Network Working Group
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Correction to BBN Report No. 1822

In the process of generating RFC # 271 we have discovered a set of errors in BBN Report No. 1822 (NIC 7958). The attached page is a corrected version of page 25; in addition the first two lines should be deleted from page 26. The paragraph at the top of page 25 is changed to show that the Host is not marked dead under the stated conditions, and to show that the timeout period is 30 (rather than 40) seconds. In the footnote, the two changes are underlined; these changes also show the timeout period as 30 seconds. A more formal update to Report 1822 will be distributed eventually.

Please note that these changes reflect errors in previous versions of Report 1822, not changes to the IMP system. The timeout period has always been 30 seconds and the Host was never marked dead under these conditions.

If the hardware interface from the IMP to the Host should fail in such a way as to cause any part of a message to remain on the output queue to the Host for a period of about 40 seconds, the Host is assumed to be broken. In this special case, the IMP will reset its interface and reclaim all the buffers on the output queue to the Host.* The IMP ready line will be dropped for approximately 1/4 second to notify the Host that the IMP was reset, that messages may have been discarded and that the message currently in transmission is to be discarded by the Host. The next incoming message from the Host will be discarded by the IMP and should therefore be a *NOP*.

*For example, the handshake procedure used by the hardware can theoretically fall out of sequence and halt; or some component in the interface may simply break. The same effect can also be produced by a Host that violates the specification to be responsive and allows any part of a reassembled message to remain in the IMP for a period of 30 seconds.

Whenever a message has remained in reassembly for 15 seconds without being reassembled, the destination IMP insures that the entire message is discarded and returns an *Incomplete Transmission* message (see Section 3.4) to the source Host. This event is unrelated to the 30-second timeout of messages on the output queue to the Host and, in particular, the IMP discards no other message and does not cause its ready line to drop.

The IMP ready line will also be turned off while the IMP attempts to reload a copy of the IMP program from the net and will remain off for approximately 1/4 second after the program is restarted. It takes approximately three seconds to reload the program over a 50-kilobit line. A successful reload is generally achieved within two or three attempts, or on the first attempt when the line happens to be error free.

An *IMP Going Down* control message will be sent to the Host when its IMP is about to be taken down for maintenance; in this case, the ready line will go off shortly thereafter (approximately 20 seconds later).

3.3 Host-to-IMP Leader Format

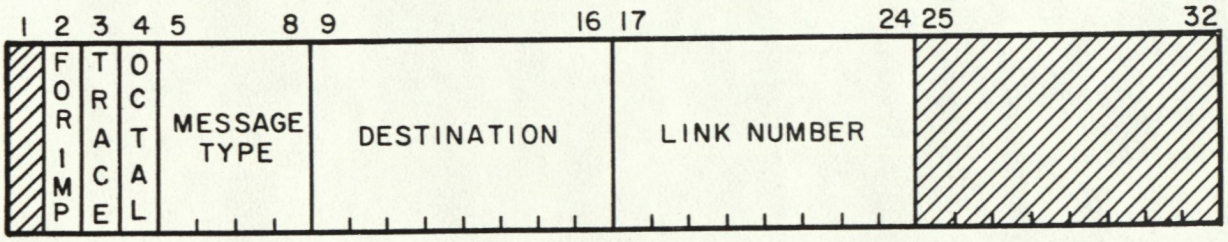

FIG.3-1 HOST-TO-IMP LEADER FORMAT

Bit 1 Unassigned.

Bit 2 For IMP—

The For IMP bit, which is designated for debugging, changing IMP parameters, IMP Teletype output, and

APPENDIX A

IMP AND HOST SITE IDENTIFICATION

Bits 9-16 of the leader of most Host-to-IMP or IMP-to-Host messages define a *network address* related to the message (these bits are not meaningful for message types 1, 2, and 4). In a Host-to-IMP message the network address identifies a particular Host to which the message should be delivered. In an IMP-to-Host message the network address identifies the Host from which the message originated.

A network address consists of six bits (bits 11-16 of the leader) which specify an IMP number, preceded by two bits (bits 9-10 of the leader) which specify the Host number of a particular Host connected to that IMP. The table below gives the decimal values of IMP number, Host number, and network address for each Host currently connected to the ARPA Network or scheduled for connection in the near future. Scheduled installation dates are also shown for Hosts not currently connected; these dates, however, are subject to change without notice.

IMP NUMBER	SITE NAME	HOST NUMBER	HOST	NETWORK ADDRESS	SCHEDULED INSTALLATION
1	UCLA	0	SIGMA-7	1	
		1	IBM 360/91	65	
2	SRI	0	PDP-10 (NIC)	2	
		1	PDP-10 (AI)	66	
3	UCSB	0	IBM 360/75	3	
4	UTAH	0	PDP-10	4	
5	BBN	0	DDP-516	5	See Note 1
		1	PDP-10 (A)	69	
		2	PDP-10 (B)	133	

Note 1: Prior to September 1, 1971 the BBN PDP-10 (A) will be Host number 0 (network address 5) and the BBN DDP-516 will be Host number 1 (network address 69). The address change is to be made during the day on 9/1/71.

IMP NUMBER	SITE NAME	HOST NUMBER	HOST	NETWORK ADDRESS	SCHEDULE INSTALLATION
6	MIT	0	Honeywell 645	6	
		1	PDP-10	70	
7	RAND	0	360/65	7	
		1	PDP-10	71	
8	SDC	0	IBM 360/75	8	
9	HARVARD	0	PDP-10	9	
		1	PDP-1	73	
		2	PDP-11	137	
10	LINCOLN	0	IBM 360/67	10	
		1	TX2	74	
11	STANFORD	0	PDP-10	11	
12	ILLINOIS	0	PDP-11	12	
13	CASE	0	PDP-10	13	
14	CARNEGIE	0	PDP-10	14	
15	PAOLI	0	B6500	15	
16	NASA/AMES	0	IBM 360/67	16	8/3/71
		2	TIP	144	
17	MITRE	2	TIP	145	8/31/71
18	RADC	0	H 635/645	18	10/5/71
		2	TIP	146	
19	NBS	0	PDP-11	19	11/2/71
		2	TIP	147	
20	ETAC	2	TIP	148	11/30/71
21	TINKER	0	418 III	21	1/4/71
22	McCLELLAN	0	418 III	22	2/1/72
23	USC	0	IBM 360/44	23	2/29/72
		2	TIP	151	
24	GWC	2	TIP	152	3/14/72
25	NCAR	0	CDC 7600	25	3/28/72
		2	TIP	153	
30	BBN/TIP	2	TIP	158	