)(_bp.*)/) {
      $page++;
      print STDOUT "$1\n";
      print STDOUT "%%Page: $page $page\n";
      print STDOUT "$2\n";
   } elsif (/^_ed/) {
      print STDOUT "%%Trailer:\n";
      print STDOUT $_;
      print STDOUT "%%Pages: $page\n";
   } elsif (/^([^\/].*\S.*)(_ed.*)/) {
      print STDOUT "$1\n";
      print STDOUT "%%Trailer:\n";
      print STDOUT "$2\n";
      print STDOUT "%%Pages: $page\n";
   } else {
      print STDOUT $_;
   }
}
---------------------- cut here ----------------------------------
```

Q42: Document file is not valid TIFF ...?

Q42.

"Document file is not valid TIFF ..."?

I have compiled v2.2.2beta043, but still no go! Can only receive fax but sending results in errors. I use

```
sendfax -d xxxxxx -lm -p -v plot.ps
```

to submit a fax (plot.ps genterated by gnuplot, checked wtih gs) and I get this error

```
"Document file is not valid TIFF (check for PostScript conversion problems)"
```

in the server trace log. I don't know why the PostrScript file is not valid. What other debug commands can I use? Your help is really appreciated.

A42.

This diagnostic means that the server invoked the PostScript interpreter to image a submitted PostScript document but the resultant document file was invalid (TIFF is the file format used for imaged facsimile). If the server machine is setup correctly this should never happen. (Incorrect PostScript documents should be returned to the user with a different diagnostic.)

The problem must be debugged on the server machine. The following step–by–step procedure might be used:

1. Run faxquit to stop the fax server.
2. Submit the problematic job using the sendfax program or similar.
3. Position yourself at the top of the server spooling area;

   ```
   cd /usr/spool/fax
   ```

4. Invoke the PostScript interpreter script as done by the fax server:

   ```
   bin/ps2fax -o t.tif docq/doc*.cover
   ```

   and look for problems. (Actually the above command line is a simplified version of the one used by the fax server; you can find the exact command line used by the fax server in the server trace log.)

From this you should see exactly why the PostScript interpreter is not functioning as expected. Once you've done that you can backtrack to figure out the step in the installation procedure that was not done correctly. If step 4 generates a valid TIFF file in the output file **t.tif**, then there is some problem associated with the environment the server runs in (e.g. the environment variable that specifies where to search for dynamically loaded libraries).

Q43: Faxing TIFF G4 images?

Q43.

Faxing TIFF G4 images?

I have now installed flexfax on and AIX 3.2.5 system using a Miracom modem and everything works well in the testing so far. ie. sending PS, text files etc....

However, my real reason for installing flexfax is to send from our image system. The image spec is as follows.

```
A4 scanned image
KIPP TIFF files
Width x Height: 2448 x 3510
Number of colours: 2
DPI: 300 x 300
Image size inches: 8.16 x 11.70
```

I have a copy of image Alchemy which can convert to TIFF G3 I can not reduce the resolution, but flexfax will understand that it is a TIFF G3 image. Alas I do not have the Alchemy version which can create PS files.

So my question is,

a)Can flexfax actaully send G4 images and is so what spec.
b)If the answer to (a) is no, does anyone feel like changing it so that it can.
c)if the answer to (b) is no, is there a TIFF G4 to PS converter out there.

A43.

a) Can HylaFAX actually send G4 images and is so what spec.

HylaFAX will not directly send G4 images, they must be converted either to G3 or to PostScript (see hylafax(1)).

b) If the answer to (a) is no, does anyone feel like changing it so that it can.

No, converting formats at the client makes much more sense (based on experience doing it the other way around).

c) if the answer to (b) is no, is there a TIFF G4 to PS converter out there.

fax2ps should handle G4 images. Alternatively tiff2ps from the TIFF distribution will handle them.

Q44: textfmt – No Font Metric Information found ...

Q44.

textfmt – No Font Metric Information found ...

I originally FTP'd and installed the binaries for Linux and found the following problem when I run sendfax:

```
/usr/local/sbin/textfmt ... blaah blaah blaah ...  No Font Metric
Information found for "Courier-Bold"...
```

A44.

Date: *Wed, 22 Nov 1995 21:18:45 EST*
From: *Sam Leffler <sam@sgi.com >*

The HylaFAX client programs expect AFM files in a specific directory. This directory is defined at build time with the AFM configuration parameter (look at config.site or the HTML documentation), displayed during the configure procedure and you can alter it through the prompts. After configure has run, the value of AFM is set in the defs file that is generated.

If the above information is not what you were looking for then you might look for other reasons why textfmt cannot locate a file called "Courier–Bold" in the AFM directory––perhaps the permissions on the file are setup incorrectly?

Sam

Q45: Howto set Email notification when done?

Q45.

Re: Email notification when done. ?

I have been searching how to enable by default Email notification when a mail is sent. I ave searched the man–pages, the HTML docs and the FAQ.

A45.

Date: *Mon, 08 Jul 1996 14:15:12 –0700*
From: *Sam Leffler <sam@melange.esd.sgi.com>*
Subject: *Re: Email notification when done.*

```
To:  flexfax@celestial.com
Subject:  Email notification when done.
Date: Mon, 08 Jul 1996 18:30:40 +0200
From:  Peter Tillemans

Hello y'all,

I have been searching how to enable by default Email notification when a
mail is sent. I ave searched the man-pages, the HTML docs and the FAQ.

The only option I found is in the config.h (and searching in the sources
for
the options).

   #define        FAX_DEFNOTIFY   SendFaxJob::when_done
```

```
    then recompiling.

    Is this the way to do it, or am I barking up the wrong tree?

Under v4.0 add Notify:done or similar to your ~/.hylarc file.

        Sam
```

Q46: Was is the idea behind SNPP?

Q46.

Was is the idea behind SNPP?

Am I wrong in thinking that the idea behind SNPP is that you *wouldn't* need to use a modem to dial out to make pager requests, and that they would be sent through the internet?

A46.

Date: *Mon, 19 Aug 1996 20:43:38 −0700*
From: *Sam Leffler <sam@hyla.chez.sgi.com>*
Subject: *Re: maxconcurrentjobs*

```
SNPP is a client-server protocol that is separate from the actual
mechanism used to deliver the page requests.  If you can find a
service provider that honors SNPP and is accessible directly through
the internet then no phone calls are needed.  HylaFAX can act as
a gateway between SNPP clients and providers that talk IXO/TAP (or
other protocols) so SNPP-capable clients can utilize services now
while there are still few SNPP-capable service providers.  There
are however limitations in this gateway capability caused by IXO/TAP
being a 1-way protocol (so, for example, it's not possible to do
some things based on a pager's capabilities).  It is possible to
add more extensive per-pager database information to simulate what
a pager service provider knows but I didn't think it was worthwhile
(but if many folks make use of the pager facilities then maybe
someone will extend/improve stuff along those lines).

        Sam
```

Q47: Re: faxmail from hylafax Beta 18 ?

Q47.

Re: faxmail from hylafax Beta 18 ?

A47.

Date: *Mon, 22 Jul 1996 11:38:17 −0700*
From: *Sam Leffler <sam@melange.esd.sgi.com>*
Subject: *Re: faxmail from hylafax Beta 18*

```
    To:  flexfax@sgi.com
    Subject:  faxmail from hylafax Beta 18
    Date: Mon, 22 Jul 1996 12:07:38 +0200
    From:  Rainer Krienke

        <...stuff deleted...>

    The next problem is, that faxmail (in delivery mode) sends all
    mail-faxes under
    the user id of faxmail instead of the user who issued the mail (for us
    this used
    to work, since the mailfax delivery agent is run by sendmail under the
    user id
    of the user who sent the mail).  This is a problem in so far, that the
    user who
    sent the mail is not allowed to delete it from the queue, since it does
    not
    belong to him any longer.

I checked and faxmail(1) does not describe the MailUser config parameter;
I've fixed this in my sources.

To elaborate on this issue--which I thought a bit about when doing the
work on faxmail--the problem is that it is hard to reliably map the
sender's identity (e.g. the From identity) into an account name that
should  be used to submit the facsimile because From information can be
trivially forged.  There are also issues of how to convert email addresses
(user@host) to a simple account name to use for logging in to the server.
In the end I "punted" on the problem and noted the difficulty in the
manual page.  It would be nice if someone would add support for something
like the PGP-signed multipart/signed MIME type. With this you could
authenticate the sender and reliably map the sender's identity to a
login account on the server.  Otherwise one could envision an untrusted
scheme whereby you use some mapping scheme to convert From addresses to
login accounts (though this could just as easily be done by having the
sender or a gateway script insert an x-fax-mailuser header in the envelope).

BTW, I did only enough builtin support to handle simple formatting of
multipart/digest mail that goes through my mail->fax gateway.  Folks are
welcome to improve/extend what's there.

        Sam
```

Q48: Re: Question concerning faxcover and the "−f"

Q48.

Re: Question concerning faxcover and the "−f" option of sendfax...?

A48.

Date: *Tue, 26 Sep 1995 00:24:44 −0500 (CDT)*
From: *"Leslie Mikesell" <les@mcs.com>*
Subject: *Re: Question concerning faxcover and the "−f" option of sendfax...*

```
> Still there is another problem:
>
> When using the "-f" option to sendfax in the way
>
> "'Full User Name'@496151155399"
>
> together with the "-D" or "-R" option of sendfax, the mail sent back by the
> server to the user is NOT send to the mailalias (aka user-login-name), but to
> "Full@sendinghost, User@sendinghost, Name@sendinghost".
>
> Is this a bug or a feature? Or, put it in another way: How can I prevent this
> behavior?


You can specify -f 'emailid (Full User Name)' and sendfax will
use the part inside the parens for the cover page "From", but
send the notification to emailid.

Les Mikesell
  les@mcs.com
```

Q49: Howto send HTML files?

Q49.

Howto send HTML files?

A49.

Date: *Fri, 24 May 1996 08:19:24 −0500 (CDT)*
From: *Nathan Byrd <techy@www.thinice.com>*
Subject: *Re: html to postscript?*

```
On Wed, 22 May 1996, Robert Nicholson wrote:

> Hi, I want to fax my CV (resume) which is in HTML format.
>
> Anybody know how I can get it in postscript format?
>

There is a great program called html2ps, which does exactly that.  In
fact, I use it as part of a web to fax gateway.  I'm afraid I can't
remember the address for it, but you should be able to
archie for it.  Hope this helps,

Nathaniel Byrd
```

Q50: Problems with killtime of the job?

Q50.

Problems with killtime of the job?

A50.

Date: *Wed, 24 Jul 1996 18:43:46 +0300 (GMT+0300)*
From: *Dror BenShlomo <dror@sela.co.il>*
Subject: *Re: Sending faxes in bulk − Thanks*

```
Hello,

> I've had a problem w/ killtime of the jobs. The standard
> killtime is "now +3 hours"; you may upping this with:
> sendfax -k "now +3 days" .....
> see man sendfax(1) for more information;

YES THIS WAS THE PROBLEM !! Thank You VERY much for the answer and the
quick response time.
```

Q51: Simple Mail−to−fax gateway?

Q51.

Simple Mail−to−fax gateway?

The REAL problem is, how can I restrict this gateway to certain numbers
easyly?

A51.

Date: *Wed, 11 Sep 1996 18:02:08 +0200 (MST)*
From: *Matthias Apitz <Matthias.Apitz@SOFTCON.de >*
Subject: *Re: FAXMAIL*

```
ohp@server.pyrenet.fr wrote:

    Hi, every one

    I've a very simple question for you all (I hope)

    I'm trying to set a e-mail-fax gateway up; although it's not as straitforward
    as I would hav thought, I thin I canmanage.
    The REAL problem is, how can I restrict this gateway to certain numbers
```

```
    easyly?

    Thanks for your help

We're using email addrs like "matthias.fax@faxserver.domain"
and a small ascii database to resolve "matthias.fax" to
the name of the company, the fax-number and the name of
the recipient; all the work is done in a small shell script
called by the mail transport agent at "faxserver.domain".

If "name.fax" is not in the database the mail bounces.

        matthias
```

Q52: v4.0beta015 and fax broadcasting ?

Q52.

v4.0beta015 and fax broadcasting ?

A52.

Date: *Mon, 01 Jul 1996 08:10:58 −0700*
From: *Sam Leffler <sam@hyla.chez.sgi.com>*
Subject: *Re: v4.0beta015 and fax broadcasting*

```
To:  flexfax@sgi.com
Subject:  v4.0beta015 and fax broadcasting
Date: Sun, 30 Jun 1996 15:08:37 +0200
From:  Matthias.Apitz@SOFTCON.de (Matthias Apitz)


We want to use our brand new toy :-) and do a fax broadcasting.
The pages are:
- 2 pre-formatted PostScript pages (containing customer specific
  information, e.g. the addr and fax number),
- 9 pages TIFF Class F (generated by ps2fax(1M)), which are the same
  for each customer;

I'm sending each job w/ the following command:

sendfax -n -D page1+2.ps page3-11.tif -d .......

Is there a way to tell faxq(1M) to reuse the prepared TIFF Class F
file in the docq/ directory using sendfax(1) like:

sendfax -n -D page1+2.ps -Q docq/xxxx.tif -d ......

Sorry if I've overlooked something but I can't find it in the
man pages. W/ the new hfax(1M) protocol I could retrieve the
prepared file from the docq/ dir and reuse it in a new job. But
this is not what I want to use (it does not save diskspace in
the spooling area).
```

```
There is no way to reference a document already on the server using sendfax.
It should be fairly easy to do what you want with an ftp client program and
you can automate the procedure if you combine ftp with a program like expect
but I've never tried that (I just test things by manually typing in commands
using ftp or telnet).

I've been waiting for someone to write a client-side scripting language that
is sufficiently powerful to rewrite all the existing client-side applications
in it.

        Sam
```

Q53: Is there a table describing the one character codes used by faxstat?

Q53.

Is there a table describing the one character codes used by faxstat?

A53.

Date: *Mon, 08 Jul 1996 22:29:04 −0700*
From: Sam Leffler <sam@hyla.chez.sgi.com>
Subject: *Re: A few bugs in 4.0 beta 15*

```
    To:  HylaFax
    Subject:  A few bugs in 4.0 beta 15
    Date: Mon, 08 Jul 1996 18:56:37 MDT
    From:  John Patrick Poet

    4)  A table describing the one character codes used by faxstat to indicate
        the current state, would be nice.

....

T       suspended (not being scheduled)
P       pending (waiting for time to send)
S       sleeping (waiting for scheduled timeout)
B       blocked (by concurrent activity)
W       waiting (for resources, e.g. a free modem)
R       running (actively being processed)
D       done (processing completed)

Feel free to provide better acronyms.

        Sam
```

Q54: Sending a few lines without cover page?

Q54.

Sending a few lines without cover page?

A54.

Date: *Mon, 1 Jul 96 10:45:27 EDT*
From: *Glenn Burkhardt <glenn@aoi.ultranet.com >*
Subject: *Re: Faxes without cover page?*

```
> From: Gerolf Joachim Starke
> Subject: Faxes without cover page?
>
> Hello,
>
> I'm using:
>       hylafax-v3.0pl1
>       solaris 2.5
>       Zyxel
>
> is there a way to send faxes without the cover page, or to send
> "cover" page and content text in one page.
>
> Problem is when I send just 2 lines text on a fax it receives
> to pages. Many stuff -;)
>
> Best Regards,
> GJ
>

Hylafax provides no such facility, but a couple of people have come up with
a workaround.  They write a script or program that takes the comments or
content text, builds a coversheet, and then submits the single page cover
sheet with comments to sendfax, specifying that sendfax should not generate
a cover sheet.  For an example, see 'tkhylafax', available from
ftp://ftp.sgi.com/sgi/fax/contrib/tkhylafax/"
[URL corrected, Matthias]
```

Q55: Howto use WinFlex ?

Q55.

Howto use WinFlex ?

A55.

Date: *Fri, 13 Sep 1996 05:03:53 GMT*
From: *Laine Stump <laine@MorningStar.Com >*
Subject: *Re: hylafax+Mac+Win95*

```
On Thu, 12 Sep 1996 10:37:24 GMT, leef@RUUCJ4.chem.ruu.nl (Bas Leeflang)
wrote:
```

```
>We obtained also the client packages MacFlex and Winflex (.4a)
>I like the approach of MacFlex, where te network fax is
>available as a 'printer'. This seems not to be the case with
>the win95 client winflex.

>Q:
>Am I overlooking something with respect to Winflex? Or are there
>other options (i.e. software) that allows one to send a fax directly
>from your favorite word-processor?

>As I see it now, I have to print to a file as postscript, and then
>strat the fax software, etc, etc...

No, you are definitely missing something. WinFlex works just fine as a
"printer port" which can have a PostScript driver attached to it, and
you can print directly from your applications to that printer.

First, run WinFlex and in the Settings dialog click on the Auto Print
checkbox and enter a directory and filename for spool files. When you
click Ok, WinFlex will ask if it should make an entry in win.ini for
your spool file; answer yes, then you'll be told that you need to
connect a printer to the spool file.

Next, add a new PostScript printer (QMS-PS810 seems to work for me -
*don't* use HP anything), and connect it to the *local* port which has
the name of your spool file.

Finally, setup WinFlex to run from your startup group so that it's
always there.

Now when you select the "PostScript printer" connected to the WinFlex
spool, your application will send the document to the PostScript driver,
which will convert everything to PostScript, then give it to WinFlex
which pops up a dialog to ask the phone number, and sends the fax off to
the server.

You may find you have better luck with the WinFlex available at
ftp.morningstar.com:/pub/tools/windows/winflex* (unless someone has made
a new version in the last several months - I haven't read this mailing
list since sometime in March or April).
```

Q56: Can I run the old WinFlex with HylaFAX v4.x?

Q56.

Can I run the old WinFlex with HylaFAX v4.x?

A56.

Date: *Tue, 6 Aug 1996 23:09:42 −0400 (EDT)*
From: Matthew Rice <Matthew.Rice@ftlsol.com>
Subject: *Re: ask for help*

```
> 2. how to send fax from windows for groups? I just got winflex, but it
> says the server's response is not right.

Winflex uses the old protocol. You can try starting hfaxd with the
"-o 4557" option.

--
Matthew Rice                            e-mail: matthew.rice@ftlsol.com
```

Q57: Winhfax client – format of phone book?

Q57.

Winhfax client – format of phone book?

A57.

Date: *Tue, 19 Nov 1996 07:16:23 +0100*
From: Ulrich Eckhardt <uli@rgw–express.de>
Subject: *Re: Winhfax client : format of phone book*

```
Phil Watkinson wrote:
>
> Hi.
>
> I am pressing on with the new Windows '95 hylafax client, thank you
> all for the help with the last question. Next problem is :
>
> What is the format of the phonebook ?
>
> I assumed that it is the text format of the 'faxdb' described in the
> man hylafax pages, and using the example from there, Winhfax warned me:
>
>          "c:\sundry\whfc\faxdb is not a Phonebook"
>
> and then crashed.
Hi,

the Phonebook is an ascii-file. The first 8 characters must be
PBOOK1.0. Then follows the field, seperated by |. One dataset has
the following fields :

Name,Faxnumber,To Company, To Location, To Phonenumber, Remarks

But becareful, because of the alpha stadium there may be changes
on the phonebook !!!

The crash is another bug.

Uli.
--
Ulrich Eckhardt         mailto:uli@rgw-express.de
```

Q58: Problem connecting with MAc Client?

Q58.

Problem connecting with MAc Client?

A58.

Date: *Wed, 11 Dec 1996 16:44:18 −0500 (EST)*
From: *Rob Newberry <rob@eats.com>*
Subject: *Re: Problem connecting with MAc Client*

```
> Hello, i have installed Hylafx in a Linux box. I also installed the Mac
> client (MacFlex) but when i send a fax, the macflex spooler gives me
> this error:
> Connection refused.

Your HylaFAX server must be started with the old protocol enabled
on the proper port, which is, I believe, 4557 (would have to look).
Normally, that's done by:

        hfaxd -o 4557 ...

You can try to see what's going on by doing this:

        telnet  4557

If you get a "Connection refused", then your server isn't running
right.  If you don't, then somethings wrong with your Mac client
configuration.  Email me privately about that, since I doubt
everybody here wants to know about MacFlex.


BUT if you do want to know more about MacFlex, the Mac client for
HylaFAX, see http://www.eats.com/MacFlex/.


Rob
```

Q59: Connecting−Problem with whfc under Windows NT 4.0?

Q59.

Connecting−Problem with whfc under Windows NT 4.0?

A59.

Date: *Fri, 6 Dec 1996 08:47:46 +1300 (NZDT)*
From: *Jonathan Chen <jonc@pinnacle.co.nz>*

Subject: *Re: Connecting−Problem with whfc under Windows NT 4.0*

```
On Wed, 4 Dec 1996, Lars Niedermeier wrote:

>
> When I try to update the queue or to deliver a fax,
> the HylaFAX-Server running under Linux refuses the connection with whfc:
> 1. Error Messagebox: Password required for fax    (or any other user name)
> 2. Error Messagebox: Please login with USER and PASS

You've forgotten to set up the .../fax/etc/hosts file. Read the man
pages for more info
--
Jonathan Chen                          e-mail : jonc@pinnacle.co.nz
```

Q60: Sendpage and Mail?

Q60.

Sendpage and Mail?

Is there a mail2page application that exists where there is an alais setup to redirect mail messges to pages?

A60.

Date: *Tue, 1 Oct 1996 15:01:55 −0600 (MDT)*
From: *Jason Kohles <robobob@xmission.com>*
Subject: *Re: Sendpage and Mail*

```
On Tue, 1 Oct 1996, Ravi Pina wrote:

> Is there a mail2page application that exists where there is an alais
> setup to redirect mail messges to pages?
>
I use filter (the mail filtering software that comes with elm) with a filter
like this:
### email pager - bitchin
if [ SUBJECT CONTAINS "URGENT" ] then executec "/usr/local/bin/sendpage
-p XXXXXXX MP:%s"

this sends "MP: the subject line" to my alpha pager.

    Jason Kohles -- System Administrator -- XMission Internet Access
      robobob@xmission.com (at work) robobob@mindwell.com (at play)
```

Q61: Where to find mailfax.sh for sendmail?

Q61.

Where to find mailfax.sh for sendmail?

A61.

Date: *Tue, 29 Oct 1996 13:18:21 +0000*
From: *Phil Watkinson <pkw@elgro.co.uk>*
Subject: *Re: WHere to find mailfax.sh.sendmail*

```
At 22:43 28/10/96 -0300, Xavier Merino wrote:
>
>I read in online documentation about setting sendmail to work with
>hylafax.
>
>I do not know where to find it, can someone help me with this,
>

Well, I found that the mailfax.sh.sendmail is now out of date.

This is my mailfax script ( all of one day old ) which is working
under test conditions on a Linux 1.2.13 box with Sendmail 8.8.0 :

----------------------------cut here--------------------------------
#! /bin/sh
#
#  mailfax - email to fax gateway for sendmail
#
#  This file should be installed as /usr/local/lib/fax/mailfax
#  (the default path in the sendmail.cf file).
#
#  Edit your sendmail configuration to include MAILER(fax). This adds:
#
#  Mfax,         P=/usr/local/lib/fax/mailfax, F=DFMhu, S=14, R=24,
#                M=100000, T=X-Phone/X-FAX/X-Unix,
#                A=mailfax $u $h $f
#
#  and the following address rewriting rule to rule set 0:
#
#  # resolve fake top level domains by forwarding to other hosts
#  R$+< @ $+ .FAX. >            $#fax $@ $2 $: $1       user@host.FAX
#
#  Things to note re faxmail options
#
#  -v       verbose output ( faxlog needs mode 666 permissions )
#  -n       no cover page
#  -s a4    set a4 page size
#  -d       direct delivery in the form: test@123456.FAX pkw@elgro.co.uk
#
#
/usr/local/bin/faxmail -v -n -s a4 -d "$1@$2" "$3" 2>/var/log/faxlog

---------------------------cut here--------------------------------

As you see, for Sendmail versions 8.7 and 8.8 all you have to do is add
a MAILER(fax) line to the .mc configuration file and the macro will do
the rest. I'm not sure if this is how version 8.6 behaves.

All the mailfax script does is to call the Hylafax program 'faxmail'.
```

```
Please note that the $u (user) argument passed to mailfax is important;
without it sendFAX will hang.

Good Luck!

Cheers,
Phil Watkinson,
Boston, UK.
```

Q62: Howto Numeric–only paging?

Q62.

Howto Numeric–only paging?

A62.

Date: *Sat, 28 Dec 1996 17:17:05 +0100 (MET)*
From: Matthias Apitz <Matthias.Apitz@SOFTCON.de >
Subject: *Re: Numeric–only paging*

```
Mark C. Cooper wrote:

    Howdy!

    I have setup HylaFAX 4.0pl0, and the faxing works great!

        ...

    I downloaded SkyTel's paging software (PC only) and used the same
    800 number I am using for HylaFAX -- it worked fine. I even tried
    using the same modem initialization string they do -- no worky!
    I am using the defaults supplied with HylaFAX (7bit, even I think).

    Q: What is the correct syntax for paging a numeric-only pager?
       (e.g. sendpage -p"pin" -n "555-1212" ??)

this is explained in the man page of sendpage(1): all options for
a particular destination must precede the page ID specified with
-p option; example: sendpage -n -p 4711 1234567890
("4711" is the pin and "1234567890" is the message);

    Q: I have checked the archives, FAQ, etc (I promise!), but there
       isn't much on numeric-only pagers.  Does anyone have any
       words of wisdom in this regard?

        ....

yes; just collect a SessionTrace;

        matthias
```

Q63: Where to set default notifying level for sendfax?

Q63.

Where to set default notifying level for sendfax?

A63.

Date: *Tue, 10 Dec 1996 07:59:21 +0100 (MET)*
From: Matthias Apitz <Matthias.Apitz@SOFTCON.de >
Subject: *Re: Where to set default notifying level ?*

```
Kit-pui Wong wrote:

    Dear HylaFax Administrators,

Barb Wire: Don't call me ``HylaFax'' ... :-)
it's just ``HylaFAX''

    We are running HylaFax 3.0. I want to setup
    a system default notification to every fax senders
    whether his/her job has been successful. Notification
    is currently send only if sending has been failed.

    I have browsed the man page of "sendfax" and there is an
    option "-D" that set this preference. However, I don't
    know where it is called from faxq, so that I can
    add "-D" to sendfax.

you should update to v4.0pl1; in v4 you may set system wide
configuration parameters for that; see man sendfax(1) of v4

        matthias
```

Q64: Service not available, remote server closed connection?

Q64.

Service not available, remote server closed connection?

A64.

Date: *Tue, 17 Sep 1996 09:21:48 +1200 (NZST)*
From: Jonathan Chen <jonc@pinnacle.co.nz>
Subject: *Re: Installation Woes*

```
On Mon, 16 Sep 1996, Richard Freilich wrote:

>
> Trying to configure Hylafax V4.0p10 on OSF/1 without much luck.  After
> following the instructions found in the package as well as on the Web
> site, I get the package configured, compiled and installed.  After running
> faxmodem to setup my modem, I run faxstat to make sure that it's up, and
> receive the following msg:
>
> Service not available, remote server closed connection
>
> Telneting in to the machine on port 4559 gets a "Connection closed by
> foreign host." message.

Looks like hfaxd(1) isn't running on your machine. You have to make
sure that hfaxd(1) and faxq(1) is running before you get any decent
response with faxstat(1).

Furthermore, with OSF1, you have to hand-create the startup/closedown
files in /sbin/rc[0-3].d to start and close HylaFAX down. Make sure
*NOT* to use killall(8) in the script, 'cos the behaviour is vastly
different to IRIX's version.
--
Jonathan Chen                          e-mail : jonc@pinnacle.co.nz
```

Q65: How do I use modems connected to a Telebit NetBlazer?

Q65.

How do I use modems connected to a Telebit NetBlazer?

Does FlexFAX work with following configuration:

```
--------------         -----------------
|            |         |               |      ---------
|            |         |               |------| Modem | ZyXEL
|  UNIX Host |---------| NetBlazer     |      ---------
|            |         |               |      ---------
|            |         |               |------| Modem | ZyXEL
--------------         -----------------      ---------
```

I've a Netblazer with a couple of modems attached. I'm able to connect to the modems from the UNIX Host via Telnet (I can assign an IP address to each modem l line). When Telnetting to the modem it's almost the same than saying "cu" or "tip".

Note:
The following information relates FlexFAX and I'm not sure if and how it works with HylaFAX (Matthias Apitz).

A65.

Date: *Tue, 24 Aug 93 19:21:55 −0700*
From: *cslater@Telebit.COM (Charlie Slater)*
To: *flexfax@sgi.sgi.com*
Subject: *how to use FlexFAX with NetBlazer*

How to Use FlexFAX with a NetBlazer by C. Slater, Rev 0.1, 8/24/93

Configure your NetBlazer.

On the NetBlazer running version 2.1, I set up my modem on line01 with these line commands:

```
    auto <line> 01 off

    talk 01
    AT&FS58=2&W
    (suspend talk, with ctl-])

    flow 01 cts
    dsrtime 01 0
    ctstime 01 0
    dtrtime 01 200
    login 01 off
    char 01 raw
    reset 01
```

The line parameters should now look something like this:

```
c58:Top>Configure>Line> l 01
Line    Modem        Char's     Use        Command    MFlags
line01  <<None>>     raw        none       <<None>>   <CTS,DCD,DSR,RTS,DTR>
Flags:  0019284f   <DEBUG,CTS,DCD,DSR,NOLOGIN,CTSFL,NOAUTO,RTS,DTR>
DSR: ON        DCD: ON        CTS: ON       RTS: ON       DTR: ON
Speed: 19200    Flow control: cts/rts
Login: OFF      Callin: ON     Access: all     Autoconfigure: off
Modem command delay: 0 milliseconds
Modem status delay (seconds): DCD=0.320     DSR=0.000     CTS=0.000
DTR off time: 100 milliseconds
Idle times (minutes):   receive=27     transmit=27     auto-reset=0
Trace: ON        Callback monitor: OFF
IP address: 143.191.10.58:7001
Terminal type: <<None>>        Rows: not set        Cols: not set
Process = Event Manager, Dial Protocol = Console, state = Idle
```

Then I did

```
        server start raw
        save
```

Get "nd". (I got my copy from ftp.uu.net in networking/cisco.) Build and install it (easy, it's small).

Start nd:

```
nd -\& -r tcpcon -r 1 -l /dev/ptyqe <your_netblazer_host_name> <7000 + line>
```

On my BSDI workstation, I did:

```
nd -\& -r tcpcon -r 1 -l /dev/ptyqe c58 7001
```

to connect nd to line01 on the netblazer named, "c58".

Telnet to the NetBlazer and run line trace. (E.g. trace 01 on). tcpcon should make a connection to line01 and line01 should move to state "TALK". The line parameters should now look like this:

```
Line    Modem        Char's     Use        Command    MFlags
line01  <<None>>     raw        RAW_CONNEC <<None>>   <CTS,DCD,DSR,RTS,DTR>
Flags:  0019284f   <DEBUG,CTS,DCD,DSR,NOLOGIN,CTSFL,NOAUTO,RTS,DTR>
DSR: ON        DCD: ON        CTS: ON       RTS: ON       DTR: ON
Speed: 19200    Flow control: cts/rts
Login: OFF      Callin: ON     Access: all     Autoconfigure: off
Modem command delay: 0 milliseconds
Modem status delay (seconds): DCD=0.320     DSR=0.000     CTS=0.000
DTR off time: 100 milliseconds
Idle times (minutes):   receive=30     transmit=30     auto-reset=0
Trace: ON        Callback monitor: OFF
IP address: 143.191.10.58:7001
Terminal type: <<None>>        Rows: not set        Cols: not set
Process = line01, Dial Protocol = Console, state = Talk
```

In another window, use "tip" or something to test ttyqe. Send commands like "at", "at+fmfr?", and "at+fclass=?" to the modem. When I did this, I saw responses like, "OK", "Telebit", and "0,2".

Get out of tip (or whatever). Line trace should show the line moving to Idle and then back to TALK.

Almost ready to go. Now you need to make one source modification.

faxd goes nuts lowering and raising DTR to make sure that DTR really comes back on, it closes and opens the tty file. This is bad for the raw TCP connection that makes the "nd–NetBlazer" team work. FlexFAX does all this for good reasons, but those reasons don't apply to this configuration. In my copy, I took the reopen out of of the FaxModem::reset(long ms) function in FaxModem.c++.

The code I took out out looks like this:

```
#ifdef NOTDEF
    /*
     * On some systems lowering and raising DTR is not done
     * properly (DTR is not raised when requested); thus we
     * reopen the device to insure that DTR is reasserted.
     */
    server.reopenDevice();
#endif
```

Build, install and start faxd. On my BSDI system I did "/usr/libexec/faxd –m /dev/ttyqe".

At this point I could send FAXs to various number using sendfax.

Notes:

I used a WorldBlazer in my test, but I don't think it matters. Any modem that works with FlexFAX should work with the NetBlazer in this configuration. I used FlexFAX 2.1 and the 2.2beta041 code.

The dtrtime value (the time the NetBlazer waits for the modem to boot) of 200 milliseconds is an order of magnitude shorter than it needs to be in normal worldblazer/netblazer configurations. I faxd does its own waiting and it takes a while for flexfax/nd/netblazer raw TCP will allow to get going. This gives the modem the extra 2.5 seconds it needs to finish booting.

Many people would like a more general solution that allowed them to use a single modem for anything (SLIP, FAX, etc.) without manual reconfiguration. I don't know how to do this, yet.

I am sure I missed something in the instructions, so when you find it let me know.

Thanks! −charlie

For more information contact support@telebit.com

Q66: Do I have to restart a server after changing the modem config file?

Q66.

Do I have to restart a server after changing the modem config file?

On another note does one have to restart ther servers in order for changes in the modem configuration file to take effect?

A66.

No. The HylaFAX servers will re−read a config file (if needed) before each send and on any reset. This means you only need to explicitly restart a server if you change it before doing a receive. You can also avoid restarting it if you use cu/tip to talk to the modem since this will cause the server to wakeup and then reset itself when you exit from cu/tip.

Q67: How do I make a prototype config file from a working config file?

Q67.

How do I make a prototype config file from a working config file?

Also, how can I set up a config.ppi file to be automagically selected correctly by faxaddmodem, for the Practical Peripherals modems? I don't know enough shell script to untangle the faxaddmodem awk and grep cleverness properly. And, in case it helps to set it up, here are the +FMxx responses for these modems.

```
Manufacturer=" (c) Practical Peripherals Inc., 1992, 1993."
Model="PM14400FXMT [6R1]"
```

A67.

If you look at another Class 2 modem config file you'll see a comment of the form:

```
# CONFIG: CLASS2: ZyXEL*-RTSTCTS
```

The faxaddmodem script will grep for lines of this sort and select one according to the modem type (CLASS1 or CLASS2) and DTE–DCE flow control scheme. The glob pattern to the right of the CLASS2: is then massaged into a Bourne shell case statement and applied to the string

```
"$Manufacturer-$Model-$FlowControl"
```

where $Manufacturer is the string returned by the modem in response to a +FMFR? command, $Model is the string return for +FMDL?, and $FlowControl is either RTSCTS or XONXOFF according to whether hardware or software flow control is to be used. Thus, the above example matches all modems manufactured by ZyXEL. For your case, you can probably add a line like

```
# CONFIG: CLASS2: *PM14400FXMT-XONXOFF
```

though it would be good to come up with something that works for all PPI modems that share the configuration.

See also the prototype config file descriptions in faxaddmodem(1M) and config(4F).

Q68: How do I change HylaFAX to use mailx instead of sendmail?

Q68.

How do I change HylaFAX to use mailx instead of sendmail?

I would like to request that the scripts that are hardcoded to use sendmail be made configurable. For example:

```
util/notify.sh:
```

```
        change last line from :
                ) | 2>&1 $SENDMAIL -t -ffax -oi
                                          ^^^^^
        to :
                MAIL_CMD=mailx
                ) | 2>&1 $MAIL_CMD
```

A68.

These won't do the same thing. The −t option to sendmail tells it to extract the address(es) from the header. If you use /bin/mail or mailx you'll have to put the address on the command line yourself.

To switch over to mailx you'll need to make more extensive modifications. If you get things all working, please send the appropriate patches so they can be shared with others.

Q69: [Dell SVR4] No trace logging under Dell SVR4?

Q69.

No trace logging under Dell SVR4?

I installed 2.2beta019 out of the box; no problems. However, it's not working. Even more important, I get no log information, even if I (presumably) turn on all the logging bits by setting the tracing parameters to 2047.

If I start faxd on an unconfigured device, I do get messages from syslog.

A69.

I wasn't getting any syslog information under Dell SysVr4 until I made /dev/log writable by ordinary users.

Q70: Problems sending a PostScript file

Q70.

I can't send a PostScript file?

A70.

There are mostly three reasons. In all these cases the job is returned to the sender by e−mail with a message like this:

```
Your facsimile job to +123456789 was not sent because conversion
of PostScript to facsimile failed.  The output from "bin/ps2fax" was:
```

```
bin/ps2fax[98]: -q:  not found
```

1. You need a tool like Ghostscript to translate the PostScript file to TIFF −− and you don't have this tool or it's not in the place where **bin/ps2fax** searches for it.
2. Your Ghostscript lacks the needed driver **tiffg3**; see the makefiles of Ghostscript how to add a driver.
3. Your Ghostscript doesn't support the **−q** option. In this case you should update to a newer version.

Q71: Ghostscript−imaged fonts look funny?

Q71.

Ghostscript−imaged fonts look funnny?

I've found that the default font used by textfmt leaves a little to be desired during the rendering process. I realize that this is more a ghostscript issue than a FlexFAX one, but I was wondering what other users of FlexFAX have found. [...] I tried using Type 1 fonts, rather than the bitmap ones supplied with ghostscript, and they don't look any better.

A71.

If the problem is occurring on the faxes themselves, make sure that the Fontmap entry for Ghostscript is really pointing to the Type 1 fonts. (Try feeding "/Times−Roman findfont" (substitute whichever font you're using for Times−Roman) to gs and verify that the path from which it is loading the font is correct.)

If your observation is based on a preview using Ghostscript 2.6 or later, try running gs with −dNOPLATFONTS (alternatively, you can add "Ghostscript*UseExternalFonts: false" to your X resources if you're previewing with X).

Q72: How do I get a line of text across the top of each outgoing page?

Q72.

How do I get a line of text across the top of each outgoing page?

On our old fax machine, stuff was printed out at the top of each outbound page. Does this show up with HylaFAX?

A72.

HylaFAX calls this line of text a *tag line*. Tag line configuration is described in the advanced server setup documentation.

Q73: [PC] Why can't I get HylaFAX to use RTS/CTS on a Digiboard port?

Q73.

Why can't I get FlexFAX to use RTS/CTS on a Digiboard port?

Has anyone got any experience of using FlexFAX with Digiboards and Hardware Flow Control ? Under System V.4?

A73.

Yes, I have it working with Dell SysVr4, an eisa Digiboard, and a recent Boca modem. Using the CCON/16 where the connector box doubles as an RS232 breakout box it is easy to see that h/w flow control is working. I understand that it might not work with other fax modems, though.

Q73.

I've been using FlexFAX on a "normal" sas driven com port on Esix 4.0.4 with no problem. I expected to be able to simply switch it and the same modem over to a digiboard port. I use /dev/ttyi1a hard−linked to /dev/term/i1a. My problem is that I can't get the port to hold on to RTS/CTS flow control when using flexfax. Neither uucp nor ppp have any trouble with the Digiboard, but FlexFAX does. I can put hw flow control on the port with ditty, but as soon as FlexFAX runs its gone.

I have to admit I'm out of my depth with how the port knows what its supposed to be (I can read man pages, but that's not the same as knowing:−)). I've tried fiddling around with all sorts of things including ttymon, but had no luck so far.

Any tips would be most appreciated.

A73.

```
> Digiboard uses two device naming schemes with their drivers.
> On SVR4, these are:
>
>       /dev/term/i#x
>           and
>       /dev/term/i#X
> Where:
>       "/dev/term/i" is the root name of all ports
>       "#" is the board number (ie. 1 for the first board, 2 for the second)
>       "x" or "X" is a letter a-z or A-Z (a for the first port, etc)
>       An upper case letter is used to denote the hardware flow control
```

```
>       port (or modem control port).  This port blocks on open until
>       carrier is raised and enables RTS/CTS flow control.  To use the
>       port without carrier, you need to open it with O_NDELAY set.
>       A lower case letter denotes a software flow control port that
>       does not need carrier for the open to succeed.
```

The CX drivers use

```
 /dev/term/a##s and /dev/term/a##m

where: a is a letter corresponding to which of the 16-port boxes you want
       ## is the port number (01-16) on that unit
       m indicates hardware modem control, s indicates software.

> SVR4 added a an easy way to enable hardware flow control with the
> termiox(7) extensions to termio(7), but some serial board makers haven't
> seen the light yet.
```

I thought these worked, but now it occurs to me that I have not had any occasion where I wanted to turn off h/w flow control if the connected device used it.

```
> I have had to modify several programs to enable hardware flow control
> for both SVR4 and Digiboard drivers.  I wish I could just use the SVR4
> termiox(7) method.
```

I've just used the modem control device in the first place and if necessary, modified the software to use O_NDELAY in the open(). In my opinion, software that talks to modems should be aware that carrier detect is not going to be present before dialing.

```
> So, you could add some code to FlexFax to enable RTS/CTS flow control,
> but it will only work for Digiboards or you can try to use the modem
> control devices.
```

FlexFAX will open the modem control device without any changes. However you may need to use the device without modem control for the faxaddmodem script and change the name afterwards. Version 5A of kermit has a "set carrier off" command so you can easily chat with off–line modems. I used it to send an "AT&C0&D0" command to the modem so it would temporarily hold carrier detect up for the faxaddmodem and probemodem scripts. I recommend keeping a copy around if you need a handy way to set up modems.

Q74: [Sun] How do I get HylaFAX to use RTS/CTS on a Sun serial port?

Q74.

How do I get FlexFAX to use RTS/CTS on a Sun serial port?

I have been following the list for the last month or so and notice a lot of Sun – ZyXEL users out there. I tried to get FlexFAX going with hardware flow control on the sun and was told by the list that this is not possible.

Does anyone know why? I have been talking to Sun here who said they used truefax software and "did not do anything special with flow control."

A74.

Date: *Sat, 17 Apr 93 16:47:45 EDT*
From: *bst%tt@CAM.ORG (Brent Townshend)*
To: *flexfax@sgi.sgi.com*
Subject: *Sun RTS/CTS problems summarized.*

I'd like to recap the current status of the SUN RTS/CTS flow control problems, and see if anyone has anything further to add. Perhaps these problems should go noted in a README file in the port/sun directory. I'm running SunOS 4.1.1 with a U1496E+ with 6.00 ROMS and FlexFAX beta 97. Here is the problem as I see it:

The Sun driver for the Sparcstation on−board zs serial port behaves somewhat differently than one may expect. If hardware flow control is requested by the host and carrier detect is not asserted by the modem then data from the modem to the Sun is discarded. Note that data from the host to the modem works fine under these conditions. Once carrier detect is asserted, RTS/CTS works as expected. The problem is that when flexfax awaits responses from its 'AT' commands, the replies are thrown away by the OS since Carrier Detect is not present.

One would think that the recent changes to FlexFAX in regards to setting the CLOCAL bit would fix this problem. However, it appears that the CLOCAL bit is having no effect.

As mentioned by Steven Grimm, and further verified by looking at the data sheets, the problem arises from the Zilog Z8530 chip used for serial communications. On that chip there is a single control bit which turns on automatic RTS/CTS handling. This same bit turns the CD input into a receiver enable. Thus if the hardware is set for RTS/CTS flow control, then input is discarded whenever CD is inactive. This explains why the OS can't do what we'd like when CLOCAL is set.

One fix for this is to set the modem to always assert CD using AT&C0. However, this will cause problems in disconnecting after a call is finished. Another fix is to use XON/XOFF flow control, but effective RTS/CTS would be better, especially for data connections.

I believe the only way we are going to get around this problem is if FlexFAX would allow independent flow−control selection for setup, data transfer, and FAX transfer. This would also help out handling for modems like the ZyXEL which always do Xon/Xoff flow control when sending faxes.

A74.

Date: *Wed, 17 Nov 93 22:07:42 CST*

From: *katzung@katsun.chi.il.us (Brian Katzung)*
To: *flexfax@sgi.sgi.com*
Subject: *Bidirectional hardware flow control for Sun zs users!*

An infamous and long–standing hardware flow control problem with Sun's built–in serial ports, which Sun customers have often been led to believe was insoluable, has at last been solved.

Sun has released a new jumbo tty patch 100513–04 for SunOS 4.1.2 and 4.1.3 that incorporates changes that I have developed for the ZS 8530 serial communications driver (which most notably affects the built–in serial ports) to support bidirectional hardware flow control.

My changes eliminate a problem in which the receiver is disabled if CRTSCTS mode is enabled but CD (carrier detect) is not present, and add support to lower RTS (request to send) when the input buffers are getting full and reassert it when the buffers drain.

If you are not running SunOS 4.1.2 or 4.1.3 but you have a software support contract with Sun and are interested in seeing this enhancement supported in the release you are running, I suggest you contact your Sun software support representative.

I would like to take this opportunity to thank Dr. R. P. C. Rodgers of the National Library of Medicine Lister Hill Center, Peter Glassenbury of the University of Canterbury, Christchurch, New Zealand, and Arborvitae Software, all of whom provided invaluable assistance.

A74.

Starting with v2.3beta036 there is sufficient support in the configuration file escape code mechanism to workaround the Sun tty driver limitations regarding DCD and RTS/CTS. Specifically you can configure the fax server so that it will use RTS/CTS flow control only when carrier is known to be asserted. To do this set the modem up to initially use no flow control:

```
ModemFlowControl:       None    # initially disable host-side flow control
```

and then when carrier is known to be asserted, when dialing out or when receiving an incoming call, switch to use hardware flow control:

```
#
# Enable RTS/CTS on the host only after carrier is established.
#
ModemSendBeginCmd:      "<rts>"
ModemAnswerFaxBeginCmd: "<rts>"
ModemAnswerDataBeginCmd:"<rts>"
```

Consult the config(4F) manual page for complete details.

Q75: How do I force HylaFAX to set the tty device to

mode 664?

Q75.
How do I force FlexFAX to set the tty device to mode 664?

I'm running flexfax v2.1.0 on a Sun Sparc, and it works fine. The only problem I'm having is that after I halt the faxd server using faxquit, my modem's tty, /dev/dialer0, has had it's file permissions changed to 600, so as tip won't work unless I su to root and chmod the file back to 664. Not a big deal, but kind of weird...

A75.
Look at the **DeviceMode** configuration parameter in config(4F); it can be used to control the protection mode that HylaFAX sets for the tty device

Q76: How do I get faxd to print everytime I receive a facsimile?

Q76.
How do I get faxd to print everytime I receive a facsimile?

I am wondering how to get fax to printed everytime I receive one. Man pages say that changing the bin/faxrcvd script will do it. As it is now, faxes are being saved in TIFF format (I think thats the default)

A76.
TIFF/Class F is the format in which HylaFAX stores received facsimile. There is documentation on the faxrcvd script invoked by the fax server for each received facsimile. To print each received fax just modify the script according to your local needs. For example, you might use fax2ps (in the HylaFAX distribution) piped to ghostscript with the Laserjet driver.

```
/usr/local/bin/fax2ps $1 | gs -q -sDEVICE=ljet3 -dNOPAUSE -sOutputFile=- | lp
```

Another useful program to use when printing TIFF images is the tiff2ps program that is included in the TIFF software distribution.

Q77: No answer from remote (extending the connect time)?

Q77.

"No answer from remote" (extending the connect time)?

I had a user attempt a fax to "01149364142xxxx" (Germany). It failed numerous times, with "no answer from remote". I dialled the number myself, after 10–15 seconds, a modem answered, but without any rings first. Is this what is confusing my fax modem? S7 is 60 seconds. We have successfully faxed to numerous places in Europe before.

A77.

That is not enough. It may take much longer for some connections overseas to get established. I'm using the following in the configuration file:

```
ModemWaitTimeCmd:       S7=80           # Wait up to 80 seconds for a connect
```

Consult config(4F) for more information.

Q78: Help with etc/dialrules?

Q78.

Help with etc/dialrules?

At our University, we can dial 4 digit numbers to reach internal lines, and must dial 9 to get an external line.

I'd like to be able to use the same rules for sending faxes, and I've read (but not understood) the dialrules manpage, but I'm not sure what I have to change for this to work.

If anyone else has already done this, could you please share the changes with us?

Right now, I'm using something like: sendfax –d Jack@9,9787320 /etc/fstab But I'd like to be able to use: sendfax –d Jack@7320 /etc/fstab (for internal faxes), and: sendfax –d Pizza@9671111 /etc/pizza (for external calls).

A78.

You perhaps want to match numbers with more than 7 digits and automatically preprend "9,". If so, then something like

```
^[0-9]{7,}$      = 9,&
```

would do the trick I think (use the dialtest program to debug your rules).

Q79: How these dialrules work?

Q79.

How these dialrules work?

I would like to ask a couple of questions about dialrules....

Attached below is a e–mail from Seth Chaiklin to the mailing–list about the dialrules w/ comments from Sam Leffler (and yes: I welcome this for the FAQ).

A79.

Date: *Tue, 24 Oct 1995 10:35:56 PDT*
To: *Seth Chaiklin <SETH@psy.aau.dk >*
From: *Sam Leffler <sam@sgi.com >*

```
    To:  flexfax@sgi.engr.sgi.com
    Subject:  dialrules
    Date: Fri, 20 Oct 1995 17:46:37 +0700
    From:  "Seth Chaiklin" <SETH@psy.aau.dk>

    I would like to ask a couple of questions about dialrules and
    area codes.  Probably these questions do not come up for most
    people because they live in the United States and just use the
    rules outta the box.  But the rules are different in Denmark and
    I have been trying to make my own rules.  Therefore, I would like
    to inquire a little about the principles behind their operations.

    [Don't worry, I have seen the interesting and helpful examples
    that can be found on sgi.com in the contrib section!]

    I understand more or less the basic idea behind dialrules, have
    learned to appreciate the help provided by dialtest, and
    therefore I am NOT trying to ask for advice about how to compose
    the rules, or what the difference is between a canonical string
    and a dialstring.

    However, I would like to check my understanding and possibly make
    some suggestions to be incorporated into the man or FAQ pages.

    Question #1:  Are dialrules required?

    In principle, if a person always gave precisely the correct phone
    number (including necessary codes for getting external lines, or
    international access, country codes, and so forth, and it was not
    necessary to hide credit card information or special access
    codes), then one would not need dialrules.  Is that true?

    If so, then function of dialrules is to provide a kind of
    "service" to make it easier for the user to succeed in entering a
    correct fax number (e.g., by removing country codes for one's own
    country or one's own area code).  But this is simply a luxury or
    user-friendly feature, not a necessity of HylaFax operation.

dialrules are required to craft the canonical phone number from the
user-supplied dialstring.  The canonical number is used to uniquely
identify the destination when storing and retrieving cached information
such as the remote device's capabilities.  This information is also
used to create filenames for session logs.
```

The other important reason for dialrules on the server is to provide a uniform mechanism for specifying dialing commands. In particular supporting the +country code syntax means that client phone number databases can be setup in a location independent fashion (important given the client-server nature of the system--otherwise folks in different locales or using different servers wouldn't be assured of being able to exchange phone numbers/databases).

> Question #2: What are the extent of applications to which the AreaCode, CountryCode, InternationalPrefix, LongDistance Prefix, used for in etc/config and etc/config.modem?
>
> My answer: As best as I can tell (from config(5) and from the online documentation about advanced configuration of the server) is that they are only used to hold values that can be used in dialrules.

Correct.

> They are not required, but could be helpful in setting up the dialrules. And it is just helpful to keep these values separately in a config file, rather than "hard-coded" into dialrules. If they are not mentioned in config, then they will not be available for use in etc/dialrules, but otherwise, they have no other effect. Is that true?

Correct.

> Question 3: If my answer to question #2 is correct, then in a situation where one always use the local area code, even when dialing within that area code, then it is necessary to change the dialing rule from the "original formulation." One can still provide a value for "area code" in etc/config file, but if it is not used by dialrules, then it really has no meaning, isn't that right?

Correct.

> Question #4. Is there any error-checking for valid telephone numbers?
>
> I realize this is dicey business, but if it is true that dialrules are provided as a step in the direction of userfriendliness (in the sense of checking for International prefix, country code, area code), then why not continue in that direction and have more strict errorchecking. I will illustrate with my own local case (which will allow me at the same time to raise a suggestion about dialrule documentation).
>
> All calls within Denmark are composed of 8-digit numbers. In principle the first two digits are a kind of "area code", but these numbers are always dialed. For example, in Aarhus, we have 86 as an "area code", but if I dial from a phone with an 86 exchange to another 86 exchange, I still start the dialing with "86..." Therefore, it would seem "smart" to me if there was a kind of setup in the dialrules that would check to make sure that "local" calls are exactly 8 digits, and otherwise not bother to process local calls that were not 8 digits. There are no exceptions, as far as fax is concerned, and it would also have protect against calling emergency and information numbers, which are usually three digits.
>
> For example, maybe the following rules would do it (I am still rather shaky at rule construction -- well I tested them and I can see they are WRONG. But allow me this foolishness to make some more points).

```
    [some rules to clean up syntax and process leading '+' and '0']
    [0-9]{0,7} =       ! replace 0 to 7 digit numbers with nothing
    [0-9]{9,} =        ! replace over 8 digits with nothing

    In effect, this would remove the phone number if it was "local"
    and less than 8 digits.  And if there was an "internal" exchange
    (as is the case at my university), then perhaps the following
    rule just after would pick up those cases?

    [0-9]{4}  = &      ! keep 4 digit cases (trust user has valid no).
    [0-9]{0,3} =            ! reject numbers with three or less
    [0-9]{5,7} =            ! reject 5-7 digit numbers
    [0-9]{9,} =                  ! reject over 8 digit numbers

    Or what about the person who only sends a fax once every three
    months, and cannot remember whether a + or the international
    access code should be used, so writes:

    user@+004589424901

    or the person who knows that a 0 has to be entered to get an
    outside line, and therefore adds one of those:

    user@+0004589424901

    In principle...and with sufficient patience...one should be able
    to write rules that could catch these special cases.

    But let me ask (returning in effect to my question #1, but on a
    more sophisticated plane):  in principle one would not have to
    write rules to catch these cases, but then it is also likely the
    modem will fail to complete the call because of the "botched"
    phone number.  It is no different than using an 'O' for '0' or '1' for 'l'
    or '-' for '_' in composing an email address.  You get an error
    message and then fix it up.  But, again, in principle, if one can
    write the correct rules, then one can protect users (a little)
    against their mistakes.  Unlike the email example, where the
    problem is a wrong character.  Here the problem is that the
    person knows the correct number, but is a little uncertain about
    which form the fax server needs to get the information.

    Question 4a:  Is this a foolish idea to try to use dialrules for this
    kind of error checking?

    Just not worth the trouble to catch the few errors.  The user
    will just get the fax back.  Or maybe this will prevent some
    unnecessary modem use, and possible calls to undesired locations.

    Question 4b:  Have I made foolish errors in my rule-writing?

    Yes.  I can see that.

There are two ways that I intended for folks to reject phone numbers.
The DestControls file has an explicit mechanism that lets you reject
destinations and return the user a message explaining why the destination
cannot be sent to.  The 2nd mechanism is as you describe, using the
dialstring rules to transform the user-supplied dialstring to an
illegal phone number that is then rejected.  These two mechanisms
can be used together.

    Suggestion:  Is it possible to start to build a small listing of
    what rule constructs can be used for specific purposes?  man
    dialrules only says that POSIX extended regular expressions are
    used (which is great news for those who are competent and
    knowledgeable about such things).  But it does not tell where to
    get information if you are not.  The FAQ has a helpful little
    example about dialrules, but again it just shows the answer,
```

```
    without giving so much insight into the actual rules for regular
    expressions.  I finally found some enlightenment in "man grep".
    (The GNU version also discussed extended regular expressions).

util/regex in the source distribution includes the documentation
that comes with the regex package used by HylaFAX.  You can also
get a POSIX spec that documents the regex syntax.

    If nothing else, I would suggest mentioning 'man grep' in either
    'man dialrules' or the FAQ as a source of information about
    regular expressions.

    Also, it might be worth mentioning in the FAQ that one can find
    some interesting examples of dialrules in at sgi.com:
    in sgi/fax/contrib/dialrules.

    Alternatively or additionally, it might be nice to have a weblink
    in the FAQ to a place where one could read about those
    expressions.  BUT, it is not so important in this context to
    learn all the ins and outs of regular expressions, but rather to
    learn those specific techniques that are needed for the limited
    domain of dialing strings.

    Therefore, I would like to suggest that a little library of
    illustrative examples could be built up that could link syntax
    and function explicitly.

All this is fine, but someone needs to do it.  I'm sure that Matthias
would welcome a contribution to the FAQ.  I'd also be happy to include
more documentation in the HTML materials.  Feel free to contribute.

        <...other stuff deleted...>

I think you understand things quite well and could write something up
for inclusion.  Most people that use this software do so blindly and
w/o understanding 5% of its capabilities (it *is* large and complex,
but then again it tries to solve many problems).  Better documentation
would go a long way to improving this situation.

        Sam
```

Q80: Why have fax user?

Q80.

Why have fax user?

I've been trying to figure out why there is a need for a "fax" user. I'm running AIX 3.2.5 (and I checked this under Solaris as well). It seems that if the fax user has the same userid as uucp, then for any sort of lookup, uucp will be returned when one might want fax's userid.

For example, I have a file. I do a 'chmod fax filename' and then do an ls –l. ls shows that the file is now owned by uucp. In addition, if I try to use faxrm from the fax userid to remove someone elses job, faxrm reports that I'm not the fax user. So, in the end, I can not remove anyone's fax job if I am not the fax user, which I will never be because faxid = 5 = uucpid.

So, why the fax user? Why not run everything under uucp? If there are compelling reasons, where is the code which faxrm uses to check if you are the owner of a fax or the "fax" user? (I looked and looked, but nothing seemed obvious)

A80.

Because the "fax" user has a separate passwd file entry it can have a private passwd different from uucp. The reason that it's got the same uid as uucp is to simplify management of the UUCP lock files and tty device protections. It should be possible to have a uid different from uucp (at one time it did), but right now the code has some assumptions that require it to be identical. At some point in the future the requirement that the fax&uucp uids be the same may be eliminated (patches welcome).

Q81: What is the purpose of putting '@' at the end of the dial string?

Q81.

What is the purpose of putting '@' at the end of the dial string?

Could someone explain the purpose or advantage of putting '@' at the end of the dial string when dialling out in FAX mode?

The modem manual (Worldblazer) says it puts in 5 seconds of silence, but it is not clear from the FlexFAX docs or the modem manual why or when this is a Good Thing (unless I have missed it).

Currently I don't have the '@', and it seems to work OK.

A81.

The @ is used to get result codes that disambiguate "NO ANSWER" from "NO CARRIER". That is, whether the phone was not answered, or whether it was answered, but no carrier was recognized. By doing this one should be able to recognize when a person answers the phone (and thereby not redial). Unfortunately some modems do not properly implement @ and/or do not return useful results that permit one to recognize when a non−modem answers the phone. The ZyXEL is a prime example of a modem that does not implement the @ dial modifier correctly. I personally would never setup a high−volume fax service with a modem that did not properly implement the @ dial modifier because of the potential for harassing folks as a result of dialing wrong numbers.

BTW, the "@−trick" is due to Stuart Lynne.

Q82: Retrain negative (pages lost during transmit)?

Q82.

Retrain negative (pages lost during transmit)?

Here is my situation:

FlexFax v2.2.2pl1, Sparc LX, Solaris 2.3
Multi−Tech 1432 BA/A, fw 0111 (AT&T chip).

I constantly loose page eight from a ten page document received from a fax back system. Pages 1−7 look O.K., but after page 8, I get a "retrain negative", Then receive two more pages (Pages 9 and 10). Faxinfo claims 9 pages but the log looks like it received 10 pages. One thing is that page 8 (missing page), has two RECV lines in the log. The second line says 1592 lines received. (There is a lot of white space on this page. Is this significant?) Is this simply another case of the remote unable to resend the page and/or protocol violation, or is there something more?

Here is the log beginning with page 8 to the end.

```
Jun 22 17:01:09.32: [  751]: RECV recv MPS (more pages, same document)
Jun 22 17:01:09.33: [  751]: RECV send MCF (message confirmation)
Jun 22 17:01:09.33: [  751]: --> [2:OK]
Jun 22 17:01:09.33: [  751]: <-- [6:AT+FDR]
Jun 22 17:01:10.55: [  751]: --> [14:+FHT:FF 13 8C ]
Jun 22 17:01:11.29: [  751]: --> [7:CONNECT]
Jun 22 17:01:11.29: [  751]: RECV: begin page
Jun 22 17:01:11.30: [  751]: MODEM set XON/XOFF/FLUSH: input disabled, output enabled
Jun 22 17:01:11.30: [  751]: <-- data [1]
Jun 22 17:01:20.18: [  751]: RECV: 16384 bytes of data, 523 lines
Jun 22 17:01:29.07: [  751]: RECV: 12524 bytes of data, 1592 lines
Jun 22 17:01:29.07: [  751]: MODEM set XON/XOFF/DRAIN: input enabled, output enabled
Jun 22 17:01:29.08: [  751]: --> [24:+FPTS:2,2113,105,45,1960]
Jun 22 17:01:32.50: [  751]: --> [14:+FHR:FF 13 4F ]
Jun 22 17:01:32.50: [  751]: --> [6:+FET:0]
Jun 22 17:01:32.50: [  751]: RECV recv MPS (more pages, same document)
Jun 22 17:01:32.51: [  751]: RECV send RTN (retrain negative)
Jun 22 17:01:32.51: [  751]: --> [2:OK]
Jun 22 17:01:32.51: [  751]: <-- [6:AT+FDR]
Jun 22 17:01:33.66: [  751]: --> [14:+FHT:FF 13 4C ]
Jun 22 17:01:35.49: [  751]: --> [26:+FHR:FF 13 83 00 62 F8 00 ]
Jun 22 17:01:39.75: [  751]: --> [14:+FHT:FF 13 84 ]
Jun 22 17:01:40.14: [  751]: --> [5:+FCFR]
Jun 22 17:01:40.14: [  751]: --> [21:+FDCS:1,5,0,2,0,0,0,0]
Jun 22 17:01:40.15: [  751]: REMOTE wants 14400 bit/s
Jun 22 17:01:40.15: [  751]: REMOTE wants page width 1728 pixels in 215 mm
Jun 22 17:01:40.15: [  751]: REMOTE wants unlimited page length
Jun 22 17:01:40.16: [  751]: REMOTE wants 7.7 line/mm
Jun 22 17:01:40.16: [  751]: REMOTE wants 1-D MR
Jun 22 17:01:40.51: [  751]: --> [7:CONNECT]
Jun 22 17:01:40.51: [  751]: RECV: begin page
Jun 22 17:01:40.52: [  751]: MODEM set XON/XOFF/FLUSH: input disabled, output enabled
Jun 22 17:01:40.52: [  751]: <-- data [1]
Jun 22 17:01:49.35: [  751]: RECV: 16384 bytes of data, 540 lines
Jun 22 17:01:58.11: [  751]: RECV: 16384 bytes of data, 374 lines
```

```
Jun 22 17:02:07.04: [  751]: RECV: 16384 bytes of data, 407 lines
Jun 22 17:02:15.90: [  751]: RECV: 16384 bytes of data, 393 lines
Jun 22 17:02:24.40: [  751]: RECV: 15596 bytes of data, 551 lines
Jun 22 17:02:24.41: [  751]: MODEM set XON/XOFF/DRAIN: input enabled, output enabled
Jun 22 17:02:24.51: [  751]: --> [18:+FPTS:1,2264,0,0,0]
Jun 22 17:02:25.67: [  751]: --> [14:+FHR:FF 13 4F ]
Jun 22 17:02:25.67: [  751]: --> [6:+FET:0]
Jun 22 17:02:25.67: [  751]: RECV recv MPS (more pages, same document)
Jun 22 17:02:25.68: [  751]: RECV send MCF (message confirmation)

[page 8]

Jun 22 17:02:25.68: [  751]: --> [2:OK]
Jun 22 17:02:25.68: [  751]: <-- [6:AT+FDR]
Jun 22 17:02:26.85: [  751]: --> [14:+FHT:FF 13 8C ]
Jun 22 17:02:27.61: [  751]: --> [7:CONNECT]
Jun 22 17:02:27.61: [  751]: RECV: begin page
Jun 22 17:02:27.62: [  751]: MODEM set XON/XOFF/FLUSH: input disabled, output enabled
Jun 22 17:02:27.62: [  751]: <-- data [1]
Jun 22 17:02:36.36: [  751]: RECV: 16384 bytes of data, 579 lines
Jun 22 17:02:45.32: [  751]: RECV: 16384 bytes of data, 424 lines
Jun 22 17:02:54.11: [  751]: RECV: 16384 bytes of data, 384 lines
Jun 22 17:02:59.46: [  751]: RECV: 8701 bytes of data, 878 lines
Jun 22 17:02:59.46: [  751]: MODEM set XON/XOFF/DRAIN: input enabled, output enabled
Jun 22 17:02:59.47: [  751]: --> [18:+FPTS:1,2264,0,0,0]
Jun 22 17:03:04.44: [  751]: --> [14:+FHR:FF 13 2F ]
Jun 22 17:03:04.44: [  751]: --> [6:+FET:2]
Jun 22 17:03:04.44: [  751]: RECV recv EOP (no more pages or documents)
Jun 22 17:03:04.45: [  751]: RECV send MCF (message confirmation)

[page 9]

Jun 22 17:03:04.45: [  751]: --> [2:OK]
Jun 22 17:03:04.46: [  751]: <-- [6:AT+FDR]
Jun 22 17:03:05.65: [  751]: --> [14:+FHT:FF 13 8C ]
Jun 22 17:03:07.39: [  751]: --> [14:+FHR:FF 13 FB ]
Jun 22 17:03:07.39: [  751]: --> [7:+FHNG:0]
Jun 22 17:03:07.39: [  751]: REMOTE HANGUP: Normal and proper end of connection (code 0)
Jun 22 17:03:07.96: [  751]: --> [2:OK]
Jun 22 17:03:12.01: [  751]: RECV: end
Jun 22 17:03:12.02: [  751]: SESSION END
```

A82.

The remote never retransmitted the bad page. The fax server overwrites bad pages when a retransmitted copy is supposed to be delivered. That is why your file only has 9 pages in it. I can't recall the exact wording in the T.30 spec, but I believe it's not required that the sender be capable of retransmitting a bad page. FlexFAX will properly retransmit a page if it receives RTN.

Q83: [SunOS] Utmp/motd not updated on SunOS−4.1.3_U1?

Q83.

[SunOS] Utmp/motd not updated on SunOS−4.1.3_U1?

I'm finding that login(1) only updates lastlog, leaving utmp and wtmp alone.

A83.

This happens when you don't have a ttytab entry for the dial–in device, or if a device has multiple links and the reference in ttytab is not the first one in /dev. See also ttyslot(3V).

Q84: Should I use Class1 modems?

Q84.

Should I use Class1 modems?

A84.

Date: *Tue, 13 Aug 1996 18:07:02 –0700*
From: Sam Leffler <sam@hyla.chez.sgi.com>
Subject: *Re: Code 25??*

```
    To:  flexfax@sgi.com
    Subject:  Re: Code 25??
    Cc:  Joergen Haegg
    Date: Tue, 13 Aug 1996 18:02:43 CDT
    From:  Eric Jergensen

        .....

    Try using it as a class 1 fax.

    The USR Sportster I have works that way, but not as class 2.0.  USR
    seems to have solid modulation code and pathetic fax firmware.

I personally would not depend on the operation of a Class 1 modem
under FreeBSD unless the system is dedicated to fax operation.  This
is not a slam against FreeBSD, I'd say the same thing about any system
that does not have explicit support for "realtime"-oriented applications.
There is also the issue that you are assuming that my Class 1 driver
is better than any Class 2/2.0 firmware that you can buy.  Given that
there are high quality Class 2/2.0 modems at inexpensive prices I can
see no reason to spend much effort on a Class 1 modem unless you:

1. Already have a Class 1 modem that you want to use.
2. Need some functionality that is not available with a Class 2/2.0
   modem.

I used a Class 1 modem with my software in production use for several
years with excellent results.  I have since replaced it with a Class
2.0 modem with as good if not better reliability.

        Sam
```

Q85: Howto Forward Incoming Faxes using E−mail?

Q85.

Re: Forward Incoming Faxes using E−mail? ?

A85.

Date: *Thu, 01 Aug 1996 17:17:48 −0700*
From: *Sam Leffler <sam@hyla.chez.sgi.com>*
Subject: *Re: Forward Incoming Faxes using E−mail?*

```
    To:  flexfax@sgi.com
    Subject:  Forward Incoming Faxes using E-mail?
    Date: Thu, 01 Aug 1996 18:18:29 CDT
    From:  "Coleman T. Jones"

    Hi,
    I was wondering if the following scenario is currently possible with
    HylaFax:

    Setup a Linux Fax Server PC with two modems (Practical Peripheral
    PM14400FXMT).
    A group of sales reps are given UNIQUE Fax telephone numbers.  Each
    fax number will be assigned to ONE and ONLY ONE rep.  All those fax
    numbers funnel into the TWO modems on the fax server.  Based on the fax
    number DIALED by the sender (which uniquely identifies the recipient)
    the fax can be forwarded to the appropriate individual through e-mail.

Yes, you just configure two different faxrcvd scripts; one for each modem.

    I thought I heard of some telephony technology ('DID' or 'TAPI' I think)
    that will allow a program to identify characteristics of incoming calls.
    One of those characteristics being the Original Dialed Telephone Number.

DID = Direct Inward Dial, it refers to a facility where multiple Telco
numbers are routed to a single physical connection to the host; the host
identifies the phone number associated with the inbound call through
information sent to the host by a special-purpose device.

TAPI = Telephone API; it's a programming API defined by Microsoft for Win95.

Check out http://www.faximum.com/faqs/fax.glossary.

        Sam
```

Q86: NoCarrierRetrys, MaxDials or MaxTries variables...

Q86.

Re: MaxDials... ?

NoCarrierRetrys, MaxDials or MaxTries variable – and I tried to set that, but with no success...

A86.

Date: *Fri, 07 Jun 1996 08:16:55 −0700*
From: *Sam Leffler <sam@hyla.chez.sgi.com>*
Subject: *Re: MaxDials...*

```
To:  flexfax@sgi.engr.sgi.com
Subject:  MaxDials...
Cc:  hana@tintilinic.srce.hr (Hana Breyer)
Date: Fri, 07 Jun 1996 14:40:14 +0200
From:  hana@tintilinic.srce.hr (Hana Breyer)

Here is my problem - if fax cannot be delivered succesfully faxserver
dials same number - unpredicable (for me) number of times. As I see it
there is supposed to be a way to limit the number of dials with either
NoCarrierRetrys, MaxDials or MaxTries variable - and I tried to set that,
but with no success...

my config.cua1 looks like:

    <...stuff deleted...>
#
NoCarrierRetrys:        3               # retry 3 times on no carrier
MaxDials:               3               # da ne gnjavi ljude ...
MaxTries:               3               # i dalje da ih ne gnjavi
#
PagerSetupCmds:         ATS41=10%B300   # use V.21 at 300 bps

    <...stuff deleted...>

MaxDials is enforced by the scheduler process so the parameter must be
specified in faxq's config file.  If you obtain the v4.0 sources (or just
the manual pages) you will see that the v4.0 config(4F) documentation now
explicitly identifies which config file(s) configuration parameters are
expected to appear in.  Hopefully this will clear up confusion of this sort.

        Sam
```

Q87: How to config ModemClass?

Q87.

Re: How to config ModemClass ?

A87.

Date: *Sun, 07 Jul 1996 22:08:56 −0700*

From: Sam Leffler <sam@hyla.chez.sgi.com>
Subject: *Re: How to config ModemClass*

```
To:  Sam Leffler
Subject:  Re: How to config ModemClass
Cc:  metgeos@hk.net (Royal Observatory HK), flexfax@sgi.com
Date: Sun, 07 Jul 1996 19:22:02 +1200
From:  Phil Abercrombie

>     I have three modems configured at tty5 , tty8 and tty9.
>     I want to use the Modem Class feature to partition modems at
>     tty5 and tty8 as a group, say 'abc'. But after reading through
>     the documents and man pages, I still cannot try out how to do
>     that.
>
> Add
>
> ModemClass: "abc tty[58]"
>
> to the faxq config file or send it directly to faxq using faxconfig.


Don't like to disagree with Sam, but suggest if this doesn't work for
you, to try
ModemClass: "abc:tty[58]"

    ....

(I guess this is a bug either in the code or the documentation)
```

```
Thank you.  You are correct; the bug is (was) in the config(4F) man page
(which I was using as reference).

        Sam
```

Q88: No regular expression for modem class?

Q88.
No regular expression for modem class?

A88.
Date: *Wed, 18 Dec 1996 08:16:38 −0700 (MST)*
From: Steve Williams <steve@genie96.com>
Subject: *Re: No regular expression for modem class?*

```
Howdy,

After having just waded through the source code of this area, I know for
a fact that you are using the ModemClass paramater INCORRECTLY.
Read man 4 config to find out about the ModemClass.  It does not define the
Fax Class of the modem.  It is used to group modems together, so that
```

```
jobs can be targeted for a specific group of modems.

The correct syntax would be:

ModemClass:     "any:   tty[0-1]"

This would set the default fax modems to use for any job to be tty0 and
tty1.  If you had any other modems defined in hylafax, they would be
ignored for outbound fax usage.

Good Luck,

--
        Steve Williams, Calgary, Alberta, Canada
        Genie Computer Systems Inc.
        steve@genie96.com
>
>
> After seeing that my modem does not answer the phone properly :
> picks up and immediately hangs up the line without evenn trying to
> handshake I looked at the system log file and saw the following :
>
> Dec 18 06:41:50 FaxQueuer[6746]: No regular expression for modem class
> Dec 18 06:41:50 HylaFAX[6748]: HylaFAX INET Protocol Server: restarted.
> Dec 18 06:41:50 HylaFAX[6748]: HylaFAX Old Protocol Server: restarted.
> Dec 18 06:41:50 HylaFAX[6748]: HylaFAX SNPP Protocol Server: restarted.
>
> This come up everytime I restart Hylfax.
> Modem class is clearly defined in my /var/spool/fax/etc/config file.
>
> LogFacility:            daemon
> CountryCode:            1
> AreaCode:               601
> LongDistancePrefix:     1
> InternationalPrefix:    011
> DialStringRules:        "etc/dialrules"
> ServerTracing:          1
> ModemClass:             2.0
>
>
> So what does this message really mean ?
>
> Thanks in advance for any ideas.
>
> Atif Khan
> aak2@ra.msstate.edu
>
```

Q89: Re: Logging in HylaFAX v4.0beta18 ?

Q89.

Re: Logging in 4.0b18 ?

Why does the logging style in HylaFAX v4.0beta18 has changed?

A89.

Date: *Tue, 13 Aug 1996 20:44:29 −0700*
From: *Sam Leffler <sam@hyla.chez.sgi.com>*
Subject: *Re: Logging in 4.0b18*

```
    To:  Sam Leffler
    Subject:  Re: Logging in 4.0b18
    Date: Tue, 13 Aug 1996 20:42:50 CDT
    From:  "Chris D. Halverson"

    On Tue, 13 August 1996, Sam Leffler wrote:

    > It is trivial to write a script that takes the new logs and merges them

    True. That was my first thought, but then I thought I may as well ask
    anyway :)

    > back into the old-style files.  The new scheme has many advantages that
    > you may not see.  FWIW since beta018 I've added a server log message that

    Just curious (and not to be facetious), but what advantages are there?
    I'm sure there are, otherwise you would not have put them in, I just
    am not seeing them right now.

The old-style log files did not provide a unique way to map a reference to
a phone call back to the session log for the call; it was necessary to know
the exact time of the call and the PID of the faxsend/faxgetty process that
was handling the call.  Since the PID was not recorded anywhere it was not
possible to always guarantee a back mapping.  The ability to quickly find
out all the information about a particular call is important in a production
environment.  I took this idea from the draft T.611 spec that tries to
define something similar to my client-server protocol.

While there currently is no facility for monitoring a session log
directly through the client-server protocol building an ad hoc mechanism
could be done by monitoring the send operation to get the commid (look at
faxwatch for an example of how to do this) and then doing the equivalent
of tail -f on the log file (driven by a changing file size and/or by
listening for send events to trigger reads of the log file).  With the
old scheme where all session logs to the same phone number were merged in
a single file doing something like this would be much harder since you'd
need to separate out the log messages for the call you wanted.

There are other benefits to the per-log scheme such as simplifying the
implementation of lots of the shell scripts that do things like return
session logs for failed calls.

I consider the inconvenience of having to search for the specific log file
name to be minor.  If there were a way to monitor a job/call through the
client-server protocol then noone would probably care.  I've described a
simple scheme for doing this above; maybe someone will even follow through
and implement something.  I've even considered adding a new protocol op
to do this basic function as a SITE extension but this won't happen before
the v4.0 release.
```

```
        Sam
```

Q90: RFC for Sam's funky new c/s protocol?

Q90.

Is there a RFC number for SAM's funky new c/s protocol? ?

A90.

Date: *Thu, 01 Aug 1996 10:05:54 −0700*
From: Sam Leffler <sam@hyla.chez.sgi.com>
Subject: *Re: RFC for SAM's funky new c/s protocol?*

```
    To:  flexfax@sgi.com
    Subject:  RFC for SAM's funky new c/s protocol?
    Date: Thu, 01 Aug 1996 14:18:38 BST
    From:  "Mr. Arlington Hewes"


    Hylafax(1) has this to say:

           information.   For  information on the server-side support
           provided with HylaFAX consult hfaxd(8C).   For  documenta-
           tion  on  the  client-server fax protocol consult RFC XXXX
           (to be filled in).

    Have the XXXXs become numbers as yet?  ;-)

The document does not exist and I have no schedule for when it'll be
ready.  However the protocol is reasonably straightforward and the
basic operation can be easily deduced by looking at a protocol trace
for sendfax, faxstat, faxrm, faxalter, etc.  You also have all the
code.  Basically think FTP and add in the concept of a job.

        Sam
```

Q91: Is T.30 Sub−Addressing support in HylaFAX?

Q91.

Is T.30 Sub−Addressing support in HylaFAX?

A91.

Date: *Tue, 27 Aug 1996 10:15:53 −0700*
From: Sam Leffler <sam@hyla.chez.sgi.com>
Subject: *Re: T.30 Sub−Addressing*

```
To:  flexfax@sgi.com
Subject:  T.30 Sub-Addressing
Date: Tue, 27 Aug 1996 16:41:11 BST
From:  David Brownlee

    Castelle make a thing about their system being able to route
    incoming faxes based on the 'T.30 Sub-Addressing Standard'.

    A cannot find any reference to this in hylafax, is this something
    that is likely to be adopted in future, or just irrelevant?
    (Or have I missed something!)

    <...stuff deleted...>
```

```
v4.0 has some support for subaddressing but it is incomplete and little
tested.  Specifically there is support in the Class 1 driver for parsing
received subaddress info and for sending it and the Class 2.0 driver has
some support based on the ITU T.class2 spec but since no Class 2 or 2.0
modems that I know of have firmware support the latter is not especially
useful (and obviously untested).  There is also very little support above
the drivers; the info gets passed around, e.g. you can set it via sendfax
and it gets percolated back up into the receive info passed to faxrcvd but
there is no good database for using this info to do routing (hacks like
that currently used for the TSI would be easy though).  Most importantly
since subaddressing is a new protocol feature that is not supported in any
current fax machine its use is very limited.  I expect it'll show up in
future machines but given that there are a lot of existing fax machines out
there without it, it's unclear how useful it'll be for a while.  Castelle
may have support for it but it's unclear whether you'll find anyone that
can make use of it except for another computer (in which case using fax is
silly; just use electronic mail--though it might be worthwhile in a "faxback"
system).

        Sam
```

Q92: UnixWare 4.2 general permission scheme & HylaFAX v4.x

Q92.

UnixWare 4.2 general permission scheme & HylaFAX v4.x

A92.

Date: *Sat, 27 Jul 1996 00:11:02 −0500 (CDT)*
From: *"Leslie Mikesell" <les@mcs.com>*
Subject: *Re: ANNOUNCEMENT: v4.0beta018 x86 SVR4.2 binary distribution*

```
>     command line like the script tells you.  It's working now as
>     long as I run hfaxd standalone.  If I let inetd start it I get
>     a message about not being able to create dev/null (no leading /).
>     Is it supposed to work that way?
>
```

```
> I'm allways starting hfaxd(1M) from the script in /etc/rc2.d/
> and running it this way it doesn't need any setuid-bits. I've
> removed these bits from hfaxd(1M), faxq(1M), faxqclean(1M) and
> faxgetty(1M). If you want to start hfaxd(1M) from the inetd
> you should chmod(1) it to 4755 w/ owner root. Please note that
> hfaxd(1M) does a chroot(2) to the spooling area and tries to
> create "dev/null", "dev/tcp" and "etc/netconfig" below (that's
> why there was no leading "/" in the message.

That makes sense.  I'll run it standalone on the machine that
actually sends a lot of faxes, but I have a couple of others
where I mainly want to run faxgetty to handle inbound data
calls because it is more robust than the native ttymon.  Hfaxd
will run rarely, if ever, so it should be more efficient to
use inetd.

> On UnixWare 2.0x one *must* not set setuid-bits on these processes
> because they will loose the priveleges on the first setuid(2) call.

I've given up on Unixware and 4.2 in general (the permission scheme
has gotten too wierd) and am trying to move to Linux.  But I have
some programs that require sysvr4 and some machines with Digiboard
C/X cards.

        ....

Les Mikesell
  les@mcs.com
```

Q93: Experience from using HylaFAX regarding sending 1000 per day?

Q93.

Experience from using HylaFAX regarding sending 1000 per day?

A93.

Date: *Thu, 26 Sep 96 08:09:16 CDT*
From: Tom G. Brusehaver/Consultant Euler Solutions <tgb@bnu003.cncc.bnr.com >
Subject: *Re: Experience from using HylaFAX*

```
>We are evaluating both public and commercial software solutions for sending
>faxes based on a UNIX server. It would be interesting to know if there are
>somebody using HylaFAX in a configuration that handles:
>
>- Sending 500 - 1000 per day
>- With a modem pool consisting of 2 - 5 modems
>- Preferably based on the newest release of HylaFAX
```

```
We are sending that many pages, and using about 5 modems.  Latest
(4.0p10) Hylafax.

Gotta watch old fax machines with little memory, they have trouble
with MPS requests.

Otherwise it works pretty well.

--
tgb@bnr.com
```

Q94: Is there a way to re−init the modem after some time?

Q94.

Is there a way to re−init the modem after some time?

A94.

Date: *Wed, 25 Sep 1996 08:34:16 +1200 (NZST)*
From: *Jonathan Chen <jonc@pinnacle.co.nz>*
Subject: *Re: Auto Reinit??*

```
On 23 Sep 1996, Keith Mitchell wrote:

> Is there anyway to automatically reinitialize the modem after so
> many minutes??
>
> The reason is: when I dial out the the modem gets initialized (ATZ).  This
> takes the modem out of Adaptive answer mode.  After the call, just quitting
> the app doesn't reset the modem.

Are you running faxgetty(1M)? Our internal setup involves outgoing and
incoming calls, and after an outbound data call finishes, the log traces
distinctly shows faxgetty(1) reinitalizing the modem to the appropriate
state.
--
Jonathan Chen                         e-mail : jonc@pinnacle.co.nz
  Pinnacle Software Ltd               Voice  : +64.9.415.4460
  Auckland, New Zealand               Fax    : +64.9.415.4250
```

Q95: MultiTech ZDX2834 modems?

Q95.

MultiTech ZDX2834 modems?

A95.

Date: *Wed, 18 Sep 96 14:11:03 EDT*
From: *Glenn Burkhardt <glenn@aoi.ultranet.com>*
Subject: *MultiTech ZDX2834 modems*

```
I've been working with MultiTech support, and we've found out how to
improve the ZDX 2834's ability to receive faxes.  The receive threshold
in negative decibels is determined by the S38 register.  Its factory
default value is 43; changing it to 35 makes it possible to receive
faxes from our AT&T 3510D fax machine (and probably many others).

The command "ATS38=35" will change the value of the S register.
The command "AT&F9" will prevent the factory default value from being
loaded should the command "AT&F" be issued.  So, recommend this
one-time, out of the box, initialization for the modem:

AT&F
ATS38=35
AT&F9
AT&W0

The explanation they had was that when carrier was dropped as part of the
normal facsimile handshaking, noise on the line was above the receive
threshold level, making the modem think that carrier hadn't be dropped.
Eventually, the T2 timer expired, and the modem reported "+FHNG:73"
(T.30 T2 timeout, expected page not received (code 73) ).  Increasing
the modem's receive threshold to -35db keeps the noise level below the
carrier, at least for my fax machine and phone lines

I earlier reported seeing

        "REMOTE HANGUP: Unspecified Transmit Phase B error code 20)"

errors during fax transmissions with the ZDX.  These were in fact due to
the phone number being incorrect (the 0 in the 011 international access
code had been omitted due to a typo in the config file).

I currently know of no fax transmission failures with the ZDX2834 modem.

MultiTech Support (800 972 2439) also invited anyone who's having
trouble to call them.
```

Q96: USRobotics Courier modem and class2.0 standard

Q96.

USRobotics Courier modem and class2.0 standard

A96.

Date: *Tue, 13 Aug 1996 14:30:12 −0700*

From: *Sam Leffler <sam@hyla.chez.sgi.com>*
Subject: *Re: Code 25??*

```
    To:  flexfax@sgi.com
    Subject:  Code 25??
    Date: Tue, 13 Aug 1996 13:32:11 +0200
    From:  Joergen Haegg


    Hello.
    I'm trying to get 4.0beta18 to work on my FreeBSD 2.1.5 host.
    I have a USRobotics Courier modem (class 2.0) connected.
    The modem works, I'm using it for PPP normally.

Actually you mean "the modem works for data".

    But I get 'DCS sent 3 times without response' when I try to send a fax.
    (code 25)

    Can anyone explain why and maybe how to fix it?

USR's Class 2.0 fax firmware is notoriously substandard.  If you intend
to depend on a modem for facsimile communication you should look at the
documentation for recommendations on modems that are thought to be good.

        Sam
```

Q97: Howto set 7−E−1 instead of N−8−1 for paging?

Q97.

Howto set 7−E−1 instead of N−8−1 for paging?

I can't figure out where to specify that calls to my alpha provider should be made 7−E−1 instead of N−8−1.

A97.

Date: *Tue, 10 Sep 96 17:18 PDT*
From: *Randy Bush <randy@psg.com >*
Subject: *Re: Hylafax paging*

```
> I can't figure out where to specify that calls to my alpha provider should
> be made 7-E-1 instead of N-8-1.

# Pager Stuff
PagerSetupCmds:         <300>
PagerIDMapFile:         "etc/pagermap"
PagerTTYParity:         even

        ...
randy
```

Q98: Sending Very Large Files gives Job time limit exceeded?

Q98.
Sending Very Large Files gives Job time limit exceeded?

A98.
Date: *Sun, 22 Sep 1996 09:46:00 +0200 (MST)*
From: *Matthias Apitz <Matthias.Apitz@SOFTCON.de >*
Subject: *Re: Sending Very Large Files*

```
Eric Poole wrote:


    I have a very large Microsoft Word file that I need to be able to fax.

    It's 12 pages long, but there are lots of graphics and the Microsoft Word
    file size is just a shade under 10 megabytes.

        ....
    However, the transmission is unsuccessful, and it
    appears to be due to a timeout somewhere.

    The e-mailed message I got from sendfax is as follows:

    ==================

    Your facsimile job to 434-6994 was not sent because document conversion
    to facsimile failed.  The output from the converter program was:


    [Job time limit exceeded]


    Check any PostScript documents for non-standard fonts and invalid constructs.
        ...

    ================================================


    As I was writing this note, I went to send two more faxes that were
    considerably shorter ... the Postscript files are 731,866 bytes and 986,691
    bytes.  These two failed as well, with the same failure message.

    Smaller files, generating Postscript files up to about 500K bytes, seem to
    go out fine.

    I looked over the docs on the Web and couldn't find anywhere where one can
    set a timeout time.  Is this a compile time option or something?  Can anyone
    give me a hand in getting Hylafax set up with more liberal timeouts?
```

```
Just read man config(4F) for PostScriptTimeout:

        matthias
```

Q99: Howto deinstalling HylaFAX

Q99.

Howto deinstalling HylaFAX

I would now like to remove the files associate with hylafax and don’t want to break anything else in the process – I have looked on the web site and read the FAQ, but it does not list what files are installed where or what changes are made to what system files.

A99.

Date: *Mon, 03 Jun 1996 11:13:11 −0700*
From: *Sam Leffler <sam@melange.esd.sgi.com>*
Subject: *Re: Help deinstalling hylafax from Linux (1.2.13)*

```
There is no existing support to remove the software on non-IRIX systems.
I've suggested that someone might want to make some enhancements to the
install script to create a history file of installed files (and their
checksums) so that deinstallation could be automated; but noone has done
anything.  A common technique that people use to simplify removal is to
install everything under a single root directory; this is simple when
working from the source distribution.

        Sam
```

Q100: Re: BUG when device has name ’xxx_yy’ ?

Q100.

Re: BUG when device has name ’xxx_yy’ ?

A100.

Date: *Tue, 20 Aug 1996 17:50:34 −0700*
From: *Sam Leffler <sam@hyla.chez.sgi.com>*
Subject: *Re: BUG when device has name ’xxx_yy’*

```
    To:  flexfax@sgi.com
    Subject:  BUG when device has name 'xxx_yy'
    Date: Wed, 21 Aug 1996 00:32:55 +0200
```

```
    From:  Alex Ongena

    Hylafax 4.0 beta 18
    Linux 2.0.7

    Hi,

    I think I discovered a (small) BUG.

    I have a modem device that I called /dev/mod_yd.
    The first time the device name is read properly, but after receiving
    a fax and than queing one, FaxSend thinks the device is called /dev/mod/yd.

    I think that this is *not* an undocumented feature ;-)

SVR4 systems use modem devices that reside in a subdirectory; e.g.
/dev/term/10.  These device names are converted to "device identifiers"
by stripping a leading /dev and replacing all ``/''s with ``_''.
Because many people (myself included) got confused about when to supply
a device identifier and when to supply a device filename to certain
programs I made them interchangeable.  The result is that you cannot
use device filenames with ``_'' in them.  config(4F) describes this
stuff and it is described elsewhere too but probably not in the HTML
materials--I will fix this.

Bottom line is that this "issue" will be documented but nothing will
change for v4.0.

        Sam
```

Q101: Re: Distinctive Ring Support ?

Q101.
: *Re: Distinctive Ring Support ?*

A101.
: **Date**: *Wed, 03 Jul 1996 16:12:54 −0700*
From: *Sam Leffler <sam@melange.esd.sgi.com>*
Subject: *Re: Distinctive Ring Support*

```
    To:  flexfax@sgi.com
    Subject:  Distinctive Ring Support
    Date: Wed, 03 Jul 1996 11:21:52 -0000
    From:  "David Palmer"

    Hello Sam and HylaFax users,

    Is there a world-wide standard for distinctive ring cadences ?

    Telstra (Australian telephone service provider) have just upgraded
    the telephone network to offer distinctive ringing (or EasyCall
    Multiple Number as the Telstra marketing people call it.) and have
```

```
    been told to expect my fax number to ring using Distinctive Ring
    number 7.

    To configure HylaFax to answer to this ring is it a simple modem
    config. change as stated in the advanced documentation to set this
    to number 7 and it should work or are there any other tasks to define
    the distinctive ring cadence numbers elsewhere ?

    I understand my modem requires distinctive ring support enabled
    in its firmware to use this HylaFax feature.

The software simply interprets status messages from your modem to decide
if an inbound call is fax/data/voice.  You have to configure your modem
and the software to specify the relationship between status messages and
call types.  This stuff is explained in the documentation.

        Sam
```

Q102: Re: Faxing from a PC?

Q102.

Re: Faxing from a PC?

A102.

Date: *Wed, 3 Jul 1996 07:22:40 −0700 (PDT)*
From: *Bill Campbell <bill@celestial.com >*
Subject: *Re: Faxing from a PC*

```
>
>I'm using HylaFAX Version 3.0pl1 on a Solaris 2.5 sparc10.
>
>I trying to use send faxes from Microsoft Word, on a NT box.
>Is WinFlex my only option for doing this? I anyone doing
>something similar, is so can you give me the quick 1, 2.
>
We have a Unix printer named faxprn, and a SYSV LP Interface script that
extracts the fax number from the body of the fax (PostScript or text) by
searching for the pattern 'Fax: phone_number' then forwarding the message
via sendfax.  I've never tried this using a BSDish printer, but it
shouldn't be difficult.

This allows any application to send faxes by directing them to the fax
printer (the SYSV syntax is 'lp -dfaxprn ...'), and it's only necessary for
the Word user to select the proper printer.  We generally define the fax
printer as a very generic PostScript printer.

Bill
```

A102.

Date: *Sat, 25 May 1996 10:06:37 −0700 (PDT)*
From: *Bill Campbell <bill@celestial.com >*

Subject: *Re: Microsoft Word Documents*

```
>
...
>Is there any chance that you could share your script with other Hylafaxers?
>(i.e. me :-) The Microsoft-cruft-stripping component sounds particularly
>appealing!
>
>Malcolm Gillies
>Systems/Development Engineer
>Connect.com.au Pty Ltd
>
Sure.  The lpfaxprn interface script and a routine, /usr/bin/csspath.pl,
which sets the PATH and other stuff that's global to the system and that's
available too via anonymous ftp:

ftp://ftp.celestial.com/pub/sysvlp/model/lpfaxprn
ftp://ftp.celestial.com/pub/lbin/csspath.pl

Others should make sure that anything that's specific to our site gets
changed since I haven't made any attempt to generalize this yet.

Bill
```

Q103: Re: Files in /var/spool/fax/docq ?

Q103.

Re: Files in /var/spool/fax/docq ?

Is there a configuration option that I'm missing or something? The files in /var/spool/fax/docq don't seem to go away after the fax has been sent.

A103.

Date: *Fri, 28 Jun 1996 07:42:22 −0700*
From: *Sam Leffler <sam@hyla.chez.sgi.com>*
Subject: *Re: Files in /var/spool/fax/docq*

```
man faxqclean(1M) and read the HTML documentation.

    Sam
```

Q104: Problem accessing fax services by clients?

Q104.

Problem accessing fax services by clients?

A104.

Date: *Wed, 4 Sep 1996 15:16:49 +1200 (NZST)*
From: Jonathan Chen <jonc@pinnacle.co.nz>
Subject: *Re: Problem accessing fax services by clients*

```
On Tue, 3 Sep 1996, Kevin Scholz wrote:

> I'm using hylafax-v4.0beta020 on IRIX 6.2.
>
> I'm having a problem on client machines accessing the fax applications.
> My network uses a "shadow" password file for security. I'm being
> prompted for a password which doesn't every match because the "hosts"
> password files contains an "x" string and it doesn't decode to any known
> password.
>
> It seems like the Hylafax software does a direct look up of the "hosts"
> file and does not use any system procedures like getpwnam, getpwuid or
> getpwent to do the lookup. (which makes the shadow password file
> invisible to an application).

HylaFAX actually consults etc/hosts (in /var/spool/fax) for security
purposes. You must have an entry in the file for each client that
accesses your fax-server. man 4f hosts(4F) for more details.
--
Jonathan Chen                          e-mail : jonc@pinnacle.co.nz
```

Q105: How to set passwd for remote users ?

Q105.

How to set passwd for remote users ?

I hav a line in my /var/spool/fax/etc/hosts file on my fax server machine like below:

```
    ^okamoto@granite.cias.osakafu-u.ac.jp$
```

I don't know how to set passwd on this file.

A105.

Date: *Fri, 09 Aug 1996 08:12:18 −0700*
From: Sam Leffler <sam@hyla.chez.sgi.com>
Subject: *Re: How to set passwd for remote users*

```
If you really want to create a password for this entry then your best
choice right now is to do the following:

1. Create a user with administrative privileges by setting up a hosts
   entry with a null administrator password.  Consult hosts(4F) for info.
```

```
2. Use telnet to talk to hfaxd and use the SITE ADDUSER command to create
   the user account with the password; e.g.

hyla% telnet oxford hylafax
Trying 155.11.194.2...
Connected to oxford.chez.sgi.com.
Escape character is '^]'.
220 oxford.chez.sgi.com server (HylaFAX (tm) Version 4.0beta018) ready.
user sam
230 User sam logged in.
admin
230 Administrative privileges established.
site help adduser
214 Syntax: SITE ADDUSER user-spec [passwd [adminwd]]
site adduser ^okamoto@granite.cias.osakafu-u.ac.jp$ foobar
500 User password is all lower-case; use something more.
site adduser ^okamoto@granite.cias.osakafu-u.ac.jp$ FooBar
200 User ^okamoto@granite.cias.osakafu-u.ac.jp$ added with uid 0.
quit
221 Goodbye.
Connection closed by foreign host.

You will see that an entry w/ that password exists in the hosts file
for the user:

^okamoto@granite.cias.osakafu-u.ac.jp$:0:YnBA.fn3C.d3U

You can also copy encrypted password entries from your system password
file but this is obviously not a great idea to use the same password for
login as for fax access.

A better solution for folks that want to have password-controlled user
accounts is to write a little program like the passwd program that sets
up/changes the passwords and/or a faxadduser program for creating accounts
without using the client-server protocol.  I've asked for these programs
to be contributed in the past but received nothing so nothing will be
available in the v4.0 release.  If someone thinks they want to write this
program; all the code you need is in hfaxd/User.c++.

        Sam
```

Q106: Installing the v4 pl0 Binary dist under Linux Slackware 3.0?

Q106.

Installing the v4 pl0 Binary Distribution under Linux Slackware 3.0?

These notes relate to the binary distribution of HylaFAX version 4 patch level 0 which is available at ftp.sgi.com/sgi/fax/binary/ with the name :

```
hylafax-i386-linux-v4.0pl0-1.tar.gz [06-Sep-96] 2009 Kbytes
```

A106.

Date: *Tue, 29 Oct 1996 17:08:01 +0000*
From: *Phil Watkinson <pkw@elgro.co.uk>*
Cc:: *Matthew Rice <matthew.rice@ftlsol.com>*
Subject: *Submission to the Hylafax FAQ*

The INSTALL readme notes provide useful information, and should be sufficient if you are using the **RedHat 3.0.3** Linux Distribution.
For **Slackware 3.0** users, some additional work is required.

Most importantly, you will need to upgrade the **libg++** package.
Version 2.7.0 in the slackware distribution is not compatible with the Hylafax code, and an upgrade to **version 2.7.1.4** is neccessary.

The library is available from sunsite or its mirrors in the **/pub/Linux/GCC** directory.

- ```
  libg++-2.7.1.4.bin.tar.gz          [15-Feb-96]  1252 Kbytes
  ```

The binary files we need in the package are :

  - /usr/lib/libg++.a
  - /usr/lib/libg++.so.27.1.4
  - /usr/lib/libstdc++.a
  - /usr/lib/libstdc++.so.27.1.4

Before moving them into the `/usr/lib` directory, rename the old versions and remove existing links:~
[The following commands assume you are **root** *and are in the directory* `/usr/lib` *]*

```
mv  -v   libg++.a        libg++.a.2.7.0
mv  -v   libstdc++.a     libstdc++.a.2.7.0
rm  -v   libg++.so.2
rm  -v   libstdc++.so.2
```

Now we can move the new files into `/usr/lib`, and recreate the two links, plus two new links required by Hylafax :~

```
ln  -vs  libg++.so.27.1.4     libg++.so.2
ln  -vs  libstdc++.so.27.1.4  libstdc++.so.2
ln  -vs  libg++.so.27.1.4     libg++.so.27
ln  -vs  libstdc++.so.27.1.4  libstdc++.so.27
```

Almost there, now create the following three links :~

```
ln  -vs  /bin/mkfifo     /usr/bin/mkfifo
ln  -vs  /usr/bin/sed    /bin/sed
ln  -vs  /usr/bin/gawk   /usr/bin/mawk
```

Finally, before running the **faxsetup** script you need to find the name of the **device** your modem is attached to.
It is likely that it is called *ttyS1*; it can be checked using the program **cu –** but please
```

see the documentation file from the package *setup.html*; it is a very good idea to have this printed out beside you when going through the next stage....

Now you have a good chance to run **faxsetup** and follow into **faxaddmodem** successfully. BTW, you can ignore messages about the absence of **egetty** and **vgetty**; they are optional which you probably not need.

Good Luck!

Q107: Where is the file pagermap?

Q107.
Where is the file pagermap?

A107.
Date: *Tue, 17 Sep 1996 17:46:11 +0200 (MST)*
From: Matthias Apitz <Matthias.Apitz@SOFTCON.de >
Subject: *Re: sendpage problems*

```
Chris Reyes wrote:

    I am currently  trying to run the sendpage module of Hylafax but, I
    encounter the follwing error.

    sendpage: 550 Cannot open pager ID mapping file /etc/pagermap (No suchfile
    or directory).

BTW: etc/pagermap is relativ to the spooling area,
e.g. ..../spool/etc/pagermap

    Can someone please send me a sample pagermap file so that I may build one?
    Is it also possible to send a page by entering the number in the
    commandline thus eliminating the need for a pager map?

here is my:
49171(.*) 01712092522/&

which allows "sendpage -p 49171xxxxxxx text" and dials the
provider as 01712092522; see also man pagermap(4F);

        matthias
```

Q108: Howto set pagerMaxMsgLength?

Q108.

Howto set pagerMaxMsgLength?

I have run across a few small bugs. The only way I was able to change the pagerMaxMsgLength from 128 up to 240 was to edit the source and recompile.

A108.

Date: *Sun, 29 Sep 1996 16:33:48 +0200 (MST)*
From: Matthias Apitz <guru@softcon.de >
Subject: *Re: Alpha−numeric pagers...*

```
    ...

changing the source to configure the software is not the way
the things should work;

         I am guessing that for some reason or other, it cannot see the
    config.cua1 file ( I am only using one modem and I have changed the
    config.cua1 entry to read:

    &pagerMaxMsgLenth: 240

         which had no effect - and I did kill and restart everything. I will use
    strace to try and track this one down like you showed me.)

what do you mean by "it cannot see the config.cua1 file"?
faxaddmodem(1M) called from faxsetup(1M) will create a modem−config
file below etc/ (e.g. /var/spool/fax/etc/config.cua1) for you;
by default there is no entry in this file for the pager message
length;

if you're using sendpage(1) this command uses SNPP to contact the
hfaxd(1M) daemon; hfaxd(1M) reads the configuration from the file
hfaxd.conf in $DIR_LIB (e.g. lib/hfaxd.conf); the parameter for
the message length in SNPP is "MaxMsgLength"; see the man page
of hfaxd(1M); messages longer than this value (default 128)
are rejected;

if the job is queued and later send to the provider by pagesend(1M)
this daemon reads it configuration from the modem config file
mentioned above; the parameter is "PagerMaxmsgLength" and is
explained in the man page config(4F); messages longer than this
value (defaults also to 128) are truncated (but send);

        ....

        matthias
```

Q109: HylaFAX and Short Message Service in Germany?

Q109.
HylaFAX and Short Message Service in Germany?

A109.
Date: *Sat, 5 Oct 1996 18:10:29 +0200 (MST)*
From: *Matthias Apitz <Matthias.Apitz@SOFTCON.de >*
Subject: *HylaFAX and Short Message Service in Germany − E−Plus*

```
Just a note for HylaFAX users in Germany:

the German mobil phone provider "E-Plus" uses also the TAP/IXO
protocol for the SMS (as the German Telekom in "D1" does) and
HylaFAX v4.0 works perfectly out of the box w/ the SMS Centre;

the dial-in point of the SMS Centre is +49 177 1167 and all you
have to do is to setup an entry in spool/etc/pagermap like:

#
# D1 Short Message Service Centre (SMSC)
#
49171(.*) 01712092522/49171\1
#
# E-Plus SMSC
#
49177(.*) 01771167/49177\1

to send a message to a known E-Plus mobil phone +49177xxxxxx with:

$ pagesend -p 49177xxxxxx "Hello World"

The Mannesmann Mobilfunk Ltd. (also known as "D2" in Germany) uses
"UCP" as the protocol and they sent me the spec of "UCP";
actually there is no pagesend(1M) daemon for "UCP" in HylaFAX.

        matthias
```

Q110: Howto restrict outbound usage in v4.0?

Q110.
Howto restrict outbound usage in v4.0

What should I do if I need to *mandate* the use of a specific modem for outgoing facsimilies?

A110.
Date: *Fri, 07 Jun 1996 08:10:37 −0700*
From: *Sam Leffler <sam@hyla.chez.sgi.com>*
Subject: *Re: ANNOUNCE: v4.0beta013 available*

```
    To:  flexfax@sgi.engr.sgi.com
    Subject:  Re: ANNOUNCE: v4.0beta013 available
    Date: Fri, 07 Jun 1996 06:32:46 EDT
    From:  raoul@earmuff.meei.harvard.edu

    Ed, if you need to *mandate* the use of a specific modem for outgoing,
    I'm not sure how to handle it. You could put faxq up only on the modem
    for fax and run a simple getty on the dial-in lines, although faxgetty
    is very nice for re-configuring modems after use, and faxaddmodem gets
    their configurations *right* (one of hylafax's nicest features, IMHO).

    However, can't you just set FAXSERVER by default to be
    /dev/[modem-line]@[hfaxd-host], and get most of what you want?
    You could also slip a booby trip into the configuration dial-out setups
    for the dial-in modems so attempts to dial-out won't work....

A more subtle way to restrict outbound usage in v4.0 is to redefine the
definition of the ``any'' modem class so that it includes on those modems
that you want users to use (consult ModemClass in config(4F) for more info).
This would keep folks from explicitly routing outbound jobs to other modems
but it will probably handle most uses.

        Sam
```

Q111: Howto re–use failed jobs from the docq?

Q111.

Howto re–use failed jobs from the docq?

I want to be able to re–queue failed faxes,

A111.

Date: *Mon, 8 Jul 1996 13:29:19 –0700*
From: *"Scott J. Kramer" <sjk@cisco.com>*
Subject: *Re: "reuse" of documents*

```
On Jul 8, 13:21, John Patrick Poet wrote:
> Subject: "reuse" of documents
>
> I have scanned through all the man pages which seem relevent, but I cannot
> find how to "reuse" a document in Hylafax 4.0 beta 15.
>
> I get an email message which ends with:
>
>           ---- Documents submitted for transmission ----
>
>       The following documents were submitted for transmission and are
>       available on the server for reuse until they are automatically
>       purged when this job is removed.  Documents may also be manually
>       removed using the faxrm command; consult faxrm(1) for information.
>
```

```
>       Filename                 Size Type
>       docq/doc2.ps             6583 PostScript
>
> This is fine, but how do I tell sendfax, or faxalter or whatever, to try
> sending that document again?  Do I have to rcp or ftp that document from the
> server machine back to the client machine, and then do a normal sendfax?

Here's what Sam had to say about that during alpha testing:

On Apr 8, 16:25, Sam Leffler wrote:
> Subject: Re: trying to give statistic on which page sendfax is on.
>     To:  hylafax-alpha
>     Subject:  Re: trying to give statistic on which page sendfax is on.
>     Date: Mon, 08 Apr 1996 16:10:46 PDT
>     From:  "Scott J. Kramer"
>
>     On Apr 4, 12:35, Sam Leffler wrote:
>     > Subject: Re: trying to give statistic on which page sendfax is on.
>
>     One other question:
>
>     What's the recommended method of [re]submitting a job that references files
>     in the $SPOOL/docq directory before they're purged by `faxqclean'?  Can't
>     seem to find anything in the documentation about it.
>
> There currently is no command-line mechanism for doing this.  I considered
> adding a special syntax for referencing files on the server but figured I'd
> wait.  I was initially expecting some GUI apps to be built that would have
> support for doing this work.  Right now you can craft a job by hand using
> ftp or similar to communicate directly with a server.  I'd hoped ever since
> I made the v4.0 code available that someone would get interested in writing
> a tool that had TCL or Perl or Python or something as the base command
> language and extensions that handled the client-server protocol requests.
> Then all the existing command-line tools could be trivially rewritten as
> scripts that were fed to this tool.  A tool like this would make it easy
> to do what you want.
>
> BTW, I made a conscious decision in the design of the new protocol to not
> support resubmitting a failed job.  Instead it's intended that you "clone"
> a resubmitted job directly from the failed job.  Specifically you can do
>
> JOB
> JNEW
>
> to get a new job that inherits all the useful information from the failed
> job.  You still have to fill in various pieces of job state but it's a
> lot less to do than respecifying everything again.  This is the sort of
> info+rationale that I need to put in the protocol spec (but which I've had
> no time to write as yet).
>
>         Sam
>
>
>-- End of excerpt from Sam Leffler
```

Q112: Howto setting up the syslog daemon?

Q112.

Howto setting up the syslog daemon?

```
> Tell you what's wrong: you've forgotten to include a servertrace
> in your question :-))

how to do that?
```

A112.

Date: *Wed, 11 Sep 1996 09:30:45 +0200 (MST)*
From: Matthias Apitz <guru@softcon.de >
Subject: *Re: fax can not be sent*

```
You may start by reading the man pages of config(4F). The faxgetty(1M)
tries do initialize the modem and a ServerTrace would show which
AT-commands are sent to the modem an what the modem is responding.
The value of ServerTrace: should be set in the modem config file
(e.g. spool/etc/config.ttyf2) to a value like 0x0f.
The value of LogFacility: should be set to "local0".

The log-output is done via syslogd(1M) and you have also to configure
your syslog daemon to collect the messages in a file; see the man
page of syslog.conf(4F) how to do that on your system. For me on my
UNIX SVR4.2 the file /etc/syslog.conf contains:
local0.err      /var/log/syslog
local0.info     /var/log/syslog
local0.warning  /var/log/syslog
local0.debug    /var/log/syslog
local0.notice   /var/log/syslog

The file "/var/log/syslog" must exist, world-writeable and after
changing /etc/syslog.conf you've to restart the syslog daemon (or
poke it with signal -HUP).

    Btw, by "faxsetup", two files "/bin/vgetty" and "/bin/egetty" can not
    be found. They are not in my computer, where can I find them?

You only need them for voice handling or other special cases;
read config(4f) for details.

Hope it helps you out.

        matthias
```

Q113: Howto distinguish which files have been received on which devices

Q113.

Howto distinguish which files have been received on which devices

A113.

Date: *Tue, 28 May 1996 08:09:21 −0700*
From: *Sam Leffler <sam@hyla.chez.sgi.com>*
Subject: *Re: recvd subdirectory*

```
    To:  flexfax@sgi.engr.sgi.com
    Subject:  recvd subdirectory
    Date: Mon, 27 May 1996 19:06:41 CDT
    From:  "Zhang Geng"


    Hi,

    I have 2 modems that litsens to 2 phone lines.  I would like them to store
the received faxes in separate directories.

    I noticed that all the faxes by both modems are stored in the
"${SPOOL}/recvq".  Is there any way to change this directory (e.g. specify a
parameter in the configuration file or specify a switch in a command) other
than modifying the source code?

You don't indicate why you want two separate directories.  If you want to
distinguish which files have been received on which devices then that's
easy; the info is in the file and/or in the xferlog file.  If you want to
control access then you can use the RecvFileMode parameter to control that
based on device.  Otherwise you can modify/replace the faxrcvd script to
move the files to some other place that you prefer and/or change permissions
and/or ownerships.

        Sam
```

Q114: UUCP locking in Solaris x86, ...

Q114.

UUCP locking in Solaris x86, ...

A114.

Date: *Tue, 4 Jun 1996 07:45:08 +0200 (MST)*
From: *Matthias Apitz <Matthias.Apitz@SoftcoN.de >*
Subject: *Re: incomming faxing in Solaris x86...*

```
robert@elastica.com wrote:

    Hi again,
```

```
    Well I've got outgoing faxes under control completely however, I can't
    get faxgetty to coexist with dp-4.0

    Does this inittab look correct? ie. is the device correct?

    t2:23:respawn:/usr/local/sbin/faxgetty  ttyb

    dp-4.0 uses cuab or cua1 in bsd terms...

UUCP lock files are based on the major number of the device
containing the entry of the tty special files and the
major and minor number of the tty special itself. These
numbers are used to create the name of the lock file and
the pid of the locking proc is written into this file in ascii or
binary. See the example below:

$ cat /var/spool/locks/LK.047.071.080
     24067
$ ls -l /dev/root
brw-------   2 root     sys       47,  1 Aug 13  1994 /dev/root
$ ls -l /dev/ttyFN01
crw-rw-rw-   1 uucp     uucp      71, 80 Jun  4 07:14 /dev/ttyFN01

Both ("dp" and faxgetty(1M)) must use the same locking style (ascii
or binary) and the same numbers generated from the names dev/ttyb
and dev/cuab.  Does these two special files have the same major and minor?

        matthias
```

Q115: AT+FAP=? gives ERROR?

Q115.
AT+FAP=? gives ERROR?

A115.
Date: *Sat, 16 Nov 1996 08:54:43 +0100 (MET)*
From: Matthias Apitz <Matthias.Apitz@SOFTCON.de >
Subject: *Re: modem init problem*

```
Eric W. Bates wrote:

        ....

    Nov 15 17:01:30 news FaxGetty[17194]: <-- [9:AT+FAP=?\r]
    Nov 15 17:01:30 news FaxGetty[17194]: --> [5:ERROR]

    The AT+FAP=? string does not appear in config.tty00.  Where else
    might it be coming from?

$ grep FAP faxd/*.c++
faxd/ModemConfig.c++:{ "class2apquerycmd",              &ModemConfig::class2APQueryCmd, "AT+FAP=?" },
```

```
faxd/ModemConfig.c++:{ "class2apcmd",          &ModemConfig::class2APCmd,      "AT+FAP" },

either ignore this error or use
Class2APQueryCmd: ""
to switch this off (this value is not documented in config(4F));

        matthias
```

Q116: Fonts for HylaFAX?

Q116.

Fonts for HylaFAX?

A116.

Date: *Wed, 18 Dec 1996 12:26:43 −0600 (CST)*
From: *Leslie Mikesell <les@Mcs.Net>*
Subject: *Re: commercial postscript to fax interpreters?*

```
>
> Ghostscript is limited somewhat by its fonts, which are improving but are
> kind of icky. Adobe has the copyrights on Postscript, I would talk to them.

Ghostscript 4.x claims to have much improved fonts over the 3.x version,
and either will happily image real Adobe fonts if you care to buy them
and drop them in.  Another message hinted at this but I'll spell it
out: Aladdin Ghostscript is different from the GNU release and is
available as a commercial product with support and custom programming
in addition to having a free (for some purposes) version.

Les Mikesell
  les@mcs.com
```

A116.

Date: *Wed, 18 Dec 96 14:05:07 EST*
From: *raoul@kerberos.cirl <raoul@kerberos.cirl>*
Subject: *Fonts for HylaFAX, was Re: commercial postscript to fax interpreters?*

```
Aladdin Ghostscript has better fonts than the older ghostscript
versions, especially the version 4.0x fonts.  True. The freeware
ones, at least, still look somewhat icky after being translated
to fax. I don't know about the commercial version, not having seen
its output.

I've also got some notes about how to get ghostscript to
properly use different fonts you might have installed, included below.

   OK, here are my notes for re-configuring your font selection for
   HylaFAX and ghostscript (whose standard fonts are kind of sucky for
   things like faxmail).
```

```
Get some fonts: I got mine from an Adobe font distribution to
customers with Illustrator. You want the *.pfa fonts for UNIX.

Designate a directory for them: I use /usr/local/spool/hylafax/fonts, but
that easily could be a symbolic link to the real source
directory.

Add a couple of lines to "ps2fax.gs", setting

        FAXFONT=/usr/local/spool/hylafax/fonts

and add an argument to gs, to get it to look in your directory first
for fonts and things.

        -I$(FAXFONT) \

Either read Fontmap and add links from the font files you want (such
as Courier-BoldOblique.pfa) to the files named in the Fontmap,
(whatever-dos-compatible-name-it-is.gs) so that it finds your file
first rather than the ghostscript distributed one, or copy Fontmap
into your $(FAXFONT) directory and edit to change the table to point
to your file instead of the standard ghostscript name (which is what I
did, I hate those DOS names).

Look out for the aliases: There are several that I had to reverse,
since I had the aliased name and didn't have its alternate form.

Test it on a few files, view them with viewfax and/or ghostscript, and
you're in business.

                     Nico Garcia
                     Engineer, CIRL
                     Mass. Eye and Ear Infirmary
                     raoul@cirl.harvard.edu
```

Q117: Howto prevent modem data connection for security?

Q117.
Howto prevent modem data connection for security?

A117.
Date: *Sun, 15 Dec 1996 17:09:28 +0100 (MET)*
From: Matthias Apitz <Matthias.Apitz@SOFTCON.de >
Subject: *Re: Prevent modem connection − security*

```
Uri Shkolnik wrote:

    Hi,

    I am running Hlyafax on SunOS4.1.4/Sparc20.
```

```
    The problem is that anybody how dial the fax number can login on my main server without any firewall!!!!!!!
    How can I prevent the modem to answer data call?

read the man page config(4) for the value of GettyArgs;

        matthias

(added: maybe the number is 5 and not 4 for some systems - but
it's not a big deal to find it)
```

Q118: FIFO Permission problem with faxanswer?

Q118.

FIFO Permission problem with faxanswer?

A118.

Date: *Sat, 5 Oct 1996 07:55:22 +0200 (MST)*
From: Matthias Apitz <Matthias.Apitz@SOFTCON.de >
Subject: *Re: FIFO Permission problem with faxanswer*

```
Farzin Guilak wrote:



    System configuration:

        HylaFAX 4.0pl0,
        Solaris 2.5,
        Telebit Worldblazer Version LA7.02


    I'm having difficulties getting faxanswer to run.  RingsBeforeAnswer
    is set to 0 in my config file, and the hosts file has just the
    default entries.  I don't think I did anything out of the ordinary
    during the installation procedure.

    Whenever I try to run faxanswer, I get the following message

        FIFO: open: Permission denied

    This is regardless of the user (the same message occurs if I run as
    root or as fax).

    I stopped and restarted faxd so it would recreate the FIFOs, and
    they are created with the following permissions:

    # ls -l FIFO*
    prw-------   1 uucp     uucp           0 Oct  3 23:51 FIFO
    prw-------   1 uucp     staff          0 Oct  3 23:51 FIFO.cua_a
```

```
    I found the following description in troubleshooting.html, but this
    indicates that the default setup should be correct:

        Processes that want to send faxq information about new modems
        must be able to access the file; this means the protection on
        the file must be such that clients can open it for writing (the
        default setup should make this happen).

    Did I somehow change the default configuration, or is there some
    other parameter that I'm not aware of to cause the FIFOs to have
    different protection?  What *should* the default protection be for
    the FIFOs?

faxanswer(1M) belongs to administration commands (1M) and must
be run by root or the faxuser "fax";

        matthias
```

Q119: Start faxserver if reboot?

Q119.
Start faxserver if reboot?

A119.
Date: *Fri, 27 Dec 1996 13:13:48 +1300 (NZDT)*
From: *Jonathan Chen <jonc@pinnacle.co.nz>*
Subject: *Re: run faxserver if reboot*

```
On Sat, 21 Dec 1996 fikri@werty.wasantara.net.id wrote:

> I use hylaFAX in linux redhat 3.0.3
> how to make faxserver can run automatic if the system reboot ?
> what file config I have to setting ?

If you've installed the system off the sources, there should be a file
source-dir/etc/hylafax which you put in your startup directories
(usually /etc/rc2.d or /sbin/rc2.d) with the appropriate prefix.
eg: S80fax

        ....
--
Jonathan Chen                          e-mail : jonc@pinnacle.co.nz
```

Q120: I can't remove a job?

Q120.
I can’t remove a job?

A120.
Date: *Wed, 30 Oct 1996 08:52:17 +1300 (NZDT)*
From: Jonathan Chen <jonc@pinnacle.co.nz>
Subject: *Re: your mail*

```
On Mon, 28 Oct 1996, Perry Wang wrote:

> Any clue?
>
> fax:/var/tpc# faxstat -s
> HylaFAX scheduler on fax.ieee.ca: Running
> Modem modem2 (+1.613.820.5320): Waiting for modem to come ready
>
> JID  Sender      Pri S Number        Pages Dials     TTS Status
> 579  peilien     127 R +1-6138341111  0:0   0:12
>
>
> fax:/var/tpc# faxrm -v 579
> Trying localhost (127.0.0.1) at port 4559...
> Connected to localhost.
> 220 fax.ieee.ca server (HylaFAX (tm) Version 4.0pl0) ready.
> -> USER root
> 230 User root logged in.
> -> JKILL 579
> 504 Cannot kill job: Operation not permitted.
> -> JDELE 579
> 504 Cannot delete job: Operation not permitted.
> 504 Cannot kill job: Operation not permitted.

Only the user who submitted the job is allowed to remove it; unless
you've set up the administrator entry in etc/hosts.
--
Jonathan Chen                          e-mail : jonc@pinnacle.co.nz
```

Q121: modem state for other programs?

Q121.
modem state for other programs?

A121.
Date: *Wed, 1 Jan 1997 13:25:58 +0100 (MET)*
From: Matthias Apitz <Matthias.Apitz@SOFTCON.de >
Subject: *Re: modem state for other programs*

```
D. Hugh Redelmeier wrote:

    I am using hylafax-v4.0pl0 under Solaris 2.5.  I am trying to install
```

```
    my new Motorola ModemSURFR 28.8 modem (class 2).  It is mostly
    working, but I have a few problems.  This note is about one of them.

    I run faxgetty, letting it adaptively answer the phone (I haven't
    yet tested whether an inbound data call works).  I use tip and
    uucp outbound.  Since I've installed the new modem, tip is no longer
    able to dial out; I've adjusted uucp's Dialers entry so that it does
    work.

    I *think* what is happening is that faxgetty leaves the modem in a
    state that isn't suitable for tip.  Perhaps it has to to do adaptive
    answer.

faxgetty(1M) sets the modem for incoming calls and is waiting
for "RING". If tip takes the modem it is responsible from now
for all and *must* set the modem to fit its needs.

    My evidence is from testing with a tip to connect to the raw modem
    (tip to an entry that looks like
        usrnhf:\
                :dv=/dev/cua/a:br#38400:
    ).  When I manually dial the number, I get a "+FCON" response from the
    modem.  tip's dialer is not really configurable, so I can't convince
    it to deal with this.

    My solution for uucp is to add an ATZ at the start of the Dialer
    string.  This seems to reset things to the state I stored as the reset
    state.

    Is my analysis correct?

Yes and you could also reset the modem to factory defaults
with AT&F (or similar for your modem). Keep in mind that some modems
don't like anything else on the same command line together with
ATZ or AT&F (some modems are clearing the command-line buffer
during ATZ before parsing the items which follow ATZ). The best way
is sending AT&F (or similar for your modem) to reset to factory
defaults, wait for OK and then send down all settings you want
to change.

    Is there a correct way to get faxgetty to reset the modem state when
    an outbound program wants to use it?

No. faxgetty(1M) listens to the modem line. If there is anything
to read faxgetty(1M) checks the lock for the modem *before*
reading anything from the line; if there is no other process
with a lock for the modem it creates a lock itself and does
read-in the message (e.g. "RING") from the modem and processes
the message (e.g. counting the RING's to decide to pick-up the call);

In case of outbound usage the other proc should create the lock.
If it doesn't create a lock (or create it on some other place
as faxgetty(1M) is locking for) and sends an AT-cmd down to the
modem the following would happen: the modem is responding to
the command and both proc (e.g. tip and faxgetty(1M)) would do
a racing to read the response OK or ERROR etc.

Despite of the fact of this racing what should faxgetty(1M) do
if it sees a OK message from the modem which is a response
```

```
to the AT-command from tip? And how should it set now anything
usefull into the modem (may be tip doesn't like this setting
because it has just set something else)?

BTW: The racing described above is the typical situation where many
HylaFAX users without understanding of how faxgetty(1M) works are
complaining here in the list about "Waiting for modem come ready".

        matthias
```

Q122: Where to get "egetty" for FAXSETUP?

Q122.
: *Where to get "egetty" for FAXSETUP?*

A122.
: **Date**: *Thu, 10 Oct 1996 08:39:49 +0200 (MST)*
From: Matthias Apitz <Matthias.Apitz@SOFTCON.de >
Subject: *Re: Where to get "egetty" for FAXSETUP*

```
Aaron The Young wrote:


    >> While I tried to run
    >> "faxsetup",  I got error message as
    >> cannot seems to find "/bin/egetty"...
    >
    >Actually, I believe you only get a warning.  I think that it is just
    >a hook for future work. Similar to the one for vgetty. You can ignore it.

    While this might not be the right thing to do, I just linked them to
    the regular getty and the warnings go away.

I think it's not the right thing to link egetty to a regular
getty and .....

    I don't know if this provides the correct functionality, but everything
    seems to be working for me.

....it's a bad idea to do such links "just for fun";
the program is launched in a priv environment and you've no
information what's going on;

        matthias
```

Q123: The truth about egetty/vgetty

Q123.

The truth about egetty/vgetty

A123.

Date: *Fri, 15 Nov 1996 15:30:14 −0500 (EST)*
From: Rob Newberry <rob@eats.com>
Subject: *the truth about egetty/vgetty*

```
Here is the "truth" about vgetty/egetty.

HylaFAX calls the program which is configured as "vgetty"
when it has been configured to use distinctive ring and
it has detected that a voice call has just been answered.
In order to use it, you must have HylaFAX working with
distinctive ring support on your modem, and distinctive
ring support from your phone company.  What then happens
is that you normally get FAX/data calls to your modem, and
the modem says "RING1" (or something) and HylaFAX says
"Hey, it's a FAX or data call", answers the phone and hands
it off to getty (for data calls) or handles it iself.
For voice calls, the modem says "RING2" and HylaFAX answers
the phone (but doesn't make any noise on the line) and
hands the call off to the configured "vgetty" program, along
with any configured arguments.

The vgetty that comes with "mgetty+sendfax" is NOT this kind
of program.  To the best of my knowledge, it will NOT work
in this way.  That vgetty works much like HylaFAX itself
works --it handles answering the phone and everything.  It
doesn't support invoking it with the TTY line already open.
At least, that's the way it used to be.

On the other hand, I have written a VERY basic "vgetty"
program that works with Rockwell modems.  I had shared it
with another member on this list who was adding more sophisticated
voice mail features to it, but we've both been sidetracked.
I would probably be willing to release the code, but cannot
support it in any form.  But I can't do even that very quickly.

"egetty" is, to the best of my knowlege, a similar program.
I do not know its author, but I know that he or she and I both
had email conversations with Sam about getting HylaFAX to better
support voice calls, and our solution was to provide the hooks
that now exist in HylaFAX (actually, this was mostly Sam's
own solution, just slightly made easier to use by us).

I hope this makes things a little clearer.  I'm sorry that
it's taken me so long to speak up, but I thought I would
get around to finishing up the project, but the Mac client*
has consumed all of my spare time.

Rob

Rob Newberry
rob@eats.com
```

```
* see http://www.eats.com/MacFlex/ for more info; a new version
is coming SOON
```

Q124: Anyone done a faxback system?

Q124.
Anyone done a faxback system?

A124.
Date: *Tue, 29 Oct 1996 11:24:24 PST*
From: Bill Fenner <fenner@parc.xerox.com>
Subject: *Re: 2nd time: Anyone done a faxback system?*

```
I use vgetty (part of the "mgetty+sendfax" package) with my ZyXEL modem to
implement a menu system.  I configure HylaFax to think that all calls are
voice calls, and implement the menu system with a hairy shell script and the
"zplay" command.  Check out http://www.leo.org/~doering/mgetty/.

It's long been my intention to make "PhoneScript" work with ZyXEL's voice
stuff, and to make HylaFAX able to answer the phone as FAX if the voice getty
exits with a certain status (e.g. "press 1 to send a fax"), but it's never
been a tremendously high priority since I have fairly simple needs.

  Bill
```

Q125: faxgetty and ringback?

Q125.
faxgetty and ringback?

A125.
Date: *Sun, 13 Oct 1996 12:18:24 −0500 (CDT)*
From: "Leslie Mikesell" <les@mcs.com>
Subject: *Re: faxgetty ringback?*

```
>
>     Does faxgetty also provide ringback capabilities (as getty or mgetty) ?
>
> no, it doesn't
>

On the other hand, faxgetty simply invokes a user-defined getty program
after the modem reports a DATA connection.  Thus it should be possible
to run a getty version with ringback capablility at that point as long
```

```
as the other program doesn't insist on re-initializing the modem or
dropping the existing connection.  I don't know if mgetty can be used
this way or not.

Les Mikesell
  les@mcs.com
```

Q126: Waiting for modem to come available?

Q126.
Waiting for modem to come available?

A126.
Date: *Fri, 15 Nov 96 18:12:28 EST*
From: raoul@cirl.meei.harvard.edu <raoul@cirl.meei.harvard.edu>
Subject: *Re: Waiting for modem to come available*

```
The "split-device" trick doesn't work with Hylafax, and it is hardly
universal. The SunOS, for example, does it by adding a new /dev entry
with the MSB of the minor node number flipped (which is what you get
by adding 128 to the minor node number), and doing different things
based on that bit. But it does not come with that device installed:
This has to be done by hand, by an administrator.

Unfortunately, file-locking with /var/spool/uucp breaks if you do this
and use both names for the same line. And life becomes *very* confused.
It is vastly better, IMHO, to let Hylafax act as the line handler and
start up getty's as necessary, and use the vastly more universal
UUCP file-locking to protect the modem from two simultaneous uses.

                        Nico Garcia
```

Q127: terminal−based sendfax interface available

Q127.
terminal−based sendfax interface available

A127.
Date: *Thu, 11 Aug 1994 17:02:15 −0400*
From: Ken Hornstein <kenh@wrl.EPI.COM>

I've written a simple, terminal based interface to "sendfax". It pops up a little form with various fields for you to fill in (FaxNumber, FaxCompany, etc), lets you select files to include, and optionally e−mail a copy of your message to someone. It's nothing wonderful, but it works and it's proven useful to people here who are daunted by all the arguments to sendfax.

It's called "sfax", and it's written in Perl. It is available in the FlexFAX contrib area, so you can find it on ftp://sgi.com/sgi/fax/contrib/sfax/.

There isn't a man page, but a README file that explains how you use it and a sample form file is provided.

Suggestions and bug reports welcome.

Q129: TCL/Tk GUI front−end to FlexFAX/HylaFAX

Q129.

TCL/Tk GUI front−end to HylaFAX

A129.

Andy Moskoff has written a tcl/tk front−end to HylaFAX. It can be retrieved from ftp://ftp.sgi.com/sgi/fax/contrib/tkhylafax/". There is also a README file for it.

Supporting software required:

- Hylafax (at least v3.0)
- ghostview
- tcl/tk (at least tk4.2)
- X11 (at least R5)

Current features:

- Batching fax destinations
- Builtin faxnumber database
- Fast cover sheet generation
- Cover sheet preview
- Cover sheet ONLY transmission option
- Directory browser
- Fax job dequeuing made easier
- Fax job scheduling made easier
- Highly configurable

Andy Moskoff: email andy@wx.gtegsc.com

Q130: Macintosh client for HylaFAX

Q130.
New Release of MacFlex − Macintosh client for HylaFAX!

A130.
Date: *Fri, 22 Nov 1996 00:20:41 −0500 (EST)*
From: Rob Newberry <rob@eats.com>
Subject: *New Release of MacFlex − Macintosh client for HylaFAX!*

```
Hello again, HylaFAX and Macintosh users!

I have finally, after about a year (maybe more, it's been so
long I've forgotten), completed most of the work on a new
release of MacFlex.  This release has quite a few new features,
plus lots and lots of bug fixes.  I've done a good bit
of testing on this release, and I think it should be quite a
bit more stable on folks machines.

New features:
  * the FAX Builder lets you "build" a FAX from multiple
    print jobs
  * a FAX viewer that lets you view and print FAXes
    received via HylaFAX (it even supports rotation)
  * new better looking U/I, courtesy of a rewrite in PowerPlant
  * notification of successful sending of FAX (the most
    requested new feature)

Bug fixes:
  * preference file problems (I think I REALLY got 'em this time)
  * cover sheet problems (I tested several that people sent me)
  * crashes when printing or imaging FAXes
  * problems updating the queue status

This release is not ABSOLUTELY perfect, but I've fixed all the
problems that I can successfully reproduce.

I have tested it on several machines, including a PowerMac 7500, a
PowerMac 7200, and a Quadra 630, using applications like
MS Word 5.1a, MS Word 6.0.1, MS Excel, Netscape Navigator 2.02,
the Finder, Metrowerks CodeWarrior, Graphic Converter, and
SimpleText.  Still, I'd like to hear about any problems folks
have.  Several of the programs produce log files, and if you run
into a problem, please send me anything you find there.

This beta release can be found at:

   http://www.eats.com/MacFlex/

        or

   ftp://ftp.eats.com/pub/MacFlex-15b1.sea.hqx

Thanks to all who have tried MacFlex, and I hope that this
```

```
release fixes many of your problems.  After fixing this
round of bug fixes, it will probably be a while before I
add more features; I'm simply too busy at my real job.  But
I do intend to iron out the bugs in this release so that
people have a reliable HylaFAX client on the Mac.

Rob Newberry
rob@eats.com
```

Q131: Announce: (Mac users: lw360f)

Q131.

Announce: (Mac users: lw360f)?

A131.

Date: *Mon, 17 Jun 1996 22:27:22 −0400*
From: *Michael Breuer <mbreuer@majjas.com>*
Subject: *Announce: (Mac users: lw360f)*

```
Begin
Title:          lw360f_1.0.tar.gz
Version:        1.0
Date:           June 17, 1996
Description:    Utility to allow faxes to be sent to hylafax from MacOS
                systems using the standard Laserwriter_f driver.
Keywords:       SelectWriter Fax Hylafax Apple netatalk
Author:         mbreuer@majjas.com
Copying-policy: GPL
End

I have uploaded this file to ftp://sgi.com/sgi/fax/incoming.  I'm not
sure if this is the correct place, but it seemed reasonable.

This utility allows use of hylafax from MacOS using the standard
printer dialog.  All features of the laserwriter driver (including
cover page) are supported.

The README file contains full instructions and requirements.
--
mbreuer@majjas.com
```

Q132: Windows 3.1 client for FlexFAX/HylaFAX

Q132.

Windows client for FlexFAX/HylaFAX?

A132.

WinFlex is a WinSock based client for FlexFAX (and HylaFAX) from Peter Bentley . WinFlex 0.4 is only available in binary and from ftp.tecc.co.uk:/pub/winflex.

A132.

Laine Stump from Morningstar made the following changes to WinFlex:

At someone else's request, I made the slight modification to the WinFlex source (and compiled it) so that:

1) The popup window that asks for the phone number actually pops up by itself under Win95, rather than requiring you to click on the Winflex icon in the Start menu.
2) Winflex requests the hylafax server to notify you when a fax is successfully sent, as well as when it fails.

You can get the updated winflex.exe from: ftp://ftp.morningstar.com/pub/tools/windows/. The full source, including an VC++ project file, is available in the same directory as ftp://ftp.morningstar.com/pub/tools/windows/winflex-src.zip.

PLEASE do not email me about this software. If you have any questions, send them to the HylaFax mailing list, where they are more likely to be read by somebody who has the time to read and answer them.

I provide this with no warranty, no offer of help if it doesn't work the way you want it to, and request that nobody deluge me with a list of requests for things to change in WinFlex – I don't have the time or the desire to do that.

The changes:

1) In winflex.cpp, in the function ffDestDialogue::ffDestDialogue() change the line:

```
show()
```

to:

```
show(SW_MINIMIZE);
show(SW_RESTORE);
```

2) In ffclient.cpp, in the function ffSocket::destSend, just after the line:

```
writeLine("pagelength", dp->pLen);
```

add the line:

```
writeLine("notify","when done");
```

Also, someone from Denmark requested a version that doesn't have the papersize hardwired to be US Letter, and that is in winflexa4.zip.
....
I did this on purpose because something in the combination of the Windows PS driver + GhostScript caused the aspect ratio of the page to be "nailed down" so that when gs was told to output as A4 (slightly longer and narrower than US Letter), the Windows−generated PS file would end up being (if I remember the number correctly) 4 pixels too wide for Hylafax to send as a fax (but hey, it *was* . After several people looked at this (ie at the ps files) and concluded that "it shouldn't happen, but I can't see what's wrong", I decided to prevent anyone from sending a fax that only contained a single error message line (and nothing else) by hardwiring the page size to be US Letter (even if you change the radio control, it still sends it letter size, since A4 is always doomed to failure anyway). [added by the FAQ maintainer: see also Q: Problems while sending a PS document... for this problem.]
....
I sure wish someone would port WinFlex to MFC so that anybody with VC++ could build it, rather than the whole world having to rely on the goodwill of the few of us who have zApp − I'm sure that would make for much more development of new features on the program. It really shouldn't be too much trouble doing so either, since the user interface is just 4 dialogs and an About box (and the main window which is used by the logger class), and all the rest could be moved over with basically no changes (the socket library doesn't need zApp) − the only trick to it is the handling of the WM_SPOOLERSTATUS message (that's how the Windows Print Manager notifies WinFlex that there is a file available to "print").
....
I think an MFC version of WinFlex would be a valuable addition to the suite of HylaFax support programs, and hope that somebody with the time to do it is lurking in the wings looking for a project to jump on.

Q133: HylaFAX client for Win95?

Q133.
HylaFAX client for Win95?

What is the status of the Windows 95 client for HylaFAX?

A133.
Date: *Wed, 04 Dec 1996 07:14:09 +0100*
From: *Ulrich Eckhardt <uli@rgw−express.de>*
Subject: *Re: status of Win'95 clients.*

```
Neil Corlett wrote:
>
```

```
> Hi,
>
> What is the status of the Windows clients for Hylafax? There have
> been a number of postings to the list, but I have rather lost
> track idea of the current efforts.
>
> I would be interested in something that would integrate to
> MS-Word (sorry) mailmerge so as to carry out a mailmerge to
> fax.
Hi,

the curren status is 0.1 Alpha. You can see the current state and
bugs under http://www.rgw-express.de/whfc

I don't think that whfc will support MS-Word mailmerge, because
there are existing mail to fax gateways for hylafax, we don't use
and don't have MS-Word here. I don't know exactly what mailmerge does,
but I think you can print the mails out, and use the fax-printer
feature of whfc

Greetings
Uli
--
Ulrich Eckhardt         mailto:uli@rgw-express.de
```

Q134: What does it mean to get CONNECT 19200 when I try to send a fax...?

Q134.

I get the following when trying to send a fax to our hardcopy Fax machine:

```
May 24 17:16:39.03: [  480]: SESSION BEGIN
May 24 17:16:39.07: [  480]: DIAL xxxxxxx
May 24 17:16:39.07: [  480]: <-- [14:ATDT9,xxxxxxx@]
May 24 17:17:08.93: [  480]: --> [13:CONNECT 19200]
May 24 17:17:08.95: [  480]: <-- [4:ATH0]
May 24 17:17:10.60: [  480]: --> [13:@I~8T`^~  ]
May 24 17:17:10.60: [  480]: --> [10:NO CARRIER]
May 24 17:17:10.65: [  480]: MODEM ERROR: No carrier
May 24 17:17:10.67: [  480]: SEND FAILED: unknown problem (check modem power)
May 24 17:17:10.67: [  480]: <-- [4:ATH0]
May 24 17:17:11.05: [  480]: --> [2:OK]
May 24 17:17:11.05: [  480]: SESSION END
```

A134.

"CONNECT 19200" indicates that the modem established a data connection, not a fax connection. If a fax connection was established, "+FCON" should have been returned. If you did in fact reach a fax machine only to establish a data connection then your modem probably was placed the call in Class 0 instead of Class 1 or 2; check your configuration file to be certain outgoing fax calls are dialed in the proper class.

Q135: Encoding errors in facsimile received with my Everex 24/96E?

Q135.

Encoding errors in encoded facsimile received with my Everex 24/96E?

I use an EverFax modem 24/96E that FlexFAX knows as a 24/96D. Everything seems fine except a problem i find every time i have to convert a received fax with 2D encoding to postscript using fax2ps. No problems for the received 1D encoded faxes.

I always get the following errors:

```
fax000219: Fax3Decode1D: Bad code word at scanline 27 (x 5).
fax000219: Fax3Decode1D: Bad code word at scanline 28 (x 5).
fax000219: Fax3Decode1D: Bad code word at scanline 29 (x 5).
fax000219: Fax3Decode1D: Bad code word at scanline 30 (x 5).
fax000219: Fax3Decode1D: Bad code word at scanline 31 (x 5).
fax000219: Fax3Decode1D: Bad code word at scanline 32 (x 5).
fax000219: Fax3Decode1D: Bad code word at scanline 33 (x 5).
fax000219: Fax3Decode1D: Bad code word at scanline 34 (x 5).
fax000219: Fax3Decode1D: Bad code word at scanline 35 (x 5).
fax000219: Fax3Decode1D: Bad code word at scanline 36 (x 5).
```

and so on.... do you think it is *always* a problem of noisy line ? Why do i have no problem with 1D encoded fax ?

A135.

Several people have reported problems with corrupted reception of 2D–encoded data. At one point this worked fine with my Everex 24/96D, but it looks to be broken now. You can workaround the problem by disabling the reception of 2D–encoded data through the **Class2DCCQueryCmd** configuration parameter; e.g.

```
#
# +FDCC=? query syntax is:
#       (vr),(br),(wd),(ln),(df),(ec),(bf),(st)
# where,
#       vr      vertical resolution
#       br      bit rate
#       wd      page width
#       ln      page length
#       df      data compression
#       ec      error correction
#       bf      binary file transfer
#       st      scan time/line
#
Class2DCCQueryCmd:      "!(0,1),(0-3),(0-4),(0-2),(0),(0),(0),(0-7)"
```

Q136: Converting received facsimile with fax2ps generates warnings?

Q136.

Converting received facsimile with fax2ps generates warnings?

Every time I receive a fax, I get this warning:

```
sdl:/var/spool/fax/recvq#> fax2ps fax029087 >x
Fax3Decode1D: fax029087: Premature EOF at scanline 1056 (x 0).
Fax3Decode1D: fax029087: Premature EOF at scanline 1056 (x 0).
sdl:/var/spool/fax/recvq#>
```

Is there something that I can do about this or is it on the sending end?

A136.

This problem is (was) on the receiving end; however the warnings can be ignored.

Prior to the addition of copy quality checking in v2.3beta036, the server code wrote the raw received fax data stream into the file without properly parsing for end–of–line (EOL) and return–to–control (RTC) codes. As a result the recorded number of received lines in a facsimile page was potentially too large if the raw data stream did not include the 6 EOL codes that make up the RTC mark that signals the end of a facsimile page. The fax2ps program scans each page of data without regard for the number of lines recorded in the TIFF file so it would sometimes generate extraneous complaints.

Q137: What does +FHNG:2 mean?

Q137.

What does +FHNG:2 mean?

Sending a fax always fails the same way. Here as example log file:

```
Jul  2 14:07:00.42: [14040]: SESSION BEGIN
Jul  2 14:07:00.46: [14040]: DIAL 8871896
Jul  2 14:07:00.46: [14040]: <-- [11:ATDT8871896]
Jul  2 14:07:14.81: [14040]: --> [5:+FCON]
    <...stuff deleted...>
Jul  2 14:07:30.43: [14040]: <-- data [2]
Jul  2 14:07:32.13: [14040]: SEND end page
Jul  2 14:07:32.23: [14040]: --> [2:OK]
Jul  2 14:07:32.23: [14040]: <-- [8:AT+FET=0]
Jul  2 14:07:32.23: [14040]: --> [7:+FHNG:2]
Jul  2 14:07:32.23: [14040]: REMOTE HANGUP: Call aborted,  from +FK or <CAN> (code 2)
```

A137.

The +FHNG status string from the modem indicates that the modem firmware encountered some problem––there is no way for the fax software to recover from this as the line has already been hung up. These types of errors typically indicate a firmware problem, though in this case the status code is very odd. The only thing I can possible think to check is whether or not the order of bits sent to the modem is correct. The probemodem result indicates that the modem understands the +FBOR command, so there should be no problem.

I would try other fax machines to see if the problem is repeatable.

Q138: [SunOS 4.1.x] Getty aborts with Interrupted system call?

Q138.

[SunOS 4.1.x] Getty aborts with "Interrupted system call"?

faxd answers the phone, determines it's a data call, and runs getty. Nothing happens for a few seconds, then I get the following message in syslog:

```
May 22 15:04:58 hbar getty: /dev/ttya: Interrupted system call
```

(Relevant line from config file: GettyArgs: "std.%s %l")

A138.

I had this problem too until I changed GettyArgs. Try using "std.%s –" instead of "std.%s %l". This tells getty to use the stdin it was passed instead of opening the device itself.

Q139: What do I need to do to share a tty line between fax and data calls?

Q139.

What needs to be done to share a tty line between fax and data calls?

A139.

To use a line for outgoing fax and data calls the calling software must either setup the modem appropriately or HylaFAX must be configured to leave the modem in Class 0 (data mode) when it is not actively being used. To do this force the modem to Class 0 through the **ModemSetupAACmd** configuration parameter (this is known to be the last command sent to the modem during setup):

```
ModemSetupAACmd:        AT+FCLASS=0
```

HylaFAX will automatically switch the modem to the apprioriate Class when placing an outbound call. Inbound calls are a bit more of a problem; you must insure the faxgetty process answers the phone in the appropriate state; for example, for a Class 2 modem:

```
ModemAnswerCmd: AT+FCLASS=2;A
```

will switch the modem into Class 2 before answering an inbound call.

A more robust solution to this problem is to insure software other than HylaFAX always forces Class 0 when using the modem for data. This however may be problematic with some software packages.

For sharing the line for incoming calls the HylaFAX server must be configured to answer incoming calls using an adaptive answer scheme that distinguishes fax from data calls. For Class 1 modems this can potentially be done by the server. For Class 2 and Class 2.0 modems it is best if the modem supports adaptive–answer in the modem (typically this is enabled with an `AT+FAA=1` command). It is also possible for Class 1,2 and 2.0 modems to use the adaptive answer support in the server to answer calls first as data and then as fax; see the descriptions of the **ModemSetupAAcmd**, **AnswerRotary**, and **AdaptiveAnswer** configuration parameters in the config(4F) manual page. See also the chapter on Advanced Server Setup.

Q140: How do I diagnose the following PostScript conversion problem?

Q140.

How do I diagnose the following PostScript conversion problem?

I submit a fax. It ends up in the docq directory. **/usr/adm/messages** states the following:

```
Sep  3 12:39:50 jack FaxServer[20522]: SEND: REJECT docq/doc1.cover+ because: "Can not open file"
Sep  3 12:43:54 jack FaxServer[20522]: SEND: REJECT docq/doc2.cover+ because: "Can not open file"
Sep  3 12:44:18 jack FaxServer[20522]: SEND: REJECT docq/doc3.cover+ because: "Can not open file"
Sep  3 12:45:34 jack FaxServer[20522]: SEND: REJECT docq/doc4.cover+ because: "Can not open file"
Sep  3 12:53:54 jack FaxServer[20522]: SEND: REJECT docq/doc5.cover+ because: "Can not open file"
Sep  3 13:17:35 jack FaxServer[22670]: SEND: REJECT docq/doc6.cover+ because: "Can not open file"
Sep  3 13:17:41 jack FaxServer[22670]: SEND: REJECT docq/doc7.cover+ because: "Can not open file"
```

The files are in the directory owned by uucp and permissions 600, but the file names do not have a "+" at the end of them.

Of course, at this point the fax is tossed out and mail sent to the sender.

A140.

Filenames with a trailing "+" are the converted (imaged) documents created by processing the submitted PostScript with the ps2fax converter program [*Ed: this was true for FlexFAX but not for HylaFAX; consult hylafax(4F) for up to date information*]. A converted file may not be opened for many reasons: it was not created, the permission or owner of the file prevents the fax server from accessing it, etc. This problem is almost always caused by the Ghostscript package being incorrectly installed and/or configured. Be sure that you have Ghostscript properly installed and that the submitted cover page is "good PostScript". One possible step–by–step method for diagnosing such a problem is described here.

Q141: Why do my transmitted faxes appear squished at the receiver?

Q141.

Why do my transmitted faxes appear squished at the receiver?

I recently installed FlexFAX, Version 2.3beta on a Sparc IPC using gcc 2.5.8. I am using a Practical Peripherals PM14400FXMT modem hanging off my ttyb serial port.

When I send faxes they are printed on the other end in about half the vertical space they should take up.

I see these entries in the log:

```
Oct 23 14:44:05.42: [20266]: REMOTE best vres 7.7 line/mm
 ...
Oct 23 14:44:05.44: [20266]: USE 3.85 line/mm
```

and this looks fishy to me. I scanned a few back issues of the archive for this mailing list and see the same thing in other logs, but with no complaints of squashed faxes.

When I generate a tiff file and view it it does not appear to be squashed. So it isn’t ghostscript to blame.

Any hints on what the problem could be?

A141.

This problem is caused by the modem firmware not properly implementing the Class 2 specification. Some modems are incapable of accepting an `AT+FDIS` command to set the session parameters between the time a call is placed and a page is transmitted. Modems with this sort of problem may ignore the `AT+FDIS` command which causes incorrect session parameters being used to interpret the page data (often resulting in ‘‘*squished pages*’’), or abort the session, returning a `+FHNG:` status message to the host. If you encounter this problem use the `Class2DDISCmd` configuration parameter to enable workaround support in the fax server (*this support was added in v2.3beta036.*)

Q142: Need help with phase error while receiving?

Q142.

Need help with phase error while receiving?

I have a SupraFAXModem with ROM version V1.400−03−CS29. This is connected to a Sun IPC running SunOS 4.1.2. I’m trying to use FlexFAX v2.3beta036 compiled with gcc 2.5.8 and libg++ 2.5.3. I’m using the standard config file for this modem type. I didn’t list it here, but if people think it would be helpful, I could.

Everything else works ok (sending faxes, data connections in and out). Just receiving has a problem. I’ve been trying to send from a regular fax machine. The fax machine complains that the remote unit (my system) isn’t responding and times out. The log I get is:

```
Jan 06 11:22:38.02: [ 5459]: SESSION BEGIN
Jan 06 11:22:38.04: [ 5459]: <-- [3:ATA]
Jan 06 11:22:39.80: [ 5459]: --> [3:FAX]
Jan 06 11:22:45.83: [ 5459]: --> [5:+FCON]
Jan 06 11:22:45.84: [ 5459]: ANSWER: FAX CONNECTION
Jan 06 11:22:45.84: [ 5459]: STATE CHANGE: ANSWERING -> RECEIVING
Jan 06 11:22:45.92: [ 5459]: RECV: begin
Jan 06 11:25:46.08: [ 5459]: TIMEOUT: reading line from modem
Jan 06 11:25:46.09: [ 5459]: REMOTE HANGUP: Unspecified Receive Phase B error (code 70)
Jan 06 11:25:46.09: [ 5459]: RECV: Unspecified Receive Phase B error (begin)
Jan 06 11:25:46.11: [ 5459]: RECV: empty file "/bigtmp/faxAAAa05459" deleted
Jan 06 11:25:46.16: [ 5459]: RECV: end
Jan 06 11:25:46.16: [ 5459]: SESSION END
```

A142.

You probably have the ModemRate set to other than 19.2. Most Supra modems lock the DTE−DCE speed to 19.2 when receiving in Class 2 (see http://www.vix.com/flexfax/Modems/supra−v32bis.html). You can either run at 19.2 all the time or try switching to 19.2 when a fax session is initiated (see **ModemAnswerFaxBeginCmd**).

Q143: Unrecognized Transparent data command

(code 44)?

Q143.

Unrecognized Transparent data command (code 44)?

I have a new USR Courier. Flexfax works fine with the Courier as a Class1 modem, but with Class2.0 I get this error:

REMOTE HANGUP: Unrecognized Transparent data command (code 44).

The modem is configured for hardware flow control. The transcript is attached.

```
Feb 03 13:24:20.21: [17852]: <-- [6:AT+FDT]
Feb 03 13:24:20.39: [17852]: --> [20:+FCS:0,5,0,2,0,0,0,5]
Feb 03 13:24:27.01: [17852]: --> [7:CONNECT]
Feb 03 13:24:27.02: [17852]: SEND begin page
Feb 03 13:24:30.07: [17852]: SENT 14196 bytes of data
Feb 03 13:24:30.07: [17852]: SEND 1D RTC
Feb 03 13:24:30.34: [17852]: SEND end page
Feb 03 13:24:30.35: [17852]: SEND send EOP (no more pages or documents)
Feb 03 13:24:30.45: [17852]: --> [2:]
Feb 03 13:24:30.46: [17852]: --> [7:+FHS:44]
Feb 03 13:24:30.46: [17852]: REMOTE HANGUP: Unrecognized Transparent data comma-d (code 44)
```

A143.

This is caused by improper DTE−DCE flow control. The modem failed to see the Return To Control (RTC) command from the host and/or the <DLE><ETX> message the punctuates the end of the page data to be sent. You either have flow control misconfigured or the modem does not properly support hardware flow control in Class 2.0.

Q144: Unspecified Transmit Phase C error (code 40)?

Q144.

Unspecified Transmit Phase C error (code 40)?

I’ve been trying to install a GVC class 2 modem for my Solaris 2.4 system for a week now. I’ve made it to the point where server seems to start up ok, but each sending hangs with "Unspecified Transmit Phase C error (code 40)". The log show the following:

```
    <...stuff deleted...>

Feb 15 13:34:00.94: [  347]: <-- [23:AT+FDIS=0,3,0,2,0,0,0,4]
Feb 15 13:34:02.32: [  347]: --> [9:+FHNG: 40]
Feb 15 13:34:02.33: [  347]: REMOTE HANGUP: Unspecified Transmit Phase C error (code 40)
```

A144.

Read about the **Class2DDISCmd** in config(4F).

Q145: Where I can get a list of all the error codes?

Q145:

BTW, is there any place where I can get a list of all the error codes??? in this case it's 52 but am wondering if there is a list out there somewhere...

Any help would be appreciated...

```
Oct 06 10:35:08.01: [ 7116]: --> [2:OK]
Oct 06 10:35:08.02: [ 7116]: SEND send MPS (more pages, same document)
Oct 06 10:35:08.02: [ 7116]: <-- [8:AT+FET=0]
Oct 06 10:35:28.79: [ 7116]: --> [8:+FHNG:52]
Oct 06 10:35:28.79: [ 7116]: REMOTE HANGUP: No response to MPS repeated 3
times (code 52)
Oct 06 10:35:28.81: [ 7116]: <-- [4:ATH0]
Oct 06 10:35:30.44: [ 7116]: --> [2:OK]
Oct 06 10:35:30.44: [ 7116]: SESSION END
```

A145:

From: *Richard Baldwin*
To: *flexfax@sgi.com*
Subject: *FW: mps problem*
Date: *Fri, 06 Oct 95 14:13:00 PDT*

```
   ......

Phase A is establishing the connection (dialing & sending CNG and pickup)
Phase B is the T.30 handshake (negotiation of resolution, speed etc.)
Phase C is the data (fax image) sending
Phase D is the inter-page or end of message T.30 handshake

HangUp Status Codes - Call Placement and termination

  0     Normal and proper end of connection - indicates a modem
        dialing error of unknown type which returns the modem to
        normal operation afterwards.  This type of error is not
        counted as a "try" for counting retries

  1     Ring Detect without successful handshake (ERR_RINGDETECT)
        This is a fatal error, Siren Fax will not retry a job which
        experiences this error, as normally it is only encountered
        when something other than a fax (or someone) answers the
        call from Siren Fax.  When an incorrect number is dialed,
        this error normally results.  If the DIALWAIT option is not
        enabled in FAXSPROFILE, Error code 1 will also result from
        calls which would otherwise receive an Error code of 10 or
        11 (and be retried)

  2     Call aborted, from +FK or <CAN> - means the software killed the
        transmission session - rarely or never seen - not counted as a try
```

```
  3     No loop current - indicates a telephone line error - not
        counted as a try.

Transmit Phase A Errors.  Errors commonly occur in Phase A due to
incorrect phone numbers (in the case of Error Code 1) or other
anamolies.  Typically Phase A errors are not retried (normally
set as fatal errors in FAXSPROFILE)

 10     Unspecified Phase A error (ERR_UNSPECPHA) - means that
        some undetermined failure occurred in the handshake
        protocol - only seen if DIALWAIT option is enabled in
        FAXSPROFILE - normally this is a fatal error and job will
        not retry

 11     No answer (T.30 T1 time-out) (ERR_NOANSWERPHA) - This is
        not the same as the telepphone line failing to answer
        (Error Code 155) this is only seen if the DIALWAIT
        option is enabled in FAXSPROFILE - normally this is a
        fatal error and job will not retry

Transmit Phase B Errors

Errors in Phase B are relatively uncommon, but very persistent
with certain numbers you might dial.  They occur during the
T.30 initialization protocol phase.  Siren Fax normally retries
after a Phase B error, but some receiving devices cannot be
connected to without special handling by the Siren Fax
Administrator, hence repeated errors may be experienced with
a particular receiver

 20     Unspecified Transmit Phase B error
 21     Remote cannot receive or send
 22     COMREC error in Transmit Phase B
 23     COMREC invalid command received
 24     RSPREC error
 25     Siren Fax Responds same as 26 below -
        Specified Response for Error 25 is: DCS sent 3 times
        with response
 26     DIS/DTC received 3 times; DCS not recognized
 27     Failure to train at 2400 bps or +FMINSP value
 28     RSPREC invalid response received

Transmit Phase C Errors - Siren Fax will retry the job when
Phase C errors occur, unless on the last retry.

 30     Unspecified Transmit Phase C error

 33     DTE to DCE data underflow - normally caused by a poor
        quality modem with insufficient buffer, or caused by
        a Serial port which is not properly handling software
        flow control or which cannot properly
        buffer the data flow at normal speeds.

 40     Unspecified Transmit Phase C error - same as 30

 41     RSPREC error - error

 42     No Response to MPS repeated 3 times - MPS means
        'Multi-Page Send.'  Prior to sending each page, the
        sending modem 'trains' with the receiving fax machine
        or modem, ie. they re-establish the communcations
        parameters to be used for the next page of image data.
        This error means that some part of the retrain process
        failed and that the devices jointly decided to give up.
        Siren Fax will retry the job when this error is detected,
        unless it occurs on the last retry.
```

43	Invalid response to MPS
44	No response to EOP repeated 3 times - will normally retry and send remaining pages
45	Invalid response to EOP
46	No response to EOM repeated 3 times
47	Invalid response to EOM
48	Unable to continue after PIN or PIP

Transmit Phase D Errors - Siren Fax will retry the job when Phase D erros occur, unless on the last retry.

50	Unspecified Receive Phase B error in hangup protocol
51	RSPREC error - same as 41 above
52	COMREC error: Same as 42, No Response to MPS repeated 3 times
53	T.30 T2 time-out, page expected but not received
54	Siren Fax Responds same as 44 above - Specified Response for Error 54 is: T.30 T1 time-out after EOM received
60	Unspecified Receive Phase C error
61	Missing EOL after 5 seconds (seciont 3.2/T.4)
63	DCE to DTE buffer overflow
64	bad CRC or frame (ECM or BFT modes)
70	Unspecified Receive Phase D error
71	RSPREC invalid response received
72	COMREC invalid response received
73	Unable to continue after PIN or PIP
74	T.30 T1 time-out after EOM received
90	Unspecified Receive Phase C error
91	Missing EOL after 5 seconds - result is that modem times out and disconnects - EOL means End Of Line, referring to the end of a scan line
93	DCE to DTE buffer overflow
94	bad CRC or frame (ECM or BFT modes)
100	Unspecified Receive Phase D error
101	RSPREC invalide response received
102	COMREC invalide response received
103	Unable to continue after PIN or PIP
128	Cannot send due to MIN speed parameter (ERR_MINSPEEDERR)
129	Cannot send remote is V.29 only (ERR_REMOTEV29)

```
130     No T4 receiver bit in DCS/DIS frame (ERR_NOT4RECVBIT)

131     FK or cancel

132     Format mismatch (ERR_FORMATMISM)

133     Remote can't receive (ERR_CANTRECEIVE)

134     XON not received in time to save session

151     Dialing Failed - An attempt at dialing a number
        timed out (ERR_DIALFAILED)

152     No Dialtone - The modem reported no dial tone (ERR_NODIALTONE)

153     Busy - The modem reported line busy (ERR_BUSY)

154     Unknown Receive Error - rarely seen. Failed/timeout
        during modem dialog in adm/faxrcv/recv2.c:
        timeout from fax2wait(OK, ...) or waitok() initial
        dialog setting modem speed, volume, etc setting modem
        class on  LEOF, TIMEOUT, FHNG returned by call to
        mdread when mdread didn't set any other error code
        during modem data read/write using sio_write() (ERR_UNKNOWN)

155     No Answer - The receiving end did not answer, ie. did not
        go off hook:
        This error is only returned when DIALWAIT is enabled in
        FAXSPROFILE,  if disabled an Error Code 1 is returned
        (ERR_NOANSWER)

156     Modem either timed out or failed to return OK during
        an initialization step in adm/libdm/fax2.c (ERR_INITPROB)

157     Answer Timeout - Modem timed out during the call to mdread()
        in fax2wait() Modem returned a RING/LEOF at an inappropriate
        time while waiting for an answer (ERR_ANSWERTIM)

160     Modem Dial Error - dialing phase timeout error - generated
        by the modem.  Failed/timeout during modem dialog while
        dialing in adm/faxsnd/send2.c: LEOF, TIMEOUT, RING  returned
        by fax2wait(OK) timeout from waitok() (ERRDUNKNOWN)

161     Modem Send Error - Sending phase timeout error - generated
        by the modem.  Failed/timeout during modem dialog while
        sending in adm/faxsnd/send2.c:  LEOF, TIMEOUT, RING
        returned by fax2wait(OK,CONNECT) LEOF, TIMEOUT,  FHNG,
        RING returned by mdread()
        -1 returned by sio_get()
        -1 returned by fax2eom()
        timeout in sio_write()

162     Modem Finish Error - EOM phase timeout error - generated
        by the modem.  Default error condition from fax2eom()
        after LEOF, TIMEOUT, FHNG, RING  (ERRFUNKNOWN)
```

** end of e−mail **

Note:
The list of error codes from the EIA/TIA specifications are incorporated in the source code. If you have the HylaFAX source installed you should also check the file *faxd/Class2.c++* for these codes.

Q146: Troubleshooting

TROUBLESHOOTING HYLAFAX PROBLEMS

[This troubleshooting section is part of the normal HTML documentation provided with the HylaFAX source distribtution. It is included here because it answers a lot of common questions and problems.]

This section contains tips for dealing with the most common problems encountered when setting up and running the software. If you did not follow the instructions in the chapter on ‘‘Server Setup and Basic Configuration’’ then do not bother reading this chapter; read the setup information first!

There are several components to the complete HylaFAX software package:

- client applications (sendfax, (sendpage, faxstat, faxrm, etc.),
- the job submission and server status process that runs on the server machine and communicates with client applictions (hfaxd),
- the programs that handle delivery of outbound facsimile and pager requests (faxsend and pagesend),
- the processes that service each modem (faxgetty),
- the central scheduler for outbound jobs (faxq), and
- the spooling area cleaner process (faxqclean).

If you are having trouble first try to identify which part of the system is failing. Work forward from the client application to the server machine. On the server machine work from the hfaxd process to the scheduler to the delivery programs. Usually it is pretty obvious which piece of the system has got a problem but if you are unfamiliar with the software you can easily be fooled by error messages that may be passed back to client programs from a process deep within a server machine. The following sections cover specific areas:

- Client Basics
- Client Access Control Problems
- Server Basics
- Scheduler Operation
- Session Tracing
- PostScript Document Preparation
- TIFF Document Preparation
- Communication Problems
- Getty Problems
- Problems with UUCP, cu, tip, etc.

You can also consult the HylaFAQ for answers to common questions.

TROUBLESHOOTING: CLIENT BASICS

All client applications support a `-v` option to enable various levels of debugging. It is possible with one or more `-v` options to trace the protocol between the application and the hfaxd process on the server machine. hfaxd has a `ServerTracing` configuration parameter that controls various tracing support, including the protocol messages it receives. If you are in doubt whether a problem is on the client machine or the server, try the following:

Run faxstat to request server status. You should see something like:

```
HylaFAX scheduler on hyla.chez.sgi.com: Running
Modem ttyf2 (+1 510 528-9999): Running and idle
```

or possibly,

```
HylaFAX scheduler on hyla.chez.sgi.com: Not running.
```

If you do not see something like this, then you are having problems communicating with the hfaxd program on the server machine or there is a configuration problem on the server machine. If you cannot establish a connection to the hfaxd process on the server machine, then verify that you have your `FAXSERVER` environment variable setup correctly (if the server is not on the same machine where the faxstat program is run) and that both client and server programs are communicating on the same TCP port.

Beware of settings that might be present in personal or system−wide configuration files. Some applications such as sendfax search an additional file as well. Consult manual pages for complete information about configuration file handling.

On the server machine make sure that the hfaxd program is setup to run standalone or properly configured to be invoked by the inetd program. If run standalone then hfaxd should be running and have been started with a `-i` option (and possibly other options). hfaxd should also send messages to the system logging facility whenever it is started up and these messages should identify the client−server protocols it is servicing; e.g.

```
May 28 20:11:20 5D:hyla HylaFAX[8447]: HylaFAX INET Protocol Server: restarted.
May 28 20:11:20 5D:hyla HylaFAX[8447]: HylaFAX Old Protocol Server: restarted.
May 28 20:11:20 5D:hyla HylaFAX[8447]: HylaFAX SNPP Protocol Server: restarted.
```

Otherwise check the contents of **/etc/inetd.conf**, or similar, for a line of the form:

```
hylafax stream  tcp     nowait  fax     /usr/local/sbin/hfaxd   hfaxd -I
```

There may also be other entries if support for the old client−server protocol and/or SNPP is enabled.

Be certain that inetd has ‘‘reread’’ its configuration file; either send it a SIGHUP or restart it. This should automatically happen when the faxsetup program *is run on the server machine. Note also that the* `fax` *service must be defined on the server machine in order for inetd to startup the hfaxd program−−check for this entry in the* **/etc/services** *file and/or the YP/NIS database.*

Note that hfaxd uses the chroot system call to confine clients to the HylaFAX spooling area on the server machine. On most systems only the super−user is permitted to do a chroot call so if hfaxd is not started by the super−user or the executable program is not setup to be setuid−root then it will not function properly. If this happens clients will usually be denied access with a message of the form `` `Cannot set privileges.`''.

You can also use an existing network program such as telnet or ftp to communicate with the hfaxd process;

```
hyla% <B>telnet localhost 4559</B>
Trying 127.0.0.1...
Connected to localhost.
Escape character is '^]'.
220 hyla.chez.sgi.com server (HylaFAX (tm) Version 4.0beta012) ready.
<B>help</B>
214-The following commands are recognized (* =>'s unimplemented).
   ABOR    CHMOD   IDLE    JSUBM   JGRP*   NLST    REIN    STAT    USER
   ACCT*   CHOWN   JDELE   JSUSP   JGSUBM* NOOP    REST    STOR    VRFY
   ADMIN   DELE    JKILL   JWAIT   JGSUSP* PASS    RETR    STOT
   ALLO*   DISABLE JNEW    JGDELE* JGWAIT* PASV    RNFR*   STOU
   ANSWER  ENABLE  JOB     JGKILL* LIST    PORT    RNTO*   STRU
   APPE    HELP    JOBFMT  JGNEW   MDTM    PWD     SHUT    SYST
   CWD     FILEFMT JPARM   JGPARM* MODE    QUIT    SITE    TZONE
   CDUP    FORM    JREST   JGREST* MDMFMT  RCVFMT  SIZE    TYPE
214 Direct comments to FaxMaster@hyla.chez.sgi.com.
<B>quit</B>
221 Goodbye.
Connection closed by foreign host.
```

If the network−related configuration is setup properly but faxstat still does not return an expected answer then use the `-v` option to trace the client−server protocol:

```
hyla% <B>faxstat -v</B>
Trying localhost (127.0.0.1) at port 4559...
Connected to localhost.
220 hyla.chez.sgi.com server (HylaFAX (tm) Version 4.0beta012) ready.
-> USER sam
230 User sam logged in.
-> TZONE LOCAL
200 Using time values in PST.
-> PORT 127,0,0,1,7,198
200 PORT command successful.
-> LIST status
150 Opening new data connection for "status".
HylaFAX scheduler on hyla.chez.sgi.com: Running
Modem ttyf2 (+1 510 528-9999): Running and idle
226 Transfer complete.
```

A protocol or configuration problem should be evident from the trace information. You can also configure hfaxd to log its operation through syslog by setting the `ServerTracing` configuration parameter in the **hfaxd.conf** file:

```
ServerTracing: 0x3              # enable protocol tracing
```

hfaxd will reread this file for each new network connection so there is no need to restart the server if running standalone.

Once again, remember that inetd will not see a change to the **inetd.conf** file until it is restarted or sent a SIGHUP; and that hfaxd logs its debugging information through syslog (using the syslog facility setup in the **hfaxd.conf** file, or the setting compiled into the program when the software was built).

TROUBLESHOOTING: CLIENT ACCESS CONTROL PROBLEMS

If you are able to establish a network connection to the hfaxd server process then access control problems are either due to incorrect installation of the server software or misconfigured permissions on the server machine. Client access is defined by the contents of the **etc/hosts** file located in the HylaFAX spooling area on the server machine. This file must exist and *must not be publicly readable* or access will be denied to all clients.

Beware of the protection on the **etc/hosts** *file when upgrading from HylaFAX 3.0. Previous versions of HylaFAX did not care if the file was publicly readable so it probably is.*

The hfaxd program confines clients to the spooling area on the server machine using the chroot(2) system call. This means that clients should not have access to any information on a HylaFAX server machine outside the spooling area (and hfaxd restricts access to only part of this area).

HylaFAX clients are assigned a ‘‘fax user ID’’ when they login to a HylaFAX server. This identifier is similar to the normal UNIX user ID but is maintained separately by HylaFAX and is independent of the normal system operation. Beware that hfaxd stores this ID as the group ID of files that are created on a HylaFAX server on behalf of a client. The fax user ID assigned to a client is defined by the information in the **etc/hosts** file; consult the manual page for more details. You can also find the user ID for a particular user by logging in with telnet and issuing a `STAT` request:

```
    melange% <B>telnet flake 4559</B>
    Trying 192.111.25.39...
    Connected to flake.esd.sgi.com.
    Escape character is '^]'.
    220 flake.esd.sgi.com server (HylaFAX (tm) Version 4.0beta020) ready.
    <B>user foo</B>
    230 User foo logged in.
    <B>stat</B>
    211-flake.esd.sgi.com HylaFAX server status:
        HylaFAX (tm) Version 4.0beta020
        Connected to melange.esd.sgi.com (192.111.25.40)
   -->  <I>Logged in as user foo (uid 2)</I>
        "/" is the current directory
        Current job: (default)
        Time values are handled in GMT
        Idle timeout set to 900 seconds
        Using long replies
```

```
        No server down time currently scheduled
        HylaFAX scheduler reached at /FIFO (not connected)
        Server FIFO is /client/25133 (open)
        File cache: 15 lookups, 0 hits (0.0%), 1.1 avg probes
            15 entries (2.3 KB), 0 entries displaced, 0 entries flushed
        TYPE: ASCII; STRU: File; MODE: Stream; FORM: PS
        No client data connection
    211 End of status
    <B>quit</B>
    221 Goodbye.
    Connection closed by foreign host.
```

Client access may be controlled with passwords that are transmitted in the clear by a client across the network connection. This is obviously insecure and plans exist for improved security measures. The existing password facilities use the same crypt(3) function the system login facilities use and encrypted passwords are stored in the **etc/hosts** file in a format that is compatible with most systems' password files. This means that client passwords can be copied from a password file if desired (though this is obviously discouraged). The HylaFAX client–server protocol `ADDUSER` request includes a variety of checks for easy–to–guess passwords.

HylaFAX uses the standard system crypt function to implement client passwords. Systems without this routine may substitute the publicly available GNU version but then it may not be possible to copy encrypted passwords from the system password file.

If a client is prompted for a password when contacting the server then it means the client is setup with a password in the **etc/hosts** file. Read the hosts(4F) manual page carefully to understand the format for this file.

Logging of client login and network connections can be controlled separately by bits in the hfaxd `ServerTracing` configuration parameter; consult the hfaxd manual page for details.

TROUBLESHOOTING: SERVER BASICS

One faxq process does the job scheduling and initiation of outbound calls; it handles many tasks:

- manage the queue of jobs and schedule their processing
- prepare PostScript, TIFF, and PCL documents for transmission
- start the processes that do the low–level work to deliver facsimile or pager messages

One faxgetty server process is usually run for each fax modem on a machine. These processes are responsible for handling inbound calls, carrying out the following tasks:

- answer incoming call and decide whether the call is fax, data, or voice
- do the low–level work to receive facsimile
- possibly invoke the system getty program to handle data calls
- possibly invoke the system vgetty program to handle voice calls

- possibly invoke the system egetty program to deduce the type of a call

Proper setup of HylaFAX involves setting up the configuration files and the ancillary programs and command scripts that are invoked by faxq and by faxgetty. The setup of the ancillary programs should automatically be done when the software is configured and installed. The modem–related setup and much of the system–related configuration work should be done by the faxsetup and faxaddmodem commands. Problems that arise in the normal operation of a server typically fall into two categories:

- incorrect configuration and/or setup of the server software,
- incorrect configuration of the modem.

In either case HylaFAX provides extensive *tracing* or *logging* facilities that should supply the information needed to locate and correct a problem.

Tracing information is broken up into two separate areas: *server tracing* and *session tracing*. Server tracing is the logging done by server processes when not in active conversation with another device such as a facsimile machine or paging service provider. This tracing covers modem initialization, scheduler operation, and general bookkeeping and maintenance work. Session tracing is the logging done while a server process is actively communicating with a remote device; e.g. the communcation work done to send or receive a facsimile. This split permits better control over the amount of information logged in a production environment. Typically once a system is setup and working the amount of server tracing information captured can be quite small while the session tracing logged needs to be more extensive to help debug any communication problems that might arise.

HylaFAX servers processes are controlled by a collection of *configuration files*. There is a configuration file for the faxq scheduler process, **etc/config**, and one file for each process that uses a modem, **etc/config.***device*. (The hfaxd process that implements the client–server protocols also has its own configuration file.)

faxq tracing information is controlled by the `ServerTracing` and `LogFacility` configuration parameters. `ServerTracing` controls which work should be traced while `LogFacility` specifies the syslog(3) facility where the tracing messages should be directed. By default server tracing information is directed to the ‘‘`daemon`’’ facility.

Modem–related tracing information is controlled by `ServerTracing`, `SessionTracing`, and `LogFacility` parameters that are put in the per–modem configuration files. `ServerTracing` controls the logging done when one of these programs is not in active conversation with another device while `SessionTracing` controls the logging during other times. As before, `LogFacility` defines where server tracing messages get sent. Session tracing messages are not sent using syslog; they are written to *session log files* that are described separately below.

To capture server tracing messages you must enable the appropriate bits in a `ServerTracing` parameter **and** configure the syslogd process to capture messages sent to the `daemon.debug` facilitiy (or substitute for `daemon` to reflect the value of the `LogFacility` parameter).

By setting `LogFacility` *to something like* `local5` *it is easy to capture HylaFAX syslog messages in a separate file; just setup the* **syslog.conf** *file appropriately, e.g.*

```
local5.debug        /var/spool/fax/etc/syslog
```

A sample server trace log is shown below. The lines marked ‘‘`FaxQueuer`’’ are generated by the faxq process. The lines marked ‘‘`FaxGetty`’’ are generated by a faxgetty process. The process ID of each process is shown enclosed in ‘‘[]’’. Each line is marked with the date and time that it was generated.

```
Apr  1 12:25:31 6V:oxford FaxQueuer[307]: HylaFAX (tm) Version 3.0beta112
Apr  1 12:25:31 6V:oxford FaxQueuer[307]: Copyright (c) 1990-1996 Sam Leffler
Apr  1 12:25:31 6V:oxford FaxQueuer[307]: Copyright (c) 1991-1996 Silicon Graphics, Inc.
Apr  1 12:25:58 6V:oxford FaxQueuer[307]: MODEM ttym2 DOWN
Apr  1 12:25:58 6V:oxford FaxGetty[477]: OPEN /dev/ttym2
Apr  1 12:26:03 6V:oxford FaxGetty[477]: MODEM TELEBIT T3000SA - Version LA7.20F/T3000SA - Version LA7.20F
Apr  1 12:26:04 6V:oxford FaxQueuer[307]: MODEM ttym2 READY
```

The tracing facilities supported by the HylaFAX server processes should provide enough information to debug any problem in the software. Consult the config(4F) manual page for complete information on the various parameters.

TROUBLESHOOTING: SCHEDULER OPERATION

HylaFAX requires a faxq process to be running for outbound transmissions to be done. The faxstat program should show this process running in its output:

```
HylaFAX scheduler on hyla.chez.sgi.com: Running
Modem ttyf2 (+1 510 528-9999): Running and idle
```

If the scheduler is marked ‘‘Not running’’ but faxq *is* running on the server machine then the first thing to check is the server tracing log for faxq to see if there is a problem. faxstat gets its information from hfaxd on the server machine and hfaxd decides if faxq is running based on whether it can open the FIFO special file **FIFO** in the spooling area on the server machine. Check that this file is the correct type and that it has the appropriate permission. faxq will create this file when it starts up if it does not exist; if there is a problem try stopping faxq, remove the file, possibly fiddle with faxq’s server tracing (to get more information logged), and then restart faxq:

```
hyla# <B>faxquit</B>
  ...<I>verify that faxq has terminated</I>...
hyla# <B>/usr/local/sbin/faxq</B>
```

Note that if the faxquit command does not cause faxq to terminate then you may need to forcibly kill the process (but beware of doing this when outbound jobs are in progress as this can leave the system in an inconsistent state). When sending a signal to faxq use SIGTERM or SIGINT; faxq catches these signals and tries to cleanup its state as much as possible.

FIFO−related problems usually happen when the FIFO special file is removed without first stopping the HylaFAX server processes. This can cause one or more processes to be left with an open file descriptor to a file that is no longer present in the filesystem, and hence unreachable. When doing maintenance work on a HylaFAX server it is a good idea to first shut down the server processes. This is simple to do with the **hylafax** shell script used on System V−style systems; simply do

```
hyla# <B>/etc/init.d/hylafax stop</B>
```

If you believe that you are having problems with the messages exchanged by the various HylaFAX server processes `ServerTracing` bit 0x04000 can be set to force logging of all the messages sent and received through FIFO special files; usually you need to do this only for the faxq process.

Other than FIFO communication problems, the most common scheduler−related problem encountered is that no outbound jobs get scheduled for processing. faxq will only schedule an outbound job when it believes it has a modem available that is capable of handling a job's needs. A modem's existence and capabilities are signalled to faxq through messages received on its FIFO file. The two programs that send modem information are faxgetty and faxmodem. Processes that want to send faxq information about new modems must be able to access the file; this means the protection on the file must be such that clients can open it for writing (the default setup should make this happen). The order in which faxq and faxgetty are started does not matter; a handshaking protocol between faxq and faxgetty insures that modem status information will be exchanged no matter what order the processes startup in.

When in doubt about what is happening, or not happening, to jobs enable the job queue management tracing bit in the `ServerTracing` parameter for the faxq process; e.g.

```
ServerTracing:  0x201
```

and check the log to understand what is going on. There is also a separate bit for tracing low−level job queue operations; this should only be needed on rare occasions.

Otherwise there is very little that can go wrong with the scheduler with respect to managing the queue of outbound jobs. Setting the system time backwards on the server machine can cause problems as timers managed by faxq are calculated relative to the current time−of−day. Jobs may be rejected without a phone call if a `rejectNotice` entry is present for a destination phone number in the destination controls file destctrls(4F). Beware that multiple jobs to the same destination are usually serialized to reduce phone calls. Jobs that are blocked in this way have a "*Blocked by concurrent...*" status. You can change the maximum number of concurrent jobs that will be scheduled to a destination with the `MaxConcurrentJobs` configuration parameter.

TROUBLESHOOTING: SESSION TRACING

The `SessionTracing` parameter controls tracing information *during the time*

HylaFAX is engaged in conversation with another device (fax machine, pager service provider, etc.) Tracing of this sort is done by faxgetty processes (when receiving facsimile) and by processes started up by faxq to process outbound jobs (faxsend, pagesend, etc.). Session tracing is controlled by configuration parameters specified in the per–modem configuration files. It is also possible to enable session tracing on a per–destination basis for outbound jobs through the per–destination `DestControls` facility provided by faxq.

Communication–related problems will be found in the information logged under session tracing. Session tracing information is stored in files in the **log** subdirectory in the spooling tree and is returned to users via electronic mail when notification is requested, or when an unrecoverable error is encountered. The log(4F) manual page has information on the meaning of many messages that might appear in these files.

A sample snippet from a session log is shown below. The trace was collected from a transmission through a Class 1 modem. The `SessionTracing` parameter was set to `0x4f`. Notice that the format is very similar to the server tracing information collected through syslog (shown above). Beware that, unlike previous versions of HylaFAX, session logs are collected in individual files that are uniquely named according to a unique *communication identifier*. This can make locating the session log file a bit tricky; to find the appropriate log file you can look for a record in the **etc/xferlog** file or a server tracing message. Either should contain a communication identifier which can then be used to select the appropriate file from the **log** directory in the spooling area. (If only one call is being handled on a server you can also just look for the most recently changed file in the **log** directory.)

Session logs are straightforward to understand. Messages sent *to the modem* are identified by lines with a ‘‘`<--`’’ mark while data received *from the modem* are identified by lines with a ‘‘`-->`’’. Timestamps show the date and time, with time to the right of the decimal point displayed to 10 millisecond precision (the typical granularity of the realtime clock on a UNIX system). The number of characters in each message prefix the message itself. Unimportant binary data, usually the facsimile page data, is sometimes shown generically as ‘‘`data`’’.

```
Apr 01 09:01:09.78: [18302]: SESSION BEGIN
Apr 01 09:01:09.80: [18302]: MODEM set DTR OFF
Apr 01 09:01:09.80: [18302]: MODEM set baud rate: 0 baud (flow control unchanged)
Apr 01 09:01:09.80: [18302]: DELAY 2600 ms
Apr 01 09:01:12.40: [18302]: MODEM set DTR ON
Apr 01 09:01:12.40: [18302]: MODEM set baud rate: 38400 baud, input flow RTS/CTS, output flow RTS/CTS
Apr 01 09:01:12.40: [18302]: MODEM flush i/o
Apr 01 09:01:12.40: [18302]: <-- [14:ATE0V1Q0S0=0H0]
Apr 01 09:01:12.53: [18302]: --> [2:OK]
Apr 01 09:01:12.53: [18302]: <-- [20:ATS8=2S7=60&K4&D2&C1]
Apr 01 09:01:12.66: [18302]: --> [2:OK]
Apr 01 09:01:12.66: [18302]: <-- [11:AT+FCLASS=1]
Apr 01 09:01:12.78: [18302]: --> [2:OK]
Apr 01 09:01:12.78: [18302]: <-- [4:ATM0]
Apr 01 09:01:12.90: [18302]: --> [2:OK]
Apr 01 09:01:12.90: [18302]: <-- [11:AT+FCLASS=1]
Apr 01 09:01:13.02: [18302]: --> [2:OK]
Apr 01 09:01:13.06: [18302]: DIAL 14159657824
Apr 01 09:01:13.06: [18302]: <-- [15:ATDT14159657824]
Apr 01 09:01:23.85: [18302]: --> [7:CONNECT]
Apr 01 09:01:23.92: [18302]: MODEM input buffering disabled
```

```
Apr 01 09:01:25.45: [18302]: --> HDLC<26:FF C0 02 2C 4C 1C EC AC 6C 9C AC 8C 2C 8C D4 04 04 04 04 04 04 04 04 2C F7 7E>
Apr 01 09:01:25.45: [18302]: --> [2:OK]
Apr 01 09:01:25.45: [18302]: REMOTE CSI "+14159657824"
Apr 01 09:01:25.45: [18302]: <-- [8:AT+FRH=3]
Apr 01 09:01:25.45: [18302]: --> [7:CONNECT]
Apr 01 09:01:25.79: [18302]: --> HDLC<10:FF C8 01 00 76 5F 00 C6 4A 7E>
Apr 01 09:01:25.79: [18302]: --> [2:OK]
Apr 01 09:01:25.82: [18302]: REMOTE best rate 14400 bit/s
Apr 01 09:01:25.82: [18302]: REMOTE max page width 2432 pixels in 303 mm
Apr 01 09:01:25.83: [18302]: REMOTE max unlimited page length
Apr 01 09:01:25.83: [18302]: REMOTE best vres 7.7 line/mm
Apr 01 09:01:25.83: [18302]: REMOTE best format 1-D MR
Apr 01 09:01:25.83: [18302]: REMOTE best 0 ms/scanline
Apr 01 09:01:25.83: [18302]: REMOTE does not support PostScript transfer
Apr 01 09:01:25.83: [18302]: USE 14400 bit/s
Apr 01 09:01:25.83: [18302]: USE 0 ms/scanline
Apr 01 09:01:25.83: [18302]: SEND file "docq/doc19.cover;30"
    ....
```

Normal installation of HylaFAX will enable enough session tracing to debug most communication problems. The default configuration files come with `SessionTracing` set to 11 which is a good setting for Class 2 modems (i.e. a lot of information is provided, but the load on the server should not keep it from operating properly). For Class 1 modems a setting of 0x4f will also cause HDLC frames to be collected. Beware of tracing timer operations and modem I/O; these trace flags are only useful if you are trying to debug a problem specifically related to a timer not going off, or a problem where data appears to be corrupted.

When debugging modem−related problems, only enable the tracing that you really need. Enabling all tracing can affect the operation of the server processes by altering the timing of operations.

Note that when capturing a trace for the purpose of submitting a bug report, the less extraneous information that you include, the easier it is for people to help understand the problem. Most of the time HylaFAX will return the relevant session log for a communication failure in the notification message sent to a user when an outbound job fails. Note however that the contents of this log is controlled by the value of the `SessionTracing` parameter specified in the per–modem configuration files. If this parameter is set too low then session logs may be returned that do not show sufficient information to diagnose a problem.

TROUBLESHOOTING: POSTSCRIPT DOCUMENT PREPARATION

PostScript documents submitted for transmission as facsimile are converted to a binary format by the ps2fax(1M) script that is invoked by the scheduler. If this preparation fails it is either due to the submission of invalid PostScript or a problem in the setup of the PostScript RIP that does the conversion from PostScript to TIFF/F. faxq tries to return any error messages returned by the PostScript RIP to the user that submits a job but some programs make this difficult. In this case it may be easiest to see what is happening by invoking the ps2fax script directly using the same command arguments used by faxq; this information can be found in the faxq trace log. Beware however, that if faxq is started up by the init(1M) program that it may inherit a different shell environment. In particular, beware of problems with search paths when the PostScript RIP is linked with Dynamic Shared Objects (DSOs); e.g. when Ghostscript is linked with the the X11 driver and a DSO version of the X library.

On machines with dynamic shared libraries (e.g. SunOS), if you link Ghostscript with the X11 device driver and use shared X11 libraries that are not in a standard location, then you may need to augment the HylaFAX **util/ps2fax.gs.sh** *script with something of the form:*

```
LD_LIBRARY_PATH=/usr/local/R5/lib:/usr/openwin/lib
export LD_LIBRARY_PATH
```

The faxsetup script should verify that the PostScript RIP is installed in the correct location and properly configured for use with HylaFAX. It may not however be able to verify DSO–related problems of the nature described above.

PostScript imaging problems may also result in the faxq process not being able to reopen the imaged document after the ps2fax script is run. After faxq invokes ps2fax to image a document it validates the resulting TIFF/F file to make sure the work was done correctly. This is necessary because some programs terminate with exit status 0 indicating a successful run even if an error was encountered.

Some other potential problems to be aware of. If Ghostscript is configured with a `tiffg32d` device driver to generated 2D–encoded data beware that versions of Ghostscript prior to 3.12 (inclusive) had a bug in this driver that caused invalid data to be generated. If you are in doubt you can disable the use of 2D–encoded facsimile data with the `User2D` configuration parameter to faxq:

```
Use2D: no
```

(remember this goes in faxq's **etc/config** file, not the per–modem configuration file).

Versions of Ghostscript prior to about 3.63 permitted PostScript documents to set the output page dimensions to arbitrary values. Some applications such as Frame 4.0 and various PostScript drivers found in Microsoft Windows used this facility to force the output page to be 1734 pixels wide (8.5 inches at 204 pixels/inch). This causes problems when HylaFAX requests that documents be imaged with pages that are 1728 pixels wide. The result is that documents will be submitted, imaged, and then rejected during transmission because they have an incorrect page width. The solution is to get a current version of Ghostscript or to edit the PostScript documents to remove the `setpagedevice` requests that (incorrectly) force the output page dimensions.

TROUBLESHOOTING: TIFF DOCUMENT PREPARATION

Like PostScript documents TIFF documents may need to be prepared before they can be transmitted as facsimile. This work is done by the tiff2fax(1M) script that is invoked by faxq. The tiff2fax script depends on programs that are part of the separate TIFF software distribution and, in some instances, the ps2fax script. If you encounter a problem preparing a TIFF document for transmission capture the command arguments to the tiff2fax script from the faxq log and try running it by hand.

TROUBLESHOOTING: COMMUNICATION PROBLEMS

Communication problems refer to errors that occur during an outbound call handled by faxsend or pagesend, or an inbound call handled by faxgetty. Almost all communication problems can be diagnosed from the information in a session log. The only server tracing information that might be needed is for modem setup work done by faxgetty which does not appear in a session log.

If a problem occurs during modem setup by faxgetty, set `ServerTracing` to 11, or similar, in the modem configuration file and check the server trace log. Modem initialization for an outbound job is included in the session log and controlled by the `SessionTracing` parameter. Problems during modem setup are typically caused by:

- misconfiguration of the flow control scheme,
- not disabling the getty program on the modem port (so that multiple processes are simultaneously trying to read/write to the modem), and
- invalid initialization sequences.

Once a call is placed, facsimile communication happens in several *phases*. First the sender and receiver negotiate a set of *session parameters* to use during communication. These parameters define the format of data that is to be exchanged, the physical dimensions of the pages, and certain other parameters related to the communication work (speed at which to transfer data, modulation scheme, time to delay between raster scanlines to permit a receiver's printer to run properly, etc.). An example of this negotiation for a Class 2.0 modem is:

```
Aug 16 09:54:03.26: [28224]: DIAL xxxxxxxxx
Aug 16 09:54:03.26: [28224]: <-- [14:ATDTxxxxxxxxx\r]
Aug 16 09:54:25.33: [28224]: --> [4:+FCO]
Aug 16 09:54:25.33: [28224]: --> [26:+FCI:Gupta Corporation    ]
Aug 16 09:54:25.33: [28224]: REMOTE CSI "Gupta Corporation"
Aug 16 09:54:25.33: [28224]: --> [20:+FIS:1,3,0,2,0,1,0,4]
Aug 16 09:54:25.33: [28224]: --> [2:OK]
Aug 16 09:54:25.33: [28224]: REMOTE best rate 9600 bit/s
Aug 16 09:54:25.33: [28224]: REMOTE max page width 1728 pixels in 215 mm
Aug 16 09:54:25.33: [28224]: REMOTE max unlimited page length
Aug 16 09:54:25.34: [28224]: REMOTE best vres 7.7 line/mm
Aug 16 09:54:25.34: [28224]: REMOTE best format 1-D MR
Aug 16 09:54:25.34: [28224]: REMOTE supports T.30 Annex A, ECM
Aug 16 09:54:25.34: [28224]: REMOTE best 20 ms, 10 ms/scanline
Aug 16 09:54:25.34: [28224]: USE 9600 bit/s
Aug 16 09:54:25.34: [28224]: USE 20 ms, 10 ms/scanline
Aug 16 09:54:25.34: [28224]: SEND file "docq/doc1617.ps;30"
Aug 16 09:54:25.34: [28224]: USE page width 1728 pixels in 215 mm
Aug 16 09:54:25.35: [28224]: USE unlimited page length
Aug 16 09:54:25.35: [28224]: USE 3.85 line/mm
Aug 16 09:54:25.35: [28224]: USE 1-D MR
Aug 16 09:54:25.35: [28224]: <-- [23:AT+FIS=0,3,0,2,0,0,0,4\r]
Aug 16 09:54:25.45: [28224]: --> [2:OK]
```

The receiver announces its *capabilities* and the sender then selects which of these capabilities it wants to use in doing the transmission.

Beware that a common problem in Class 2 modems is for the modem to reject or ignore an `AT+FDIS` *command to set the session parameters between the time a call is placed and a page is transmitted. When this problem occurs pages may appear ''squished'' or the session may be aborted abnormally. If you suspect this problem use the* `Class2DDISCmd` *configuration parameter to enable workaround support; e.g.*

```
Class2DDISCmd:      AT+FDIS
```

Following the negotiation of the session parameters pages of facsimile data are transmitted followed by a *post page exchange* of messages. For example:

```
Aug 16 09:54:25.45: [28224]: <-- [7:AT+FDT\r]
Aug 16 09:54:46.53: [28224]: --> [20:+FCS:0,1,0,2,0,0,0,5]
Aug 16 09:54:46.53: [28224]: --> [7:CONNECT]
Aug 16 09:54:46.53: [28224]: SEND begin page
Aug 16 09:54:46.56: [28224]: <-- data [1029]
Aug 16 09:54:46.56: [28224]: <-- data [1024]
Aug 16 09:54:46.56: [28224]: <-- data [1026]
Aug 16 09:54:46.56: [28224]: <-- data [1026]
Aug 16 09:54:46.83: [28224]: <-- data [1025]
Aug 16 09:54:47.10: [28224]: <-- data [1027]
Aug 16 09:54:47.36: [28224]: <-- data [1024]
Aug 16 09:54:48.20: [28224]: <-- data [1024]
Aug 16 09:54:48.65: [28224]: <-- data [845]
Aug 16 09:54:49.11: [28224]: SENT 9037 bytes of data
Aug 16 09:54:49.11: [28224]: SEND 1D RTC
Aug 16 09:54:49.11: [28224]: <-- data [9]
Aug 16 09:54:49.56: [28224]: SEND end page
Aug 16 09:54:49.56: [28224]: SEND send MPS (more pages, same document)
Aug 16 09:54:49.56: [28224]: <-- data [2]
Aug 16 09:55:18.11: [28224]: --> [2:OK]
Aug 16 09:55:18.11: [28224]: SEND recv MCF (message confirmation)
```

In this case after the page an ''MPS'' message was sent to indicate that this page was to be followed by more pages of the same document. The receiver responded with an ''MCF'' message indicating the received page of facsimile data was OK (had an acceptable number of errors, if any) and that the sender should commence sending the next page of data. This procedure continues until the sender is done in which case it signs off by sending an ''EOP'' message at the end of the last page to be transmitted.

The basic work described above occurs for all facsimile communication no matter whether it is done with a Class 1, 2, or 2.0 modem. Two things to understand from this abbreviated description:

- Facsimile pages *are not considered to be delivered until an acknowledgement is received from the receiver*. A receiver may explicitly reject or ''NAK'' a page for many reasons; HylaFAX will retransmit information as required to deliver a facsimile.
- The format of facsimile data transmitted by HylaFAX is based on the negotiated set of session parameters. If a facsimile document is not properly formatted or prepared according to the session parameters then the receiver may reject it. HylaFAX optimally *preformats* facsimile data according to any

user−specified requests and any cached capabilities for the receiver. If this information is wrong then it will disconnect and reformat the documents according to the correct parameters.

A more detailed description of the underlying facsimile protocol can be found at http://www.grayfax.com/ and, of course, in the CCITT/ITU T.30 recommendation.

When debugging a communication problem try to identify if the problem is transient or repeatable and if the problem always happens when communicating with the same sender/receiver. Also check the negotiated session parameters to see if there is any correlation, for example, to the negotiated data format (i.e. 1D−encoded data versus 2D−encoded data). Communication problems can be caused by many things including:

- misconfiguration of the communication equipment used by HylaFAX.
- poor or faulty implementations of the fax protocols in the sender and/or receiver, or
- line noise caused by a poor quality phone connection or other environmental problem (e.g. an answering machine on the same phone line),

If you can communicate with some facsimile devices but not others than you can usually rule out the first cause. Transient or unrepeatable problems, jobs that require one or more retransmissions before working, or other similar problems are frequently due to line noise or poor phone connections but sometimes incorrect protocol implementations or host−modem flow control problems that depend on host load or page content. If you believe your have a noise problem it is a good idea to isolate the modem on the phone line (i.e. remove any other equipment such as an answering machine or handset) and to try an alternate line if possible, though this may not matter if the problem is *close to the receiver*. Last but not least, when using a Class 2 or 2.0 modem check with the vendor to make sure the firmware revision for the modem is up to date. If you can reliably reproduce a problem then knowing the make and model of the device at the other end can help a modem vendor understand and/or fix a protocol implementation problem.

If communication problems persist to a specific receiver when using 2D−encoded data, you can disable its use through the info(4F) database. Note also that sendfax has a command line option that lets you select 1D−encoded data in any single transmission.

The HylaFAQ contains information on some common communication problems that might be encountered. It is also important to monitor the operation of a server to detect trends that might indicate modem or telecommunication problems; the faxcron(1M) script is useful for doing this since it extracts the transcripts of failed calls.

TROUBLESHOOTING: GETTY PROBLEMS

HylaFAX will invoke the getty program when a data connection is established and the `GettyArgs` parameter is set to a non−null string. When HylaFAX starts up a getty program it sets the standard input, output, and error descriptors to the modem device (closing all other descriptors), creates a new process group, and turns off the `CLOCAL` bit on the tty device so that if carrier is dropped the process group will receive a SIGHUP signal.

- be sure that the system is not also configured to start getty on the modem's tty port
- beware of misconfigured getty arguments that cause getty to reopen and/or initialize the modem device
- also be careful that on some systems the **/etc/ttytab** entry for the modem port must be setup as a *dialup* line as opposed to a *local* line

The section on ''System−specific Guidance'' in the chapter on setting up a server and the HylaFAQ have information about other problems that you may encounter.

TROUBLESHOOTING: PROBLEMS WITH UUCP, CU, TIP, ETC.

If you have a problem running the fax software together with other communication programs such as uucp, cu, tip, slip, ppp, etc. first verify that your data communication software is configured to use the correct modem initialization strings and that both HylaFAX and the program(s) in question are using *the same device name*. Many of the prototype modem configuration files for Class 2 and Class 2.0 modems will leave the modem *idling* in Class 2 or 2.0. This means that in order to place a data call the modem must first be reset to Class 0; e.g.

    AT+FCLASS=0DT<phone number>

Other common problems involve the ownership and protection of the modem device file. When a HylaFAX server process is running it forces the tty device to be owned by the ''fax'' user (typically the same UID as the ''uucp'' user) and to have the mode specified by the `DeviceMode` configuration parameter. Finally, beware that there are several different styles of UUCP lock files; verify that your UUCP and related programs use the same style that HylaFAX is configured to use. The UUCP lock file scheme used by HylaFAX may be specified with the `UUCPLockType` configuration parameter. If you specify this parameter be certain to put it in both the faxq configuration file and each modem configuration file; otherwise one HylaFAX server process may do the right thing while another may not.

HylaFAX home page http://www.vix.com/hylafax/.

Q147: Can't send FAX from ZyXEL to some machines?

Q147.

I can't send FAX from my ZyXEL to some machines?

Sending FAX to some (not all) machines from my ZyXEL 1496E+ doesn't work. The transmission aborts with the message:

```
Hylafax error: DTE to DCE data underflow...
```

and the problem in the log−file looks like:

```
Aug 18 19:13:29.00: [ 4120]: USE 9600 bit/s
Aug 18 19:13:29.00: [ 4120]: USE 20 ms, 10 ms/scanline
Aug 18 19:13:29.00: [ 4120]: USE error correction mode
                             ^^^^^^^^^^^^^^^^^^^^^^^^^
Aug 18 19:13:29.00: [ 4120]: SEND file "docq/doc23.cover;41"
Aug 18 19:13:29.27: [ 4120]: USE page width 1728 pixels in 215 mm
Aug 18 19:13:29.27: [ 4120]: USE unlimited page length
Aug 18 19:13:29.28: [ 4120]: USE 7.7 line/mm
Aug 18 19:13:29.28: [ 4120]: USE 1-D MR
Aug 18 19:13:29.30: [ 4120]: <-- [22:AT+FIS=1,3,0,2,0,1,0,4]
Aug 18 19:13:29.41: [ 4120]: --> [2:OK]
Aug 18 19:13:29.41: [ 4120]: <-- [6:AT+FDT]
Aug 18 19:13:35.21: [ 4120]: --> [20:+FCS:1,3,0,2,0,1,0,3]
Aug 18 19:13:35.21: [ 4120]: --> [7:CONNECT]
Aug 18 19:13:35.21: [ 4120]: SEND begin page
Aug 18 19:14:00.13: [ 4120]: SENT 26792 bytes of data
Aug 18 19:14:00.13: [ 4120]: SEND 1D RTC
Aug 18 19:14:00.13: [ 4120]: SEND end page
Aug 18 19:14:00.17: [ 4120]: SEND send MPS (more pages, same document)
Aug 18 19:15:51.28: [ 4120]: --> [7:+FHS:43]
Aug 18 19:15:51.28: [ 4120]: REMOTE HANGUP: DTE to DCE data underflow (code 43)
```

A1471.

Date: *Mon, 21 Aug 1995 09:44:01 PDT*
From: *sam@hyla.chez.sgi.com (Sam Leffler)*
To: *flexfax@sgi.com*
Subject: *Re: Hylafax error: DTE to DCE data underflow... help??*
.....

Try disabling the use of ECM by adding

```
Class2DCCQueryCmd:      "!(0,1),(0-7),(0-4),(0-2),(0),(0),(0),(0-7)"
```

to your config. file. Information on this command can be found in config(4F) and/or the HTML documentation.

If things work when you disable ECM then send mail to Brent Mosbrook *brent@zyxel.com* if it's ok to use the phone number to test for the apparent bug in the ZyXEL ECM support.

A1472.

Date: *Mon, 29 Jan 1996 11:57:51 −0800*
From: *timf@Delmarsol.COM (Tim Flagg)*

It appears the following error messages can also be caused by error correction mode bugs:

```
REMOTE HANGUP: Unknown hangup code (code 60)
REMOTE HANGUP: RSPREC error/got DCN (code 51)
```

tim

Q148: faxaddmodem problems on Linux

Q148.

faxaddmodem problems on Linux

A148.

Date: *Sat, 21 Oct 1995 22:41:34 +0100*
From: *Martin Konold <zxmmz01@student.uni−tuebingen.de>*

```
>   Here's the last part of faxaddmodem:
>
>   Creating new configuration file /var/spool/fax/etc/config.cua0...
>   /usr/bin/sed: Couldn't open file /tmp/faxsed7480
>
>   *** Sorry, something went wrong building /var/spool/fax/etc/config.cua0.new.
>   *** The original config file is unchanged; I'm terminating before
>   ***    I do something stupid.
>
>   bash#
^^^^^^^^^^ bash! This beast _is_ the problem. Please get a very recent
version > 1.14.3!
This will solve your problems.
```

Q149: Certain faxmachines can't receive?

Q149.

Certain faxmachines can't receive?

We have three different fax machines here. Two can receive from hylafax.
The third can not connect properly. Now is this a configuration problem again
or is it just accepted that some faxes can't connect with other faxes.

A149.

Date: *Thu, 14 Dec 95 08:26:00 PST*
From: *Richard Baldwin <richard.baldwin@attws.com >*

Try using:

```
"Use2D:        No"
```

in your '/usr/spool/fax/etc/config' file. Read about this parameter in the config man page.

Q150: Problems while sending a PS document generated by Frame, word 7.0, ...

Q150.

Problems while sending a PS document generated by Frame, word 7.0, ...

I have the following two problems:

1) for certain documents the transmission fails with [8:+FHNG:50] (or 52). So far it seems that this only happens with documents that were created using FrameMaker !!! Everything else worked fine.

```
Nov 15 13:43:55.17: [ 9823]: <-- data [363]
Nov 15 13:44:03.86: [ 9823]: SENT 14699 bytes of data
Nov 15 13:44:03.86: [ 9823]: <-- data [2]
Nov 15 13:44:12.93: [ 9823]: SEND end page
Nov 15 13:44:16.85: [ 9823]: --> [2:OK]
Nov 15 13:44:16.85: [ 9823]: SEND send EOP (no more pages or documents)
Nov 15 13:44:16.85: [ 9823]: <-- [8:AT+FET=2]
Nov 15 13:44:32.86: [ 9823]: --> [8:+FHNG:50]
Nov 15 13:44:32.86: [ 9823]: REMOTE HANGUP: Unspecified Transmit Phase D error, including
+FPHCTO timeout between data and +FET command (code 50)
Nov 15 13:44:32.86: [ 9823]: <-- [4:ATH0]
Nov 15 13:44:32.86: [ 9823]: --> [2:OK]
Nov 15 13:44:32.86: [ 9823]: SESSION END
```

A1501.

Date: *Fri, 17 Nov 1995 10:02:39 PST*
From: *Sam Leffler <sam@sgi.com >*

If this is Frame 4.0 beware that it generates PostScript that forces the page dimensions to a full 8.5" wide. This translates to 1734 pixels which is invalid for fax transmission. The tiffg3* drivers in Ghostscript try to force a page width of 1728 pixels but only in the most versions does Ghostscript have support for constraining the page dimensions requested through the setpagedevice operator. I thought that gs 3.51 had this support but I must be wrong. In any event you can see if this is the problem by running Ghostscript over a Frame−generated PS document, then look at the resulting TIFF using something like the tiffinfo tool that is part of my TIFF software distribution (ftp://ftp.sgi.com/graphics/tiff). If the image width is 1734 pixels then this is the problem. Fixing the PS is a bit of a mess−−you basically have to hand−edit the documents to eliminate or correct the setpagedevice calls. Either that or find a version of Ghostscript with the constrainted setpagedevice support.

Sam

A1502.

Date: *Fri, 01 Dec 1995 12:04:56 PST*
From: *Sam Leffler <sam@sgi.com >*

> ....
> Thanks for the reply but I created the ps file from word 7.0 for
> windows95. The ps drivers I was using was hp 4/4m.
> I've been having problems
> gettingwinflex to fax a doc created by a native win 95 application using
> native win 95 ps drivers, rather than the 3.11 ps drivers. If
> I can figure out this miscalculation problem I should have it solved.
> Since it's creating the doc with a width of 1734 when the most it should
> be is 1728. How can I force it to be at most 1728 pixels wide?

As I said, whatever program you are using to generate PostScript is emitting PostScript that forces the page dimensions to be 1734 pixels wide. Look for my earlier posting about this topic for a discussion on what causes and how to deal with it.

Sam

Q151: Unable to set session parameters on INDY

Q151.

Unable to set session parameters on INDY?

I have problem with USR Robotics conected to an INDY, when i configure it like a FAX Class 2.0, In the xferlog it says:

```
        Unable to set session parameters
```

A151.

Date: *Tue, 02 Jan 1996 11:59:55 +0100*
From: *Sam Leffler <sam@sgi.com >*

You need patch 766 or similar. Once this is installed be certain ClocalAsRoot is set to yes in your modem config file. This is described in the HTML documentation in the section on setting up a server.

....

Beware that the error may be caused by many things. One potential common problem is if a server is setup as a send−only system (i.e. no faxgetty) and the modem is incapable of sending 2D−encoded data. Then if a 2D−encoded fax is submitted by faxq the faxsend program may/will get an error when it tries to setup the session parameters resulting in this error−−very different from problem originally described.

Q152: Courier V.everything – 2DMR encoding

Q152.

Re: Hylafax − Courier V.everything − 2DMR encoding ?

Our Hylafax daemon (v4.0, Sunos−4.1.3), using a USR Courier V.Everything modem, reports the following error with one fax machine we dial:

A152.

Date: *Sun, 25 Aug 1996 09:40:31 −0700*
From: Sam Leffler <sam@hyla.chez.sgi.com>
Subject: *Re: Hylafax − Courier V.everything − 2DMR encoding ?*

```
To:  flexfax@sgi.com
Subject:  Hylafax - Courier V.everything - 2DMR encoding ?
Date: Sun, 25 Aug 1996 07:08:10 EDT
From:  ron@mlfarm.com (Ronald Florence)

Our Hylafax daemon (v4.0, Sunos-4.1.3), using a USR Courier
V.Everything modem, reports the following error with one fax machine
we dial:

Aug 23 16:56:43.48: [ 8823]: REMOTE best rate 14400 bit/s
Aug 23 16:56:43.48: [ 8823]: REMOTE max page width 1728 pixels in 215 mm
Aug 23 16:56:43.48: [ 8823]: REMOTE max unlimited page length
Aug 23 16:56:43.48: [ 8823]: REMOTE best vres 7.7 line/mm
Aug 23 16:56:43.48: [ 8823]: REMOTE best format 2-D MR
Aug 23 16:56:43.48: [ 8823]: REMOTE best 10 ms, 5 ms/scanline
Aug 23 16:56:43.48: [ 8823]: USE 14400 bit/s
Aug 23 16:56:43.50: [ 8823]: USE 10 ms, 5 ms/scanline
Aug 23 16:56:43.50: [ 8823]: SEND file "docq/doc42.ps;71"
Aug 23 16:56:43.52: [ 8823]: Document was encoded with 2DMR, but modem
                             does not support this data format

The firmware in the modem is listed as (supervisor date 04.29/96, dsp
date 04/11/96, supervisor rev 6.5.0, dsp rev 1.3.2).  The modem is
used in Class-2.0 fax mode by the Hylafax daemon.  As far as I can
tell from the Hylafax documentation, Hylafax is supposed to adjust the
compression to the optimal scheme supported by both the transmitting
modem and the receiving fax device.

Is this send failure a problem of the modem, or perhaps a
misconfiguration of Hylafax?  In either case, how can I prevent the
problem?  Thanks in advance for suggestions by email,
```

```
The modem is incapable of transmitting 2D-encoded data but HylaFAX has
been told that it is capable of doing this.  My guess is that you used
faxmodem to notify the scheduler that the modem exists and you specified
the wrong capabilities.  If you run faxgetty then this will not happen.
The setup instructions discuss the correct way to run faxmodem and of
course there is the manual page.

         Sam
```

Q153: Problems with FAA=1 ?

Q153.

Re: Problems with FAA=1 ?

I've Problems with the ModemSetupAACmd: (adaptive answer command)

A153.

Date: *Fri, 09 Aug 1996 11:12:16 −0700*
From: Sam Leffler <sam@melange.esd.sgi.com>
Subject: *Re: Problems with FAA=1*

```
    To:  "'flexfax@sgi.com'"
    Subject:  Problems with FAA=1
    Date: Thu, 08 Aug 1996 20:35:30 CDT
    From:  "Francisco Correa R."

    I wrote the last Friday that I've Problems with de ModemSetupAACmd:
    AT+FAA=1 because when it's in my config file the system accept only
    Data calls appropriately, and when it isn't in the config-file the
    system accept only FAX call.

    I've  received an answer for my problem that say:

    Some modem require +FCLASS=0+FAA=1 to do answer correctly.

    Y think that's mean set ModemSetupAACmd:  AT+FCLASS=0+FAA=1 in
    config file, but it doesn't work.

        <...stuff deleted...>

I know of only two modems that correctly support adaptive-answer with
Class 1 operation: ZyXEL 1496 (and probably 2864 but never tried) and
the Motoroloa Lifestyle.  Your modem is not correctly implementing
adaptive-answer; it is switching into Class 2 mode when a fax call is
received.  HylaFAX does not support split operation; e.g. outbound with
Class 1 and inbound with Class 2/2.0.  Either configure the modem to
operate as a Class 2 modem or do not use the modem's adapative-answer
support.

         Sam
```

Q154: I couldn't find it anywhere howto specify the FAXSERVER

Q154.
I couldn't find it anywhere howto specify the FAXSERVER...

A154.
Date: *Wed, 31 Jul 1996 07:48:40 +0200 (MST)*
From: Matthias Apitz <Matthias.Apitz@SOFTCON.de >
Subject: *Re: Starting up the server...and sendfax*

```
    >     3. When I try to do a sendfax, the program is not trying to reach the
    >     server "fax" on our network, but localhost.  Where do I tell sendfax to
    >     use the proper host?
    >
    >     fax:/usr/local/spool/hylafax/etc#> !send
    >     sendfax -d 5800820 /etc/hosts
    >     Can not reach server at host "localhost", port 4559.
    >
    > RTFM.

    I couldn't find it anywhere in the manual, but as a stab in the dark, I
    set my FAXSERVER environment variable to "fax" and that worked.

That you can't find it does not mean that is does not exist:

thias:/usr/local/lib/HylaFAX-v4.0/man/man1 $ grep FAXSERVER *
faxalter.1:.B FAXSERVER
faxalter.1:.SM FAXSERVER
faxrm.1:.SM FAXSERVER
faxstat.1:.SM FAXSERVER
faxwatch.1:.SM FAXSERVER
hylafax.1:.SM FAXSERVER
hylafax.1:setenv FAXSERVER flake.asd
hylafax.1:FAXSERVER=flake.asd; export FAXSERVER
hylafax.1:.SM FAXSERVER
hylafax.1:FAXSERVER=ttym2@flake.asd; export FAXSERVER
hylafax.1:.SM FAXSERVER
sendfax.1:.SM FAXSERVER

>From hylafax.1:
        ...
.PP
Once the software is setup on your machine you need to locate a
host that has a facsimile server that you can use.
The host, and possibly the modem on the host, should be defined
in your environment in the
.SM FAXSERVER
variable.
        ...
```

```
matthias
```

Q155: Problems with HylaFAX and incomming data call

Q155.
: *Re: Pb. with HylaFAX/Solaris 2.4 and incomming data call?*

A155.
: **Date**: *Fri, 29 Sep 1995 09:26:05 −0500 (CDT)*
From: "Leslie Mikesell" <les@mcs.com>
Subject: *Re: Pb. with HylaFAX/Solaris 2.4 and incomming data call*

```
> > Faxgetty is always best.  My suggestion is to disable all the port
> > monitor stuff for that line.  Let faxgetty answer your modem and spawn
> > a getty.  This is assuming your modem can distinguish fax and data
> > calls.  Using this scenario, I also recommend the "cua" devices
> > faxgetty.
> >
>
> but here is the problem with this solution :
>
> If the caller has a modem with a speed of 19200, all is OK.
> If the caller has a lower speed, for example 9600, the 2 modems synchronize,
> but nothing come on the screen. This mean :
>
> Is HylaFAX supporting multiple speed detection for incomming call,
> and how to configure it for this ?

Faxgetty just kicks off your normal getty for data calls, so whatever
getty does should still happen if you give it the right arguments.

However, virtually all modern modems will do speed switching with
reasonable buffering and compression on the modem<->modem link so
you really want to lock the computer<->modem connection at the
fastest speed they can handle.  This requires working hardware
flow control on the computer side though, and may be hard to
accomodate with modems that need to use xon/xoff in fax mode.
The modems I've used (Boca, Multitech) can run at any speed
in fax mode with h/w flow control so I just lock the speed and
tell getty not to switch.

Les Mikesell
  les@mcs.com
```

Q156: Problem with BOCA MV.34E modems

AT+FCLASS=?

Q156.

Re: Problem with BOCA MV.34E modem (cont) ?

HylaFAX doesn't understand the response for `AT+FCLASS=?` command from my BOCA MV.34E.

A156.

Date: *Wed, 12 Jun 1996 10:40:46 −0700*
From: Sam Leffler <sam@melange.esd.sgi.com>
Subject: *Re: Problem with BOCA MV.34E modem (cont)*

```
    To:  flexfax@sgi.com
    Subject:  Problem with BOCA MV.34E modem (cont)
    Date: Wed, 12 Jun 1996 14:04:46 +0200
    From:  Peter Sorensen

    Jun 12 13:47:13 delta FaxSend[16043]: <-- [11:AT+FCLASS=?]
    Jun 12 13:47:13 delta FaxSend[16043]: MODEM set baud rate: 38400 baud (flow
    control unchanged)
    Jun 12 13:47:14 delta FaxSend[16043]: DELAY 500 ms
    Jun 12 13:47:15 delta FaxSend[16043]: --> [8:0,1,2,80]

Actually, you can try working around this (apparent) problem
(see my previous reply) by using

ModemClassQueryCmd: "!0,1,2"

in the modem config file.

        Sam
```

Q157: I've problems with data inbound calls

Q157.

Re: I've problems with my data inbound Call]?

HylaFAX has problems with inbound data calls. The Getty just hangs up.

A157.

Date: *Thu, 1 Aug 1996 07:52:42 +0200 (MST)*
From: Matthias Apitz <Matthias.Apitz@SOFTCON.de >
Subject: *Re: [Fwd: Re: I've problems with my data inbound Call]*

```
    On Tue, 30 Jul 1996, Francisco Correa R. wrote:
```

```
> Hello
>
> I've  problems with my data inbound Call. the system response an incoming
> phone call but then exit with this message in the log file.
>
> Jul 30 10:43:31.94: [13449]: SESSION BEGIN 00000031 5742627109
> Jul 30 10:43:31.94: [13449]: <-- [4:ATA\r]
> Jul 30 10:43:43.68: [13449]: --> [4:DATA]
> Jul 30 10:43:43.68: [13449]: ANSWER: DATA CONNECTION
> Jul 30 10:43:43.69: [13449]: GETTY: START "/usr/lib/saf/ttymon -g -h -t
> 60 -l 38
> 400NP -p Login:", pid 13520
> Jul 30 10:43:48.85: [13449]: GETTY: exit status 0400
> Jul 30 10:43:48.86: [13449]: SESSION END

Your modem is returning "DATA" and perhaps (not shown in the log)
returning "CONNECT" on a new line. "CONNECT" is passed to
/usr/lib/saf/ttymon an makes it fail.
Set "ModemWaitForConnect: Yes" in your config.tty... file;
see config(4F) for the explanation;

        matthias
```

Q158: I've access problems for files in the spooling area

Q158.

Re: UnixWare 2.03 permission problems??

HylaFAX can't create files in the spooling area – what could be the problem?

A158.

Date: *Sat, 3 Aug 1996 18:10:13 +0200 (MST)*
From: *Matthias Apitz <Matthias.Apitz@SOFTCON.de >*
Subject: *Re: UnixWare 2.03 permission problems?*

```
>
>... I'm still checking the truss but just to make sure:
>spool/client/ is *not* in some NFS-mounted file system?
>
    ....

Just for closing this thread: It turned out that spool/client/
was in an NFS-mounted file system and hfaxd(1M) couldn't
create fifo's there.

        matthias
```

Q159: Unable to set RT scheduling parameters ...

Q159.

UnixWare 2.03: Unable to set RT scheduling parameters

What does the message "Unable to set RT scheduling parameters" in the binary distribution for SVR4 x86 mean?

A159.

Date: *Wed, 7 Aug 1996 20:59:30 +0200 (MST)*
From: Matthias Apitz <Matthias.Apitz@SOFTCON.de >
Subject: *Re: UnixWare 2.03 permission problems?*

```
Rajib Rashid wrote:

         ---- Transcript of session follows ----

    Aug 07 14:04:22.82: [11725]: SESSION BEGIN 00000025 17164231596
    Aug 07 14:04:22.84: [11725]: DELAY 2600 ms
    Aug 07 14:04:25.49: [11725]: <-- [17:ATE0V1Q0X4S0=0H0\r]
    Aug 07 14:04:25.69: [11725]: --> [2:OK]
        ....
    Aug 07 14:04:26.43: [11725]: --> [2:OK]
    Aug 07 14:04:26.43: [11725]: <-- [5:ATM0\r]
    Aug 07 14:04:26.63: [11725]: --> [2:OK]
    Aug 07 14:04:26.63: [11725]: Unable to set RT scheduling parameters: Invalid
    argumentm

I'll fix this in one of the next binary distributions;
the arguments for the priocntl(2) call's are different for UnixWare;
ignore this at the moment or compile from source;

        matthias
```

Q160: ReTrainNegative Problem with some FAX−machines

Q160.

Re: Problem with some FAX−machines ?

Sending a fax to this destination delivers only the coverpage, then the error +FPTS:2 (bad page, retrain requested) (retrain negative) occurs and the sendprocess is aborted.

A160.

Date: *Thu, 01 Aug 1996 10:03:23 −0700*

From: Sam Leffler <sam@hyla.chez.sgi.com>
Subject: *Re: Problem with some FAX−machines*

```
    To:  baudler@lulu.gsf.de, Matthias.Apitz@SOFTCON.de
    Subject:  Re: Problem with some FAX-machines
    Cc:  flexfax@sgi.com
    Date: Thu, 01 Aug 1996 11:00:39 +0200
    From:  Rainer Krienke


        <...stuff deleted...>

    Hello experience excacly the same problem I think. I found
    one particular number
    that cannot receive a fax from hylafax (Hylafax Beta 18,
    Sunos 4.1.3, Zyxel
    U1496 , Firmware V6.16M). Sending a fax to this
    destination delivers only the coverpage, then the error
        +FPTS:2 (bad page, retrain requested)
        (retrain negative)
    occurs and the sendprocess is aborted.

    If the modem will retrain or not is as far as I
    know determined by the modem
    parameter *Q1 (*Q2, *Q3, *Q0)
    (this is for zyxel modems; other modems use eg %E1 %E0 for this purpose).

    Our modem was set to *Q2 which means to use the
    next slower transferspeed if the
    signal quality is bad and to speed up again, if the signalquality of the
    telephone line gets better again. Perhaps one sould try either *Q1
    (initiates a real renegotiation if signalquality is bad)
    or *Q0 (no renegotiation at all).

The AT*Q command relates to a data connection and not a fax connection
(unless you know something that I do not).  Retraining during a fax
session is required when the receiver requests it through the post-page
message response--in this case "RTN" or ReTrain Negative (acknowledgement
of the received page data).  Problems of this sort are typically caused
by a poor phone connection but sometimes may be due to improperly encoded
page data or, if ECM is being used, a bug in the ECM protocol.  The session
log that was supplied indicated ECM was not being used so the only reasonable
possibilities would seem to be bad data or a bad phone connection.  The
former is highly unlikely and the original poster did not indicate if the
problem was reproducible or if they'd tried a different phone line.

        Sam
```

Q161: I have a problem with TSI in HylaFax

Q161.
I have a problem with TSI in HylaFax

A161.

Date: *Fri, 30 Aug 1996 11:30:03 −0700*
From: *Sam Leffler <sam@melange.esd.sgi.com>*
Subject: *Re: About HylaFax and TSI.*

```
    To:  flexfax@sgi.com
    Subject:  About HylaFax and TSI.
    Date: Thu, 29 Aug 1996 11:30:49 +0400
    From:  Andrew Davydov

    Hello.
    I have a problem with TSI in HylaFax:

    Aug 26 10:21:11 ns FaxGetty[6152]: ANSWER: FAX CONNECTION
    Aug 26 10:21:16 ns FaxGetty[6152]: REJECT TSI "095  3625576"
    ^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
    Aug 26 10:21:20 ns FaxGetty[6152]: RECV FAX: Permission denied
(unacceptable client TSI)
    Aug 26 10:21:21 ns FaxGetty[6152]: RECV: No pages received
    Aug 26 10:21:25 ns FaxGetty[6152]: MODEM  /

    FaxgeGetty don't understand space in teh TSI (095 3625576).
                                                     ^
Read about the QualifyTSI parameter in config(4F) and/or the HTML
documentation.

        Sam
```

Q162: Winflex does not put COMMENTs on my cover page?

Q162.

Winflex does not put COMMENTs on my cover page?

A162.

Date: *Fri, 24 May 1996 09:39:42 EDT*
From: *Eric Mercer <mercer@ceres.med.upenn.edu>*
Subject: *RE: thanks for the help ; question about the status of winflex*

```
>Winflex works fine. I have only one glitch in the cover page
>generation. It doesn't cut comments in lines (comment1, comment2...)
>as it is done in faxcover.c++ in faxCoverApp::emitCommentDefs. I would
>like to support only one cover page for unix and windows.
>
>Is there a simple work around? Is there any plan to update winflex? I
>guess I could get by by doing some postscript hacking, but I am not
>that good in PostScript.

There is a small problem with Winflex.  Instead of using the string "CommentsN"
(N = line number) as the HylaFAX documentation indicates, Winflex uses
```

```
"CommentN".  If you edit the template & replace "comments" with "comment", it
should work.

-Eric Mercer
```

Q163: Problems sending PS from WinFlex in Win95 ?

Q163.

Problems sending PS from WinFlex in Win95

Has anyone been able to send a multiple paged fax with graphics from windows 95 using winflex????

A163.

Date: *Mon, 2 Oct 1995 21:45:16 −0500 (CDT)*
From: *"Leslie Mikesell" <les@mcs.com>*
Subject: *Re: hylafax, winflex, and 95*

```
> Has anyone been able to send a multiple paged fax with graphics from windows 95
> using winflex????
> I can fax fine through windoze 3.11 but for windows 95 I can only send a one
> page fax (with text only).  Otherwise, when I try to fax it it will fax it
> but on the receiving end instead of your postscript file printing it says
>
> This job requires morm memory than is available in thi printer.
> try one or more of the following, and then print again:
>   In the postscript dialog box, click optimize for portability
>   In the device oprions dialog box , make sure the Available printer mem is
>    accurate.
>   reduce the number of fonts in the documnet
>   print the document in parts...

I haven't run into this myself yet, but I would guess this item
from gnu.ghostsript.bug is relevant:

|From: ghost@aladdin.COM (L. Peter Deutsch)
|Newsgroups: gnu.ghostscript.bug
|Subject: Re: Not enough virtual memory?
|Date: 3 Sep 1995 21:09:14 -0400
|Message-ID:
|References: <42ddf5$k00@vixen.cso.uiuc.edu>
|
|> Looking at the Postscript code (generated by Word 6 for Windows), the
|> Postscript seems to be querying the Postscript device for the amount
|> of memory it has and then printing the message if there is not
|> enough.
|
|This is a not uncommon "feature" of bad PostScript code put out by
|applications that don't understand PostScript printing.
|
```

```
|The easiest way to work around it is to patch a definition of vmstatus into
|gs_init.ps so that it always returns some huge amount of unused memory.  For
|example:
|
|       /vmstatus { vmstatus 2000000 add } bind odef
|
|Of course, if you are trying to preview or print on a small MS-DOS PC, it
|may legitimately run out of memory.


Les Mikesell
  les@mcs.com
```

A163.

Date: *Tue, 20 Aug 1996 11:51:05 +0200 (MET DST)*
From: *Alex Ongena <ao@able.be>*
Subject: *Re: Windows 95 Winflex*

```
On Mon, 19 Aug 1996, Adrian Sherriff wrote:

>
> I have tried to use winflex under windows 95 but I am having trouble
> getting a print.
>
> All I seem to get is that my printer does not have enough memory.
>
> Can you advise which is the printer driver to use I seem to remember
> something about either QMS or HP.
>
> I would be gratefull if you could offer any advice

I think that this has nothing to do with winflex nor Hylafax. I had a
similar problem and that was caused by Ghostscript 2.6x and Win95 Postscript
output in general. I upgraded to Ghostscript 4.01 and the problem was gone.

An alternative is to run following script on you PS output to remove the
error code from the PS file. This worked for me for GS 2.6x files and Win95.

        #!/bin/sh
        sed '/^\/VM?/,/ VM?/d' $1 > outp

Good Luck
Alex
```

Q164: Bad EOP response to blank page ?

Q164.

Bad EOP response to blank page ?

We just noticed that two of our fax machines (not fax modems connected to computers) don’t like receiving blank pages, and I was wondering if anyone else had noticed this or had some explanation.

A164.

Date: *Tue, 13 Aug 1996 21:03:37 −0700*
From: Sam Leffler <sam@hyla.chez.sgi.com>
Subject: *Re: bad EOP response to blank page*

```
    To:  flexfax@sgi.com
    Subject:  bad EOP response to blank page
    Cc:  richard@aoi.ultranet.com
    Date: Tue, 13 Aug 1996 22:42:56 EDT
    From:  Glenn Burkhardt

    We just noticed that two of our fax machines (not fax modems connected
    to computers) don't like receiving blank pages, and I was wondering if
    anyone else had noticed this or had some explanation.  One of our users
    tried to send a text file that had a dozen or so blank lines at the end,
    and when it was paginated for transmission, the second page was
    completely blank.  The fax transmissions using hylafax-v4.0beta018, with
    SunOS 4.1.4, and Zoom Telephonics or MultiTech ZDX modems failed, after
    sending both pages.  The system continued to retry until the MAXTRIES
    limit was reached, resulting in several copies at the receiving end.

    I tried sending a text file with 8 blank lines, and the logs are attached.

    If it turned out that fax machines in general reject blank pages,
    "textfmt" could of course be easily changed to remove them.

        <..log deleted...>

I uncovered this behaviour after v4.0beta018 got made.  What is happening
is that the page chopping code is removing all the trailing white space
in the page.  I've made changes to insure that blank pages always have
sufficient space to hold a tag line that might be imaged across the top.
This also keeps fax machines happy by sending something rather than no
encoded data followed by RTC.  If you want an immediate workaround you
can disable page chopping.

This fix will appear in the next distribution which will go out just as
soon as I can finish the documentation (I'm overhauling the HTML docs
in preparation for the v4.0 release).

        Sam
```

Q165: Communication between WinFlex and HylaFAX

Q165.

Communication between WinFlex and HylaFAX

A165.

Date: *Fri, 13 Sep 1996 16:00:28 −0700 (PDT)*
From: *Troy Morrison <troy@v−com.com>*
Subject: *Re: hylafax + win95*

```
On Fri, 13 Sep 1996, Bas Leeflang wrote:

> 3./   What worries me is that the communication between winflex
> and hylafax does not seem to be optimal. At least in my case:
>
> When asking for the status e.g. I get sommething like:
>
>
> ERROR: Unable to find service name "fax": WSANO_DATA: No host data record of requested type
> WARNING: Connect("ruucj4.chem.ruu.nl", "fax") failed.

You need to add a line to your \SERVICES file like:

fax               4557/tcp

And that will get rid of the error message.  I had the same problem.

Troy
```

Q166: chown(2) problems in HylaFAX on SCO, HP−UX, ...

Q166.

chown(2) problems in HylaFAX on SCO, HP−UX, ...

A166.

Date: *Tue, 17 Sep 1996 09:04:35 +1200 (NZST)*
From: *Jonathan Chen <jonc@pinnacle.co.nz>*
Subject: *Re: Hylfax/SCO UNIX problems*

```
On Mon, 16 Sep 1996, Dan Rosenblatt wrote:

[snip]
> The problem shows up when trying to send a fax (full server trace).
> There are various 'chown' errors and then 'Operation not supported'.
> Anyone have suggestions as to what might be going on.
> The servers are started from root, and a ps shows that their uid
> (effective?, real?) is uucp (aka fax).  Could there be a problem
> with switching uids back and forth between root to uucp/fax?
> Could there be a problem with doing 'chown' to give away ownership?
>
[snip]
> Sep 14 17:21:34 argon HylaFAX[29751]: /tmp/doc48.ps: chown: Invalid argument
> Sep 14 17:21:34 argon HylaFAX[29751]: /tmp/doc48.ps: chown: Invalid argument
```

```
> Sep 14 17:21:34 argon HylaFAX[29751]: <--- 150 FILE: /tmp/doc48.ps (Opening new data connection).
> Sep 14 17:21:34 argon HylaFAX[29751]: <--- 226 Transfer complete (FILE: /tmp/doc48.ps).

The problem is due to the HylaFAX using the default owner id (actually the
gid) of [some-big-number]. SCO's chown actually seems to check this against
something, and that's why it's complaining. The fix is to change the
etc/hosts to have the default fax-user-id to some lower gid number. eg:

    127.0.0.1:5::                      # local access

--
Jonathan Chen                          e-mail : jonc@pinnacle.co.nz
```

This problem was fixed in v4.0pl1. HylaFAX now detects the maximum value for the GID during configuration.

Q167: I got code50 during send operation?

Q167.
: *I got code50 during send operation?*

A167.
: **Date**: *Mon, 10 Jun 1996 09:48:12 −0700*
: **From**: *Sam Leffler <sam@melange.esd.sgi.com>*
: **Subject**: *Re: code50*

```
To:  flexfax@sgi.engr.sgi.com
Subject:  code50
Date: Sun, 09 Jun 1996 12:21:54 +0300
From:  Dror BenShlomo

Hi all

My system :  HylaFAX Version 3.0pl0113
             indy - IRIX 5.3
             boca modem MV.34EM (28,800)

I'm using it without any problems most of the time but sometimes I have
problems with individual fax machines.
There are two problems :
1. I got code 50 ( twice on the fax machine).
   Here is the mail I got ( I use -D option ):

    <...stuff deleted...>

Jun 06 20:13:18.71: [12444]: USE 2-D MR
Jun 06 20:13:18.71: [12444]: <-- [23:AT+FDIS=0,3,0,2,1,0,0,2]
Jun 06 20:13:18.98: [12444]: --> [2:OK]
Jun 06 20:13:18.98: [12444]: <-- [6:AT+FDT]
Jun 06 20:13:25.93: [12444]: --> [22:+FDCS: 0,3,0,2,1,0,0,3]
```

```
    <...stuff deleted...>

Jun 06 20:15:06.81: [12444]: SEND send EOM (more documents)
Jun 06 20:15:06.81: [12444]: <-- [8:AT+FET=1]
Jun 06 20:15:09.94: [12444]: --> [8:+FPTS: 2]
Jun 06 20:15:10.04: [12444]: --> [2:OK]
Jun 06 20:15:10.04: [12444]: SEND recv RTN (retrain negative)
Jun 06 20:15:10.04: [12444]: <-- [5:AT+FK]
Jun 06 20:15:15.62: [12444]: --> [9:+FHNG: 50]
Jun 06 20:15:15.62: [12444]: REMOTE HANGUP: Unspecified Transmit Phase D
error, including +FPHCTO timeout between data and +FET command (code 50)
Jun 06 20:15:16.20: [12444]: --> [2:OK]
Jun 06 20:15:16.20: [12444]: SEND: Unable to transmit page (giving up after
3 attempts); Giving up after 3 attempts to send same page "docq/doc778;70",
dirnum 0
```

```
If this problem is repeatable then try disabling the use of 2D-encoded
when calling this destination.  Consult info(4F) to find out how to do this.
```

```
    2. I got code 2 . I read the FAQ about this problem but in my case I got
       only 1 per more than 100 faxes that I send and only on some fax machine
       (on the fax machine in the next log I got it twice)

        <...stuff deleted...>

    Jun 06 18:27:58.91: [11267]: SEND send MPS (more pages, same document)
    Jun 06 18:27:58.91: [11267]: <-- [8:AT+FET=0]
    Jun 06 18:28:01.91: [11267]: --> [8:+FPTS: 4]
    Jun 06 18:28:02.02: [11267]: --> [2:OK]
    Jun 06 18:28:02.02: [11267]: SEND recv PIN (procedural interrupt negative)
    Jun 06 18:28:02.02: [11267]: <-- [5:AT+FK]
    Jun 06 18:28:08.61: [11267]: --> [8:+FHNG: 2]

PIN is received when a *person* on the remote side interrupts the transmission.
Because HylaFAX has no mechanism for notifying a person locally to allow
them to deal with this intervention it dops the connection.

        Sam
```

Q168: Waiting for modem to come ready?

Q168.

Waiting for modem to come ready?

A168.

Date: *Wed, 18 Sep 1996 14:13:49 +0200 (MST)*
From: Matthias Apitz <Matthias.Apitz@SOFTCON.de >
Subject: *Re: Waiting for modem to come ready*

```
Wolfgang Baudler wrote:
```

```
    Hi,

    Thanks for the hints so fare...

    I somehow managed to get the right logs for my problem (see below).

...and with this log your problem perhaps can be solved, see
below :-))

    Is anybody using an ELSA or TKR modem sucessfully with HylaFAX? Your
    config-files could save a lot of time...
    And what devices do I have to use for faxgetty and for HylaFAX? /dev/ttyS?
    or /dev/cua?

    Log:
    ====

    Sep 17 23:02:51 lucutus FaxGetty[1151]: OPEN /dev/ttyS1
    Sep 17 23:02:51 lucutus FaxGetty[1151]: MODEM set DTR OFF
    Sep 17 23:02:51 lucutus FaxGetty[1151]: DELAY 2600 ms
    Sep 17 23:02:54 lucutus FaxGetty[1151]: MODEM set DTR ON
    Sep 17 23:02:54 lucutus FaxGetty[1151]: MODEM set baud rate: 38400 baud, input
    flow RTS/CTS, output flow RTS/CTS
    Sep 17 23:02:54 lucutus FaxGetty[1151]: MODEM flush i/o
    Sep 17 23:02:54 lucutus FaxGetty[1151]: <-- [15:ATZE0V1Q0S0=0H\r]
    Sep 17 23:02:54 lucutus FaxGetty[1151]: --> [14:ATZE0V1Q0S0=0H]
                                                    ^^^^^^^^^^^^^^
as you can see the command string contains "E0" but the modem is not
in echo-off mode after the reset-cmd "ATZE0V1Q0S0=0H";

the behaviour of modems regarding the command-buffer after "ATZ"
is undefined; some modems are just cleaning the buffer during ATZ
and don't executing all commands behind ATZ on the command line;
the echo of the commands from the modem are read by faxgetty(1M)
and faxgetty(1M) don't understand them correctly;

don't use "ATZ" in ModemResetCmds: (see also man config(4F));

        matthias
```

Q169: Do I _have_ to install BSD printf?

Q169.

Do I _have_ to install BSD printf?

A169.

Date: *Fri, 31 May 1996 15:06:30 −0700*
From: Sam Leffler <sam@melange.esd.sgi.com>
Subject: *Re: Scripts and Echo*

```
    To:  flexfax@sgi.engr.sgi.com
    Subject:  Scripts and Echo
```

```
Date: Fri, 31 May 1996 09:50:15 EDT
From:  Mitchell Perilstein

Hi all,

Newbie here can't get 3.0pl1 going on SunOS 4.1.3 because the ...lib/fax
scripts such as probemodem don't seem to recognize that there is 'echo
-n' available. The script header identifies the target correctly as
sparc-sun-sunos4.1.3, so I presume the configure step was at least half
right.  The message before exit is:

    You don't seem to have a System V-style echo command
    or a BSD-style printf command.  I'm bailing out...

Do I _have_ to install BSD printf?
```

```
echo -n does not do everything needed/expected by probemodem (or faxaddmodem);
that's why the scripts abort.  printf is part of the GNU shell utils package.

        Sam
```

Q170: document conversion script was not found?

Q170.

document conversion script was not found?

A170.

Date: *Thu, 12 Sep 1996 07:44:55 +0200 (MST)*
From: *Matthias Apitz <Matthias.Apitz@SOFTCON.de >*
Subject: *Re: Installion of Hylafax*

```
Richard Freilich wrote:

    On Thu, 12 Sep 1996, Jonathan Chen wrote:

    > On Wed, 11 Sep 1996, Richard Freilich wrote:
    >
    > > --
    > > Your facsimile job to 78478420 was not sent because
    > > the document conversion script was not found.
    > > --
    >
    > Did you install ghostscript?

    Yep, ghostscript is correctly installed in /usr/local/lib/ghostscript

For the use of ghostscript in HylaFAX you need:
- the ghostscript fonts (e,g, below /usr/local/lib/ghostscript)
  and other ghostscript files;
- the ghostscript binary itself linked w/ the TIFF driver;
- the conversion script in spool/bin
```

```
In your case HylaFAX is complaining about the missing script
spool/bin/ps2fax; this should be linked by faxsetup(1M) to
spool/bin/ps2fax.ps - please check it out and try to
figure out why faxsetup(1M) failed to make this link;

        matthias
```

A170.

Date: *Mon, 16 Dec 1996 10:48:11 GMT*
From: *Laércio Fortes <leco@gcsnet.com.br >*
Subject: *Re: document conversion script was not found*

```
>faxsetup(1M) should create a link in the HylaFAX spooling area from
>bin/ps2fax.gs to bin/ps2fax - check if this was done by faxsetup(1M)
>and the link exist; if there is no bin/ps2fax you can't send
>PostScript files; if the link doesn't exist try to find
>out why faxsetup(1M) didn't create it; faxsetup(1M) is a shell
>script in sbin/
>
>       matthias


Ok.
I cheked and there is a link ps2fax -> ps2fax.gs on /var/spool/fax/bin.
The faxsetup(1M) is creating it. I remove the link and run faxsetup(1M)
again and the script recreated it.
Best regards,

leco@gcsnet.com.br
```

A170.

Date: *Wed, 18 Dec 1996 06:57:33 −0500 (EST)*
From: *"David A. De Graaf" <degraaf@digitel.net>*
Subject: *Re: I have a newbie question*

```
Matthew Rice wrote:
>
> > 2.faxsetup also tells me that ps2fax is not in the
> >   proper directory and it is! I looked and it is where
> >   faxsetup wants it.
>
> I've never seen this problem before.  But ps2fax seems to be running so...
>
Yesterday I had what may be a related problem on my new Linux system.
I had copied Uutry from another (Dell UNIX) system into
/usr/lib/uucp/Uutry.  When I tried to execute it Linux reported:

  [dad@datium /usr/lib/uucp]$ ./Uutry -r datix
  bash: ./Uutry: No such file or directory

The problem was the first line of Uutry:

  #!/usr/bin/bash

which says this is a script that is to be executed by /usr/bin/bash.
But that's not where bash lives; it's in /bin/bash.
```

```
I thought the error message was a bit misleading, eh.

--
        Dave De Graaf,  Internet: degraaf@digitel.net
        DATIX, Inc.     voice: (803) 785-3136   fax: (803) 785-3156
```

Q171: Faxgetty dies with signal 15?

Q171.

Faxgetty dies with signal 15?

A171.

Date: *Tue, 27 Aug 1996 14:06:25 +0200 (MST)*
From: *Matthias Apitz <Matthias.Apitz@SOFTCON.de >*
Subject: *Re: Faxgetty dies*

```
Wolfgang Baudler wrote:

    >
    >     I have another problem using HylaFAX v4.0beta020 on an IRIX 6.2 System
    >     (I think the same thing happend on an IRIX 5.3 System):
    >
    >     I run faxgetty with the following entry in /etc/inittab:
    >
    >     t2:23:respawn:/usr/local/sbin/faxgetty ttyf2    # port 2
    >
    >     and the following GettyArgs Entry:
    >
    >     GettyArgs:              "-h %l dx_%s"
    >
    >     Everything works fine for some time until the faxgetty process dies
    >     without any reason. It should respawn through init I thought but it
    >     simply dies (there was no activity on the modem line) and never respawns.
        ....

    faxgetty is telling me the following all the time:

    Aug 25 01:01:35 6D:caravaggio FaxGetty[9471]: OPEN /dev/ttyf2
    Aug 25 01:01:35 6D:caravaggio FaxGetty[9471]: Purge stale UUCP lock
    /var/spool/locks/LCK..ttyf2
    Aug 25 01:01:40 6D:caravaggio FaxGetty[9471]: MODEM ZYXEL E2864/V 1.13
    Aug 25 01:06:35 3D:caravaggio FaxGetty[9471]: CAUGHT SIGNAL 15
    Aug 25 01:06:35 6D:caravaggio FaxGetty[9471]: CLOSE /dev/ttyf2
    Aug 25 01:06:35 6D:caravaggio FaxGetty[9481]: OPEN /dev/ttyf2
    Aug 25 01:06:40 3D:caravaggio FaxGetty[9481]: CAUGHT SIGNAL 15

Your faxgetty(1M) log locks like you have entries with
"respawn" and "off" for the same tty-line in your inittab(4F) file;
please check;

        matthias
```

Q172: faxgetty is spawning too rapidly?

Q172.
faxgetty is spawning too rapidly?

A172.
Date: *Mon, 19 Aug 1996 16:38:08 −0400*
From: "Tanya Ruttenberg" <tanya@ora.com>
Subject: *(Fwd) Re: faxgetty spawning too rapidly*

```
(One of) Murphy's Law(s):  Send a simple question to a mailing list and you
are sure to find the answer on your own within 10 minutes.

To keep faxgetty from respawning in this situation:

 Aug 19 13:26:14 ruby FaxGetty[11346]: OPEN /dev/ttyb
 Aug 19 13:26:14 ruby FaxGetty[11342]: /dev/ttyb: Can not lock device.

Try running it *without* the "-D" flag in /etc/inittab:

 fg:234:respawn:/usr/local/fax/bin/faxgetty /dev/ttyb

Sorry for wasting bandwidth.

Tanya
```

Q173: Access problems in the spooling area?

Q173.
Access problems in the spooling area?

A173.
Date: *Sat, 28 Sep 1996 12:26:44 −0500*
From: Youn Gonzales <youn@clascomputers.com >
Subject: *Re: Alpha−numeric pagers...*

```
>hfaxd(1M) has no problems to open "etc/hosts" (while current
>dir is "/var/spool/fax") but has problems with files after
>using the chroot(2) sys-call and the names are now like "/etc/hosts".
>
>You could test this by writing a short pgm in C as and run it
>as root under strace(1):
>main()
>{
>       chdir("/var/spool/fax");
```

```
>       chroot(".");
>       chdir("/");
>       open("/etc/hosts", 0);
>}
>to verify this; this should produce the same problem. It's difficult
>for me (I'm not using Linux) and from here to find out the problem in
>your file system tree; maybe you've a symbolic link like
>/var/spool/fax/ ----> /usr/spool/fax
>or
>/var/spool/     ----> /usr/spool
>and they are not working after a chroot(2) sys-call on Linux(?).
>
>The problems opening some message files are unrelated to this
>problem.
>
>       matthias

     This did produce the same problems. The /var/spool/fax/etc directory
entry is a symbolic link to the /etc/hylafax directory. After the chroot is
executed, the new root directory is /var/spool/fax - making it impossible
for the sybolic link to /etc/hylafax to be a valid link because the real
/etc no longer exists in the current context. The symbolic link is now a
circular reference which creates the OS error of Too many symbolic links
encountered. Can I just remove the symbolic link and copy the /etc/hylafax
directory to the /var/spool/fax/etc directory, or does hylafax access some
of the files through the true path /etc/hylafax? BTW, thank you very much. I
would never have found this on my own..


Youn Gonzales
youn@clascomputers.com
```

Q174: Why are my tiff files corrupted?

Q174.

Why are my tiff files corrupted?

A174.

Date: *Tue, 18 Jun 1996 09:48:06 −0700*
From: *Sam Leffler <sam@hyla.chez.sgi.com>*
Subject: *Re: corrupted tiff files*

```
To:  flexfax@sgi.com
Subject:  corrupted tiff files
Date: Sat, 15 Jun 1996 07:00:49 EDT
From:  "Thomas B. Clark"

I am a recent convert, and LOVE Hylafax;
unfortunately, I still have not successfully received
a fax, although I can send them normally.

This is additional information about the problem I
```

```
    already posted.  The TIFF files are actually corrupted,
    since another program does not recognize them as TIFF.

    System:  Sparc 20, Solaris 2.5
    Serial port:  /dev/cua/6 (MAGMA serial board, no
    parameters preset)
    Modem:  SupraFax 28.8

    Email received from Hylafax:

    recvq/fax00010.tif:
    Could not open recvq/fax00010.tif; either not TIFF or corrupted.
    ReceivedOn: cua_6

    The full document was not received because:

        Normal and proper end of connection

        ---- Transcript of session follows ----

    Jun 15 06:51:51.86: [29378]: SESSION BEGIN 00000017 19199662253
    Jun 15 06:51:51.89: [29378]: <-- [4:ATA\r]
    Jun 15 06:52:00.01: [29378]: --> [5:+FCON]
    Jun 15 06:52:00.02: [29378]: ANSWER: FAX CONNECTION
    Jun 15 06:52:00.02: [29378]: RECV FAX: begin
    Jun 15 06:52:01.59: [29378]: --> [29:+FTSI: " 1 919 493 2030     "]
    Jun 15 06:52:01.59: [29378]: REMOTE TSI "1 919 493 2030"
    Jun 15 06:52:02.00: [29378]: --> [22:+FDCS: 1,5,0,0,0,0,0,0]
    Jun 15 06:52:02.00: [29378]: REMOTE wants 14400 bit/s
    Jun 15 06:52:02.00: [29378]: REMOTE wants page width 1728 pixels in 215 mm
    Jun 15 06:52:02.00: [29378]: REMOTE wants A4 page length (297 mm)
    Jun 15 06:52:02.00: [29378]: REMOTE wants 7.7 line/mm
    Jun 15 06:52:02.00: [29378]: REMOTE wants 1-D MR
    Jun 15 06:52:02.10: [29378]: --> [2:OK]
    Jun 15 06:52:02.10: [29378]: <-- [7:AT+FDR\r]
    Jun 15 06:52:05.16: [29378]: --> [5:+FCFR]
    Jun 15 06:52:07.20: [29378]: --> [22:+FDCS: 1,5,0,0,0,0,0,0]
    Jun 15 06:52:07.20: [29378]: REMOTE wants 14400 bit/s
    Jun 15 06:52:07.20: [29378]: REMOTE wants page width 1728 pixels in 215 mm
    Jun 15 06:52:07.20: [29378]: REMOTE wants A4 page length (297 mm)
    Jun 15 06:52:07.20: [29378]: REMOTE wants 7.7 line/mm
    Jun 15 06:52:07.20: [29378]: REMOTE wants 1-D MR
    Jun 15 06:52:07.20: [29378]: --> [7:CONNECT]
    Jun 15 06:52:07.20: [29378]: RECV: begin page
    Jun 15 06:52:07.21: [29378]: RECV: send trigger 021
    Jun 15 06:52:09.19: [29378]: RECV: 0 total lines, 0 bad lines, 0
consecutive bad lines

Notice 0 lines received.

    Jun 15 06:52:09.21: [29378]: --> [17:+FPTS: 1,2219,0,0]
    Jun 15 06:52:11.14: [29378]: --> [7:+FET: 0]
    Jun 15 06:52:11.14: [29378]: RECV recv MPS (more pages, same document)
    Jun 15 06:52:11.25: [29378]: --> [2:OK]
    Jun 15 06:52:11.40: [29378]: RECV send MCF (message confirmation)
    Jun 15 06:52:11.40: [29378]: RECV FAX (00000017): from 1 919 493 2030,
page 1 in 0:09, A4, 7.7 line/mm, 1-D MR
    Jun 15 06:52:11.40: [29378]: <-- [7:AT+FDR\r]
    Jun 15 06:52:13.43: [29378]: --> [7:CONNECT]
```

```
    Jun 15 06:52:13.43: [29378]: RECV: begin page
    Jun 15 06:52:13.43: [29378]: RECV: send trigger 021
    Jun 15 06:52:16.10: [29378]: RECV: 241 total lines, 240 bad lines, 240
consecutive bad lines

Notice 240 of 241 lines received were bad (i.e. had errors).

    Jun 15 06:52:16.10: [29378]: --> [17:+FPTS: 1,2219,0,0]
    Jun 15 06:52:17.98: [29378]: --> [7:+FET: 2]
    Jun 15 06:52:17.98: [29378]: RECV recv EOP (no more pages or documents)
    Jun 15 06:52:18.08: [29378]: --> [2:OK]
    Jun 15 06:52:18.08: [29378]: RECV: REJECT page quality, 0% good lines (95%
required)
    Jun 15 06:52:18.08: [29378]: RECV send RTN (retrain negative)
    Jun 15 06:52:18.08: [29378]: <-- [10:AT+FPTS=2\r]
    Jun 15 06:52:18.33: [29378]: --> [2:OK]
    Jun 15 06:52:18.33: [29378]: <-- [7:AT+FDR\r]
    Jun 15 06:52:21.38: [29378]: --> [8:+FHNG: 0]
    Jun 15 06:52:21.38: [29378]: REMOTE HANGUP: Normal and proper end of
connection (code 0)
    Jun 15 06:52:21.38: [29378]: RECV FAX (00000017): recvq/fax00010.tif from
1 919 493 2030, route to , 1 pages in 0:21
    Jun 15 06:52:21.44: [29378]: RECV FAX: Normal and proper end of connection
    Jun 15 06:52:21.44: [29378]: RECV FAX (00000017): session with 1 919 493
2030 terminated abnormally: Normal and proper end of connection
    Jun 15 06:52:21.44: [29378]: RECV FAX: bin/faxrcvd "recvq/fax00010.tif"
"cua_6" "00000017" "Normal and proper end of connection"

The resulting TIFF were considered "corrupted" because they had no valid
data in them (yes, the error message could be more informative).  You need
to figure out why you're receiving no data or garbage data.  Frequently a
problem such as this is caused by the wrong RecvFillOrder or a host-modem
flow control problem.  You might also try disabling copy quality checking
in the host so that you capture the raw data from the modem--you can then
look at it with some of the TIFF tools to, for example, figure out if the
bit order is opposite to what is expected.

        Sam
```

Q175: Problems after Un−taring a binary distributions?

Q175.

Problems after Un−taring a binary distributions?

A175.

Date: *Wed, 31 Jul 1996 08:13:31 +0200 (MST)*
From: Matthias Apitz <Matthias.Apitz@SOFTCON.de >
Subject: *Re: Starting up the server...*

```
Sam Leffler wrote:
```

```
        [....]

    It sounds like you might have un-tar'd the binary distribution as yourself
    and not root.  This would have caused many files to be owned by the wrong
    user and since of them are setuid this would have caused numerous problems
    when the programs were started.  In this case the best thing to do is to
    purge everything and start again.  Problems such as this are the reason for
    having "real distribution mechanisms" like the SGI inst software or (maybe)
    the SVR4 pkg tools.

Yes; the SVR4 pkg tools are able to create and install packages in
a very very robust form. The "package" consist of a tree of all
application files and some info files describing these files

- pkgmap(4), describing these files (where the files
  should be placed and who should own them ...)
- pkginfo(4), describing the package itself
- copyright(4)
- postinstall(4) and preremove(4) ...
  scripts which are executed during postinstall phase or
  preremove phase if one is installing the package or removing it.

The package is created by pkgmk(1), can be tar(1)'ed for transport
and can be installed with pkgadd(1M).  Below is
a short snipp of the pkgmap-file. As you can see it's
also easy to distribute FIFO's (they are just created by pkgmak(1M):
        ...
1 p none /usr/local/lib/HylaFAX-v4.0/spool/FIFO 0600 uucp uucp
1 d none /usr/local/lib/HylaFAX-v4.0/spool/archive 0700 uucp uucp
1 d none /usr/local/lib/HylaFAX-v4.0/spool/bin 0755 uucp uucp
        ...


   matthias
```

Q176: Bad exit status 0400 for "bin/faxrcvd ..."

Q176.
: *Bad exit status 0400 for "bin/faxrcvd recvdq/faxCAAa000Vw ..."*

A176.
: **Date**: *Wed, 4 Dec 1996 00:06:05 +0100 (MET)*
From: *Matthias Apitz <Matthias.Apitz@SOFTCON.de >*
Subject: *Re: your mail*

```
ron@cze.com wrote:

        ...
    2) What is the meaning of the error message (after receiving a fax):
```

```
        FaxGetty[process ID]: Bad exit status 0400 for
        "bin/faxrcvd recvdq/faxCAAa000Vw 0.90 9600 "1-D MR" "" cua_a"
        AUDIT: Tue Dec 3 08:18 1996: 5788 X: client 19 rejected
        from local host

for me the file name "recvdq/faxCAAa000Vw" indicates that you're
not running faxgetty(1M) of v4.0pl0;

        matthias
```

Q177: Problems with TAP service provider?

Q177.

Problems with TAP service provider?

A177.

Date: *Sun, 8 Dec 1996 08:55:01 +0100 (MET)*
From: Matthias Apitz <Matthias.Apitz@SOFTCON.de >
Subject: *Re: pagesend woes..*

```
Tramale 'Shidoshi'Turner wrote:

    Okay.. here is the log with server tracing set at 0x100f

    > please set
    >
    > SessionTracing:         0x100f
    >
    > and show the log with the low-level IXO/TAP protocol again;
    >
    >     v4.0beta022 Solaris 2.4 gcc 2.7.2 motorola ModemSURFR ITU V.34

        ....

    Dec 07 17:03:59.38: [27736]: SESSION BEGIN 00000046 18005647079
    Dec 07 17:03:59.38: [27736]: SEND PAGE: JOB 16 DEST 18005647079 COMMID
     00000046
    Dec 07 17:03:59.38: [27736]: MODEM set DTR OFF
    Dec 07 17:03:59.39: [27736]: DELAY 2600 ms
    Dec 07 17:04:01.99: [27736]: MODEM set DTR ON
    Dec 07 17:04:02.00: [27736]: MODEM set baud rate: 38400 baud, input flow
    XON/XOFF, output flow XON/XOFF
    Dec 07 17:04:02.00: [27736]: MODEM flush i/o
    Dec 07 17:04:02.00: [27736]: <-- [15:ATE0V1Q0S0=0H0\r]
    Dec 07 17:04:02.13: [27736]: --> [2:OK]
    Dec 07 17:04:02.13: [27736]: <-- [18:ATS8=2S7=60&D2&C1\r]
    Dec 07 17:04:02.24: [27736]: --> [2:OK]
    Dec 07 17:04:02.24: [27736]: <-- [7:ATL0M1\r]
    Dec 07 17:04:02.35: [27736]: --> [2:OK]
    Dec 07 17:04:02.35: [27736]: MODEM set parity: 7 bits, even parity
    Dec 07 17:04:02.35: [27736]: MODEM input buffering enabled
    Dec 07 17:04:02.37: [27736]: <-- [12:AT+FCLASS=0\r]
```

```
Dec 07 17:04:02.59: [27736]: --> [2:OK]
Dec 07 17:04:02.59: [27736]: DIAL 18005647079
Dec 07 17:04:02.59: [27736]: <-- [17:ATDT18005647079@\r]
Dec 07 17:04:23.04: [27736]: --> [13:CONNECT 38400]
Dec 07 17:04:23.04: [27736]: EXPECT ID (paging central identification)
Dec 07 17:04:23.04: [27736]: <-- <1:\015>
Dec 07 17:04:25.04: [27736]: MODEM TIMEOUT: reading line from modem
Dec 07 17:04:25.04: [27736]: <-- <1:\015>
Dec 07 17:04:26.18: [27736]: --> <24:TDD's Enter M and RETURN>
Dec 07 17:04:26.18: [27736]: RECV: TDD's Enter M and RETURN
Dec 07 17:04:26.18: [27736]: <-- <1:\015>
Dec 07 17:04:26.18: [27736]: --> <3:ID=>
Dec 07 17:04:26.18: [27736]: RECV ID ("ID=")
Dec 07 17:04:26.18: [27736]: SEND device identification/login request
Dec 07 17:04:26.18: [27736]: <-- <5:\033PG1\015>
```

ok - pagesend(1M) of HylaFAX has sent the PG1 sequence (for
remote entry device - see the TAP spec.)

```
Dec 07 17:04:26.96: [27736]: --> <3:ID=>
Dec 07 17:04:26.96: [27736]: RECV: ID=
Dec 07 17:04:27.96: [27736]: --> <3:ID=>
Dec 07 17:04:27.96: [27736]: RECV: ID=
```

these two "ID=" messages from the paging terminal are not expected
but ignored by pagesend(1M)

```
Dec 07 17:04:29.15: [27736]: --> <1:\006>
```

ok - we got ACK from the paging terminal

```
Dec 07 17:04:29.15: [27736]: RECV ACK (login successful)
Dec 07 17:04:29.15: [27736]: --> <24:Processing - Please Wait>
Dec 07 17:04:29.15: [27736]: RECV: Processing - Please Wait
```

ok - some optinal message (is a "nice to have" in the TAP specs)

```
Dec 07 17:04:29.95: [27736]: --> <3:\033[p>
Dec 07 17:04:29.95: [27736]: RECV go-ahead (prologue done)
```

ok - we got the go-ahead and the paging terminal should now
await our first message block;

```
Dec 07 17:04:29.95: [27736]: SEND message block
Dec 07 17:04:29.95: [27736]: <-- <33:\0027DIS\015This is a test hommie\015\0038<:\015>
```

we sent the message to PIN "7DIS" and the message looks ok (I didn't
check the checksum value - but I trust sendpage(1M));

```
Dec 07 17:04:31.95: [27736]: --> <25: Version 01.13   08-05-93>
Dec 07 17:04:31.95: [27736]: RECV:  Version 01.13   08-05-93
Dec 07 17:04:31.95: [27736]: --> <2:OK>
Dec 07 17:04:31.95: [27736]: RECV: OK
```

the paging terminal should answer with:
"" or with
but "Version..." and "OK" message does not belong to the TAP
protocol here;

```
    Dec 07 17:04:31.95: [27736]: --> <20:]: Page NOT accepted>
    Dec 07 17:04:31.95: [27736]: RECV: ]: Page NOT accepted
    Dec 07 17:04:31.95: [27736]: <-- [5:ATH0\r]
    Dec 07 17:04:35.39: [27736]: --> [4: '] ]
    Dec 07 17:04:35.39: [27736]: --> [10:NO CARRIER]
    Dec 07 17:04:35.39: [27736]: MODEM No carrier
    Dec 07 17:04:35.39: [27736]: MODEM input buffering enabled
    Dec 07 17:04:35.39: [27736]: MODEM set DTR OFF
    Dec 07 17:04:35.39: [27736]: SESSION END

you should contact the provider PageAmerica and show them the
log-file with the comments; IMHO the sequence violates the
TAP specification;

        matthias
```

Q178: [Linux:] can't load library 'libg++.so.27'

Q178.

[Linux:] can't load library 'libg++.so.27'

A178.

Date: *Tue, 15 Oct 96 16:51 CDT*
From: Johnie Stafford <js@cctechnol.com >
Subject: *Re: Just a little worried...*

```
>>> On Tue, 15 Oct 1996 22:01:55 +0100, Phil Watkinson  said:

 pw> /usr/local/sbin/faxq: can't load library 'libg++.so.27'

 pw> I'm just a little worried, after browsing through the documentation
 pw> and noticing quite a few mentions of 'libg++', that this will be a
 pw> major problem area for me.

 pw> 'locate' tells me that I have 'libg++.so.2' and 'libg++.so.2.7.0'
 pw> files on my disk ( both in directory /usr/lib/ ) but not a
 pw> 'libg++.so.27' file - so do I need another library file/package?

I suspect the binary that you are installing was built on a Red Hat
system. There was a typo in the libg++ package that came with 3.0.3
such that the libg++ library was named libg++.so.27 instead of
libg++.so.2.7.0. All you need to do is make a link to the one that you
have on your system and it should work fine.

        Johnie
```

Q179: Waiting for modem to come ready?

Q179.

Waiting for modem to come ready?

A179.

Date: *Sat, 16 Nov 1996 18:08:09 +0100 (MET)*
From: *Matthias Apitz <Matthias.Apitz@SOFTCON.de >*
Subject: *Re: Waiting for modem to come available*

```
Matthias Apitz wrote:

    Subject: Re: Waiting for modem to come available
    To: arnolds@ifns.de, flexfax@sgi.com
    Date: Fri, 15 Nov 1996 18:40:39 +0100 (MET)

        <....stuff deleted....>

    just to make sure: if you set RingsBeforeAnswer to 1 does this
    fix this problem? your trace is showing that the faxgetty(1M)
    on the now outbound-busy line doesn't see that the line (cux07)
    is busy for outbound (e.g. used by faxsend(1M)); the faxgetty(1M)
    doesn't wake up;

[This was a bug in v4.0pl0 and you should update to pl1]

I've checked the source and it turned out that in the case of
RingsBeforeAnswer = 0 faxgetty(1M) doesn't monitor the modem
after the initialization; that's why it doesn't see the outbound
call and the state "Waiting for modem to come ready" which
faxsend(1M) sets after the outbound call;

I'm working for a solution of this to include a fix into
one of the next patches; please ignore this problem but
keep in mind, that faxgetty(1M) will also not see any changes
in the config-files in this situation and you must kill
and restart faxgetty(1M) if you change any config-values;

        matthias
```

Q180: Can I still run HylaFax without mawk?

Q180.

Can I still run HylaFax without mawk?

A180.

Date: *Mon, 11 Nov 1996 16:41:44 −0500 (EST)*
From: *Matthew Rice <Matthew.Rice@ftlsol.com>*
Subject: *Re: Mawk.H*

```
> Can I still run HylaFax without mawk?   If not, can anybody tell me how to
> get mawk working, and/or where to get mawk.h?

Some people are using a link to /usr/bin/awk as a replacement with no
complaints.  You could also get a binary distribution (as a rpm) from
redhat's ftp site.

--
Matthew Rice                             e-mail: matthew.rice@ftlsol.com
```

Q181: Linux: hfaxd children dying with signal 11?

Q181.
Linux: hfaxd children dying with signal 11?

A181.
Date: *Fri, 4 Oct 1996 00:35:58 +0200 (MET DST)*
From: *Alex Ongena <ao@able.be>*
Subject: *Re: Newbie Help: Linux: hfaxd children dying!*

```
> System seemed to compile fine...  Using sendfax or faxstat (or just
> telnetting into the server port) results in the "child" hfaxd process dying
> with "Caught signal 11".  The connection then terminates before any
> information can be sent or received.

Aha, I think you need the Sig 11 FAQ, the fanous one ...

http://www.bitwizard.nl/sig11/

(BTW: this has probably nothing to do with Hylafax, but with your
hardware. Read the FAQ first bedore shooting at me)

Alex
```

Q182: Rockwell chipset (Zoom modems)

Q182.
Rockwell chipset (Zoom modems)

A182.
Date: *Fri, 1 Nov 96 17:25:32 EST*
From: *raoul@cirl.meei.harvard.edu <raoul@cirl.meei.harvard.edu>*
Subject: *Re: tiny pages*

```
Zoom uses the Rockwell chipset, which has certain known problems that Zoom
is too stupid to understand. Try this:

ModemSendFillOrder:     LSB2MSB
ModemSendFillOrder:     MSB2LSB
```

Q183: Re: Fax to FAx through Internet ?

Q183.

Re: Fax to FAx through Internet ?

A183.

Date: *Mon, 02 Sep 1996 09:15:31 +0100*
From: *"Mr. Arlington Hewes" <tpcadmin@info.tpc.int>*
Subject: *Re: Fax to FAx through Internet ?*

```
> > I wonder if it's possible to send fax (fax to fax) through Internet.  Would
> > anyone pls advise ?  Thanks.
>
> Take a look at http://www.tpc.int
>
> Everything is done through e-mail.  There is no guarantee for delivery (if
> the area isn't supported as a non-long distance call) and no way to
> get it done immediately.  But it works (from what I read at least :-)


;-)  It works, . . . and in some cases on a lightly loaded cell can even be
immediate, contrary to what you suggest above.  HOWEVER, . . . we do not do
FAX to FAX, which is what the original poster was after.

*beep* this has been a public service announcement (sorry Sam for irrelevance)

-DPN



--
Mr. Arlington Hewes           (tpcadmin@info.tpc.int)
The TPC.INT Subdomain          (http://www.tpc.int/)
```

Q184: PPP autodetection in faxgetty ?

Q184.

PPP autodetection in faxgetty ?

A184.

Date: *Wed, 4 Dec 1996 15:41:20 −0600 (CST)*
From: *Leslie Mikesell <les@Mcs.Net>*
Subject: *Re: PPP autodetection in faxgetty ?*

```
> Is anyone interested in, or perchance working on, integrating
> auto PPP-detection to faxgetty ?

Yes, I'd like to have this.

> Current versions of mgetty+sendfax incorporate autodetection of PPP
> with a rather simple chunk of code:

I suspect you could just run mgetty as the 'data' getty for HylaFAX
and make it happen if you can coax mgetty to not hang up and
reset the modem.  Or paste the autodetect code into getty_ps, but
these would be Linux-specific.

> I've been thinking of hacking this into the flexfax front end for a while
> now but it hasn't been happening.  I thought I'd check if there's any
> broad interest, nearly-completed code, etc...

Same here but I don't see much chance of finding time to do it.  It
seems like it should be pretty simple to emulate the rest of getty
if you assume you don't need any of the speed-switching cruft.

> I'd probably do the hack a bit differently if there was a chance of it
> becoming part of the dist. than if I was just crufting my own faxgetty :)

Actually I'd like something slightly more warped... I'd like a front
end that could optionally run 'slirp' in ppp mode instead of pppd.
Slirp is a user-level slip and ppp emulator that doesn't require any
IP address or routing setup.  You connect with a normal client but
outbound connections use only the host's address.  The catch is
that you have to log in first to use it.  I'd like something to
make it work with a PAP-capable dialer without scripting.  That is,
detect PPP frames, accept the PAP login/password and check against
the passwd file, then start slirp as the specified user.

Les Mikesell
  les@mcs.com
```

A184.

Date: *Wed, 4 Dec 96 17:53:16 EST*
From: *raoul@cirl.meei.harvard.edu <raoul@cirl.meei.harvard.edu>*
Subject: *Re: PPP autodetection in faxgetty ?*

```
Les, the simple way to start up PPP is to have your .cshrc or .profile
detect if the dialup is happening on a modem line (by checking the
serial port in use, for example), and having it start up SLIRP or a
ppp-login script. This is exactly how I suggest doing in the
INSTALL-sunos...  notes.

                        Nico Garcia
                        Engineer, CIRL
                        Mass. Eye and Ear Infirmary
```

raoul@cirl.harvard.edu

Q185: Serial Port Scanner for Unix??

Q185.

Serial Port Scanner for Unix??

A185.

Date: *Sat, 15 Jun 1996 18:29:07 −0700 (PDT)*
From: Bill Campbell <bill@celestial.com >
Subject: *Re: Serial Port Scanner for Unix?*

```
>
>
>Has anyone made one of the variety of inexpensive personal scanners
>that are now available work with Unix? They seem to work with a
>serial port on PC's and Macs.
>
We use a standard HP ScanJet on a Windoze box on the network for any
fax scanning we need (Windows machines are nice I/O devices for Real
Computers :-).

Bill
```

A185.

Date: *Sat, 15 Jun 96 22:05:14 EDT*
From: Nico Garcia <raoul@cirl.meei.harvard.edu >
Subject: *Re: Serial Port Scanner for Unix?*

```
I've used an HP Scanjet to get hardopy into Postxcript. The expense
with UNIX is primarily the software, especially OCR software. I
investigated the price early this year and found a good OCR package
and scanner would run about $1500, although the OCR could then be used
with Hylafax on incoming faxes! APUNIX is good: they have a webiste at
www.apunix.com.

But a scanner is 1200 to 2400 dpi, and usually color these days. You
don't *need* that for faxing, and it's a waste of money to get for
just that purpose.  A cheap fax-machine works to fax it to the Hylafax
modem: I've done this from a fax down the hall to send schematics to
people, faxing it to my hylafax server so I can resend it at will, use
my Hylafax cover pages, and have it online myself.

                        Nico Garcia
```

Q186: Where can I get CCITT test patterns?

Q186.

Where can I get CCITT test patterns?

A186.

There are CCITT fax test patterms.

The earlier CCITT (now ITU−T) fax test charts are in the 1988 Blue Book Volume VII Fascimile VII.3 (available from CCITT document distributors: UN, ANSI, Omnicom, others?) designated T.20 and T.21. T.20 and T.21 are being replaced by T.22. I assume that T.22 is also available from ITU−T document distributors, but it may not as the distribution of Recommendations often lags the Recommendation completion by substantial times (6 to 12 months). Be sure to ask for completed T.22, not drafts.

All these Recommendations are physical images, not electronic.

There is also work, almost complete, on a Recommendation "T.test−images" which will be published in electronic form (CD−ROM). I would need to check if the images are also available in any standard file formats. images are also available in any standard file formats.

I am technical editor of Communications Standards Review which report on the work in different ITU−T Study Groups and US technical committees including SG 8 where the test charts are developed. Subscribers to Communications Standards Review can acquire draft documents. We prefer not to provide drafts to non−subscribers:

1. We don’t make any money for our efforts
2. Concern that the draft they have will change without their knowledge.

For information on subscribing to CSR ($795.00 per year) contact E. Baskin at:72540.113@compuserve.com, fax +1 415 856−6591, tel +1 415 856−9018

A186.

An incomplete scanned set of the CCITT test images are available at: http://www.cs.waikato.ac.nz/~singlis/ccitt.html.

Q187: Where did FlexFAX/HylaFAX come from (and other comments)?

Q187.

Where did FlexFAX/HylaFAX come from (and other comments)?

A187.

From the author of HylaFAX, Sam Leffler:

From time to time it's worthwhile to remind folks of some things about the software that I give out and my involvement. I work full time for Silicon Graphics doing work (that's supposed to be) totally unrelated to fax software. HylaFAX (aka FlexFAX) is a project that I've been working on, and giving away, for more than 5 years. I use only SGI equipment. I do my best to make sure the software functions on non–SGI platforms solely because I believe that everyone (especially SGI users) benefits from the widest possible distribution and use of the software. In particular, I believe that the more users there are, the more cross–platform bugs that will be found, the more modems that will be supported, the more enhancements that will be contributed. That said, people should understand that I make an effort only to insure that the software functions correctly on SGI machines (and in particular, *my* SGI machines) and that it does what I need. I am sympathetic to folks with non–SGI environments and/or with needs that differ from my own. However, if you want something fixed or want something enhanced, then you should send me a complete patch so that I can easily understand the change and integrate it. Otherwise the problem/enhancement is likely to be ignored. Please note also, that if you send me something that I don't feel belongs in the basic software then I'll likely stick it in the contrib area on sgi.com.

In general I spend lots more time on HylaFAX than I should. I cannot promise that I will provide timely answers to questions or new distributions; though people that know me recognize that I try my best to keep people happy.

BTW, be sure to check out the acknowledgements section. You will see that many people have contributed to this software besides myself; many more than are listed there. I really do appreciate contributions, comments, critiques, etc. despite the brusk and/or curmudgeonly attitude that often comes across in my notes .

Date: Tue, 19 Mar 1996

HylaFAX is free software. I've been giving it away in one form or another for ~6 years (probably more). I get nothing in return for this software; it is provided purely because I find it useful and my company has decided not to make a product out of it. I make no promise that the software works on any systems but the ones that I use (SGI IRIX and BSD/OS). I do however try my best to make sure the software builds and functions properly on other systems. The motivation for doing this is to have as many people as possible using the software so that problems are identified and fixed.

In general I try my best to help people when they have problems. I expect folks to read the documentation before asking for help and to provide sufficient information in their postings to let me (or someone else) answer the question without referring to a long littany of postings. This means in particular that if you have a problem you should include basic information such as the version of the software you are working with, the host type and operating system version, and probably the type of modem (and perhaps the firmware rev). It is also important to provide documentation of the problem you are having. All the programs that make up HylaFAX support some form of controls for generating information used in debugging problems. Generic descriptions of problems rarely elicit a response from me; provide a session log or the like and you're almost guaranteed to get a reply of some sort. I almost never respond to a posting whose answer is in the documentation. You may consider this elitist, conceited, or just plain being an asshole, but given the amount of mail I routinely receive about this software I find this necessary. I also do not respond to questions sent to me directly by mail−−if your question does not appear on this mailing list I will not answer it. This last decision is bound to anger some people but I have had to resort to this because everything else I tried just generated more work for me (e.g. forwarding questions to the list, responding by saying to post to the list, etc.). Please recognize that it is not my job to support HylaFAX; I do it because I feel like it, but only when it does not interfere with my other work.

Regarding changes to the software. I welcome any and all changes. Many people have made significant and valued contributions and I appreciate the work that folks do to help improve the software. However I cannot guarantee that I will accept changes or incorporate them in a timely fashion unless they are fixes to problems. Because I am almost always running a version of HylaFAX that is very much newer than what is being distributed it is important that any changes be sent in the form of a context diff listing that I can directly apply using the patch program. I am unable to accept GNU unified context diffs; please send me the output of diff −c or if that's not available just plain diff. If you feel your change is of interest to all users feel free to post it to the mailing list (so long as it is small); otherwise sending it to me directly is fine.

Finally, I have been saying for some time that there would be a new distribution of HylaFAX "real soon now". I apologize for the delay in getting it out to folks. Some unexpected events have delayed things and I do not distribute software that has not been well−tested (to my satisfaction). The next distribution is currently in "alpha test" and there should be a publicly available beta version available for folks within a month.

Note: *Some of the hyperlinks (e.g. for the man pages) can only work, if the HylaFAX software and the full dokumentation are installed on your system.*

Matthias Apitz / guru@softcon.de.