INTEGRIT
Embedded Software Design House

NatureDSP G.711.1 Wideband Voice Codec

Overview

G.711.1 – embedded wideband speech and audio coding algorithm operating at 64, 80 and 96 kbit/s conforming the ITU-T G.711.1 recommendation. The encoder input and decoder outputs are sampled at 16 kHz by default, but 8-kHz sampling is also supported. When sampled at 16 kHz, the output of the G.711.1 coder can encode signals with a bandwidth of 50-7000 Hz at 80 and 96 kbit/s, and for 8-kHz sampling the output may produce signals with a bandwidth ranging from 50 up to 4000 Hz, operating at 64 and 80 kbit/s. It can be used in a wide range of applications such as multimedia devices, visual telephony, wireless telephony, and videoconferencing products.

Features

- coding rates 64, 80 or 96 kbps
- frame rate 5 msec
- maximum algorithmic delay 11.875 ms
- sampling rate 8 or 16 kHz
- ITU G.711.1 compliant
- ITU G.711 compatible (in R1 mode)
- Very low stack usage
- Linux/Windows Kernel Mode compatible

Applications

- VoIP
- Conferencing
- Telephony

Coder modes

Mode	Sampling rate (Hz)	Overall bit rate (kbit/s)
R1	8000	64
R2a	8000	80
R2b	16000	80
R3	16000	96

Specifications

PLATFORM	MIPS consumption
Texas Instruments C64xx, DSP/BIOS	
NB R1+PF Encoder+Decoder	call
WB R3 Encoder+Decoder	call
ARM9E	
NB R1+PF Encoder+Decoder	8.6
WB R3 Encoder+Decoder	13.3
ARM11	
NB R1+PF Encoder+Decoder	4.8
WB R3 Encoder+Decoder	7.4

Bit exactness proved by ITE

G.711.1 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

- Texas Instruments TMS320C64xx, DaVinci
- ARM9E, ARM11
- x86 Windows/Linux Object Library
- Porting on other platforms is upon request

Contacts
support@integrit.com
Tel: +7 495 545 4642
www.integrit.com