Planning a DSN Support Section Technical Library

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This article describes the planning procedure being used to establish a technical library for the DSN Support Section. It describes the inventory and survey methods employed and discusses the preliminary results of these methods.

I. Introduction

The information needs of an engineering group cover a broad range, from specific technical information about particular components to generic information about classes of equipment. In time, the amount of information that the engineer needs and stores in personal files becomes overwhelming. The Deep Space Network Support Section is taking steps to organize and control this information by establishing the Support Section Technical Library. The methods used to plan the library can be applied by other organizations with similar problems. The purpose of this article is to outline the progress to date.

II. Technical Library Goals

Success of a technical library is achieved when its services are designed to meet the specific needs of the individual users rather than conform to traditional library services. In fact, if a library is to justify its existence, it must be fully responsive to the information needs of the personnel it serves (Ref. 1). There is no simple way to determine the information needs of potential users, and unfortunately there are no procedural manuals available for conducting user studies in these areas.

In the present situation, each engineer is responsible for the collection, storage, retrieval, and distribution of documentation associated with his or her work. There is no central control of documentation received, and as a result, it is not known how much documentation exists or to what extent it is utilized. The technical library will be established to coordinate these functions to ensure that information is being utilized in the most effective manner.

III. Information Resource Inventory

To design a technical library, it is necessary to identify the information resources presently in use and to understand the information needs of the users (Ref. 2). This process includes an inventory of the materials in use and a survey of the user needs with regard to possible library services. An inventory of all materials will enable space requirements to be estimated, and the decision to centralize or decentralize materials can be made. The survey provides information to determine which service requirements are needed by which personnel, and can help in the estimation of manpower needed to support the services.

The inventory process consists of cataloging all information materials in each staff member's collection. The end product of the inventory is a composite list that shows the location and number of copies of existing materials. The list will serve as the basis for a retrieval system that allows the sharing of such materials as reference books and periodicals, which are in an individual's personal collection. This will help eliminate unnecessary duplication of documents and serve also as a speedy means to acquire information that is presently available within the section.

IV. User Surveys

The first step in planning the Support Section Technical Library was a personal interview with each prospective user. The interview served as a means to inform personnel that a section library was being established and to introduce ideas and receive suggestions as to services and collection content.

The second step of the survey consisted of a series of questionnaires. The first questionnaire (Fig. 1) is designed to gather data on the information sources now in use, the level of importance of each source, and the level of satisfaction in acquiring, maintaining, and disseminating information. The frequency of use that the various types of documents receive is also learned. The purpose of this questionnaire is to gain understanding of the information structure that now exists in the Section.

The second questionnaire is designed to learn what information services are required to improve the existing information structure in the Section (Fig. 2). Here, use patterns of library facilities and attitudes toward library organization systems are examined. Also, questions are asked concerning previous experience in using library services and attitudes toward projected service. Results from this questionnaire will provide information necessary to plan the organization system and services that the library will implement.

A final questionnaire will be given after the library has been in operation for several months. Personnel will be requested to evaluate the new information system as to level of satisfaction with services and collection content. The results of this questionnaire will serve as a check point to see if the library is operating in an effective manner.

V. Preliminary Results

We are still in the survey phase, but certain items have been noted. The interviews found an overall positive reaction to the formation of a section library. The engineers' number-one concern is that it be designed to serve their individual needs in contrast to merely developing a collection of documents.

The inventory process revealed that duplication exists in the various collections. However, the duplicates are not necessarily of the same revision level, so some users have collections of outdated material. Each personal collection tends to be job-function oriented, and includes such information sources as textbooks and vendor catalogs. The average engineer currently uses from seven to nine linear feet of shelf space for his personal reference collection. How much of this information can be centralized is yet to be determined.

Personnel indicated in the questionnaire that they have ready access to information materials; however, they have to order the materials, and, in turn, the items become a permanent part of their personal reference collection. The staff felt that this system was satisfactory, but that they would prefer a centralized reference collection that would reduce the need to order copies and would minimize the size of their personal files.

Acquiring and maintaining documents is not thought to take a great deal of time, but the interview and inventory process demonstrated that most of the personal collections are not up-to-date, and contain materials no longer needed. Also, engineers indicated that the information they need is available but not easy to find, and that the time delay in acquiring documents disrupts their work activity. These apparent contradictions need further investigation. The most important sources of information are internal documents and personal contacts with colleagues. External documents, textbooks, handbooks, and journals ranked fairly evenly from very important to not important. The degree of importance is directly related to the individual's specific work activities.

VI. Conclusion

The need for a DSN Support Section Technical Library has been demonstrated. The details of its implementation remain to be worked out. The final survey results and implementation details will be presented in a future article.

References

1. *Contemporary Problems in Technical Library and Information Center Management: a State-of-the-Art*, edited by A. M. Rees. American Society for Information Science, Washington, D.C., 1974.
2. Batten, W. E., *Handbook of Special Librarianship and Information Work*, 4th ed., Aslib, London, 1975.

NAME _____ DATE _____

The following questions are designed to provide a general overview of your personal experience and attitudes of information usage in your work. The information will be used to help plan a section library.

1. Please agree or disagree with the following statements:

Circle the number that best describes your level of agreement.

1 = agree 100%
2 = agree 75%
3 = agree 50%
4 = agree 25%
5 = disagree 100%

a. I have ready access to all information needed for a project.	1	2	3	4	5
b. The information I need is available, but not easy to find.	1	2	3	4	5
c. Time delay in acquiring documents disrupts my work activity.	1	2	3	4	5
d. I am aware of the information services available to me that the JPL library provides.	1	2	3	4	5
e. Acquiring and maintaining documents requires a great deal of time.	1	2	3	4	5
f. Because of time pressure associated with my job, I am not able to make a thorough search for information I need to complete a project.	1	2	3	4	5

2. How important are the following information sources in the performance of your work?

	not important				very important
a. Personal contacts with colleagues in your work group	1	2	3	4	5
b. Personal contacts with colleagues at JPL	1	2	3	4	5
c. Personal contacts with outside organizations	1	2	3	4	5
d. Internal documents	1	2	3	4	5
e. External documents	1	2	3	4	5
f. Science and technical journals	1	2	3	4	5
g. Other periodicals and journals	1	2	3	4	5
h. Textbooks	1	2	3	4	5
i. Engineering handbooks	1	2	3	4	5
j. Documentation department	1	2	3	4	5
k. JPL library	1	2	3	4	5

Fig. 1. Sample document usage questionnaire

3. For what sub-systems do you need information? _____

4. How often do you use the following types of documents? (X = Yes)
Please provide an X for each document type.

	Frequently	Seldom	Never
General Specifications			
Detail Specifications			
Design Specifications			
Functional Requirements			
Test Specifications			
Test Descriptions			
Test Procedures			
Operation Procedures			
Installation Procedures			
Process Specifications			
Modification Procedures			
Technical Descriptions			
Technical Requirements			
Project Implementation Plans			
Engineering Data Lists			

	Frequently	Seldom	Never
Quality Assurance Documents			
Software & Firmware Document			
DSN Standards			
DSN Standard Instructions			
DSN Standard Procedures			
Commercial Manuals TM's			
JPL Technical Manuals			
Maintenance Procedures			
Engineering Reports			
DSN Energy Project Reports			
Vendor Catalogs			
800 Series Documents			
377/422 Section Documents			
Training Manuals			
DSN Progress Reports			

5. When the section moves off lab, will this affect the way you acquire or use information? Yes _____ No _____ Briefly explain:

_____

_____

_____

_____

Fig. 1. (contd)

NAME _____ DATE _____

The following are questions designed to provide information about what information resources and services you would like in connection with your work. The information will be used to help decide what materials should be included in the library collection and what services need to be provided. If you are not familiar with the function that the services perform, please read the definitions provided. (Feel free to include as much information about your personal information needs--write in the margins or on the back of this sheet.)

1.1 When considering a section library, what materials would you like to have in connection with your work?

	Yes	No		Yes	No
JPL documents	____	____	Aperature Cards	____	____
Reference books (e.g., dictionaries, handbooks, etc.)	____	____	Telephone Directories	____	____
			Maps/Atlases	____	____
Textb· 'ks	____	____	Other_____	____	____
Periodicals/Journals	____	____	Other_____	____	____
Vendors Catalogs	____	____	Other_____	____	____

DEFINITIONS OF LIBRARY SERVICES

Literature Search	A systematic and exhaustive search for material on a specific subject.
Bibliographies	An annotated catalog of documents that refers to writings related to a subject, period, author, or other unifying concept.
Acquisition Lists	Lists of new materials received by the library. (This would include updates)
Abstracts	A condensation of document contents which covers all pertinent points appears in the document.
Reference and Information Services	Personal assistance by the librarian to individual information
Routing of Periodicals	The systematic circulation of periodicals or other printed materials among individuals or an organization in accordance with their information needs.
Acquisition Requests	Ordering specific materials that are requested by individuals.

1.2 Of the services listed above, which do you need in connection with your work?

	Yes	No		Yes	No
Literature Searches	____	____	Reference & Information Services	____	____
Compilation of Bibliographies	____	____	Routine of Periodicals	____	____
Acquisition Lists	____	____	Acquisition Requests	____	____
Abstracts Prepared	____	____			

Fig. 2. Sample library services questionnaire

1.3 Do you feel that space and equipment should be provided so that personnel can study materials in the library? (e.g., study tables)

Yes _____ No _____

1.4 Would you please list the scientific, technical or general purpose publications that you review on a regular basis in your work: (e.g., IEE Spectrum, Business Week, etc.) Indicate with an X if JPL provides these publications.

_____ _____ _____

_____ _____ _____

_____ _____ _____

1.5 On the average how quickly do you need information? (indicate with an X)

immediately	_____	within a week	_____
within a few hours	_____	within a month	_____
by the next day	_____	time is not important	_____

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Studies have found that engineers do not use library services to their full advantage because they are not aware of the full potential and possible applications of the services. Another deterring factor is that library resources and services are not readily accessible because of physical distance. The following questions are designed to find out your library use habits and how valuable library services and resources are in meeting your information needs.

2.1 How often do you use the library? (Concerning section library, estimate frequency of use.)

	Daily	2-3 Times a Week	Weekly	Monthly	2-3 Times a Year	Once a Year	State briefly the reason for your latest visit to the library. (e.g., general reading, to find a specific fact, etc.)
JPL Library							
Public Library							
School/Univ. Library							

2.2 When you go to the library, do you ask the librarian for assistance?

often _____ once in awhile _____ never _____

2.3 If you never use the library, please try to state why:

_____

_____

Fig. 2. (contd)

2.4 Which JPL library services have you used and how satisfactory were they in meeting your information requirements? (X=yes)

	not satisfactory				satisfactory
Reference and information service _____	1	2	3	4	5
Literature searches _____	1	2	3	4	5
Computer search services _____	1	2	3	4	5
Photocopying _____	1	2	3	4	5
Routing of periodicals _____	1	2	3	4	5
Acquisition lists _____	1	2	3	4	5
Microfilm services _____	1	2	3	4	5
Other _____	1	2	3	4	5

2.5 Which JPL library sources have you used and now useful were they in meeting your information requirements? (X=yes)

	not useful				useful
None _____	1	2	3	4	5
Periodicals and journals _____	1	2	3	4	5
Indexes and abstracts _____	1	2	3	4	5
Technical reports _____	1	2	3	4	5
Books _____	1	2	3	4	5
Other _____	1	2	3	4	5
Other _____	1	2	3	4	5

Fig. 2. (contd)