ODP
Processing Notes:
Multi-Channel Sonic Data

3/2004

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First leg logged: Leg 102
Last leg logged: Leg 118

Tools Used

The Multichannel Sonic Tool was designed at BRG in the early 1980s and was operated by BRG personnel aboard the *JOIDES Resolution*. The data acquisition program resided on a Masscomp computer.

Data Processing History

The data were originally loaded onto 9-track tapes. In the mid 1990s, the data was transferred to 4-mm DAT tapes using the program "copytape," originally created for the Masscomp, where the data acquisition software also resided. A collection of programs was created in the early 1980s to process MCS waveforms. In the spring of 2003, however, the only two programs left on Unix were "copytape" and "sonicopy."

No processing was performed on the MCS data. The data was simply converted from the original format into binary format.

Data Conversion History

In May 2003, Gilles Guerin wrote a code to translate the MCS data from the original format into binary. This program replaces the old "sonicopy" and outputs the data in a form similar to that of sonic waveforms. It also outputs information such as the number of columns and row for each file, number of samples/waveform, start and stop depth, receiver spacing, and other parameters.

In Leg 103, Hole 638B, the two upward files are very similar but not identical. (Possibly a different gain or filter was applied). Two binary files were created.

In Leg 110, the two upward files are identical. Only one binary file has been made.

Some holes (418A through pipe, 395A, and 504B) had depths that were clearly out of range (9000 m and up); using the site reports and the tape headers, an attempt has been made to correct the depths. In the documentation files both the original and the inferred depth are presented.

The Summary Table lists all the holes converted into binary and some of the outputs related to the conversion.

Data storage

The MCS data converted into binary format are saved on CD-ROM and in the archive directory on the LDEO-BRG file server. All the original MCS data are saved on 4-mm DAT tapes.

MULTI-CHANNEL SONIC DATA SUMMARY TABLE

Logging Date	Hole	Leg	Run*	Start (m)	Stop (m)	# Columns	# Rows	Samples/ wf	Depth Incr. (m)	Sampling rate (micros)
1985	418A	102	d	6005	6280	24001	508	2000	0.5	2
			u1	6309	6042.6	24001	889	2000	0.3	2
			u2	6042.3	5962.1	24001	250	2000	0.3	2
			u3	5960	5508	24001	196	2000	1	2
1985	638B	103	d	4766	4824	24001	58	2000	1	5
			u1	4819.2	4757.4	24001	413	2000	0.15	2
			u2	4819.2	4757.4	24001	413	2000	0.15	2
1985	639D	103	d	4965	4997.7	24001	110	2000	0.3	5
			u	4999	4914	24001	317	2000	0.3	5
1986	395A	109	d1	4590	4662	24001	258	2000	0.28	2
			d2	4662.3	4911	24001	889	2000	0.28	4
			d3	4911.3	5080	24001	603	2000	0.28	4
			u1	5080	4991.2	24001	889	2000	0.1	2
			u2	4991.1	4902.3	24001	889	2000	0.1	2
			u3	4902.2	4813.4	24001	889	2000	0.1	2
			u4	4813.3	4724.5	24001	889	2000	0.1	2
			u5	4724.4	4635.6	24001	889	2000	0.1	2
			u6	4635.5	4584.7	24001	509	2000	0.1	2
1986	672A	110	u	5256	5188.7	24001	152	2000	0.3	5
1986	504B	111	d1	3579	3740	24001	889	2000	0.18	7
			d2	3740	3885	24001	889	2000	0.16	7
			d3	3893	4070	24001	889	2000	0.2	7
			d4	4070	4248	24001	699	2000	0.25	7
			d5	4230	4700	14401	889	1200	0.5	5
			d6	4700	5000	14401	588	1200	0.51	5
1987	735B	118	d1	930	954	12001	25	1000	1	5
			d2	995	1220.9	12001	227	1000	1	5
			u1	1216.6	950.3	12001	889	1000	0.3	5
			u2	950	858.2	12001	307	1000	0.3	5
			u3	860	856.5	12001	13	1000	0.3	5
			u4	856	846.2	12001	34	1000	0.3	5
			u5	858	745	12001	378	1000	0.3	5

* d=downlog
u=uplog