

T.37 Store and Forward Fax over IP Protocol Software(T.37 FoIP Software)

ITU-T Recommendation T.37 is a protocol designed to store and forward facsimile images for the Internet. It defines the chosen file format when storing a facsimile image on a disk. The T.37 fax protocol is used in the following applications:

1. Used when trying to send an image to a facsimile device but the facsimile device is busy so it must be sent later.
2. Used if a facsimile image must be sent to several recipients (batch running).

The T.37 store and forward FoIP protocol uses the TIFF (tagged image file format) image format to store data on disk, TIFF is a public file format made by Aldus Corporation. The T.37 references in particular a document from IETF (Internet Engineering Task Force) called RFC 2301 File format for Internet Fax. The T.37 file format complies with the IETF image format RFC 2301 profile S. RFC 2301 references no other documents, but the full TIFF file format information is located in the document TIFF Revision 6.0 from Aldus Corporation. TIFF has an ideal framework for FOIP and therefore it has been chosen by ITU-T and IETF because it adds functionality to both existing fax machines and future fax machines that will use colors and other compression algorithms than those existing today. TIFF is such a vital image file format when it comes to the T.37, T.38, and other documents referencing FoIP.

Floreat's T37FaxProc is developed based on parts of ITU-T T.37 store and forward Fax over IP protocol. In addition to the Floreat's T.37 FoIP protocol three more protocols are implemented; the first and most important protocol is ITU-T recommendation T.30; Procedures for document facsimile transmission in the general switched telephone network. The second protocol is the ITU-T recommendation T.4; Standardization of Group 3 facsimile terminals for document transmission, which defines image coding. The third protocol is ITU-T Recommendation F.185; Internet facsimile: Guidelines for the support of the communication of facsimile documents.

The T.37 Store-and-Forward Fax software protocol can operate in two modes.

Simple mode is accomplished when only the coded document is transmitted on the Internet using e-mail.

Full mode requires additional exchange of capabilities and confirmation of receipt.

This software provides T.30 session management and T.4 functions of MH image coding and scan-line data formatting. The fax documents are stored in TIFF-file format appropriate for Simple mode T.37 FoIP.

To send or receive TIFF-files user can run any e-mail application.

The specification of TIFF- format is given in RFC 2301; File Format for Internet Fax. The T37FaxProc program conforms to this protocol.

Software and hardware environment

The T37FaxProc is thread-based Windows application developed with Visual Studio C++ 6.0. It can run under Windows 98/NT/2K. The program issues some messages during fax session using **OutputDebugString()** function. To handle this function user can execute DebugView application, which captures and displays output data, Floreat's fax software modem or any commercial (external or internal) modem needs to be connected to the serial port.

Floreat's fax modem protocols are modular, re-locatable and re-entrant to support multi-channel capability. This protocol software can operate within a multi-tasking environment or as a single task and it is supported on various DSPs and processors as well as offered in fixed and floating point C.

Floreat's Fax Modem protocols can be integrated with Floreat's other data modem, telephony, speech compression, VoIP, FoIP, imaging and video software for various applications.

Floreat supports its software on the following DSPs, Controllers and Processors

- TI C5000 and C6000
- Intel Pentium fixed and floating point and XScale
- ADI Blackfin (BF53x), SHARC 21xxx
- ARM 7/9/9E, MIPS
- PowerPC, STM, SuperH cores, Philips Nexperia
- CEVA (formerly DSPG's licensing division)
- Ported by customers to their processors:
 - NEC
 - STM
 - Zilog

► For further information on the standard, please click [ITU Standards](#).

► For our brief profile, please click [Company Profile](#).

► For further inquiry, please send us an [Inquiry Form](#) or send an email to info@floreatinc.com.