Date: July 5, 1990

To: X3T9.2 Committee (SCSI)

From: George Penokie (IBM)

Subject: Request for Clarification on exception conditions during logging operations

Problem:

In the Log Parameters section (7.3.2) the descriptions of the bits in byte 2 of the Log Parameters does not completely describe what to do when the logs become full. There is also a reference to 'exception conditions' but is not made clear as to what 'exception conditions' are. There is a cross-reference to 7.3.3.1 which implies that section will explain what 'exception conditions' are, but that section only references back to section 7.3.2.

Interpretation:

After talking with various people I have devised the following flow diagram to describe the intent of section 7.3.2. I would like the committee's input as to whether or not this is the correct interpretation.

IF the RLEC bit is set to 0 (Control Mode Page byte 2 bit 0)
   a) No logging actions will cause Check Conditions to occur
   b) No logging actions will cause Unit Attention Conditions to occur

IF the RLEC bit is set to 1
   IF ETC bit is set to 1 (Log Parameters byte 2 bit 4)
      IF a threshold condition is met (exception condition)
         IF there is an active I/O process
            a) Complete the active I/O process
            b) If a Contingent Allegiance Condition exists wait for it to be cleared
         END
         a) Issue a Unit Attention Condition to all Initiators
         IF the Unit Attention Condition is ignored
            a) Continue normal operations until the threshold condition is met again
         END
IF LP bit is set to 0 (Log Parameters byte 2 bit 0)

   IF a log counter reaches its maximum value (exception condition)
      a) Set DU to 1 (Log Parameters byte 2 bit 7)
      IF there is no active I/O process
         a) Wait until there is an active I/O process
         END
      b) Complete the active I/O process
      IF no Contingent Allegiance Condition exists
         a) Create a Contingent Allegiance Condition
            with a sense key of Recovered Error and an
            ASCQ of Log Exception, Count At Maximum
         END
      c) Wait for the Contingent Allegiance Condition to be cleared
      IF the cause of the counter reaching maximum is not
         cleared by the Initiator
         a) Create a Check Condition every time the counter
            should be incremented.
      END
   END
ELSE (LP bit set to 1)

   IF the log of parameters is full (exception condition)
      a) Place the new log parameter code value into the lowest
         parameter code value position (wrap-around the
         parameter codes)
      IF there is no active I/O process
         a) Wait until there is an active I/O process
         END
      b) Complete the active I/O process
      IF no Contingent Allegiance Condition exists
         a) Create a Contingent Allegiance Condition
            with a sense key of Recovered Error and an
            ASCQ of Log Exception, List Codes Exhausted
         END
      c) Wait for the Contingent Allegiance Condition to be cleared
      IF the cause of the log of parameters filling is not
         cleared by the Initiator
         a) Create a Check Condition every time an entry
is placed into the log of parameters