Proposed Change in IMP-to-Host Protocol

We are currently considering a redefinition of the IMP-to-Host
error message types (type 1 and type 8) and the creation of addi-
tional IMP-to-Host error message types. We believe that these
changes will assist the Hosts in determining appropriate recovery
action, without causing any serious reprogramming problems. Our
current plans are to install these changes within a few months;
therefore we should be informed of any strong negative reactions
relatively quickly.

The proposed changes fall into two general classes as de-
scribed below:

A) General Error Message

    Under certain circumstances, particularly when the Host
    has been unresponsive to queued input for a "long time"
    the IMP drops its ready line for a short period, causing
    the "error flip-flops" to be set (see RFC #270, NIC 7818).
    Under these conditions the IMP sends a few NOP's to the
    Host and then resumes normal operation. We propose to
    send the Host a new message (message type 13) in addition
    to the NOPs; this message will tell the Host that the
    IMP's Ready Line was dropped, that the IMP's error flop
    was set, and that the IMP will respond to the next com-
    pletion of a Host-to-IMP message with a type 1 or type 8
    message (because of the setting of the IMP's error flop.

B) Error Messages which are Responses to Specific

    Host-to-IMP Transmissions:
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    1) IMP-to-Host message type 1 will be redefined to mean:
        "IMP's Error flip-flop was set on a message which
        the IMP cannot identify."

    2) IMP-to-Host message type 8 will be redefined to mean:
        "IMP's Error flip-flop was set during receipt of the
        message identified by the 'source' and 'link number'
        bits of this error message."

3) IMP-to-Host message type 10 will be defined to mean:
    "A Host-to-IMP message was too short (and cannot be
    identified)."

4) IMP-to-Host message type 11 will be defined to mean:
    "A Host-to-IMP message was too long; the message is
    identified by the 'source' and 'link number' bits
    of this error message."

5) IMP-to-Host message type 12 will be defined to mean:
    "A Host-to-IMP message with an illegal message type
    code was received; the message is identified by the
    'source' and 'link number' bits of this error message.
    (Note that the erroneous type code is not included in
    the error message.)"

AAM/jm