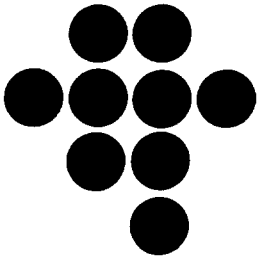


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COMMUNICATIONS
FORUM

"Access to Government Information"

November 29, 1990

Seminar Notes

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**MASSACHUSETTS INSTITUTE OF TECHNOLOGY
COMMUNICATIONS FORUM**

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Ms. Prudence Adler, Association of Research Libraries

Ms. Jane Bortnick, Library of Congress

Mr. Jay Lucker, MIT Libraries

Elizabeth H. Prodromou, M.I.T., Rapporteur

This session of the M.I.T. Communications Forum brought together three representatives from the library sciences, all of whom are working with the dynamic issue of access to government information. Researchers, information providers, and policymakers increasingly recognize the critical importance of information technology to access government information. The combination of increased use of information technologies by federal agencies to collect, manage, and disseminate government information; the growing economic value of this information in electronic formats; the budgetary constraints facing federal agencies; and the expanding access needs and requirements of the research community for this data are exacerbating tensions among the public, not-for-profit, and private sectors. Several legislative initiatives provide new policy guidance as well as new challenging opportunities for accessing these national information resources. The growth of interdisciplinary research, international collaboration, and large science projects further contribute to this changing environment. Among the issues under discussion are how to facilitate more "transparent" access to the wide range of federal STI; how to manage and archive the exploding amount of scientific data; and how to resolve data policies planned to address many of these aspects, based on their own experiences with the interface between the changing nature of government information and the impact on library sciences and research.

Mr. Jay Lucker, Director of Libraries at MIT served as moderator, and also participated as one of the three speakers. Lucker began with a few opening remarks on the subject of the lecture. He noted that the topic was a follow-up to related discussions held during last year's sessions of the MIT Communications Forum. Lucker also commented that the subject is of interest to a variety of people, including policymakers and decisionmakers who need to understand how to get access to government information and data bases. He also noted that, in terms of the MIT interest in the topic, the Institute is especially interested in the issue of restrictions on government scientific and technical information.

The first speaker was Ms. Prudence Adler, Assistant Director, Association of Research Libraries, Federal Relations. Adler explained that the Association of Research Libraries is an organization encompassing all of the major research libraries (academic and non-academic) in the United States and Canada. She commented that the subject of today's panel was encouraging, since it indicated the increasing interest and importance of access issues. She noted that there has been a growing amount of legislation dealing with issues of access to government information; during the previous session of Congress, there were over 125 bills related to such information issues.

Adler commented that there are new players, new issues and new agendas relating to the topic of access to government information. She also emphasized that the complexity of the issues and players explains, to some degree, the government's inability to update its national information policy.

Adler began by considering why, in fact, the whole subject of access to government information is changing so rapidly. She commented that a good starting point for considering this question is the fact that government information is unlike any other area of information. As a result, having access to the information is only part of the debate. Adler pointed out that knowing what information exists and how to get at it is a critical piece of the debate. In keeping with this notion of difference, she pointed to the Paperwork Reduction Act, the centerpiece in the Congressional debates on information issues. Renamed as The Federal Information and Resources Act, this piece of legislation recognizes government information as a federal resource. Adler emphasized that this is how government information should be viewed - as a federal resource to be used in the scholarly and research communities to support continuing and new research, to provide government services, to be combined with state and local data to promote regional economic interests, and to be used by citizens seeking information about their government. Adler commented that, as a federal resource, this information has special qualities that separate it from other types of information.

According to Adler, information is different from other policy issues, such as the federal commitment to health care, transportation, and research in various disciplines. Adler explained that it is different because information is an integral element to all programs, needed by all citizens and all organizations, public or private. She noted, further, that as a resource, information does not fall neatly into categories that we as users of services or as participants in the governmental process, are accustomed to. Adler explained that information, as a resource, has special qualities that both set it

apart from as well as make it unresponsive to standard resource management practices.

Adler explained that, when managing other resources, concepts such as control, ownership, depletion, depreciation and exchange are commonly applied. She noted that these concepts do not "fit" with information. She then cited Harland Cleveland's view of the characteristics of information: information is expendable; it becomes enlarged and more valuable with use; it is not resource-hungry; in comparison to the processes applied to physical materials, information processing and distribution consume few other resources; information is a substitute for capital, labor, and physical goods; it is transportable at little cost and high speed; most importantly, information is difficult to contain and is not subject to monopoly; information can be shared; the owner does not lose information by seeing it or by giving it to others; in fact, many times, the value of information often increases with the number and variety of users.

Based on the above characterization of information, Adler noted that there are three key factors influencing the current debate over access to government information: (1) the increasing economic value of information in electronic formats; (2) related to the first factor, the increasing reliance by the government on technology to provide and disseminate information for government programs and activities. Adler elaborated that this applies at the federal and local agency level. She explained that there has been an enormous increase in government-produced electronic products and services which, in turn, has fueled the market for these services and, concomitantly, private sector demand for a role in producing and disseminating these government services. In short, Adler claimed that government information is now viewed as an economic resource; and, finally, (3) the federal government's use of technology has stimulated new uses of information, as users have become increasingly sophisticated in using information technologies, in manipulating such information, and in ensuring expectations of use of the data.

Adler summed up by noting that the debate can be characterized as one having a growing number of actors and economic implications, and as not being subject to traditional policymaking solutions.

She then turned to the question of why there should be a federal role in information access. Adler posited the following points in response to this question: (1) equity: the government must ensure equitable access; (2) citizens must have access to information about the government in order to ensure government accountability and to help make for a more informed electorate - these notions are underlying principles of our democracy; (3) there is a need for agencies to provide information in support of their missions; (4) government role in broad-based dissemination to promote and encourage economic interests.

According to Adler, the primary dissemination channel designated by law for government information is libraries. She noted that the government has traditionally used libraries as a means to balance the four aspects noted above. Adler also explained, however, that there are emerging concerns that the government might pay unequal attention to or emphasize the latter two aspects at the expense of the former two. In recognition of this concern, ARL in 1988 endorsed principles on Government Information in Electronic Format. Adler noted that the ARL Principles are based on, amongst other principles, the notion that the open exchange of public information should be protected and that copyright should not be applied to government information.

Adler emphasized that the government must continue its role in encouraging access to government information, and must not shift the focus of its efforts to the question of ownership of government information. She stressed that the concept of access, in addition to ownership, is becoming a reality - new technologies make this possible. Adler went on to offer two examples of programs which illustrate the importance of access to government information. She noted, first, the collaborative efforts of Johns Hopkins and the Welch Library in designing new approaches to data base systems. Adler then noted the cooperative efforts of the National Agricultural Library with North Carolina State Library, in putting together an internet-based document delivery system for libraries.

According to Adler, the aforementioned programs demonstrate the potential for expanding the access to government information through new ventures which combine technologies with information sources. She argued that these sorts of programs would not happen, however, if it were left solely to the private sector.

Adler closed by calling for continued experimentation and new ways of thinking about questions of access to government information. She stressed the need for the higher education community to build a new government information system based on the principle of access rather than ownership.

The next speaker was Ms. Jane Bortnick, Assistant Chief, Science Policy Research Division, Library of Congress. Bortnick is a specialist in information science and technology. She noted that she is currently working on a three month special assignment on these issues at the National Research Council. Bortnick began by stating that she agreed with the points made by Adler, and she explained that she intended to follow up on Adler's remarks about how to lay the foundation for identifying some of the key issues on the debate concerning access to government information.

Bortnick emphasized current trends in building systems to support the use of government scientific and technical information. In this more specialized area of scientific and technical information, Bortnick stressed the need for creative and inventive public policy solutions to the problem of information access and use.

Bortnick noted that scientific and technical information is both an input to and a result of the research enterprise. In this way, it's unique and clearly requires access to information. She pointed out that, in addition, access to information of this sort can make a big contribution to national issues. Bortnick noted that scientific and technical information also speaks directly to the importance of the federal role in developing information.

Bortnick proposed to focus on the changing environment which is drawing attention to scientific and technical information (STI) issues. She commented on the interest of the scientific and policymaking communities on this issues, due to the impact of information technology itself and to the vast implications for how data management activities for scientific research are undertaken. Bortnick noted that there are all sorts of computerized instruments today which gather vast amounts of data, analyze data, and provide visualization techniques. In short, there are new questions related to STI because there are new information technology capabilities.

Bortnick observed that the new capabilities are raising important challenges, such as (1): the current data management techniques are being overwhelmed, raising the problem of how to deal with massive amounts of data; (2) analysis capability - how to analyze all this new data - is increasingly important; she cited the example of the global change field; (3) there is the question of how to maintain and archive all of this data; she offered the example of the enormous growth in the amount of NASA data from their space missions; related questions include what to save, what not to save, for how long to save the information, where, and how to maintain access to it; (4) there is increasing pressure on traditionally accepted information practices; scientists have always had to take responsibility for their own data practices, but with new electronic technologies, new questions on scientific data collection methods are being raised; (5) problems associated with data security and privacy; and (6) the area of data ownership, peer review, and what is considered as publication in terms of the electronic transmission of data.

According to Bortnick, yet another important trend related to STI is the movement towards increasingly interdisciplinary research. She noted that many federal programs require an expansion in the circle of cooperation, as well as in the access to different types of information. This trend, in turn, is fueling new efforts by systems designers to bring the information to the disparate user communities.

Bortnick noted that these developments relate to yet another increasingly important issue in STI, namely the "distant user." She defined the distant user as someone who may be distant in discipline, time, and location. She stressed that information systems being designed for the future must take into

account these distant users in terms of making access available in different ways. **Bortnick** noted that some information systems models are already being built along these lines - she cited NASA's Master Directory as an example of an information locator system. Other considerations, according to **Bortnick**, include establishing criteria for meta-data, improving validation techniques and making access more transparent.

Yet another trend which **Bortnick** discussed was the growing internationalization of research, both at the level of data gathering and research participation. **Bortnick** cited the Global Change Project as an example of this tendency towards the internationalization of STI issues. She also noted that one of the most important and interesting things about the Global Change Project is the federal government's recognition that data management and dissemination are critical components of the program and a vital aspect of its success.

Bortnick closed by stressing that, in her opinion, the federal government must take a leadership role in designing 21st century information systems to support the broader research agenda of the nation. She also remarked on her expectation that the information community itself will be changing, in several ways: (1) old lines of distinction within the community are blurring; (2) there is an increasing need for access to the full range of information resources; (3) there is a merging of interests among the actors; (4) there is an increasing use of graphics as part of STI; (5) the range of resources for scientists is increasing, and the concept of access in a systemwide, transparent sense is becoming increasingly important, as opposed to older notions of access at one central location, and (6) information providers and repositories of information are becoming increasingly important to and connected to the scientific community.

The final speaker was the moderator, Mr. Jay Lucker, Director of the MIT Libraries. **Lucker** proposed to speak about the role of the individual library in the collection and dissemination of government information. He began by explaining the traditional role of libraries in collecting and disseminating government information. **Lucker** explained this as a collection process which functioned under the general umbrella of the Depository Library System (DLS). **Lucker** explained the various roles of the Library in providing access to government information. First, it is a collector, a function it fulfils through a variety of mechanisms. For example, many libraries buy from the DLS those reports which they can't otherwise easily obtain. Similarly, the Library obtains material through its position as a specialized depository agency; it also collects information from gifts from faculty and individuals; and, finally, it gathers and collects information by individual request.

Lucker explained that the Library also is an organizer. It must arrange its collections in a way that makes them accessible. **Lucker** pointed out that, legally, the depository libraries must provide the general public with access to government information. He also noted that access is provided through a variety of avenues, although increasingly through on-line catalogs.

The Library also functions to provide service to the collections, through interlibrary loans, etc. Finally, according to **Lucker**, the Library maintains the collections. The search librarians have done this with government information back to the point when the collection process started. **Lucker** noted that part of the maintenance process involves the physical maintenance and preservation of the actual materials.

According to **Lucker**, the Library has accepted all of these roles, but at a huge cost. The aim, however, has been to serve the local community and to contribute to the public good.

Lucker noted that things are now changing in government information, in terms of how it affects libraries. He commented that these changes raise several concerns: (1) the increasing costs associated with all activities, especially with the acquisition of information; this is particularly important for electronic information; (2) the increasing cost of providing on-line access to government information; (3) changes in restrictions on government information; this includes changes in the restrictions themselves as inhibitions to access, and the cost of dealing with these restrictions administratively; (4) retroactive classification, which involves establishing restrictions for government information which was previously in

the public domain; (5) the basic reduction in the amount of government information that is being provided to the depository libraries, given legislation such as the Paperwork Reduction Act; (6) the increasing focus on cost-benefit analysis; this means that information services which are seen as not generating revenues in the community will not be provided (e.g. translated information); (7) there is a greater need for access to information that the research community didn't need before - e.g. information in translation, particularly in the area of Japanese R & D and STI; (8) the desire for direct access on the part of users, as opposed to using the librarian as an intermediary, and (9) the need for access to primary data, that is, non-bibliographical, primary text data.

Lucker stressed that what is need is a new system for access to government STI. He offered some suggestions on what this system should be like and on how to go about designing it: (1) establish a central clearing house, via national referral system, for all government STI ; this would function in an on-line, directly available capacity; (2) develop full texts of on-line government information; (3) establish a network of federally supported libraries that provide services for searching and access to government information; this network would work along the lines of the state patent depositories, it would apply to the whole range of government information, and would be aimed primarily at individuals and small businesses; (4) expand the use of CD-ROM technology, and (5) provide direct access to government data bases by library and computer centers, particularly for statistical and numerical information.

Lucker closed by emphasizing that all of these suggestions are feasible options, but he also noted that they will require a change in how the government considers its information activities.

Question & Answer

The first question asked about the possible differences between the Reagan and Bush administration in terms of their attitudes regarding access to government information.

Adler commented that, until very recently, she viewed the Bush administration as more open on this issue than the Reagan administration. In the earlier parts of the Bush administration, there had been a pro-access attitude in terms of government information as a public good; however, **Adler** noted, recent developments include more restrictive steps as the government seems to be considering government information as an economic resource. The implication is that there should be greater reliance on the private sector in terms of their role in collecting and disseminating the information. **Adler** cited the examples of NASA and DOD, which want to define what kinds of copyright restrictions should be applicable to government information and technology.

Bortnick remarked that, for the most part, she agreed with **Adler**. The administration's focus seems to be shifting to questions of access based on economic concerns - e.g. the linkage between access to government information and the issue of how to bolster U.S. competitiveness internationally.

Lucker commented that, from his perspective at the end of the chain, he hasn't found that things have changed too much from one administration to the next. He agreed, however, that what is increasingly driving issues of access are economic considerations. He also noted, however, that he has no sense that there is a coordinated, cohesive national policy. Rather, questions and decisions about access are relatively decentralized.

The next questioner asked about the speakers' comments on the huge growth in government information in electronic form. The speaker asked how much of this information is actually available.

Adler answered that, through the DLS, between six and ten products are available. She noted that there are more products available through private sector vendors, at cost.

The next questioner observed that, as a lawyer, he regards the privatization of government information as having enormous implications for the quality of people's civil rights.

Bortnick responded that she understood his points as emphasizing the need for some sort of determination of what information resources are, in fact, national resources and, therefore, of when the federal government has a responsibility to make this information available to the public. She also noted that budget pressures have put greater pressure on the government to live up to these principles.

Lucker commented that privatization did not begin with electronic information. He noted, however, that electronic information has made the privatization question a more obvious and discussed issue.

The next question related to the issue of bulletin board services and and the archiving of such information.

Adler remarked that, in fact, one of the most crucial questions regarding bulletin board information was precisely this issue of who will save the information, which information will be archived, and how will it be archived as the quantity of information continues to grow so rapidly.

The next question concerned the issue of ensuring that government information is provided to local libraries. The questioner asked how it is possible to ensure that the technology haves and have-nots do not become the information haves and have-nots.

Lucker commented that, at the state level, the NEAR NET System is a step in the right direction. He noted that, if the BPL enters the NearNet System, then it will create enormous possibilities for linking all local libraries into this regional information system.

The next questioner commented on his perception that the U.S. is far more open than other countries in terms of providing access to government information. He pointed out that, if there is no exchange involved, then the U.S. has no real incentive to make this information available.

Bortnick commented that the U.S. needs to recognize that R & D happens all over the world, not just in the U.S., and that there are increasing numbers of international collaborative efforts in R & D. With this perspective, it is clear that the U.S. does benefit from access to other countries' government information. She also emphasized her belief that, in the long run, open access will benefit the United States.

Lucker commented that competitiveness issues have oftentimes been used as an excuse for secrecy in a proprietary sense. He noted that this linkage should not be over emphasized.