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Write Same Translation Proposal

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Rev 2

Technical Editor:

Curtis E. Stevens

Western Digital

Phone: 949-672-7933

E-Mail: Curtis.Stevens@wdc.com

9.x Write Same (10) command (41h) and Write Same (16) command (93h)

9.x.1 Command Summary

The WRITE SAME (10) command requests that the device server transfer a single logical block from the data-out buffer and write the contents of that single logical block, with modifications based on the LBDATA bit and the PBDATA bit, to the specified range of logical block addresses.

| Field | SAT Type | Description or Reference |
|-----------------------|----------|--|
| OPERATION CODE | E | If the ATA device supports SCT LBA Segment Access (TR-), the SATL should issue SCT LBA Segment Access which repeatedly writes the data in the buffer to the device. If the device does not implement SCT then the SATL shall issue write commands as defined in see 9.12.2. |
| WRPROTECT | U | See SBC-2 |
| PBDATA | E | See Table xx – LB and PB Data |
| LBDATA | E | See Table xx – LB and PB Data |
| LOGICAL BLOCK ADDRESS | I/E | 32 bit start address |
| GROUP NUMBER | U | The SATL may implement this field as defined in SBC-2 |
| NUMBER OF BLOCKS | I/E | A NUMBER OF BLOCKS of 0 indicates that the data-out buffer shall be repeatedly written from LOGICAL BLOCK ADDRESS through the last user addressable sector on the media. If the NUMBER OF BLOCKS is not zero, the SATL shall repeatedly write the data-out buffer for the number of sectors specified to the device. The SATL shall send as many ATA commands as required to satisfy the number of blocks specified by the WRITE SAME command. |
| CONTROL | I | (See 6.4) |

Table xx – LB and PB Data

| LB DATA | PB DATA | Description |
|---------|---------|--|
| 0 | 0 | The SATL shall transfer the single block of data from the data output buffer to the range of blocks specified in LOGICAL BLOCK ADDRESS and NUMBER OF BLOCKS repeatedly on the media. If the drive supports the SCT LBA Segment Access capability, then this should be used for the data transfer. Otherwise, write commands shall be used as documented in 9.12.2. See SBC-2 |
| 0 | 1 | The SATL shall terminate the command with CHECK CONDITION status with the sense key set to ILLEGAL REQUEST and the additional sense code set to INVALID FIELD IN CDB. |
| 1 | 0 | The SATL shall replace the first four bytes of the block received from the data-out buffer with the least significant four bytes of the LBA of the block being written to the media, ending with the least significant byte (e.g., if the LBA is 77665544_33221100h, 33221100h is written with 33h written first and 00h written last). |
| 1 | 1 | The SATL shall terminate the command with CHECK CONDITION status with the sense key set to ILLEGAL REQUEST and the additional sense code set to INVALID FIELD IN CDB. |