



Digital Network Echo Celler



Processor

Motorola DSP56300 range.

Background

A multi-channel digital network echo canceller is used for echo control on international and mobile telephony circuits. They are voice-operated devices, which are placed in the 4-wire portion of a network and used for reducing the echo caused by impedance mismatches in the circuit. An estimate of the echo is generated, and subsequently subtracted from the circuit echo.

The software is compliant with ITU-T G.165 and G.168 recommendations, and includes non-linear processor (NLP) and 2100 Hz tone detector.

Features and Performance

Equivalent Echo Path Delay (ms)	Program Memory (Words)	Data Memory		Processing Load (MHz)
		X (words)	Y (words)	
4	453	36n	41n	1.74n
8	453	68n	73n	2.51n
16	453	132n	137n	4.05n
32	453	260n	265n	7.12n
64	453	516n	521n	13.26n

Table 1 : DSP Requirements for a Digital Network Echo Celler

Note: Processing loads quote worst-case scenarios and n represents the number of channels.
Program memory table values are initialisation values.

Interface Details

For convenience the individual software functions are supplied as a single library module. The library contains all the object code that is required to link in to a user's top-level application code. The functions are either callable as C functions or as assembly functions.

Availability

Fully optimised code is available now, for a one-off payment and/or royalties depending on the commercial application.

Also available for the DSP56300 are a full range of vocoders, fax modems, data modems, IP telephony and other communication algorithms.

SIGNALS+SOFTWARE

SIGNALS+SOFTWARE was founded in 1992 as a developer of high quality Digital Signal Processing application software for the communications industry. Supplying to a whole range of customers, including large blue chip corporations, **SIGNALS+SOFTWARE** has quickly established itself as the world leader in DSP software design and production.

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