SPIRIT DSP
Voice & Video Engine Experts

SPIRIT ICELP 4800 bps Vocoder

SPIRIT ICELP 4800 bps vocoder implements a proprietary Improved Code-Excited Linear Prediction (ICELP) algorithm, based on well-known CELP model and strongly optimized, ensuring significant improvement of speech quality at low computational complexity. It can be effectively used in all applications where storage capacity and/or bandwidth are limited.

Features

- High speech quality (MOS about 3.7)
- 4800 bps encoded bit stream rate
- Frame size 30 ms
- Algorithmic delay 37.5 ms
- Automatic built-in Frame Synchronization and Comfort Noise Generation (CNG)
- Input/output samples format: Linear PCM, 8 kHz, 16 bits
- Very simple application interface
- Code is reentrant, supports multithreading and dynamic memory allocation

Specifications

SPIRIT provides porting services to multiple DSP (TI C6xxx, , Analog Devices, etc), RISC and general-purpose processors. The product is supplied with test environment and integration example code.

Detailed Product Annotation and User Guide documents describing testing procedures, interface and integration of this product, as well as DSP-based (TI 5402 DSK) demo are available for evaluation upon request.

Benefits

- Highly optimized
- Low bitrate
- High speech quality

Key Features

- Improved CELP algorithm

Applications

- Trunking systems
- Wireless communications
- Digital voice over HF
- Call-logging systems
- Answering machines

Availability

- DSP code for x86 platformDSP code for TMS320C5xxx/C6xxx
- Fully functional evaluation object code (available upon request)
- DLL for MS Windows

PLATFORM	TI C55xx		
	Encoder	Decoder	Encoder+Decoder
Peak MIPS	18	1.9	19.9
Program Memory, KB	-	-	30.2
Constant Memory, KB	-	-	17.5
Dynamic Memory, KB	-	-	3.12
Stack, KWords	-	-	3.02

CONTACTS

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