TEXAS
INSTRUMENTS

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MEMORANDUM

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TO: John Lohmeyer, Chairman X3T9.2

FROM: Bill Spence   Texas Instruments
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SUBJECT: Proposed Direct-Access Mode-Select Page 01h and Sense Data
          Modifications

In this revision of our 87-177 we have amended somewhat the way we propose to
try to accomplish what we see as needed objectives. One objective is to try
to illuminate for any user who cares what type of recovery action permits an
initially unsuccessful write or read to be retried successful. For the user
who doesn't care, it obviously is unimportant in what form the retry count is
reported. For the user who does care, reporting only the number of entire
retry algorithms used for a successful recovery is a very blunt indicator.
A problem exists, however, in that the retry counts in Mode Select Page 01h
(p 8-31 of SCSI-2 Rev 2) are clearly applied to the number of times the entire
recovery algorithm is attempted, and wording in the sense data return (p 7-30)
tries to tie the meaning of retry count in the sense data to the meaning of
retry count in the mode select. The needs of the two commands seem to us to be
different, and we propose that this tie be broken and retry count be defined so
as to be most useful in each case. Thus, we propose no change in this part of
mode select but propose the following change in sense data:

PROPOSAL 1:

p 7-30, paragraph immediately below Table 7-23 -- Delete the 2nd sentence and
replace it with the following: "It is recommended that this field report the
total number of actual writes or reads performed by the drive in its recovery
attempt, so that it can be determined not only in which algorithm retry but
also at which exact point in the algorithm the recovery was accomplished."

Even if the user does not know details of the recovery algorithm, the total
number of writes or reads used seems generally more informative than simply the
number of times an algorithm was employed.

Our second proposal is an attempt to create more utility in the operations of
specifying non-zero numbers in the Head Offset Count and Data Strobe Offset
Count fields in Page 01h of mode select (p 8-31, last par and p 8-32, 3rd par).
The assumptions which underly our proposal are fourfold, as follows: