

# ENDL TEXAS

Date: 23 June 2007  
To: T10 Technical Committee  
From: Ralph O. Weber  
Subject: OSD-2 Task Management Function Catchup

## Introduction

SAM-4 includes two task management functions that do not appear in SAM-3. These need to be added to the PERFORM TASK MANAGEMENT FUNCTION command. Also, the QUERY xxx Task Management Functions return valuable information in the Service Response and this information needs to be returned as parameter data by the PERFORM TASK MANAGEMENT FUNCTION command.

N.B. Since both new task management functions need to be addressed to the root object, there is no need to modify other OSD-2 clauses (e.g., no changes are needed in table 18 or any other aspects of capability definitions).

## Revision History

r0 Initial revision

Unless otherwise indicated additions are shown in blue, deletions in ~~red-strikethrough~~, and comments in green.

## Proposed Changes in OSD-2 r01

### 6.17 PERFORM TASK MANAGEMENT FUNCTION

The PERFORM TASK MANAGEMENT FUNCTION command (see table 87) allows a SAM-34 task management function (e.g., ABORT TASK) to be processed when the security method is not NOSEC (see 4.10.4). The PERFORM TASK MANAGEMENT FUNCTION command also allows a SAM-34 task management function to be processed concurrently with attributes retrieval and setting command functions.

**Table 87 — PERFORM TASK MANAGEMENT FUNCTION command**

Bit Byte	7	6	5	4	3	2	1	0
	⋮    {{no changes above the USER_OBJECT_ID field}}							
24	(MSB)		USER_OBJECT_ID				(LSB)	
31								
<del>32</del>	<del>Reserved</del>							
<del>38</del>								
32	(MSB)		TASK MANAGEMENT RESPONSE ALLOCATION LENGTH				(LSB)	
35								
36	Reserved							
38								
39	TASK MANAGEMENT FUNCTION							
	⋮    {{no changes below the TASK MANAGEMENT FUNCTION field}}							

The GET/SET CDBFMT field specifies the format of the get and set attributes parameters as described in 5.2.2.

The contents of the TIMESTAMPS CONTROL field are defined in 5.2.8.

The contents of the PARTITION\_ID field are defined in 5.2.5.

The contents of the USER\_OBJECT\_ID field are defined in 5.2.9.

The TASK MANAGEMENT RESPONSE ALLOCATION LENGTH field specifies the size of the parameter data buffer allocated to receive the information shown in table x1. If the TASK MANAGEMENT RESPONSE ALLOCATION LENGTH field does not contain eight, the command shall be terminated with a CHECK CONDITION status, the sense key shall be set to ILLEGAL REQUEST, and the additional sense code shall be set to INVALID FIELD IN CDB.

The TASK MANAGEMENT FUNCTION field (see table 88) specifies the SAM-34 task management function to be processed.

**Table 88 — Task-management function-values TASK MANAGEMENT FUNCTION field**

<b>Value Code</b>	<b>SAM-34 Task Management Function</b>	<b>Addressed OSD Object</b>	<b>Task Tag Specified</b>
01h	ABORT TASK	Any	Yes
02h	ABORT TASK SET	Root	No
04h	CLEAR TASK SET	Root	No
08h	LOGICAL UNIT RESET	Root	No
40h	CLEAR ACA	Any	No
80h	QUERY TASK	Any	Yes
81h	QUERY TASK SET	Root	No
82h	QUERY UNIT ATTENTION	Root	No

All values codes not listed in this table are reserved.

If the TASK MANAGEMENT FUNCTION field contains a value that table 88 lists as being addressed to the root object and either the PARTITION\_ID field or the USER\_OBJECT\_ID field contains a value other than zero, the command shall be terminated with a CHECK CONDITION status, the sense key shall be set to ILLEGAL REQUEST, and the additional sense code shall be set to INVALID FIELD IN CDB.

The TASK TAG field contains the task tag that identifies the task to be managed if the TASK MANAGEMENT FUNCTION field contains a value listed as specifying a task tag in table 88. If table 88 lists a task management function as not specifying a task tag, then the contents of the task tag field shall be ignored.

The format of the task tag is specified in the applicable SCSI transport protocol standard and the length of the task tag may be less than eight bytes. Any bytes between the end of the task tag and the end of the TASK TAG field shall be ignored (e.g., a two-byte task tag occupies the first two bytes of the TASK TAG field and the remaining six bytes are ignored).

The get and set attributes parameters are defined in 5.2.2. The format of the Data-In Buffer and Data-Out Buffer when attributes are being retrieved or set is described in 4.12.

The capability is defined in 4.9.2.2.

The security parameters are defined in 5.2.6.

The PERFORM TASK MANAGEMENT FUNCTION parameter data (see table x1) indicates the results of the task management function specified by the TASK MANAGEMENT FUNCTION field. The parameter data shall be returned in the command data or parameter data segment of the Data-In Buffer (see 4.12.3).

**Table x1 — PERFORM TASK MANAGEMENT FUNCTION parameter data format**

Bit Byte	7	6	5	4	3	2	1	0
0	(MSB)							
1	DATA LENGTH (6h)						(LSB)	
2	Reserved							
3	Reserved							
4	SERVICE RESPONSE							
5	ADDITIONAL RESPONSE INFORMATION							
7	ADDITIONAL RESPONSE INFORMATION							

The DATA LENGTH field indicates the number of bytes that follow. The DATA LENGTH field shall contain six.

The SERVICE RESPONSE field (see table x2) indicates the service response (see SAM-4) returned by the task management function specified by the TASK MANAGEMENT FUNCTION field.

**Table x2 — SERVICE RESPONSE field**

Code	Service response (see SAM-4)
00h	FUNCTION COMPLETE
05h	FUNCTION SUCCEEDED
08h	FUNCTION REJECTED
09h	INCORRECT LOGICAL UNIT NUMBER
All codes not listed in this table are reserved.	

If the TASK MANAGEMENT FUNCTION field does not contain 10h (i.e., QUERY UNIT ATTENTION), the contents of the ADDITIONAL RESPONSE INFORMATION field are reserved. If the TASK MANAGEMENT FUNCTION field contains 10h, the ADDITIONAL RESPONSE INFORMATION field shall contain the data defined by SAM-4 for the Additional Response Information argument for the QUERY UNIT ATTENTION task management function.