

; <FEIGENBAUM>ARPANET.;1 SAT 27-SEP-75 8:33PM

26-SEP-75 15:27:12-PDT,8955;000000000000  
Mail from BBN-TENEX rcvd at 26-SEP-75 1526-PDT  
Date: 26 SEP 1975 1825-EDT  
From: GIRDVAINIS at BBN-TENEX  
Subject: ARPANET MANAGEMENT TRANSITION  
To: FEIGENBAUM at USC-ISI

FROM: Defense Communications Agency  
Washington, D.C. 20305

SUBJECT: ARPANET Management Transition

1. The operational management of the ARPANET was transferred from the Defense Advanced Research Project Agency to DCA on 1 July 1975. Enclosure 1 is a memorandum of policy for the utilization of ARPANET. Enclosure 2 is a copy of the ARPANET Management Transition Plan which gives a detailed description of the network.

2. The ARPANET backbone is now being funded through the Communications Services Industrial Fund (CSIF), managed by DCA. Monthly billings for ARPANET services will be prepared by the Defense Commercial Communications Office (DECCO), located at Scott AFB, Illinois 62225. The first billing is expected to be completed during September 1975, and will be retroactive to 1 July 1975. All subsequent billings will be monthly. The FY 1976 monthly billing rate will be \$4,900 for each TIP or IMP. A one percent overhead charge will be added to this monthly billing rate. It should be noted that DECCO will not bill the individual contractors such as ISI, MITRE, etc, but will bill the sponsor of the IMP or TIP, e.g. ARPA will be billed for all the ARPA-sponsored nodes.

3. A sponsors group will be established with the first meeting scheduled for 21 October 1975. The purpose of the group is to provide a vehicle for coordinating proposed network changes which may impact sponsors and users, and to exchange ideas and information on network operations and user activities. All network users will be represented by their sponsor.

4. Questions regarding the ARPANET should be directed to the ARPANET Management Branch Code 535, AUTOVON 222-6175 or 222-6176, Commercial (202) 692-6175 or 692-6176.

FROM: Defense Communications Agency  
Washington, D.C. 20305

SUBJECT: Policy for ARPANET Utilization

1. PURPOSE: This document prescribes the policy of the Defense Communications Agency concerning utilization of ARPANET.

2. APPLICABILITY: This policy applies to all users of

the ARPANET,

### 3. DEFINITIONS:

a. INTERFACE MESSAGE PROCESSOR (IMP). A store and forward packet switch which will accommodate up to four host computers,

b. TERMINAL INTERFACE PROCESSOR (TIP). A store and forward packet switch which will accommodate up to 3 host computers and 64 terminals.

c. HOST. A customer owned computer which is connected to a host port on an IMP or TIP.

(1) LOCAL HOST. A host located within 30 feet of an IMP or TIP.

(2) DISTANT HOST. A host which is more than 30 feet but less than 2,000 feet from an IMP or TIP.

(3) VERY DISTANT HOST. A host which is located over 2,000 feet from an IMP or TIP and requires modems.

d. TERMINAL. A teletypewriter, CRT or similar unit which is connected to a terminal port of a TIP.

e. INTERSWITCH TRUNKS. A circuit between packet switches (e.g., IMPS and TIPS) which is used to pass messages through the network.

f. ACCESS LINE. A circuit from a host computer or terminal to an IMP or TIP. The circuit may be a local cable or a transmission facility requiring modems.

g. BACKBONE. The switching nodes (e.g., IMPS - TIPS), the communications lines interconnecting the nodes, and the network control center.

h. SPONSOR. A DoD or U.S. Government Agency, which qualifies as an ARPANET user is authorized to sponsor a contractor or other non-government activity for access to the ARPANET for the conduct of official U.S. Government business.

4. DESCRIPTION: The ARPANET is an operational, computerized, packet switching DoD digital network which provides a capability for terminals or geographically separated computers, called Hosts, to communicate with each other. The Host computers typically differ from one another in type, speed, word length, and operating system. Each terminal or Host computer is connected into the network through a local small computer called an IMP or TIP. The complete network is formed by interconnecting the IMP's through wideband communication lines (50KB) supplied by common carriers. Each IMP and TIP is programmed to receive and forward messages to the neighboring IMP's or TIP's in the network. During a typical Host to

Host operation, a Host passes a message to its IMP; the message is passed from IMP to IMP through the network until it finally arrives at the destination IMP, which passes it along to the destination Host. A terminal (teletypewriter or CRT) accesses the network through a Terminal Interface Processor (TIP) and sends a message to a Host or another Terminal. The terminal message passes through the network in the same manner as a Host to Host message. The elements of the network are the Interface Message Processors (IMP), Terminal Interface Processors (TIP), interswitch trunks, access lines, host computers and terminals.

5. RESPONSIBILITY FOR OPERATIONAL DIRECTION:

a. The Director, DCA, will control system engineering and exercise operational direction over those operating elements of ARPANET which are part of the backbone. ARPANET subscriber equipment/terminals are non-backbone facilities. However, ARPANET subscribers must be responsive to management instructions issued by the DCA.

b. Criteria and standards for interface are specified in Report Number 1822, Interface Message Processor: Specifications for the Interconnection of a Host and an IMP (Bolt, Baranek and Newman, April 1973). New criteria and standards developed jointly by the DCA, the Military Services, and the Defense agencies will be promulgated by the DCA. All subscribers will meet ARPANET interface criteria.

c. The Director, DCA, on a continuing basis, will monitor the effectiveness of ARPANET, evaluate those matters which have major impact or will impact adversely on the network, and direct action to alleviate or prevent such impact.

6. SUBSCRIBER ACCESS: The ARPANET is intended to be used solely for the conduct of or in support of official U.S. Government business.

a. DOD USERS - Subject to the availability of assets, DoD activities will be connected to the ARPANET provided their requirements are processed through normal communications validating channels.

b. NON-DOD U.S. GOVERNMENT ACTIVITIES - Requests for ARPANET service from non-DoD U.S. Government activities will be considered by DCA on a case-by-case basis.

c. NON-GOVERNMENT U.S. ACTIVITIES - A DoD or other U.S. Government activity authorized to use the network may sponsor as a User, a non-government activity performing in contractual support of the U.S. Government. Justification outlining benefits to the U.S. Government for such access shall be provided to DCA by the sponsoring activity. Cost for network services provided to non-government activities shall be allocated to the sponsoring activity.

d. NON-U.S. ACTIVITIES - Non-U.S. activities will not be

directly connected to the ARPANET. Utilization of the ARPANET may be provided through the facilities of an authorized user provided the use is coordinated with DCA.

e. NON-COMPETITIVE BASIS - The ARPANET is an operational DoD network and is not intended to compete with comparable commercial service. Accordingly, before ARPANET service is provided to any non-U.S. Government activity it must be determined that adequate commercial service is not available.

f. PRIVACY - The proposed use of the ARPANET must not be in violation of applicable information privacy laws.

## 7. PROCEDURE:

a. U.S. Government activities requesting ARPANET service must apply to the Director, Defense Communications Agency, ATTN: ARPANET Management Branch, Code 535. The format for the application is at enclosure 1.

b. A non U.S. Government activity must have a U.S. Government activity acting as a sponsor. Application for service on the ARPANET must be submitted by the sponsoring activity to Director, Defense Communications Agency, ATTN: ARPANET Management Branch, Code 535. The application must clearly state how the proposed service is in the best interest of the U.S. Government, is essential to mission fulfillment, does not violate information privacy laws, and that adequate commercial service is not available. The format for this application is at enclosure 1.

c. DCA will evaluate the application and advise the requesting activity of the disposition of their request within thirty days. If the application is approved the notification will include instructions for gaining access to the ARPANET.

-----