Voice Modem

http://www.vocal.com

VOCAL Technologies, Ltd. voice modem software libraries include a complete range of ETSI / ITU / IEEE compliant modulations, optimized for execution on ANSI C and leading DSP architectures (ADI, ARM, DSP Group, LSI Logic ZSP, MIPS and TI). This software is modular and can be executed as a single task under a variety of operating systems or it can execute standalone with its own kernel.

The three mayor features of Voice modem v92 are Modem-on-Hold (MOH), PCM upstream (PCMU) and Quick Connect (QC). Each of these features can be used independently.

Depending upon the Voice modem v92 configuration selected, the line interface may be an analog front end (codec and DAA) or a digital interface such as T1/E1, switched 56 and ISDN. The upper end of this software can provide PPP, V.14, HDLC or direct binary framing layers. Higher data protocol layers, such as, V.42 (including MNP 2-4), V.44, V.42bis and MNP5 are options as well.

This modulation family can be combined with other data modulations (V.90, V.34, V.32bis/V.32, and V.22bis/ V.22/V.23/V.21). V.8/V.8bis startup procedures can be used. All data modulation software is fully compatible with VOCAL's facsimile, telephony, speech coder and multimedia systems.

Terminology:

- Voice modem v92 (Determined November 2000) refers to procedures between a "digital modem" and an "analog modem". The analog modem, which may be connected to the PSTN through either an analog or digital interface, transmits and receives G.711 PCM signals. The digital modem, which is connected to the PSTN through a digital interface, transmits and receives G.711 PCM signals.
- V.90 (Determined February 1998) refers to procedures between a "digital modem" and an "analog modem". The analog modem, which may be connected to the PSTN through either an analog or digital interface, transmits V.34 signals and receives G.711 PCM signals. The digital modem, which is connected to the PSTN through a digital interface, transmits G.711 PCM signals and receives V.34 signals.

Features:

- Compliant with Voice modem v92 and Appendix I, upgrades are provided as the as recommendation is improved.
- Modem MIB Support (RFC 1696)
- Specifies 22 modulation rates in range of 28000 bps to 56000 bps, in increments of 1 1/3 kbps. (Administration requirements may restrict maximum rates/power allowed).
- Multi-tasking environment compatible

Configurations:

- As per terminology above, these Voice modem v92 system configurations are relevant: V.90 plus PCM upstream, V.90 plus Quick Connect, V.90 plus Modem-on-Hold, V.90 plus PCM upstream and Modem-on-Hold, V.90 plus PCM and Quick Connect, V.90 plus Modem-on-Hold plus Quick connect, V.90 plus Modem-on-Hold plus Quick connect plus PCM upstream.
- Analog modem DAA interface using linear codec at 16.0 kHz sample rate.
- Digital modem direct interface to 8.0 kHz PCM data stream (A-law or μ-law).
- PPP (RFC1662), V.14, HDLC and direct binary framing layers available.
- North American and International Dialing/Telephony functions available.
- Data protocol layer (V.42/MNP2-4/V.44/V.42bis/MNP5) available.
- System can be combined with V.110 rate adaptation software.
- System can be combined with other modulations (V.90, V.34, V.32bis, et al.) and automode procedures (V.8bis, V.8 and PN-2330).
- Data/Facsimile/Voice Distinction upon startup available. Complete facsimile systems, modulations (V.34, V.17 et al.) and protocols (T.30), and speech coders available.

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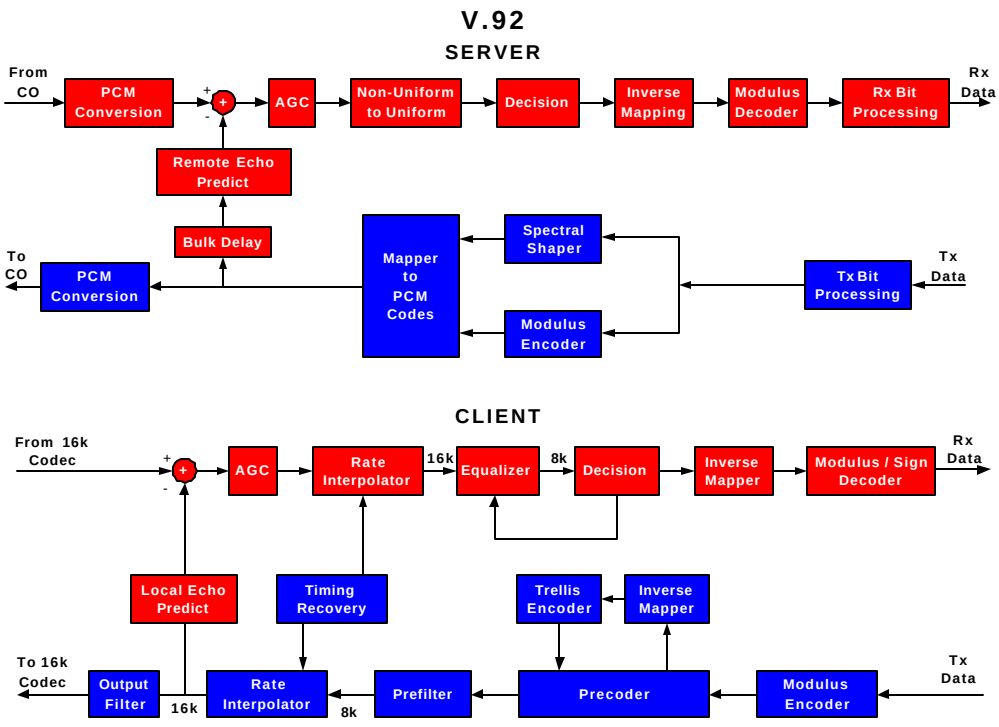

Figure 1 Voice modem v92 Server and Client

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