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TO: T10 SBP-2 *ad hoc* Working Group

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RE: Task management event matrix

The table below is a proposal to summarize and clarify the expected or required target actions in response to common events. If agreed by the working group, I suggest that it be added to normative section 10, Task management.

10.5 Task management event matrix

Common events that affect the state of target fetch agents and their associated task set(s) are summarized below. Refer to the governing clauses in sections 8, 9 and 10 for detailed information.

Event	AGENT_STATE.*st* Normal	AGENT_STATE.*st* Stream	Task set(s) Normal	Task set(s) Stream
Power reset	RESET		Clear all task sets	
Command reset (write to RESET_START)	RESET		Clear all task sets	
Bus reset (immediate)	RESET	—	Clear all task sets	—
Bus reset (after one second)	—		Logout any initiator that has failed to successfully reconnect	
Login	—		—	
Create stream	—		—	
Reconnect	—		—	
Logout	RESET		Abort initiator's task set	
Faulted command (CHECK CONDITION)	DEAD		Abort faulted initiator's task set	
ABORT TASK	—		—	
ABORT TASK SET	DEAD		Abort initiator's task set	
CLEAR TASK SET	DEAD		Clear all task sets	
LOGICAL UNIT RESET	DEAD		Abort all the logical unit's task sets	
TARGET RESET	DEAD		Clear all task sets	
TERMINATE TASK	—		—	

With respect to events supported by the target's management agent, *e.g.*, logout, there is an assumption of successful completion. In the case of a function rejected response or other indication of failure, the preceding table does not apply.

Bus resets affect target fetch agents and task sets according to the kind of request, login or create stream, by which the initiator first acquired access privileges. A login request allocates normal command block resources while a create stream request allocates stream command block and stream control resources.

Immediately upon detection of a bus reset, all normal command block fetch agents transition to the reset state and their associated task sets are cleared. Stream command block and stream control fetch agents do not fetch any additional ORB's subsequent to a bus reset but otherwise preserve their state. The task sets associated with these stream agents continue execution, but status for completed commands is held by the target and not stored to the initiator's *status_FIFO*.

For one second subsequent to a bus reset, targets save state information for initiators that were logged-in at the time of the bus reset. If an initiator successfully completes a reconnect request during this period, the actions described in 8.3 occur. For normal command block requests, the task set is empty and the initiator may signal new ORB's to the target. For both stream command block and stream control agents, fetching operations resume from the same point as before the bus reset. Any completion status held by the target during this one second period may also be stored to the initiator's *status_FIFO* after the successful reconnection.

One second after a bus reset, the target shall automatically perform a logout operation for all login ID's and stream ID's that have not been reconnected with their initiator. This returns all the affected fetch agents to the reset state and aborts any associated stream task sets.