

8. Doctoral Dissertations on Transportation: A Bibliography, 4th Issue, 1971-1972. Transportation Center Library, Northwestern University, Evanston, Ill., Sept. 1973.

Robert W. Gibson, General Motors Research Laboratories

TRISNET is a cooperative program for "hooking together" already existing, organized segments of transportation information to improve access to and utility of the total available information. It is intended not to supplant or operate existing services but to make them more available to a larger audience. These segments include those that either specialize in transportation areas or process substantial quantities of transportation information within a larger subject scope. The services vary widely among themselves: Some are governmentally sponsored, some are financed completely by private organizations, some include only research-in-progress information, and some are predominately indexing and abstracting services. Some of the information is available in machine-readable format; the remainder is in a manual form. There are libraries organized to provide access to the indexed documents.

TRISNET would, thus, be made up of 2 subsystems: a network of services that collects, organizes, and processes information for résumés or abstracts and a network that provides document access and delivery to the transportation research community.

Since the transportation information is so broad in nature and is included in many research disciplines, a necessary first step in the organization of TRISNET is preparing a directory that gives all transportation information services and an in-depth definition of each service. This directory would be similar to a detailed version of the phone company yellow pages. For each service, the directory should include specific identification and contact points; subject scope; types, formats, and quantities of information holdings; vocabulary and access-control methods; data elements and their formats; information products and their formats and frequencies; processing and output capabilities; transfer procedures and their costs and limitations; accessibility, including type, procedures, required equipment, and availability; and response time. The directory should be available in a variety of formats, i.e., machine-readable form for quick updating, on-line retrieval form for those with available equipment, and hard-copy form with frequent revisions.

Concurrent with the development of knowledge as to where the transportation information is available is work on the 2 subsystems of the network: (a) résumés and abstracts and (b) document access and delivery.

### RÉSUMÉS AND ABSTRACTS

Approximately 5,000 transportation research and development projects are under way in the United States at the present time, and the annual production of transportation research reports and articles is in the order of 15,000 documents. Worldwide estimates are 3 times these figures. TRISNET users should have access to all of these pieces of information. The set of services within the network should be that necessary for covering on an in-depth basis all major modal technologies, such as highway and rail transport, and for covering major subject specialities, such as economics and transport safety. Likewise, services should be developed for transportation modes and specialities, such as pipeline or inland waterway transport, that are not well covered by existing services. Transfer linkages are a necessary ingredient so that each component is better informed about other members of the system and thus each can serve its users from a larger reservoir of information.

The initial project for this subsystem is the compilation of an on-line data base from existing data tapes of component services. During the developmental period, the on-line data will include résumés of research projects that are currently active or that have been completed in the past 2 years, abstracts of documents that have been

published during the previous 4 years, and statistical data bases that are currently accessible. The on-line data base will act as one interface between abstract services and document access services. Users of the on-line data base will be informed on how to access documents that correspond to the on-line abstracts.

Subsequent projects in the subsystem will make available the organized manual data bases. These are often more specific and narrower in parameter, but nonetheless important to the total transportation information.

#### DOCUMENT ACCESS AND DELIVERY

Libraries have traditionally provided documentation access and delivery services to the transportation community. Initially, TRISNET will develop an improved prototype document access and delivery subsystem network; a selected number of existing libraries will be used to ensure users access to all items in the evolving TRISNET data base. These selected libraries will necessarily need financial support to perform more detailed services to a larger clientele and, when organized for the additional load, will serve as primary nodes in the transportation network. Selection as one of the nodes will be based on ability and willingness to participate in the system, the subject coverage of modal and intermodal disciplines (the nodes as a group would need to cover the transportation literature in its broadest context), and geographic balance. The U.S. Department of Transportation library will be one of these nodes, but it has neither the mission nor the financial support to provide all services to the community on a broad scale.

Additional consideration will be given to establishing the DOT library as a repository of last resort, for some of the worthwhile documents in the transportation area are extremely difficult to locate. Resources (both financial and human) will be devoted to acquiring these "fugitive" items so that they can be made available through the nodes. The nodal document subsystem will need to be especially cognizant of foreign groups performing similar functions for their areas and will benefit from established communication links with these systems. Users will be encouraged to continue to initiate requests through their local libraries; if the requests cannot be fulfilled in this way, they will be referred to one of the nodes.

Future effort will be needed to establish communication links that will facilitate fast response times within the document-access system and between the system and the user.

#### COORDINATION UNIT

I have discussed the necessary components of the proposed Transportation Research Information Services Network as envisioned initially by the working committee. But the program will never get off the ground without the organization of a strong coordinating unit. For this unit to receive the strongest and broadest base of support, it should be established on a quasi-governmental basis that is conducive to support and participation from both public and private sectors of the transportation community. The coordination unit should be established initially within the National Research Council so that the inaugural steps of the network organization can benefit from the council's long history of impartial and independent performance. The council should secure policy, technical, and operating advice through the usual committee structure. In this way all members of the transportation community will have assurance that TRISNET will attempt to serve their needs in the most impartial and best possible manner.

The initial organization will consist of 3 parts:

1. An advisory committee (board of directors) that represents not only user and service elements of TRISNET but also private and public organizations whose objectives are similar and that identifies needs within the user community, identifies ways to improve system performance, and provides for system evaluation;
2. A managers' council that consists of managers of individual services that are part of the network and that concerns itself with the development and operations of the network, including the evaluation of holdings and acquisition procedures of the member

services, recommendations for new services, and elimination of unnecessary overlaps; and

3. A secretariat that implements plans and requirements of both the advisory committee and managers' council or that operates the network coordination.

Siegfried M. Breuning, Southeastern Massachusetts University

There is little doubt in anyone's mind about the information explosion. An abundance of printed paper is produced in increasing amounts every year. The bill for this material is rising to staggering amounts. Subscriptions to the proceedings of professional organizations run into hundreds of dollars annually. Worse still, the pressure for growth remains unabated. There is much talk about the problem, but little is being done about it.

One approach toward the solution of this problem might lie in the slumbering capabilities of automated information-handling systems. Automated systems offer "instantaneous" access, even over long distances. They use abstracting effectively; they allow easy interaction nationally and even internationally. But these advantages alone merely aggravate the documentation flood. The real benefits of automation lie in the opportunity for selectivity and feedback. We must harness the quantity of the flood to satisfy specific needs of the user, and we must improve the quality of the information flow through feedback from the user. Although the first of these needs is being tackled through the development of improved search procedures, the ultimate utility depends on both selection in quantity and improvement in quality.

The work of the TRISNET committee during 1973 focused on the user through a user subcommittee. The most important result of that committee's deliberation is the call for much deeper and more conscious involvement of users in the development of an information system tailored to their needs. As in the political process, everyone complains about it, but few get involved. Everyone complains about the problems of information management, yet few take the time and effort to spell out their complaints and to detail their wishes. Maybe this is so because users themselves do not know what they really want. Nevertheless, it is important that interested researchers and practitioners of transportation get seriously involved in the solution to the information problem and make their needs known where it counts.

The TRISNET user subcommittee identified, among others, 3 suggestions for better recognition of user needs: a user conference, a market survey of information users, and evaluation by user feedback.

#### USER CONFERENCE

"If you don't know what I want, how can I?" Most librarians know this question only too well, even if few researchers or students ask it quite that bluntly. But it strikes at the heart of the problem: How can we define what the user wants, if no one, including the user, knows?

One approach suggested is a user needs conference, which brings together some sympathetic professionals who are users of information. Their needs and preferences, both expressed and implied, are essentially the criteria that ultimately decide the success or failure of any information system.

The conference must encourage the participants to think for some time about their information interests and needs. Most people come with a vague notion of an information problem. Often they do not even know precisely what question they need information on. The initial question is immediately modified by the available information. The user conference is intended to focus on this problem and to encourage the user to formalize his or her needs into what might be called an ideal set of information requirements. It is hoped that such ideal information criteria will provide an important step in developing a responsive information system for the future.