To: **T10 Membership**
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Subject: **Extended Modes for READ/WRITE BUFFER**
Date: **Friday, October 16, 1998**

This proposal extends the mode field for READ/WRITE BUFFER commands to add a logical buffer mode to the implied physical buffer modes. The logical buffer mode allows the use of READ/WRITER buffer commands during normal I/O operations; the existing commands imply the use of physical buffers that might corrupt user data during normal I/O operations.

The existing mode fields in the READ BUFFER and WRITE BUFFER commands is increased to four bits. The value 1010b is defned as the logical mode. The remaining seven new mode values are reserved.

The following parapgraph is added to the READ BUFFER command:

Read Data from logical buffer (1010b)

In this mode the target transfers data to the initiator from the logical buffer. The logical buffer shall be the same buffer as used when the WRITE BUFFER command with the mode field set to logical buffer was issued. The Buffer ID and Buffer Offset fields are ignored in this mode.

A WRITE BUFFER command with the mode field set to logical buffer shall be sent prior to the READ BUFFER command; otherwise the READ BUFFER command may terminate with CHECK CONDITION: ILLEGAL REQUEST or may return indeterminate data.

The READ BUFFER command shall return the same number of bytes of data as sent in the prior WRITE BUFFER command.

The following parapgraph is added to the WRITE BUFFER command:

Write data to logical buffer (1010b)

In this mode the target transfers data from the initiator and stores it in a logical buffer. A logical buffer is assigned in the same manner by the target as it would for a write operation. The Buffer ID and Buffer Offset fields are ignored in this mode.

Any command other than a READ BUFFER command may overwrite the data in a logical buffer.

IMPLEMENTOR'S NOTE: It is recommended that an incontrovertible, uncontestable, absolute, irrevocable, mandatory, superuser, priority, positively unbreakable, unconscionably persistent reservation be made to the target prior to executing the write/read buffer operation.