Date: July 5, 1990   X3T9.2/90-_//_ Rev 0

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 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
        END
    END

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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
                    END
              END
       END
END

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