



GAO Research Inc. G.728 Vocoder

GAO Research Inc.

#1 In Embedded Communications Software

<http://www.gaoresearch.com>

Features

- ▶ Operates at 16 Kbps.
- ▶ Adaptive post filter enhances performance for multiple transcodings.
- ▶ User-selectable processing frame size.
- ▶ 2 ms transcoding delay.

Product Description

GAO's G.728 vocoder implements the low delay code-excited linear prediction (LD-CELP) speech compression technique specified in the ITU standard and provides approximately 4 kHz of speech bandwidth. The software encodes 5 sample frames of 16-bit linear PCM data into 10-bit code words. GAO's G.728 software employs backward-adaptive linear predictive coding analysis to achieve a low transcoding delay. Applications for GAO G.728 include digital circuit multiplication equipment, videoconferencing, digital telephony, and multimedia products.

The ITU G.728 standard specifies the encoding of 8 kHz sampled speech signals for transmission over a 16 Kbps channel. This recommendation contains the description of an algorithm for the coding of speech signals at 16 Kbps using low-delay code excited linear prediction (LD-CELP).

Leadership in Embedded Communications Software

With over a decade of experience, GAO leads the embedded communications software market by providing comprehensive modem, fax, speech, and telephony technologies; broad technical expertise; and unsurpassed support to our world-class customers including electronics, communications, and semiconductor companies across the globe. GAO's software integrates easily with MP3, MPEG, TCP/IP, and most popular real-time operating systems.

Rigorous Testing

GAO's testing facilities are equipped with state-of-the-art test equipment. Our software is rigorously tested on TAS, Consultronics, Rochelle, Advent and Telegra equipment under various channel models according to the relevant ITU or TIA standards. All GAO's speech software has passed the test vectors specified by the ITU. Our telephony software meets all appropriate TIA, EIA, BellCore, and Mitel standards. GAO also adheres to stringent quality control procedures, which is reflected in our well structured code, detailed design documentation, and well-defined design and test plans. This ensures ease of integration into the customer's system, easy maintenance, and a smooth upgrade path for next-generation customer products.

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