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Electronic Acquisition and Release of Federal Agency Information: Analysis of Recommendations Adopted by the Administrative Conference of the United States

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ELECTRONIC ACQUISITION AND RELEASE OF FEDERAL AGENCY INFORMATION: ANALYSIS OF RECOMMENDATIONS ADOPTED BY THE ADMINISTRATIVE CONFERENCE OF THE UNITED STATES

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I. INTRODUCTION AND OVERVIEW

Information long has been recognized as playing an essential role in a democratic political system. The rapidly advancing revolution in information technology raises anew many of the economic and policy issues debated, legislated about and litigated in the context of the speech and press clauses of the First Amendment, the Fourth Amendment, the Freedom of Information Act,[1] and the Paperwork Reduc-

[1] 5 U.S.C. § 552 (1982).

tion Act.[2] The technology makes it possible for agencies to acquire information electronically and to release it electronically. Electronic acquisition can occur by submission of magnetic tape, cassettes, disks, optical disks, or transmission over telephone links. Information can be released electronically via the same media, and by satellite transmission. The new electronic means can improve access and reduce paperwork, but they also can impose significant economic burdens and threaten the position of established electronic information enterprises.

On December 9, 1988, the Administrative Conference of the United States (ACUS)[3] adopted a set of formal recommendations covering "Federal agency use of computers in acquiring and releasing information."[4] The recommendations resulted from a report written by the author of this article. The report and the recommendations deal with the rapidly expanding use by federal agencies of electronic technology for accepting information from filers and for disseminating information to the public. The ACUS recommendations address three major issues:

1. Expanding electronic acquisition of information and choosing between mandatory and voluntary electronic filing;
2. Defining the circumstances under which agencies should release information electronically and the degree to which agencies should add value; and
3. Providing electronic means of satisfying Administrative Procedure Act participation requirements.

This article is based partially on the report, "*The Electronic Acquisition and Release of Federal Agency Information*"[5] and contains excerpts from the author's recent book, *How to Practice Law with Computers,*[6] published by the Practising Law Institute in New York. The article differs from the report in that the article substantially abbreviates the descriptive material on specific agency and court programs, and eliminates discussion of technology issues, focusing exclusively on legal and policy issues.

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[2]44 U.S.C. §§ 3501–3520 (1982 & Supp. IV 1986).

[3]The Administrative Conference of the United States (ACUS) is a federal agency charged with reviewing the administrative process and developing recommendations for the President, the Congress and agencies on improvements in agency management and administrative procedure. Administrative Conference Act, 5 U.S.C. §§ 571–6 (1982).

[4]ACUS Recommendation 88–10, 54 Fed. Reg. 5209 (Feb. 2, 1989) (to be codified at 1 CFR § 305.88–10).

[5]H. Perritt, the Electronic Acquisition and Release of Federal Agency Information (unpublished report available from the Administrative Conference of the U.S., Washington, D.C.) [hereinafter Report].

[6]H. Perritt, How To Practice Law With Computers (1988) (available from the Practising Law Institute in New York).

A. Glossary of Terms

In understanding the issues addressed in this article it is useful to understand some of the terms used in this article and in Recommendation 88–10.

Bulk form means large quantities of data in nearly raw form, with little formatting information or other added value, usually maintained and transferred on magnetic tape or cassettes or high capacity optical or magnetic disks.

Data product is a specific form of electronic information, sometimes including data structures, indices, retrieval software, and telecommunications links.

Database is a body of information maintained in electronic form, from which parts can be retrieved electronically.

Dial-up is a form of electronic dissemination through which anyone with a computer, a modem, and access to an ordinary telephone line can retrieve information from an electronic database.

Electronic access is the lowest level of electronic release; the ability to obtain agency information on request; communicating information to consumers on request.

Electronic acquisition is obtaining information from the public electronically; includes electronic filing; submitting information to an agency in electronic form.

Electronic disclosure is an intermediate level of electronic release; making information available electronically to the public at one or only a few places.

Electronic dissemination is the highest level of electronic release; using electronic means to make information widely available to the public at places where it is used; same as electronic publishing.

Electronic publishing is the same as electronic dissemination.

Electronic release is communicating information to users in electronic form; a generic term that includes access, disclosure, and dissemination.

Retailing is providing information in a format different from that used by the government, or with accompanying analysis, aggregation, or segregated subsets, enhanced search or retrieval capabilities (such as user friendly menus), or otherwise tailored to be of value to specialized or individual end users; also may include distribution components of electronic release.

Retrieval is extracting a part of a database and presenting it to the requester in a form understandable by humans.

Wholesaling is providing resellers or large end users information only in the form used by the government or only in bulk form.

B. Broad Electronic Acquisition and Release Programs

About two dozen federal agencies are operating or are planning electronic acquisition and release programs. Under these programs,

Agency	Acquisition			Release			
	MAND	INTER	PAGE	ACCESS	DISCL	DISSEM	PRIVATE
SEC	✓			✓			✓
IRS		✓					
USCS		✓			✓		✓
FERC	✓					✓	
FMC	✓					✓	
USPTO			✓	✓			
Office of the Federal Register/GPO				✓			
Depository Libraries					✓		
DOT		✓			✓		✓
ICC		✓				✓	✓
NRC	✓		✓		✓		
Department of Energy							
NLM						✓	
USDA						✓	✓
Department of Commerce						✓	
FDA		✓					
National Weather Service						✓	✓
National Inst. of Stds. & Tech.						✓	
EPA/OSHA Emergency Response						✓	
Census Bureau						✓	
Supreme Court					?	?	✓
Lower Federal Courts							✓

persons required to file securities reporting forms, personal income tax forms, customs declarations, tariffs, or administrative litigation material, do so electronically. Electronic filing is accomplished by establishing a telephone connection between the filer's computer and the agency computer, or, in a few cases, submitting a computer diskette physically to the agency. Electronic release capability permits persons desiring to use agency information, such as SEC securities filings, some regulatory docket information, customs declarations, or some tariff information, to get the information in electronic form. Electronic release is accomplished in some cases by dial-up telephone connection similar to WESTLAW or LEXIS and by purchasing diskettes or tapes in other cases.

Electronic filing is mandatory in relatively few cases, but the proportion of total filings being accomplished electronically in volun-

tary programs is growing rapidly. Virtually no electronic release programs substitute electronic information for the paper form of the same information. By releasing the information in electronic form, however, the agencies make it much easier for consumers of the information to get exactly what they want, and to perform various computer manipulations on larger quantities of information without having to rekey it into their computers.

The preceding chart summarizes major characteristics of the major agency electronic acquisition and release initiatives.

In the chart, a check in the column headed "MAND" indicates that electronic filing is mandatory. A check in the column headed "INTER" means that the acquisition program relies heavily on intermediaries. A check in the column headed "PAGE" means that page image data is accepted. A check in the column headed "ACCESS" means that electronic release is limited to access. A check in the column headed "DISCL" means that electronic disclosure is used. A check in the column headed "DISSEM" means that electronic dissemination is used.[7] A check in the column headed "PRIVATE" means that the electronic release activities are designed to rely heavily on private sector resellers.

The paradigmatic electronic acquisition systems are the Securities and Exchange Commission's (SEC) Electronic Data Gathering, Analysis, and Retrieval (EDGAR) permitting corporations to send electronic securities filings to the SEC and the Internal Revenue Service (IRS) Electronic Filing Program, permitting third-party tax preparers to file tax returns with the IRS electronically. Large-scale electronic acquisition programs are being implemented or planned by the SEC, IRS, United States Customs Service (USCS) (customs, manifests and declarations), Federal Maritime Commission (FMC) (ocean tariffs), Interstate Commerce Commission (ICC) (motor and rail freight tariffs), Department of Transportation (DOT) (airline tariffs), and Food and Drug Administration (FDA) (drug testing data). The SEC, IRS, and USCS systems, though not fully implemented, are using electronic acquisition now in support of agency missions. The IRS and USCS systems rely primarily on intermediaries, while the SEC system relies on direct submission by filers. Only the SEC system involves mandatory filing. The Federal Energy Regulatory Commission (FERC), FDA and Nuclear Regulatory Commission (NRC) systems involve electronic acquisition only for specific regulatory proceedings (energy rates, drug test results, and nuclear plant licensing, respectively), rather than for the full scope of the agency's information

[7]The glossary in this section explains the distinction among access, disclosure and dissemination.

acquisition efforts. All of the systems, with the possible exception of the FDA system, contemplate primary reliance on direct filing via telecommunications links rather than via physical submission of tape or magnetic or optical disk.

Electronic acquisition of information is relatively non-controversial. In many cases, the initiative for electronic acquisition has come from filers. The ICC and DOT electronic tariff proposals are clear examples. The IRS program makes effective use of a major private sector industry historically involved in filing returns with the IRS. The USCS system is notable because it centers on restricting complete on-line disclosure to participants in the acquisition component of the program.

Electronic release initiatives are much more controversial. A recurring controversy in such programs is whether agencies should retail computerized information—make it easily available to the general public—or whether they should limit their roles to wholesaling—releasing information only in bulk for possible retailing by private enterprise. All of the systems except for the IRS and FDA systems have major electronic release functions, but the levels of release contemplated vary considerably.

The paradigmatic electronic dissemination program is the Department of Commerce electronic bulletin board, which permits anyone with a desktop computer and modem to dial a telephone number and receive economic statistical information by selecting choices from a menu. The FERC, FDA, National Weather Service (NWS) (weather forecasts and reports), and National Institute of Standards and Technology (NIST) (microcomputer product and use information) bulletin board programs also involve electronic publishing directly by the agencies, with considerable value added. In all five cases, the private sector competes, in some sense, with the agency-sponsored programs through systems that add value in the form of "one-stop shopping."

The paradigmatic electronic disclosure program is SEC's EDGAR, which permits retrieval of EDGAR filings from terminals in SEC public reference rooms. The SEC system contemplates large scale electronic publishing by the private sector and contemplates limiting the agency's role to wholesaling of electronic information and general public disclosure through public reference rooms. The approach is the result of a major controversy over monopoly power, eventually resolved by the Congress.

The paradigmatic electronic access program is Government Printing Office release of typesetting files for the *Federal Register* on magnetic tape.

The DOT and ICC-proposed tariff systems are notable because they contemplate a relatively high level of electronic publishing (or at

least disclosure) by the private sector with little agency involvement. The parties from whom information is acquired electronically are responsible for releasing it.

To date, agencies have been dissuaded from aggressive electronic dissemination by the desire of private sector information providers to protect markets, combined with congressional desire for control over the purse strings. Existing electronic tariff information vendors challenged the need for a new government initiative relating to release. Private companies already offered both collection and dissemination services respecting FMC's ocean tariffs and DOT's airline tariffs.

In the near term, the Federal Maritime Commission (FMC) Automated Tariff Filing and Information System (ATFI) represents the most likely battleground for resolution of policy issues with broad implications for the respective roles of public and private sectors in electronic information dissemination. The FMC system presently focuses the policy choice between the wholesaling of bulk information and agency retailing of value-added information. There is room for argument whether the dialup links contemplated by the FMC represent value-added "dissemination" because of the dialup capability, or whether they represent cost effective "access" or "disclosure" without added value beyond byproducts of the internal automation. The FMC controversy is greater because the FMC contemplates an agency database, unlike the DOT and ICC tariff proposals, which rely on private databases, made accessible to the public. Tariff information is much more volatile than financial information filed with the SEC or patent data. Therefore, the likelihood is low that periodic distribution of tariff data via electronic media would be satisfactory. Online access, whether provided by the government or by the private sector, is almost certainly needed. For the time being, private sector interests have acceded to the FMC system including dialup links. But Congress has mandated that FMC limit dialup dissemination of large quantities of tariff information. The details of the limits remain to be worked out.

Pricing of electronic release products varies. The prices for direct NWS access are much higher than the prices for direct access to the Department of Commerce Economic Bulletin Board.[8] The differences in price may be attributable to (1) much higher capital or operating costs for the NWS system, or (2) recovery of a greater proportion of total cost by the NWS than by the Department of Commerce. USDA charges relatively high fixed prices, and relatively low variable prices for its crop forecast and agricultural economics

[8]*See* Report § III(O), describing system for dialup availability of economic reports.

system, favoring wholesale distribution of EDI information, and presenting advantages to value-added information resellers, while minimizing end-user retail competition with them. Generally, when private sector interests oppose electronic publishing initiatives, there is a tendency for political role reversal to occur, present vendors siding with Congress in favor of low or no user fees, and the potential information consumers siding with OMB in favor of user fees.

Electronic acquisition and release of court information is less prevalent, mainly because courts have less need than agencies to manage information electronically. Electronic release of court information is influenced by the decentralized nature of the judicial system. Most information in civil and criminal cases is generated locally, used by local courts, and is of interest predominantly to local consumers, mainly to the parties and the judge involved in a particular case. Most federal agency information, in contrast, is collected centrally, used centrally, and is of interest to essentially national consumers. Decentralized retailing of electronic information by the courts to the general public is less threatening to private sector vendors of state-wide or nationwide court information.

State agencies mostly are relying on commercial vendors to market their information electronically, so the public/private sector controversies surrounding many of the federal agency programs are muted at the state level.

As with any important societal change, the revolution in information technology occurs at a different pace in different sectors of the society. It is inevitable that some private filers of information with the government will sometimes have technology that exceeds the government's ability to accept the information in the form in which it is kept and most easily filed. In other cases, the reverse will be true. In many cases, the government will be ready to provide, and will prefer to provide for economic reasons, information in electronic form to persons who are not ready to consume it in electronic form. It will be a long time before every citizen has a microcomputer and a modem. Until such time as most citizens and government agencies have roughly equivalent technologies, transitional arrangements will be necessary to ensure that electronic acquisition and release do not prejudice major segments of the population.

This article is organized into five major parts. Part I is this introduction. Part II addresses certain security issues. Part III presents an overview of the statutory framework for automating agency information functions. Part IV analyzes policy and legal issues raised by these programs. Part V is the conclusion, and Part VI reprints the text of ACUS Recommendation 88–10.

Policy judgments about electronic acquisition and release systems, like other policy judgments, have a political dimension. Despite the

focus of Recommendation 88–10 on rational cost/benefit factors, decisionmakers must not forget the aphorism that politics is the art of the possible and the science of timing. There is no point in making exactly the "correct" choice according to objective factors but be denied funding or have the Congress amend authorizing legislation to dictate the terms of an electronic system. Agency decisionmakers should define affected parties and consider how their interests can be satisfied.[9] For example, USDA skillfully managed the public/private sector controversy at the launching of its EDI program, distributing agency information via a private vendor, and ensuring that format and pricing of the data encouraged adding value by other resellers.

C. Electronic Dockets

A few agencies are exchanging information electronically in the course of rulemaking or adjudicatory proceedings. The FERC system is the most mature electronic acquisition and release system oriented primarily toward APA regulatory dockets. It apparently has engendered little controversy. FERC's Commission Issuance Posting System (CIPS) is a good example of an effective way to publish regulatory information electronically. The author has accessed the system for publishing agency decisions and announcements and finds it easy to use and up to date.

The FDA bulletin board is a good example of electronic publishing of regulatory information through a private vendor. The program is in its infancy, but promises also to become a major electronic docket initiative.

The Nuclear Regulatory Commission LSS, for managing discovery data in nuclear waste licensing proceedings, is the most ambitious electronic docket system under active consideration by a federal agency. It faces technology challenges because of the need to accommodate page images. It also, like the Customs Service systems,[10] offers a higher level of electronic release for participants in the system in order to create incentives for participation.

It is desirable for everyone participating in a rulemaking or adjudicatory proceeding to have all the information in electronic form. Pertinent comments, exhibits, and testimony can be retrieved more easily than through conventional means. New submissions are available to all parties almost immediately. Dialup electronic dissemination equalizes availability to every interested person rather than giving a timing advantage to those with Washington staff and the

[9]*See* Perritt, *Negotiated Rulemaking Before Federal Agencies: Evaluation of Recommendations by the Administrative Conference of the United States*, 74 GEO. L.J. 1625 (1986) (analyzing ACUS Recommendation 85–5).

[10]*See* Report § III(C).

resources to photocopy large volumes of information. The potential for prejudice is small. Most generators of commentary or evidence are sophisticated and have the capability to submit the information in electronic form. Unsophisticated participants usually submit smaller quantities of information, and the burden of the agency of keying it into an electronic database would be small.

Ultimately, there is no reason why the *Federal Register* cannot be published electronically as well as in its present paper form. Such initiatives are desirable and further the purposes of the publication and public participation provisions of the APA. No legislation is required until further experience occurs with such concepts.

II. SECURITY ISSUES

Three slightly different security questions are raised by electronic acquisition and release systems. First, do electronic communications links between agency databases and members of the public intended for acquisition or release of information increase the likelihood of unauthorized access to information possessed by the agency? Second, does keeping information in electronic form make it more likely that agencies will make errors in screening information in response to FOIA requests, thereby failing to afford the protections contemplated by the exemptions to the Freedom of Information Act or by the Privacy Act? Third, do such systems increase the possibility that information could be lost, because of transmission errors, accidental erasure, or deterioration of electronic media?

Many important and difficult information security issues are beyond the scope of Recommendation 88–10 and of this article.[11] Agencies may have inadequate precautions to protect information against disaster such as fires or floods. They may have inadequate personnel screening and supervision practices. They may not have appropriate backup or archiving procedures for electronic information. But these risks to information security exist regardless of whether agencies undertake electronic acquisition or release.[12] The proper scope of inquiry is to identify those aspects of electronic acquisition or release programs that change the risk of information loss or improper access. As to those risks, agencies must include

[11] *See* 41 C.F.R. §§ 201.7.000–205 (1987) (security of federal information resources, obligating agencies to ensure security of electronic information systems); U.S. Congress, Office of Technology Assessment, Defending Secrets, Sharing Data: New Locks and Keys for Electronic Information (1987) (OTA-CIT-310) (examining vulnerability of communications and computer systems and trends in technology for safeguarding information in such systems).

[12] *See generally* Is Your Computer Secure?, Business Week, Aug. 1, 1988, at 64 (describing risks to government computer systems).

appropriate security procedures as an integral part of their systems designs.[13]

A. Unauthorized Access

It is well accepted that expanding the points of access and the class of persons entitled to access to any electronic information base increases the risk of unauthorized access. The same risk exists with paper systems; a clerk can put documents in the wrong envelope. But it is also true that directing information electronically to the wrong destination may escape detection longer, and a single error might result in much larger quantities of information being misdirected.

In some cases, of course, the problem disappears because the entire information base is public. This is true of the SEC EDGAR information, and the three electronic tariff systems.

One additional layer of protection is possible in electronic acquisition systems but not in electronic release systems. In electronic acquisition systems, users can supply information to the system, but not be permitted to obtain information from the system except for acknowledgment messages. The very nature of electronic release systems, conversely, contemplates user access to portions of the information base defined by the user to be of interest.

A major subspecialty of information systems technology involves development of appropriate compartmentalization, passwords and other access-limiting methods to ensure that users can obtain access only to those data to which they are entitled.[14] Recommendation G(1) of Recommendation 88–10 says that acquisition and release systems should be designed to include state of the art access control techniques.

B. FOIA/Privacy Act Screening

Electronic FOIA and Privacy Act screening[15] is different in kind but not in character from screening in connection with an FOIA request for paper records. Paper records pertaining to an FOIA request generally are reviewed by an FOIA officer of the agency. Information protected by the Privacy Act or potentially covered by an FOIA exemption is identified and the agency forms a position as to whether the confidential information can be redacted from the paper record or whether the entire record must be withheld.

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[13]*See* Management of Federal Information Resources; Final Publication of OMB Circular No. A-130, 50 Fed. Reg. 52730, 52742 (Dec. 24, 1985) (requiring agencies to assure adequate security for all agency automated information systems).

[14]*See generally* H. PERRITT, HOW TO PRACTICE LAW WITH COMPUTERS ch. 8 (available from The Practising Law Institute in New York).

[15]*See* § IV(D)(4)(a)(v) of this article discussing electronic "redaction."

The same kind of screening process can take place with electronic records. FOIA officers can review the requested information on video displays or on paper printouts. The screening problem may be more difficult with electronic information, however. Pressure is growing for agencies to supply information in electronic form, possibly retrieved via computerized database query methods. Except for the need for screening, individual records or fields comprising such information would not be presented to agency personnel in a form that a human can read. So the need for FOIA and Privacy Act screening interposes a step for human intervention that otherwise would not be necessary.

As more experience is obtained, automated techniques can be developed and perfected that will improve the quality of Privacy Act and FOIA exemption screening. For example, the Customs Service presently redacts certain manifest information to ensure that shippers and consignees entitled to protection from access under the Customs statutes have identifying information redacted from their manifest records.[16]

In some cases security is better with electronic systems. Once a computer screening program is correct, it will block confidential data with absolute reliability. File clerks are not so reliable. It is not unheard of for a clerk to send the wrong pile of paper, sending confidential information to persons supposed to receive only the non-confidential information.

C. Loss of Information

The third type of security problem will arise with paperless electronic acquisition systems. It has not yet become manifest because two of the most mature acquisitions systems, EDGAR and ACS, presently require information to be filed in both electronic and paper form. The paper filing is the official one. Loss of data apparently is not a problem with the IRS electronic filing system, where no parallel paper records exist.

Eventually, however, parallel paper and electronic channels will be eliminated. Then, what happens if the agency seeks to impose sanctions on a person for failing to file and the person defends on the grounds that a filing was submitted but the agency lost it?

It certainly is true that electronic data can be erased quickly, leaving no trace unless some audit system is in place. This possibility seems to make a failure-to-file dispute especially difficult to resolve in the case of electronic filing. But the difficulty can be put in better perspective by considering the same problem in a purely paper system. Government agencies do lose paper forms. In such a case, the burden of

[16] *See* Report § III(C).

proof presumably is on the filer. The filer is unable to meet this burden unless it has some documentary or testimonial evidence of the filing.[17] There is no reason that such evidence is harder to come by with respect to electronic filing than paper filing. Both EDGAR and ACS provide electronic receipts, and so does the IRS automatic filing system.

One theoretical possibility for mitigating the risk of lost or altered data is for an electronic acquisition system to write a duplicate copy of all received filings to a special "log" file, separate from the files intended for subsequent agency processing, which would be protected from alteration or manipulation.[18] The increasing availability of practicable optical disk storage facilitates creation of such a log file. Because the CD-ROM type of optical disk technology is inherently inalterable, electronic receipts can be written to CD-ROM as soon as they are received, creating a permanent record of the filing. The electronic receipts stream then could be routed to agency analysts for further processing without concern about maintaining an audit trail of alterations.

III. STATUTORY FRAMEWORK

Four statutes and three policy statements interact to frame the policy contours of electronic acquisition and release systems: the Freedom of Information Act,[19] the Privacy Act,[20] the User Fee Act,[21] the Paperwork Reduction Act,[22] Office of Management and Budget (OMB) Circular A-130,[23] draft Commerce Department Guidelines,[24] and the Policy Report of the House Committee on Government Operations.[25] Policy guidance also is provided by information and procurement regulations[26] and by various other OMB circulars.[27]

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[17]Many filers of paper forms have the agency file-stamp duplicate copies of the paper filing. Such a procedure makes meeting the filer's burden of proof easy.

[18]The author thanks Dallas attorney Benjamin Wright for suggesting this possibility.

[19]5 U.S.C. § 552 (1982).

[20]5 U.S.C. § 552a.

[21]31 U.S.C. § 9701.

[22]44 U.S.C. §§ 3501–3520.

[23]Management of Federal Information; Final Publication of OMB Circular No. A-130, 50 Fed. Reg. 52730 (Dec. 24, 1985).

[24]*See* Report § V(B)(7).

[25] Committee on Government Operations, House of Representatives, Electronic Collection and Dissemination of Information by Federal Agencies: A Policy Overview, H.R. REP. No. 99–560, 99th Cong., 2d Sess. (1986) [hereinafter House Policy Report].

[26]41 C.F.R. chaps. 201–1 to 201–49 (Federal Information Resources Management Regulation) (July 1, 1988) and 48 C.F.R. chaps. 1 to 53 (Federal Acquisition Regulations).

[27]A-109 ("Major Systems Acquisitions," rev. Apr. 5, 1976), A-76 ("Performance of Commercial Activities") and A-11 ("Preparation and Submission of Budget Estimates,

Other statutes covering government contracting and procurement also are relevant.[28]

A. Freedom of Information Act

The Freedom of Information Act[29] establishes a policy in favor of releasing government information to the general public. Upon request, agencies must make available records[30] not falling within the Act's publication requirements.[31] Although it does not specifically address information in electronic form, the Act presumptively favors designing electronic release systems so that the public will have access to information stored in electronic form. It does not, however, resolve the question of who bears the cost of formulating queries appropriate to retrieve information according to an FOIA request, nor is it clear on whether software, as opposed to raw data, must be made available.[32]

The Act contains nine exemptions, protecting from access, disclosure or dissemination records pertaining to (1) national security, (2) agency personnel matters, (3) matters specifically exempted from access by another statute, (4) commercial secrets, (5) agency deliberations, (6) private personal matters, (7) law enforcement investigations, (8) financial institution examinations, and (9) geological surveys.[33]

In 1986, the Freedom of Information Act (FOIA) was amended to authorize agencies to prescribe fee schedules for three levels of agency activity: document duplication alone, search time, and review time.[34] The agency fees must conform to uniform fee guidelines issued by OMB.[35] Commercial requesters can be charged for review

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rev. 1987 and annually thereafter). *See also* Exec. Order No. 12615, 52 Fed. Reg. 44853 (Nov. 19, 1987), 31 U.S.C.A. § 501 *note* (West Supp. 1988).

[28]*See* Competition in Contracting Act, 10 U.S.C. §§ 2301–2306, 2310, 2311, 2313, 2356 (defense contracting); 31 U.S.C.A. §§ 3551–3556; 40 U.S.C. § 759 (automatic data processing procurement policy and goals); 41 U.S.C.A. §§ 251, 252–54, 257–60, 401–420 (West Supp. 1988) (general procurement); Property Act, 40 U.S.C. §§ 295, 481, 484, 486(c), 487, 602(c), 757 (procurement policy and coordination); 44 U.S.C. §§ 2901–2910, 3101–3107 (records management).

[29]5 U.S.C. § 552 (1982).

[30]5 U.S.C. § 552(a)(4).

[31]5 U.S.C. § 552(a)(1), (2). 5 U.S.C. § 553(b) also requires proposed rules to be published in the Federal Register to provide an opportunity for public comment. This implicates electronic docket issues discussed in the introduction and Recommendation H.

[32]*See* Report § V(F)(4)(a) (discussing FOIA requirements for electronic release in considerably more detail).

[33]5 U.S.C. § 552(b).

[34]Freedom of Information Reform Act of 1986, Pub. L. No. 99–570, §§ 1802, 1803, 100 Stat. 3207, 3207–48 (1986) (amending 5 U.S.C. § 552(a)(4)(A)).

[35]5 U.S.C. § 552(a)(4)(i) (1982 & Supp. IV 1986).

time, search time and duplication;[36] most other requesters can be charged for search time and duplication;[37] and a limited category of requesters can be charged only for document duplication.[38] OMB promulgated a uniform FOIA fee schedule,[39] which, among other things, explicitly covers computer searches "using existing programming,"[40] defines duplication to include making machine readable documentation including tapes and disks,[41] and establishes a costing method for computer searches for records.[42]

B. Access Fees: User Fee Act

The User Fee Act[43] sets general guidelines for establishing user fees for government services. Basically, these guidelines say that services or things of value provided by an agency to a person should be self-sustaining through user charges. The statute requires the charges to be "fair" and based on four factors:

- costs to the government,
- the value of the service or thing to the recipient,
- public policy or interest served, and
- other relevant facts.[44]

The Act authorizes agencies to issue regulations establishing charges, subject to policies prescribed by the President.

C. Privacy Act

The Privacy Act,[45] codified as part of the Administrative Procedure Act, obligates agencies to restrict access to "systems of records" concerning individuals and to provide access to such information to the individuals covered. The Privacy Act is concerned with information maintained in electronic form and imposes a duty to design electronic databases to facilitate response to individual requests and to safeguard against non-permitted access.

The Privacy Act interacts in some important ways with the Freedom of Information Act. The Privacy Act is concerned with "systems of

[36]5 U.S.C. § 552(a)(4)(A)(ii)(I).
[37]5 U.S.C. § 552(a)(4)(A)(ii)(III).
[38]5 U.S.C. § 552(a)(4)(A)(ii)(II) (education and non-commercial scientific organizations and news media).
[39]The Freedom of Information Reform Act of 1986; Uniform Freedom of Information Act Fee Schedule and Guidelines, 52 Fed. Reg. 10012, 10017 (March 27, 1987).
[40]52 Fed. Reg. at 10017 (Para. 6(d)).
[41]52 Fed. Reg. at 10017 (Para. 6(e)).
[42]52 Fed. Reg. at 10018 (Para. 7(b)).
[43]31 U.S.C. § 9701 (1982).
[44]31 U.S.C. § 9701(b).
[45]5 U.S.C. § 552a (1982).

records"[46] within which information is kept on individuals.[47] The Act was primarily motivated by concern over computerized databases,[48] but it is broadly applicable to paper as well as electronic information.

D. The Paperwork Reduction Act

The Paperwork Reduction Act[49] is the most comprehensive of the enumerated statutes. It contemplates formulation of a government-wide information policy by a new Office of Information and Regulatory Affairs within the Office of Management and Budget.[50] Building upon the long-standing requirement that agencies seeking to collect information obtain OMB approval, the Act expressly mentions electronic information techniques and obligates the Director of OMB to develop government wide policies for coordinating data acquisition requests, data use, and information systems acquisition policies.[51]

Although the Paperwork Reduction Act gives new authority to OMB over federal information policy, it also expressly foreswears any broadening of OMB authority over substantive policies and programs of agencies,[52] and leaves intact other statutory provisions limiting OMB's authority to determine the need for specific services or to conduct procurement.[53] Unfortunately, the Paperwork Reduction Act is drafted in general terms and, although it refers to electronic information management techniques,[54] many of its provisions are focused on paper reports.[55] Only in Section 3504(g)(4)[56] does the Act

[46]5 U.S.C. § 552a(a)(5) (defining "system of records"). The Act does not cover informal records which may pertain to individuals. Boyd v. Secretary of the Navy, 709 F.2d 684 (11th Cir. 1983) (supervisor's memorandum of meeting with employee, not keyed to employee's name or identifying number), *cert. denied*, 464 U.S. 1043 (1984).

[47]The Act does not, for example, cover databases oriented toward economic regulation of commercial enterprises. Unt v. Aerospace Corp., 765 F.2d 1440 (9th Cir. 1985) (letter about employer rather than employee); Fagot v. Federal Deposit Ins. Corp., 584 F. Supp. 1168 (D.P.R. 1984) (records organized by bank name).

[48]*See* Thomas v. United States Dep't of Energy, 719 F.2d 342 (10th Cir. 1983).

[49]44 U.S.C. §§ 3501–3520 (1982 2nd Supp. 1986).

[50]44 U.S.C. §§ 3503–3504.

[51]44 U.S.C. § 3504.

[52] 44 U.S.C. § 3518(e); *See* United Steelworkers of Am. v. Pendergrass, 855 F.2d 108 (3d Cir. 1988) (OSHA hazardous communication standard not within OMB Paperwork Reduction Act authority).

[53]*See* 41 U.S.C. § 405(c) (1982).

[54]44 U.S.C. §§ 3501(5) (policy), 3502(2), 3502(13), 3504(a), 3504(g) (OMB functions), 3505(2)(C) and (E), 3506(c)(6).

[55]*But see* S. Rep. No. 930, 96th Cong., 2d Sess. 1, 13, *reprinted in* 1980 U.S. CODE CONG. & ADMIN. NEWS 6241, 6253 (Paperwork Reduction Act applies to SEC electronic acquisition).

[56](OMB shall promote ADP and telecommunications equipment to improve dissemination of data.)

address information release. This provision is not well integrated with the other provisions of the act.[57]

OMB has released draft guidance for comment, intended to implement the Paperwork Reduction Act.[58]

E. OMB Circular A-130

OMB is authorized to set information policy by the Paperwork Reduction Act,[59] the Privacy Act,[60] the Federal Property and Administrative Services Act,[61] the Budget and Accounting Act of 1921,[62] and Executive Order 12046.

Circular A-130 mandates that public rights to access information derived from the FOIA be preserved in electronic release systems.[63] OMB has directed that agencies should place maximum feasible reliance on the private sector for the dissemination of information.[64] OMB does not intend that agency information activities "be indiscriminately turned over to . . . the private sector . . . ," but intends that agencies have an obligation to examine private sector activities before embarking on duplicative activities of their own.[65] OMB recognizes:

> an agency's shift to electronic filing of reports, perhaps carried out primarily in order to improve internal information management, might generate a public demand for electronic dissemination that could be satisfied at minimal cost to the government and also improve the performance of the agency's information access function.[66]

Agencies should, according to OMB, consider the most cost-effective way of proceeding.[67] On December 28, 1988, (published Jan. 4, 1989) OMB solicited public comment on possible revisions to Circular A-130 relating to information dissemination.[68] The solicitation explicitly focuses on electronic dissemination and was significantly recast in June 1989.[69]

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[57]*See* Sprehe, *Developing Federal Information Resources Management Policy: Issues and Impact for Information Managers*, 2 INFO. MGMT REV. 33, 37 (1987) (contrasting explicit statutory policy direction for information acquisition with lack of such policy direction for dissemination).

[58]*See* Report § V(B)(6), and §III(E) of this article.

[59]44 U.S.C. § 3504.

[60]5 U.S.C. § 552a.

[61]40 U.S.C. § 759.

[62]31 U.S.C. § 101 et seq. (1982).

[63]50 Fed. Reg. 52730, 52736 (1985).

[64]*Id.* at 53736.

[65]*Id.* at 52746 (Appendix IV to Circular A-130).

[66]*Id.* at 52547 (Appendix IV to Circular A-130).

[67]*Id.* at 52748 (Appendix IV to Circular A-130, explaining continuing validity of Circular A-76 regarding public/private roles).

[68]54 Fed. Reg. 214 (1989) [hereafter "January notice"].

[69]*See id.* at 216 (electronic medium may be superior to paper medium in some cases; existence of electronic information not sufficient to justify dissemination; need to avoid

In August 1987, OMB released for public comment proposed policy guidance on electronic collection of information.[70] The proposed policy requires agencies to certify that they have considered use of electronic information collection techniques as a means to reduce burdens on respondents and costs to the government. When final, this guidance will be issued as an appendix to OMB Circular No. A-130. Specific OMB-suggested guidelines are substantially the same as those contained in ACUS Recommendation 88–10.[71]

ACUS Recommendation 88–10 does not reflect value judgments different from those underlying OMB Circular A-130. In these respects, A-130 is entirely consistent with the process envisioned by Recommendations B through E of ACUS Recommendation 88–10, which elaborate on cost and benefit categories to be considered in deciding to release information at three different levels and to be considered in allocating responsibility between public and private sectors. The recommendations distinguish specific types of dissemination activities that may be performed better or more cheaply by agencies or private enterprise. The recommendations also provide more detail on FOIA obligations as applied to electronic information.

F. Department of Commerce Draft Guidelines

On August 5, 1988, the Assistant Secretary of Commerce for Administration published a draft departmental administrative order containing policies for electronic dissemination of information.[72]

The draft is intended to implement OMB Circular A-130 within the Department of Commerce. Much of the draft reiterates guidance from Circular A-130,[73] but certain portions provide additional guidance warranting separate comment. The draft distinguishes between "new" dissemination products and products that merely change from paper to electronic media the form in which information is disseminated.[74] The draft mandates use of private sector resources for electronic dissemination when the value to be added is best

monopoly control), 218 (pricing of electronic information products). On June 9, 1989 OMB published a "Second Advance Notice of Further Policy Development on Dissemination of Information." 54 Fed. Reg. 25554. The June notice responded to comments on the January notice, softening OMB's position that agencies must not add value to electronic information.

[70]52 Fed. Reg. 29454 (1987).

[71]*Compare* ACUS Recommendation 88–10 Para. B *with* App. IV, Paras. 2(a)(1)–(6).

[72]The August 5 draft is referred to hereinafter as "Commerce Guidelines."

[73]*See* Report § V(B)(6).

[74]The draft uses the distinction in formulating its requirements for public notice about electronic dissemination products.

performed by the private sector,[75] or when the private sector will provide faster delivery or lower costs to users.[76]

G. House Government Operations Committee Policy Report

In 1986, the Committee on Government Operations published a policy statement on electronic dissemination.[77] The statement is not, of course, an authoritative expression of policy for the Congress as a whole. It presents, however, a thoughtful analysis, and explores the appropriate directions for government-wide electronic information policy.

The House policy statement encourages agencies to expand public availability of electronic information,[78] but also urges that agencies avoid unnecessary competition with the private sector in disseminating electronic information.[79] "Fair competition" should be the criterion for agency deference to private sector electronic dissemination.[80] Although the enumerated "Recommendations" in the report emphasize preserving a role for the private sector, the entirety of the report and its enumerated "Findings" make it clear that agencies should use electronic methods to advance public availability of agency information, and that some degree of competition between public and private sectors with respect to information products is inevitable. In late 1988, the Congressional Office of Technology Assessment released a report on electronic information policy.[81]

IV. POLICY AND LEGAL ISSUES

A. Introduction

Automation of agency acquisition and release of information raises different policy and legal questions depending on whether one considers the acquisition or the release side of the information flow.[82]

Release is more controversial because agencies have legal duties to release information upon request, and these duties may extend to

[75]Commerce Guidelines at § 6.02(c)(1).

[76]*Id.* at § 6.02(c)(3)–(4).

[77]Committee on Government Operations, House of Representatives, Electronic Collection and Dissemination of Information by Federal Agencies: A Policy Overview, H.R.Rep. 99–560, 99th Cong., 2d Sess. (1986) [hereinafter "House Policy Report"].

[78]House Policy Report, *supra* note 77, at 9–10.

[79]*See id.*, at 2.

[80]*See id.*. at 59–61.

[81]*See* U.S. Congress, Office of Technology Assessment, Informing the Nation: Federal Information Dissemination in an Electronic Age (October 1988).

[82]*See generally* The $3 Billion Question: Whose Info Is It, Anyway?, Bus. Week, July 4, 1988, at 106–07.

electronic information. Moreover, agency electronic release has greater potential to compete with established private sector electronic information vendors. And, the consumers of government information are more diverse than the providers of information to the government.

The legal questions are more varied and complex with respect to release than acquisition. The sections that follow discuss, first, some cost/benefit issues common to acquisition and release systems, and then more specific policy and legal issues that pertain to acquisition and release of information.

B. Cost/Benefit Analysis

The evaluation process proposed in Recommendations C and D of ACUS Recommendation 88–10 presupposes the existence of a cost and benefit framework to guide the evaluation. One proxy for a social welfare criterion for agency electronic information activities is a favorable cost/benefit ratio. Specific costs and benefits obviously will be different for each proposed information product. Moreover, some government information has benefits that are not economic.[83] Certain categories of costs and benefits should be considered in every case, however. Costs are easier to measure and compare than benefits because of the existence of a common monetary denominator. Benefits are inherently difficult to quantify, but they can be identified.

The best approach is to recognize that different kinds of information have different kinds of benefits to different consumers; and to enumerate those advantages—non-economic as well as economic, also enumerating the marginal costs of providing electronic information in different ways, through private sector as well as public sector channels. Long-term costs and benefits should be considered as well as short-term marginal costs. A short-term marginal cost analysis may lead to a conclusion that an agency should retail information as a byproduct of its internal automation activities; yet long-term software enhancement, and communications system expansion capital costs may be great.

In addition to capital and operating costs,[84] agencies should consider unrecovered costs associated with existing government or private sector capital that would be obsoleted by the new product, and capital and marginal costs to consumers of substitute sources of information if the product is launched but not maintained or funded to permit its intended benefits to be realized over its planned term.

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[83]*See* 50 Fed. Reg. 52730, 52732 (1985) (preamble to OMB Circular A-130) (discussing comments to proposed draft); ACUS Recommendation 88–10, Recommendation E.

[84]*See* ACUS Recommendation 88-10, Recommendation E.

Recommendation E(2) emphasizes cost avoidance associated with eliminating the cost of producing existing paper products, eliminating agency and consumer costs of making and responding to paper FOIA requests, eliminating agency and consumer costs of retrieving information from and maintaining public reference rooms. Benefits also should include the increase in the number of interested persons having access to information, and improvements in the utility of information for its intended purpose because of improved organization and retrieval possibilities, or reductions in delays associated with transferring information from an agency to eventual consumers.

Benefit categories E(2)(b) and (c) would be associated with upgrading the level of information release from ad-hoc FOIA access to electronic disclosure in a public reference room and upgrading paper public reference room disclosure to electronic publishing.

The Conference added (E)(1)(e) to the author's original recommendations in response to comments on the draft recommendation. The conference also added (E)(1)(h) in connection with restructuring language in the preamble and other recommendations associated with the cost of format conversion.

C. Electronic Acquisition Policies

1. *Policy Issues*

Electronic acquisition presents significantly less controversy than electronic release for several reasons. Most electronic acquisition programs in operation or advanced planning make filing voluntary. SEC's EDGAR and FMC's tariff system are exceptions. Apparently difficult format compatibility problems are being worked out with relatively little difficulty so far. Agencies are working through private sector intermediaries where they exist.

Recommendation B of ACUS Recommendation 88–10 points out that agencies incur significant costs when they acquire information in paper form and convert it into electronic form. Private sector entities providing information to the government also incur costs when they must convert electronic information kept in electronic form into paper form for submission to the government. It is therefore desirable in many cases for the government to acquire information in electronic form. Electronic acquisition is desirable only when the agency's use of the information is automated. When most providers of information ("filers") are technologically sophisticated, and private sector intermediaries do not already perform a conversion and submission role, it is appropriate for agencies to require filers to submit information electronically, after developing standard formats in consultation with the filer community, and after appropriate testing

and transition periods. An important part of cost/benefit analysis for designing electronic filing programs is to understand how costs of changing to standard formats will be borne, and to choose the most cost-effective way to standardize or handle different formats.

In some cases, filers have information in electronic form but are not permitted to file it electronically. Perhaps the clearest example involves international air cargo and passenger tariffs which currently are filed electronically by airlines with one of two contractors, the Official Airline Guide or Air Tariffs Incorporated.[85] These contractors produce hard copies of the electronically filed information, and file the hard copies with the regulatory agencies.

The only real issue with respect to voluntary electronic filing relates to the cost of an agency having two separate tracks for receiving information: one electronic and one a paper process. Additionally, of course, all of the compatibility issues associated with mandatory filing are involved in voluntary filing except that an agency presumably has more discretion to impose requirements for the format of voluntarily filed information. The IRS, FMC, Customs Service and SEC have resolved format questions without major controversies.

Mandatory electronic filing requirements must balance benefits to the agency, the public, or the regulatees from electronic filing against the costs of imposing such requirements. In some cases, such as the international air tariff example discussed above, the cost to most regulatees is small. But in most instances, there will be some regulatees that would be unable to meet mandatory electronic filing requirements without buying electronic conversion services, particularly when small businesses constitute part of the filing community.

It may be essential to provide for some kind of exception to the mandatory requirement so that some filers can file on paper. But storing some information only in paper form undermines the integrity of the resulting computerized database, and agencies should undertake the burden of keying information that is filed in paper form. An additional danger of waiving the electronic filing requirement for too many filers is that some filers may be tempted to file on paper to serve illegitimate ends, such as delaying release of information to the public so that financial gain can be made from the information "float."

In some cases, the burdens of electronic filing can be mitigated by relying on commercial intermediaries to put the information in an electronic form that is acceptable to the agency. There is some precedent for this approach in the tariff area. For decades, tariff bureaus have assisted small transportation enterprises in meeting the

[85] *See* Report § III(I).

filing requirements imposed by the Interstate Commerce Commission and other regulatory agencies. The broader and more diverse the filing population, however, imposing filing requirements legally and then effectively obligating persons to use commercial services to access their government agencies can engender significant controversy. Most agencies considering the question, such as IRS and the Customs Service, have let filing be voluntary but have tried to create incentives for filers or third parties to file electronically. This is a good approach, if the incentives work.

2. *Signatures on Filings*

A concern often expressed about electronic filing programs is that an electronic filing, unlike a paper filing, cannot be signed in the usual way. This concern is considerably overblown. A number of techniques exist to satisfy any legal requirement for a signature on electronic filings.

Under generally accepted definitions, a signature is any mark made by a person intending that the mark be that person's signature.[86] Under this definition, a signature need not be holographic;[87] it need not spell out the signer's name; there is no conceptual reason why the "mark" cannot be an electronic string of symbols rather than the image made by ink on paper. The American banking industry has found electronic signature methods acceptable for use with automatic teller machines to withdraw money from bank accounts[88] even though non-electronic withdrawal procedures usually require traditional holographic signatures on paper.

Signature requirements for electronic acquisition systems raise many of the same issues as telegraphic signatures. Disputes over the validity of telegraphic signatures historically have been resolved by imposing a duty on the recipient of a telegram to verify the validity of the signature.[89]

Two basic approaches are being used by federal agencies to meet signature requirements. The SEC's EDGAR system exemplifies the first approach. The IRS electronic filing project exemplifies the second. EDGAR filings are accepted only when the filer transmits two different codes, an access password and a signature code. The second

[86]*See* 80 C.J.S. Signatures §§ 2, 7 (1953 & Supp. 1988).

[87]*See id.*, at § 7 (citing Zenith Radio Corp. v. Matsushita Elec. Indus. Co., 505 F.Supp. 1190 (E.D. Pa. 1980)).

[88]*See generally* Electronic Fund Transfer Act, 15 U.S.C. §§ 1693a–1693r (1982) (allocating responsibility for economic loss between banks and depositors and providing for contractual regulation of details).

[89]*Cf.* Bradford Trust Co. v. Texas Am. Bank of Houston, 790 F.2d 407 (5th Cir. 1986) (validity of telegraphic signature not directly in question; reviewing legal principles and cases).

of these codes is assigned in a way, and filers are expected to use it in a way that limits its availability to persons authorized to "sign" SEC filings.

Electronic tax returns must be followed by a simple paper submission that has a holographic signature.

A variety of confirmation and character count approaches, such as those used by the Customs Service, IRS and EDGAR systems, are appropriate to minimize the risk that an electronic filing might be misdirected and never reach the agency, and to ensure that if an entire electronic form is not received that none of it will be accepted and that the sender will get a rejection notice. In any event, an electronic log, discussed in Section II(C)(3), can be maintained on non-erasable media, which, if used in conjunction with state-of-the-art error checking protocols, should provide ample evidentiary support for what an agency received electronically.

3. *Other Legal Issues*

Legal issues associated with mandatory filing requirements are most likely to turn on interpretation of specific statutory authorization for agencies to require the filing of information. For example, could the Securities and Exchange Commission legally require persons to file information electronically, before enactment of the 1987 EDGAR legislation? Do the organic statutes of economic regulatory agencies bear an interpretation that permit them to require tariffs to be filed electronically? The FMC, for example, explored this question, and obtained a legal opinion answering the question affirmatively.

A slightly different question occurs in connection with statutes that give members of the public a right to submit information. A clear example is Section 553 of the Administrative Procedure Act giving members of the public a right to submit comments on proposed agency rules. If an agency were to require that comments be filed electronically, the legal question would be whether the burden of electronic filing impermissibly interferes with the right to file comments and have them considered by the agency. FERC does require that regulatory filings be electronic.[90]

D. Electronic Release Policies

Several policy issues exist with respect to electronic release of information. The policy issues must be understood in the context of three different levels of electronic release, specifically including:

(1) release of electronic information only in bulk, or only in response to FOIA requests. This is the lowest level, corresponding to

[90] *See* Report § III(D).

"access," in the glossary to Recommendation 88–10, contained in the introduction to this article.[91]

(2) release of electronic information only through public terminals in public reference rooms. This is an intermediate level, corresponding to "disclosure" in the glossary.

(3) electronic publishing, involving on-line, dial-up links or sale and distribution of magnetic or optical disks formatted so as to permit easy retrieval on a small computer. This is the highest level, corresponding to electronic publishing or "dissemination" in the glossary.

While the dividing lines among the three levels are subject to disagreement, more value has been added to the raw electronic information as one moves from the lowest level to the higher levels,[92] and the higher levels more accurately can be described as retailing information, while the lower levels can be described as wholesaling information.[93]

The policy and legal issues pertaining to electronic release differ considerably depending on whether one considers access obligations under the FOIA in response to discrete requests, or whether one considers more active agency initiatives to disseminate information through some form of electronic publishing. Recommendation 88–10 begins with the FOIA because that statute is broadly applicable to all agencies, with important implications for how agency-specific electronic release initiatives should be conducted.

Most of the controversy over every program discussed in this article involves the question whether the sponsoring agency should publish (disseminate) information electronically, as opposed only to providing access under the FOIA or offering disclosure through public reference room terminals. Controversy also exists regarding the legality of agencies' restricting access to electronic information. In most cases, agencies legally are obligated only to provide access or to disclose, not to disseminate, information. Moving to higher levels of release is largely discretionary.

Deciding the respective roles of public and private sectors is at the heart of most of the controversy over agency electronic release programs. Private sector electronic information vendors fear that disseminating agencies may compete unfairly with private sector entrepreneurs. Such unfair competition could result from agencies' offering value added services to the general public at prices supported by public funds.

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[91] *See id.* at § II(A)(3) for an explanation of the distinctions among dissemination, disclosure and access.

[92] *See* at § IV(D)(1) of this article.

[93] *See* § IV(D)(2) of this article.

Recommendation 88–10 suggests that the nature of electronic publishing initiatives by federal agencies should depend on the content of the information,[94] and its value in promoting meaningful public involvement in the functions of government or in complying with law. Agencies should evaluate possible new electronic information products in a three step process, working from a baseline of traditional paper information products and evaluating costs and benefits of electronic information products with essentially the same content. The first step in the evaluation process should be to identify the form in which information that would be contained in a new electronic information product currently is released: (1) released only in response to FOIA requests; (2) released through a public reference room or some similar means that facilitates public disclosure; or (3) published and distributed by the government or by the private sector.

The second step is to identify the benefits and costs of replacing or supplementing existing means of release with different forms of electronic release, specifically including: (1) release of electronic information only in response to FOIA requests; (2) release of electronic information only in bulk or only through public terminals in public reference rooms; or (3) electronic publishing, involving online, dial-up disclosure or sale and distribution of magnetic or optical disks formatted so as to permit easy retrieval on a small computer. An electronic information product should not be proposed by an agency unless the cost/benefit analysis demonstrates that the electronic alternative analyzed is superior to existing means.

In some cases of course, a new electronic information product involving publishing is warranted despite the absence of a comparable paper product. One clear example is the electronic database of hazardous materials explicitly mandated by the Superfund Amendments. In other cases there is no statutory mandate but the benefits of a new product are appreciable and the costs are so much lower than for a paper equivalent that a new product is warranted. An example is the Federal Energy Regulatory Commission's electronic bulletin board of commission documents.

In other cases, a statutory mandate for, or a long practice of, paper publishing raises a presumption that electronic publishing should be viewed favorably. Examples include information contained in the Congressional Record, the *Federal Register,* codifications of statutes, regulations and judicial opinions, economic statistics, weather fore-

[94] *See also* House Policy Report, *supra* note 77, at 9 (general public availability of information is a principal goal of governmental information policy, however, information should not be made available if there is legitimate governmental or private interest opposing disclosure).

casts and warnings, the contents of regulatory dockets, information to promote regulatory compliance and patent information. When publishing is mandated by statute or when paper publishing exists, agencies should promote electronic publishing of the information unless the cost/benefit analysis suggests offering a lower level of electronic release.

Electronic disclosure through public reference rooms or through purchase of tapes or disks with aggregate data is an intermediate level of electronic release. This level of release is presumptively appropriate when statutes explicitly require disclosure of paper information in public reference rooms or when there is a long practice of making it available through that channel. Tariff information is included in this category, though it possesses special legal characteristics.

When paper information is provided through public reference rooms, agencies also should consider the costs and benefits of upgrading to electronic publishing.

Recommendations A and B(3) cover agency obligations under the FOIA. Agencies also should consider the costs and benefits of upgrading release of information presently disclosed only in response to discrete FOIA requests to electronic disclosure under Recommendation D(2) or electronic publishing under D(1).

1. *Information as an Economic Good: Adding Value*

Information is an important economic good. But an immutable characteristic of tangible economic goods—scarcity—applies only in diminished form to information. Information can be shared indefinitely without depriving the original owner of anything. Moreover, information usually can be duplicated relatively cheaply. Electronic information can be duplicated even more cheaply than paper information. As a result of these characteristics, it is difficult to set a high price on information unless secondary distribution can be prevented. Copyright is a standard legal mechanism to restrict duplication and secondary distribution.[95] Government information cannot be copyrighted, but government agencies can exert a variety of controls that prevent certain forms of electronic release and therefore limit the cheapest forms of duplication and redistribution. Such restrictions permit either the agency or an outside possessor of the electronic information to enforce a high price because such an agency or outside possessor has a monopoly in the marketplace for that information.

Electronic information shares many of the qualities of paper information. But the nature of the value that can be added to

[95]The foregoing observations come from House Policy Report, *supra* note 77 at 24.

electronic information differs in magnitude from roughly analogous forms of value added to paper information. Other characteristics of electronic information, besides susceptibility to cheap copying, influence the economics of such information.

Paper information is immediately usable by ultimate consumers. Electronic information is not; it requires a computer with appropriate software to interpret the information and present it on a screen or print it on paper. Large quantities of raw electronic information are not very valuable because it is difficult for computers to retrieve particular information items of interest to an information consumer. Structured information with indices and matching retrieval software is highly valuable, however, because any data item accommodated by the structure can be retrieved easily. Telecommunications links, or availability on disks appropriately formatted for use on personal computers, increases the value further.

Compiling paper information and adding indices increase the value of the information somewhat; structuring electronic information and adding retrieval software add to its value enormously. Paper information must be possessed physically to be used. Electronic information can be transmitted over telecommunications links. So creation of appropriate telecommunications links is a type of value that can be added to electronic information with no counterpart in the paper information world.

"Adding value" to electronic information means adding structure, indices and retrieval software to the raw data and adding telecommunications links to the data or distributing personal computer diskettes with the resulting enhanced data on them.

Developers of electronic information systems have strong motives to create monopolies, but the points at which monopolies can be created differ for electronic information, depending on the points at which significant value can be added. Significant capital may be required to convert information to electronic form and to develop and operate systems for storing, managing and retrieving the information. If the investor of the capital releases the enhanced information without restriction, it is possible for other persons to duplicate and distribute it at very low marginal costs thereby undercutting a price sufficient to afford recovery of capital costs. These characteristics of electronic information as an economic good create strong incentives for the first person who creates an electronic database to restrict duplication and redistribution. This is true whether the person creating the electronic information base is an agency or a private sector entrepreneur.

Recommendation 88–10 deals with monopoly issues in Recommendation F. The author's original recommendation read, "No federal

agency should grant monopoly power to a private firm over public information in possession of the agency."[96]

The explanation to the author's original recommendation suggested that limited monopolies over electronic information might be justified to encourage private sector entities to add value or to support agency price levels necessary to recover capital costs. Agencies may wish to encourage voluntary participation in electronic acquisition programs by giving participants preferential rights to electronic information.

The Conference at the plenary session extensively rewrote Recommendation F to recognize the possibility that there might be circumstances under which legitimate reasons exist to create exclusive control. The final language of Recommendation F also recognizes, however, that certain interpretations of the FOIA are inconsistent with long-term exclusive rights. Indeed, those aspects of the recommendations that cover FOIA interpretations are inconsistent with a refusal by an agency to disclose bulk information and electronic form solely to protect exclusive rights granted to a preferred information disseminator.

2. *Retailing versus Wholesaling: Public/Private Sector Roles*

Permeating all three levels of information release is the question of whether federal agencies should retail information in electronic form or only wholesale it.[97] Retailing means disclosing or disseminating directly to the general public, and providing search and retrieval software and other added value. Wholesaling means providing information to large volume requesters or contractors only in raw form, relying on the recipient to package it and resell it to the general public.

Agency retailing makes the agency a competitor of private sector sellers of electronic information. Agency wholesaling makes the agency a supplier of private sector sellers, and a possible promoter of additional competition in private electronic information markets.

A clear example of wholesaling is the release by the Government Printing Office of tapes of *Federal Register* and *Congressional Record* text which then is repackaged by West Publishing Company and Mead Data and made available to the general public (at substantial cost) via the WESTLAW and LEXIS databases, which include sophisticated search capability. The *Federal Register* and *Congressional Record* in printed form, however, are obvious examples of government retailing

[96]*See id.*, at 12, 13.

[97]See the glossary in the introduction for a review of the meaning of wholesaling and retailing.

of paper information. MEDLARS[98] and the Commerce Department economic bulletin board[99] are the clearest examples of electronic information retailing.

As noted in the preceding section, many different kinds of value can be added by an information retailer. Most common is the construction of an inverted index, necessary to permit key word search and retrieval of information from a free text database.[100] A retailer also may sell a total package of communications links and database access.[101] A retailer may offer one-stop shopping so that an information consumer can gain access to information from many different agencies through what appears to be a single database.[102] A retailer may offer useful topical groupings of information or proprietary classification systems.[103] A retailer may reformat information so that it can be fed into an ultimate consumer's computer system.[104]

Recommendation 88–10 addresses public/private sector roles in Recommendation D. After the evaluation process contemplated by Recommendations B and C,[105] agencies should identify electronic information products available from private sector sources, and consider explicitly the relationship between those products and natural byproducts of agency automation activities. This step necessarily involves evaluating appropriate pricing levels for the information product.

In many cases, the public sector will provide only FOIA access or public reference room disclosure, and the private sector will take information released through one of those methods by the government and perform a publishing function, delivering a more easily usable product directly to consumers.

Absolutely restricting an agency to a wholesaling function is artificial. The wholesaling concept implies that agencies release only raw data, and not add value in the form of indices, retrieval software, or dialup telecommunications links. In virtually every case, however, an agency must develop retrieval software and indices in order to make use of the raw data internally. The costs of these two types of added

[98]*See* Report § III(M); House Policy Report, at 59 (noting the practical unlikelihood of terminating MEDLARS, despite industry opposition).

[99]*See* Report § III(O)

[100]*See* Report § II(B)(3).

[101]WESTLAW is an example. A subscriber to WESTLAW need not make special arrangements with a Public Data Network to access the database via a local telephone gateway.

[102]Compuserve, ABA/net, WESTLAW and LEXIS are good examples.

[103]West's key number indexing system is a good example.

[104]ATP's formatting of airline tariff information for inclusion in airline reservation systems is a good example.

[105]Recommendations B and C guide agencies in deciding when paper information products should be supplemented or replaced with electronic information products.

value will already have been absorbed by the agency. Restricting the agency from making these indices and retrieval software available to the public therefore erects an artificial barrier to public release in order to protect private markets. Moreover, it is not altogether clear that either indexes or retrieval software in electronic form can be protected from access under the Freedom of Information Act. Accordingly, it is prima facie appropriate for agencies to add value, and thus to retail, to the extent of making publicly available their own retrieval software and indices. They should, however, also make data available in a form that will facilitate private sector development of different or better retrieval methods and indexes.

Dialup dissemination via telecommunications lines is another matter. The sophistication and cost of a telecommunications interface for an agency database varies in proportion to the number and dispersion of persons seeking access. Rarely would an agency construct a telecommunications system for its own internal use of data large enough for widespread public use. It is prima facie inappropriate for agencies to undertake large scale public dissemination telecommunications interfaces unless (1) there is reason for believing that the private sector will not provide such dissemination, (2) dissemination via depository libraries will not be sufficient in terms of the scope of information available through those intermediaries or in terms of delays before it will be available, or (3) the nature of the information places it in the highest category warranting public expenditure to make it widely available.

Agencies should distinguish between that part of electronic publishing that involves adding value in the form of search and retrieval software and indices, from that part of electronic publishing that involves providing telecommunications disclosure. Such a distinction permits a principled distinction to be drawn between easy-to-use electronic disclosure in an agency reading room, and nationwide dial-up dissemination. One useful approach may be to rely on the private sector to handle electronic communications between the public and agency databases, to administer cost recovery user-fee systems,[106] and to offer private enhancements to agency supplied information.

In some cases, the overall cost/benefit analysis of electronic publishing will suggest a government subsidy for private information providers rather than direct performance of the entire electronic publishing activity by the agency itself.

[106]*See* House Policy Report, *supra* note 77 at 10, 12 (user fees should be based on the cost of dissemination and should not be used to prevent agencies from complying with statutory requirements to maintain the public availability of government information).

Even when the government undertakes new electronic acquisition or release activities, existing or new private sector electronic information products will exist.

Electronic information policy should seek to mobilize market forces to ensure availability of information at a price no greater than distribution costs resulting from the best available technology. Diversity of electronic information products is desirable. It is also desirable to enable market forces to improve efficiency and reduce price. If a vendor charges too much money, new entrants will drive down the price. Agencies should not frustrate market forces by protecting markets for information to create a monopoly for their own automated systems, or to protect markets for contractor systems.[107] The easiest way for an agency to create a monopoly for its own, or a preferred vendor's electronic retailing service is to refuse to release electronic information in any form, or to release it only in very small quantities or only in inconvenient places, frustrating potential competitors' ability to use it.[108]

In some cases improved or cheaper public disclosure may be the natural byproducts of agency automation. When that is the case, agencies should consider carefully how improved public availability can be obtained without driving private enterprise out of the market. Agencies should not discourage market entry by "dumping" information products at prices lower than those necessary to encourage private capital investment. Private sector entrepreneurs produce government information products only when they expect to recover their total costs and earn a reasonable rate of return. If the government prices essentially the same information products at a level below the price necessary for private sector cost recovery, the government will drive the private sector out of the market, or prevent it entering the market. A comprehensive information policy must address the possibility that the agencies possessing information would undercut prices charged by entrepreneurs in a competitive market.

Other concerns, besides dumping, exist about too great a public sector role in information retailing. The government might drive the private sector out of a particular market, achieving a practical monopoly, and then provide inferior service because of funding limitations. In other words, an assessment of short-run marginal costs might support a conclusion that the government should retail information, driving the private sector out of the market, but longer term

[107] *See id.* at 13.

[108] *See* Report § III(F) and § IV(D)(4)(a)(vi) of this article, discussing Computaprint v. Department of Commerce, No. 87–1848, (D.D.C. Aug. 16, 1988) (complaint alleging inadequacy of access to USPTO reading room terminals to build comprehensive electronic database of patent and trademark files).

public finance concerns might turn the government's information product into something inferior to what the market would produce on its own. The government may be less responsive to competitive forces than private sector providers, resulting in lower efficiency and lower overall social welfare. When the government is the sole conduit for important public information, warranted or unwarranted suspicion can be fueled that the information is subject to political manipulation. Of course such suspicions can arise when the information is maintained and released solely in paper form as well.

Section IV(D)(4)(c) explicitly proposes a method for setting prices for government information products that serve these objectives.

The foregoing, by itself, suggests a sharply limited role for the government. But the government always has engaged in retailing information, and ought to continue to do so when the private sector is unlikely to achieve appropriate levels of public availability. It is not accurate to conclude that the government historically has not added value to information and retailed the resulting information product. For many years the Supreme Court has published United States Reports, containing syllabi, headnotes, and chronological compilations of Court opinions, rather than restricting itself to releasing slip opinions, and letting private sector enterprise add headnotes and publish compilations as occurs with courts of appeals opinions. United States Reports is retailed through stores maintained by the Superintendent of Documents throughout the country, as well as by mail order. The United States Code is another value-added product, organizing statutes to facilitate retrieval, rather than simply releasing Statutes at Large. The Code of Federal Regulations represents another value- added product, aimed at facilitating public availability of agency rules. If the government were to restrict itself to a wholesaling role, it would simply release agency decisions, or perhaps publish the *Federal Register,* and leave it to private entrepreneurs to compile the rules.

In each of these three examples of paper information products, a policy decision has been made by the Congress or by the Court, that the public interest requires the added value at government expense.

A similar range of examples exists in the universe of electronic release products. The Department of Commerce retails information through its electronic bulletin board. GPO wholesales bulk electronic information only. USDA has designed a value-added system to encourage wholesale use and to discourage retail use.

The free market model does not always fit the realities of the electronic information marketplace. The most important assumption for a theoretical free market to operate efficiently is relatively free entry. In fact there are substantial barriers to entry, some capital, some technological. These barriers to entry create an industry structure

closer to oligopoly than perfect competition. This is consistent with current observed pricing behavior. Simply saying that the federal government should wholesale and not retail is not enough to ensure market efficiency, although wholesale release of bulk electronic information reduces barriers to entry.

Agencies can design their electronic release information products to promote competition. In some cases, the cost/benefit assessment proposed in Recommendations D & E will conclude that market inefficiencies and pricing levels represent barriers to adequate levels of public availability. In such cases, agencies may compete themselves by offering and distributing retail electronic information products. This may be an attractive alternative, for example when the significant added value is the byproduct of internal agency automation.[109] More often, agencies should design their electronic release systems so that wholesale products reduce costs for private sector electronic information resellers, and encourage new private sector entrants.

The author's original recommendation read:

> 3. If new electronic means of agency acquisition or new information products are warranted by agency missions and the private sector is unwilling to make a commitment to provide them at appropriate prices, agencies should provide them, if clearly identified non-economic and economic benefits outweigh the capital and marginal costs. Agencies should not abdicate their responsibilities to ensure appropriate levels of electronic dissemination. In some cases, the economic structure of existing private institutions, including economic or technological barriers to entry, may inhibit competitive forces. Prices for electronic information may be high, inhibiting wide public access. Information content or retrieval methods may be inadequate. Or, there simply may be no private provider of the particular category of information. In such cases, agencies should take affirmative action to ensure appropriate levels of public disclosure. The action need not involve agencies directly in disseminating information directly to public consumers; it may involve creating incentives, including subsidies for private dissemination, free use of agency-developed software, or a commitment for the agency to restrict its own retailing of value added information.

The language ultimately adopted by the conference deleted specific reference to barriers to entry and to a possible commitment for an agency to restrict its own retailing of value added information as an

[109]For many years, Australian air transportation policy was to promote competition between one national airline and one private airline. Obviously, factors influencing airline policy are entirely different from factors influencing electronic information policy. Australia's "two airline policy," however, illustrates how a government may deliberately enter a market to create competitive forces that might otherwise be absent.

inducement for private sector dissemination at appropriate levels. There was not significant committee or plenary session discussion of this change, and the revision of Recommendation F relating to exclusive control of information is consistent with the possibility that an agency may restrict its own retailing activities to create a market for a private sector entity.

Agencies should presume that private sector electronic information products will continue to be provided by private sector sources, and should consult with the private sector providers to explore enhancements or pricing changes that appear desirable to further agency missions. When appropriate, agencies should contract with private sector providers to increase certainty for agencies, the providers, and information consumers. Section IV(D)(4)(c) explores contracts as a policy tool.

Making government information decisions depend on existing private sector activity is controversial because it may result in establishing artificial policy-based restrictions on government dissemination of public information in order to protect private markets. Yet, questions also exist about the appropriateness of duplication of services: if a private company distributes government information widely, in a highly usable format, at affordable prices, why should public resources be used to provide a duplicative service, even if it is just as good a product? An example familiar to most lawyers illustrates the appropriateness of such a policy in at least some circumstances. The government does not publish the opinions of the United States Courts of Appeal in a form readily usable by persons using them for legal research. Rather, the courts publish individual slip opinions and leave it to the private sector to compile the opinions into paper and electronic products readily usable by lawyers. West Publishing Company publishes the opinions in a series called Federal Reporter Second, which is treated by lawyers and courts as the official source of judicial precedent from this level of court. In addition, West Publishing and Mead Data publish the opinions electronically in their WESTLAW and LEXIS databases. No apparent benefits would result from the federal courts deciding to publish a competing set of court of appeals opinion reporters in paper; nor would there be apparent benefits from the federal courts' undertaking to publish the opinions electronically. Costs to the court system and to West and Mead would increase if such government competition were to occur. This conclusion would change only if some new computer technology should evolve and be widely available to the consumers of this information and the existing opinion publishers did not embrace the new technology for some reason.

In striking an appropriate balance between retailing and wholesaling, it is essential to understand that the two types of electronic release

are not mutually exclusive: the government might retail to some degree but also wholesale to private sector information resellers who would create retail information products different from those offered by the government. As the commentary to Recommendation D suggests, it is prima facie appropriate for agencies to add value, and thus to retail, to the extent of making publicly available their own retrieval software and indices. They should, however, also make data available in a form that will facilitate private sector development of different or better retrieval methods and indexes. For example, the government can release bulk electronic information on tapes or optical disks in combination with public reference room disclosure. It is a valid policy goal for the government to act so as to promote diversity in information products and pricing.

3. *Pricing*

As Section IV(D)(4)(b) explains, the law is flexible enough to allow agencies considerable discretion in setting prices for information products.

Within the framework, policy choices regarding public/private sector roles, especially the retailing/wholesaling distinction, can be implemented through pricing structures.

Private sector entrepreneurs will be willing to produce government information products only if they have a reasonable expectation of recovering their costs (including capital costs) and can earn a reasonable rate of return. If the government sells the same information products at or below cost, the government will drive the private sector out of the market, or prevent it from entering the market. Firms already selling government information in electronic form fear inexpensive government dialup links because that could permit consumers to bypass private sector services.

Agency sale of raw data in electronic form does not compete with vendors offering value added retrieval and telecommunications capability, but it may make it easier for private sector competitors to enter the market because it eliminates the cost of keying paper information.

User fees enter into the economic equation. Low user fees for bulk raw electronic information benefit private sector competitors who do not already have information in electronic form. Low user fees for value added information directly competes with existing value added vendors. High user fees, of course, have the opposite effect.

High fixed charges (subscription, access or monthly charges), combined with low variable charges (per document or character retrieved and downloaded) benefit high volume users such as resellers and create economic barriers for low-volume end users. Conversely, low fixed charges, combined with high variable charges, benefit low-volume end users and penalize high volume resellers. So if a

dissemination system is aimed primarily at wholesaling, it should have high fixed, and low variable, prices. Examples are the National Weather Service and USDA EDI systems.

A collateral benefit of attractive pricing for resellers is discouraging use of the FOIA as an end run around the agency-preferred release product, because it is cheaper to get large quantities of electronic information through the preferred channel.

An evaluative process for making these pricing policy choices is presented in Section IV(D)(4)(b) and summarized in Recommendations D & E of ACUS Recommendation 88–10.

4. *Legal Issues*

a. Freedom of Information Act Issues

Recommendation 88–10 begins with FOIA issues. In many respects, the FOIA issues and the "electronic publishing" issues addressed in Recommendations D to F are independent. The FOIA involves a statutory access mandate and gives rise to controversies over interpretation of statutory terms and legal rights and obligations. Electronic publishing involves a broader array of policy and economic judgments involving the best way to provide information products in a market economy, while also occasionally raising issues about the scope of an agency's mandate and authority.

Nevertheless, there are inter-relationships between the two subjects. It is conceivable that agencies might be so zealous in restricting themselves to wholesaling of electronic information in order to serve policy judgments about the role of the private sector (see Recommendation E) that they would impede FOIA access.

Conversely, certain interpretations of the FOIA are incompatible with an agency's limiting its role in release of electronic information only to a wholesaling function. If the FOIA requires an agency to afford direct computerized access to computer databases, charging only the actual, marginal, cost of the retrieval, the agency effectively has been forced into a retailing role, because it must make available indexing and retrieval software in order to provide the requested access.

Recommendation A suggests that a change in the form in which information is kept, indexed, and retrieved should not erode the spirit of the FOIA by increasing the frequency with which agencies decline access altogether, by forcing requesters to take data in gross in forms usable only by the technologically sophisticated, or by forcing requesters to obtain information from private sector providers instead of from agencies directly. Nor is it appropriate for FOIA requesters to dominate the design of database schemes, the allocation of programmer resources, or to force agencies to perform sophisticated statistical analysis or data comparisons. Unavoidably, a period of

experimentation will be necessary as new concepts under the FOIA are developed that fit the nature of electronic information and retrieval technology.[110]

(i) *Is an electronic document or record an FOIA "record"?* The prevailing view now is that computer stored information is considered an agency record under FOIA just the same as paper documents.[111] Recommendation A proposes that agencies treat electronic data as FOIA records. Otherwise the FOIA will be nullified as more and more agency information is kept in electronic form. In considering Recommendation 88–10, the Justice Department did not disagree with this part of Recommendation A, although it objected to other parts, fearing an implication that agencies are obligated to create records or perform programming.

(ii) *Who chooses between paper and electronic access?* A second FOIA question is whether an agency can refuse to provide access to information in computer form because it is readily available in some other form from the agency or from a third party. Many agencies take the position that, even when information is requested in electronic form, the agency has the discretion to insist upon disclosing it in paper form. Conversely, there may be other instances in which requesters want the information in paper form, especially individuals or small businesses, but an agency wishes to provide access to it only in electronic form.

Dismukes v. Dep't of the Interior[112] directly addressed the issue of an agency holding records in two separate forms. In *Dismukes,* the

[110]*See* Yeager v. DEA, 678 F.2d 315, 327 (D.C. Cir. 1982) (FOIA must be contoured to characteristics of computer records).

[111]*See* Long v. IRS, 596 F.2d 362, 365 (9th Cir. 1979), *cert. denied,* 446 U.S. 917, (1980). In SDC Dev. Corp. v. Mathews, 542 F.2d 1116 (9th Cir. 1976), the court of appeals in an opinion written by now Supreme Court Justice Kennedy, held that MEDLARS information did not constitute "records" or "agency records" required to be made available at nominal charges under the Freedom of Information Act. The court found that the information was not primarily of the type intended to be covered by FOIA access requirements and also found a conflict between FOIA access and fulfillment of the statutory mandate of the National Medical Library. 542 F.2d at 1120. *SDC Dev. Corp.* has not been extended however. See House Policy Report at 33 (criticizing *SDC Dev. Corp.*); Yeager v. DEA, 678 F.2d 315, (D.C. Cir. 1982) (computer stored records, whether stored in central processing unit, on magnetic tape or in some other form are FOIA "records," *Id.* at 321; (agency not obligated to compact information to satisfy request) *Id.* at 323; 52 Fed. Reg. 10012, 10017 (1987) (OMB fee guidelines, implying that FOIA covers records kept in computer-readable form); 53 Fed. Reg. 8471 (1988) (VA proposed regulations permitting public access to general counsel's computerized database). A recent conference of state FOIA administrators resulted in agreement that "a variable definition of public record based on the medium in which the information is stored is unacceptable," and that computerized records should be considered to be "records." 1 Public Records Division, Office of the Massachusetts Secretary of State, Report of the First National Conference on Issues Concerning Computerized Public Records 17 (1987). [hereinafter "State FOIA Report"].

[112]603 F. Supp. 760 (D.D.C. 1984).

Department of the Interior denied an FOIA request for a copy of a computer tape listing of the names and addresses of participants in a federal oil and gas lottery, instead offering the requested information on microfiche, which was the usual medium for dissemination.

The court conducted a two part analysis in deciding whether a request for information on computer tape could be satisfied by the release of the same information on microfiche. First, the court considered whether a requester could designate the format of the information. Because the FOIA deals with the content of information, not its form, the court held that a requester does not have an absolute right to designate the format of the information as long as the variation in format does not reduce the quantum of information available to that requester.[113] The court concluded that the information would be the same, whether provided on computer tape or on microfiche; therefore, the quantum of information available in either form was not reduced by limiting the requester to microfiche.

Second, the court considered whether the release of information in a form other than that requested would unreasonably hamper plaintiff's access to that information.[114] The court found that even though the microfiche was slightly more expensive than the computer tape, it was a satisfactory alternative because it was most useful to the general public, and did not erect unreasonable barriers to plaintiff's access to the information. The agency need only provide information in a "reasonably accessible" form.[115]

By negative implication from *Dismukes,* an agency might violate the FOIA by declining to provide computer readable forms of information when the alternative forms are significantly more difficult for the requester to use. Conversely, if the quantum of information is the same in computer and non-computer media, and if the non-computer medium is reasonably accessible, *Dismukes* says the disclosing agency need not release the information in electronic form.

The *Dismukes* facts apply to agencies which possess information in more than one form, but do not deal directly with an agency's right to deny the release of information because it is publicly available outside that agency. The United States Supreme Court in *United States Dep't of Justice v. Tax Analysts,*[116] answered this question in the negative. In *Tax Analysts,* the Department of Justice (DOJ) denied plaintiff's request for district court tax decisions, claiming that they were already publicly available from the issuing court. Although court access was

[113]*Id.* at 762.
[114]*Id.*
[115]*Id.* at 763.
[116]57 U.S.L.W. 4925 (Jun. 23, 1989).

alleged by plaintiff to be inadequate, the lower court refused to shift to the DOJ the administrative burden and expense of supplying copies of the tax decisions. The D.C. Court of Appeals reversed, concluding that district court tax decisions must be made available by the DOJ upon a proper FOIA request. It held that the availability of the same information outside the agency does not relieve the agency of its duties under FOIA. The Supreme Court affirmed.

The holdings in *Dismukes* and *Tax Analysts* provide a helpful framework when information is available in both electronic form and some other form. If it is the agency that holds the information in two or more forms, a Dismukes analysis is applied by comparing the utility and content similarity of the different forms. *Dismukes* also is relevant when an FOIA request covers information contained both in a structured database and in unstructured free text. The requester might prefer one or the other depending on whether the requester has software to take advantage of the database structure. On the other hand, an agency cannot avoid releasing electronic information on the grounds that a third party[117] holds the same information, under *Tax Analysts*.

FOIA case law suggests that the Freedom of Information Act is intended to make information available to the public without unduly burdening requesters. It is consistent, therefore, with the spirit of the Act to require an agency to make information available in electronic form when that would not burden the agency greatly and when it would burden the requester to handle a paper or other non-electronically accessible form of the information.[118] Conversely, because the purpose of the FOIA is to make information available, a requester unable to read electronic information almost certainly would be entitled to the information in some kind of form that the requester could read. There is no obvious reason, however, why this requirement might not be satisfied by presenting the desired information on a video display device, as long as the requester could make a copy—perhaps through a co-located printer.

Agencies should permit FOIA requesters to specify whether they want records in electronic or paper form, recovering any disparate costs of satisfying requests for particular media from the requester. If information normally is kept in electronic form and the requester

[117]For example, a value-added reseller of agency supplied electronic information. *Tax Analysts* leaves open the question whether an agency may decline an FOIA request on the grounds that the agency itself has made the same information available in other ways.

[118]Strictly speaking, information on an optical disk is not in electronic form, but the information is electronically accessible, and the intent of the text is to treat optical disks as electronic media.

wants it on paper, it ought to be sufficient if the agency provides a public terminal with an attached printer.[119]

One must recognize that permitting FOIA requesters to specify media creates a potential end run around the wholesale/retail policy choices made by an agency,[120] but it is most appropriate to deal with that problem through (1) design of access and dissemination products, and (2) the relative pricing of access/dissemination products to make those products more attractive than FOIA access.[121]

(iii) *Fees for "Programming."* A significant controversy exists with respect to applying the FOIA's user fee limits[122] to electronic information.

Assuming that electronic information comprises a "record" covered by the FOIA, such information in its raw form rarely is useful. For example, modern database systems organize individual records to meet the needs of the hardware. Ordering and selecting information of interest to a user depends upon sophisticated query formulation, optimization, and retrieval techniques. A useful automated information system makes available such software to agency personnel. If an outside person requests information, however, use of agency software, and frequently a certain degree of programming, is necessary to retrieve information corresponding to the request.

In some cases, such retrieval requires little more than formulation of a single query in the query language of the database. Arguably, this is programming, but arguably it is not. At the other extreme, an FOIA requester might desire data sorted and retrieved according to complex and unanticipated criteria, necessitating extensive programmer hours to satisfy the request. Some agencies take the position that no FOIA request need be satisfied if any programming is required to satisfy the request. The rationale for this position is that the FOIA does not obligate agencies to create records, but only to provide access to existing records. Other agencies are willing to perform the programming, or to make available agency software, but refuse to cover the full cost of such programmer or software availability. Litigation produced a compromise between Public Citizen Inc. and OSHA on these issues.

It is important to understand that certain legal analytical concepts developed to apply the FOIA to paper records may not be appropriate in applying it to electronic records. The need for "programming" to satisfy FOIA requests is a good example.

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[119]*But see* § IV(D)(4)(a)(vi) of this article discussing Computaprint No. 87–1848 (D.D.C. Aug. 16, 1988) (plaintiff alleges that use of public terminals to obtain information is unduly burdensome.

[120]*See* § IV(D)(4)(a)(vi) of this article.

[121]*See* § IV(D)(3) for a discussion of the impact of pricing on FOIA end runs.

[122]*See* § IV(D)(4)(a) (introduction), discussing how the FOIA limits fees.

It is easy to understand what it means to create a new paper record. It is harder to know what it means to create a new electronic record. Is retrieval programming a "search," in which case the agency is obligated to do it, or is it creation of a new record, in which case the agency is not obligated to do it? Is selecting a dozen records meeting criteria defined on a single screen menu a "search"? Is it programming? Is it generating a new record? Intuitively, this is not "programming," nor is it generating a new record. Is a statistical analysis of the underlying data "generating a new record," a "search," or is it "programming"? Intuitively this seems like programming or creating new information.

Some retrieval systems, especially on older mainframe database technology, require an activity that legitimately could be called "programming" to retrieve anything. Under such systems, a certain amount of "programming" would be required to respond to any FOIA request. Other systems, employing newer relational database technology, Query-By-Example software, and menuing approaches, permit new types of information as well as traditional "records" to be retrieved simply by selecting a menu choice and pressing a key. It is more desirable to charge requesters the actual costs of retrieval, or provide them with retrieval hardware, software and documentation,[123] than to decline FOIA requests for electronic information because they require "programming" or generating new records.

(iv) *Access to indices and software.* As Section IV(D)(4)(a)(i) explained, there is growing acceptance of the idea that electronic data is an FOIA "record."[124] However, an issue still bitterly debated is whether coding schemes, computer programs, and computer indices must be made available as FOIA "agency records."

Although there are no decisions to date that explicitly resolve this question, several cases provide guidance as to the legal framework for considering the issue.

The first question is whether software and indices are FOIA "records." Assuming the electronic form of the underlying data is a record,[125] there is no apparent reason why software and indices are not records also.[126]

The second issue is whether an agency may deny an FOIA request for database indices or program code under Exemption 4 of the

[123]Recommendation C(4) of ACUS Recommendation 88–10 encourages agencies to consider the costs and benefits of upgrading FOIA access to disclosure through reading room terminals.

[124]Long v. IRS, 596 F.2d 362, 365 (9th Cir. 1979), *cert denied,* 446 U.S. 917 (1980).

[125]*See* § IV(D)(4)(a)(i) of this article.

[126]*See* Windels, Marx, Davies & Ives v. Department of Commerce, 576 F. Supp. 405 (D.D.C. 1983) (computer program to evaluate steel import prices would be disclosable but for qualification under Exemptions 2 and 7).

FOIA as a trade secret or commercial information. This issue is determinative of whether a federal agency can avoid access to indices or other software designed by a private developer. *In Re Inslaw*[127] involved a debtor's effort to establish its proprietary interest in computer software and to enjoin the Department of Justice from "appropriating its interest," in part by releasing it under the FOIA. The debtor, Inslaw, had contracted with the DOJ to develop software connected with the PROMIS system. A dispute arose when the DOJ asserted ownership of enhancements to the PROMIS system added by Inslaw on Inslaw's own initiative, paid for with its own funds.

In negotiations between DOJ and Inslaw over the allocation of property rights in the software, DOJ took the position that the enhancements were covered by its contract with Inslaw and DOJ would therefore consider FOIA requests for the software.[128] Earlier however, DOJ had rebuffed a FOIA request for PROMIS programming code and software documentation on the grounds, among others, (1) that they were "trade secrets and commercial or financial information obtained from a person and privileged or confidential," and thus exempt from access under Exemption 4 of the FOIA.[129] The bankruptcy court concluded that, because Inslaw's software enhancements were proprietary and a trade secret, the Department of Justice could not copy, use, sell or disseminate the software.[130]

Inslaw is not an FOIA case, but the opinion does offer several conclusions of law useful to FOIA analysis: (1) computer programs can be trade secrets;[131] and (2) trade secret protection for a private government contractor is not lost when the contractor licenses the program to the government.[132] Unless trade secrets do not qualify for protection under Exemption 4 of the FOIA—an unlikely proposition,[133] *Inslaw* is support for the idea that an FOIA requester would not be entitled to FOIA access to contractor-developed software as to which the contractor has retained intellectual property rights under its license to a government agency. Moreover, mere possession of a document does not necessarily mean that it is an agency "record" subject to FOIA access.[134]

The strongest argument for an obligation to provide access to indices and retrieval software would be: (1) such information consti-

[127]83 Bank. R. 89 (D.D.C. 1988).
[128]*Id.* at 153, 155.
[129]*Id.* at 155, n.29.
[130]In re Inslaw, at 159.
[131]*Id.* at 158 (citing cases).
[132]*Id.* at 159 (citing cases).
[133]*See* Public Citizen Health Research Group v. FDA, 704 F.2d 1280, 1286–87 (D.C. Cir. 1983) (trade secrets protected by Exemption 4 without further inquiry).
[134]*See* Center for Nat'l Security Studies v. CIA, 577 F. Supp. 584, 586 (D.D.C. 1983) (copy of Congressional document in agency files not an "agency record").

tutes an "agency record"; (2) the information is not a third party's trade secret or confidential information within Exemption 4. Under *Dismukes,* the agency could provide access either in paper form or in computer readable form, assuming a listing of the indices and program code is reasonably usable by the requester in either form.

The strongest argument against access would be that the indices and other software were developed by a third party which retained an intellectual property interest, such as copyright, or trade secret, in it. A somewhat weaker argument would be that the "agency record" is the underlying data, and the indices and other software are unnecessary to make the underlying data reasonably accessible; in other words, the indices and software do not themselves constitute an "agency record."

Many of these issues were before a district court in the *Computaprint* case, discussed *infra* in Section IV(D)(4)(a)(vi), specifically whether computerized compilations constitute an FOIA record, whether availability of electronic disclosure on public reference room terminals relieves an agency of an FOIA obligation to provide access to the contents of a database in bulk electronic form, whether contractor proprietary interests in database software can prevent FOIA access under Exemption 4, and whether FOIA access can be prevented by contract. *Computaprint* was effectively abandoned through a voluntary dismissal without prejudice in 1989.

(v) *Protecting privacy interests.* An important FOIA issue is how privacy interests recognized both by FOIA Exemption 6 and the Privacy Act should be protected when information in electronic form is requested.[135] One can characterize this as an "electronic redaction" problem.

Even if some information in a record is protected by Exemption 6 and the Privacy Act, the agency still must provide access to those "reasonably segregable" portions of a record that do not implicate privacy interests, redacting only those portions entitled to Exemption 6.

As previously explained in Section II(B), one of the security issues in electronic release of agency information involves redacting information protected by Exemption 6 from the electronic records before they are released. Many agencies avoid the electronic redaction issue by taking the position either that data in electronic form are not accessible under the Freedom of Information Act at all or that if electronic data are accessible, they need not be made available when programming or agency software is required to access the data.[136] This means not only that certain types of requests are denied, but also that if the electronic data contains exempt information or information

[135]Protection of proprietary commercial information is similar in many respects to protection of individual privacy interests.

[136]*But see* § IV(D)(4)(a)(iii) of this article.

protected by the Privacy Act, and programming or electronic access via agency software is necessary to redact it, the agency is not obligated to manipulate the data to extract only the disclosable portion.

(vi) *FOIA as a constraint on agency policies limiting retail dissemination.* Certain interpretations of the FOIA are incompatible with an agency's limiting its role in release of electronic information only to a narrowly defined wholesaling function.[137] Suppose an agency establishes a policy that it will sell its raw data on magnetic tape but will not add value or provide online disclosure. This essentially is the position that many existing vendors urge on agencies. Then suppose someone requests specific material from the electronic database under FOIA, taking the position that the agency is obligated to use its software and to do any necessary programming to retrieve the requested information.[138] If the FOIA requires the agency to accede, charging only the actual cost of the retrieval, the agency has effectively been forced to breach its policy only to wholesale and not to add value. This hypothetical more or less parallels the facts in *Computaprint*[139] and *SDC Development,*[140] except that in *SDC Development* a restrictive interpretation of FOIA obligations was motivated to protect the agency's own market position rather than the role of private sector retailers. Of course, delays associated with information released under this hypothetical method might reduce significantly the value of the information thus released compared with online dissemination or routine distribution of the information of magnetic diskettes or CDROMs.[141]

An even stronger potential for conflict between the FOIA and a wholesaling-only policy would arise if the FOIA were interpreted as requiring an agency to provide access to its retrieval software along with raw data.[142] This would force the agency, in effect, to add value.

Pending litigation between USPTO and International Computaprint Corp. over USPTO's refusal to provide access under the FOIA to its data in electronic form[143] is a good example of the FOIA's

[137] *See* § IV(D)(2) of this article regarding the distinctions between wholesaling and retailing.

[138] *See* State FOIA Report at 6, 12, 13 (summarizing controversy over whether programs are disclosable under state FOIA statutes and whether agency must write a program to retrieve computerized information).

[139] The case is described more fully later in this section. In *Computaprint*, the agency was unwilling even to release a tape with the raw information.

[140] *See* § IV(D)(4)(a)(i) of this article.

[141] *See* Report § III(N), regarding pricing policy of USDA's EDI system.

[142] *See id.* at § IV(D)(4)(a)(iv) of this article.

[143] International Computaprint Corp. v. U.S. Dep't of Commerce, 8 U.S.P.Q.2d 1507 (BNA) (D.D.C. 1988) (not reported in F. Supp.) (Civ. Act. Nos. 87–1848 & 88–0839). On August 16, 1988, the district court granted summary judgment in favor of the

role in shaping agency policies regarding competition with the private sector. In *International Computaprint Corp. v. United States Department of Commerce,*[144] Computaprint challenged USPTO's denial of an FOIA request for magnetic tapes containing a computerized database of public trademark information. USPTO denied the request, in part on the grounds that the requested records already were available on computer terminals in USPTO's public reference room, and in part on the grounds that the requested magnetic media constituted USPTO's system for delivering information, not disclosable as an FOIA "record."[145] Computaprint challenged the adequacy of public reference room terminal disclosure to satisfy its request, asserting that it would take eight years and more than $500,000 to extract the information from the terminals.[146] Several of Computaprint's competitors intervened in the district court action, arguing that USPTO should not release the requested information. Later, Computaprint filed a "praecipe"[147] stipulating that it sought only public trademark information in computer-readable or computer-output form, and not any proprietary information developed by intervenors constituting a trade secret. The intervenors argued (1) that the FOIA does not compel access to agency efforts to compile, organize or computerize publicly available information,[148] (2) that the FOIA does not compel creation of computer readable media,[149] and (3) that the computer process for organizing trademark information, implicitly sought, qualified for protection under FOIA Exemption 4.[150]

When USPTO subsequently decided to release microfilm containing certain of the requested information, Thomson & Thomson brought a "reverse FOIA suit" to prevent release of allegedly proprietary information contained in the microfilm. On August 16, 1988, the district court, by memorandum opinion, granted summary judg-

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USPTO in No. 88–0839, holding that Thomson & Thomson (intervening on behalf of the Dep't of Commerce), a contractor to USPTO, had no proprietary interest in microfilm of trademarks sufficient to preclude FOIA disclosure of the microfilm to Computaprint. Cross motions for summary judgment in No. 87–1848, involving computerized trademark data were pending as of early 1989, when Computaprint abandoned the lawsuit by voluntarily dismissing the suit.

[144]*Id.*

[145]Complaint at Appendix B (USPTO letter denying FOIA request), *Id.* (No. 87–1848).

[146]Memorandum in Support of Plaintiff's Motion for Partial Summary Judgment at 10 (Oct. 16, 1987), *Id.* (No. 87–1848).

[147]Filed Oct. 26, 1987.

[148] Defendant-Intervenor's Memorandum of Points and Authorities in Opposition to Plaintiff's Motion for Partial Summary Judgment and in Support of Defendant-Intervenors' Cross-Motion for Summary Judgment [hereinafter "Intervenor Memorandum"] at 4–10, (No. 88–0839).

[149]*Id.* at 14–16.

[150]*Id.* at 22.

ment in the reverse FOIA case, finding that the contents of the microfilm were in the public domain because Thomson & Thomson's proprietary information was not used to prepare them, and therefore failed to meet the confidentiality requirement of Exemption 4.[151] The court also rejected Thomson & Thomson's contract-based claims on the grounds that exclusive jurisdiction over breach-of-contract claims lies in the United States Claims Court.[152] The court reserved judgment on the other FOIA questions raised in the original lawsuit.

(vii) *Electronic disclosure in agency regulatory proceedings.* A few agencies[153] are contemplating, or actually are, exchanging information electronically with private parties in rulemaking or adjudicatory proceedings. Such initiatives contemplate providing dialup links to documents making up the docket for a particular regulatory proceeding, and complete sets of documents on disk or tape. This type of electronic release[154] is desirable, and furthers the purposes of the publication and public participation provisions of the APA by making party submissions and agency proposals available more quickly and permitting their contents to be organized, reviewed and synthesized by computer techniques. The electronic information thus exchanged is, for the most part, not information required to be published in the *Federal Register,* but is information only made available to those interested in the particular rulemaking proceeding.

Recommendation H[155] encourages this kind of experimentation with electronic means of providing public participation in rulemaking and adjudication under Sections 553–54 and 556–57 of the Administrative Procedure Act, when suitable provisions are made for those wishing to participate but lacking the means to access the electronic information.

The same cost-reducing and benefit-enhancing incentives that militate toward electronic exchange of docket information also militate toward electronic publication of certain information now published in the *Federal Register.*

There is no legal reason in APA Section 553 or the Federal Register Act why the *Federal Register* cannot be published electronically as well as in its present paper form. Electronically published agency notices would be far more accessible to interested persons than a paper *Federal Register,* largely because of the potential for distribution via both dialup links and through depository libraries.[156] Electronic publication of *Federal Register* notices is unlikely to provoke

[151] *International Computaprint Corp.,* 8 U.S.P.Q. at 1512–13.

[152] *Id.* at 1514.

[153] *See* Report § III(D) regarding FERC, Report § III(K) regarding NRC's LSS.

[154] Release is not feasible unless the documents are submitted by proceeding participants in electronic form.

[155] *Infra* at 102.

[156] *See* Report § III(H).

controversy[157] until such time as the distribution or contents of a paper *Federal Register* is curtailed.

The harder question is whether certain agency notices might ultimately be published in electronic form only. Under present statutory language, the proviso in Section 552(a)(1) of the APA that exempts information otherwise widely disseminated from the *Federal Register* publication requirement, subject to the approval of the Office of Federal Register, would seem worth considering. By the end of the century, a paper *Federal Register* may well be replaced by an electronic equivalent, although it is reasonable to expect Congress will amend the statute when this becomes feasible and acceptable.

b. Pricing—User Fees

Information pricing issues are inseparable from questions regarding measurement of costs and benefits,[158] economic characteristics of electronic information,[159] FOIA obligations,[160] and the respective roles of the public and private sectors. The pricing of electronic information involves cost, competitive effect and public availability issues. Even if government information in electronic form is superior to the same information in paper form, a high price for electronic access makes such information practically unavailable to some segments of the public.[161] The same result obtains if the information is available free, or at very low cost, only at an agency's headquarters, or only a few locations, while prices are high for dialup electronic dissemination of the information. Thus, low government prices for value-added electronic information offer benefits to information consumers, at least in the short run. Low government prices for bulk electronic information can stimulate further competition in private markets, resulting in lower private prices.

Pricing by private sector providers may enhance or impede public availability of government information.[162] If high private prices

[157]Electronic publication of such notices may, however, provoke controversy regarding competition with private vendors. The contents of the *Federal Register* are available online now via WESTLAW, among others.

[158]*See* Report § V(D).

[159]*See* § IV(D)(1) of this article.

[160]*See* § IV(D)(4)(a) of this article.

[161]*See* 50 Fed. Reg. 52748 (App. IV to OMB Circular A-130) (recognizing that cost-based user fees for electronic dissemination might, in some instances, unduly impede public access).

[162]Most of the general public lacks the technology to use information in electronic form; only a tiny fraction of the population has microcomputers and modems. But certain sectors of the public, who frequently are the intended consumers of specific agency information, do have such technological capability. Lawyers in general, and intellectual property lawyers in particular, are examples. Other members of the public, such as libraries, serve as conduits through which information flows to the general

impede desirable levels of availability, a government policy that restricts agencies from competing with private sector vendors erects a barrier between citizens and their own information. On the other hand, if all government information were disseminated free, the cost would be enormous; and it is not clear how such disclosure would be financed, considering competing demands on public resources. There is nothing intuitively wrong with user fees to permit a more sophisticated information dissemination program to be paid for by those who receive the benefits.

The FOIA constrains fee policies for electronic information made available under the FOIA.[163] This section focuses primarily on how the law constrains pricing choices agencies may make for electronic disclosure in public reference rooms and electronic dissemination via dialup links, or sale of tapes and disks.

The User Fee Statute,[164] and a 1959 OMB circular, set general guidelines for establishing user fees for government services.[165] These guidelines state that services or things of value provided by an agency to a person should be self-sustaining through user charges. The statute requires the charges be "fair," and based on four factors: costs to the government, the value of the service or thing to the recipient, public policy or interest served, and other relevant facts.[166]

These legal criteria embody conflicting considerations and provide ample authority for agencies to price electronic information in accord with policy judgments.[167] The self-sustaining criterion suggests that the government should price information products at a level sufficient to cover fully and fairly allocated capital costs. OMB circular A-130 suggests that users should pay their fair share of the full cost to the government.[168] Following this criterion to its limits, however, could result in high prices, based on the capital costs of hardware and software necessary for internal agency storage, management and retrieval of information. Such prices would reduce competition with, and enlarge the role of, the private sector. The government's capital costs are likely to be higher than the private sector's because of complex procurement procedures and the cost of providing internal agency data management and retrieval capability, which need not be

public. Libraries generally have the technology necessary to use information in electronic form. *See* Report § III(H).

[163]*See* § III(A) of this article.

[164]31 U.S.C. § 9701 (1982).

[165]*See* 50 Fed. Reg. 52748 (App. IV to OMB Circular A-130) (reiterating 1959 guidance and discussing factors relevant to user fees for electronic dissemination).

[166]31 U.S.C. § 9701(b).

[167]*See* § IV(D)(3) of this article.

[168]50 Fed. Reg. at 52741–42 (OMB Circular A-130, App. II, para 4(c)); *see also* House Policy Report, *supra* note 77, at 37.

part of a private sector information product. On the other hand, such prices would provide few direct benefits to information consumers.

The value criterion suggests that government information should be priced according to the value to the recipient. The House Policy document[169] suggests that pricing information on the basis of value rather than costs is practically unsupportable in the absence of authority for the government to copyright information. FOIA obligations tend to undercut a value-based or a full-capital-recovery pricing policy.[170]

The cost-to-the-government criterion could be interpreted to require that information be priced at marginal costs—exclusive of costs for that portion of an information system that provides utility to the government itself. Public policy, for some types of information, also might militate in favor of free or below cost pricing. Following this criterion to its limits, however, would result in much greater competition with the private sector when public funds pay capital costs for the hardware and software, producing value-added electronic information products as a byproduct of internal agency automation.

As Section IV(D) of this article explains, low government prices for value-added electronic information products can discourage desirable private sector activity. As a general matter, the private electronic information industry can be expected to urge interpretations of user fee statutes that result in high prices for value-added information offered at retail. Present vendors also may urge interpretations that result in high prices for bulk information offered at wholesale, in order to limit competition with their established information products. New potential vendors are likely to urge interpretations that result in low prices for bulk information because it will make it easier for them to get into the market.

As Recommendation C suggests, pricing of electronic information products by federal agencies should depend on the content of the information,[171] and its value in promoting meaningful public involvement in the functions of government or in complying with law.

Under the three-step process envisioned by Recommendations C and D, an agency is to identify electronic information products available from private sector sources and consider explicitly the pricing relationship between those products and natural byproducts of agency automation activities. Electronic information products

[169]House Policy Report, *supra* note 77, at 37. *See also* Report § V(B)(8).

[170]*See* § IV(D)(4)(a)(vi) of this article.

[171]*See also* House Policy Report, *supra* note 77, at 9 (general public availability of information is a principal goal of governmental information policy, however, information should not be made available if there is legitimate governmental or private interest opposing disclosure).

identified and evaluated favorably under step two should be evaluated further to decide how existing or projected private-sector prices compare with agency estimates of information product costs.

Costs higher than private sector prices indicate the existence of private sector efficiencies or cross subsidies that cannot, or should not in most cases, be matched by the government. Competing government information products, at higher cost-based prices, either will not be used or will result in higher costs to information consumers for products providing the same benefits as lower-priced private products. The government should not compete with respect to such products. Exceptions to this rule of thumb must be justified by the peculiar nature of the information and special needs for its wide dissemination.

Electronic publishing of some types of information may offer such a great benefit by increasing public availability that below-cost pricing is warranted. There are various ways of pricing at less than full cost. The government could publish and distribute itself, paying the cost from public funds; or the government could contract with a private sector enterprise and pay, out of public funds, a fee for services. The government could also subsidize private firms out of public funds. Finally, the government could artificially protect certain markets for electronic information so as to generate sufficient monopoly profits in those markets to provide an internal cross subsidy for electronic publishing and distribution activities by the same firms in low-price markets.

Costs significantly lower than private sector prices indicate either oligopolistic or monopolistic pricing by the private sector, or government efficiencies resulting from capital investment in internal processing systems. In either event, such a disparity between costs and prices suggests favorable cost/benefit effects from agency disclosure or dissemination. The nature of agency action should depend on the content of the information.

If the information is such that wide public availability is desirable at low costs, direct government retail dissemination at below-market, though cost-based, prices is appropriate. The same policy justification for public subsidy also justifies giving the public the benefits of low government marginal costs.

In other cases, the content of the information suggests that public disclosure is desirable, and pricing decisions must be based on whether losses in product diversity, and the possibility that the government may not be able to sustain its disclosure activities in the long run, outweigh public benefits resulting from lower cost-based government prices. The content of the information suggests that users should pay full costs for the information, but that government investment offers the potential of lower full costs. "Full cost" in this

context should not include capital costs of computer systems developed for agency purposes, only capital and operating costs for that portion of the system designed for public disclosure. Of course, the cost allocation decisions may be controversial

In the cost, benefit, and information-content configurations explored in the preceding paragraphs, no artificial restriction on government electronic release activities is necessary or appropriate.

Nevertheless, choices still can be made regarding public and private sector roles. Retailing and wholesaling electronic information release are not mutually exclusive: the government might retail to some degree, but also wholesale to private sector information resellers who would create retail information products different from those offered by the government. This is expressly contemplated by Recommendation C(2). For example, agencies might engage in electronic publishing, providing direct "retail" public dissemination, while still preserving opportunities for private enhancements such as "one stop shopping" for wider categories of information or improved search and retrieval techniques. Higher private sector prices would satisfy a demand for products with more value added.

One other configuration, however, does justify consciously restricting government electronic release. The government can be essentially indifferent as to how widely certain information is distributed, beyond satisfying legal obligations under FOIA. If cost-based government prices for electronic access or disclosure for this type of information are higher than private sector prices, the decision is easy: do not offer the uncompetitive, higher priced, government information product. But if cost-based government prices for disclosure or dissemination would be lower than private sector prices, the decision is more difficult. The content of the information means that the public benefits from direct government disclosure or dissemination do not justify higher levels of electronic release. The government simply should make the information available at "wholesale" in a form that will enable private sector resellers to add value and distribute the information, to the extent that consumers are willing to pay the price necessary to attract private capital.[172]

c. Implementing Electronic Release and Pricing Policies by Contract

Several sections of this article and Recommendations C and D urge agencies to consider the role of the private sector in disseminating electronic information. The preceding section suggested that an agency might implement its electronic publishing policy by contracting with a private electronic information reseller to provide desired

[172]*See* § IV(D)(2) of this article, regarding retailing and wholesaling.

levels of availability at appropriate prices, while limiting the agency's competition with the reseller.

Ensuring the availability of a private sector information product, in conjunction with a government decision to limit government information product offerings, is difficult legally. Conceptually, the government could contract with a private sector information provider, obligating the private sector provider to make the product, covered by the contract, available for a particular term. In exchange, the government could commit itself not to compete with the private sector product. The government promise would be not to add value. The government still would be free—and would be obligated by the FOIA—to provide access to information in bulk, in other words, to wholesale information to any potential competitor.

The difficulty is not that the government would be unable to enforce the private provider's part of the bargain (it could), but that the private sector provider could not enforce the government's part of the bargain. The contract could be enforced to preclude the government from directly offering a competing product, but it could not be enforced to prevent a private competitor from using government information in electronic form to compete with the private contractor. For example, suppose an entrepreneur files an FOIA request with the contracting agency for data in electronic form and for retrieval and telecommunications software developed for internal agency use. Under the most likely interpretation of the FOIA, the government would be obligated to make the requested electronic information available.[173]

The new competitor, therefore, could begin competing with the private contractor, presumably with much lower startup costs, because it has the benefit of agency-created data and software. No apparent legal theory based on the contract would permit the contractor to prevent public access to the information covered by the FOIA request.[174]

Obviously, if the indexing, retrieval, and telecommunications software were proprietary and not owned by the government, its release could be blocked, but not otherwise. Thus, the efficacy of the contract approach to ensure the continued availability of a particular information product would depend on (1) appreciable value added by the private contractor representing an economic barrier to entry by competitors and (2) the unavailability of comparable added value in government-owned software disclosable under the FOIA.

On the other hand, if the contract obligates the private contractor to reduce prices in exchange for the protected market, incentives for new private sector competition would be reduced.

[173] *See* § IV(D)(4)(a)(iv) of this article.

[174] *See Computaprint,* discussed in § IV(D)(4)(a)(vi) of this article.

Further, if the deal involves first-time conversion of paper information, and the government has no need for internal use of the information in electronic form,[175] the deal could be structured so that the private contractor converts paper information into electronic form. In this case, the electronic data arguably would not belong to the government but to the private contractor, and therefore could be protected from access under the FOIA. The viability of this legal theory is at the heart of the controversy between International Computaprint and USPTO.[176]

V. CONCLUSION

Much of Recommendation 88–10 necessarily begs the question as to where lines should be drawn and who decides whether abstract criteria are met in particular cases. In this stage in the evolution of government electronic information policy, the most one can do is suggest substantive principles to be applied in the first instance by agency electronic system designers, policy makers, and budget planners. The objective is to provide an analytical framework within which agencies can think about options, and justify choices made, by articulating their rationale according to the framework. Ultimately, of course, responsibility for policing compliance with the framework, or for deciding whether the framework is appropriate, rests with the courts interpreting existing statutory authority and obligations, and with Congress in reshaping agency duties. As experience is gained, Congress ought to set policy on as broad a basis as possible. It ought not to specify the details of particular acquisition or release programs.

Recommendation I of Recommendation 88–10 considers the role of the Congress. The author's original Recommendation (I)(4) read as follows:

> 4. Instead of micromanaging agency electronic acquisition and release programs, the Congress should exercise oversight of agency compliance with generic policy guidelines, including scrutiny of agency classification of information types as suggested in Recommendation C, and agency consideration of private sector capacity to provide appropriate service and price levels. Agencies are in the best position to assess these factors, subject to appropriate Congressional oversight. When agencies have offered rational justifications for their electronic information programs, the Congress should defer to agency judgment.

[175]This assumption is at war with reality. If the agency has no need for the information in electronic form, it has no business manipulating private markets for electronic forms of the information.

[176]*See* § IV(D)(4)(a)(vi) of this article for a description of this case and its status.

The conference changed the language, primarily to be less confrontational by omitting the pejorative term "micromanaging."

The report supporting Recommendation 88–10 urged that the Administrative Conference develop resource materials for agencies to use in evaluating artificial intelligence techniques for incorporation in agency information management systems. While it may not be feasible or appropriate for ACUS to maintain a library of information, ACUS could develop indices of agency personnel with experience in electronic acquisition and dissemination systems, agencies providing services and equipment to other agencies, whether on a cost reimbursement basis or otherwise, and technical references, especially on artificial intelligence and expert systems, and all relevant laws, regulations, OMB circulars and policy statements on government electronic system acquisitions. Such ACUS activity would be of particular use to smaller agencies like the FMC.

The recommendations adopted by the conference did not include this ACUS-oriented recommendation, simply because of the traditional view that the Administrative Conference should not make recommendations to itself. The discussion at the conference plenary session, however, reinforced the idea that further activities by the Conference regarding electronic information policy are desirable. In particular the following subjects seem worthy of investigation:

— Artificial intelligence applications
— Legal issues involved in disclosing database and telecommunications software or protecting it from disclosure
— Issues involved in protecting personal privacy and commercial secrets as electronic release becomes more common

VI. TEXT OF RECOMMENDATION 88–10

A. Freedom of Information Act

1. In interpreting the Freedom of Information Act, agencies should recognize that a "record" includes information maintained in electronic form.

2. Agencies using electronic databases rather than paper records should not deny access to the electronic data on the grounds that the electronic data are not "records," that retrieval of the electronic information is equivalent to creation of a "new" record, or that programming is required for retrieval. In responding to FOIA requests, agencies should provide electronic information in the form in which it is maintained or, if so requested, in such other form as can be generated directly and with reasonable effort from existing databases with existing software. Agencies, however, should not be

obligated under the FOIA to create large new databases for private advantage, thus using agency resources for private purposes. Agencies should use a standard of reasonableness in determining the nature and extent of the programming that provides an appropriate search for and retrieval of records in responding to FOIA requests, and in determining the extent to which FOIA requesters may ask the agency to produce data organized in formats other than those used by the agency in the regular course of its operations.[177]

3. Differences in technologies and database structures used by individual agencies make it necessary, for the near term, to define FOIA obligations on a case-by-case basis. Further experience with electronic information systems is a prerequisite to the formulation of general rules applicable to such controversies under the Act as how requesters must identify the records sought, how much programming, if any, an agency must do, and how costs shall be borne. The concept of reasonableness applied to searches for paper information made in response to FOIA requests should provide a useful guideline for resolving controversies over the application of FOIA to electronically maintained data.

B. Acquisition of Information in Electronic Form

1. Agencies should acquire information in electronic form when they use, or will use, the information in that form and when most information submitters already maintain information electronically, or have ready access to intermediaries who will prepare and submit it in electronic form. When agencies sponsor electronic acquisition programs, they should make clear their intention that all information required will eventually be available to them in electronic form, either by strictly administering exceptions to mandatory programs, or by undertaking the conversion of paper submissions into electronic form themselves.

2. When most providers of information ("filers") are technologically sophisticated, it is appropriate for agencies to require electronic filing of information, after developing standard formats in consultation with the filer community, and after appropriate testing and transition periods.

3. In determining whether to require or permit electronic filing of information and in designing the particulars of an electronic acquisition program, agencies should carefully weigh the costs and benefits

[177]Agencies should be able to recover the costs of complying with FOIA requests, including programming costs, in a manner consistent with the Freedom of Information Reform Act of 1986, 5 U.S.C. § 552(a)(4)(A) (1982 & Supp. 1988), and related OMB guidance, 52 Fed. Reg. 10012, 10017 (1987).

of electronic acquisition of information. The analysis should address the factors identified in Recommendation D together with other considerations made relevant by the agency's mandate.

4. Agencies initiating electronic acquisition programs should take steps to facilitate electronic filing by entities having limited technological capacity (without raising the costs for sophisticated entities), including the optional use of "smart forms." When a significant proportion of the filer community is technologically unsophisticated, electronic acquisition may be feasible only through intermediaries. In such cases, agencies should create economic incentives for electronic filing rather than mandating it. Part of the economic incentive to file electronically under voluntary electronic acquisition programs can be the imposition of a fee on technologically sophisticated filers who choose to file on paper, assuming the statutory authority to do so exists.

C. Release of Information in Electronic Form

1. Electronic information release policies should depend on such factors as (a) whether the desired level of release consists of electronic publishing, electronic disclosure, or electronic access in response to FOIA requests (see the glossary for definitions of these terms); (b) the agency's policies in releasing like information maintained in paper records; and (c) the costs and benefits of replacing or supplementing an existing paper medium with an electronic medium.

2. When a statute or agency policy mandates the publishing of information, the agency should itself electronically publish the information or facilitate its electronic publication by others, unless the cost-benefit analysis suggests the desirability of restricting publishing to the paper medium, possibly accompanied by a lower level of electronic release.[178]

If the agency publishes the information only on paper, it should consider electronic publication of the availability of the paper information products. Where an agency publishes information electronically, it should consider the feasibility of providing dial-up access.

3. When a statute mandates public reference room disclosure, or paper products presently are made available through a public reference room, agencies should provide electronic disclosure in public reference rooms of information already in electronic form. Such agencies should consider the costs and benefits of upgrading from electronic disclosure to electronic publishing. Agencies should also make information disclosed electronically available to any requester in an electronic form that would be easily usable by information resellers.

[178]When a statute mandates electronic publishing, the agency would not have discretion to restrict publication to a paper medium or to a lower level of electronic release.

4. In those instances where an agency maintaining information in electronic form has no mandate to release information other than in response to FOIA requests, the agency should consider upgrading release of appropriate parts of this information to electronic disclosure through public reference rooms and wholesaling in electronic bulk form to private sector requesters.[179]

D. Allocation of Responsibilities Between Public and Private Sectors

1. Agencies that have decided under Recommendations B and C to acquire or release information in electronic form should define the appropriate roles of the public and private sectors in providing that information and related products (including telecommunications facilities, indexes and retrieval software as well as raw data). That choice should depend on the relative costs and benefits of privately versus publicly provided information products.

2. When choosing between publishing and a lower level of electronic release of information, an agency should determine whether private sector providers are willing to supply electronic products having features (e.g., user-friendly menus) that will give the public greater benefits or lower costs than would electronic publishing by the agency. When an agency relies on the private sector for electronic publishing of agency information, the agency should seek to establish by contract the nature of the products to be provided.

3. When an agency determines that its mission warrants new electronic means of acquisition or release of information and the private sector will not commit to provide them at appropriate prices, the agency should provide them, if clearly identified non-economic and economic benefits outweigh the capital and marginal costs. Agencies should recognize, however, that there may be circumstances where the costs to an agency would suggest the wisdom of creating incentives for the private provision of the desired electronic information product—for example, the free use of agency-developed software.

E. Determination of Costs and Benefits

1. Agencies should take into account the following costs in the decisionmaking processes suggested in Recommendations B, C and D:

(a) Capital costs to the agency of establishing the product, and the probable economic life and other uses over which the costs should be allocated;

[179]The prices for such electronic information would be determined under the general user fee statute, 31 U.S.C. § 9701, or under the FOIA. *See* OMB's user fee guidelines, restated in OMB Circular A-130 App. IV, 50 Fed. Reg. 52748 (1985).

(b) Capital costs to information consumers and information providers to utilize the product, and the probable economic life and other uses over which these costs should be allocated;

(c) The marginal costs to the agency for user access;

(d) Marginal costs to users for obtaining the information;

(e) Marginal costs to electronic information providers of updating the electronic information;

(f) Unrecovered costs associated with existing government or private sector capital that would be made obsolete by the new product;

(g) The costs of updates and upgrades in service levels or capacity necessary to permit intended benefits to be realized at levels of demand expected over the long term; and

(h) Costs of changing to standard formats or of handling different formats.

2. Agencies should take into account the following benefits in decisionmaking processes suggested in Recommendations B, C and D:

(a) Savings associated with eliminating the cost of producing and maintaining existing paper products;

(b) Savings to agencies and consumers associated with upgrading the level of information release from ad hoc FOIA disclosure to electronic disclosure in a public reference room;

(c) Savings to agencies and consumers associated with upgrading paper public reference room disclosure to electronic publishing;

(d) Increase in the number of interested persons having access to information;

(e) Improvements in the utility of information for its intended purpose because of improved organization and retrieval capabilities; and

(f) Reductions in delays associated with transferring information from an agency to eventual consumers.

3. Cost-benefit analyses should take into account FOIA obligations, including obligations to protect trade secrets and other exempt information. In designing electronic databases, agencies should consider the types of FOIA requests likely to be received for data in the database, consulting with representative users when feasible. Insofar as it is consistent with agency mission performance, databases should be designed so as to facilitate responses to FOIA requests. A proper rule of thumb is that it should not be any more difficult to obtain information under the FOIA after automation than before.

4. In some cases, effective design may require some sacrifices in electronic FOIA retrieval capability. In these cases, agency designers of electronic databases and retrieval software should consider how FOIA requests can be satisfied consistent with the spirit of the Act. For example, an agency might choose to make raw data available to requesters in computer-readable form along with retrieval software, so that requesters can effect their own retrievals. In other situations,

new electronic information products may reduce costs of FOIA requests, to both requesters and agencies. This would occur, for example, if information were published or otherwise made accessible electronically in a public reference room, rather than provided only on paper in response to FOIA requests.

F. Exclusive Control of Public Information

An agency generally should not grant a private party exclusive control of its electronic information or of the acquisition or release thereof. Nor should the agency itself as a general matter maintain such control in the absence of a compelling public purpose. Where an agency has, and wishes to exercise, authority to enter into an exclusive arrangement providing a private sector vendor with a preferential right to electronic information, the agency should first consider whether the analysis suggested in Recommendations B, C, D and E demonstrates that efficiencies can be achieved through such an arrangement. The agency should also guard against the possibility that the arrangement may be inconsistent with its responsibilities under the FOIA or may impair the ability of the agency and the public to benefit from subsequent technological developments.

G. Technology Issues

1. Agencies should use proven technologies in their electronic acquisition and release systems. They should stay abreast of the state-of-the-art in all matters related to the electronic acquisition and release of information and should be particularly alert to the need for up-to-date and effective access control and other techniques required to maintain an appropriate level of security.

2. Agencies should seek to base electronic information formats on existing standards efforts such as American National Standards Institute standards on Electronic Business Data Interchange[180] before developing their own distinctive format definitions.[181]

3. Whenever possible, agencies should use public data networks rather than developing their own communications links for public filers or consumers.

4. Agencies should consider conducting demonstration projects to experiment with evolving electronic information technology.

H. Electronic Participation in Administrative Proceedings

Agencies should experiment with electronic means of providing public participation in rulemaking, adjudication and other administrative

[180]These standards are currently designated as "X.12."

[181]*Cf.* Recommendation 78–4, Federal Agency Interaction with Private Standard-setting Organizations in Health and Safety Regulation, 1 CFR § 305.78–4.

proceedings, while retaining a means of effective participation for persons who lack the means to access the electronic information system.

I. Government-wide Policy on Electronic Information

1. A government-wide policy on electronic information is desirable to afford guidance to agencies. Such a policy should articulate goals consistent with those expressed in the foregoing recommendations.

2. Congress should formulate the larger value judgments necessary for a government-wide policy on electronic information.[182] These include the roles of public and private sectors; who ought to pay for increased information utility; and the level of funding to be provided by the government.

3. Because agencies often are in the best position to apply the considerations identified in this recommendation, Congress should normally defer to agency judgment in selecting methods to implement congressionally enacted policies when the agencies have offered rational justifications for their electronic information program decisions.

J. National Institute of Standards and Technology

The National Institute of Standards and Technology should continue to work with the U.S. Patent and Trademark Office to advance electronic data storage and transmission technology, as, for example, its work with high-capacity storage technology, and should inform agencies about commercially available products and services to facilitate electronic acquisition and communications.

K. Administrative Conference of the United States

[Recommendation K was not adopted by the Conference, but was presented to it for future Conference action.]

1. The Administrative Conference should continue to facilitate government-wide consideration of appropriate electronic information policy and technology alternatives.

2. The Administrative Conference should develop resource materials for agencies to use in evaluating Artificial Intelligence techniques for incorporation in agency information management systems.

3. The Administrative Conference should continue to monitor major agency electronic acquisition and dissemination systems and prepare updates from time to time on the issues identified in the supporting report.

[182] *See, e.g.*, U.S. Congress, Office of Technology Assessment, *Informing the Nation: Federal Information Dissemination in an Electronic Age* (October 1988).