

Network Working Group  
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D. Crocker  
UCLA-NMC  
N. Neigus  
BBN-NET  
J. Feinler  
SRI-ARC  
J. Iseli  
MITRE-TIP  
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#### Arpanet Users Interest Working Group Meeting

A new group, the Arpanet Users Interest Working Group (USING) is the outgrowth of a meeting held in Boston on May 22-23, 1973. The meeting, cochaired by Dave Crocker, UCLA-NMC, and Nancy Neigus, BBN, followed BBN's Resource Sharing Workshop.

#### PURPOSE

The USING meeting was seen by the members as a forum for Network Users to air complaints, exchange information, voice desires, and present concrete proposals for the design and implementation of user-oriented Network capabilities.

The group will devote itself to lobbying on behalf of user interests, to promoting and facilitating resource sharing, to improving user interfaces (support), and to studies of standardization. The ultimate goal will be provide users identification of, and facilitated access to, whatever resources on the Network they might wish to use.

Neigus, Crocker, and Iseli of MITRE were selected to define the objectives and goals of USING in more detail, and they will present their discussion in a later publication.

#### ATTENDEES

Dave Crocker, UCLA-NMC, Co-Chairperson  
Nancy Neigus, BBN, Co-Chairperson  
Ken Bowles, UCSD-CC  
Frank Brignoli, NSRDC  
Jim Calvin, CASE-10  
Jake Feinler, NIC  
Wayne Hathaway, NASA-AMES  
Jean Iseli, MITRE  
Mike Kudlick, NIC  
Mike Padlipsky, MIT-MULTICS

Lee Richardson, USC-ISI  
Ron Stoughton, UCSB  
Jim White, NIC  
Steve Wolf, UCLA-CCN  
Joe Wyatt, Harvard

#### CATEGORIES OF CONCERN

The meeting began by attempting to create a relatively complete list of topics directly relevant to users. The intention was to then discuss some of these categories in detail. The categories of concern to users are listed here along with a brief outline of the discussion and recommendations associated with each category. Not all topics were discussed fully due to time limitations. It was acknowledged that some of the recommendations were quite extensive, but that they should be mentioned even though their implementation would be far off.

1. Online and Offline Documentation, Information Sharing, and Consulting
  - a. There is a general need to upgrade the quality, technical accuracy, timeliness, dissemination, and format of both online and offline documentation.
  - b. Documentation should avoid "buzz" words (jargon), and should follow easily understood syntax conventions, abbreviation standards, reference citation rules, etc. However, there probably cannot be a standard format for writing documentation.
  - c. Offline documentation should be well indexed, should contain a good table-of-contents, and should be written in an easily browsable format. Online documentation should be presented in a browse mode with well-labeled categories of information as well as a keyword search capability.
  - d. Documentation should be identified with date/author/version information, particularly in large online documents, so that it is easier to keep the most current version of a document and to query the author, in the event of problems with the documentation.
  - e. Network news needs to be gathered and intelligently distributed to users (Network PR).
  - f. Users need several levels and styles of access to documentation, whether online or offline, based upon their experience, interests, and preferences.

- g. Each server site should also provide some degree of information variety in online "help" mechanisms, tailored to fit the needs and experience of different user types.

In addition, entering "Help" from the EXEC level of a system should direct a user to ALL procedural-type information.

- h. New users should be carefully introduced to the Network by way of a New Users Packet (NUP). Since the MITRE-TIP group is the official contact for new users, they should design such a packet and incorporate suggestions from USING.

This packet should eventually contain, among other things:

- a definition of, and introduction to the Network

- a list of sites

- step-by-step scenarios for accessing functional documents and related online items

- a definition of who can get on the Network

- some quick-reference charts showing a list of Network services available to new users

- and an introduction to Network groups, including USING, as well as the names of Network consultants, assistants, and the like.

- i. Information-accessing mechanisms should be provided for users, including interactive tutorials, user scenarios, and other training mechanisms.
- j. A Network-wide "who, what, where and when" information system should be implemented. (This was nicknamed the Network Yellow Pages.) Discussion of support for such a system focused on obtaining some form of central funding.
- k. The concept of 'Regional Agents' for collecting information for the Resource Notebook was discussed.

Several felt that what was really needed was a 'rebirth' of the original concept of Technical Liaison as the person who provides information to the NIC and technical assistance to users.

There was concern voiced about the number of people collecting information and the redundancy of the requests received by sites.

There was also concern about what incentives there are (or should be or can be) for Liaisons to perform their tasks adequately by providing truly up-to-date and complete information (carrot vs. stick).

1. Server Sites should provide a variety of consulting services to supplement 'help' and general information services. Consultants could represent the whole Network, a group of sites, a single site, general areas such as software, or specific applications processes. This could fit into the workings of the Network Servers Group.

## 2. Standardization for the User

- a. If they so desire, users should only have to learn one Executive (command) language, rather than 20. Rather than have every site change its interface to the user, it was suggested that there be a Network Common Command Language Protocol which is translated to/from the host's own Executive command language.

As with FTP and RJE, a human user should be able to type in CCL Protocol directly, though many sites may want to allow a local user to type in their local Executive language, and then they will translate it into CCLP, for the foreign host.

Any Network Common Command Language should be compatible with batch systems as well as with interactive systems, and should provide an effective means for batch job submission and control.

Bowles, Hathaway, and Stoughton volunteered to outline specs for Network command language that would be compatible with ideas suggested by Padlipsky and discussed at the meeting.

- b. One of the functions to included in a Common Command Language is a simple editor, which Padlipsky has outlined. The editor should be easy for users to learn as well as for servers to implement or interface to their own editors.

### 3. Status/Measurement of Site Performance

- a. A variety of performance measures, for the individual sites, needs to be derived, acquired, maintained, and made available to users.

This could include some attempt to measure average "response time", relative costs (relative to type of task, that is), availability/reliability, etc.

- b. Mechanisms are needed for software certification and for measuring and verifying the accuracy and/or reliability of systems, hardware, protocols, applications software, etc.

### 4. User Feedback Mechanisms

- a. There is a need for a uniform Network gripe/suggestion mechanism. This should cover several types of gripes, including program bugs and service complaints.
- b. Each user registering a complaint deserves immediate acknowledgement and some indication of what, if any, action will be taken.
- c. The NIC should set up Network ident groups for Principal Investigators, Liaisons, Station Agents, Accounts Administrators, Consultants, etc., so that users can easily direct their comments, inquiries and mail to these groups.
- d. A Network Servers Group should be started, to coordinate the activities (to the extent possible) of the servers (a Server's Cartel?). It would also provide a focus for user complaints and suggestions.

(The group was originally dubbed the "Tobacco Institute". The Tobacco Institute acts as a representative for the disparate Tobacco companies, and attempts to convince the public that smoking is good for them.)

The point of the Servers Group -- rather than trying to convince the Network public that servers are good for them -- would be for servers to help each other with common tasks (such as documentation) that are too big for each to handle alone.

This eventually works in the users interest, because the servers (in the Network free-market economy) are dependent upon the users for their livelihood.

There should be cooperation between the Server Group and USING, but the groups would NOT be comprised of the same people. They are on opposite sides of the product.

- e. Station Agents should supply users with information of a clerical nature such as names, phone numbers, titles, documentations, etc. To be able to do this, the Agents must first HAVE this information.

#### 5. Messages to Users

- a. Messages to users, such as error messages or diagnostics, should be simple, clear, and meaningful to users.
- b. The user should have the ability to control notifications given to him, by being able to queue messages or refuse them.
- c. Users should be able to suppress diagnostics or to specify abbreviated or expanded versions.

#### 6. Tailoring of Resources for Users

- a. Interfaces to users should support different levels of user proficiency, without being a burden to the more proficient user.

That is, a new user needs more prompting, etc. A more experienced user does not need and DOES NOT WANT such prompting. So the capabilities of the interface, which are not needed by a specific user, should be transparent.

- b. A method for work flow management that permits a user to set up a sequence of computer tasks that are contingent upon one another is needed. The user should be able to describe this sequence interactively and then be able to detach and continue with other work while the sequence of tasks is being carried out.

#### 7. Personal Information Management System

- a. Users need a system for managing all types of machine-based contacts such as mail, links, journal items, etc.

Such a system should 'log' what has been received and allow the user to keep a copy, if desired.

It should also provide the user with options for organizing his personal information.

- b. A personal 'calendar' or reminder system would be handy, especially if it allowed one to look ahead to coming events as well as to check events for the current day or week.
- c. A 'return to sender' feature is needed in the Network-wide mail address system.
- d. (Discussion of the current work on the Mail Protocol indicated that some of these ideas are already being considered)

#### 8. Uniform Accounting Procedures and Online Status of Accounts

- a. This topic was covered in detail by sections of the Resource Sharing Workshop. It is mentioned here only because it is a problem of real concern to users.

#### 9. Trial Usage and Browsing

- a. Ideally, users should be allowed some 'free' sampling of systems and features available at each site. Practically, this presents problems of space allocation, accounting, consulting, etc. Although none of these problems are easy to solve equitably, an attempt should still be made to provide some free usage to everyone.
- b. Several types of trial usage should be considered, such as for those who will make an immediate commitment and those who wish merely to sample, without making any commitment.

#### 10. Prelogon Facilities

- a. Some facilities should be available as prelogon facilities, so that any user can access them whether or not he has an account, directory, etc., at a given site. Some sites will not be able to support many of these functions, so a required set must be kept to a minimum.

#### 11. Remote User Facilitation

- a. Users not only need help with actual use of systems from a remote site, but they also need facilitation of administrative tasks. Station Agents should be able to handle most of these problems or transfer the user to the proper person. System access requirements, account and billing problems, and document acquisition need particular attention.

- b. There should be a simple mechanism for users to acquire/update information in functional documents such as the Resource Notebook and in files such as identification files. Publications or files of this sort should combine the collective input of all the users.

## 12. Transportability of Resources and Information

- a. Users should be able to easily transfer information, such as files, memos, mail, online documentation, (programs?!?) etc., from one site to another.

## 13. Network Utilities

- a. Should distributed data banks and similar features be considered Network utilities that can be used by all?

The idea of "Network Utilities" was recognized as an interesting one by the group, but there was little agreement as to what constitutes Network utilities or how they should be supported.

## CURRENT PLANS

1. Neigus, Crocker, and Iseli will draft the scope, objectives, goals, and priorities of USING and will submit their recommendations for approval by the members.
2. MITRE will design a New User's Packet incorporating ideas from USING.
3. Bowles, Hathaway, and Stoughton will write preliminary specs for a Network Common Command Language Protocol. All members should suggest a list of commands for consideration.
4. Padlipsky will produce specifications for a simple, standard editor (NETED) which could easily be implemented by server hosts.
5. A general Users Group (NIC ident = USERS) will be formed, to allow any interested person to monitor user-oriented activities, especially those of USING. Anyone interested in being in USERS should contact Dave Crocker (DHC).



6. Activities of the group will be reported in the ARPAnet News, and a user's forum column will be made available for user's comments.
7. The group will meet again in the Fall of 1973 at the Network Information Center in Menlo Park, California.

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