

Agenda: May 18 Co-located Meeting P1285/X3T9.2

- **Introductions**
- **P1285: Current Direction**
- **P1285 Overview**
- **Discussion**
- **Next Co-located Meeting**

P1285 Scalable Storage Interface

X3T9.2/93-0962

P1285: Current Direction

- **Memory-Mapped Interface**
 - **Looks like a RAM**
- **Emphasis on Logical Level**
 - **Several Physical Levels in Appendix**

P1285 Scalable Storage Interface

Command.code Values

Names	Description
CMD_IN_MORE	More in-order xfers; media -> data buffer
CMD_OUT_MORE	More in-order xfers; data buffer -> media
CMD_IN_LAST	Last in-order xfer; media -> data buffer
CMD_OUT_LAST	Last in-order xfer; data buffer -> media
CMD_IN_EXACT	Last in-order xfer; media -> data buffer
CMD_OUT_EXACT	Last in-order xfer; data buffer -> media
CMD_FETCH	An any order xfer; media -> data buffer
CMD_JUMP	Over-write next command entry address

Command.status Values

Names	Description
STATUS_NULL	Reserved (never written) status value
STATUS_SOME	Status entry valid, data xfer continues
STATUS_DONE	Status entry valid, data xfer completed

Command Completion State Bits

State Bits

Description

error

done, data may be corrupted

diff

done, not all transferred

done

done, all transferred

more

data transfer continues into
next command entry block

Command.mode.exec Bits

Name	Enabling Condition Bits
<i>error</i>	<i>State.error</i>
<i>diff</i>	<i>State.diff</i>
<i>done</i>	<i>State.done</i>
<i>more</i>	<i>State.more</i>

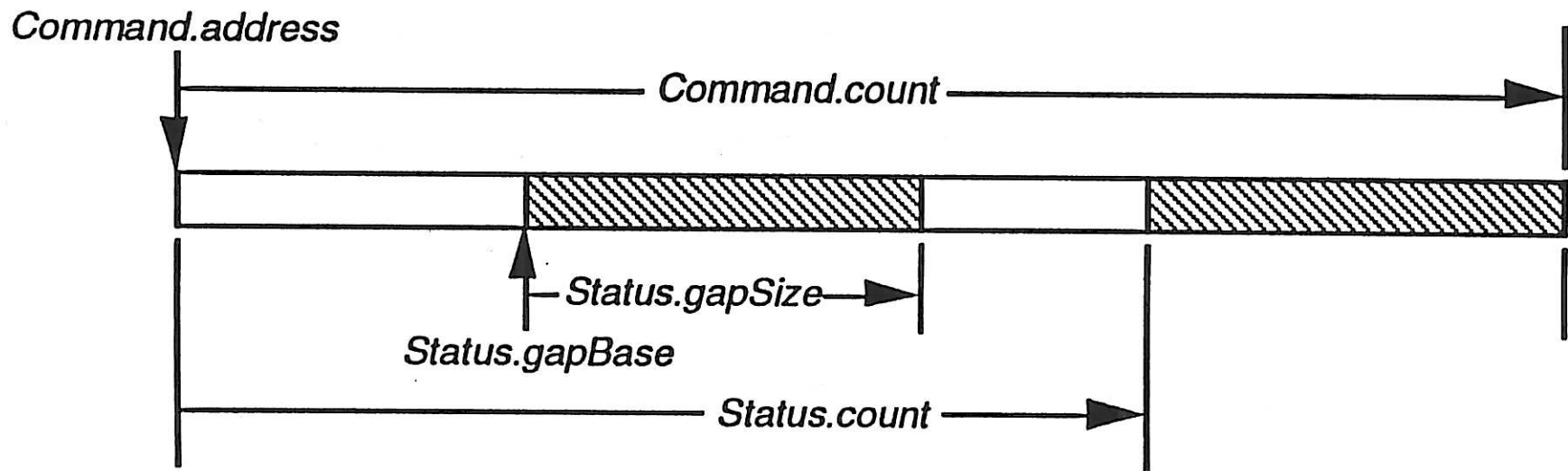
Command.mode.halt Values

Names	Bits Causing a Halt
HALT_ERROR	<i>State.error</i>
HALT_DIFF	<i>State.error, State.diff</i>
HALT_DONE	<i>State.error, State.diff, State.done</i>
HALT_NEVER	<i>-none-</i>

Command.mode.int Values

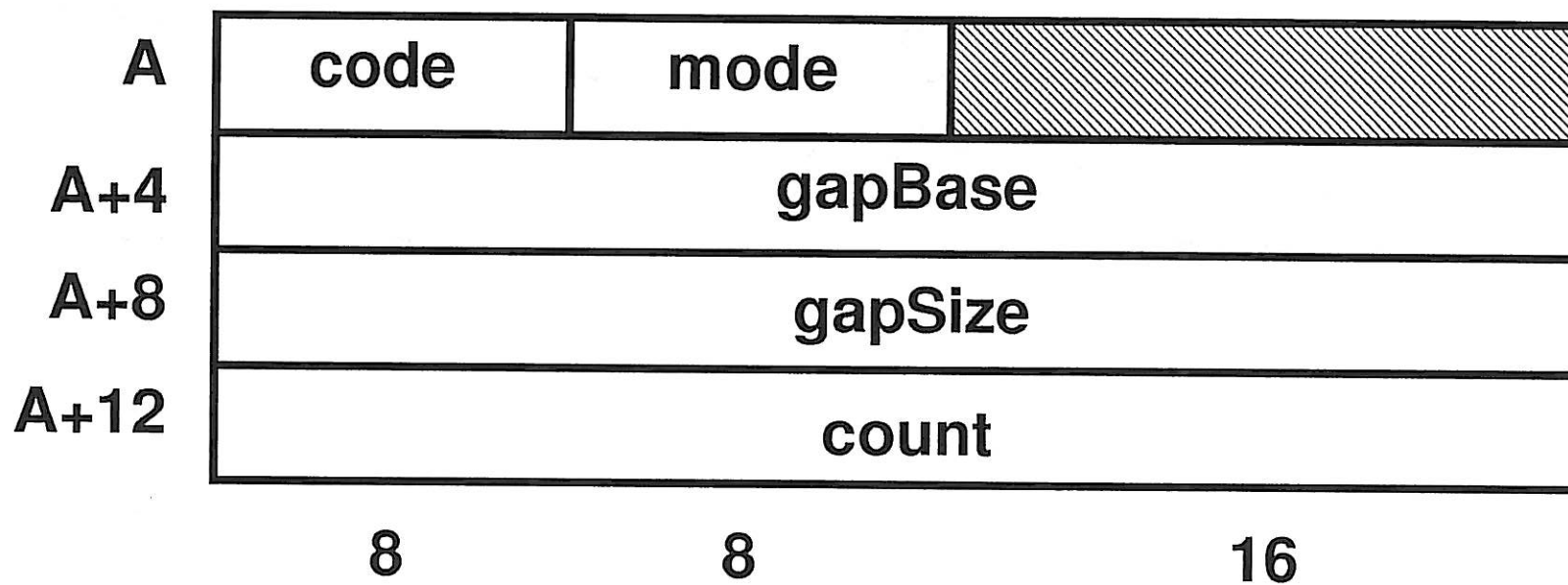
Names	Bits Causing a Interrupt
INT_ERROR	<i>State.error</i>
INT_DIFF	<i>State.error, State.diff</i>
INT_DONE	<i>State.error, State.diff, State.done</i>
INT_NEVER	<i>-none-</i>

Intermediate Fetch



P1285 Scalable Storage Interface

Intermediate Fetch Status Format



P1285 Scalable Storage Interface

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Command Entry Formats

A	code	mode	mediaAddressHi
A+4	mediaAddressLo		
A+8	offset		
A+12	count		
	8	8	16

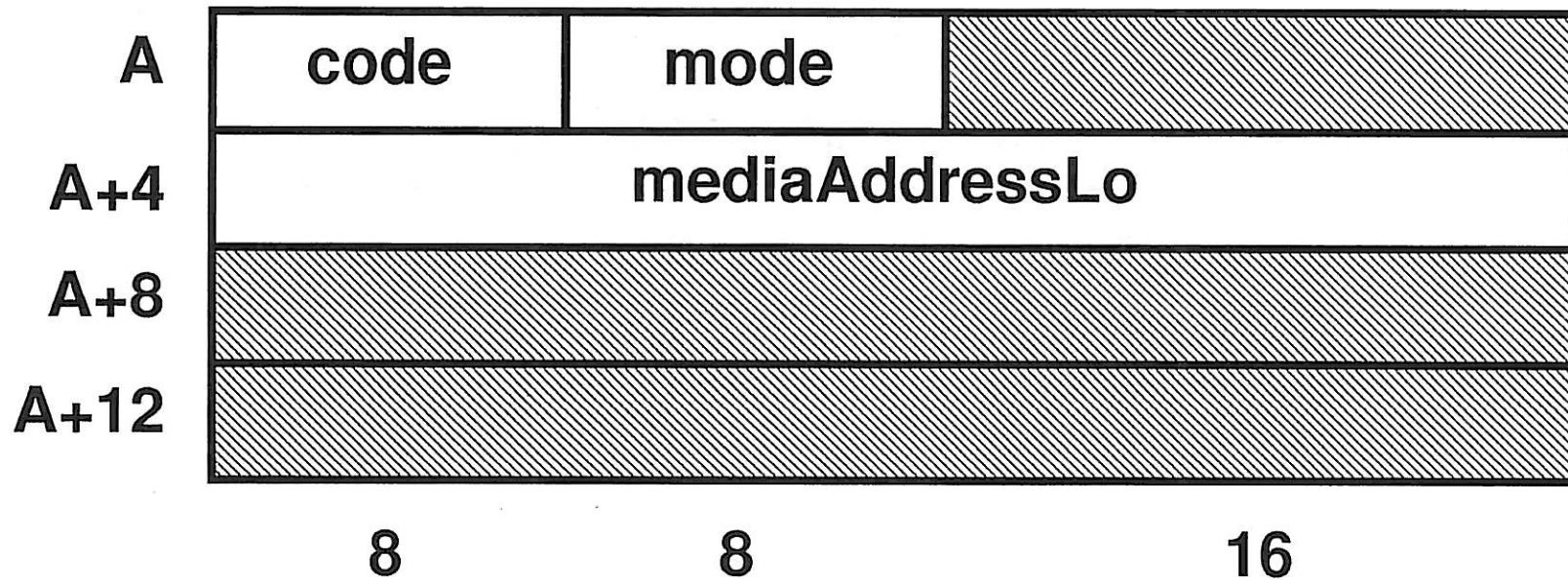
P1285 Scalable Storage Interface

Data Transfer Command Format

A	code	mode	mediaAddressHi
A+4	mediaAddressLo		
A+8	offset		
A+12	count		
	8	8	16

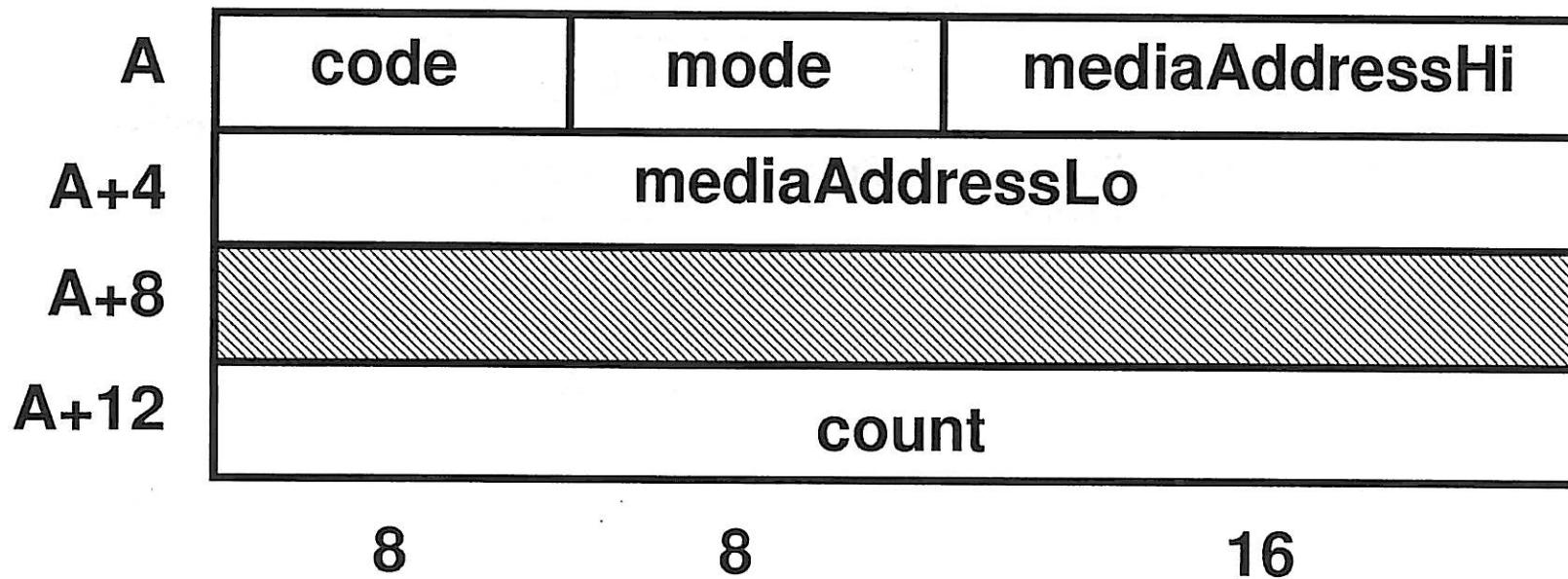
P1285 Scalable Storage Interface

Jump Command Format



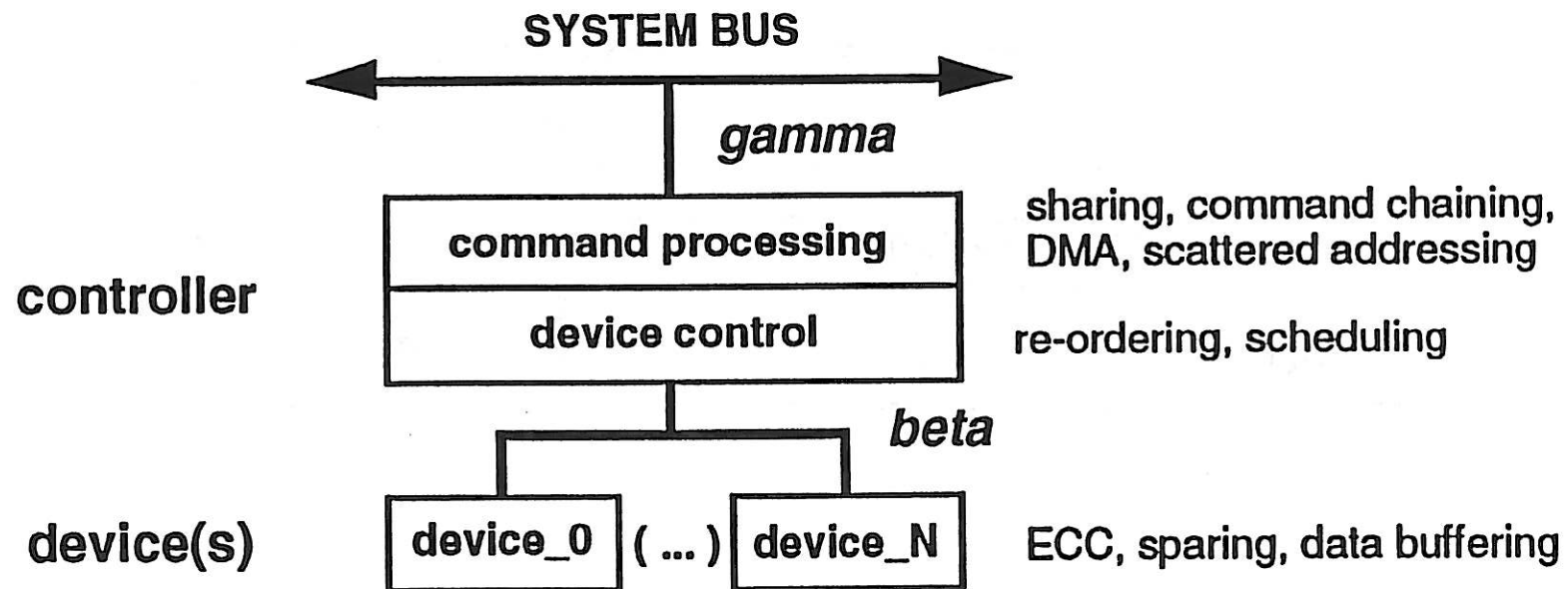
P1285 Scalable Storage Interface

Abnormal Status Entry Format



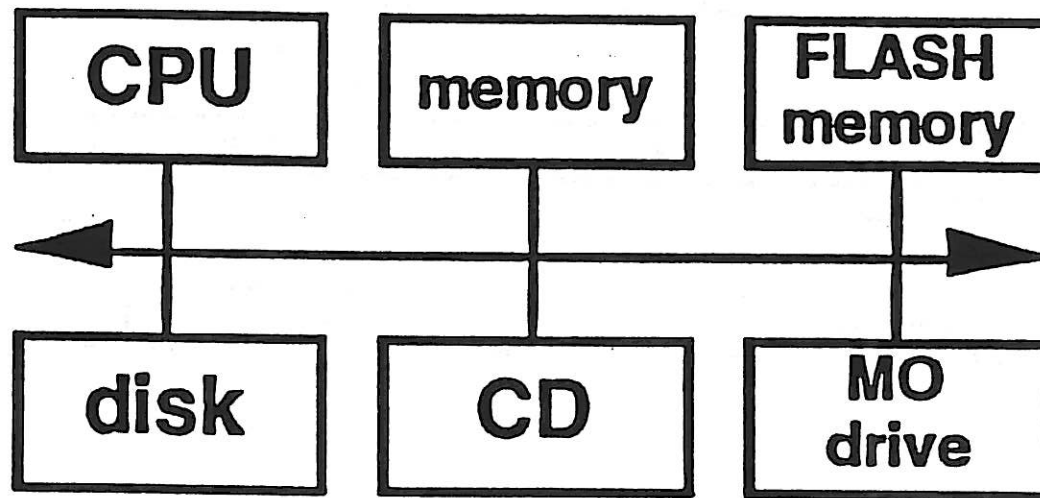
P1285 Scalable Storage Interface

Interface Levels



P1285 Scalable Storage Interface

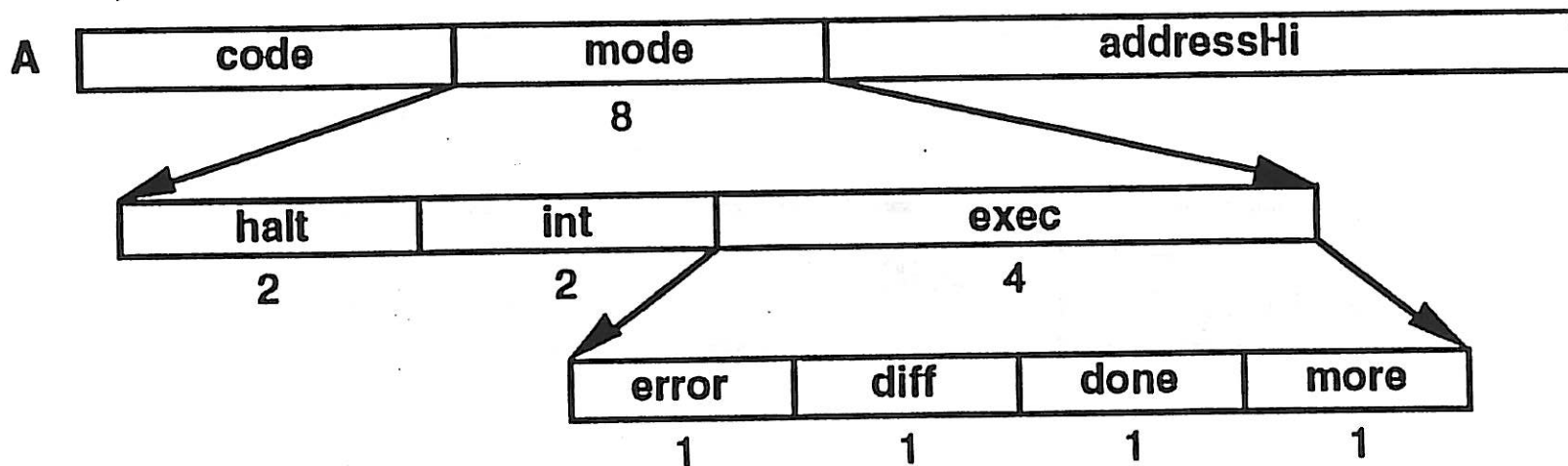
Systems of the '90s



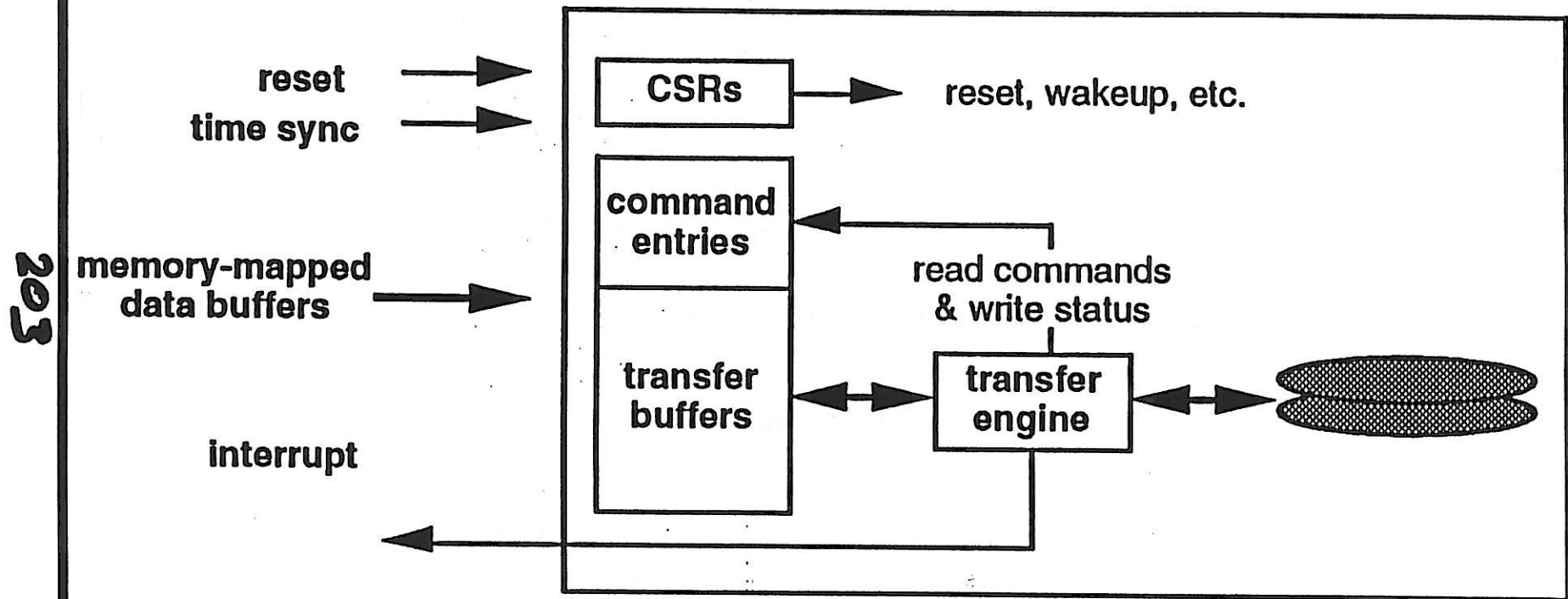
(components near the motherboard)

P1285 Scalable Storage Interface

*Command.mode*Field Components



Memory Mapped Storage (Beta Level)



P1285 Scalable Storage Interface