X3T9.2/89-98

SONY

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To: John Lohmeyer - X3T9.2 Chairman

FROM: Rita Lin - Sony Corp of America

RE: **SONY "NO" VOTE ON SCSI-2 FORWARDING MOTION (X3T9.2/86-106 REV 10)**

In SCSI-2 Rev 9 13.2.10, READ SUB-CHANNEL Command, the Media Catalog number (UPC/Bar Code), the Track International-Standard-Recording-Code (ISRC) and other data (which are Audio status, Track Number, Index Number, Absolute CD-ROM address and Track Relative CD-ROM address) must be returned at the same time. Since some CD-ROM disk may have the UPC/Bar code or the ISRC code at the rate of 1 block/100 blocks (this is the minimum rate decided by Yellow Book p46-p47). At this rate the CD-ROM drive can't pick up these codes in the case that drive is in hold track state (for instance, audio play is not in progress) and keep access some continguous blocks less than 100 blocks.

We think the main purpose of READ SUB-CHANNEL command is to request that the CD-ROM drive return Audio Status, Track Number, Index Number, Absolute CD-ROM address and Track Relative CD-ROM address. These data give the SCSI-2 initiator time information and audio play information which seem to be repetitively requested by the initiator.

The UPC/Bar code and the ISRC code seem to be requested not so much than the main data, particularly the UPC/Bar code may be requested only one time because it is constant code in anywhere on CD-ROM disk (see Yellow Book p46). Therefore these 2 codes should be requested separately from the main data.

We would like to make the proposal to solve the problem. In our proposal we would like to add "MC" bit and "TC" bit into Table 13-17, READ SUB-CHANNEL Command, and divide Table 13-18 to three 16 bytes table (our proposal Table A, B, and C).

13.2.10. READ SUB-CHANNEL Command

Table 13-17: READ SUB-CHANNEL Command

Bit / Byte	7	6	5	4	3	2	1	0
0	Operation Code (42h)							
1	Logical Unit Number		Reserved				MSF	Reserved
2	Reserved	SubQ	Reserved					
3	**MC***	**TC***	Reserved					
4			Reserved					
5			Reserved					
6			Reserved					
7	(MSB)		Allocation Length					
8								(LSB)
9			Control Byte					

The READ SUB-CHANNEL command (Table 13-17) requests that the target return the requested sub-channel data of the current block plus the state of an ongoing audio play operation.

See 13.1.5. for a description of the MSF bit.

The Sub Q bit set to one requests the target return the Q sub-channel data. The Sub Q bit set to zero requests that no sub-channel data be returned. This shall not be considered an error.

NOTE: The other bits in this byte are reserved for future standardization at which time they may be defined to request other sub-channel data.

The MC bit set to one requests the target return Media Catalog Number (See Table B: Media Catalog Number). In this case, TC bit must be set to zero.

The TC bit set to one requests the target return Track

International-Standard-Recording-Code (See Table C: Track International-Standard-Recording-Code). In this case MC bit must be set to zero.

If both MC bit and TC bit are set to zero, the target return Address Data (See Table A: Address Data).'

Table A Address Data

	7	6	5	4	3	2	1	0
0	Reserved							
1	Audio Status							
2	(MSB)	Sub-Channel Data Length						
3								(LSB)
	Sub-Channel Data Block							
4	Reserved							
5	ADR				Control			
6	Track Number							
7	Index Number							
8	(MSB)	Absolute CD-ROM Address						
11								(LSB)
12	(MSB)	Track Relative CD-ROM Address						
15								(LSB)

Table B Media Catalog Number

	7	6	5	4	3	2	1	0
0	Valid	Reserved						
1	(MSB)	Media Catalog Number (UPC Bar Code)						
-								
15								(LSB)

Table C Track International-Standard-Recording-Code

	7	6	5	4	3	2	1	0
0	Valid	Reserved						
1	(MSB)	Track International-Standard Recording-Code (ISRC)						
-								
15								(LSB)