17 June 88

TO: X3T9.2 SCSI-2 COMMITTEE   X3T9.2/88- 70

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SUBJECT: ADDITIONAL SENSE QUALIFIER CODES

After reviewing the Additional Sense Codes and the Additional Sense Code Qua~
propose the following scheme for the qualifiers

Currently each Additional Sense Code has a list of qualifiers. The qualifiers are different for
each code. This will require the generation of a large number of tables.

An alternative to this would be to use a standard set of qualifiers that applies to all Additional
Sense Codes. We propose codes 00-3f be used for the generic qualifier and 40-7F for specific
codes.

EXAMPLES:
Generic

Code	Qualifier	
04	02	Drive Not Ready, initialization command required
04	24	Drive Not Ready, Drive initialization failure.
12	07	Unrecovered write error, Retries exhausted
11	07	Unrecovered read error, Retries exhausted
17	11	Read recovered in user area with retries and no correction
18	11	Read recovered in user area with correction and retries
18	00	Read recovered in user area with correction

Specific

40	40-7F	Diagnostic failure on component nn where nn is qualifier 40-7F.
18	40-7F	Recovered data with error correction, 00-3F bits corrected

99

00	NO ADDITIONAL SENSE QUALIFIER
01	MANUAL INTERVENTION REQUIRED
02	INITIALIZATION COMMAND REQUIRED
03	DRIVE IN PROCESS OF BECOMING READY
04	FORMAT IN PROGRESS
05	TIME-OUT
06	PARITY ERROR
07	RETRIES EXHAUSTED
08	ERROR TO LONG TO CORRECT
09	MULTIPLE READ ERRORS
0A	DATA RESYNCHRONIZATION ERROR
0B	BLANK SECTOR ENCOUNTERED
0C	NON-BLANK SECTOR ENCOUNTERED
0D	ERASED SECTOR ENCOUNTERED
0E	NO ALTERNATE SPACE AVAILABLE
0F	ID LIMIT ERROR
10	NO INDEX/SECTOR MARK
11	READ RECOVERED WITH RETRIES — USER AREA
12	READ RECOVERED WITH POSITIVE HEAD OFFSET — USER AREA
13	READ RECOVERED WITH NEGATIVE HEAD OFFSET — USER AREA
14	READ RECOVERED WITH RETRIES — PRIMARY ALTERNATE
15	READ RECOVERED WITH POSITIVE HEAD OFFSET — PRIMARY ALTERNATE
16	READ RECOVERED WITH NEGATIVE HEAD OFFSET — PRIMARY ALTERNATE
17	READ RECOVERED WITH RETRIES — GLOBAL ALTERNATE
18	READ RECOVERED WITH POSITIVE HEAD OFFSET — GLOBAL ALTERNATE
19	READ RECOVERED WITH NEGATIVE HEAD OFFSET — GLOBAL ALTERNATE
1A	GROWN DEFECT LIST NOT AVAILABLE
1B	WRITE RECOVERED ERROR — DATA IN PRIMARY ALTERNATE
1C	WRITE RECOVERED ERROR,— DATA IN GLOBAL ALTERNATE
1D	CARTRIDGE SENSOR FAILURE
1E	TRACKING SERVO FAILURE
1F	FOCUS SERVO FAILURE
20	SPINDLE SERVO FAILURE
21	LASER FAULT
22	COARSE SEEK FAILURE
23	STEPPER MOTOR FAILURE
24	DRIVE INITIALIZATION FAILURE
25	NOT ON CORRECT TRACK
26	PHASE LOCK FAILURE