

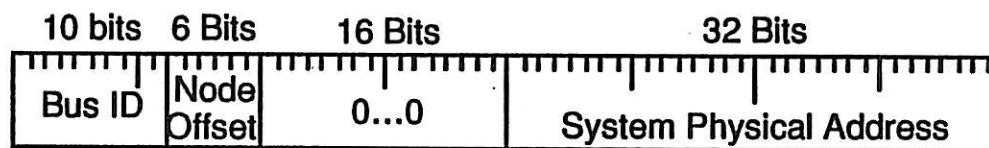
SCSI3 CCS over P1394

- P1394/P1212 64-bit Address Format
- P1394 Packet Format
- Block Read Packets
- Block Write Packets
- Transaction Codes
- Lock Operations

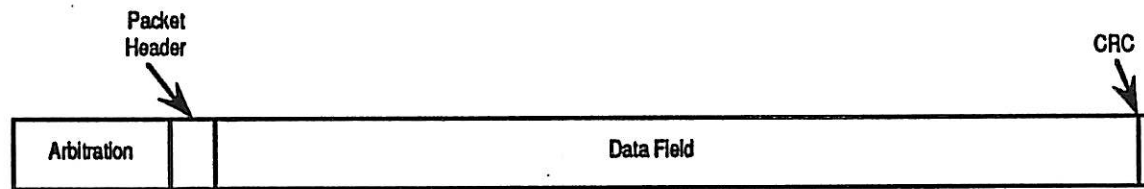
SCSI3 CCS over P1394 (cont.)

- Lock Request/Response
- Command Block Packet Format
- Command Queuing
- Command Queuing, 2 Initiators
- Dequeuing Commands (Emptying Queue)

P1394/P1212 64-bit Address Format



P1394 Packet Format



512 Byte Packet
(to scale)

Block Read Packets

T-Code	4 bits
Responder node ID & Read Address	64 bits
Requestor node ID	16 bits
Transaction Label	6 bits
Retry Code	2 bits
Reserved	24 bits
Length	16 bits
CRC	32 bits

Block Read Request

T-Code	4 bits
Requestor node ID & Status	64 bits
Responder node ID	16 bits
Transaction Label	6 bits
Retry Code	2 bits
Reserved	24 bits
Length	16 bits
CRC	32 bits
Data	Length bytes
CRC	32 bits

Block Read Response

Block Write Packets

T-Code	4 bits
Responder node ID & Write Address	64 bits
Requestor node ID	16 bits
Transaction Label	6 bits
Retry Code	2 bits
Reserved	24 bits
Length	16 bits
CRC	32 bits
Data	Length bytes
CRC	32 bits

● Block Write Request

T-Code	4 bits
Requestor node ID & Status	64 bits
Responder node ID	16 bits
Transaction Label	6 bits
Retry Code	2 bits
Reserved	8 bits
CRC	32 bits

Block Write Response

Transaction Codes

- 0000 Quadlet Write Request
 - 0001 Block Write Request
 - 0010 Write Response
 - 0100 Quadlet Read Request
 - 0101 Block Read Request
 - 0110 Quadlet Read Response
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Transaction Codes (cont.)

- 0111 Block Read Response
 - 1000 Cycle Start (Link Layer Function)
 - 1001 Lock Request
 - 1010 Isochronous Packet (Link Layer Function)
 - 1011 Lock Response
-

Lock Operations

- Invisible operations
- Lock Operations Needed for Queuing:
 - Compare and swap
 - Mask swap (return old value)

Lock Request/Response

T-Code	4 bits
Responder node ID & Write Address	64 bits
Requestor node ID	16 bits
Transaction Label	6 bits
Retry Code	2 bits
Reserved	8 bits
SubCommand	8 bits
Reserved	8 bits
Length (only 4, 8 or 16 are possible)	16 bits
CRC	32 bits
Data	Length bytes
CRC	32 bits

● Lock Request

T-Code	4 bits
Requestor node ID & Status	64 bits
Responder node ID	16 bits
Transaction Label	6 bits
Retry Code	2 bits
Reserved	8 bits
SubCommand	8 bits
Reserved	8 bits
Length (only 4, 8 or 16 are possible)	16 bits
CRC	32 bits
Data	Length bytes
CRC	32 bits

Lock Response

Command Block Packet Format

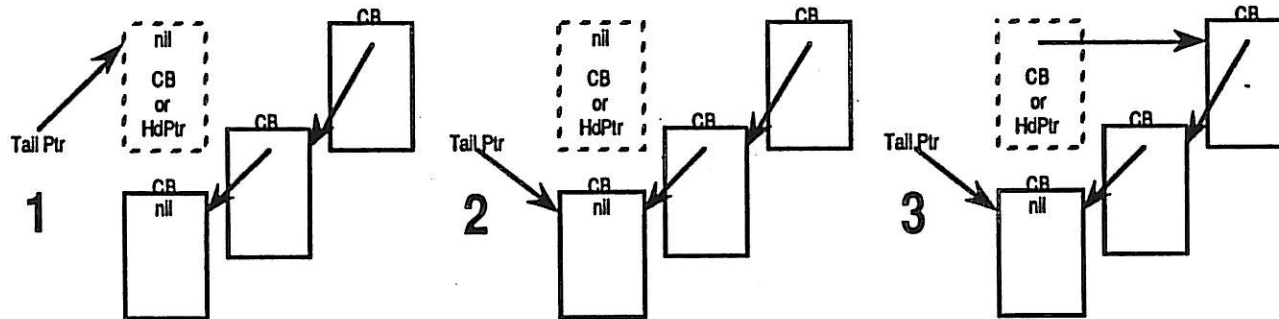
Operation Code
LUN
Logical Block Address
Transfer Length
Control

CDB

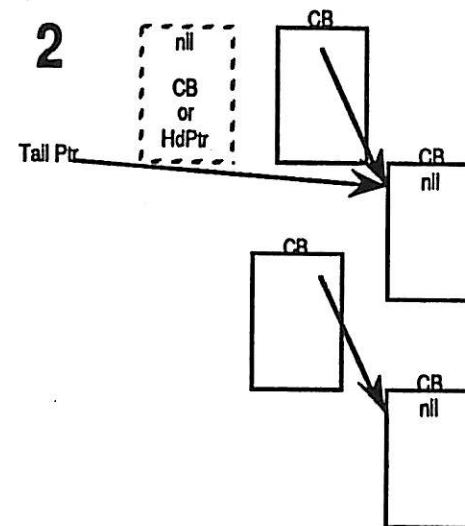
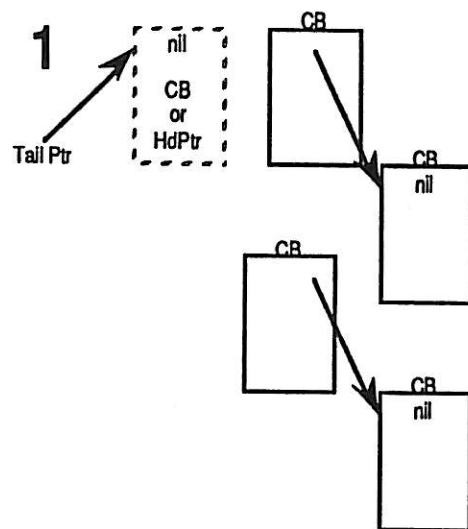
	Size of parameter	
Next CB Pointer	8	
Previous CB Pointer	8	
Addr of this CB	8	
Status Block Pointer	8	
Initiator Buffer Pointer	8	
Status Tail **	8	
Initiator Wakeup Register Ptr	8	
Initiator Wakeup Value	4	
Size	4	
SCSI Entity Address	8	↑ Command Dependant Area ↓
SCSI CDB	16	
SCSI Control	8	
SCSI Transfer Length	8	

CB

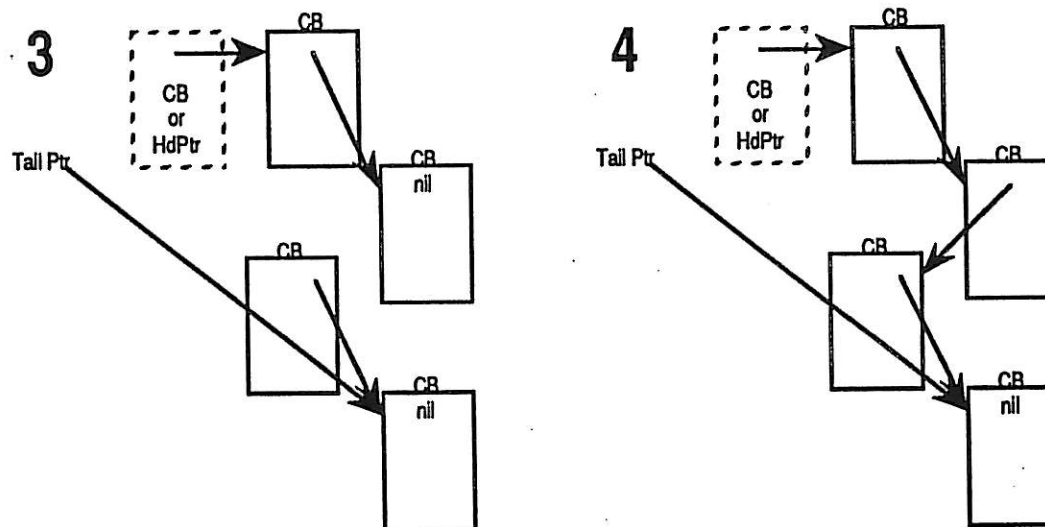
Command Queuing



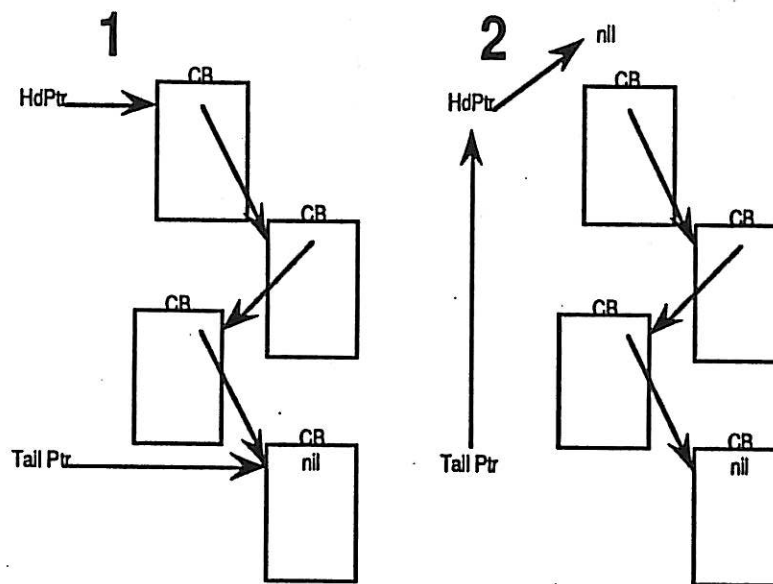
Command Queuing, 2 Initiators



Command Queuing, 2 Initiators (cont.)



Dequeuing Commands (Emptying Queue)



Dequeuing Commands (Emptying Queue) (cont.)

