Floreat, Inc.
Embedded Multimedia and Communications Software

V.42 and MNP2-4 Error Correction modem software protocol

Floreat's V.42 software implements the ITU-T V.42 recommendation. This recommendation contains an HDLC-based protocol referred to as the Link Access Procedure for Modems (LAPM). Since the data rates can be asymmetrical, the V.42 protocol sends an initial handshake after the data pump handshake is done in order to identify V.42 compatibility with the other end; if V.42 is not supported at the other end then the data transmission falls back to the start-stop 8-bit format.

The V.42 error correction software protocol implements the LAPM error control protocol specified in V.42, it detects error and retransmits the corrupted data, an option to select the frame and window sizes is provided. It is observed that the usage of the V.42 error correction protocol with the software modem saves bandwidth up to 20% by eliminating the start-stop bit for every 8-bit.

The Microcom Networking Protocol (MNP) 2 to 4 is another error correction protocol supported by Floreat. Both V.42 and MNP2-4 implement error correction through an automatic repeat transmission request. An error correction MNP2 uses data packets of asynchronous characters over a full-duplex modulation, MNP3 error correction introduces the use of HDLC based synchronous data packets and the MNP4 error correction protocol provides the use of slightly smaller data packets and its acknowledgement. MNP4 can be used without the MNP3 protocol.

Floreat also provides the full suite of modem software; V.92, V.90, V.34, V.32bis/ V.32, V.22bis/ V.22, V.23, V.21, Bell 212A, Bell 202 software modems. Any Floreat SoftModem can be licensed as a module and this module can be executed as a task in an operating system in a multitasking environment or it can execute standalone with its own kernel provided by Floreat upon request.

Floreat's software modems support most of the commercial analog front ends as well as various discrete DAAs with codecs, depending upon the application. The modem software also supports the digital environment such as T1/ E1 interfaces.

Floreat also implements V.42bis and MNP5 compression protocols with its software modems.

The above listed modem software can be integrated with Floreat's other fax, telephony, speech compression, VoIP, FoIP, Imaging and Video software.

Floreat offers its software modems for various architectures; controllerless modem, hardware modem, host modem, DSP based modem, controller based modem, PC modem, RAS modem, WinModem or USB modem. Floreat's V.22bis/ V.22 and Bell 212A software modems are supported on various DSPs and processors as well as offered in ANSI C.

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**.