



Encore's G.722

Technology

ITU-T G.722 is the benchmark coder for wideband speech coding quality. Like all wideband speech coders, in G.722 also, the speech signal is sampled at 16000 samples/second. G.722 can handle speech and audio signal bandwidth upto 7 kHz, compared to 3.6 kHz in narrow band speech coders.

G.722 coder is based on the principle of Sub Band – Adaptive Differential Pulse Code Modulation (SB-ADPCM). The signal is split into two sub bands and samples from both bands are coded using ADPCM techniques. The system involving G.722 coder can be used to work in three modes 64, 56 and 48 kbit/s. The latter two modes will allow an auxiliary data channel of 8 and 16 kbit/s respectively, within the 64 kbit/s channel.

Features

- Fully compatible/bit exact with the ITU-T G.722 standard.
- The code is verified using ITU-T G.722 Appendix II Test sequences.
- Frame based design. The code is designed to work on a frame basis, and currently the frame size is designed as 160 samples (10 msec). (Can be modified to any size, which is multiple of 2, with minor modifications in the code)
- Optional bit packing utilities are available, with support for all modes of the system.
- Full duplex multi-channel capability.
- Flexible interface with 'C' callability, with a single archive file for all functions.
- Built-in scratch memory management to avoid run-time overloading of system stack memory.
- Relocatable program and data spaces. Static (state) and scratch data memory are dynamically relocatable. Program and table data spaces can be fragmented.
- The code is interruptible and frame re-entrant. It can be used in systems with multi threaded software architecture.

Platforms

- TMS320C64X
- TMS320C62X
- TMS320C55X
- ZSP400
- Coldfire (M52xx, M53xx, M522xx)

Performance Numbers

Platform	Program Memory (KBytes)	Data Memory (KBytes)			MIPS
		Static/Channel	Scratch	Tables	
TMS320C64X	7.25	0.63	0.98	1.2	3.77
TMS320C62X	7.25	0.63	0.98	1.2	5.6
ZSP400	2.6	0.40	0.8	1.2	8.7
TMS320C55X	1.672	0.212	1.14	1.2	8.24
M52xx, M53xx, M522xx	5.6	0.4	1.38	1.2	44

Availability

Now.

For further information please visit our web site, <http://www.ncoretech.com> or email to: ip@ncoretech.com