A Method for Encoding a New Parameter "*The Initiator will maintain data buffer content integrity across Bus Resets*"

(to address the proposal made by Ueda-san on Recovery in August.)

November 9, 1998
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☆Method for Encoding New Parameter(1)

➢Communication direction parameter

⇨Add two bits to indicate direction(s) to MAX_TASK_SET parameter.

- ★Bi-directional communication is based on the “two queues” model. In this model, uni-directional is modeled as single queue.
- ★MAX_TASK_SET parameter is currently indicating the characteristic of the queues (merged number of queue entries within two queues).
- ➔Indicating direction with MAX_TASK_SET will be consistent with the model.

☆Method for Encoding New Parameter(2)

- Parameter to indicate “the initiator will maintain data buffer content integrity across bus resets.”
  - ⇨Use value zero of MAX_T2I_TASK_SIZE parameter as proposed in august.
    - ★MAX_T2I_TASK_SIZE is limiting buffer size in initiator and is modeled as the size of intermediate re-transmission buffer in the target.
    - ★In case that initiator maintains data buffer content, no re-transmission buffer is necessary for the target.
    - ➔Indicating this initiator’s preference with MAX_T2I_TASK_SIZE will be consistent with the model.

☆MAX_TASK_SET Definition

Least significant 14 bits of this parameter returns the maximum size of the active task set across all ordered queues supported by this connection. The initiator must avoid queuing more tasks than this on the task list. All targets shall support at least one active task for each ordered queue. This value shall be fixed for the duration of a login. Most significant two bits of this parameter indicates communication direction(s) supported by this connection. The following table describes the encoding.

Most significant two bits	**description**
00_2	reserved
01_2	initiator-to-target uni-directional
10_2	target-to-initiator uni-directional
11_2	bi-directional

☆MAX_T2I_DATA_SIZE Definition

This parameter provided by the target indicates the maximum amount of data that will be held and re-sent by the target in case of recovery in response to a re-queued TRANSPORT_T2I_DATA command. The initiator shall set this parameter value smaller than or equal to the value provided by the target. The value zero specified by the initiator indicates that the target needs not to hold and re-send data beyond 1394 transaction. Target shall hold and re-send data up to this (negotiated) parameter size in case of recovery. Responsibility in holding the contents of buffer beyond this parameter size belongs to the initiator. The initiator shall avoid to issue TRANSPORT_T2I_DATA command which has associated buffer larger than this parameter in case that the buffer contents may not be held.

This value shall be fixed for the duration of a connection.