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Computer Systems Research Division Request for Comments No.51

PLANS FOR THE MULTICS ARPA NETWORK PROGRAM LOGIC MANUAL

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This memo presents my thoughts on the ARPA Network PLM we are to produce for Honeywell, with my first cut at a rough outline of the PLM. Comments of those involved are solicited.

The attached outline indicates, at each appropriate section heading, who I think is best able to write that section. The idea, of course, is to get the person who knows about it to write about it. One thing which will make our task easier than we originally thought is that Honeywell will be doing all the typing for the PLMs in Phoenix, just as the SPS/MPM typing was done here at MAC. Thus, we do not have to turn over finished copy to Steve Webber; initial drafts of material may be handwritten, and should follow the Honeywell guidelines for sectionalization given in MTB 59.

Our objective is to produce an adequate PLM for Honeywell without taking up too much of our time. I would like to see initial detailed outlines of the PLM sections in about two weeks, and first drafts of the sections themselves in about four weeks. We hope to complete the PLM (except for interaction with the typists -- proofreading, etc.) in about two months.

PLM writeups should include:

1) Descriptions of how each piece of software works
2) Module writeups (a la the SPS) for entries called externally from the package of which they are a part (i. e., purely internal interfaces need not be written up).

Where appropriate, pointers should be given to other current documentation (MPM, NUS, other PLM's). See MAB-007 for more information on the content of the PLM.

ARPA Network Software Program Logic Manual
(AN-64)

Note: Initials in parentheses indicate tentative PLM section authors. "SPS" indicates a section will draw heavily from existing SPS documentation.

1. Overview of the Multics ARPA Network Implementation (MAP & KTP) (1)

   1.1 ARPA Network protocols and relevant documents

   1.2 Relationship of the IMP DIM, NCP, and Network Daemon

   1.3 "User-Level" protocol implementations and other user-ring software

2. The IMP DIM (RKK) (2)

3. The Network Control Program

   3.1 Overview (KTP & DMW)

   3.2 Implementation (EWM) (3)

   3.3 Daemon (privileged) calls (DMW & SPS) (4)

4. The Network Daemon and its environment (KTP)

(1) Probably a re-hash of what started out as some of Mike's NUS drafts.

(2) The outline for this section should be fleshed out as soon as possible; it shouldn't take too much effort to do that.

(3) This will be an edited version of Ed Meyer's "How the NCP works" document.

(4) This will be mostly module writeups, with a little more prose than is already found in the SPS sections.

5. "User-Level" protocol implementation

   5.1 Role of the Answering Service in Server-side protocol implementations (DMW)

   5.2 The Server Telnet (DMW)

   5.3 The File Transfer Server (KTP)

   5.4 The User Telnet (DMW)

   5.5 The User-FTP (DMW)

   5.6 Network IOSIMs (DMW)

6. Miscellaneous support software (KTP & DMW) (1)

(1) This will contain module writeups and descriptions of such routines as net_connect_, net_pin_manager_, host_id_, etc.