ENE A® FAX-BRICKS

Group 3 Fax Transfer Protocol

Enea’s FAX-Bricks is a portable protocol stack that implements protocols used by Fax group 3 devices for connection to PSTN or ISDN.

FAX-Bricks Software Architecture

The Enea FAX-Bricks software architecture is based on the Enea Netbricks architecture, which follows the ISO/CGITT X.200 model.

All the protocol entities are managed as isolated objects communicating through datagram message passing. The message passing is based on FIFO queue communications.
System entities are housed within processes (one or more entities within each process), which are managed by an RTOS real-time multi-tasking kernel. When the origination and destination entities are in the same process, the message passing is done through an internal FIFO without the need for RTOS scheduling. When the two entities are in different processes, message passing is done using RTOS message exchange management.

The figure describes the different protocol stacks and the communications between system entities. The system contains the following stacks and entities:

- System management (SM).
- Signaling stack:
  - ACU: PSTN signaling or ISDN signaling
  - MPH-D physical layer management
  - PH-D physical HDLC D channel protocol
- MNL data link layer management
- DL data link protocol (LAPD)
- MNS network signaling management
- NS network signaling protocol
- CC call control protocol with extension for multiple calls management
- DTE-INT DTE interface with "AT" command set parser
- Fax and Modem stack:
  - PH-GSTN physical modem protocol
  - FAXMOD fax modem control
  - T30: T.30 protocol with Error Correction Mode (ECM)
  - LAPM and MNP4 Error correction protocol (V.42 and MNP4 (V.42 annex A)
  - CF control function
  - DC data compression (V.42bis, MNP5)
- DTE-INT DTE interface with TR29 class 2 and "AT" modem protocols

Enea FAX-Bricks Client Software Architecture.