Chapter 9

The Freedom of Information Act in an Electronic Age

Photo credit: Mark Mangold, Bureau of the Census

Mainframe area, 1986, Bureau of the Census

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SUMMARY

When the Freedom of Information Act (FOIA) was passed in 1966, Federal Government records were stored primarily in paper form; the act makes no mention of computer records. Since 1966, the installation and use of computer systems by Federal agencies has proceeded at a dramatic pace. Agency regulations and judicial interpretations have generally supported the treatment of computer tapes and other non-paper media (such as motion pictures, video, and audiotapes) as agency records under FOIA. However, significant unresolved issues warrant congressional attention.

For example, the case law as applied to paper information establishes that FOIA does not require agencies to create new records in fulfilling requests. When additional programming is required to extract information from computer systems, agencies and courts have sometimes held that such programming would be analogous to record creation, and therefore would not be a required part of the FOIA "search' process. In the electronic age, however, some degree of reprogramming or program modification may be essential to obtain access to electronic information.

Another gray area involves defining a "reasonable effort on the part of the government in searching for records responsive to a FOIA request. In the computer context, the programming/no programming distinction has begun to detach decisions about "reasonableness" from considerations of effort. This is incongruous with tradition, as significant expenditures of effort continue to be involved in manual FOIA searches. Retrieval of paper documents may involve extensive tracking, communication with various bureaus, consolidation of disparate files, and substantial hand deletions of exempted materials. As computer capabilities for searching, segregating, and consolidating of data become increasingly efficient and cost-effective, computer searches could be broadened and public access enhanced. Agencies may need to focus on designing new ways to respond more readily to FOIA requests for computer records.

Another issue is whether and under what conditions the advantages of electronic formats are such that providing electronic access should be guaranteed. Although the case law and the FOIA fee guidelines have established that computer-stored information is subject to FOIA, requesters are not guaranteed access to the information in formats other than paper. If large quantities of data could be more effectively utilized with the flexibility offered by magnetic tapes, disks, or online retrieval, access to these electronic media may be important.

In several FOIA cases, the courts have expressed a need for Congress to clarify the gray areas left open by the statute in its application to electronic information. In developing and considering possible amendments to FOIA, it is important to understand the types and nature of emerging computer-related problems. It is also important to consider new developments in computer and database technology that could alleviate some of these problems in the future. A synopsis of the issues is presented below:

- Electronic information technologies are obscuring the boundary between record and nonrecord material. As electronic databases become more sophisticated, they resemble information "pools" rather than discrete records. For example, relational database technology allows data elements from different pathways or "fields" to be connected to one another in nonlinear com-

binations. The parallels to paper records are becoming more remote.

- Computers are facilitating faster and more complex searches, thereby encouraging a broader definition of a "reasonable" search. Given computer capabilities for expedited searching, segregating, and consolidating of data, the definition of a "reasonable" search may need to be broadened.
- Electronic FOIA requests can be incompatible with the ways agencies collect and organize information. Although this problem also applies to FOIA requests for paper documents, computerized information management systems are aggravating the issue as they are relatively inflexible, with limited capacity to respond to inquiries in an *ad hoc* fashion. Evolving technologies such as relational databases and hypertext could provide some solutions in the future.
- Computer searching raises new staffing and budgetary problems, as well as opportunities for Federal agencies. Most agencies have no computer programmers assigned to FOIA implementation. Requests for computerized records are generally given to personnel hired to operate internal information management systems. Agency use of electronic technologies that would help administrative staff retrieve computerized information could ultimately enhance public access to computer records. These technologies include preprogrammed utility software, front-end systems with natural query languages, expert systems, and optical disks.
- Federal agencies are using information products whose status is unclear under FOIA. The status of computer programs (including computerized indexes, codes, and directories) is unclear, as is that of integrated software and database packages. Electronic mail, quickly becoming a major mode of interdepartmental communication, presents additional questions for FOIA.
- Paper printouts of electronic information may not satisfy public access needs. Although the case law has established that computerized information is subject to FOIA, agencies are not required to deliver the information in machine-readable form. The option of encouraging or requiring agencies to provide alternative electronic formats– such as magnetic tape, floppy disk, optical disk, and online access—warrants consideration.

In resolving these issues, Congress may need to reconsider the purposes and goals of FOIA. If new procedures need to be instituted for an electronic FOIA, the policies behind the procedures should be evaluated and clarified. Computer records today bear few similarities to the paper records of 1966. New database technologies have begun to raise questions about whether computer-stored information can even be conceptualized as discrete records.

For the 1990s and beyond, Congress may need to decide whether the FOIA should continue to be viewed as an "access to records" statute, or whether it should be perceived more broadly, as an "access to information" statute. This is not to suggest that public access to computer-stored government information should be unlimited; access must be balanced against economic and personnel constraints of Federal agencies. However, due to the explosive growth in electronic information storage, processing, and transmission by the Federal Government, traditional views about records and searches may need to be modified to ensure even basic access to computerized public information.

The case law in many areas is too limited, conflicting, or vague to give consistent direction to agencies and courts. Even in those areas where the case law is clear, variation in agency practice suggests the need for greater statutory specificity. If Congress wishes to maintain the integrity of FOIA in an electronic environment, the goals of the statute need to be reassessed and statutory amendment pursued.

INTRODUCTION

The passage of the Freedom of Information Act (FOIA)[1] in 1966 eliminated the ambiguous public information provisions of the Administrative Procedures Act,[2] and shifted the burden of proof from the public to Federal agencies with respect to the withholding of Federal information from public view. The act not only created a "clear right" of access to government information for the press and public, but also made that right enforceable.[3] The purpose of the act was to establish a "general philosophy of full agency disclosure unless information is exempt under delineated language, and to provide a court procedure by which citizens and the press may obtain information wrongly withheld."[4] In signing the bill into law, President Johnson articulated the spirit behind the legislation: "I signed this measure with a deep sense of pride that the United States is an open society in which the people's right to know is cherished and guarded."[5]

In the years following the passage of FOIA, there has been substantial growth in Federal Government use of electronic information systems. Estimates indicate that, when FOIA was passed in 1966, about 3,000 mainframe computers had been installed by Federal agencies; microcomputers were not yet in use.[6] Recent reports indicate that, by 1986, approximately 25,000 mainframes and over 125,000 microcomputers were in place, representing a dramatic increase over a 20-year period.[7] The use of electronic mail and other electronic information systems has also proliferated. For example, according to a 1986 Office of Technology Assessment survey, 97 of 134 Federal agencies and agency components responding reported the use of electronic mail.[8] The results of the 1987 GAO survey summarized in chapter 2 indicate significant and growing Federal agency use of electronic technologies and formats.

When a "paper statute" is applied in an era of electronic information, its original ideals may become more difficult to carry out. Drawing analogies in the courts between paper documents and electronic information is often difficult. Evolving problems in interpreting FOIA could mean that new electronic technologies may serve as barriers to, rather than facilitators of, information disclosure under the act.

This chapter draws upon the existing body of FOIA case law addressing electronic information, and presents those FOIA cases involving traditional paper records that have served as precedents for decisions involving computer records. Inmost instances, cases are presented chronologically, to provide an evolutionary perspective on the lines of reasoning relevant to issues involving computerized records. Other sources of information that may help clarify ongoing debates, such as legislative history and agency practice, are included.

Finally, the chapter provides an analysis of trends in computer and database technology that raise additional questions about the applicability of traditional interpretations of FOIA to current Federal information practices.

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[1] 5 U.S.C. sec. 552.

[2] 60 Stat. 238 (1946); 5 U.S.C. sec. 1002 (1964).

3 Harold L. Cross, quoted in the FOIA Source Book, U.S. Congress, Senate Committee on the Judiciary, Subcommittee on Administrative Practice and Procedure, 93rd Cong., 2d. sess., 1974.

4 U.S. Congress, Senate Committee on the Judiciary, Subcommittee on Administrative Practice and Procedure, *Freedom of Information, Hearings on S. 1663,* 88th Cong., 1st sess., 1964. "U.S. Senate, FOIA Source Book, op. cit., 1974.

6 Martha Mulford Gray, U.S. Department of Commerce, National Bureau of Standards, Institute for Computer Sciences and Technology, *Computers in the Federal Government: A Compilation of Statistics-J978,* N.B.S. Special Publication 500-46 (April 1979).

7 U. S. General *Services* Administration, Information Resources Management Service, *Managing End User Computin, in the Federal Government, No. 2,* September 1986.

8 U.S. Congress, Office of Technology Assessment, *Federal Government Information* Technology: *Management,* Security. *Congressional Oversight, OTA-CIT-297* (Washington, DC: U.S. Government Printing Office, February 1986).

APPLICABILITY OF FOIA TO ELECTRONIC MEDIA

Although the term "records" is used throughout the text of FOIA,[9] it is not defined. Absent statutory reference, application of FOIA to computer tapes and other nonpaper media is determined by agency practice or on a case-by-case basis in the courts. To date, both agency practice and the case law generally support the treatment of computerized information as "records" under FOIA, although agencies are not necessarily required to provide the information in machine-readable form. In certain commonly-occurring cases, the status of computerized information still remains problematic. For example, in instances where computer records require insertion of codes or some form of additional programming to be retrieved from computer systems, agencies and courts have sometimes designated these efforts to be supplemental to the required FOIA "search" process.

According to the following decisions, the term "records," at least in principle, should be applied to computerized information and other nonpaper media, including motion pictures, audio recordings, and videotapes.

Computerized Information

The history of discussion of computerized FOIA records by Federal courts began in 1979, in the U.S. Court of Appeals for the Ninth Circuit. In *Long v. Internal Revenue Service,*[10] the court vacated and remanded a district court decision that had denied a request for electronic information compiled by the IRS in its "taxpayer compliance measurement program." Speaking for the majority, Judge Kennedy stated:

> . . . we dispose at the outset of any contention that computer tapes are not generally within the FOIA. The district court apparently determines that the term "records," as used in the Act, does not include computer tapes. This conclusion, however, is quite at odds with the purpose and history of the statute.

Kennedy relied upon the Senate Report accompanying the 1974 amendments to FOIA for its consideration of special problems of computer records in the context of search and copying fees.[11] In addition, he cited the Treasury Department's FOIA regulations which "make explicit provision for disclosure of 'records maintained in computerized form',"[12] and a 1975 opinion by the U.S. District Court for the Northern District of California that had affirmed the accessibility of motion pictures under FOIA.[13]

Judge Kennedy concluded: "In view of the common, widespread use of computers by government agencies for information storage and processing, any interpretation of the FOIA which limits its application to conventional written documents contradicts the 'general philosophy of full agency disclosure' which Congress intended to establish.[14] We conclude that FOIA applies to computer tapes to the same extent it applies to any other documents."[15]

The United States Supreme Court addressed the issue of computerized records in 1980. In *Forsham v. Harris,*[16] the Court referred to the Records Disposal Act" to arrive at a definition of agency records under FOIA. In delivering the opinion of the Court, Justice Rehnquist cited the Attorney General's 1976 Memorandum on the FOIA for its conclusion that Congress intended the Records Act definition to apply to FOIA:

> . . . although Congress has supplied no definition of agency records in the FOIA, it has formulated a definition in other Acts. The Records Disposal Act, in effect at the time Congress enacted the FOIA, provided a threshhold requirement for agency records: "records in-

[9] 5 U.S.C. sec. 552.
[10] 596 F.2d 362 (9th Cir. 1979).
[11] S. Rep. No. 854, 93rd Cong. 2d sess. 12 (1974), cert. denied, 446 U.S. 917 (1980).
[12] 31 C.F.R. ssl.5(f) & 1.6(g) (3)(ii)(1977).
[13] *Save the Dolphins v. U.S. Department of Commerce, 404* F. Supp. 407, 410-411 (N.D. Cal. 1975).
[14] S. Rep. No. 813, 89th Cong. 1st sess. 3 (1965).
[15] 596 F.2d 362, 365 (9th Cir. 1979).
[16] 445 U.S. 169, 186 (1980).
[17] 44 U.S.C. sec. 3301.

> eluded all books, papers, maps, photographs, *machine readable materials,* or other documentary material, regardless of physical form or characteristics, made or received by an agency of the United States Government under Federal law or in connection with the transaction of public business . . . ." (emphasis added)[18]

A 1982 decision by the U.S. Court of Appeals for the District of Columbia reaffirmed the applicability of FOIA to computerized records. *Yeager v. Drug Enforcement Administration,*[19] concerned an appeal to the Drug Enforcement Administration (DEA) for the release of computerized information and the use of computer-facilitated "disclosure avoidance techniques" to conceal exempted private information. Though the appellant request for "compacting" or concealing personal information was denied, the court acknowledged parallels between manual and computer storage: "Although it is clear that Congress was aware of problems that could arise in the application of the FOIA to computer-stored records, the Act itself makes no distinction between records maintained in manual and computer storage systems."[20] The court concluded that:

> It is thus clear that computer-stored records, whether stored in the central processing unit, on magnetic tape or in some other form, are still "records" for the purposes of the FOIA. Although accessing information from computers may involve a somewhat different process than locating and retrieving manually-stored records, these differences may not be used to circumvent the full disclosure policies of the FOIA.[21]

Other Media

A small, yet important, body of case law has established that various other media constitute records under FOIA. These cases have been cited in several decisions concerning computer generated materials.

Motion Pictures

In *Save the Dolphins v. U.S. Department of Commerce,*[22] the U.S. District Court for the Northern District of California affirmed that motion pictures constitute records subject to the disclosure requirements of FOIA. The case concerned a nonprofit corporation that sought access to a National Marine Fisheries Service film documenting the incidental killing of dolphins in the nets of commercial tuna fishing boats. In attempting to determine the status of motion pictures under FOIA, the court admitted to a lack of precedent in the area: "The first question is whether the film sought is a 'record' within the meaning of the Act (FOIA). The term is not defined in the Act. Neither do existing judicial interpretations appear helpful in regard to the precise questions here presented."[23] The court was forced to draw on examples from agency practice, citing both the "Disposal of Records" chapter of the Public Printing and Documents Act[24] and the General Services Administration definition of agency records, which includes "all books, papers, maps, photographs, or other documentary materials, regardless of physical form or characteristics . . . ."[25] At the time of the case, the Department of Commerce had not yet defined records in its regulations pertaining to FOIA.

The court's decision in *Save the Dolphins* reflected an interest in broad policy goals over narrow "records" definitions:

> The object of the Freedom of Information Act is to make available to the public "information" in the possession of government agencies. The term "records" in common parlance includes various means of storing information for future reference. There does not appear to be any good reason for limiting "records" as used in the Act to written documents. The motion picture film in question was made in order to store the information it now contains; it therefore falls within the definition of "records" in 5 U.S. C. § 552.[26]

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[18] 445 U.S. 169, 186 (1980).
[19] 678 F. 2d. 315 (D. C. Cir. 1982).
[20] Ibid.
[21] Ibid.
[22] 404 F. Supp. 407 (N.D. Cal. 1975).
[23] Ibid.
[24] 44 U.S.C. sec. 3301.
[25] 141 C.F. R. sec. 105-60.104(a).
[26] 404 F. Supp. 407 (N.D. Cal. 1975).

The important conceptual distinction between whether FOIA applies to "records" narrowly defined or to 'information' broadly construed recurs throughout the FOIA debate in cases involving computer-generated materials.

Audio Recordings

A 1976 decision by the U.S. District Court for the Southern District of New York, *Mobil Oil Corp. v. Federal Trade Commission*[27] has been cited for its implied treatment of audio recordings as FOIA records. The defendant had requested copies of communications between several Federal and State agencies pertaining to aspects of petroleum use. Although the case dealt primarily with the applicability of pertinent FOIA exemptions, the court specified that "*all identifiable* records must be made available to the public on demand unless requested documents fall within one of the Act's nine exemptions." Mobil's request encompassed "all communications including letters, reports or memoranda, and notes, transcripts, or other memorialization of oral communications. During the proceedings, the FTC was ordered by the court to search for any relevant tape recordings and documents. Only after this search was completed did the court attempt to establish whether Mobil's request fell under FOIA exemptions.

Videotape

Murphy v. F. B. I.[28], a 1982 decision by the U.S. District Court for the District of Columbia, concerned a New York Congressman's request for ABSCAM videotapes documenting alleged meetings between the Congressman and undercover agents. Although the decision concerned whether or not the tapes constituted investigatory records, subject to the law enforcement exemption of FOIA, the court held that videotapes could be obtained at the conclusion of the law enforcement proceedings: "[V]ideotapes which were exempt from disclosure prior to indictment can be obtained by accused after indictment."[29]

Although *Albright v. United States*[30] is essentially a Privacy Act case, the judgment by the U.S. Court of Appeals for the District of Columbia was based on FOIA's inclusion of videotapes as public records. The case concerned the legality of the filming and retention of a potentially damaging videotape by the Department of Health, Education, and Welfare (HE W). The videotape documented a confrontation between HEW employees and their supervisors. The plaintiffs maintained that storing videotapes of displeased employees exercising their First Amendment rights constituted an unfair labor practice and a violation of the Privacy Act. A copy of the videotape had been provided by the agency to the employees pursuant to a FOIA request filed 3 years earlier. The court determined that:" We do not think the fact that the means of storing information in this case was a videotape makes it any less a record for the purposes of the Act. After citing the decision in *Save the Dolphins*[31] concerning motion picture film, the court maintained that: "As long as the tape contains a means of identifying an individual by picture or voice, it falls within the definition of a 'record' under the Privacy Act."[32]

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[27] 406 F. Supp. 305 (S. D.N.Y. 1976).
[28] 490 F. Supp. 1138 (D.C. Cir. 1980).
[29] Ibid.
[30] 631 F.2d 915 (D.C. Cir. 1980).
[31] 404 F. Supp. 407, 410-411 (N. D. Cal. 1975).
[32] 631 F.2d 915, 920 (D.C. Cir. 1980).

DEFINING THE LIMITS OF SEARCHING UNDER FOIA

Traditional Interpretations

Although it has been established that FOIA applies to records on computer tapes that are in government possession at the time of a request, the status of information stored in computers is undercurrent dispute. The arguments turn on the definition of what activities should constitute searching under FOIA, and what activities extend beyond the realm of searching to records creation. The case law, as applied to paper information, establishes that the FOIA does not require agencies to create new records in fulfilling requests. A history of relevant Supreme Court decisions is presented below. The difficulties involved in making analogies between paper and computer-generated materials will be discussed in a subsequent section.

National Labor Relations Board v. Sears Roebuck,[33] a 1975 decision by the U.S. Supreme Court, addressed the Labor Board's attempted rejection of a request by Sears forcertain Advice and Appeals Memoranda used in litigation proceedings. The Board argued, first, that the memoranda should be exempt from disclosure under FOIA Exemption 7 dealing with law enforcement proceedings. Second, the Board argued that the requirement to generate explanatory material describing "circumstances of the case" was beyond the reach of FOIA. Although the Supreme Court remanded the first objection, it held that describing the "circumstances of the case" constituted the generation of new materials, and was thus unnecessary for FOIA disclosure purposes:

> The Act does not compel agencies to write opinions in cases in which they would not otherwise be required to do so. It only requires disclosure of certain documents which the law requires the agency to prepare or which the agency has decided for its own reasons to create. Thus, insofar as the order of the court requires the agency to create explanatory material. it is baseless.[34]

In *Forsham v. Harris,*[35] the Supreme Court addressed the issue of whether materials generated by government contractors and remaining in the possession of contractors could be considered government records and subject to FOIA request. As in *National Labor Relations Board,* this case turned on whether or not the FOIA request would involve the creation of new records. Speaking for the majority, Justice Rehnquist equated records creation with the obtaining of records not previously held by the agency:

> . . . Congress contemplated that an agency must first either create or obtain a record as a prerequisite to its becoming an 'agency record" within the meaning of the FOIA. . . .[I]n this context the FOIA applies to records which have been in fact obtained, and not to records which merely could have been obtained.[36]

Justice Brennan, dissenting, denied that government possession was a requirement for determining what constituted a record: "Nothing whatever in the legislative history suggests that Congress meant to allow agencies to insulate important steps in decisionmaking on the basis of the technical niceties of who 'owns' crucial documents. " In explaining his dissent, Brennan argued that a "close connection' between the government and the record was sufficient:

> Where the nexus between the agency and the requested information is close, and where the importance of the information to public understanding of the decisions or the operation of the agency is great, I believe the congressional purposes require us to hold that the information sought is an "agency record" within the meaning of FOIA.[37]

Brennan added that if contractor information was not subject to FOIA, the institution of government contracting could ultimately shield public access to information:

[33] 421 U.S. 132 (1975).
[34] 421 U.S. 132 at 161-162 (1975).
[35] 445 U.S. 169 (1980).
[36] 445 U.S. 169 at 186 (1980).
[37] 445 U.S. 169 (1980).

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> Just as the explosion of Federal agencies, which are not directly responsible to the electorate, worked to hide the workings of the Federal Government from voters before enactment of FOIA, the understandable tendency of agencies to rely on nongovernmental grantees to perform myriad projects distances the electorate from important information by one more step. If the records of such organizations, when drawn directly into the regulatory process, are immune from public inspection, then government by secrecy must surely return.[38]

In *Kissinger v. Reporters Committee for Freedom of the Press*[39], the Supreme Court once again addressed the issue of whether records outside of government hands at the time of a request were subject to FOIA disclosure. The plaintiff had questioned a journalist's access to transcripts of politically-significant telephone conversations. Originally in government hands, the transcripts had subsequently been donated to a private library prior to the request. In delivering the opinion of the Court, Justice Rehnquist emphasized the distinction between existing records and record production: "When an agency has demonstrated that it has not 'withheld' requested records in violation of the standards established by Congress, the Federal courts have no authority to order the production of such records under the FOIA." Rehnquist cited the legislative history to strengthen his argument:

> Several sources suggest directly that agency possession or control is prerequisite to triggering any duties under the FOIA. In the debates, the Act was described as ensuring "access to the information *possessed* by (government) servants. " (emphasis added)"

He also referred to FOIA guidelines issued by the Attorney General in 1966 for the use of all Federal departments and agencies in complying with the new statute:

> The guidelines state that FOIA "refers, of course, only to *records in being* in the possession or control of an agency. , ." [It] imposes no obligation to compile or *procure* a record in response to a request. (emphasis added)[41]

Justice Brennan, concurring and dissenting in part, determined that FOIA contained an implicit mandate for the government to retain those records it had created, but did not contradict Rehnquist stance on record creation:

> FOIA does not compel agencies to write opinions where not otherwise required. FOIA neither compels the Government to conduct research on behalf of private citizens, nor duplicates administrative law requirements of adequate explanation for Government action. . . . What the Act does mandate is exposure of the research and explanations which the government has chosen to memorialize; an agency's obligation to *retain* records, therefore, may be inferred from FOIA without contradicting the principle that agencies need not *create* records. (emphasis added)[42]

Although it is clear that agencies are not required to create new records in response to FOIA requests, determining the point at which searching becomes records creation can be difficult. Put another way, the definition of what constitutes a "record" may depend upon the viewpoints of agencies or courts on the purposes and goals of FOIA. These views will influence whether or not records are perceived to be tangible entities, or whether records are defined more broadly, in terms of the information they may provide. The debate about the physical nature of records pervades the FOIA case law addressing paper records, and is highly significant for cases involving computer records. Whether FOIA applies to some notion of a tangible 'agency record' or, instead, to "information in the abstract becomes a crucial distinction in the case of computer records, which may not exist in tangible form unless modified in some way.

In the Supreme Court's decision in *Forsham*[43], Justice Rehnquist embraced a narrow definition of records, stating outright that

38 Ibid.
[39]445 U.S. 136 (1980).
[40] 112 Cong. Rec. 13652 (1966), reprinted in FOIA Source Book, S. Doc. No. 93-82, p. 69 (1974).
"Ibid.
[42]445 U.S. 136 at 152 (1980).
"445 U.S. 169 (1980).

"The FOIA deals with 'agency records', not information in the abstract. '[44] In his dissent, Justice Brennan drew upon the legislative history to argue for a broader interpretation of ''records' to account for the original purposes of the Act:

> The Court concedes, of course, that the statute itself does not define "agency records. " Therefore, out task is to construe the statutory language consistently with the purposes of FOIA , . . FOIA is a broad enactment meant to open the processes of government to public inspection. It reflects a finding that if left to themselves agencies would operate in near secrecy. FOIA was, therefore, enacted to provide access to information to enable "an informed electorate," so ''vital to the proper operation of a democracy, to govern itself .45

In 1982, the Supreme Court in F.B.I. v. *Abramson,*[46] used a broad definition of records to *limit* access to exempted information. The Court addressed the issue of whether information contained in records compiled for law enforcement purposes (and thus subject to Exemption 7 of the FOIA) would lose its exempt status when incorporated into records compiled for purposes other than law enforcement. The U.S. Court of Appeals for the District of Columbia Circuit had used a physical definition of records to conclude that the exempt status would be lost when records were recompiled into a new physical form. According to the Supreme Court, because recompilation of the physical form of the documents would not alter the basic nature of the information, the exempt status should remain. The Court's decision was based on the "equivalence" of the information contained in the two sets of records:

> We are of the view, however, that the statutory language is reasonably construable to protect that part of an otherwise non-exempt compilation which essentially reproduces and is substantially the *equivalent* of all or part of an earlier record made for law enforcement uses. (emphasis added)[47]

In dissenting, Justice Blackmun advocated a narrower definition of records: ''I cannot escape the conclusion that the Court has simply substituted the word 'information' for the word 'records' in Exemption 7 (C)." He cited *Forsham*[48] **to** conclude that FOIA applied to "agency records, not information in the abstract." Justice O'Connor, also dissenting, concluded that the Court was reaching beyond Congressional intent:

> To reach its result, the Court assumes that, through inadvertence or inattention, Congress' pen slipped while amending Exemption 7 in 1974, Proceeding on this basis, the Court helpfully undertakes to rewrite the Exemption, substituting for the statutory phrase ' 'investigatory records compiled for law enforcement purposes" something like "records containing investigatory information originally gathered for law enforcement purposes. "[49]

In the Computer Context: The Distinction Between Searching and Programming

Can the distinctions between searching and record creation under FOIA be extended by simple analogy to the computer context? It is clear that, in cases involving paper documents, the FOIA does not require agencies to create new records on behalf of requesters. A fundamental difference between computerized records and hard copy records, however, is that the former may reside within computer systems until they are specifically demanded.

Computerized government records may require the application of codes or even additional programming to be retrieved from host systems in systematic or comprehensible form. By extending analogies from cases involving paper records, the courts are creating distinctions between computer searching and computer programming, maintaining that programming is not required under FOIA, as it is analogous to record creation. As more information becomes machine-readable, the line

[44] Ibid.
[45] S. Rep. No. 813, 89th Cong. 1st sess. 3 (1965).
[46] 456 U.S. 615 (1982).
[47] Ibid.
[48] 445 U.S. 169 at 186 *(1980).*
[49] *456* U.S. 615 (1982).

between record searching and record creation becomes increasingly fine. Also, as Federal agency communication via electronic mail and other electronic vehicles intensifies, government records may have the potential to become "buried" within computer systems.

The intellectual debate that needs resolution is as follows: in an electronic age, is creating a program to retrieve a document part of the *searching* process, analogous to a manual search, or should it be considered *creation* of a new record (not required for governmental purposes), which, the case law has determined, is *not* required under FOIA? Press groups and various public interest and public data user groups tend to hold the view that creating a program is analogous to the *searching* process, while agencies may respond that creating a program is no different from creating a new document.

The arguments turn on how records are defined. If an agency maintains that FOIA pertains only to "records in being, " then any kind of manipulation used to extract data from a system could technically serve as a rationale to withhold information. If some degree of manipulation is required to make a computer record comprehensible or available to the public, then perhaps the "record in being" definition should be avoided. On the other hand, in some cases, distinctions must be drawn between making records available and analyzing or further manipulating data, as FOIA does not compel agencies to assume analytical research functions. Furthermore, FOIA applies only to records created for government purposes, and the manipulation of information may be perceived to be equivalent to the creation of records that are not for government use.

Another gray area, which has become increasingly apparent in the context of online information, is the determination of what constitutes a "reasonable effort" on the part of the government in searching for records responsive to a FOIA request. The legislative history of the FOIA indicates that a description of a requested record is sufficient if it enables "a professional agency employee familiar with the subject area to locate the record with a reasonable amount of effort. "5° How can a "reasonable effort be defined in an electronic age, when the capabilities for manipulating information become increasingly efficient and cost effective? In the light of electronic developments, the threshold of "reasonableness" warrants re-examination. The issue becomes apparent in the cases presented below, some of which involve requests for computer segregating and compacting of data. According to the case law, when exemptions are involved, FOIA only requires agencies to disclose that information which is "reasonably segregable." The ability to delete personal and trade data electronically could call for a broadening of the domain of requests that are considered reasonable. Congress and the courts may need to abandon some traditional views, and build an entirely new frame of reference for electronic information.

Federal appellate and district courts have begun to address the problems associated with defining the appropriate nature and extent of computer seaching under FOIA. In *Long v. lRS,*[51] the U.S. Court of Appeals for the Ninth Circuit vacated and remanded a district court decision that had determined that the process of deleting personal information from a record in order to "sanitize" tax compliance information would involve the creation of a new record. The appeals court determined that the material requested was, in fact, "reasonably segregable" from exempted information, and, therefore did not involve the creation of a new record: "We do not believe, however, that the mere deletion of names, addresses, and social security numbers results in the agency's creating a whole new record."[52]

The *Long* court differentiated the facts of the case from *N.L.R.B. v. Sears:*[53]

> Requiring an agency to write an opinion on request is far different, however, from requir-

[50] H R. Rep. No. 876, 93rd Cong., 2d sess. 6 (1974), reprinted in 1974 U.S. Code Cong. & Ad. News 6271.
[51] 596 F. 2d. 362 (9th Cir. 1979), cert. denied, 446 U.S. 917 (1980).
[52] Ibid.
[53] 421 U.S. 132, 161-62 (1975).

> ing it to excise a name or social security number from an existing record. . . . [T]he editing required here is not considered an unreasonable burden to place on an agency.[54]

The appeals court in *Long* disagreed with the district court's holding that deletion of identifying information would be prohibitively expensive; the IRS had estimated an editing cost of $160,000. The court explored ". . . whether the cost and inconvenience to the agency attributable to the editing process can be the sole basis for determining that material is not reasonably segregable." The court cited the legislative history of the 1974 amendments to FOIA dealing with fees to argue that agencies should bear the costs of deletions. The legislative history contains a statement indicating that "fees should not be used for the purpose of discouraging requests for information or as obstacles to disclosure of requested information. '-'-' The amendments provided that agencies could only charge for costs of search and duplication. The court further cited a Department of the Treasury regulation that stated that "under no circumstances will a fee be charged for . . . deleting exempt matter . . ."[56]

In *Yeager v. Drug Enforcement Agency,"* the D.C. Circuit Court came to a different conclusion regarding the limits of reasonableness in segregating disclosable data under FOIA. In this case, the requester had asked the Drug Enforcement Agency to "collapse" or "compact" data electronically. Data compaction or "disclosure avoidance techniques" are used to remove sensitive information from statistical materials and involve the expression of specific information in more general terms. Computers have facilitated these types of data manipulations.

The *Yeager* court determined that agencies were not required under FOIA to use disclosure avoidance techniques in fulfilling their duties to release "reasonably segregable, " nonexempt portions of records. The test used to determine the breadth of requestable functions was whether the search was "functionally analogous' to a manual search. The Senate report on the 1974 amendments, in the sole reference to computer-stored records, maintained that, "in computerized form, the term 'search' would include services 'functionally analogous' to searches for records maintained in conventional form."[58] The court held that: "although it is clear that Congress was aware of problems that could arise in the application of the FOIA to computerized records, the Act itself makes no distinction between records maintained in manual and computer storage systems. " The judge cited holdings in *National Labor Relations Board,*[59] *Forsham,*[60] and *Kissinger*[61] on record creation, and concluded that:

> It is well settled that an agency is not required by FOIA to create a document that does not exist in order to satisfy a request. A requester is entitled only to records that an agency has, in fact, chosen to create and retain. Thus, although an agency is entitled to possess a record, it need not obtain or regain possession of a record in order to satisfy a FOIA request . . . Agencies are not, however, required to commit to paper information that does not exist in some form as an agency "record. Thus, they need not write an opinion or add explanatory material to a document.[62]

The *Yeager* court determined that new capabilities of computers should not result in the expansion of duties imposed on agencies: "The FOIA does not contemplate imposing a greater segregation duty upon agencies that choose to store records in computer than upon agencies that employ manual retrieval systems. " The court concluded that Congress did not require any restructuring of the substantive content of records, feasibility and full disclosure not withstanding:

[54] 596 F. 2d 362 (9th Cir. 1979).
[55] S. Rep. No. 1200, 93rd Cong. 2d. sess. (1974).
-'" 31 C.F.R. sec. 1.6(a)(1) (1977).
[57] 678 F. 2d 315 (D.C. Cir. 1982).
[58] S. Rep. No. 854, 93rd Cong. 2d. sess. (1974).
[59] 421 U.S. 132, at 161-162 (1975).
[60] 445 U.S. 169, at 186 (1980).
[61] 445 U.S. 136, at 152 (1980).
[62] 678 F 2d at 315 (1982).

> The interpretation suggested by (petitioner) Yeager may be desirable in terms of full disclosure policy and it may be feasible in terms of computer technology; these factors notwithstanding, however, we are not persuaded that Congress intended any manipulation or restructuring of the substantive content of a record when it commanded agencies to "delete" exempt information.[63]

Although Yeager rejects segregation duties in this case, it pays lip service to the potential of increased disclosure offered by computers:

> Our treatment of the use of disclosure-avoidance techniques should not be viewed as disapproval of the use of such techniques by agencies. We hold only that the FOIA does not *mandate* their use in determining whether information is "reasonably segregable." The FOIA does not prohibit an agency from releasing information that falls within any of the delineated exemptions. It only provides the agency the option of withholding the documents. . . . Agencies that store information in computerized retrieval systems have more flexibility in voluntarily releasing information and should be encourage(d) . . . to process requests for computerized information even if doing so involves performing services which the agencies are not *required to provide* . . . (emphasis added) [64]

That searches for computer records should involve activities which are "functionally analogous" to manual searches is an important concept, one which continues to serve as a cornerstone of debates about the extent of computer searching appropriate to FOIA. The term has been used to support as well as to deny requests for computer searches. However, defining when a computer search is "functionally analogous" to a manual search may be a subjective enterprise; Congress may need to examine the appropriateness of using tests which are based on analogies to paper records to define the limits of computer searches.

In a case recently settled in the U.S. District Court for the District of Columbia, *Public Citizen v. Occupational Safety and Health Administration,*[65] a public interest group challenged the comparison of computer programming to new record creation. The case involved an attempt by Public Citizen to conduct a survey of OSHA's enforcement of policies of employee notification about workplace hazards. Public Citizen first approached a regional office which claimed that a search of paper records would be unduly burdensome, and suggested that the enforcement information was currently available on a company-by-company basis in OSHA's computerized "Integrated Data Management System" in its Office of Management Data Systems. When Public Citizen offered its list of companies to that office, OSHA maintained that, although the companies were in its database, computer reprogramming would be required to satisfy the request. As new programming would constitute the creation of a new record, the request did not fall under FOIA, and Public Citizen therefore would not be entitled to a fee waiver.

Public Citizen's lawsuit challenged this contention, claiming that the retrieval procedures were analogous to searching, not record creation. According to Public Citizen, OSHA's assessment of the full costs of computer time would terminate Public Citizen's inquiry. The public interest group also pointed out that OSHA had supplied similar computer printouts in the past to requesters free of charge.

Once the suit was initiated, OSHA claimed that it had increased its computer capabilities to the extent that the appropriate technology was available to conduct the search without additional programming. The case was settled when the agency agreed to produce the information and grant a FOIA fee waiver to the public interest group.

Public Citizen illustrates a problem that recurs in legal questions involving new technologies-a lack of technological literacy among lawyers, judges and litigants. In the case of FOIA, it may be difficult or impossible for non-agency personnel to know whether technological explanations are being used

[63] Ibid.
[64] S. Rep. No. 854, 93rd Cong., 2d sess. 12 (1974).
[65] Civil Action No. 86-07-05 (705 D.C. District Court).

honestly or arbitrarily to circumvent information disclosure. This issue is connected to that of determining costs for searches. If requesters cannot know what types of operations are genuinely required to fulfill requests, they have little way of knowing whether assessed costs are accurate.

In a recent decision by the U.S. District Court for the Eastern District of Pennsylvania, *Clarke v. Treasury*,[66] the plaintiff sought compiled information from the bond records of certain "Flower Bond" holders. The court determined here that anew computer program would need to be created to extract the information requested. The court drew upon *Forsham*[67] and *Kissinger*[68] to hold that: "while an agency maybe required to produce records that do exist, it is not required to make them, " and cited the Department of the Treasury's regulation that provided that: "[t]here is no requirement that records be created or data processed in a format other than that required for governmental purposes in order to comply with a request for records."[69]

In a case decided by the U.S. District Court for the District of Columbia, Kele v. *U.S. Parole Commission*,[70] the petitioner requested statistical information on convicted murderers receiving early parole. The Commission maintained that the information could not be retrieved without new programming and denied the petitioner's request. Though the petitioner, Kele, insisted that retrieval would involve nothing more than the punching of a few keys on a keyboard, the Department of Justice argued on behalf of the Commission, holding that:

> . . . to go beyond an agency's own existing capabilities to extract data in defining computerized 'records' would constitute a wholesale departure from both existing law and the purposes of the FOIA, to say nothing of the practical ramifications for the government.[71]

In denying Kele's request, the court upheld the Justice Department's view that:

> . . . to hold otherwise by requiring agencies to write computer programs not needed for carrying out agency functions in response to FOIA requests would transform the government into a giant computer research firm captive to the whims of individual requesters at a great public expense.[72]

A recent decision by the Department of Energy's Office of Hearings and Appeals (OHA) may help change the tenor of future debate." The Energy Department determined that reprogramming of computers, in some cases, should be considered appropriate and necessary to the FOIA search process.

The case concerned a request by the National Security Archive (NSA) for a listing of unclassified "limited access documents' available to authorized requesters from the DOE Office of Scientific and Technical Information (OSTI). Library personnel at OSTI responded that the data existed in a database, but that FOIA did not require OSTI to compile the list, as production of a list from the database would constitute new programming.

The NSA appealed OSTI determination to the DOE's Office of Hearings and Appeals (OHA). In conferring with OSTI, OHA found that if a "profile' of the requesting party were entered into the computer, the list of reports available to that party could be retrieved. OHA granted NSA's appeal" and directed OSTI to contact the NSA to clarify the scope of its request and to inform the NSA of the structure and contents of its database. According to DOE regulations, if the agency holds that a request does not reasonably describe the records sought, agency personnel are required

[66]Civil Action No. 84-1873 (E.D. Pa. 1986).
[67]445 U.S. 186 (1980).
[68]445 U.S. 136, 152 (1980).
[69]31C.F. R. sec. 1.5(a) (1984).
[70]Civil Action No. 85-4058 (D.C. District Court, 1986).

[71]Memorandum of Points and Authorities in support of defendant's motion to dismiss, p. 18.
[72]Ibid., p. 19.
[73]'Opinion of Record, Decision and Order, Office of Hearings and Appeals, U.S. Dept. of Commerce, Case No. KFA-0158 (June 1988).
[74]Decision and Order, Office of Hearings and Appeals, U.S. Dept. of Energy, Case No. KFA-0146 (Dec. 18, 1987).

to confer with the requester in an effort to restate the request in a manner that would facilitate compliance.[75] In addition, OSTI was then directed to search its database to provide the list of documents sought by the NSA. The OHA stated in its decision that programming could be considered an appropriate part of a search for FOIA records: "[T]he mere retrieval of information already existing in a database, even if a computer must be programmed to select specified types of data, does not constitute creation of a new record."[76]

Shortly thereafter, OSTI filed a Motion for Clarification of OHA's decision, maintaining that OHA's statement was overboard and inconsistent with FOIA requirements. In its response, OHA held that, contrary to OSTI's contention, providing a list of documents derived from OSTI database would not constitute the creation of a new record. According to OHA, agencies may need to manipulate their software to perform FOIA searches, even if those searches are dissimilar from searches normally conducted by agencies for their own purposes:

> We believe, however, that to the extent that OSTI maintains records in a database and already has software that is capable of searching the database, the FOIA requires OSTI to use that software to search the database for the requested records. This is true even if the type of search that must be performed is different from the type normally performed by OSTI. A search of this nature is not, in substance, significantly different from a search of a file cabinet for paper records that are responsive to a request. If the FOIA required anything less it would allow agencies to conceal information from public scrutiny by placing it in computerized form. This would be inconsistent with the FOIA policy of the fullest possible disclosure.[77]

The OHA specified that there should be limitations upon the work that agencies must undertake under FOIA, as:

> . . . the FOIA does not require agencies to answer questions, generate explanatory material, compile statistical data, or provide any other information that is not already contained in agency records . . . There is also no doubt that agencies are not required to perform calculations, manipulate data, or restructure records in any way pursuant to a FOIA request, since this would constitute the creation of a new record.[78]

However, short of the above exceptions, the OHA held that many types of computerized searches should be considered analogous to those performed by hand:

> While the process may be different, many computer searches are in substance essentially the same as manual searches and involve comparable methods and skills. For example, to search paper records a methodology must be developed and the relevant files or file drawers manually searched for the requested information. Similar methodologies must be developed and used when a computer is instructed to perform the search. A computer search may be electronic in nature, but it is not necessarily any different in essence. It merely uses different tools—the computer and its software—to conduct the search.[79]

The OHA refuted the court's holding in *Clarke v. Treasury*,[80] where the agency was not required to undertake programming to provide a simple listing to the requester:

> Under these circumstances, we do not believe that this single district court opinion can be interpreted to mean that agencies can never be required to perform any reprogramming in order to comply with a FOIA request.[81]

The OHA did not attempt to define the extent to which agencies must reprogram their computers in order to respond to FOIA requests, and maintained that it will address this issue in the future on a case-by-case basis:[82]

> The more difficult issue is the extent to *which agencies must search a database* in ord-

[75] 10 C.F.R. 1004.4 (C)(2).
[76] Op. cit.
[77] Decision and Order, Office of Hearings and Appeals, U.S. Dept. of Energy, Case No. KFA-0158 (May 26, 1988).
[78] Ibid.
[79] Ibid.
[80] Civil Action No. 84-1873 (E. D. Pa. 1986).
[81] U.S. Dept. of Energy, Case No. KFA-0158, op. cit.
[82] Ibid.

er to select those records within the database that are requested pursuant to the FOIA. On this issue, no precise answer can be formulated in the abstract. As noted above, this is an unsettled area of the law and there are few judicial determinations to guide us. Furthermore, an agency's obligation to search its database may depend upon the circumstances presented, including how the database is structured, the capabilities of the agency's computer system and personnel, and the specific information requested."{ emphasis added)"

Determining the Format of Information Delivered

Although both the case law and the FOIA fee guidelines have established that computer stored information is subject to FOIA, requesters are not guaranteed access to this information in formats other than paper. According to a limited body of case law, once the determination has been made that a FOIA request for computer-stored information is reasonable, an agency is not legally bound to offer the information in any specified format. If a requester does not specify format, the agency will generally provide the information in the least expensive form possible, or in the form most compatible with the agency's current information delivery modes. If the requester does specify format, agencies may accommodate the request, if costs are not unreasonable. Otherwise, the requester will be denied the format, or offered the option of obtaining the specified format at a higher price.

A 1984 decision by the U.S. District Court for the District of Columbia, *Dismukes v. Department of the Interior*,[84] addressed the issue of the equivalency of alternative formats. The plaintiff requested a computer tape listing of participants in the Bureau of Land Management's California oil and gas leasing lotteries, in "nine track, 1,600 b.p.i., DOS or unlabeled, IBM compatible formats, with file dumps and file layouts. " The Department of the Interior responded that the information was only available on microfiche. The court held that the agency had no obligation under law to satisfy the request on computer tape, and could determine the form in which it would make its records available, providing it had a reasonable argument for not presenting the information in the format requested:

> An agency has no obligation under the FOIA to accommodate a particular requester's preference regarding the format of requested information and, according to FOIA, the agency need only provide responsive, nonexempt information in a "reasonably accessible form."[85]

Although, in this case, computer tape offered the least expensive means of access, the agency system was configured to deliver this type of information on microfiche.

The issue in *Dismukes* was whether the tape and microfiche were *equivalent* media for agency records, such that release of the latter would satisfy a request for the former. To support the decision, the court used the rationale that FOIA applied to information in the abstract rather than to tangible agency records. While this is an argument that recurs throughout FOIA case law, it was used here to limit the specificity of formats, rather than to argue for fuller disclosure.

The *Dismukes* court acknowledged the Supreme Court holding in FBI v. *Abramson*,[86] also citing a 1982 case, *Center for National Security Studies v. CIA*,[87] where the court rejected the plaintiff "literal, physical approach to the definition of agency record. " The court determined that, if the plaintiff were to strengthen his case, he would need to prove that the decision to release the information on microfiche would diminish his access to the information he sought. The court did allow that, in some cases, formats would *not* be equivalent, as in the case of audiotapes, where written transcripts would not be able to provide the "nuances of inflection which give words added meaning beyond that reproducible on paper." In the case presented, however, the court determined that: "neither plaintiff nor any document in the record suggests that the

[84] Ibid.
[85] 603 F. Supp. 760 (D.D.C. 1984).
[86] Ibid.
[87] 456 U.S. at 615 (1982).
[88] 577 F. Supp. 584, 589-590 (D.C. District Court, 1984).

quantum of information contained in the microfiche varies in any way from that recorded on the computer tape."[88]

NASA has recently appealed a decision by the U.S. District Court for the District of Columbia, in which information contained in audiotapes was determined to convey nuances that made them more valuable than the written transcripts. New *York Times v. NASA* [89] concerns a New *York Times* reporter's FOIA request to obtain cockpit voice recordings from the space shuttle, *Challenger,* along with transcripts and digital information. The trial judge ordered disclosure of the tapes. NASA appealed on the grounds that the tapes constituted personal proprietary information (similar to personnel and medical files), and that release of the tapes could create undue suffering for the families of the astronauts. The reporter claimed that, unlike transcripts, the tape recordings conveyed voice inflections and reproduced shuttle background noises that could serve as indicators of technical problems, possibly enhancing future efforts to improve safety. A three-person Circuit Court panel recently affirmed the lower court's decision, and the case awaits a potential appeal by NASA to the full court.

[88] 603 F. Supp. 760 (D.C. District Court, 1984).
[89] Civil Action No. 86-02860 (D.C. District Court, 1986),

EXPANDING THE LEGAL FRONTIERS: PUBLIC ACCESS TO SOFTWARE AND ONLINE DATABASES

Software

The status of computer software (including indexes, directories, and operating programs and codes) under FOIA is uncertain, and few agencies mention software in their regulations. Agency practice is inconsistent, varying with the function of the software, its commercial potential, and general agency attitudes toward openness. No legal cases clearly address the issue of what classes of software should constitute agency records. Some agencies have suggested that software is a *tool* used to manipulate information rather than a record, while others relinquish software products when requests are perceived to be reasonable. This issue is problematic as some sort of code may be necessary for even the most basic functions, such as producing a printed document from the magnetic media on which the information is stored. It may be difficult or impossible for requesters to know what types of computer operations are involved in the agency's retrieval process, and whether their rights under FOIA are being arbitrarily denied for technical or other reasons.

The issue of whether or not codes and other information needed to extract computerized data are agency records under FOIA was raised by the district court in Yeager,[90] and was not resolved on appeal. Conceivably, an agency might deny access to computer codes under FOIA Exemption 2, which covers internal personnel matters and has been construed to absolve the agency from any obligation to produce "trivial" internal information. The appeals court in *Yeager* concurred with the holding of the lower court on the subject of codes: "The district court found that if Yeager had magnetic tapes of computer records, then the codes necessary to read and use the tapes would become more than intra-agency records."[91]

A more liberal view emerged in a 1982 decision by a Florida appellate court, where computer codes were compared to instructions accompanying a written document. In *Seigle v. Barry,*[92] the court stated:

> The information in a computer is analogous to information recorded in a code. Where a public record is maintained in such a manner that it can only be interpreted by the use of

[90] 678 F.2d at 315 (D.C. Cir. 1982).
[91] Ibid.
[92] 422 So.2d 63 (Fla. 4 D.C.A. *1982).*

a code, then the code book must be furnished to the applicant.[93]

While pre-existing data can be demanded under FOIA, further analysis of data cannot. However, the distinction between record production and data analysis may become blurred in cases involving computer records. If a record is incomprehensible to anyone but the operator of an in-house system, some form of analysis may be required. Also, if a database includes software combined with public information, and the two are not segregable, the status of the software under FOIA can be argued. Conceivably, one fraction of the database could constitute nonreleasable agency information, while the rest of the unit qualified as a "record" by FOIA standards.

While most agencies have failed to mention software explicitly in their FOIA regulations, the Department of Defense (DoD) is an exception. DoD made several explicit references to software in its recent regulations pertaining to fees and fee waivers, in compliance with the FOIA Reform Act of 1986.[94] In specifying those materials which should not constitute records under FOIA, the Department included in its definition of commercially exploitable resources: "Computer software, if not created or used as primary sources of information about organizations, policies, functions, decisions, or procedures of a DoD component. " DoD did, however, add that this definition should not include the "underlying data which is processed and produced by such software and which may in some instances be stored with the software. " (emphasis added)[95]

Perhaps even more significant is DoD's reference to information stored inside machines. According to the regulations, information stored within a computer "for which there is *no existing computer program or printout*" (emphasis added)" would *not* be subject to a FOIA request. When in-house paperwork reduction efforts and the efficacy of computer communications have led to increased use of electronic mail and other electronic systems to relay agency information, this limited definition of "records" could be problematic. Even when information is targeted for public consumption, the growing adoption of "printing on demand" practices should stimulate close examination of relevant regulations.

Online Databases

Given the trend toward cost recovery for Federal agency information products, it seems likely that user fees will continue to help support Federal online database delivery systems. If FOIA requests for copies of certain databases are denied, and online access is priced beyond the means of particular requesters, the Federal Government can be accused of restricting public access to its electronic information. On the other hand, if private vendors or other members of the public are able to obtain copies of Federal databases at nominal prices under FOIA, the ability of these database services to operate in a self-sustaining fashion could be eroded.

The leading case addressing a FOIA request for machine-readable copies of a Federal database is *SDC Development Corp. v. Mathews*, a 1976 ruling by the U.S. Court of Appeals for the Ninth Circuit.[97] The case concerned an attempt by a private firm to use FOIA to obtain copies of the extensive MEDLARS bibliographic health database from the National Library of Medicine (NLM). The MEDLARS tapes were available for sale on a subscription basis through the National Technical Information Service (NTIS) for $50,000, with an estimated additional cost of $50,000 for annual data updating. The firm maintained that the database should be relinquished for the cost of search and duplication, presumably much less than the NTIS sales price.

The court held that the library reference materials were not public records, and need not be relinquished under FOIA. Although this

[93] Ibid.
[94] P.L. 99-570, 100 Stat. 3207-49.
[95] 32 C.F. R. Part 286, 1987 (Fed. Reg. vol. 52, No. 132, July 10, 1987).
[96] Ibid.
[97] 542 F. 2d at 1116 (9th Cir. 1976).

case is sometimes cited by agencies to deny the analogy between paper records and computerized records, the fact that NLM's reference materials were stored in a computer databank was inconsequential to the decision. The court used the rationale that applying FOIA here would constitute a conflict between two statutes, in this case FOIA and the National Library of Medicine Act.[98] "When two statutes are capable of coexistence, it is the duty of courts, absent a clearly expressed Congressional intention to the contrary, to regard each as effective."[99] The National Library of Medicine Act, in which Congress established the Library in 1956, authorized the Secretary of Health, Education, and Welfare to charge the public for using services and materials.[100] The court also footnoted the Technical Information Act[101] which directed the Secretary of Commerce to maintain a clearinghouse for scientific and technical information in which "to the fullest extent feasible, each of the services and functions provided shall be self-sustaining or self-liquidating." [102]

The court distinguished here between information per se and information delivery systems:

> Congress specifically mandated the agency to prepare this system and hold it as stock in trade for sale to the public. As such the system constitutes a highly valuable commodity. Requiring the agency to make its delivery system available to the appellants at nominal charge would not enhance the information gathering and dissemination function of the agency, but rather would hamper it substantially. Contractual relationships with various organizations, designed to increase the agency's ability to acquire and catalog medical information, would be destroyed if the tapes could be obtained essentially for free , . . The agency is seeking to protect not its information, but rather its system for delivering that information. [103]

The Mathews court determined that the MEDLARS material did not constitute an agency record, as it:

> . . . does not directly reflect the structure, operation, or decision-making functions of the agency, and where, as here, the materials are readily disseminated to the public by the agency, the danger of agency secrecy which Congress sought to alleviate is not a consideration. [104]

SDC v. Mathews is particularly interesting when observed in the context of the debate over the roles of the public or private sectors in the delivery of public information services. In a committee report on government information dissemination prepared by the House Committee on Government Operations, the *Mathews* court was accused of having "misunderstood the statutory role of NLM, misread the FOIA, and failed to consider the Copyright Act and the significance of the policy against restrictions on dissemination of government information.[105] The decision works both in favor of and against private vendors. On the one hand, the decision supports NLM's charging of fees and its exclusive agreements with private contractors in order to further the agency's public information objectives. On the other hand, to protect the agency's information dissemination mission, the decision prevents other private database vendors from using FOIA as an inexpensive means to obtain marketable electronic data.

A case currently pending in the U.S. District Court for the District of Columbia, *International Computaprint Corp. v. U.S. Department of Commerce*[106] raises issues addressed in *Dismukes*[107] as well as *SDC v. Mathews.*[108] Computaprint, a private database vendor, requested machine-readable copies of the Patent Office's (PTO) computerized trademark database. PTO denied the request on two grounds. First, because the data was available

[98] 42 U.S. C. 276.
[99] 542 F. 2d at 1116 (9th Cir. 1976).
[100] 42 U.S.C. 276 (c)(2).
[101] 15 U.S.C. sec. 1151-1157.
[102] 542 F. 2d at 1116 (9th Cir. 1976).
[103] 603 F.2d at 1116 (9th Cir. 1976).
[104] Ibid.
[105] *Electronic Collection and Dissemination of Information by Federal Agencies: A Policy Overview.* House Rep. 99-560, 99th Cong. 2d sess. 1986, p. 35.
[106] Civil Action No. 87-1848 D.C. (District Court, 1987).
[107] 603 F. Supp. 760 (D.D.C. 1984).
[108] 542 F. 2d. at 1116 (9th Cir. 1976).

through alternate means, PTO claimed that it had no obligation to provide machine-readable tapes. Trademark data could be obtained online in PTO's public reading room, as well as on microfiche. Using the line of reasoning in *Dismukes,* the agency maintained that the information content of a record is not affected by its format. Second, PTO responded that the economic value of the tapes excluded them from FOIA.

Computaprint maintains that the Patent Office's alternative means of securing trademark information are inadequate. According to Computaprint, the paper records in PTO's reference library are not as accurate as the computerized records—in fact, the agency's original rationale for computerization was the upgrading of its information. During an experimental effort to use the heavily-trafficked computer terminals in the public reference rooms, Computaprint personnel were asked to leave the terminals at one-hour intervals. Computaprint has estimated in its briefs that securing the information through the public reference rooms would take about 8 years. According to Computaprint, the case is not analogous to *SDC v. Mathews,* as there are no provisions in PTO authorizing legislation to make the trademark database self-sustaining.

Complicating the case, a reverse-FOIA action was filed by Thomson and Thomson, the contractor that computerized PTO's files.[109] In a special agreement with PTO, Thomson and Thomson currently receives a copy of the database for commercial use. Thomson and Thomson claims that the records in question represent a "a computer-readable trademark database and search system developed at substantial cost, "n" and that releasing some of the information to Computaprint, even on microfiche, could reveal proprietary information of submitters. According to Thomson and Thomson, release of machine-readable tapes to Computaprint at nominal costs under FOIA would relieve Computaprint from the capital costs of developing its own database, giving Computaprint an unfair competitive advantage over Thomson and Thomson in the trademark search business. Computaprint has responded that allowing Thomson and Thomson to use the database while restricting other bulk transfers of data from PTO's system is contrary to the mandates of FOIA.

[109] *Thomson and Thomson v. International Computaprint Corp.,* Civil Action No. 88-0839 (D.C. District Court, 1988).
[110] Ibid.

FEE ASSESSMENT AND FEE WAIVERS: CHARGED ISSUES IN AN AGE OF ELECTRONIC INFORMATION

The growth in computerized agency records and the associated escalation in costs of records have heightened public sensitivity to the new Federal standards for fee assessment and fee waivers that were specified in the FOIA Reform Act of 1986.[111] The act gave the Office of Management and Budget the authority to establish fee guidelines, which were issued in 1987 as the Uniform Freedom of Information Act Fee Schedule and Guidelines.[112]

Fees that are assessable *under* FOIA fall into three categories: 1) review costs—costs associated with the determination of whether the requested documents can be disclosed), 2) search costs—costs associated with retrieving disclosable documents, and 3) reproduction costs.

Under the FOIA amendments of 1974, fees were reduced or waived when the information requested was determined to 'benefit the general public."[113] "Benefitting the public" was subsequently construed by agencies to mean that public dissemination was expected. The new standard for applying general fee waivers has been more specifically defined, from "benefit-

[111] P.L. 99-570 (100 Stat. 3207-44).
[112] P.L. 99-570 (Fed. Reg. vol. 52, No. 59, 1987).
[113] "P.L. 93-502,

ting the public" to "*significantly* increasing the understanding of government activities" (emphasis added)."

Where there were no distinctions between requesters in the 1974 amendments, the provisions of the FOIA Reform Act specify three categories of requesters that are unconditionally entitled to preferential fee treatment. The news media, educational institutions, and noncommercial scientific institutions are automatically excluded from all but duplication costs. Commercial requesters may be assessed review, search, and duplication costs, while other requesters who do not fall into one of the above four categories may be assessed both search and duplication costs. Outside this schedule, all requesters are entitled to apply for general fee waivers.

Since the 1986 amendments have guaranteed reduced fees for specified groups, they are potentially more generous than the amendments of 1974. However, the new amendments have been highly criticized for their omission of certain groups from the favored categories, particularly libraries and public interest groups. Also, the definition of the specified categories eligible for favorable fee treatment has generated controversy, as the OMB guidelines take a more restrictive view than those put forward by several congressional sponsors of the amendments.

Under the new FOIA fee guidelines, in searches for paper records, noncommercial requesters may not be charged for the first 2 hours of search time or the first 100 pages of information delivered. OMB has determined, however, that 2 hours of computer search time is not analogous to 2 hours of manual search time. Since most computer searches are accomplished in seconds and fractions of seconds, according to OMB, an interpretation of the statutory free search time as an entitlement to require an agency to operate a computer for 2 hours would constitute an unreasonable disruption of an agency's normal automated data processing (ADP) activities. Thus, OMB has developed a formula based on a literal analogy to a manual search, whereby the computer searcher is equated to as a clerical worker undertaking a manual search. The requestor is, therefore, entitled to receive an amount of computer processing unit (CPU) operating time equivalent to the cost of 2 hours of computer operator salary. In order to reduce administrative steps required to calculate costs on an individual basis, agencies may establish agencywide average operator/programmer salaries and average CPU operating costs. According to OMB, 100 pages of free information should not be applied directly to microfiche, but to the "microfiche equivalent" of 100 pages. Similarly, audiotape distribution should be analogous to 100 pages of paper copies.

[114] P.L. 99-570 (Fed. Reg. vol. 52, No. 59, 1987).

NEW TECHNOLOGIES AND THE NEED FOR AMENDING FOIA

As is evident in the courts, new communication and information technologies are raising essential questions about the fundamental nature of records and the parameters of searches for records. In several FOIA cases, the courts have expressed a need for Congress to clarify the numerous gray areas left open by the statute in its application to the new generation of computerized information. The *Yeager* court is one such example:

> [W]e decline Yeager's invitation to "view the availability of disclosure avoidance techniques as simply defining with more clarity the manner in which microdata information might be released. " This invitation should be extended to Congress rather than to this court.[115]

[115] 678 F.2d at 315 (D.C. Cir.1982).

The appeals court in *Yeager* mirrored the views of the district court regarding congressional specificity y:

> [A]s agencies begin keeping more of their records in computerized form, the need to contour the provisions of FOIA to the computer will become increasingly necessary and more dramatic.[116]

At present, decisions about fundamental principles are left to agency discretion, with further interpretation, when litigated, by the courts. Consequently, these decisions may be subject to the biases of agency personnel, or be made by lawyers and judges whose understanding of new technologies may be limited. Some of the problems raised by new technologies may be clarified by the facts of individual cases and can be approached on a case-by-case basis. But many of the growing ambiguities need to be addressed through statutory amendment. As technology is continually evolving, setting objective criteria for defining records and search efforts will be a difficult task. Nevertheless, working toward greater specificity could bean important first step in ensuring an adequate level of public access to electronic information.

In developing and considering possible amendments to FOIA, it is important to understand the nature of emerging computer-related problems. It is also important to consider new developments in computer and database technology that could alleviate some of these problems in the future. A typology of the issues is presented below:

- Electronic information technologies are obscuring the boundary between record and nonrecord material. As electronic databases become more sophisticated, they resemble information "pools" rather than discrete records. For example, relational database technology allows data elements from different pathways or "fields" to be connected to one another in nonlinear combinations. The parallels to paper records are becoming more remote.
- Computers are facilitating faster and more complex searches, encouraging a broader definition of a "reasonable" search. Given computer capabilities for expedited searching, segregating, and consolidating of data, the definition of a "reasonable" search may need to be broadened.
- Electronic FOIA requests can be incompatible with the ways agencies collect and organize information. Although this problem also applies to FOIA requests for paper documents, computerized information management systems are aggravating the issue as they are relatively inflexible, with limited capacity to respond to inquiries in an *ad hoc* fashion. Evolving technologies such as relational databases and hypertext could provide some solutions in the future.
- Computer searching raises new staffing and budgetary problems, as well as opportunities for Federal agencies. Most agencies have no computer programmers assigned to FOIA implementation. Requests for computerized records are generally given to personnel hired to operate internal information management systems. Agency use of electronic technologies that could allow clerical and administrative staff to retrieve computerized information could ultimately enhance public access to computer records. These technologies include preprogr ammed utility software, frontend systems with natural query languages, expert systems, and optical disks.
- Federal agencies are using information products whose status is unclear under FOIA. The status of computer programs (including computerized indexes, codes, and directories) is unclear, as is that of integrated software and database packages. Electronic mail, quickly becoming a major mode of interdepartmental communication, presents additional questions for FOIA.
- Paper printouts of electronic information

] [16]Memorandum order at 6; App. at 44.

may not **satisfy public access needs.** Although the case law has established that computerized information is subject to FOIA, agencies are not required to deliver the information in machine-readable form. The option of encouraging or requiring agencies to provide alternative electronic formats–such as magnetic tape, floppy disk, optical disk, and online access–warrants consideration.

Electronic Information Technologies Are Obscuring the Boundary Between Record and Nonrecord Material

At the most fundamental level, new technologies are obscuring the boundary between record and nonrecord material. As information technology evolves, records become more difficult to conceptualize in terms of discrete, tangible documents. Information technology is, in a sense, detaching information from its embodiment. A record stored electronically may become a useful body of information only upon retrieval. The concept of database is replacing the concept of "record" per se. It thus becomes more difficult to establish genuine parallels between paper records and records stored in computers.

Electronic Information Often Requires Intervening Technologies To Become Understandable

In court cases involving computer records, analogies from paper documents are still being applied, implying a distinct boundary between record and nonrecord material. The courts are currently basing the delineation of this boundary on the *function* of retrieval: if information requires new programming for its retrieval, it is not an agency record (or it is an entirely new record, the creation of which is not required under FOIA). This type of functional definition is clearly easier to apply than other distinctions, but it may be inappropriate. At present, if an electronic file cannot be printed out with one push of a button, agencies and courts may determine that it legally need not serve as a record under FOIA.

The current records test, based on programming, is inappropriate because electronic information always needs some type of transformation to be understood. While written information can be read instantaneously, no one can look at the electronic bits of data in a database and understand their meaning. These bits of data often require specialized software for reorganization into readable form. As intervening technologies are necessary rather than superfluous, there is technically no such thing as a "record in being. "

As Electronic Databases Become More Sophisticated, They Resemble Information "Pools" Rather Than Discrete Records

As electronic database systems become more sophisticated, electronic records become more difficult to conceptualize in terms of separable, identifiable entities. As records can be generated from data elements from different files, the information stored in databases may resemble "pools" of information rather than discrete documents. As the database technology continues to evolve, the parallels to paper records become more oblique.

For example, relational database systems, developed in the 1970s, allow discrete data items to be linked to one another based on specified underlying criteria. One record may therefore constitute a synthesis of information retrieved from several different files. In some cases, then, several pieces of data can or must be connected to make a record. The jargon in the field of relational technology reflects the pool-like aspect of the new databases. A collection of data is called a "relation" instead of a file. A record is, in effect, a series of relations or collections of data rather than a single file.

This represents a significant jump from the flat file technology of the 1970s where databases were designed in hierarchical or network

fashion. In both hierarchical and network databases, information retrieval is linear. In the former, one piece of information is connected to others through a series of hierarchically-arranged channels. Access begins at the top of the hierarchy and spreads through subsequent levels of detail. While network databases are set up so that a single data element can "point" to other data elements, there is still a fixed pathway for navigating through the database. By contrast, in a relational database, data elements from different pathways or "fields" can be connected to one another in nonlinear combinations.

As a result, some forms of new programming or other intervening operations may be necessary to interpret or compile electronic records. Making analogies between paper and electronic records and using the function of programming to distinguish between record and nonrecord material could be detrimental to the intent of FOIA. If genuine access to records is to be preserved, a new focus may need to be placed on the substance, or information content, of databases, rather than the operations required to extract or interpret them.

Computers Are Facilitating Faster and More Complex Searches, Thereby Encouraging a Broader Definition of a "Reasonable" Search

As mentioned earlier, the legislative history of the FOIA indicates that a description of a requested record is sufficient if it enables a professional agency employee familiar with the subject area to locate the record with a "reasonable amount of effort."[117] At present, the definition of what constitutes a reasonable search is left to the discretion of agencies and, when litigated, the courts. As in defining records, the current test of reasonableness usually includes whether new programming is required.

This test may no longer be appropriate due to technological evolution. Given computer capabilities for expedited searching, segregating, and compacting of data, the realm of what constitutes a "reasonable search could be broadening. In cases involving paper records, decisions in the courts as to what is reasonable have been related to the *effort* agencies are required to exert on behalf of requesters. In the computer context, some courts have concluded that any new programming or modification of an existing program should be deemed new record creation and, therefore, unreasonable. According to DoD's recent regulations pertaining to FOIA fees, electronic information for which there is no existing printout need not be attainable under FOIA.[118] Taken to its extreme, this regulation could be interpreted to mean that pushing a button to print a document would constitute new programming.

Thus, a subtle shift has occurred that has detached decisions about reasonableness from any considerations of effort. This is incongruous with tradition, as a significant amount of effort has historically gone into FOIA searching for and production of paper documents, Retrieval of paper documents may involve extensive tracking, communication with numerous bureaus, searching disparate files, and substantial hand deletion of exempted materials.

The programming/no programming distinction continues to decrease in validity as developing technologies reduce the effort needed to modify or execute new programs. In many cases, new programming to retrieve computer records may be less costly and/or time consuming than searches for paper records.

Clearly, drawing lines between reasonable degrees of effort is a difficult task. The functional approach is much more clear-cut. If Congress is to help set new criteria, it must take into account the rapid rate of technological evolution in data processing. What is not reasonable today may be reasonable tomorrow or in

"H.It. Rep. No. 876, 93rd Cong., 2d sess, 6 (1974), reprinted in 1974 U.S. Code Cong. & Ad. News 6271.

[118] 32 C.F.R. Part 286, 1987 (Fed. Reg. vol. 52, No. 132, July 10, 1987).

the near future. In spite of this, new criteria based on effort or cost could ultimately benefit agencies as well as requesters. Clearer standards could enhance public access as well as protect agencies from excessive demands by attorneys seeking to prolong FOIA lawsuits.

Degrees of effort needed to execute computer searches can vary dramatically. A request may be relatively easy to specify but difficult to run, requiring days of computer time. Another request may require hours of programming time, but can be searched easily once the program is created. An illustration of computer searches requiring varying levels of effort is presented below:

- Level 1. File ABCD exists in the computer. It can be retrieved with a "print" command. In other words, the data has already been collected and organized in the manner desired by the requester.
- Level 2. File ABCD exists in the computer. Though it cannot be printed directly, it can be retrieved from the database by using existing retrieval programming and entering keywords. The data does not need to be modified with a new algorithm.
- Level 3. Someone asks for E, which can be derived from ABCD using a new algorithm. Put simply, the agency maintains the data, but it must be modified to fit the request.
- Level 4. The request cannot be satisfied by information-derived from ABCD. It may require additional information from FGHI or other databases. A new program must be created. This may involve a limited amount of effort through the application of simple query language or commercially available software. On the other hand, anew program could involve a complex query that takes days of a programmer's time and hours or days of computer time.

According to recent interviews with information management personnel at selected agencies, many choose to reprogram their computers, or modify existing programs, on their own accord. In some cases, this may benefit the agencies as well as the requesters. Contoured searches may be easier to execute than supplying large amounts of unedited or disaggregate data. In other cases, programming is motivated by the awareness that the effort undertaken would be less burdensome than that associated with a potential lawsuit.

An important consideration to remember is that the effort required for a FOIA search is not solely a function of the nature of the request. Effort is also determined by the structure of the database, the sophistication of information storage and retrieval tools, and the competence of agency staff. A poorly run retrieval system could require days to search for a straightforward record. A sophisticated system with higher-level language might be able to retrieve the same data in minutes. Clearly, Congress cannot mandate the acquisition of state-of-the-art computer systems. But if searches are to be based on effort, and if requesters continue to be charged for computer programming and operation time, measures must be undertaken to encourage agency efficiency.

Electronic FOIA Requests Can Be Incompatible With the Ways Agencies Collect and Organize Information

One of the greatest problems encountered in satisfying FOIA requests is that requests are often incompatible with the ways in which agency records are originally collected and organized. For example, at the Occupational Safety and Health Administration (OSHA), a regulatory agency, most inspections are undertaken and documented by geographical region, industry, accident, or type of complaint. The databases created by OSHA follow the contours of the different inspection programs within the agency. FOIA requests, on the other hand, are usually directed to specific products or companies at particular locations. Since the agency does not maintain such a database, these requests may require new programming.

While the lack of compatibility between requests and compiled information is a problem

that also affects requests for paper records, computer retrieval in some ways exacerbates the problem. Although computers can be fast and consistent, they may be less flexible than the manual systems they have replaced. While they are proficient at processing anticipated forms of information, they are less adept at performing operations (such as responding to FOIA requests) that have not been preprogrammed into their software or machine language.

Certain new developments in hardware and software technology —such as relational databases and hypertext-promise to enhance computer flexibility and responsiveness to unanticipated forms of requests. New technologies will also increase the speed of all forms of data processing. These developments will ultimately reduce the effort associated with retrieval of electronic information, and therefore could have positive consequences for FOIA, allowing for: faster searches; searches through unorganized data; integration of data from diverse files; and better response to ad hoc requests.

Technologies Could Facilitate Ad Hoc Responses to FOIA Requests for Computerized Information

Relational Databases

As relational database technology increases in sophistication, users can more easily pull together data from different files in an ad hoc manner. The links between different data fields do not necessarily need to be preprogrammed; instead, they can be created to suit the requirements of specific requests. Programming new links varies in difficulty, depending on the software. The increasing flexibility y offered by relational database technology could have major significance for FOIA, allowing the computer to provide information better tailored to the needs of requesters.

Hypertext

Hypertext software, still in early phases of commercial development, will also allow for enhanced ad hoc data retrieval. In theory, hypertext allows a user to design a database from scratch. Links can be established between unstructured bits of information; hypertext does not impose a linear display of data. Hypertext incorporates images and sound as well as text.

Institutional Changes Could Increase Comparability Between FOIA Requests and Available Information

In addition to new technologies, certain institutional changes could help alleviate the problem of responding to requests that are incompatible with the ways information is collected. Some options are:

- Tallying frequent requests. Tallying the most common types of requests for computerized information could be a first step in enhancing compatibility between data and requests. This could lead to the development of utility programs tailored to retrieve organized data, and could influence a greater awareness of public access needs in the data collection phase. OSHA is currently documenting its most frequent FOIA requests every 6 months.
- Public input in data collection. Pilot programs could be initiated to allow citizens and public interest groups to inform agencies about the types of data that would be most beneficial to them. Public input would also help determine the delivery formats that would be best suited to requesters' needs.
- Public input in the records-searching process. Some agency regulations require their FOIA offices to consult with requesters to help tailor searches to requester needs. In some cases, requesters are allowed to "walk through" agency computer systems. If an agency is incapable of conducting a search, a requester could be shown how to narrow the inquiry, or conversely to broaden the request to allow files to be copied without editing or selection.
- Standardized information delivery systems. Current, custom-built agency information systems rarely take public access into account. Setting standards for agency hard-

ware and software could enhance compatibility with users' equipment.

- Utility programs. The creation of preprogrammed utility software for commonly-occurring requests could facilitate more efficient and appropriate responses. Utility programs are discussed in the following section.

Computer Searching Raises New Staffing and Budgetary Problems, as Well as Opportunities for Federal Agencies

Many agency FOIA offices are understaffed, and to the best of OTA's knowledge, none have computer programmers specifically assigned to FOIA. As a result, FOIA requests for computerized records are typically shunted to Automated Data Processing (ADP) departments, where they are handled by personnel hired and trained to run internal computer operations. As FOIA fees are forwarded to the Department of the Treasury rather than being credited to specific agencies, there are few financial incentives for agencies to respond to requests for electronic records. Policy could be changed to establish an annual congressional appropriation for the implementation of FOIA, or to allow agencies to retain FOIA fees at least as a partial offset against expenses. As there are usually no computer operaters on FOIA staffs, agencies could be required to hire at least one full-time computer programmer to accommodate FOIA requests involving computer work. In addition to policy initiatives, new technologies could help alleviate staffing problems and reduce costs of processing certain FOIA requests. Technologies that could relieve ADP specialists from FOIA demands could facilitate access by clerical and administrative staff, and ultimately enhance public access to computerized information. Several of these technologies are discussed below.

Technologies Could Help Nonspecialists Respond to FOIA Requests for Computerized Information

Utility Programs

The development of commercial and custom-made utility programs could facilitate responses to some types of requests, especially more common types of requests that could be predicted in advance. Utility programs are generic software programs that can perform anticipated functions. They contain a set of retrieval operations that can be invoked without programming. Thus, even if an agency had little interest in compiling a record for its internal purposes, the record could be generated much more easily than in the past.

The trend from mainframes to microcomputers, a hallmark of the 1980s, is allowing for greater user autonomy. In theory, clerical workers could be trained to handle some programming functions currently executed by ADP professionals. Administrative staff traditionally handle FOIA requests for paper records; therefore, from a staffing perspective, the use of utility programs could make some types of computer searches more similar to searches through paper files.

According to agency information managers interviewed, some are already beginning to tally their most common FOIA requests and design their own utility programs to accommodate them, eliminating the need for new programming. Searching with utility programs can be significantly less expensive than searching on mainframe, tape-driven systems. As the effort involved in satisfying certain requests is decreasing, new classes of requests could fall into the "reasonable" domain.

Networked PCs and Network Servers

As stand-alone PCs become linked through local area networks, individuals at work sta-

tions can gain increased access to large databases through "network servers. " These are specialized computers with larger storage and processing capacity than work stations. The network server is a shared machine that allows individuals at their own work stations to update, process, delete, and insert new records from remote locations. Networked PCs and network servers could give nonspecialists greater access to more powerful computer operations, including larger and more sophisticated databases. Therefore, like utility programs, they could contribute to the goal of helping administrative staff process FOIA requests for computerized information. Network servers equipped with optical disks could optimize access to large volumes of records.

Front End Software

Advances in front-end software are contributing to the possibilities for nonspecialists to write new programs, by translating complicated query languages into natural language. (A query is a command that tells a computer which fields to search and combine. At present, different databases and brands of computers require different query languages.) The growing simplification and standardization of queries could significantly reduce the amount of effort involved in some forms of new programming. In the future, better front-end technology could facilitate direct queries from home computers or from PC in agency public reference rooms.

Expert Systems

Expert systems contain inference or decision making programs that are combined with data entered by users. Expert systems software contains programmed search rules that help users decide how to maneuver through datafiles to answer particular questions. While expert systems are limited by the logic of the experts who create the programs, they could help agency personnel respond more easily and quickly to predictable FOIA requests.

Artificial Intelligence

Future artificial intelligence systems will have more self-initiating capabilities than do expert systems. Artificial intelligence software helps users ask the questions appropriate to solving problems. A master control programs directs users to appropriate expert systems through question-and- answer sessions undertaken in natural language. While artificial intelligence systems are still in early developmental phases, it is expected that, in the future, they could eliminate the need for users to remember complex codes or commands. Users will be able to articulate their questions fully in natural language.

Optical Disks

Optical disks and related search and retrieval software could greatly enhance records-storage capacity and facilitate searching through unstructured information. While manual searches for archived paper documents can take days, weeks, or even months, searches through an equal number of full-text records on optical disks could technically be accomplished in seconds or minutes.

Federal Agencies Are Using Information Products Whose Status is Unclear Under FOIA

In addition to software programs and online databases, whose status under FOIA has begun to be debated in the courts, Federal agencies are embracing additional technologies that need to be studied in the context of FOIA. Two examples are presented below.

Integrated Software and Database Systems

When databases and their integrative software are combined into one system, the func-

tional distinction between "programs" and "records" loses its validity. As the software is necessary to make the database or record comprehensible, the program may need to be supplied along with the record.

Electronic Mail

Electronic mail is significant for FOIA in that it allows data to be created, transmitted, processed, analyzed, archived, and disposed of electronically, without paper printouts. As government communications are increasingly carried out via electronic mail and other computer applications, "records" may never exist in tangible form or in a "narrow, physical sense. " Under current judicial interpretations, these forms of communication could be withheld from public view. The "record in being" concept, which continues to be used in the courts and in agency regulations, may need to be revisited.

The Iran-Contra case recently demonstrated that electronic mail can provide valuable information about government activities, information which the public may have a justifiable right to know. The National Security Council's PROFS electronic mail system provided the public with crucial information about the diversion of funds to the Nicaraguan Contras. This information was retrieved from a temporary PROFS backup file that had been created to protect users against electrical power surges or other interruptions.

The question electronic mail poses for FOIA is whether messages should be treated like agency records or like confidential personal communications such as telephone calls. If some types of electronic mail communications are to become accessible under FOIA, they must be stored, backed up, archived, and/or printed. In cases where electronic mail messages are considered analogous to telephone conversations or personal meetings, the FOIA need not apply. Monitoring or required archiving of telephone calls could be considered similar to wiretapping.

The questions of which electronic mail communications require archiving for FOIA purposes (as well as for records retention purposes), and how some messages differ from others under FOIA, need to be answered in order to develop consistent policies for electronic mail. These new policies may need to focus upon the content of the communications rather than the form. While most electronic mail systems have "document" as well as "message" features, archiving should not be limited to documents. Increasing numbers of important agency actions and decisions are resulting from electronic mail messages. Though assessing the import of messages and distinguishing between deliberations and final orders may be difficult, taking these steps may be necessary to ensure appropriate public access.

Paper Printouts of Electronic Information May Not Satisfy Public Access Needs

Although both the case law and the FOIA fee guidelines have established that computer-stored information is subject to FOIA, requesters are not guaranteed access to this information in formats other than paper. Though the case law is extremely limited in this area, the D.C. District Court decided in *Dismukes v. Department of the Interior,* that "an agency has no obligation under FOIA to accommodate a particular requester's preference regarding the format of requested information, " and that agencies need only provide information in "reasonably accessible form."[119] If requesters ask for tapes, disks, or direct online access, they are not assured their choices. The decisions generally rest with agency information custodians.

Technological change brings into question whether paper printouts alone are a satisfactory means of satisfying requests for electronic information. It could be argued that tapes, disks, or even online retrieval might be necessary to effectively use or analyze large quantities of raw data.

In practice, agency decisions about format vary widely. Some agencies provide data tapes,

[119] 603 F. Supp. 760 (D.C. District Court, 1984).

disks, and software, either to save time, lower costs, or enhance public access. Some State and Federal agencies are beginning to offer remote access to electronic records. Most Federal agencies, however, continue to satisfy their minimum legal requirements by producing paper printouts of electronic information. A brief discussion of alternative delivery formats is presented below.

Magnetic Tapes and Disks

Providing tapes or disks to requesters could relieve agencies from computer searching and printing efforts. For requesters, tapes and disks eliminate the need to re-input information, and facilitate analysis and synthesis of statistical information. As a drawback, distributing tapes or disks could result in additional time commitments for agency personnel. Requesters generally ask for explanations of data structures and need help designing programs to retrieve machine-readable data. Whether accurate or not, some agency personnel feel that releasing tapes and disks would increase possibilities of information manipulation and misrepresentation of agency statistics and opinions. Other information custodians readily release tapes and disks, although some include caveats to reduce the risks of false attribution.

Optical Disks

Optical disks may provide an economical means of distributing records to satellite reading rooms and depository libraries. Optical disks are simpler and less expensive to duplicate than large quantities of paper documents. Automated retrieval software could facilitate searches for FOIA records on disks.

Computer Programs

Computer programs contain the instructions that direct machines to store, retrieve, and manipulate data. For the purposes of FOIA, the status of programs is in a state of flux. Agency views about programs are disparate–they are sometimes considered records and sometimes tools. When deemed tools, programs are not considered subject to FOIA.

Whether programs are considered tools or records, some types of records may be inaccessible without them. Agencies must learn to distinguish fairly between programs required to interpret records and programs that further analyze or manipulate data; the former may need to be released and the latter subject to agency discretion. When programs incorporate instructions that reveal agency decisionmaking techniques or information gathering methods, they may constitute records in their own right.

In 1980, a Florida appellate court embraced a broad definition of agency records that could have implications for the status of software. In Shevin v. Byron, *Harless*,[120] the court held that, "a public record is anything made or received in connection with the agency's business that is intended to communicate knowledge. [121] In many instances, program software serves that function and could be considered a public record, unless deemed sensitive or proprietary.

As mentioned earlier in this chapter, another appellate court in Florida has compared software programs to code books accompanying written documents. In *Seigle v. Barry*,[122] the court determined that the information stored in a computer was analogous to information recorded in a written code. If a written public record were maintained in such a manner that it could only be interpreted with a code, then a code book should be provided to requesters. According to the court, it followed that computer programs should be furnished to requesters when electronic information would otherwise be inaccessible.

Remote Access

The growing use of personal computers with modems opens up entirely new possibilities for remote access to computerized FOIA records. Some agencies are making public records available online in public reference rooms and at remote locations.

[120] 379 So. 2d 633 (Fla.1980)
[121] Ibid.
[122] 422 So. 2d 63 (Fla. 4 D.C. A. 1982)

Remote access to Federal information could facilitate searches for requesters as well as agencies. Remote access would allow users to issue queries directly, reducing search time for agencies. Currently, FOIA requests are issued on paper, and computer programs are written at the discretion of agency personnel. If data are distributed in hard copy or tapes, users are required to re-input or download to their own computers.

If remote access is to be considered as a delivery option for FOIA records, the following areas would need to be addressed: security; liability for errors; cost; requirements for user assistance; upkeep of data files; privacy protection; control of levels of use; standard setting for hardware and data presentation; and competition with private online database vendors. [123]

Computers Are Prompting New Discussion About the Basic Purposes of FOIA

The original movement for enacting Federal freedom of information laws in the United States gained momentum in the 1940's and 1950's. In 1966, when FOIA was passed, the assurance of basic access to government records represented a significant strengthening of the open government principle. Although the United States Government is now heralded internationally for its policies of openness, FOIA is still narrowly interpreted as a basic "access to records" statute.

In addressing the impacts of new technologies, Congress may need to reconsider the purposes and goals of FOIA. If new procedures need to be instituted for an electronic FOIA, the policies behind the procedures should be evaluated and clarified. Computer records bear few similarities to the paper records of 1966. New database technologies have begun to raise questions about whether computer-stored information can even be conceptualized in terms of discrete records.

For the 1990's and beyond, Congress needs to decide whether the FOIA should continue to be viewed as an "access to records" statute or whether it should be perceived more broadly, as an "access to information" statute. This is not to suggest that public access to computer-stored government information should be unlimited; access must be balanced against economic and personnel constraints of Federal agencies. However, due to the explosive growth in electronic information storage, processing, and transmission by the Federal government, traditional views about records and searches need to be modified to ensure even basic access to public information.

As technology is continually evolving, setting objective criteria for defining records and appropriate search efforts will be difficult. Nevertheless, working toward greater statutory specificity could bean important first step in ensuring an adequate level of access. If the statutory language is not modified to address electronic information, agencies may have new opportunities to legally withhold certain classes of materials from the public. The case law in many areas is too limited, conflicting, or vague to give comprehensive or consistent direction to agencies and courts. Even in those areas where the case law is clear, variation in agency practice calls for stronger legislative guidance. If Congress wishes to maintain the integrity of the FOIA in an electronic environment, the goals of the statute should be reassessed, and statutory amendment pursued.

[123] Florida State Legislature, Joint Committee on Information Technology Resources, *Remote Computer Access to Public Records in Florida,* January 1985.