

# Public Access to Geographic Information Systems: An Emerging Legal Issue

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**ABSTRACT:** Institutional issues will dominate technical issues as GIS technology becomes integrated with the information management operations of public organizations. Analysis of the legal setting in which a particular GIS is established is now recommended as part of the planning and design process, particularly as it impacts public access to the system. The form and content of information provided to the public and private user community through GIS technology demands a new and more discriminating vocabulary to avoid unintended pitfalls from traditional laws developed before an information management tool of this utility was available to government. The evolution of access policy for geographic information systems will establish a course of conduct today that could determine the control of a multi-billion dollar industry. The debate over which sector of government or industry will provide extremely valuable information products in the future has begun. Establishing institutional policy to deal with GIS technology focuses many of the most significant legal issues that should prove determinative in the debate over who controls the value of information.

## THE ROLES OF GIS IN PUBLIC ORGANIZATIONS

OVER THE PAST DECADE, government agencies at all levels have become extremely cognizant of the importance of maps and geographically referenced data to support routine operations and long-term planning activities. These agencies have been turning, in increasing numbers, to GIS technology to provide the necessary capabilities to process maps and geographic data. This trend toward the implementation of geographic information systems is evidenced in a recent survey of GIS installations which shows an increase by a factor of ten, in the number of new system start-ups, each year from 1979 to 1988 (Croswell and Clark, 1989).

Over the past five years, GIS technology has matured tremendously and offers powerful capabilities for organizations which are dependent on maps and geographic data (Croswell and Clark, 1988; Dangermond, 1987). Kindleberger (1988) describes many of the challenges and opportunities facing government agencies in the use of GIS and related technologies. As the application of the technology in organizations increases, the definition of GIS itself is evolving. Two related trends are evident that will have a profound influence on GIS installations in the near future: (1) the distribution of processing power and data, and (2) the integration of diverse types and formats of geographic information.

System distribution, along with a significant decrease in hardware costs, offers the opportunity for a broad spectrum of users to gain access to GIS data and to conduct analysis and generate products. Data integration trends promise to expand the concept of a GIS to a point where it becomes a focal point to easily access and process information in traditional map and database form, as well as raster images, scanned documents, engineering drawings, and the like that are important in geographic analysis (see Figure 1).

The technology is available now to respond to a host of mapping and geoprocessing tasks that government agencies demand; and, because of the great user demand, it is improving and becoming less expensive. The greater sophistication in technology and wider options for users, however, introduce more complex institutional issues in the implementation and operation of GISs. There is a strong tendency for organizations that are initiating GIS development to overemphasize the technical aspects of the implementation process. This emphasis on the technology when it is not matched with even greater attention to the institutional factors impacting system development can lead, and too often has led, to failures or significant prob-

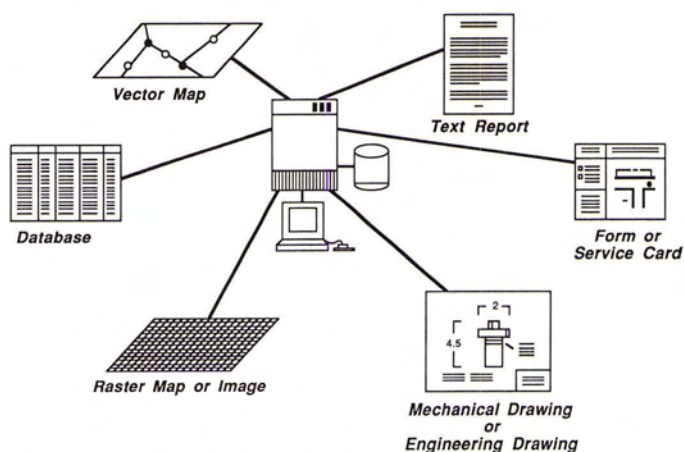


FIG. 1. Integration of different forms of geographic data and records.

lems in effective use of the system (Croswell, 1989). The promise of GIS technology is great. Online access to GIS data and the many potential products of GIS spatial analysis present a broad range of unresolved public policy issues that match the broad commercial utility of this resource. This paper discusses an important institutional topic impacting the use of geographic information systems—public access policy.

## IS THERE AN INSTITUTIONAL PROBLEM?

The distributed configurations of today's geographic information systems do not allow for the definition of a "typical" institutional setting. However, the examination of a hypothetical GIS with a defined institutional structure can reveal legal issues that are becoming standard problems for many GIS custodians. Information management facilities of the future will likely be government managed utilities just like the sewer, water, and power utilities of today. Refining the possible institutional options for this new technology will allow a more efficient progression from the initial efforts today to the information utility of tomorrow.

Imagine you are the manager of a county-wide GIS, which is a cooperative effort between the utility board and county government. The technical development of the system was well planned and data conversion is being completed for a large-scale GIS database consisting of the following layers:



- Survey control monuments
- Detailed man-made and natural planimetry derived through photogrammetric compilation
- Digital elevation data and derived contours
- Land parcels and easements
- Water system facilities
- Sanitary sewer facilities
- Political and administrative units
- Street and highway centerlines with block address ranges.

Work is well underway in the completion of a comprehensive attribute database and the development of database linkages with the County's mainframe computer. The GIS has been designed to support a wide range of mapping tasks, as well as spatial queries and more complex geographics analysis work.

The independent water district and the county assessor declined the opportunity to participate in the funding for initial system development. The county provided funding with an \$8 million bond issue, and the utility board enters into a lease arrangement for five years, agreeing to pay 30 percent of the actual annual costs for the system. County government agrees that the GIS will provide efficiency increases sufficient to merit the capital investment, but would like you to propose a way to take advantage of the utility of GIS to finance the operation, maintenance, and continuing upgrade costs of the undertaking, once the original bond money is exhausted.

System development is nearly completed, but the original development funds allocated will soon be depleted. The assessor now requests access to the system and would like your staff to develop an interface to his new computer assisted mass appraisal (CAMA) software to the database and provide regular reports to his office. The water district has purchased \$500,000 worth of hardware and software and would like a complete dump of data, with periodic updates. The School of Engineering at the local university has requested on-line access using their own workstations through remote communication lines.

You ask the county attorney and a consultant for help. Your attorney responds that the universe of information collected and maintained by the county agencies are defined as "records," and the state open records law does not allow charges for anything but the cost of materials to reproduce the record (e.g., \$40 for a tape, \$0.20 a page for paper, and \$3 for a mylar map copy). Further, the open records law does not allow the custodian to stall these requests, and a written response is due to every request for access in three days or you could go to court and face personal liability for obstruction. Your consultant suggests that the definition of "records" does not include all possible information that this technology could produce, and recommends that fees for access be established by regulation. Three months later the word is out, and several local realtors, two engineering firms, an architect, and a garage industry value-added vendor planning to sell custom maps are joining the first round of access requests.

In an attempt to deal with these requests, the attorney comes up with three types of exceptions to the open records statute that are intended to protect privacy, but can be stretched to include the GIS data, allowing you to turn down the requests from the non-government requestors. Your consultant warns that turning them down by characterizing the data as exempt records will mean you can't sell the access either, and your operational budget is due.

The county administrators direct the attorney to work with you on some acceptable solution, and you propose a fee structure for GIS access. You inform the attorney that you will need to copyright the information to protect the integrity of the official data, and to limit market competition. You learn that state government has never exercised copyright protection, and the use of copyright to protect a database is problematic. The attorney next learns that if you do sell the requested information

products and services, governmental immunity is not assured, and the liability exposure is difficult to define. He also believes that "equal protection" requires you to offer to all requestors the same arrangement established with the utility board, but the big annual expenses are now paid, and annual costs are a fraction of what the utility board has invested so far. The utility board wants a rebate, and the local private mapping firm is considering an anti-trust action to prevent government from selling maps. The county administrators are considering turning over the database to a private company and becoming one of the clients rather than become a service bureau for the entire community.

This hypothetical scenario tracks a combination of several of the questions GIS managers are finding difficult to answer today. There is a problem with the institutional setting in which we are building our GISs. The legal setting in which we are building GISs with large investments of tax dollars does not allow for the requisite control or cost recovery that is specified for a typical public facility or utility. This is because GIS is tied up with more than building parking lots or the management of services like water and garbage disposal. GIS technology is about information, and information has not been traditionally treated as a commodity, especially when government is the source. When do raw data become information and what are their value? When does information become a record subject to the provisions of the open records act? The economics of information, defining information products and services, and defining problems presented by the limited vocabulary that currently dominates our statutes when implementing GIS are all issues to be actively addressed *before* the system matures and the access requests begin.

#### GIS ACCESS POLICY AND THE BIG PICTURE

The world economy of the next century is being shaped by a set of current decisions mostly having to do with information systems, and public agencies will continue to expand their use of GIS technology (Naisbitt, 1982). What standards in law and policy will help integrate and appropriately apply the information technologies that have emerged to date? The many legal and economic issues presented by efforts to manage the access to GIS will significantly impact the bigger questions about who owns and controls the value of information in the electronic age. The front-end development costs and database source material most often require GIS sponsorship by government institutions. Federal agencies, state governments, special districts and authorities, and local governments are the custodians of a majority of the country's maturing GISs (Croswell and Clark, 1989). These government institutions can be characterized as "creatures of statute" established before the electronic age was upon us. This application of old rules to new technology leads to inappropriate literal applications, or an open field for creative interpretations.

As one of the fastest growing information technologies, GIS is setting new precedents for breaking down traditional "islands of information" and promoting the sharing of information among all levels of government. The spatial analysis capabilities of GIS provide us with an ever increasing list of applications that depend on the creation of one of the most extensive collections of databases ever undertaken and financed by government. With the accelerating advancements in hardware, software, and optical storage, the potential commercial value of these databases will increase exponentially. Recognition of the resource is already growing among government agencies that may not have contributed to the initial cost of establishing a local GIS, and among the private sector users for both direct application to their businesses and for value-added purposes.

Construction of GIS databases represents a massive investment of tax dollars. This public capital investment potentially



represents a very low overhead source of information to the private sector "value-added" information brokers. If GIS custodial agencies take an active role in development of GIS access policy today, there is an opportunity for a smooth transition to an "information utility" built around GIS technology (Archer, 1988). Without the development of new concepts in the areas of open records law, information products/services definitions, proprietary authority, copyright law, commercial law, and government liability concepts, the current legal setting tends to promote the subsidy of a small sector of the private information industry with the taxpayer's investment.

The Information Industry Association, a national lobbying organization, has estimated that revenues to "on-line databases" were \$12.5 billion in 1983, and should triple by 1990 (Bellin, 1988). Peter Marx, an IIA Director, testified to Congress in 1985 that there were over 400 "information service organizations" in the private sector that repackage raw government information (Marx, 1985). The large corporations involved in this industry would prefer government dissemination of information in the form of raw electronic data without searching aids or software enhancements, and oppose government dissemination of enhanced or value-added information (Office of Technology Assessment, 1988). This preserves their advantage and their market.

On the other side of the issue, we find the straightforward view that information collected and managed by government should be available for free, or for the nominal costs associated with copying records. The system was purchased with tax dollars, and the GIS should be treated the same as an electronic filing cabinet filled with digital records. The access issues should be no different than access to paper format record under the Freedom of Information Act or state open records laws.

Neither of these positions establishes a good policy basis for getting the greatest access to information to the most people. Information utilitarianism can only be achieved by allowing for the differences between today's information management technology and dissemination of information in paper format. The U.S. Office of Technology Assessment (OTA) has concluded that congressional action is urgently needed to resolve Federal information dissemination issues and to set the direction of Federal activities for years to come. The government is at a crucial point where opportunities presented by the information technologies, such as productivity and cost-effectiveness improvements, are substantial. However, the stakes, including preservation and/or enhancement of public access to government information plus maintenance of the fiscal and administrative responsibilities of the agencies, are high and need to be carefully balanced by Congress." (Office of Technology Assessment, 1988, p.3). At the state and local level, the need for action is even more urgent as more GISs mature, and the variety and volume of access requests increase.

The information dissemination roles and legal issues are not the same at the national and local levels. The Federal Government spends, conservatively, \$6 billion per year on information dissemination (not including the cost of collection, processing, or a prorated share of agency automation)(Office of Technology Assessment, 1988). Congress has enacted hundreds of specific laws that assign information dissemination and related functions to Federal agencies. Federal copyright law (Public Law 94-553) expressly prohibits application of copyright protection for federal government publications, and agency rules expressly limit the charges for government publications. The traditional role for the national government agencies has been to subsidize the dissemination of information for the common good.

In contrast to this traditional federal approach, there has been a trend toward the application of user fees as a major funding source at the local government level. Local government user

fees have tripled since the mid 1970s, from \$30 billion in 1976, to \$98 billion in 1987, or as a portion of the total revenues of local governments, including state and federal payments, they went from 17 percent to 21 percent. Nearly three-fourths of all local jurisdictions have user fees in some form or other, and they are being applied to a rapidly expanding number of public services and facilities (Lemov, 1989). The role of providing and subsidizing information distribution as a public resource decreases as government becomes more local. The tendency to consider public services optional, and to charge for services if provided, increases as we move through the progression from federal to state to local government.

The ratio of benefits to costs improves with increased distribution of GIS use when the cost of automation is contrasted to the cost of manual mapping. However, the institutional issues get more complex in direct proportion to the distributed nature of a particular system. More laws, charters, preexisting procedures, centralization of standards, interagency agreements, etc., come into play. Much of the real costs of GIS implementation can be avoided by a complete review of the institutional issues before they become advocate situations. The analysis of the legal setting is closely tied to the complexity of the institutional setting, and the job becomes exponentially more complex with the number of "players" involved. The increased commercial utility of GIS over all previous forms of government information resources is upsetting the public policy balance that has sufficed historically to deal with public access to government information.

The costs for the entire community of decision makers, public and private, may be less when the data and information are gathered, analyzed, and made compatible in anticipation of need, rather than left to actions at the time of decision making (Epstein, 1988). But this does not automatically mean that private industry should be subsidized by tax dollars in order to promote broad use of the system. Who controls the access to and, therefore, the value of information? What interpretations or changes of current laws impacting public access policy to GIS will promote cost-effective utilization of our recently available technical abilities to manage information?

The major concerns that GIS managers and custodial agencies must address in order to effectively use GIS technologies are summarized below:

- GIS applications are becoming integrated with overall information management operations of government agencies, and this trend will continue for the foreseeable future;
- After initial GIS development funding has been allocated, agencies must develop approaches for the continued operation, maintenance, and upgrade of the system;
- There is a large potential market for GIS products which is only beginning to be realized;
- Current laws, regulations, and public policies are out-of-date and are not sufficient to support an institutional framework that will meet the projected demand for GIS products and services; and
- Issues regarding cost allocation, cooperative funding, and user fees and their relationships to GIS development and operational costs must be examined.

#### DISTINGUISHING RECORDS FROM INFORMATION PRODUCTS

The law does not change quickly by design, and often fails to keep up with the dramatic changes modern technology brings to our society. This is very evident in a review of open records laws and their impact on issues of access to computer managed information. The most significant impact on policy in the area of GIS access issues is embodied in the state and federal freedom of information statutes and case law. Traditional rulings, statutory formulations, and current trends in this area are dominated by a balance of privacy versus right to know. The legal



precedents direct custodial agencies to release or withhold records on consideration of this balance. The limited decisions that have examined the universe of information encompassed by statutory definitions of "public records" do not provide adequate guidance to assure a smooth transition to "information utilitarianism."

Despite their ineffectiveness in addressing GIS concerns, the impact of dated laws and regulations cannot be ignored. If distinctions between "records" and "products" are necessary, the burden of showing the proper distinctions will fall on the custodial agency. "The basic premise is that a true GIS can be distinguished from other systems through its capacity to conduct spatial searches and overlays that actually generate new information" (Cowen, 1987). What about "new" information derived from records? It is clear that the range of potential products that may be generated by a GIS is nearly limitless. The GIS has unique capabilities for processing map information and conducting special geographic analysis. Because of this, the issue of "what is a record" becomes more complex in a GIS environment as opposed to more traditional information system handling tabular data alone.

One can conceive of a wide range of GIS product offerings such as those illustrated in the sample list below:

#### *Aerial Photography and Survey Control Products*

- Standard 9 inch by 9 inch prints, transparencies, or diapositives
- Photo print or transparency enlargements
- Specially formatted prints or transparencies covering defined areas
- Compiled lists of survey control and documentation on monuments

#### *Standard Map Set Products*

- 1"=100' scale planimetric or contour base maps with standard sheet format, feature content, symbology, annotation, etc.
- 1"=100' scale parcel maps with standard sheet format, content, etc.
- 1"=100' scale utility maps with standard sheet format, content, etc.
- Small scale regional or county maps (scale of 1"=1,000') with standard content, symbology, etc.

#### *Special Variations on Standard Map Sets*

This product category includes variations of a standard map product in which specifications of scale, sheet format, area of coverage, feature content, symbology, or annotation are customized for a particular use.

#### *Special Thematic Maps*

This category of products consists of any specially designed shaded or symbolized maps based on features in the GIS and their nongraphic attributes. Some examples may include the following:

- Shaded maps of existing land use based on attributes assigned to parcels
- Shaded maps depicting categories of appraised value of residential property
- Demographic maps depicting income or population by census tract or other enumeration district
- Incident maps showing the distribution of permit sites or business licenses by type.

#### *Special Reports*

A range of tabular reports using query and analysis capabilities of the system, such as those listed below, may be generated:

- Lists of names and addresses organized by property characteristics, demographic characteristics, or location within a political or administrative district
- Summary lists of demographic characteristics by enumeration district
- Voter registration lists

- Reports on permitting and development activities
- Reports on utility service by parcel or district

#### *Special Geographic Analysis and Services*

- Environmental impact assessment analysis
- Spatial model to evaluate site suitability for development
- Analysis of demographic and infrastructure data for market analysis
- Utility demand modeling to evaluate expansion of network (e.g., for water systems or electric distribution systems)
- Network analysis for optimal route determination

What are the impacts of on-line access to the database or requests for special GIS products when it would interfere with the agency doing its job? The taxpayer cannot enter the office and take the typewriter simply because it was purchased with tax dollars and is used to create records. When is the database more like the typewriter (i.e., part of an information processing tool), and when is it more like a full filing cabinet (i.e., electronically stored records)? The open records law was not written to deal with the issues raised by these new tools. A sufficiently discriminating policy must be designed and implemented now before the wrong precedents are established, either by courts or overly conservative managers.

#### INSTITUTIONAL ROLES

Agencies planning for a GIS must take an active role in molding the access policy and not wait for the state legislature to catch up with the technological progress and the implementation of GIS in government agencies. Without active guidance, the legislature won't catch up in time to deal efficiently with the many systems that are currently reaching maturity. However, literal application of the current statutory language in most states causes more potential restriction of information access than it promotes in the GIS environment. We cannot expect the courts, in isolation from any policy formulated by the professionals in information management, to find the best solutions based only on the current statutes and meager case law precedents. That pre-electronic age line of policy is based on a very different set of priorities. Any case that comes before the court involving the sale of GIS products or the provision of GIS information should be based on a course of conduct established by the agency from the inception of the GIS program.

Open records law can render the cost of owning a GIS prohibitive because of unanticipated impacts that result from the statutory language dealing with response time to a records request, and cost recovery limitations. Rules that adequately protect the public's right to know in the world of paper records can prove counterproductive in the world of information management through computer technology.

While it would be a losing argument to propose that open records laws do not apply to computerized records, the lesson being learned now is that once a map is in the computer you can do an awful lot more than just plot it out again. You can calculate areas, optimize routes, balance sales territories, and take advantage of other new applications as they appear. This can be accomplished without ever again recreating the map in pictorial form. We are now able to manage the map as a database and not as a picture.

According to current interpretations of open records law, a GIS product would be classified as a public record if it was produced using public funds or to support the formation of public policy. For instance, a special zoning case map produced to support a rezoning decision must be available to requests under open records law. But is there any public policy basis for providing access relatively free for the commercial applications of information that did not exist before the request? Is there any public policy basis for granting access in a fashion not restricted by open records statutory procedures?



## RECORDS POLICY: FOUNDATIONS AND EXPANSION

State open records laws have by no means reached a point of uniformity, but there are basic principles and trends that can be isolated:

- Definitions of "records" and "open records" are very broad. Formerly, release limitations based on the purpose of the requestor (i.e., commercial purpose) or the form in which the record is stored (i.e., electronically) were commonly found, but are disappearing. It is more common today to prohibit any inquiry into the intended use of requested information to avoid abuse of custodial discretion.
- Applicable statutes, in a majority of states, severely limit the freedom of the custodial agency in defining what constitutes a "record."
- Recovery of costs is very limited, usually allowing a charge only for the direct cost of producing copies for distribution. This assures that the custodian does not abuse purse string control to defeat the records request. Capital costs are almost never allowed, search or staff time charges are prohibited or very limited, reproduction costs are often specified based on paper format records only, and all costs are mandated to be minimal.
- The time frame for meeting a request is specified to assure that delays are not used to defeat the public's right to know. A written refusal with the basis for the refusal specified is most often required.
- The time frame for judicial review of any effort to restrict access is often given priority over other types of cases.

The need to assure accountability for the decisions of government, especially in the area of expenditure of public funds, has overridden the potential problems that a broad access policy places on the custodial agencies. (In several states, statistical analysis of records that would otherwise meet privacy exceptions, has been required. This is called "redaction," and constitutes a requirement that the custodial agency produce information that did not exist but for the request.) A balance was struck over the history of the evolving open records policy to allow the broadest possible access in spite of the taxpayer's expense, and specifying exceptions only in narrow rules protecting privacy for personal, national, and commercial security (Massachusetts Secretary of State, 1987).

Given the economy of scale we face with the potential "market" for GIS access, however, the balance traditionally considered by the courts is shifting. The utility of these new tools for managing government's information is such that outside requests can predictably reach a level that could severely limit any control over staff time and the agency's budget. The balance is also significantly affected by the ever increasing costs to taxpayers to meet the increasing costs of increasing access. Automated information management changes the impact of the old policy in ways that require immediate correction. The refinement of outdated policies in the case of GIS can be accomplished eventually through statutory changes, but currently requires an interim strategy, one that involves the creation of a defensible course of conduct under the current open records statutes and case law.

The dilemma facing organizations in the distribution of GIS products and services is illustrated in Figure 2.

Two basic and quite diverse policy approaches visible today

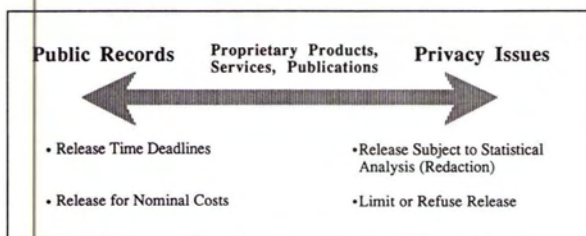


FIG. 2.

in different jurisdictions are being used by policymakers to meet the requirements of the applicable state open records law (Archer, 1988):

- (1) Find a statutory basis to refuse as many requests as possible.

An agency faced with dealing with open records requests at their own expense in terms of staff time, capital investment in the system, and especially operation and maintenance costs has little incentive to operate as a utilitarian information processor. Absent cost recovery options, a GIS manager could elect to refuse as many requests as possible on any basis they can invent that could meet specified statutory open records exceptions. These might include, "...the information is not final, the information requires proprietary software, the information is not available in the form requested, the request is not specific enough to identify the record, etc." The open records provisions in this scenario are utilized as a stick to force the resisting agency to grant access on a case by case basis, and the exceptions are used as a defense necessary to protect the custodial agency from becoming an unaffordable service bureau. Information access becomes a black-and-white issue: release information for nominal costs, or withhold information and be subjected to severe judicial scrutiny. Creative applications that could benefit the entire community are never explored.

- (2) Establish a defensible policy to grant requests for information and to address cost recovery issues in this policy.

The context in which many GIS administrators are planning for record/product distinctions is one in which the broadest possible access to products and services is to be offered. A defensible course of conduct, based on existing statutes and legal precedents, can establish the primary difference between records and products. This clear differentiation will promote broader access and will merit more favorable judicial treatment than efforts to restrict information. Control of frivolous requests, control of timing access to the GIS that does not interfere with governmental duties, and funding for system operations, maintenance, and expansion become available policy choices for the particular jurisdiction. Promotion of GIS use by the custodian for the entire community becomes the guiding policy.

Most GIS managers would like to grant broader access to information, as described above in Approach 2, but they must be able to afford the exercise. Approach 1 is a convenient policy to pursue, because it results in less expenditures from the organization's budget to handle the potentially large cost of fulfilling requests for GIS products. When no defensible policy is in place to achieve any cost recovery for system development or ongoing system maintenance, Approach 1 is by default the only realistic option for many GIS custodial agencies.

It is easy to see that maintaining a policy that would effectively limit access to GIS products will vastly reduce the potential tangible and intangible benefits of the system, and will not allow an agency to fully capitalize on significant investments in the GIS database, hardware, and software.

We make the assumption that taxpayers will receive benefits from the implementation of a GIS if that system has been well designed and is managed effectively. If this assumption is correct, policies should support the increased use of tools provided by GIS and related technologies. Taxpayers, particularly those with a commercial purpose, have access to more and better information as do the public policy makers once a GIS is available for their service area. Wouldn't it be more acceptable for this improved access ability (which is in line with the underlying purpose of the open records laws) to be paid for in part by the users who will profit from the access? Then the financial roadblock to an expanded GIS use will be reduced, and more taxpayers will enjoy the fruits of the information management systems which they could not begin to afford to initiate in the private sector.

It is in the interest of all parties to remove this incentive for



the agencies to try to limit access within the confines of the current statutory framework. This is possible only if we can make reasonable distinctions between what information is a "record," and what is a product, publication, custom report, custom map, a service, etc. A reasonable distinction must not erode the purposes of the open records laws — particularly the accountability of government (Roitman, 1988). A reasonable distinction must promote the agency to in turn promote enhanced access for the general public. Establishing an access policy based on these reasonable distinctions can act as a carrot to work with the stick represented by the open records law. An agency that unreasonably limits access to government records is subject to being hit with an open records suit. An agency that promotes broad use and creative new uses for the GIS may obtain funding for necessary system enhancements and staff that are necessary to provide the service.

The most easily defended policy for distributing products from a GIS at this time is far from the best. This would be to simply grant all requests for traditional textual material in raw printout or map form, or deliver a database "dump" on magnetic tape media when asked. Under this scenario, the agency would absorb the real costs of the exercise, and turn down all requests that don't fit a standard mode. Enhanced data, on-line access, and the most useful applications resulting from the spatial analysis made available by GIS technology are lost to the community.

A dilemma faces GIS managers who must respond to information requests through a strict interpretation of open records law. On the one hand, if the access request is analyzed exclusively under the open records law, and an exception category fits well enough to refuse access, the exception will not allow for subsequent sale or distribution of a wide range of potential GIS products. On the other hand, if the access request is met merely because no open records exception applies, then a precedent is established and no subsequent control is retained for similar requests in the future, no matter how burdensome or expensive they might prove to be.

Jurisdictions adopting the simple solution and treating all GIS access requests under the state's open records law are not serving the underlying utilitarian principles of the law as well as those seeking a reasonable distinction for identifiable products and services. They are also failing to adequately plan for the increase demand on these systems that will come with time. In the big picture, they are also not serving their taxpayers' financial interests as well, because they are missing the opportunity to distribute some of the costs to specific users, and limit the impact on the average taxpayer.

Those jurisdictions that are developing the distinctions between certain products and services and traditional records are finding the hidden carrot. They are finding themselves in an environment where it will be an advantage to promote outside access by educating the public as to the system's capabilities, marketing the existing applications to the commercial sector, looking for new applications and new products, and planning for staff and equipment to make broad access possible. They will retain the requisite control necessary to give priority to real records requests and to place governmental use ahead of commercial use of the system. They have increased the potential for financial survival of the GIS by spreading the tax burden in part to commercial users while providing more utility to the commercial users.

Given the state of the case law in most jurisdictions, an open records challenge to any distinctions between records and other kinds of products and services is likely to have a chilling effect on any proposed strategy to allow for cost recovery. However, a cautiously constructed policy should be able to avoid premature challenges until a course of conduct can be established, regulations formulated, and eventual statutory changes made with a more discriminating breakdown of what is a record and

what is not. The answer to an access request should be either "yes" (e.g., It is a public record and you may have it within three days) or "yes, but..." (e.g., It is a service/product we intend to provide, and you may have it, when we have time to produce it, for \$50). Not turning down any reasonable request is critical to avoiding open records challenges. This approach is most attractive and practical if the custodial agency decides to actively provide and sell access from the GIS from the beginning.

## SUMMARY

The creation of an institutional setting that will provide an appropriate organizational home for GIS technology requires more than a group of agencies that have enough funding to establish the initial configuration and database. GIS planners must consider access policy and the limitations and opportunities that the particular legal setting, equipment and database configuration, and demand for access provide. If access is to be controlled so as to allow reasonable use of the system by the custodial agency, some form of purse string control must evolve. The opportunity to spread the tax burden of establishing the system should not be lost by default. If government does exercise proprietary authority over GIS to establish user fees for access to the system, many corollary issues arise. To some extent, government must learn to operate as a private corporation and deal with marketing, liability disclaimers, and protections of proprietary value from third party commercial use.

Public agencies implementing GISs and the GIS managers who are overseeing their operation should take public access issues into account at the earliest possible implementation stage. Consideration of the following issues and tasks are recommended as significant aspects of any GIS operational plan:

- Establish support for distinguishing GIS products and services from public records by including house counsel or the agency records custodian in the GIS planning process
- Gain an understanding of known, probable, and potential GIS users, and a long-term perspective on the potential "market" for particular GIS products and services in the community.
- Develop a thorough understanding of the open records rules for the jurisdiction, and establish operating procedures and provide staff training to assure no abuse of records access will occur. Define particular products and services and liberally treat all unclassifiable requests as records requests.
- Develop an initial list of computer products and services based on past and projected requests for maps and special analysis from other public agencies and the private sector.
- Develop a schedule for product and service availability, and work with the identified major users in the development of required GIS applications.
- Based on local policy, make a decision about whether pricing GIS access is to achieve reasonable control over "outside use," or whether cost recovery is a major objective.
- Develop a fee structure for products and services based on the actual and estimated costs for the GIS over a defined time period
- Establish GIS on-line access or GIS product availability conditions by contract, subscription agreement, etc., with particular attention to disclaiming product liability or duty of care as appropriate
- Codify course of conduct for GIS access once a clear line between records and GIS products can be established: user fees, definitions of particular products and services, and user fee waivers or reductions (e.g., allowed for academic research, journalism, or non-profit use) should all be subjected to regulatory review processes
- Seek statutory modifications when clarifications in light of the impact of this new technology are merited: definition of "open records" (e.g., distinguishing information products and services, treatment of in-house and licensed computer programs, "value-added," etc.), express authority to establish the proprietary service with any public utility-like checks and balances desired by the legislative branch, and policy to support GIS access as a "state action" exception under the antitrust law provisions
- On the national level, join the debate over who controls the value



of information: should the capital investment of the taxpayers be spread through user fees, or should government turn this resource over to the segment of the private sector "information industry" currently making a bid for control at the federal level; will the copyright law or some other grant of federal rights suffice to protect proprietary rights in databases?

- Approach the institutional issues surrounding information sharing and the cost of the exercise early in the planning process with the participation of the highest level policy makers in the organization; the major opportunities and the major roadblocks to GIS implementation are at stake.

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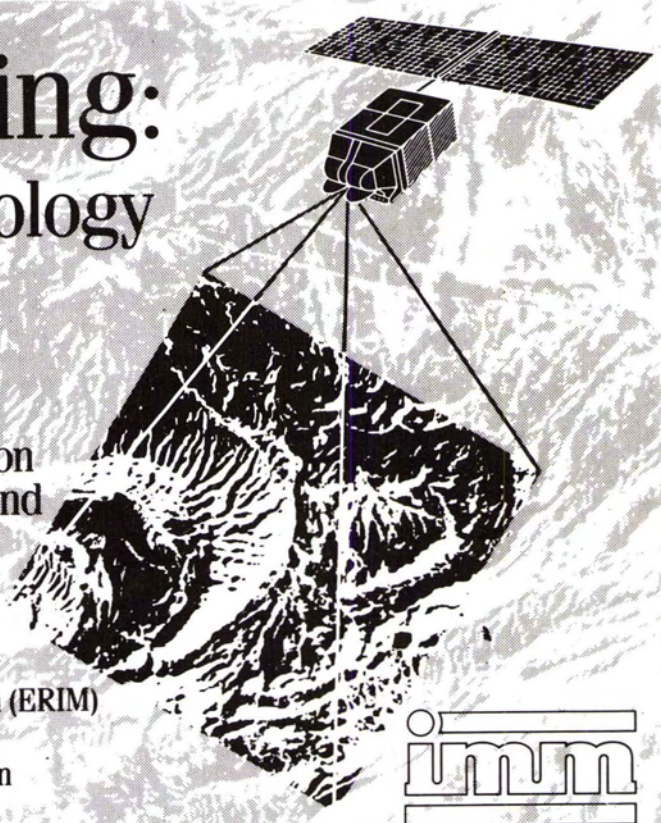
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