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Categories: A.5, O.7   John Heafner, RAND
Obsoletes RFC 221, NIC 7612   Alex McKenzie, BBN-NET
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                                 17-Nov-1971

                    REVISION OF THE MAIL BOX PROTOCOL

   The file transfer committee met and discussed the Mail Box Protocol
   RFC 221, NIC 7612. The potential utility for the mechanism was
   confirmed and a couple of changes suggested. We first give the
   changes and then restate the Protocol.

                              CHANGES

   1) The Mail Box Protocol is only to allow ASCII stings of text
   formatted for a network standard line printer rather than allowing
   other data types.

   2) A new command is to be added to the File Transfer Protocol called
   "Append With Create" which appends to a file if the file exists, and
   creates a file if it does not exist.

   3) The standard path name for the mailbox is to be, using conventional
   metalanguage symbols,

       "MAIL" <separator> ("PRINTER"/<ident>)

       <separator> is the ASCII GS, octal 035. The semantics of
       the above are the following:

       <ident> is a NIC IDENT

       "MAIL" <separator> "PRINTER" would be interpreted by the
       receiving site as meaning Append With Create the
       transmitted file to a bulk mail file to be printed or
       directly output it to a printer.

       "MAIL" <separator> <ident> would be interpreted to mean
       either

        1) The same as "MAIL" <separator> "PRINTER" i.e., ignore
        <ident> or

        2) Append With Create the following file to a file
        specifically for the person designated by <ident> for
        either online access or printing or both.

The problem of delivering mail to TIPs was discussed.

At the moment TIPs support only the Telnet Protocol, but it is planned
to support the Data Transfer Protocol. TIPs will have an ASCII line
printer available as an optional device. People desiring to send a
mail item to a TIP with a printer can open a standard published socket
and transmit to it with Telnet Protocol now, later also with the Data
Transfer Protocol. The NIC's plans with regard to TIPs is not to do
automatic network delivery to them. Messages to people using TIPs can
be sent to them through the NIC and will be delivered as with everyone
else directly to the person's initial file at the NIC. The TIP user
can read the item online or obtain a hardcopy at his terminal with the
Output Device Teletype command of NLS.

                        MAIL BOX PROTOCOL

The Mail Box Protocol will use established network conventions,
specifically the Network Control Program, Initial Connection Protocol,
Data Transfer Protocol, and File Transfer Protocol (as described in
current Network Protocols, NIC 7104).

The transmission is to be Network ASCII. The standard receiving mail
printer is assumed to have a print line 72 characters wide, and a page
of 66 lines. The new line convention will be carriage return (Hex
per the Telnet Protocol, RFC 158, NIC 6768. The standard printer will
accept form feed character (Hex '0C') (Octal '014') as meaning move
paper to the top of a new page.

It is the sender's responsibility to control the length of the print
line and page. If more than 72 characters per line are sent, or if
more than 66 line are sent without a form feed, then the receiving
site can handle these situations as appropriate for them. These
conventions can be changed by control codes as described below. At
the head of the message or document sent there is to be two copies of
an initial address string each terminated by a form feed. This
address string is to contain the sender's name and address, and the

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   receiver's name and address formatted in some reasonable, easy-to read
   form for a clerk to read and distribute. Comments could also be
   included in the address string. The requirements for two copies are
   to make one readable from a fan fold paper stack without effort.

   Initial Connection

   Initial Connection will be as per the Official Initial Connection
   Protocol, Document #2, NIC 7101, to the standard File Transfer socket
   #3.

   File Transfer

   The mail item (file) to be transferred would be transferred according
   to the File Transfer Protocol.

   As per the File Transfer Protocol, a file (mail item) can be sent in
   more than one data transaction as defined in the Data Transfer
   Protocol. End of file is indicated by the file separator (as defined
   in Data Transfer Protocol) or by closing the connection.

   Order of Transactions

   The only basic operation required is an Append With Create

                     Append With Create Request

      (Mailer) User ---------------------> Server (Mail Box)

                          <File - data>

                     -------------------->

                     End of File indication

                     -------------------->

                          Acknowledge

                     <--------------------

   The data type default is network ASCII. The Standard line printer
   default is as defined above. Other control transactions can be used.

                     CONTROL TRANSACTIONS TO BE USED

OP CODE

Hex	Octal	
09	011	Error or unsuccessful terminate
0A	012	Acknowledge or successful terminate
05	005	Append With Create request (add to existing file or create file if none exists)
5A	132	Change printer control settings

ERROR CODES

All error codes defined in the file Transfer Protocol could be
returned.

PRINTER CONTROL CODES

Hex	Octal	
D1	321	Meaning: Set line width to 72 characters
D2	322	Meaning: Use the full width of your printer
03	323	Meaning: Set page size to 66 line
04	324	Meaning: Set page size to infinite

Other virtual printer control codes can be added in the future.

Other classes of control codes can be added as the need arises.

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