3rd Level Ideas and other Noises

On 12 August 70, I met a BBN with representatives from BBN and MIT and
we discussed third llevel protocol.

Dial-up The following proposed dial-up protocol was agreed upon at the
meeting.

The purpose of this piece of protocol is to get a process at one site
(hereafter the using site) in contact with the logger at the other site
(hereafter the serving site).

To initiate contact, the using process attaches a receive socket US and
requests connection to socket 1 in the serving host. The using NCP thus
sends

```
      1             4             4             1
      ---------------------------------------------------
      |RTS |        US    |       1      |         p|
      ---------------------------------------------------
      |ALL |   P   |   space    |
      ------------------------------
```

over link 1, where US is the user's receive socket, p is the link, and
space is some nominal spae allocation.

The serving Host may decide to refuse contact, in which case it will
respond with the standard CLS. If it accepts contact, however, it will
send exactly an even 32 bit number over the connection and close the
connection. This even 32 bit number is the name of a receive socket in
the serving Host. This socket and the next higher numbered socket are

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reserved for contact with the user. Thus the serving NCP sends

```
        1              4              1
        ---------------------------------
        | STR |        1       | US|
        ---------------------------------
```

on link 1, followed by

```
               4
           -----------
           |   SS    |
           -----------
```

on link p. Note that SS must be even.

After sending the server socket number, SS, the NCP sends

```
        1              4                          4
        ---------------------------------------
        |CLS |         1          |         US |
        ---------------------------------------
        |STR |        SS+1        |         US |
        ---------------------------------------
        |RTS |        SS          |      US+1 | q |
        ---------------------------------------
        |ALL | q |        space        |
        ---------------------------
```

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The using Host also sets up these connections by sending

```
         1              4                   4
        ------------------------------------------
        | CLS  |       US         |         1  |
        ------------------------------------------
        | STR  |      US+1        |        SS   |
        ------------------------------------------
        | RTS  |       US         |       SS+1  | r |
        ------------------------------------------
```

At this point the user should be connected to the logger at the serving
site.

Standard Console

    We next agreed on an initial network standard console: 7-bit ASCII
in 8 bit fields with the eight bit on, transmitted in contiguous
streams. The speific codes are listed in appendix H of the IMP
Operations manual, BBN report #1877. This seems to work only some
hardship on PDP-10's and be fine for all others.

    For break or interrupt many systems use one of the standard
characters; for those which need another kind of signal,

```
         1        1
        ------------
        |INR  |  r |
        ------------
```

sent over the control link should suffice.

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