Overview

G.711PLC – 64 kbit/sec A/µ-law voice codec fully compliant with ITU-T G.711 recommendation. Packet loss concealment (PLC) feature enables it for use in a wide range of internet/mobile applications such as VoIP and videoconferencing products. PLC supports both narrowband (8 kHz) and wideband (16 kHz) modes. VAD/CNG allows discontinuous transmission in a packet-based communication system that can significantly reduce the transmission rate and hence improve the bandwidth efficiency. It uses generic payload format and may also be used with other speech codecs without built-in DTX capability such as G.726, G.727, G.728, and G.722. The VAD algorithm makes a voice activity decision based on multiple parameters such as the full band energy, the low band energy, the zero-crossing rate and a spectral measure. This provides robust decision over a wide range of conditions and the level of ambient noise.

Features

- coding rate 64 kbps
- A-law, µ-law encoding
- sampling rate 8 kHz and 16 kHz (PLC only)
- PLC compliant with Appendix I of G.711
- VAD/CNG with Appendix II of G.711 and interoperable with G.729B
- *demo available* for target and PC

Applications

- VoIP
- Telephony

Specifications

Algorithm	MIPS consumption		
	C64xx	ARM9e	ARM11
G.711 A-law, µ-law coding	0.04	0.09	0.08
Packet loss concealment (PLC)	0.6	1.1	0.9
Voice activity detection (VAD) – G.729B compliant	3.5	14.8	6.2
Comfort noise generation (CNG) – G.729B compliant	2.2	4.6	2.7
Voice activity detection (VAD) – fast version	3.0	4.3	2.7
Comfort noise generation (CNG) – fast version		4.4	3.0

Bit exactness proved by ITE

G.711 is delivered with fully automated IntegrIT Testing Environment (ITE) for target platform based on reference ITU-T vectors set along with extended IntegrIT proprietary vectors and methods.

Availability

This software package is available in binary/source code written on fully portable C-language for:
- Texas Instruments TMS320C64xx, DaVinci
- ARM9E,ARM11
- Marvell Sheeva/KirKwood/ARMADA
- Windows/Linux Object Library
- Porting on other platforms (Analog Devices, Freescale, etc.) is upon request.

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