ASSIGNED NUMBERS

This Network Working Group Request for Comments documents the currently
assigned values from several series of numbers used in network protocol
implementations. This RFC will be updated periodically, and in any case
current information can be obtained from Jon Postel. The assignment of
numbers is also handled by Jon, subject to the agreement between
DARPA/IPTO and DDN/PMO about number allocation, documented in Appendix A
of this RFC. If you are developing a protocol or application that will
require the use of a link, socket, port, protocol, or network number
please contact Jon to receive a number assignment.

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The ARPANET community is making the transition form the ARPANET to the
ARPA Internet. This has been characterized as the NCP/TCP transition
[63], although many other the protocols are involved, too. The working
documents for the new Internet environment have been collected by the
Network Information Center (NIC) in a book entitled the "Internet
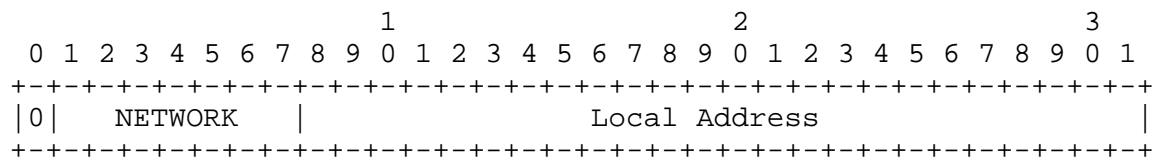Protocol Transition Workbook" [62].

Most of the protocols mentioned here are documented in the RFC series of
notes. The more prominent and more generally used are documented in the
"Internet Protocol Transition Workbook" or in the old "Protocol
Handbook" [17] prepared by the NIC. Some of the items listed are
undocumented.

In all cases the name and mailbox of the responsible individual is
indicated. In the lists that follow, a bracketed entry, e.g., [17,iii],
at the right hand margin of the page indicates a reference for the
listed protocol, where the number cites the document and the "iii" cites
the person.

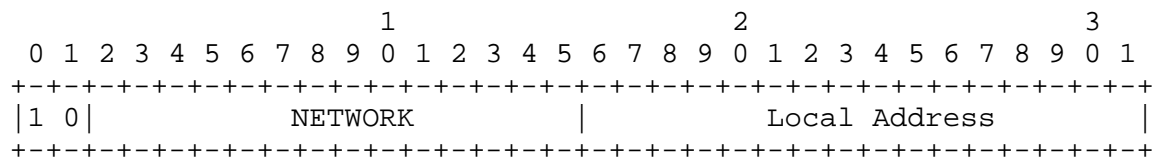   ASSIGNED NETWORK NUMBERS

   The network numbers listed here are used as internet addresses by the
   Internet Protocol (IP) [33,62]. The IP uses a 32-bit address field
   and divides that address into a network part and a "rest" or local
   address part. The division takes 3 forms or classes.

      The first type of address, or class A, has a 7-bit network number
      and a 24-bit local address. The highest-order bit is set to 0.
      This allows 128 class A networks.

```
                          1                   2                   3
      0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
     +-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
     |0|   NETWORK   |                Local Address                  |
     +-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
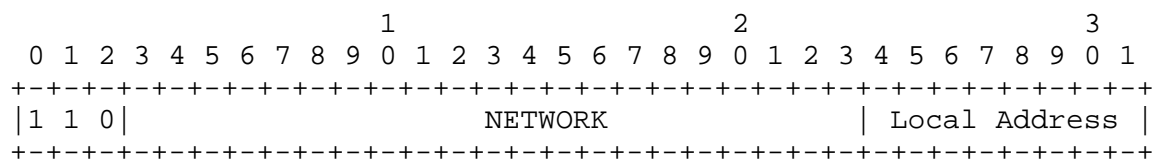```

                          Class A Address

      The second type of address, class B, has a 14-bit network number
      and a 16-bit local address.  The two highest-order bits are set to
      1-0.  This allows 16,384 class B networks.

```
                          1                   2                   3
      0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
     +-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
     |1 0|          NETWORK          |          Local Address        |
     +-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
```

                          Class B Address

      The third type of address, class C, has a 21-bit network number
      and a 8-bit local address. The three highest-order bits are set
      to 1-0-0. This allows 2,097,152 class C networks.

```
                          1                   2                   3
      0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
     +-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
     |1 1 0|                NETWORK                 | Local Address |
     +-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
```

                          Class C Address

   One commonly used notation for internet host addresses divides the
   32-bit address into four 8-bit fields and specifies the value of each
   field as a decimal number with the fields separated by periods. This
   is called the "dotted decimal" notation. For example, the internet
   address of ISIF in dotted decimal is 010.002.000.052, or 10.2.0.52.

     The dotted decimal notation will be used in the listing of assigned
     network numbers. The class A networks will have nnn.rrr.rrr.rrr, the
     class B networks will have nnn.nnn.rrr.rrr, and the class C networks
     will have nnn.nnn.nnn.rrr, where nnn represents part or all of a
     network number and rrr represents part or all of a local address or
     rest field.

     For various reasons, the assigned numbers of networks are sometimes
     changed. To ease the transition the old number will be listed as
     well. These "old number" entries will be marked with a "T" following
     the number and preceeding the name.

     To reflect the allocation of network identifiers among various
     categories (see Appendix A), a one-character code is placed to the
     left of the network number (in the column marked by an asterisk): R
     for Research and Development, D for DoD, and C for Commercial.

     Assigned Network Numbers

     Class A Networks

        * Internet Address Name   Network   References
        ---------------- ----   -------   ----------
        000.rrr.rrr.rrr   Reserved   [JBP]
     R 001.rrr.rrr.rrr T BBN-PR   BBN Packet Radio Network [JAW3]
     R 002.rrr.rrr.rrr T SF-PR-1   SF-1 Packet Radio Network [JEM]
     R 003.rrr.rrr.rrr   RCC-NET   BBN RCC Network   [JGH]
     R 004.rrr.rrr.rrr   SATNET   Atlantic Satellite Network[DM11]
     D 005.rrr.rrr.rrr T DEMO-PR-1   Demo-1 Packet Radio Network[LCS]
     R 006.rrr.rrr.rrr T SF-PR-2   SF-2 Packet Radio Network [JEM]
        007.rrr.rrr.rrr   Unassigned   [JBP]
     R 008.rrr.rrr.rrr   BBN-NET   BBN Network   [JGH]
     D 009.rrr.rrr.rrr T BRAGG-PR   Ft. Bragg Packet Radio Net [JEM]
     R 010.rrr.rrr.rrr   ARPANET   ARPANET   [17,1,REK2]
     R 011.rrr.rrr.rrr T UCLNET   University College London   [PK]
        012.rrr.rrr.rrr   Unassigned   [JBP]
        013.rrr.rrr.rrr   Unassigned   [JBP]
     C 014.rrr.rrr.rrr   PDN   Public Data Network   [REK2]
        015.rrr.rrr.rrr   Unassigned   [JBP]
        016.rrr.rrr.rrr   Unassigned   [JBP]
        017.rrr.rrr.rrr   Unassigned   [JBP]
     R 018.rrr.rrr.rrr   MIT   MIT Network   [10,43,NC3]
        019.rrr.rrr.rrr   Unassigned   [JBP]
        020.rrr.rrr.rrr   Unassigned   [JBP]
     D 021.rrr.rrr.rrr   EDN   DCEC EDN   [EC5]
        022.rrr.rrr.rrr   Unassigned   [JBP]
     R 023.rrr.rrr.rrr   MITRE   MITRE Cablenet   [44,APS]
        024.rrr.rrr.rrr   Unassigned   [JBP]

```
    R 025.rrr.rrr.rrr   RSRE-PPSN      RSRE / PPSN                 [NM]
    D 026.rrr.rrr.rrr   MILNET         MILNET                     [HH6]
    R 027.rrr.rrr.rrr   NOSC-LCCN      NOSC / LCCN                [KTP]
    R 028.rrr.rrr.rrr   WIDEBAND       Wide Band Satellite Net   [CJW2]
      029.rrr.rrr.rrr                  Unassigned                 [JBP]
    R 030.rrr.rrr.rrr   DCN-UCL        UCL DCNET                   [PK]
      031.rrr.rrr.rrr                  Unassigned                 [JBP]
    R 032.rrr.rrr.rrr   UCL-TAC        UCL TAC                     [PK]
      033.rrr.rrr.rrr                  Unassigned                 [JBP]
      034.rrr.rrr.rrr                  Unassigned                 [JBP]
    R 035.rrr.rrr.rrr   RSRE-NULL      RSRE Null Network           [NM]
    R 036.rrr.rrr.rrr T SU-NET         Stanford University Network[JCM]
      037.rrr.rrr.rrr                  Unassigned                 [JBP]
      038.rrr.rrr.rrr                  Unassigned                 [JBP]
    R 039.rrr.rrr.rrr   SRINET         SRI Local Network         [GEOF]
      040.rrr.rrr.rrr                  Unassigned                 [JBP]
    R 041.rrr.rrr.rrr   BBN-LN-TEST    BBN Local Network Testbed  [KTP]
      042.rrr.rrr.rrr                  Unassigned                 [JBP]
      043.rrr.rrr.rrr                  Unassigned                 [JBP]
    R 044.rrr.rrr.rrr   AMPRNET        Amateur Radio Experiment Net[HM]
    R 045.rrr.rrr.rrr T C3-PR          Testbed Development PRNET   [BG5]
    R 046.rrr.rrr.rrr   UCB-ETHER      UC Berkeley Ethernet        [SXL]
    R 047.rrr.rrr.rrr T SAC-PR         SAC Packet Radio Network    [BG5]
    R 048.rrr.rrr.rrr   NDRE-TIU       NDRE-TIU                    [PS3]
      049.rrr.rrr.rrr                  Unassigned                 [JBP]
    R 050.rrr.rrr.rrr   NDRE-RING      NDRE-RING                   [PS3]
      051.rrr.rrr.rrr                  Unassigned                 [JBP]
    R 052.rrr.rrr.rrr T ROCKWELL-PR    Rockwell Packet Radio Net   [EHP]
      053.rrr.rrr.rrr-126.rrr.rrr.rrr Unassigned                 [JBP]
      127.rrr.rrr.rrr                  Reserved                   [JBP]

  Class B Networks

    * Internet Address  Name         Network              References
    ----------------    ----         -------              ----------
      128.000.rrr.rrr                Reserved                   [JBP]
    R 128.001.rrr.rrr   BBN-TEST-B   BBN-GATE-TEST-B            [RH6]
    R 128.002.rrr.rrr   CMU-NET      CMU-Ethernet              [HDW2]
    R 128.003.rrr.rrr   LBL-CSAM     LBL-CSAM-RESEARCH          [MO1]
    R 128.004.rrr.rrr   DCNET        LINKABIT DCNET            [DLM1]
    R 128.005.rrr.rrr   FORDNET      FORD DCNET                [DLM1]
    R 128.006.rrr.rrr   RUTGERS      RUTGERS                   [CLH3]
    R 128.007.rrr.rrr   DFVLR        DFVLR DCNET Network       [HDC1]
    R 128.008.rrr.rrr   UMDNET       Univ of Maryland DCNET    [DLM1]
    R 128.009.rrr.rrr   ISI-NET      ISI Local Network          [CMR]
    R 128.010.rrr.rrr   PURDUE-CS    Purdue Computer Science    [CXK]
    R 128.011.rrr.rrr   BBN-CRONUS   BBN DOS Project         [12,WIM]
    R 128.012.rrr.rrr   SU-NET       Stanford University Net    [JCM]
```

```
     D 128.013.rrr.rrr    MATNET         Mobile Access Terminal Net[DM11]
     R 128.014.rrr.rrr    BBN-SAT-TEST   BBN SATNET Test Net      [DM11]
     R 128.015.rrr.rrr    S1NET          LLL-S1-NET               [EAK1]
     R 128.016.rrr.rrr    UCLNET         University College London  [PK]
       128.017.rrr.rrr                   Unassigned                [JBP]
       128.018.rrr.rrr                   Unassigned                [JBP]
       128.019.rrr.rrr                   Unassigned                [JBP]
       128.020.rrr.rrr                   Unassigned                [JBP]
     R 128.021.rrr.rrr    SF-PR-1        SF-1 Packet Radio Network [JEM]
     R 128.022.rrr.rrr    SF-PR-2        SF-2 Packet Radio Network [JEM]
     R 128.023.rrr.rrr    BBN-PR         BBN Packet Radio Network [JAW3]
     R 128.024.rrr.rrr    ROCKWELL-PR    Rockwell Packet Radio Net [EHP]
     D 128.025.rrr.rrr    BRAGG-PR       Ft. Bragg Packet Radio Net[JEM]
     D 128.026.rrr.rrr    SAC-PR         SAC Packet Radio Network  [BG5]
     D 128.027.rrr.rrr    DEMO-PR-1      Demo-1 Packet Radio Network[LCS]
     D 128.028.rrr.rrr    C3-PR          Testbed Development PR NET [BG5]
       128.029.rrr.rrr-191.254.rrr.rrr Unassigned                 [JBP]
       191.255.rrr.rrr                   Reserved                  [JBP]

   Class C Networks

     * Internet Address    Name           Network              References
       ----------------    ----           -------              ----------
       192.000.000.rrr                    Reserved                  [JBP]
     R 192.000.001.rrr    BBN-TEST-C     BBN-GATE-TEST-C           [RH6]
       192.000.002.rrr-192.000.255.rrr Unassigned                 [JBP]
     R 192.001.xxx.rrr-192.004.xxx.rrr BBN local networks        [SGC]
     R 192.005.001.rrr    CISLNET        CISL Multics Network      [CH2]
     R 192.005.002.rrr    WISC           Univ of Wisconsin Madison [RS23]
     C 192.005.003.rrr    HP-DESIGN-AIDS HP Design Aids            [NXK]
     C 192.005.004.rrr    HP-TCG-UNIX    Hewlett Packard TCG Unix  [NXK]
     D 192.005.005.rrr    BRLNET         BRLNET                  [1,MJM2]
     D 192.005.006.rrr    MINET          MINET                    [1,DHH]
     R 192.005.007.rrr    CIT-CS-NET     Caltech-CS-Net          [65,DSW]
     R 192.005.008.rrr    WASHINGTON     University of Washington [JAR4]
     R 192.005.009.rrr    AERONET        Aerospace Labnet         [9,LCN]
     R 192.005.010.rrr    ECLNET         USC-ECL-CAMPUS-NET        [MXB]
     R 192.005.011.rrr    CSS-RING       SEISMIC-RESEARCH-NET      [RR2]
     R 192.005.012.rrr    UTAH-NET       UTAH-COMPUTER-SCIENCE-NET [RF1]
       192.005.013.rrr                   Unassigned                [JBP]
       192.005.014.rrr                   Unassigned                [JBP]
       192.005.015.rrr                   Unassigned                [JBP]
       192.005.016.rrr                   Unassigned                [JBP]
       192.005.017.rrr                   Unassigned                [JBP]
       192.005.018.rrr                   Unassigned                [JBP]
       192.005.019.rrr                   Unassigned                [JBP]
       192.005.020.rrr                   Unassigned                [JBP]
     D 192.005.021.rrr    BRLNET1        BRLNET1                 [1,MJM2]
```

```
     D 192.005.022.rrr    BRLNET2        BRLNET2                 [1,MJM2]
     D 192.005.022.rrr    BRLNET3        BRLNET3                 [1,MJM2]
     D 192.005.022.rrr    BRLNET4        BRLNET4                 [1,MJM2]
     D 192.005.022.rrr    BRLNET5        BRLNET54                [1,MJM2]
       192.005.026.rrr-223.255.254.rrr Unassigned                 [JBP]
       223.255.255.rrr                 Reserved                   [JBP]
```

   Other Reserved Internet Addresses

```
     Internet Address  Name          Network               References
     ----------------  ----          -------               ----------
       224.000.000.000-255.255.255.255 Reserved               [JBP]
```

   Network Totals

      Assigned

Class	A	B	C	Total
Research	26	19	1033	1078
Defense	4	5	7	16
Commercial	1	0	2	3
Total	31	24	1042	1097

      Maximum Allowed

Class	A	B	C	Total
Research	8	1024	65536	66568
Defense	24	3072	458752	461848
Commercial	94	12286	1572862	1585242
Total	126	16382	2097150	2113658

                    ASSIGNED INTERNET VERSION NUMBERS

   In the Internet Protocol (IP) [33,62] there is a field to identify
   the version of the internetwork general protocol. This field is 4
   bits in size.

   Assigned Internet Version Numbers

      Decimal   Octal   Version   References
      -------   -----   -------   ----------
         0   0   Reserved   [JBP]
        1-3   1-3   Unassigned   [JBP]
         4   4   Internet Protocol   [33,62,JBP]
         5   5   ST Datagram Mode   [20,JWF]
        6-14   6-16   Unassigned   [JBP]
        15   17   Reserved   [JBP]

                    ASSIGNED INTERNET PROTOCOL NUMBERS

   In the Internet Protocol (IP) [33,62] there is a field, called
   Protocol, to identify the the next level protocol. This is an 8 bit
   field.

   Assigned Internet Protocol Numbers

      Decimal   Octal   Protocol   References
      -------   -----   ----------------   ----------
         0   0   Reserved   [JBP]
         1   1   ICMP   [53,62,JBP]
         2   2   Unassigned   [JBP]
         3   3   Gateway-to-Gateway   [48,49,JFH2]
         4   4   CMCC Gateway Monitoring Message [18,19,MB]
         5   5   Stream (ST)   [20,JWF]
         6   6   Transmission Control (TCP)   [34,62,JBP]
         7   7   UCL   [PK]
         8   10   Exterior Gateway Protocol (EGP)   [66,RH6]
         9   11   Unassigned   [JBP]
        10   12   BBN RCC Monitoring   [SGC]
        11   13   NVP   [12,SC3]
        12   14   PUP   [4,EAT3]
       13-14   15-16   Unassigned   [JBP]
        15   17   Cross Net Debugger (XNET)   [25,JFH2]
        16   20   Chaos Stream   [NC3]
        17   21   User Datagram (UDP)   [42,62,JBP]
        18   22   Multiplexing   [13,JBP]
        19   23   DCN Measurement Subsystems   [DLM1]
        20   24   Host Monitoring (HMP)   [55,RH6]
        21   25   Packet Radio Measurement   [ZSU]

```
   22       26      XEROX NS IP                        [59,JBP]
   23       27      Trunk-1                               [BML]
   24       30      Trunk-2                               [BML]
25-60    31-74      Unassigned                            [JBP]
   61       75      any host internal protocol            [JBP]
   62       76      CFTP                              [60,HCF2]
   63       77      any local network                     [JBP]
   64      100      SATNET and Backroom EXPAK            [DM11]
   65      101      MIT Subnet Support                    [NC3]
   66      102      MIT VAX Remote Disk Protocol          [MBG]
   67      103      Internet Pluribus Packet Core        [DM11]
   68      104      Unassigned                            [JBP]
   69      105      SATNET Monitoring                    [DM11]
   70      106      Unassigned                            [JBP]
   71      107      Internet Packet Core Utility         [DM11]
72-75  110-113      Unassigned                            [JBP]
   76      114      Backroom SATNET Monitoring           [DM11]
   77      115      Unassigned                            [JBP]
   78      116      WIDEBAND Monitoring                  [DM11]
   79      117      WIDEBAND EXPAK                       [DM11]
80-254 120-376      Unassigned                            [JBP]
  255      377      Reserved                              [JBP]
```

                        ASSIGNED PORT NUMBERS

   Ports are used in the TCP [34,62] to name the ends of logical
   connections which carry long term conversations. For the purpose of
   providing services to unknown callers a service contact port is
   defined. This list specifies the port used by the server process as
   its contact port. The contact port is sometimes called the
   "well-known port".

   To the extent possible these same port assignments are used with
   UDP [42,62].

   The assigned ports use a small portion of the possible port numbers.
   The assigned ports have all except the low order eight bits cleared
   to zero. The low order eight bits are specified here.

   Port Assignments:

Decimal	Octal	Description	References
1	1	Old Telnet	[40,JBP]
3	3	Old File Transfer	[27,11,24,JBP]
5	5	Remote Job Entry	[6,17,JBP]
7	7	Echo	[35,JBP]
9	11	Discard	[32,JBP]
11	13	Who is on or SYSTAT	[JBP]
13	15	Date and Time	[JBP]
15	17	Who is up or NETSTAT	[JBP]
17	21	Short Text Message	[JBP]
19	23	Character generator or TTYTST	[31,JBP]
20	24	File Transfer (Default Data)	[36,62,JBP]
21	25	File Transfer (Control)	[36,62,JBP]
23	27	Telnet	[41,62,JBP]
25	31	SMTP	[54,62,JBP]
27	33	NSW User System FE	[14,RHT]
29	35	MSG ICP	[29,RHT]
31	37	MSG Authentication	[29,RHT]
33	41	Unassigned	[JBP]
35	43	IO Station Spooler	[JBP]
37	45	Time Server	[22,JBP]
39	47	Unassigned	[JBP]
41	51	Graphics	[46,17,JBP]
42	52	Name Server	[38,62,JBP]
43	53	WhoIs	[57,62,JAKE]
45	55	Message Processing Module (receive)	[37,JBP]
46	56	MPM (default send)	[37,JBP]
47	57	NI FTP	[50,SK]
49-53	61-65	Unassigned	[JBP]

```
     55       67       ISI Graphics Language                    [3,RB6]
     57       71       Unassigned                                 [JBP]
     59       73       Augment File Mover                          [WWB]
     61       75       NIMAIL                                   [56,SK]
     63       77       Unassigned                                 [JBP]
     65      101       Unassigned                                 [JBP]
     67      103       Datacomputer at CCA                      [8,JZS]
     69      105       Trivial File Transfer               [47,62,KRS]
     71      107       NETRJS                                [5,17,RTB]
     72      110       NETRJS                                [5,17,RTB]
     73      111       NETRJS                                [5,17,RTB]
     74      112       NETRJS                                [5,17,RTB]
     75      113       Unassigned                                 [JBP]
     77      115       any private RJE server                     [JBP]
     79      117       Name or Finger                       [23,17,KLH]
     81      121       HOSTS2 Name Server                        [EAK1]
     83      123       MIT ML Device                              [DPR]
     85      125       MIT ML Device                              [DPR]
     87      127       any terminal link                          [JBP]
     89      131       SU/MIT Telnet Gateway                      [MRC]
     91      133       MIT Dover Spooler                          [EBM]
     93      135       Device Control Protocol                    [DCT]
     95      137       SUPDUP                                  [15,MRC]
     97      141       Datacomputer Status                     [8,JZS]
     99      143       Metagram Relay                            [GEOF]
    101      145       NIC Host Name Server                [64,62,JAKE]
    103      147       CSNET Mailbox Name Server (Telnet)   [58,MHS1]
    105      151       CSNET Mailbox Name Server (Program)  [58,MHS1]
    107      153       Remote Telnet Service                   [61,JBP]
 109-129  155-201      Unassigned                                 [JBP]
    131      203       Datacomputer                            [8,JZS]
 132-223  204-337      Reserved                                   [JBP]
 224-241  340-361      Unassigned                                 [JBP]
    243      363       Survey Measurement                       [2,AV]
    245      365       LINK                                     [7,RDB2]
 247-255  367-377      Unassigned                                 [JBP]
```

ASSIGNED AUTONOMOUS SYSTEM NUMBERS

The Exterior Gateway Protocol (EGP) [66] specifies that groups of
gateways may for autonomous systems. The EGP provides a 16-bit field
for identifying such systems. The values of this field are
registered here.

Autonomous System Numbers:

Decimal	Description	References
0	Reserved	[JBP]
1	The BBN Gateways	[JBP]
2-65534	Unassigned	[JBP]
65535	Reserved	[JBP]

ASSIGNED ARPANET LINK NUMBERS

The word "link" here refers to a field in the original ARPANET
Host/IMP interface leader. The link was originally defined as an 8
bit field. Some time after the ARPANET Host-to-Host (AHHP) protocol
was defined and, by now some years ago, the definition of this field
was changed to "Message-ID" and the length to 12 bits. The name link
now refers to the high order 8 bits of this 12 bit message-id field.
The low order 4 bits of the message-id field are to be zero unless
specifically specified otherwise for the particular protocol used on
that link. The Host/IMP interface is defined in BBN report 1822 [1].

Link Assignments:

Decimal	Octal	Description	References
0	0	AHHP Control Messages	[28,17,JBP]
1	1	Reserved	[JBP]
2-71	2-107	AHHP Regular Messages	[28,17,JBP]
72-149	110-225	Reserved	[JBP]
150	226	Xerox NS IP	[59,LLG]
151	227	Unassigned	[JBP]
152	230	PARC Universal Protocol	[4,EAT3]
153	231	TIP Status Reporting	[JGH]
154	232	TIP Accounting	[JGH]
155	233	Internet Protocol (regular)	[33,62,JBP]
156-158	234-236	Internet Protocol (experimental)	[33,62,JBP]
159-195	237-303	Unassigned	[JBP]
196-255	304-377	Experimental Protocols	[JBP]
248-255	370-377	Network Maintenance	[JGH]

                        ETHERNET NUMBERS OF INTEREST

   Many of the networks of all classes are Ethernets (10Mb) or
   Experimental Ethernets (3Mb). These systems use a message "type"
   field in much the same way the ARPANET uses the "link" field.

   Assignments:

Ethernet		Exp. Ethernet		Description	References
decimal	Hex	decimal	octal		
512	02,00	512	1000	XEROX PUP	[4,EAT3]
1536	06,00	1536	3000	XEROX NS IDP	[59,LLG]
2048	08,00	513	1001	DOD IP	[33,62,JBP]
2054	08,06	-	-	Address Res	[67,DCP1]

                  ASSIGNED PUBLIC DATA NETWORK NUMBERS

   One of the Internet Class A Networks is the international system of
   Public Data Networks. This section lists the mapping between the
   Internet Addresses and the Public Data Network Addresses.

   Assignments:

Internet	Public Data Net	Description	References
014.000.000.000		Reserved	[JBP]
014.000.000.001	311031700035 00	PURDUE-TN	[CXK]
014.000.000.002	311060800027 00	UWISC-TN	[CXK]
014.000.000.003	311030200024 00	UDEL-TN	[CXK]
014.000.000.004	234219200149 23	UCL-VTEST	[PK]
014.000.000.005	234219200300 23	UCL-TG	[PK]
014.000.000.006	234219200300 25	UK-SATNET	[PK]
014.000.000.007-014.255.255.254		Unassigned	[JBP]
014.255.255.255		Reserved	[JBP]

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                              APPENDIX A

     This appendix summarizes the agreements reached by the DDN/PMO and
     DARPA at a September 1982 meeting concerning the allocation and
     assignment of the various numbers associated with DoD Protocol
     Standards and the DARPA Experimental Standards.

     Recommended policy is summarized for each type of number assignment
     of concern:

       Network Identifiers used by the Internet Protocol

          It is recommended that the available number spaces for class A,
          B, and C network addresses be allocated among R&D, DoD and
          commercial uses, and that assignments of these addresses be the
          responsibility respectively of DARPA, DCA PCCO/DDN and the
          National Bureau of Standards. The recommended allocations are
          given below.

          Class A

             R&D allocation: 8 nets   assigned by: ARPA
             DoD allocation: 24 nets   assigned by: TBD
             Commercial allocation: 94 nets   assigned by: TBD
             Reserved Addresses: 0,127

          Class B

             R&D allocation: 1024 nets   assigned by: ARPA
             DoD allocation: 3072 nets   assigned by: TBD
             Commercial allocation: 12286 nets   assigned by: TBD
             Reserved Addresses: 0,16383

          Class C

             R&D allocation: 65536 nets   assigned by: ARPA
             DoD allocation: 458725 nets   assigned by: TBD
             Commercial allocation: 1572862 nets   assigned by: TBD
             Reserved Addresses: 0,2097151

          Class D

             All addresses in this class are reserved for future use,
             possibly in support of multicast services. They should be
             allocated to R&D use for the present.

APPENDIX A

        Within the R&D community, it will be the policy that network
        identifiers will only be granted to applicants who show
        evidence that they are acquiring standard Bolt Beranek and
        Newman gateway software or have implemented or are acquiring a
        gateway meeting the External Gateway Protocol requirements.
        Acquisition of the Berkeley BSD 4.2 UNIX software might be
        considered evidence of the latter.

        Experimental networks which later become operational need not
        be renumbered if that would cause hardships. Rather, the
        identifiers could be moved from R&D to DoD or Commercial
        status. Thus, network identifiers may change state among R&D,
        DoD and commercial, but the number of identifiers allocated to
        each use should remain constant. To make possible this fluid
        assignment, it is recommended that the network identifier
        spaces not be allocated by simple partition but rather by
        specific assignment. It is recommended that DDN/PMO or its
        designee keep track of the assignments made by DARPA, DDN and
        NBS to ensure that allocation remains as suggested.

    Protocol Identifiers

        In general, all assignments will be made by the R&D community,
        but any numbers which become R&D, DoD, national or
        international standards will be marked as such in this RFC.

        Protocol identifiers 0 and 255 are reserved.

        95 protocol identifiers are allocated for assignment to DoD
        standards, 32 for R&D use, and 127 for Commercial, national or
        international standards.

    Port Numbers

        A recommendation for allocation and assignment of port numbers
        is to be developed jointly by representatives of the ICCB and
        PSTP.

    ARPANET Link Numbers

        All unnecessary link number usage will be eliminated by joint
        effort of the ICCB, PSTP and BBN. BBN will give consideration
        to the use of link numbers to promote interoperability among
        various ARPANET interfaces and report to the ICCB, PSTP and
        DDN/PMO. Examples of possible interoperability issues are:

         (i)   interoperability of 1822 and X.25 interfaces

         (ii)   interoperability of SIP and other interfaces

         (iii) logical addressing or other special services

    IP Version Numbers

       These numbers will be assigned only by the R&D community for
       the purpose of exploring alternatives in internet protocol
       service expansion, such as inclusion of stream protocol (ST)
       services.

    TCP, IP and Telnet Option Identifiers

       These numbers will be assigned by the R&D community. Any
       permanent or experimental assignments will be identified in the
       documents specifying those protcols.

  Implementation:

    This policy recommendation has not been fully implemented as yet.
    Currently Jon Postel is acting coordinator for all number
    assignments.