NAME
sendfax − submit a facsimile job for transmission

SYNOPSIS
sendfax [*options*] [*files...*]

DESCRIPTION
sendfax submits one or more facsimile transmission requests to a *HylaFAX* facsimile server. Requests are normally processed immediately, although they may also be queued for transmission at a later time using a syntax identical to the *at*(1) command. For each job that is queued, *sendfax* prints a *job identifier* and a *job group identifier* on the standard output. A job identifier is the token by which jobs are identified within *HylaFAX*; job group identifiers are used to reference a set of jobs that have been submitted at the same time. Job and job group identifiers can be supplied to the *faxrm*(1) command to remove the jobs or to the *faxalter*(1) command to alter job parameters.

Facsimile are made from the concatenation of a cover page (see below) and one or more files specified on the command line. If no files are supplied on the command line, *sendfax* will read data from the standard input unless polling is requested. Cover pages are distinguished for the purpose of generating "*continuation cover pages*" on the server; these are makeup cover pages that are automatically generated if a job fails after sending the original user-specified cover page.

sendfax passes POSTSCRIPT® and TIFF documents directly through to the fax server for transmission, and attempts to convert other file formats to either POSTSCRIPT or TIFF. In normal operation *sendfax* automatically converts ASCII-text, *troff* (1) output, Portable Document Format (PDF), and Silicon Graphics format images for transmission. Support for other file formats can be easily added through an extensible file typing and conversion facility; see *typerules*(5F). Note that since TIFF Class F documents are processed directly it is simple to forward a received facsimile.

By default *sendfax* will generate a cover page for each facsimile that is to be transmitted. This cover page is created by the ancillary *faxcover*(1) program using information deduced by *sendfax* and by information supplied on the command line. Automatic cover page generation may be suppressed with the **−n** option.

In addition to sending documents, *sendfax* can be used to poll a remote facsimile machine to retrieve waiting documents. If the **−p** option is specified, a polling request will be submitted to each destination. If a poll request is made in conjunction with the transmission of documents, the poll request will take place after the documents are transmitted. Documents retrieved by polling are returned to the requestor by electronic mail and may be viewed with a suitable viewer program.

One or more destinations must be specified on the command line using the **−d** option. A destination is the dialing string to use to contact the remote fax machine. Phone numbers may include non-alphanumeric characters for readability—only alphanumerics, "+" (for denoting a country code), and "#" (for denoting a subaddress) are significant in placing a call. Alphabetic characters are automatically mapped to their numeric key equivalents: "abcABC" to "2", "defDEF" to "3", etc. Dialing prefixes, such as "1" and "011" (for long distance calling in the United States) need not be included if an unambiguous number is specified. Examples of unambiguous phone numbers are:

+31.77.594.131	*to call the Netherlands*
+14159657824	*to call California*
9657824	*to make a local call*
1-215-356-1666	*to call Pennsylvania from within the US*

Non-numeric strings, such as "*70" (to defeat call waiting), may be included in the destination phone number. Whether or not they are stripped from the string used to dial the destination fax machine is dependent on the dialstring rules configured for use on the server; c.f. *hylafax-config*(5F) and *dialrules*(5F).

A destination may also be specified as *user@fax-number*. In this case the *user* string will be passed to *faxcover* as the identity of the recipient. Note that multi-word names must be enclosed in quote marks; for example, "Sam Leffler@+1.415.555.1212".

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 precede 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

submits the same fax but with the default cover page handling. Note also that parameter values persist across **−d** options so the following

> sendfax -n -d 5551212 -d 5551313 /etc/network

submits two facsimile, both of which have no cover page.

OPTIONS

−1   Transmit facsimile documents using 1-D MH compression. By default *HylaFAX* will use the optimal compression scheme supported by the transmitting modem and receiving facsimile device.

−2   Transmit facsimile documents using 2-D MR compression, if possible. By default *HylaFAX* will use the optimal compression scheme supported by the transmitting modem and receiving facsimile device.

−3   Transmit facsimile documents using 2-D MMR compression, if possible. By default *HylaFAX* will use the optimal compression scheme supported by the transmitting modem and receiving facsimile device.

−a *time*   Schedule transmission up to one year in advance at the indicated *time*. *Time* is specified in the format: "HH:MM [AM|PM] | now [+ N *period* | *month* DD | *dayofweek*]´´ where *month* can be Jan(uary), Feb(ruary), Mar(ch), Apr(il), May, Jun(e), Jul(y), Aug(ust), Sep(tember), Oct(ober), Nov(ember), or Dec(ember); *period* can be minute(s), hour(s), day(s), week(s), or month(s); *dayofweek* can be Mon(day), Tue(sday), Wed(nesday), Thu(rsday), Fri(day), Sat(urday), Sun(day); e.g. "now + 30 minutes´´ to schedule transmission 30 minutes in the future. Trailing information in the *time* field (such as YYYY) is ignored. By default, *sendfax* schedules facsimile for immediate delivery. Time should be given in the user's local time.

−A   Archive the job on the server according to the bin/archive script when the job is done.

−b *speed*   Transmit facsimile documents using a signalling rate that is constrained to be at least *speed* bits/second. If the specified speed is greater than the transmitting modem or receiver is capable of, it is reduced to the highest possible speed both devices support. If a negotiated signalling rate greater than or equal to *speed* cannot be negotiated then the job is aborted. Possible speeds are: 2400, 4800, 7200, 9600, 12000, 14400, 16800, 19200, 21600, 24000, 26400, 28800, 31200, and 33600. By default *HylaFAX* will use the fastest possible rate supported by the transmitting modem and receiving facsimile device.

−B *speed*   Try to transmit facsimile documents using the desired signalling rate. Possible speeds are: 2400, 4800, 7200, 9600, 12000, 14400, 16800, 19200, 21600, 24000, 26400, 28800, 31200, and 33600. If the specified speed is greater than the transmitting modem or receiver is capable of, it is reduced to the highest possible speed both devices support. By default *HylaFAX* will use the fastest possible rate supported by the transmitting modem and receiving facsimile device (unless restricted by other server configuration); this option can be used to reduce the speed. Note that international calls are frequently more reliable when transmissions are restricted to 9600 bits/second. For Class 1/1.0 devices, if the specified speed is not greater than 14400 then V.34 will not be attempted, and if the specified speed is 9600 or 7200 then V.29 will be assumed in lieu of V.17.

−c *comments*   Pass *comments* to the *faxcover*(1) program for inclusion in the comments field of any generated cover page.

−C *file*   Pass *file* to the *faxcover*(1) program for use as the cover page template.

−D   Enable notification by electronic mail when the facsimile has been delivered. By default *HylaFAX* will notify the submitter only if there is a problem with a job.

−d *destination*

Create a job to transmit the supplied documents to a facsimile machine at the indicated *destination*. If the *destination* is of the form "*user@phone-number#subaddress*" then any cover page will show *user* as the intended recipient, and the remote system will be supplied the subaddress value (i.e. for routing) provided that the sending modem and the receiving system support it.

−E   Disable use of the Error Correction Mode (ECM) when transmitting page data. Setting ECM to false will limit the maximum speed to 14400 bps. By default *HylaFAX* will attempt to use ECM when both the transmitting modem and receiving device support it. Note that international calls are sometimes faster when ECM is disabled. Beware also that some modems and/or facsimile devices do not properly implement ECM causing transmission failures.

−f *from*   Use *from* as the identity of the facsimile sender. Otherwise the sender is the user that invoked *sendfax*. The sender is an account name to which the *HylaFAX* software should direct notification messages. The *from* identity may be a fullblown "From:" line, e.g. e.g. "Joe Blow <joe@foo.com>" and "joe@foo.com (Joe Blow)" are acceptable. If no host-part is specified in the *from* string the local hostname is used. This option is useful when *sendfax* is invoked on behalf of another user, such as in the implementation of an electronic mail to fax gateway.

−F *format*   Use the specified *format* when imaging tag lines on outgoing pages. Consult the description of the **TagLineFormat** parameter in *hylafax-config*(5F) for an explanation of how to construct a format string.

Note that many locales require that proper identification appear on all transmitted facsimile; when using this facility one should always include proper identification (e.g. a phone number) in the imaged taglines.

−G   Enable usage of any extended resolutions supported by the receiver. **−G** supersedes the usage of any **−l** or **−m** options. Beware that increased resolution will increase transmission time.

−h [*modem@*]*host*[*:port*]

Force the jobs to be processed on a specific *host* and, optionally, using a particular *modem*. The *host* may be either a symbolic name or a network address. If no **−h** option is supplied, *sendfax* uses the FAXSERVER environment variable to identify the *HylaFAX* server to which the jobs should be directed. If no server is specified then *sendfax* attempts to contact a server on the local host. If no modem is specified, the job will be submitted to any available modem.

−i *identifier* Use the *identifier* string in any notification messages instead of the usual job identifier number. This option is useful for applications that cross reference notification messages against job submissions.

−I *time*   If a job must be requeued because of a communication failure schedule the retry according to the specified *time*. Times are given in seconds. Minutes, hours, and days can be specified with "*min*", "*hour*", and "*day*" suffixes, respectively. By default *HylaFAX* reschedules jobs using retry times that depend on the manner in which the job failed; this interface permits a user to override this algorithm and specify a single fixed retry time for all communication failures.

−k *time*   Kill the job if it does not complete in the indicated *time*. The *time* is specified using notation identical to the **−a** option. Note that the *time* is relative to the time of the initial time-to-send. The default kill time is "now + 3 hours" (three hours from the time the job is first processed). To retry for an hour, "now +1 hour" could be used.

−l   Transmit the facsimile at a vertical resolution of 98 lines/inch; otherwise known as *low reso-*
                   lution.

−m   Transmit the facsimile at a vertical resolution of 196 lines/inch; otherwise known as *medium*
                   resolution or *fine mode*.

−M *mst*   Transmit facsimile documents using the specified minimum scanline time. Possible times
                   are: 0ms, 5ms, 10ms2, 10ms, 20ms2, 20ms, 40ms2, and 40ms. If the specified time is less
                   than the transmitting modem or receiver is capable of, it is increased to the lowest possible
                   time both devices support. By default *HylaFAX* will use the lowest possible time supported
                   by the transmitting modem and receiving facsimile device (unless restricted by other server
                   configuration). This option is mostly useful for debugging.

−n   Suppress the automatic generation of a cover page for subsequent facsimile. Note that
                   polling requests do not receive a cover page unless they are combined with the transmission
                   of one or more files.

−N   Do not notify the sender by electronic mail when the facsimile has been delivered or
                   requeued.

−o *owner*   Specify the fax owner login name, replacing any **FAXUSER** environment variable that may
                   be set for the same purpose. If neither is specified, the user's current login name is used.

−p   Poll each destination for any available documents. If a poll request is made together with
                   document transmission, the poll operation is done after the documents are transmitted. Doc-
                   uments received by polling are returned to the sender by electronic mail.

−P *priority* Assign the specified scheduling *priority* to subsequent jobs. A priority is an integer value in
                   the range [0-255]. Lower values result in higher priority processing. By default, each job is
                   assigned 127 for an initial scheduling priority. If a job's priority is greater than bulk faxes
                   then the job's priority is raised (numerically lowered) for each failed attempt to transmit so
                   that retransmit attempts are done ahead of newly submitted jobs. In the case of bulk faxes
                   (numerically higher than 190), then the job's priority is lowered (numerically raised) for
                   each failed attempt to transmit so that the whole of the bulk-queued jobs will be attempted
                   before any are retried. The *priority* may also be specified as one of the following symbolic
                   names: *default* or *normal* (127), *bulk* or *junk* (191), *low* (190), or *high* (63).

−R   Enable notification by electronic mail when the facsimile has been delivered and when it is
                   requeued for retransmission. By default *HylaFAX* will notify the submitter only if there is a
                   problem with a job.

−r *regarding* Pass *regarding* to the *faxcover*(1) program as the value of the ''Re:'' field of any generated
                   cover page.

−s *size*   Set the page size to use for the transmitted facsimile. Facsimile are normally imaged with a
                   system-default page size (usually letter-size pages, 8.5" by 11", for sites in North America).
                   Alternate page sizes are specified symbolically using either the name or abbreviation of an
                   entry in the *pagesizes*(5F) database; e.g. *a3* (ISO A3), *a4* (ISO A4), *a5* (ISO A5), *a6* (ISO
                   A6), *b4* (ISO B4), *na-let* (North American Letter), *us-leg* (American Legal), *us-led* (Ameri-
                   can Ledger), *us-exe* (American Executive), *jp-let* (Japanese Letter), and *jp-leg* (Japanese
                   Legal). Comparisons are case-insensitive and any match of a substring of the full page-size
                   name is sufficient; e.g. ''legal'' would match ''American Legal''.

                   Note that it may not be permissible to image into the full page area; the guaranteed repro-
                   ducible area for a page is typically inset. Also, note that while arbitrary page sizes can be
                   specified through the page size database, only a limited set of page dimensions are supported
                   by the Group 3 facsimile protocol. Thus if an odd-size facsimile is submitted for transmis-
                   sion it may not be possible to determine if it can be sent until the fax server establishes com-
                   munication with the remote facsimile machine.

−S *tsi*   Pass tsi to the server as the suggested sender identification to be used, for example, in tagline
                   imaging and fax protocol.

−t *tries*	Make no more than *tries* attempts to send the facsimile. By default, *HylaFAX* will terminate a job if 3 consecutive attempts to send a particular page fail, or it appears the receiver is not a facsimile machine. Otherwise *HylaFAX* places no limit on the *number* of attempts to send a facsimile, instead terminating a job if it is not completed within a *kill time* timeout interval. Note that a try is a call in which carrier is established and the facsimile protocol is commenced; this is contrasted with a call attempt that might have failed because the line was busy. Use "-1" to indicate that no *tries* value should be specified to the server.
−T *maxdials*	Make no more than *maxdials* calls in attempting to send the facsimile. By default, HylaFAX will redial 12 times before killing a job. Use "-1" to indicate that no *maxdials* value should be specified to the server.
−U *voice-no*	Pass *voice-no* to the *faxcover*(1) program as the sender's voice number.
−V *voice-no*	Pass *voice-no* to the *faxcover*(1) program as the destination person's voice number.
−w	Wait for the job to complete before ending the sendfax session. If this option is used, the sendfax process will not terminate until the job is completed.
−W *fax-no*	Pass *fax-no* to the *faxcover*(1) program as the sender's fax number.
−x *company*	Pass *company* to the *faxcover*(1) program as the destination company name.
−X *company*	Pass *company* to the *faxcover*(1) program as the sender's company name.
−y *location*	Pass *location* to the *faxcover*(1) program as the destination company's location.
−Y *location*	Pass *location* to the *faxcover*(1) program as the sender's company location.
−z *filename*	Read destinations from *filename* which contains a list of the destinations formatted identically as destinations for the **−d** option, one per line. Usage of this option is similar to the **−d** option and may be done in conjunction with other **−d** and **−z** options.
−v	Print information on the standard output about each conversion and cover sheet generation operation it does. If **−v** is specified twice, the protocol between *sendfax* and the *hfaxd* server process that does the submission work on the remote machine is also displayed.
−Z *range*	Specify that only certain pages of the fax should actually be transmitted. The range is in a comma-seperated list of ranges in the form of A[-B][,....]. The range is specified agains the resulting document to be faxed, excluding any cover pages. So if you have more than one document, make sure to account for them, and exclude the cover pages in the range specification. Cover pages will always be faxed, so a fax with a coverpage and 2 5 page documents with a range specified of of 1,3,10 will fax the cover page, and pages 1, 3, and 10 of the combined documents (page 1 and 3 from the first document, and page 5 of the second document).

CONFIGURATION PARAMETERS

sendfax reads configuration information from the files **/usr/local/lib/fax/hfaxd.conf**, **/usr/local/lib/fax/hyla.conf**, **/usr/local/lib/fax/sendfax.conf**, and **˜/.hylarc**; in that order, with later-read settings superseding any that may have been previously read. Configuration files follow the conventions described in *hylafax-client*(1). The following configuration parameters are recognized. Parameters marked with [1] are not available in /usr/local/lib/fax/hfaxd.conf :

Tag	Type	Default	Description
AutoCoverPage	boolean	Yes	automatically generate cover page
ChopThreshold	float	3.0	page chopping threshold
CoverCmd	string	*see below*	pathname of cover sheet program
Cover-Comments	string	–	cover page comments string
Cover-Company[1]	string	–	cover page to-company name string
Cover-Location[1]	string	–	cover page to-company location string
Cover-Regarding	string	–	cover page regarding string
Cover-Template	string	–	cover page template filename
Cover-Voice[1]	string	–	cover page to-voice number string

Cover-From-Company[1]	string		−cover page from-company string
Cover-From-Location[1]	string		−cover page from-location string
Cover-From-Voice[1]	string		−cover page from-voice number string
Cover-From-Fax[1]	string	–	cover page from-fax number string
DateFormat	string	–	cover page date format string
DesiredEC	integer	2	desired type of ECM
DesiredMST	string	–	desired minimum scanling time to use
DesiredSpeed	integer	–	desired signalling rate to use
DialRules	string	*see below*	file containing dialstring rules
From	string	–	sender's identity
HRes	float	204.	horizontal resolution
Host	string	localhost	host to contact for service
KillTime	string	–	time to expire job
MailAddr	string	–	mail address for notification messages
MaxDials	integer	12	times to retry dialing
MaxTries	integer	3	times to retry transmission
MinSpeed	integer	–	minimum acceptable signalling rate
Modem	string	–	modem to use on server
Notify	string	none	control email notification
PageChop	string	default	control page chop handling
PageLength	float	–	page length in millimeters
PageSize	string	default	page size by name
PageWidth	float	–	page width in millimeters
PassiveMode	boolean	false	whether or not to use passive mode
Port	integer	4559	port to use in contacting server
Priority	string	default	job scheduling priority
Protocol	string	tcp	protocol to use in contacting server
RetryTime	string	–	delay between failed attempts to send
SendTime	string	–	time to send job
TagLine	string	–	tagline format string
TypeRules	string	*see below*	file containing file typing rules
VRes	float	98.	vertical resolution
Verbose	boolean	No	whether or not to enable protocol tracing

The configuration parameters are explained below. Certain configuration parameters, notably those for setting strings on automatically generated cover pages, are defined mainly for use by other *HylaFAX* programs that share common code used by *sendfax*.

AutoCoverPage   Control whether or not a cover page is automatically generated for each job. (Equivalent to the **−n** option.)

ChopThreshold   The amount of white space, in inches, that must be present at the bottom of a page before *HylaFAX* will attempt to truncate the page transmission.

CoverCmd   The absolute pathname of the program to use to generate cover pages. The default cover sheet program is **/usr/local/bin/faxcover**.

Cover-Comments   The comments string to pass to the cover sheet program when auto-generating cover pages.

Cover-Company   The to-company name string to pass to the cover sheet program when auto-generating cover pages.

Cover-Location   The to-company location string to pass to the cover sheet program when auto-generating cover pages.

Cover-Regarding   The regarding string to pass to the cover sheet program when auto-generating cover pages.

Cover-Template The absolute pathname of a cover sheet template file to use in auto-generating cover pages.

Cover-Voice The to-voice number string to pass to the cover sheet program when auto-generating cover pages.

Cover-From-Company
 The from-company name string to pass to the cover sheet program when auto-generating cover pages.

Cover-From-Location
 The from-location string to pass to the cover sheet program when auto-generating cover pages.

Cover-From-Voice
 The from-voice number string to pass to the cover sheet program when auto-generating cover pages.

Cover-From-Fax The from-fax number string to pass to the cover sheet program when auto-generating cover pages.

DateFormat The *strftime*(3) format string to pass to the cover page command when auto-generating cover pages.

DesiredEC Which type of the optional Error Correct Mode (ECM) to use when transmitting facsimile. 0 to disable, 1 for 64-byte ECM, and 2 for 256-byte ECM (default).

DesiredMST The desired minimum scanline time to use when transmitting facsimile. (Equivalent to the **−M** option.)

DesiredSpeed The desired signalling rate to the use when transmitting facsimile. (Equivalent to the **−B** option.)

DialRules The name of the file containing the dialstring processing rules to when preparing an externally visible representation of the dialstring (e.g. to strip credit card numbers). By default this is /usr/local/lib/fax/dialrules.

From The sender's identity. (Equivalent to the **−f** option.)

Host The host to contact for service. (Equivalent to the **−h** option.)

HRes The horizontal resolution to use when transmitting facsimile. (NB: *this currently has no effect*.)

KillTime The expiration time to assign to each job. (Equivalent to the **−k** option.)

MailAddr The electronic mail address to direct notification messages from the server. If this string is specified without an ''@hostname'' part then the local hostname will automatically be appended. (Equivalent to the **−f** option.)

MaxDials The maximum number of times to dial the phone for each job. (Equivalent to the **−T** option.)

MaxTries The maximum number of times to retry sending a job. (Equivalent to the **−t** option.)

MinSpeed The minimum acceptable signalling rate to use when transmitting facsimile. (Equivalent to the **−b** option.)

Modem The modem to use on the server. (Equivalent to the **−h** option.)

Notify Control the email notification messages from the server. This string may be one of ''done'', ''none'', ''requeued'' or ''default'' with an optionally preceding ''when '' (e.g. ''when done''). Note that ''when requeued'' implies ''when done''. (Equivalent to the **−D**, **−R**, and **−N** options.)

PageChop Control page chop handling when transmitting facsimile. This string may be one of ''none'', ''all'', or ''last' to have no pages chopped, all pages chopped, or only the last

page chopped; respectively. Page chopping is controlled by the **ChopThreshold** parameter.

PageLength	Set the transmitted page length in millimeters.
PageSize	Set the page dimensions according to an entry in the *pagesizes*(5F) database. (Equivalent to the **−s** option.)
PageWidth	Set the transmitted page width in millimeters.
PassiveMode	Whether or not to use passive mode in communication with the server.
Port	The network port to contact for service. (Equivalent to the **−h** option.)
Priority	The scheduling priority to assign to each job. (Equivalent to the **−P** option.)
Protocol	The name of the communication protocol to use when contacting a server. (Equivalent to the **FAXSERVICE** environment variable.)
RetryTime	The time to delay between job retries due to a communication failure. (Equivalent to the **−I** option.)
SendTime	The time to send jobs. (Equivalent to the **−a** option.)
TagLine	The tagline format string to use when transmitting facsimile. (Equivalent to the **−F** option.)
TypeRules	The name of the file containing file type conversion rules. By default this is /usr/local/lib/fax/typerules.
Verbose	Control protocol tracing. (Equivalent to the **−vv** option.)
VRes	Set the vertical resolution in lines/inch to use when transmitting facsimile. (Equivalent to the **−m** and **−l** options.)

DIAGNOSTICS

The following messages are generated because of problems encountered on the local machine.

Could not call server. The facsimile server on the remote machine did not respond.

No input data; transmission aborted. No data was supplied (typically on the standard input). No facsimile will be sent.

Error converting data; command was %s." A data conversion operation failed; the shell command that was used is printed.

Can not convert %s. Data needed to be converted for transmission, but the required conversion rule was not located. This may indicate that the *HylaFAX* software was incorrectly installed; or perhaps that an NFS-mounted directory is temporarily unavailable.

%s: Can not determine file type. *sendfax* was unable to deduce the type of the file.

%s: Not a regular file. The file is something other than a regular file; for example, a directory.

The following messages may be printed by *sendfax*. These messages describe problems encountered by the server process on the remote machine. This list is incomplete; other messages may be generated by the server under unusual circumstances.

FILES

~/.hylarc	per-user configuration file
/usr/local/lib/fax/hyla.conf	system-wide configuration file
/usr/local/lib/fax/sendfax.conf	system-wide configuration file
/usr/local/lib/fax/typerules	file type and conversion rules
/usr/local/lib/fax/pagesizes	page size database
/usr/local/lib/fax/dialrules	optional client dialstring rules
/usr/local/bin/faxcover	for generating cover sheets
/usr/local/sbin/textfmt	for converting text to PostScript
/usr/local/sbin/sgi2fax	for converting SGI RGB images

/var/spool/hylafax/tmp/sndfaxXXXXXXtemporary files

SEE ALSO

at(1), *hylafax-client*(1), *faxalter*(1), *faxcover*(1), *faxmail*(1), *faxrm*(1), *faxstat*(1), *sgi2fax*(1), *textfmt*(1), *hfaxd*(8C), *hylafax-server*(5F), *typerules*(5F)