

X 3T9.2/87-21 Rev1



Scientific Micro Systems, Inc.

339 North Bernardo Avenue  
P.O. Box 7777  
Mountain View, CA 94039  
(415) 964-5700  
TWX: 910-379-6577  
TELEX: 172555  
FAX (415) 968-4861

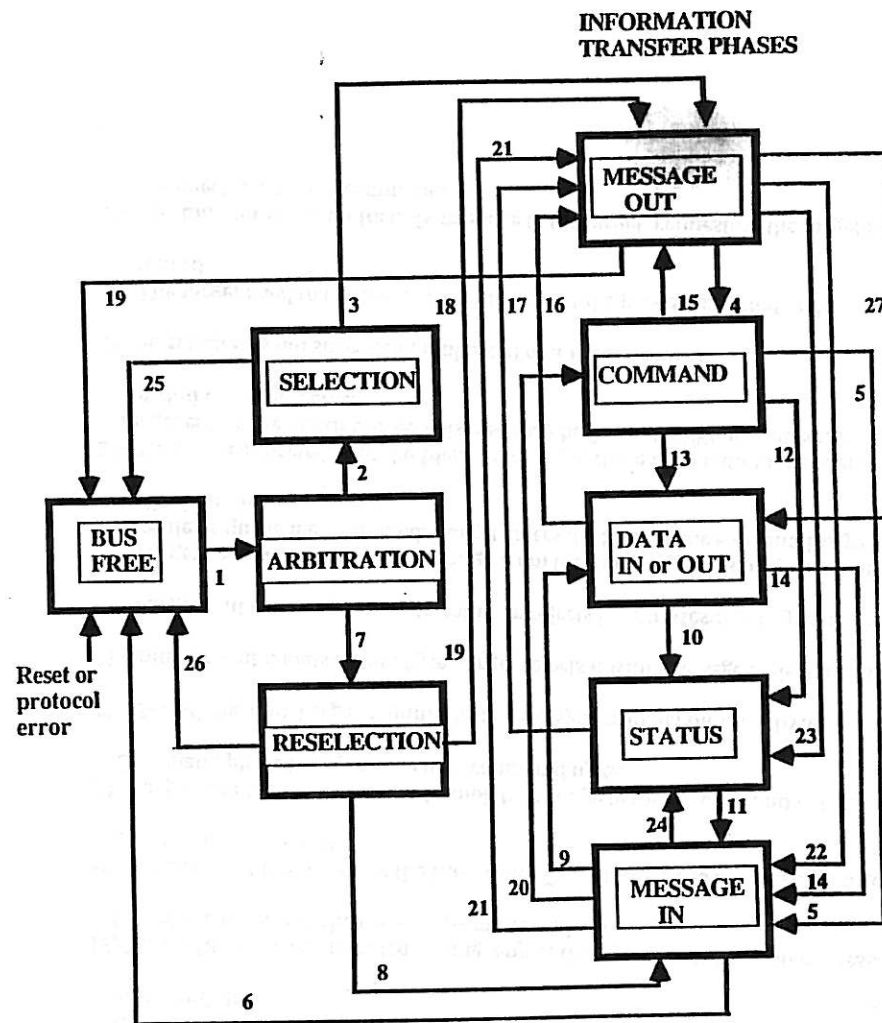
March 16th 1987

To John Lohmeyer  
Vice Chairman of ANSI X3T9.2

From Daniel Loski  
Scientific Micro Systems

Attached is the revised SCSI BUS PHASE SEQUENCES.

## SCSI BUS PHASE SEQUENCES



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SOME EXAMPLES OF  
SCSI BUS PHASE SEQUENCING

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- 1- SCSI device (initiator or target) tries to gain access to the bus.
  - 2- Initiator won arbitration, enters Selection phase to select a target.
  - 3- ATN is asserted by the initiator during the Selection phase. After accepting selection, the target enters the Message Out phase to allow the initiator to send the Identify message. The Identify message may be followed by the Abort or Bus Device Reset message.
  - 4- Initiator sent Identify message to target with no other message, target enters Command phase to request the command bytes from the initiator.
  - 5- Target received Command bytes, sends the Disconnect message to the initiator, then goes to Bus Free phase.
  - 6- Target sent Command Complete or Disconnect message to the initiator or the initiator sent Bus Device Reset message to the target and the target goes to Bus Free phase.
  - 7- Target won arbitration and enters Reselection phase to reconnect for the disconnected command.
  - 8- Target reselected to the initiator and sends the Identify message with the LUN for which the command was disconnected.
  - 9- The command involves a Data In or Out phase, from the Message In with Identify message, the target goes to Data Phase.
  - 10- The transfer length of the command was exhausted or was interrupted by an error, the target enters the Status phase.
  - 11- After Status byte is sent to the initiator, target sends the Command Complete message or a Link message.
  - 12- The command does not involve data transfer, target goes to the Status phase. This is the case for Test Unit Ready, Rezero Unit, Rewind etc...

- 13- The target does not disconnect after receiving the command bytes. The decoded command involves a Data In or Out phase.
- 14- Target wants to disconnect during the Data Out or In phase, prior to exhaust the transfer length (case for time consuming defective sector handling or cylinder switching etc...). Target enters Message In phase to send the Disconnect message to the initiator.
- 15, 16, 17, 18- ATN was asserted during any of these phases, target enters Message Out phase to request the message from the initiator.
- 19- Initiator sent the Abort or the Bus Device Reset message to the target. Target goes to Bus Free phase.
- 20- Target sent the Link Message Complete message to the initiator and enters Command phase to request the next command bytes.
- 21-22- Initiator and Target communicate with Synchronous message bytes.
- 21- Initiator sent a message out byte, target rejects it with Message Reject message.
- 22- Target sent a message out byte, initiator rejects it with Message Reject message.
- 23- Target received the Identify message from the initiator, but is busy and cannot execute or queue the command. Target enters the Status phase to send Busy status to the initiator.
- 24- Target reconnected, sent the Identify message, there is no data to transfer, the target enters the Status phase. This case may be for a Start/Stop Unit command, or Rewind command etc...
- 25- Selection was not successful, is aborted or a Reset occurred.
- 26- The target tried to reselect to the initiator but the process aborted or Reset occurred.
- 27- The initiator sends an Identify message to the target requesting the target not to disconnect during the command.