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lowAccess Project 8

Statewide Geographic Information Systems (GIS) Support

Construct the infrastructure needed for all levels of government, the educational sector, and the private sector to take full advantage of geographic information systems and related technologies.

Marty Adkins, Co-Chair

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Document #1

Document #2

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Document#4

Document #5

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Document #1

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Section I. Approach

Background Information

Geographic Information Systems (GIS) technology uses computers to organize and analyze complex data through digital mapping and tabular databases. The versatility and popularity of this tool is evident in the broad spectrum of applications demonstrated throughout the country – from tax assessing, crime mapping, natural resource management to public health services distribution. This is a tool that spans the urban/rural spectrum as to the value and educational opportunities it affords Iowans in both urban and rural sectors.

First used in Iowa's academic institutions in the mid-1970s, GIS has in the last ten years become an integral data management tool in private business and in state, city, county, and federal offices. The growth in the use of GIS and related technologies will be fueled, in part; by rapidly improving and lower cost GIS hardware and software. This growth in user numbers also creates an expanding number of potential cooperation and partnering opportunities between organizations (both in the public and private sectors). A wide range of social and economic impacts across these sectors is anticipated. While most of these impacts are positive, there are potential pitfalls that need to be mitigated for, including privacy, confidentiality, data ownership, and other issues.

The GIS Work Group of the Intergovernmental Information Technology & Telecommunications (IITT) Task Force studied issues related to the implementation of GIS technology in all levels of the public sector as well as the private sector.

Purpose

This project will design and implement a geospatial data infrastructure for Iowa, including a formalized coordination body, a coordination staff, an enhanced data clearinghouse, and a statewide GIS training and education effort.

To achieve this goal fiscal resources and technological expertise among the sectors will need to be shared, cooperative GIS training programs will need to be developed and guidelines regarding data format, access, and retention will need to be established and promoted. An important step toward achieving the widespread and efficient use of GIS in the public sector is improved coordination of resources among and within agencies at every governmental level. Some agencies would benefit from the establishment of a core staff that would oversee GIS implementation and expansion. Others will need to rely on formal and informal intergovernmental networks for technical support and coordination.

Project Goals

- Have a formalized GIS coordination mechanism in Iowa that is widely known about and effective. Develop an overall support network through which government agencies, educational institutions, and private companies can initiate and leverage their GIS-related efforts.
- Develop a more effective GIS coordination effort for Iowa that involves all relevant client groups.
- Hire an expert statewide GIS coordinator who can act as staff for the coordination body and act as an effective GIS champion.
- Enhance the existing Iowa GIS data clearinghouse to make it much richer in terms of data sets identified and in terms of functionality offered (jobs exchange, links to expertise, etc.).
- Work through government and trade associations to promote existing GIS standards, such as metadata standards. (Metadata are "data about data" or useful descriptions of how data were collected, their characteristics and their errors and weaknesses).
- Gain Federal (FGDC) recognition as a state cooperator organization and FGDC recognition of the clearinghouse.

- Develop an effective program for developing trained GIS experts throughout Iowa who can train others. Eventually develop a GIS "train the trainer" program.
- Involve citizens and potential GIS users in the process through a series of regional meetings.
- Find or develop educational materials that illustrate the benefits of GIS to potential users and citizens.
- Take full advantage of Internet technology to achieve all project goals.

Determining the client base for this program was relatively easy due to the existence of a twenty-five member GIS coordinating council whose members reflected a broad spectrum of both public and private sectors (see Document #1: *IGIC Membership*). Through the IGIC and citizens within the GIS Community, **objectives** to achieve the goal were identified:

- Develop and distribute a request for proposal (RFP) for hosting the enhanced GIS clearinghouse.
- Select a host for the GIS Clearinghouse and proceed with development.
- Determine a host agency for the GIS coordination staff.
- Develop a job description for the GIS coordinator.
- Develop an Executive Order formalizing the Iowa Geographic Information Council.
- Secure adequate funding to support the coordinator and clearinghouse.
- Identify potential training and educational sites and partners throughout Iowa. Use the GIS training facilities now in place or under development at the three Iowa Regents' universities and at community colleges where possible.
- Develop a "train the GIS trainers" effort.
- Develop an Iowa GIS CD-ROM that would contain public domain Iowa GIS data and software.

Input from the citizens on workplan initiatives was garnered through meetings and a statewide conference (October 6, 1997). The conference hosted more than 250 citizens, vendors and local-decision makers. Additionally, the IGIC had completed a Statewide GIS Strategic Plan in 1997 through which many citizens were able to provide input.

Early on a web site was developed in order to provide a means for the public to provide input and to learn of the developments of the coordinating GIS initiatives. Additionally, a list serve address was initiated to provide more direct information to the GIS Community. These means of communication bode well for encouraging a greater participation and help increase state, federal, county and local governments' efficiency by allowing staff to participate locally thus reducing travel costs and time away from work.

Needs Statement

Geographic information system (GIS) technology is a powerful tool for analysis and graphical display of data based on a combination of digital maps and tabular databases. It is extensively utilized for many purposes, ranging from law enforcement to natural resources management. The ultimate benefits of GIS use to citizens is illustrated by the case of New York City, which decreased street crime rates partly through the use of GIS-based crime mapping. The costs of GIS hardware and software have decreased to the point that barriers to use are now mainly in the areas of data development and training. This project is aimed at building networks and partnerships that will overcome those barriers.

In Coordinating GIS activities statewide, all sectors of government, educators, students, private citizens will be served. Specifically, workshops for educators and state agency staff will be offered on a quarterly basis. The Clearinghouse will allow not only allow the public with access to geospatial data but provide a tool that will afford the opportunity to do mapping interactively through the Internet. The Clearinghouse will post information on academic institutions that conduct classes on various topics that support GIS and related technologies. The Clearinghouse will host numerous other resources to enable the public to become more knowledgeable and aware of product, services and opportunities related to GIS and related technologies. The CDROM will provide the same tool mentioned above for those citizens and organizations without or with limited Internet capabilities.

Approach

Because of the diversity of the technology and broad knowledge base and accessibility issues, a multifaceted approach for coordinating GIS and related technologies identified through the public meetings with the GIS community. The development of the RFP for the Clearinghouse began in May of 1996 and the products and services that have evolved (listed below) will continue indefinitely. (Dates of delivery are indicated whenever applicable in the accomplishments listed below.)

Accomplishments

Develop and distribute and RFP for hosting the Iowa Geospatial Clearinghouse

The GIS Work Group developed an Request for Proposal that was distributed statewide. (See Document #2: *Request for Proposal*) The Request for Proposal developed by the GIS Work Group required the host to construct an infrastructure needed for all levels of government, the educational sector and the private sector to take full advantage of geographic information systems and related technologies. The means and method the Information Technology Services fulfilled required seven attributes of the RFP is as follows:

1. **A sustainable institutional and financial commitment to the development and maintenance of the Iowa Geospatial Clearinghouse.** ITS will devote 1.5 FTE to the project for the GIS Coordinator and .5 of the Clearinghouse Specialist positions. ITS staff helped purchase the hardware and software needed to support the Clearinghouse.
2. **The ability and willingness to provide access to other organizations and the public to the information in the IGC via the Internet and other appropriate means.** ITS has been the official Internet presence since 1994. ITS's partnership with the ICN ensures large bandwidth which will help accommodate and facilitate training and other services currently unavailable to Iowa citizens. This connectivity further allows city; county, state and federal government offices in remote areas ready access to geospatial data and services. ITS has shown willingness to work with GIS Coordinator in pursuing the use of the ICN as a Wide-Area Network (WAN) for the serving of county geospatial data to Iowans statewide.
3. **The ability and willingness to conduct a regular program of information and education to individuals and organizations that use or contribute to the IGC.** ITS regularly conducts multi-level classes and seminars for mainly state agency staff but are fully capable to conduct training via the ICN on GIS and related technologies.
4. **Knowledge of GIS standards and protocols.** ITS has been charged by the Governor to develop standards and best practices for emerging technologies. ITS will work with the GIS Coordinator and IGIC to develop these standards and protocol that best suit the needs of Iowa's GIS Community. She participates in the review of current and proposed standards, including metadata. Ms. Peton is formulizing several enterprise initiatives with contiguous states regarding the creation and use of GIS standards. A standards committee within the IGIC will provide input on the minimal metadata standard acceptable for distribution through the Geospatial Clearinghouse.
5. **Experience in maintenance and distribution of information.** ITS has the experience along with the GIS Coordinator in designing clearinghouse of distributed GIS databases and services. ITS administration and staff often act as service centers for improved access for both state agencies and the public.
6. **A current status as, or commitment to become, a cooperater with the Federal Geographic Data Committee (FGDC).** Ms. Peton has initiated a partnership with the FGDC. A status of State Cooperator will be formally applied for after the first of the year. In the development of the Clearinghouse, compliance to Z39.50 will be sought.
7. **An ability and willingness to work cooperatively with the Iowa Geographic Information Council (IGIC) and its Coordinator.** Housing and ITS staff support Ms. Peton and Ms Lantermans and will continue. Conference, workshops and seminars that ITS participates in will have a GIS component at which Ms. Peton will represent Iowa's GIS Community as well as the State.

Determine a host for the GIS Coordination staff

The Iowa Office of Information Technology Services (ITS) was selected by the Project Team (following the use of a formal solicitation and evaluation process) as the host organization for the State GIS Coordinator. After a competition involving an RFP, formal proposals and presentations, ITS was also selected to be the clearinghouse host. ITS was deemed by the Project team and its subcommittees to be the organization best-suited to perform both functions. Having both functions hosted by the same organization was also considered to create important synergies

Develop a job description for the GIS Coordinator and hire

Supporting documents discovered that hiring a GIS Coordinator to "champion" the causes for statewide efforts was vital to the success and continuation of efforts initiated through Project 8. The GIS Work Team developed a job description (See Document #3: *Geographic Information Systems (GIS) Coordinator*). An exhaustive search was conducted by the Information Technology Services agency through internal as well as external means (Internet GIS job clearinghouses, contiguous states web sites, etc.) Applications received were reviewed based on evaluation criteria. Once the telephone interviews were completed, the top two finalist were determined and were invited to Des Moines for a personal interview with members of the IGIC in December. With the interviews complete, Ms. Ann K. Peton was offered the position on December 26th, 1997. She started her work on Coordinating GIS initiatives on February 16th, 1998.

Within Information Technology Services, Iowa Geospatial Information Clearinghouse proposal was the identification of a 1.5 FTE for the GIS Coordinator and Clearinghouse Specialist. Plans for the second staff began immediately after Ms. Peton came onboard at ITS. Due to the high level of technical skill required for this position, external hiring mechanisms were employed with 18 applicants. A short list of six qualified applicants were interviewed during the month of June by Ms. Peton, Kevin Kane (Iowa State University's GIS Coordinator) Todd Bishop (a DNR GIS Coordinator) and Steve Zimmerman (EMD Project Manager). The job was offered and accepted by Ms. Michelle Lantermans on July 7 with Ms. Lantermans starting on July 23, 1998. With her primary responsibility to deploy and support Clearinghouse activities, a short list of her initial duties is described in Document #4: *GIS Clearinghouse Specialist Task*. Being that this position was funded in part by ITS, Ms. Peton has ascertained continued funding for this position through a Federal Emergency Management Agency (FEMA) funded grant project beginning October 1998.

Develop an Executive Order formalizing the IGIC

Through a series of open meetings, an Executive Order was drafted to formalize the IGIC and detail its structure and role in statewide GIS activities. With a little persuasion on the part of the GIS Coordinator, Executive Order No. 65 became official on May 5th, 1998 (See *Blue Folder*). This event was culminated with twenty-three members (and other Information Technology Services staff) met with Governor Branstad for a photo as he signed the Executive Order.

With the Executive Order in place, the formalized IGIC immediately met to establish subcommittees to start addressing issues to help coordinate GIS activities in Iowa. Details on the committees, their purpose and membership are contained on Document #5: *Iowa Geographic Information Council Subcommittees*

Within two months of the signing of Exec. Order No. 65, the IGIC had established a set of by-laws that were ratified and adopted at the August 5th, 1998 meeting. (See Document #6: *Iowa Geographic Information Council By-Laws*)

All IGIC meetings are conducted through the ICN to encourage intergovernmental input. The agenda and minutes are posted on the Iowa Geospatial Clearinghouse, too.

Secure adequate funding to support the coordinator and clearinghouse

ITS's Clearinghouse proposal provides for 1.5 FTE for the GIS Coordinator and partial funding of the Clearinghouse Specialist position. An agreement between the Emergency Management Division and ITS has been made that will provide additional funding for .5 FTE for the Clearinghouse Specialist position starting October 1998 for at least three years. The IGIC is aware of the need for planning for the

replacement cost of the server. Ms. Peton will be tasked as well to investigate federal funds that could be utilized in the future to replace the clearinghouse when necessary.

Identify potential training and educational sites and partners throughout Iowa

Through the IGIC Educator's Committee and through interaction with the GIS Community the type and need for GIS and GPS training have been determined. Additionally, a questionnaire was distributed to 850 state employees to determine their training interest. Ms. Lantermans is a certified GIS instructor. All of the major GIS software vendors have agreed to allow Ms. Lantermans to conduct GIS training either locally or through the ICN. Vendors that provide their own GIS training will be identified on the Clearinghouse, too.

Develop and implement a "train the GIS trainers" effort

The vendor selected to provide GIS training statewide was the Iowa State University (ISU) Extension Service, in particular Extension to Communities. ISU Extension has a long and distinguished history in Iowa of working on educational and technology transfer projects with key target groups such as the Iowa League of Cities, the Iowa Association of Counties, and the Iowa Association of Municipal Utilities. All of these groups ended up co-sponsoring the series of GIS workshops entitled "Putting Information to Work" held at 12 Iowa Communications Network (ICN) sites around the state in September 1998. Experts on legal and techniques common to GIS will be discussed as well as demonstration of several of Iowa's successful GIS applications. Several technical documents were developed by Ms. Lantermans in support of this workshop that will be provided to the participants along with the book Zeroing In: GIS Applications at Work in the Community

Develop an Iowa GIS CD-ROM that would contain public domain Iowa GIS data and software

This form of media was chosen in order to provide access to Iowans that didn't have Internet capability or had slower speed Internet capabilities making the use of the Clearinghouse's interactive mapping tool cumbersome. In addition to statewide geospatial data, a portion of Blackhawk counties specific GIS data will be included to give the users an appreciation of smaller scale product and its applications. The user will be walked through several suggested applications that will demonstrate the versatility of GIS. 5,000 copies of this CDROM will be distributed to various academic settings, public libraries, state agencies, regional planning organizations, and the legislature and Iowa citizens.

Additional deliverables created to support Coordinated GIS in Iowa

Metadata Initiative - Assist five counties/cities (Polk, Blackhawk, Emmet, Johnson and Story Counties and Iowa Falls, Dennison and Davenport) in the development of FGDC compliant metadata and other "value-added" applications for their GIS data. An additional service of hosting their data and/or metadata on Iowa's Geospatial Clearinghouse will be offered to each of the participants. In this way, citizens can have access to information they previously didn't have access to which will ultimately result in improve government services. Ms. Peton and Ms. Lantermans will encourage them to develop enterprise initiatives within their own community taking them "beyond the box" in their mentality toward GIS and related technologies. Through this "train the trainer" program, they will be required to partner with another similarly sized community/county to share their experience and "lessons learned".

Iowa's Geospatial Clearinghouse (IGC) - The IGIC Clearinghouse committee provides guidance to Ms. Peton on all components of the IGC. Primarily viewed as a "one-stop shop" for geospatial data and services, the sites currently hosts a static set of the most complete set of Iowa's geospatial data and "points" to the Department of Natural Resources web site should a user want to "download" in a format other than shapefiles. Once the infrastructure for a more dynamic link to occur, the switch will be made without "down time" for the user. Because most issues don't recognize state borders, links to our contiguous states' geospatial clearinghouse is provided, too. One of the goals is to afford the user the ability to query all data based upon feature type (e.g. river, roadway, tree type, soil type, etc.) with a simple one-phase query. In order for this to be

accomplished, much work will need to be done to make all of the metadata (i.e. data dictionary) unique as possible. Until such time, the user can view geospatial data they are interested in interactively through their web browser. In creating the Internet Interactive Mapping Tool, all users can make view the data first prior to actually downloading in order to determine if the data provided enough information and/or accuracy needed by the user. This helps eliminate wasted time, efforts and costs associated with downloading data through an Internet connection that is "slow".

Identify 50 additional technical resources that can be used for consulting – At this juncture, there are not 50 additional technical resources that can provide consulting in Iowa. Those that were found will be listed on the web site under GIS/GPS Resources. New sources as they are identified will be added to the web site and provided in the GIS Resource Guide being planned for development in the spring of 1999.

Increased outreach to policy makers and general public – Through both personal and telephone conversations, Ms. Peton has met this goal. A broad GIS community has been built up in Iowa over the past four years by the Iowa Geographic Information Council. Based on its mailing list, up to 800 persons in Iowa are now involved from the Federal, state, local, educational, and private sectors. GIS service companies and vendors are also involved. The IGIC publishes a quarterly newsletter, which has a broad distribution. It also operates a World Wide Web (WWW) site and an Internet electronic mailing list (igic@iastate.edu).

GIS Resource Manual – Sources of GIS and GPS software and hardware, Service providers, useful Internet sites, description of existing GIS applications in Iowa, academic institutions with GIS/GPS classes, members of the IGIC, federal and state agencies contacts, information about remote sensing sources, upcoming workshops and conferences.

GIS Resource Library – Books and manuals on GIS and related technologies, applications and curriculum are available for checkout through ITS. The purpose of the GIS Resource Library was to provide resources to county and local government unable to afford or just starting a GIS program. This outreach resource will be marketed through Association of Counties, League of Cities and community colleges.

Section II – Cost/Benefit Analysis

Timeframe for the Project

- RFP was developed and distributed for the Clearinghouse in May, 1997.
- In March, planning sessions began with ISU Extension to deliver the statewide GIS training program via the ICN in the Fall of 1998.
- GIS Coordinator's job description was developed and the search began August, 1997
- The state GIS Coordinator, Ann Peton, was hired in very early 1998 and was on board at ITS on February 16.
- The Executive Order was signed by Governor Branstad in May 1998 and was presented in an official ceremony to IGIC on July 2, 1998.
- A GIS Specialist, Michelle Lantermans, was hired during the July 27, 1998 and is mainly responsible for developing the on-line clearinghouse.
- Also in May, the IGIC and Project 8 Team held a formal retreat at the STARC Armory in Johnston to map out the work plan for the Coordinator and Specialist for the coming year (1998/1999). At this meeting, the IGIC also established the standing committees needed to guide Project 8 into the future and deal with such issues as metadata development, training and standards promotion.
- The Framework Survey of GIS users was conducted and compiled during Spring and Summer of 1998.
- A pilot version of the clearinghouse came on line in August 1998 for public consumption.
- The CD-ROM, which will contain Iowa GIS data and software needed for potential GIS users to explore the use of the technology will be distributed in September.

- The Statewide GIS training sessions coordinated by ISU Extension will be held and evaluated on September 28 & 30, 1998.

Planning for Coordinating statewide GIS activities has been going on since the initial meeting of the IGIC in May of 1994. Through over a dozen meetings, the IGIC garnered input from technical and administrative staff on the planning/implementation/evaluation of statewide GIS issues and activities. Implementing the deliverables began May 1, 1997 through the GIS Team. Once Ms. Peton was on board, products and services such as the clearinghouse and training became the focus of activity. Because of the dynamic nature of GIS/GPS technologies many opportunities exist and are being planned for expansion of products and services for Iowans. Ms. Peton with input from the IGIC is working with IowAccess, Inc. in the marketing of these products and services.

Project Expenditures

See Document #8: *IowAccess Project 8 – Coordinated GIS Budget*

Ongoing Costs

Training and other educational activities will be covered through attendance fees. As mentioned before, the IGIC and Ms. Peton are addressing clearinghouse replacement costs. The creation of additional products will be paid for through grants obtained through federal and/or state sources. Several sources are available: Federal Geographic Data Committee, Environmental Protection Agency (EPA), Federal Emergency Management Agency (FEMA). Ms. Peton in conjunction with the IGIC will be working toward establishing partnerships with the private sector to help offset costs, too. For example, the GPS Subcommittee has requested that Ms. Peton conducted an independent study of the state's real-time differential coverage for use in precision agriculture and surveying applications. The private sector has already expressed interest in financially supporting this effort.

Project Benefits

- GIS development will be better coordinated in Iowa, which will allow development, data, and training resources to be leveraged. The costs saving for training are significant. Currently, GIS training costs \$750 per student for a basic class (excluding travel costs). Having in-house expertise and being able to conduct training via the ICN will save approximately \$268,500.00 (2 staff per AEA, COG, County, State Agency, Academic (20))
- There will be easier and quicker adoption of GIS technology by Federal, state, local, education, and private organizations.
- There will be more, better quality information available for decision-making and other uses in government, education, and the private sector. Through the Geospatial Clearinghouse, data and services will be available that they won't have to generate themselves. This is a costs savings in staff time reaching for this same information of approximately \$27,000.00
- More GIS partnerships will be put in place. There will be better integration of data among agencies at various levels of government. Data development costs can be very high depending on the level of accuracy and availability of source material. More data will be shared, reducing the cost of GIS data development.
- More GIS expertise will be shared, reducing the cost of GIS development. Avoidance costs for having to hiring or contract for GIS planning and development can potentially be reduced with decision-makers and staff becoming more familiar with the technology. County that currently uses GIS service providers collectively spend \$250,000.00 annually on maintenance of GIS data. Over time, this amount will be reduced. Counties in the process of developing programs can achieve a higher degree of in-house technical expertise that will allow them to avoid spending money on maintenance costs of about \$50,000.00.
- GIS data and expertise will be widely accessible via the Internet. The Interactive Mapping Tool on the Geospatial Clearinghouse allows the public to do limited mapping on the Internet without having to purchase software. They can either use the tool to help with decision making or make a map to print

out in their office to use. The public can download the data in a format that allows them to use FREE GIS software on their own PC. Estimate that 500 users a year will take advantage of the Clearinghouse's service, the avoidance costs will be \$1,200 per individual or \$600,000.00

- Areas of the state unable to afford Internet access are still able to participate in GIS activities through the outreach educational programs and Iowa's Geospatial Data Interactive CDROM.
- Having a State GIS Coordinator to focus activities for all levels of government, public and private sectors has short and long term benefits.
- Educational efforts and training activities that are coordinated statewide can reduce duplication of effort and costs.
- More Iowa agencies and businesses will become aware of GIS technology and its potential uses.
- Cost savings to state/local government and citizens due to improved data access, better planning and decision-making through the use of GIS is estimated to upwards of \$500,000.00 annually.

Intangible benefits are often difficult to realize in the short term. Bringing an awareness of the use of GIS and related technologies to the public through statewide coordination was the main intent of this project. In doing this, many Iowans and organizations will see a costs savings. There have been several situations where money was saved because the State GIS Coordinator was able to get educational information from vendor free. CDROM's and educational books valuing \$25,000 have been donated.

Blackhawk County requested the Ms. Peton to help in the selection of a GIS coordinator and even interviewed potential candidates. Due to the lack of knowledge of their staff and concern about compliance with statewide GIS activities, they requested that Ms. Peton review their GIS Service contract. Because of her comments, several thousands of dollars were saved as well as the services that the county really needed was more succinctly stipulated in the final contract. The benefit to the staff and future applications of this information are hard to measure but are sure to be noticed.

Section III – Evaluation

Evaluation Criteria

- Formalization of the Iowa Geographic Information Council through Executive Order.
- The GIS Coordinator is employed and is actively promoting GIS to a variety of audiences.
- Number of public agencies and private companies aware of GIS technology.
- Number of "hits" on IGIC and clearinghouse sites.
- Number of individuals completing GIS training courses sponsored through the project.
- Number of attendees at regional information meetings and their evaluations of those meetings.

Evaluation Results

- Iowa Executive Order No. 65 was signed by Governor Branstad in May of 1998, creating official status for the Iowa Geographic Information Council. Since the signing, the IGIC has adopted formal bylaws, held its first official quarterly meeting, elected officers for 1998/1999,
- The GIS Coordinator has been employed and has been busy making contacts with a large number of potential GIS users throughout Iowa. Ms. Peton has made presentations at three national conferences, three regional, seven state agency and thirteen county/local organizations.
- An extensive, computerized survey of Iowa GIS public and private sector users (the FGDC Framework Survey) and the data being created and maintain has been completed and a 70 percent response rate realized in Iowa. This survey provides a valuable baseline of information about the extent of GIS use and interest in Iowa as of 1998. The results of this survey will be provided through the Clearinghouse in a manner that will allow users to determine similarities and varieties of applications and contact names. The survey was conducted from March to July of 1998.
- 5,000 copies of Iowa's Interactive Mapping CD-ROM will be distributed to schools, libraries, citizens and private/sectors organizations throughout Iowa.

- The GIS Clearinghouse officially came on-line September 11, 1998 and was "hit" by about 850 users in the first week.
- A formal evaluation by the 200 plus participants of the Local Decision-Makers GIS seminar will be completed at the conclusion of those sessions in September 1998.

The IGIC has requested a quarterly report of activities from Ms. Peton. (See Document #8: *Allocation of Work*). This was presented at the August 5, 1998 IGIC meeting and met with favorable response. Since Ms. Peton is an employee of the state, Mr. Stuart McDaniel, her direct supervisor has performed a six-month review, too. This document is available upon request only.

A stumbling block for Iowans considering starting or enhancing their GIS programs has been the lack of local technical expertise. To remedy this, Ms. Lantermans is available to provide limited technical telephone support. Additionally, summations of GIS software problem resolutions will be posted on the Clearinghouse by vendor. In this manner, the public can find the solutions to some of their problems without cost for a technical expert or long-distanced telephone call.

Coordinating and providing technical support to Iowans has raised the awareness of GIS and related technologies tremendously. This can be seen in the increase number of local, county and state agency either purchasing GIS software or by attending academic institutions. A testament to this would be the two hundred (plus) enrollees for the upcoming Local-Decision Makers workshop.

Section IV – Future Plans – Conclusions & Recommendations

Sustainability

This existence of the Iowa Geographic Information Council (IGIC) charged with coordinating GIS activities statewide was ratified through Executive Order No. 65 (See Document #9: Executive Order No. 65). Having the Governor recognize the need for Coordinating GIS statewide, bodes well for the need for sustaining this program.

New or enhancement of current GIS or related technologies initiatives will depend upon input from the Iowa GIS Community. Possible sources of future funding include small Federal grants (through the FGDC), state appropriations, agency contributions, and proceeds from value-added activities (conferences, training courses, workshops, value-added data sets). The Iowa Office of Information Technology Services has agreed to sustain the GIS Coordinator position into the future, which is the single largest ongoing expenditure item. The Specialist position will be maintained partly by ITS and partly through project work for other state and local agencies.

Expansion

Training will be expanded on a "pay as you go" basis. Various courses on GIS and related technologies will be coordinated through Ms. Peton and Ms. Lantermans in conjunction with the GIS community. The IGIC has as one of their five year goals, to expand the services of the Geospatial Clearinghouse through the ICN to counties that want to serve their geospatial data to the public but can't afford required firewall protection. Considering this service is based upon the ability of the county government to educate their public through the use of GIS, we feel that this may become a reality. Currently Polk county is in the process of finalizing a MOU with the City of Des Moines that may ultimately allow Iowa's Geospatial Clearinghouse to be able to serve Polk County's GIS data.

The functionality and services of the Geospatial Clearinghouse will scale up over time as the GIS community request additional services. An example of this would be the development of a interactive mapping application specifically for teachers. During class, teachers could connect to the Geospatial Clearinghouse via the Internet and demonstrate predefined data and applications that were developed by the Clearinghouse staff. The costs of this type of service would be absorbed by ITS.

The number of active participants in the IGIC and its subcommittee will be increased through the various activities accomplished through this project. Additionally, through the 1999 Conference and through various training and workshops, GIS users willing to help support IGIC initiatives will be identified.

Maintenance

Maintenance costs associated with the clearinghouse and its software will be the responsibility of ITS. The 1.5 FTE and fringe benefit will be absorbed by ITS, too. There have been discussions between IGIC and ITS on methods for distributing this costs among IGIC members. The potential for offset will be pursued in grant proposals, too.

Ms. Lantermans will maintain the Geospatial Clearinghouse. The frequency of updates for data will not be directed by either Ms. Peton or IGIC but determined by the data originator.

Intergovernmental & Citizen Focus

Over eighty percent of Iowa's counties have some type of method to improve their ability to assess taxes that involves GIS. With this in mind, the IGIC and Polk County are sponsoring a workshop in October to encourage the sharing of information on standards, practices, funding and accuracy among both the technical and administrator level staff. This type of intergovernmental workshop will help to encourage enterprise efforts within Iowa's communities and counties and the private sector that directly benefits from this type of information.

The IGIC and its subcommittee meetings will continue to be offered via the ICN. Frequently, citizens provide input to either the council members or Ms. Peton or Ms. Lantermans through email or telephone on statewide GIS activities to pursue. The IGIC is required through its by-laws to participate in meetings and garner input from the GIS community on statewide GIS issues.

The 1999 Iowa GIS User's Conference will focus on applications through Iowa that encourage intergovernmental initiatives. Citizens will attend this conference and benefit from the training offered, too.

Standards for GIS information development, exchange, and interpretation already exist through the Federal Geographic Data Committee (FGDC) and within state governments (e.g. Kansas, Missouri, and Illinois). State government should have a role in the oversight of GIS standards use in Iowa. The use of these standards will be important as more information is developed and used by growing numbers of entities.

Public Awareness

In future years the IGIS, ITS, and the GIS Coordinator plan on continuing an extensive marketing and public awareness program regarding GIS and related technologies. The Coordinator will continue her outreach activities in cooperation with the IGIC. More aggressive use of association publications and conferences put on by associations will help the "GIS message" to get out to key audiences.

Ms. Peton and Ms. Lantermans will showcase the product and services to both the public and private sectors through a "traveling show" during the months of October, November and December. The intent is to advertise with a press release in local newspapers in an area based upon the Council of Government's boundaries. For the COG's services of coordinating the event, we will offer GIS software training and educational materials that they can use to create their own GIS Resource Library.

Ms. Peton has developed a presentation that showcases Iowa's GIS initiatives (See Document #7: Coordinated GIS). This is one of a dozen presentations that have been developed by Ms. Peton for use in presenting to state, local, county and federal organizations. Additionally, a modular display unit was purchased to display maps that also demonstrate Iowa's GIS applications. Ms. Peton has made presentations at three national conferences, three regional, seven state agency and thirteen county/local organizations.

Evaluations

In order to keep abreast of the effectiveness of our training, each course will have an evaluation form that will be offered for review to the IGIC. The 1999 GIS User's Conference will have an elaborate evaluation form as well that will provide additional insight on Iowans needs as they relate to GIS and related technologies.

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State of Iowa
Executive Department

IN THE NAME AND BY THE AUTHORITY OF THE STATE OF IOWA

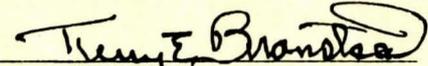
EXECUTIVE ORDER NUMBER 65

- WHEREAS,** the State of Iowa is a large geographic region including both finite and renewable resources, diverse economic activities; valuable public and private infrastructure, numerous business firms and government organizations, and a diverse population; and
- WHEREAS,** the management of geographic information about the character and location of the state's natural, physical, economic, and cultural resources and human activity is becoming more important to both the public and private sectors; and
- WHEREAS,** there are various spatial information technologies available to assist Iowa businesses and organizations meet their various and unique information needs; and
- WHEREAS,** there are various governmental, business, and educational users of spatial data technologies who would benefit from data sharing, coordination of technology development activities, the development of common standards and conventions, and educational activities; and
- WHEREAS,** there is a need to coordinate the various activities in geographic information systems (GIS) and related technologies in order to better exchange and share information and to enhance the stewardship of geographic information in the management of public resources; and
- WHEREAS,** the current Iowa Geographic Information Council, a volunteer organization, has been involved in a variety of educational, communications, and information sharing activities but lacks the explicit authority to recommend policies, guidelines, and standards; and
- WHEREAS,** there is a need to recommend policies, guidelines, and standards to the Office of Information Technology Services and other units of government for developing and sharing geographic information; and
- WHEREAS,** there is a need to avoid duplication of effort so as to reduce the costs that would otherwise be involved if each organization developed its own GIS and related capabilities independently; and
- WHEREAS,** there is a need to establish a formal forum in order to discuss, debate, and decide general issues related to geographic information; and
- WHEREAS,** there is a need to establish a formal forum in order to discuss, debate, and issue guidelines on confidentiality and privacy issues related to geographic information; and
- WHEREAS,** there is a need to prioritize and schedule the development of public-funded data programs, define the roles and responsibilities of data stewardship, and formulate policies for the access, distribution, and pricing of data; and

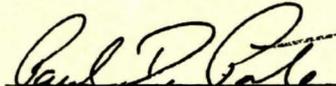
- WHEREAS,** there is a need to support the ongoing development of a geographic information clearinghouse in order to foster the sharing of geographic data; and
- WHEREAS,** there is a need to provide education, training, and support for users of geographic information to support the better management of public resources.
- NOW, THEREFORE,** I, Terry E. Branstad, Governor of the State of Iowa, by the virtue of the authority vested in me by the Laws and Constitution of the State of Iowa, do hereby order that:
1. The Iowa Geographic Information Council (hereinafter referred to as IGIC) shall be formally established.
 2. The members of the IGIC shall be appointed by the Director of the Office of Information Technology Services from nominations received from the existing IGIC. The IGIC shall be composed of members with knowledge and interest in the GIS field representing state government, federal government, city government, county government, regional and metropolitan planning, universities and private colleges, community colleges, and GIS user(s) in the private sector.
 3. The IGIC shall formulate and adopt a charter and bylaws delineating its operation, elections and formation of topical subcommittees.
 4. The IGIC shall receive administrative staff support from the Office of Information Technology Services.
 5. The IGIC shall prepare an annual report to the Governor by June 30th of each year to be submitted to the Director of the Office of Information Technology Services describing accomplishments from the previous year and recommendations for the future.
 6. The annual report due on June 30, 1998, shall include recommendations with respect to the future organizational structure of the IGIC and detailed recommendations in the form of a plan for addressing the needs described in this Executive Order.
 7. Policies, guidelines, standards and conventions developed by the IGIC shall be widely distributed throughout Iowa for discussion and shall be recommended for implementation through the Office of Technology Services and other organizations as appropriate.



IN TESTIMONY WHEREOF, I have hereunto subscribed my name and caused the Great Seal of the State of Iowa to be affixed. Done at Des Moines this twentieth day of May in the year of our Lord one thousand nine hundred and ninety-eight.


GOVERNOR

ATTEST:


SECRETARY OF STATE

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Iowa Geographic Information Council Members (August 1998)

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GIS Support and Research Facility Lab
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Secretary

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Des Moines Area Metropolitan Planning
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REQUEST FOR PROPOSALS

HOST INSTITUTION FOR AN ENHANCED IOWA GEOSPATIAL CLEARINGHOUSE

The Iowa Geographic Information Council (IGIC), in cooperation with the Iowa Intergovernmental Information Technology and Telecommunications Task Force (IITT), is soliciting proposals for the long-term housing and maintenance of an expanded Iowa Geospatial Clearinghouse (IGC).

The IGC is envisioned as the primary coordination site for geospatial data and metadata from all cooperating public and private organizations located or working in Iowa. The IGC will be recognized by all member organizations of the IGIC as the authorized contact point for geospatial information in Iowa.

Host Organization Roles and Attributes

The selected host will not necessarily house all the information managed by the IGC. The selected host will *manage access* to the information via the Internet, memorandums of agreement, and any other necessary technical, physical, or administrative means.

The selected host will demonstrate the following attributes:

- A sustainable institutional and financial commitment to the development and maintenance of the IGC.
- The ability and willingness to provide access to other organizations and the public to the information in the IGC via the Internet and other appropriate means.
- The ability and willingness to conduct a regular program of information and education to individuals and organizations that use or contribute to the IGC.
- Knowledge of geographic information system (GIS) standards and protocols.
- Previous experience in the maintenance and distribution of information.
- A current status as, or commitment to become, a cooperator with the Federal Geospatial Data Clearinghouse.
- An ability and willingness to work cooperatively with the Iowa Geographic Information Council and its Coordinator.

The selected host will work with the IITT GIS Project Implementation Team to establish the IGC. The IITT GIS Project Implementation Team has a limited amount of funding available to aid in the establishment of the IGC. Prospective host proposals should discuss the ways in which the host's resources will be used to supplement IITT funds for the establishment of the IGC, and its plans for financially supporting the IGC after its establishment.

Submitting Proposals

Institutions, organizations and agencies in Iowa that are interested in hosting the IGC should submit by mail or fax proposals by **July 1, 1997** to:

IITT GIS Project Implementation Team
c/o David Plazak
Center for Transportation Research and Education
Iowa State University Research Park
2625 N. Loop Drive, Suite 2100
Ames, IA 50010-8615
Fax (515) 294-0467

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Proposal Contents

Proposals should specifically address the ways in which the prospective host possesses the attributes listed above. Proposals should also provide a budget for IGC establishment that includes estimated contributions provided by the prospective host and by the IITT GIS Project Implementation Team. Proposals should also discuss the prospective host's plans for long-term financial and institutional support. It is anticipated that a host institution will be selected by August 1, 1997 and an agreement will be negotiated shortly thereafter.

Contacts

Questions in regard to this request for proposals may be directed to David Plazak at (515) 294-8103 (e-mail dplazak@iastate.edu), Martin Adkins at (515) 284-4135 (e-mail marty.adkins@ia.nrcs.usda.gov) or David Arringdale (e-mail darring@max.state.ia.us) at 515-281-5343.

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GEOGRAPHIC INFORMATION SYSTEMS (GIS) COORDINATOR

GEOGRAPHIC INFORMATION SYSTEMS COORDINATOR – Executive Officer 4
Information Technology Services, Des Moines, IA
Salary Range :

QUALIFICATIONS. Requires graduation from an accredited four year college or university (or equivalent experience) and the equivalent of six years full-time professional level experience such as program administration development, management or operations. Twenty-four hours of graduate level coursework in a related area may be substituted for each year of the required experience to a maximum substitution of two years. Three years of professional level GIS experience is preferred. GIS experience should be in the area of GIS systems planning, design, development, management, research and or GIS applications development. Five years of data processing experience including mainframe, microcomputer and LAN applications is preferred. Two years relational database programming, applications development and usage preferred. Experience with Internet concepts and layout is desirable. Membership and or working relationship in National, State, and locally affiliated GIS organizations preferred.

RESPONSIBILITIES.

The Geographic Information Systems Coordinator is responsible for managing, maintaining, and overseeing the Iowa GIS Clearinghouse (IGC). Job functions require a considerable amount of independent work as well some coordinated team work with selective ITS personnel whose responsibilities interrelate with successful implementation of the infrastructure development project phase, ability to communicate and relate with others, including other departments, agencies, organizations and the general public, and a strong familiarity with GIS, software, computer systems, databases, and concepts.

TASKS INCLUDE:

Coordinate the overall development, implementation and maintenance of ongoing geospatial information infrastructure for Iowa .

- 1) Coordinate intergovernmental and private sector GIS development.
- 2) Coordinate the development of access metadata and geospatial information delivery systems through Internet and other viable information resources.
- 3) Provide access to metadata and geospatial information to the public and to participant and contributing Iowa based organizations.
- 4) Provide a program of GIS information and training and coordinate multilevel GIS Education in Iowa.
- 5) Establish and maintain Federal, state, local and other linkages such as FDGC, NSGIC, IGIC, CIAM, etc., to enhance the development of the

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GIS Infrastructure for Iowa.

- 6) Develop and implement a plan to promote and market GIS opportunities to the public and private sectors of Iowa.
- 7) Develop collaborative relationships with libraries, universities, associations and public and private sectors.

Encourage and promote compliance with GIS standards and protocols including documentation of standard metadata format.

Develop an inventory system to provide metadata regarding geospatial information availability.

Develop strategies for long term financial support and serve as liaison for IGC in enablement of long term support.

Required Knowledge, Skills, And Abilities

Mainframe, microcomputer, LAN, and Internet usage and application experience is required.

Knowledge of GIS terminology, standards, and protocols is required.

Knowledge and experience with Geographic Information Systems including GIS software, hardware; usage and applications, is required.

Experience in accessing geospatial information and databases and their integration is required.

Experience in coordinating and conducting GIS training and workshops is required.

Experience in working with appropriate Federal, State, and local organizations with which GIS linkages will be established is highly desirable.

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GIS Coordinator Job Description Ideas

General Requirements

- Excellent people skills and communications skills
- Ability to market
- Ability to build networks of people

Technical Requirements

- Technical requirements are of less importance than general requirements
- Good working knowledge of GIS, GPS, and related technologies (digital orthophotos, remote sensing, etc.)
- Some hands-on experience with common GIS packages
- Good working knowledge of the Internet (e-mail, WWW, FTP)

Job Duties

- Job duties must be measurable especially in Year 1
- Main orientations should be:
 1. Building up awareness of GIS and related technologies, especially in local and state government, through outreach
 2. Helping increase GIS use around Iowa
 3. Being a catalyst to help spur cooperative GIS intergovernmental efforts
 4. Getting an idea of where and how GIS is used in Iowa (e.g. GIS contacts and expertise database)
 5. Working closely with the Clearinghouse developer to get it populated and known
 6. Building up participation in the IGIC, especially among local governments and the private sector
- Job tasks should be assigned jointly by ITS (supervisor) and IGIC Steering Committee

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**GIS Clearinghouse Specialist Task
July 23, 1998**

This document is based upon the original geospatial clearinghouse proposal and current IGIC activities.

Task Description	Priority
Update Project 8/IGIC web site	2
Work with Matt on web page	1
Work with Jeff on Interactive Mapping tool modifications	2
Review metadata tool (Enabling Technology) provided by CTRE for use in statewide metadata service	1
Determine metadata tool with IGIC	2
Order hardware	1
Training on Integraph's GeoMedia with DOT	1
Polk County ICN link	2
Identify three additional counties (Polk, Blackhawk already identified) for pilot project*	1
Use the National Spatial Data Infrastructure survey result to establish additional GIS applications, data, educational opportunities and resources	3
Work with DNR GIS on editing the metadata for the shapefiles being served	3
Investigate single data type library/querying tools for future clearinghouse development	3
Develop and conduct presentations about the GIS clearinghouse	2
Develop a list of technical resources that can be used for consulting (GIS, GPS, remote sensing, DOQ development, planning, etc.) so that it can be added to the clearinghouse	2
From both the NSDI survey and personal experiences, develop a list Iowa GIS applications/projects that includes: project name, project description, organizations involved, project during, type of data developed and data resolution, contact name	3
Work with Emergency Management Division staff on Hazard Mitigation/Flood Recovery grant program: training, data analysis, data conversion, Project Impact, education, etc.	2

*Work will be to identify, catalog, develop metadata and potentially host these counties GIS data through the ICN. The shortterm solution, if agreeable, will be that a county will let us host their data and develop an Interactive Mapping application specific to their data.

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**Iowa Geographic Information Council Subcommittees
August 1998**

Standing Committees

Education: To develop a network of educator and administrators that will promote the understanding and use of GIS and related technologies.

Roger Patocka, Iowa Lakes Community College
Terry Brase, Hawkeye Community College
Kevin Kane, Iowa State University
Lisa Schweitzer, University of Iowa
Mark Kistler, Johnson County
Bob Mortenson, ProMap Corporation
Geographic Alliance of Iowa
Matthew Goodwin, University of Iowa Extension
Ann Peton, Iowa's GIS Coordinator

Conference Committee: To plan and help implement a bi-annual GIS Users Conference in geographically diverse settings that will support the needs and interest of Iowa's GIS Community.

Steve Williams, Council of Government
Joyce Baker, Lisa Schweitzer, University of Iowa
Herb Kuehne, Briar Cliff University
Dick King, Blackhawk County Assessor
Barbara Berquam, Blackhawk County GIS Coordinator
Michelle Lantermans, Iowa's Geospatial Clearinghouse Specialist
Roger Patocka, Iowa Lakes Community College

Working Committees

By-Laws: To formalize the IGIC into a functional committee that supports the mission.

Mike Elliot, Emergency Management Division
Tom Kane, Des Moines Area MPO
Cory Brockmann, Natural Resources Conservation Services
Bill Schuman, Iowa DOT
Dave Plazak, Center for Transportation, Research and Education
Ann Peton

Clearinghouse: To work toward providing a geospatial clearinghouse that serves the needs of Iowans. Tools and applications will be developed to encourage the use and understanding of the data and technology.

Reg Souleyette, Center for Transportation, Research and Education
Bernie Hoyer, Todd Bishop, Department of Natural Resources
Bill Schuman, Iowa DOT
Kevin Kane, Iowa State University
Ann Peton and/or GIS Specialist

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E911: To instigate and encourage coordination among agencies and counties regarding the use and application of E911 services and data.

Dave Pahlas, City of Decorah Water Company
Stu Turner, Des Moines Area MPO
Peggi Knight, Iowa DOT
Mike Elliot, Emergency Management Division
Harold Jensen, Story County Engineer
Beth Henning, State Census Coordinator
Jim Giglierano, Iowa Department of Natural Resources
Ann Peton

Global Positioning Systems: To expand the knowledge, uses and applications of this and other similar technologies as they support Geographic Information Systems.

Dave Pahlas
Mike Elliot
Harold Jensen
Brian Miller
Dan Holderness

Geospatial Data Standards: To develop a set a standards in cooperation with Iowa's GIS Community based upon the Federal Geographic Data Committee (FGDC) geospatial data standards.

Member not assigned

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IOWA GEOGRAPHIC INFORMATION COUNCIL

By-laws

Final Version

August 6, 1998

Article I. Name

The name of this association shall be the Iowa Geographic Information Council, hereafter referred to as IGIC.

The Iowa Geographic Information Council was originally established by Iowa Executive Order No. 65. Exhibit A, containing a copy of Executive Order No. 65 is hereto made a part of these bylaws.

Article II. Purpose

The purpose of IGIC is to:

Foster an efficient GIS environmental through cooperative partnerships with public and private organizations that access, collect and share data, metadata, applications and education.

Article III. Objectives

The objectives of IGIC are as follows:

- Sec. 1 To coordinate the management of statewide geographic information and provide guidance and direction in the management of a statewide geographic information system.
- Sec. 2 To identify, make known and recommend actions to meet automated geographic information needs in the State of Iowa.
- Sec. 3 To act as a clearinghouse for Geographic Information System (GIS) information and expertise in Iowa.
- Sec. 4 To formulate and recommend standards for data architecture, quality, accuracy, resolution and maintenance. To formulate and recommend metadata standards based upon a widely accepted version of the Federal Geographic Data Committee (FGDC) metadata standards and to assist Iowans with metadata development and enhancement.
- Sec. 5 To promote voluntary sharing of geographic information by recommending and developing model agreements, publishing directories and newsletters and performing other appropriate information-sharing actions.
- Sec. 6 To serve as a focal point for intergovernmental efforts to receive additional funds, especially federal funds, for GIS development in Iowa.

Article IV. Iowa GIS Community

The Iowa GIS Community is made up of individuals and organizations that support the activities of the IGIC, to include, but not limited to, the bi-annual conference, newsletter, IGIC subcommittees, educational seminars, etc. This community will be encouraged to participate with the IGIC in planning and implementing statewide coordinated GIS activities. Meetings of the IGIC and its subcommittees will be conducted on the ICN when possible and will be open to the public (unless previously indicated).

Article V. Membership

- Sec. 1 Voting membership shall be appointed by the Director of the Office of Information Technology Services from nominations received from the existing IGIC. The IGIC shall be composed of members with knowledge and interest in the GIS field. Configuration of the IGIC may be as follows: University (4), County (3), Municipal (3), State Agency (4), Federal (2), Community College (2), Private College (1), Private Sector (2), Utility (2), Regional Organization (2) for a total of 25 members.
- Sec. 2 It is the responsibility of each member to be active in IGIC and to attend scheduled meetings. Representatives may send alternates to IGIC meetings and the alternates may vote for the Representatives on official matters if designated in writing as proxies. However, the representative should attend at least 50% of all meetings called annually by the IGIC Chairperson.
- Sec. 3 If a vacancy in voting membership as described in Article VI occurs, the Chairperson shall contact the designating organization within 30 days of the notification of, or occurrence of, the vacancy to request that the designated organization recommend to the IGIC a replacement.
- Sec. 4 Any member may withdraw from IGIC upon giving notice in writing to the IGIC Chairperson.

Article VI. Officers

- Sec. 1 The elected officers of IGIC shall be the Chairperson, Vice Chairperson, Secretary, and Treasurer, all of whom shall serve without compensation from IGIC.
- Sec. 2 The State GIS Coordinator shall serve as an ex-officio member of the IGIC. The State GIS Coordinator and staff will serve as advisors and staff for the IGIC and its subcommittees.

- Sec. 3 Elected officers shall assume their official duties on July 1 and shall serve one-year terms or until a successor is elected. The Chairperson and Vice Chairperson shall not be retained in office more than one consecutive term in the same office, but may reassume an office after one term out of office.
- Sec. 4 Officers shall be elected by the voting members of IGIC, as hereinafter provided. Officers may be removed by a majority vote of the voting members of IGIC.

Article VII. Duties of Officers

- Sec. 1 The Chairperson shall preside at all meetings of IGIC and shall be responsible for the implementation of the Council's decisions. The State GIS Coordinator, Chairperson and Vice Chairperson are authorized to represent IGIC with other organizations.
- Sec. 2 The Vice Chairperson will assist the Chairperson in the discharge of the Chairperson's duties as requested and, in the absence or inability of the Chairperson to act, shall perform the Chairperson's duties. Additionally, the Vice-Chairperson shall Chair the IGIC Conference Committee.
- Sec. 3 The Secretary shall record meeting minutes and provide those to the State GIS Coordinator for archival and distribution. Additionally, the Secretary shall monitor attendance and notify Chairperson in writing of poor attendance by IGIC members.
- Sec. 4 The Treasurer shall provide financial reports to the IGIC and be responsible for managing the funds generated through the IGIC.

Article VIII. Committees or Subcommittees

- Sec. 1 Committees from the Iowa GIS Community may be authorized, created, directed or dissolved by majority of the voting members in attendance at an IGIC meeting.
- Sec. 2 IGIC will foster GIS activities in Iowa through various committees and other related activities. Standing committees include: Education, Clearinghouse and Conference.
- Sec. 3 IGIC members will voluntary participate in the committees by requesting input and support from the Iowa GIS Community they represent.

- Sec. 4 Each committee shall appoint a Committee Chair to organize the group and to act as a spokesperson representing the committee before the IGIC. The Chair must be an active IGIC member.
- Sec. 5 Committee Chairs shall be responsible for maintaining membership on the committees and shall notify the IGIC of any changes in membership.
- Sec. 6 Committees shall keep a record of all proceedings and provide a copy to the State GIS Coordinator.
- Sec. 7 The State GIS Coordinator or staff will attend the committee meetings.

Article IX. Meetings

- Sec. 1 All references to the IGIC calendar relate to the Iowa State Fiscal Year; July 1, through June 30, inclusively.
- Sec. 2 IGIC meetings will be held at least quarterly. The time, agenda and additional Iowa Communication Network (ICN) sites will be posted on the Clearinghouse site at least 7 days prior to the meeting.
- Sec. 3 Additional meetings of the IGIC may be called by the Chairperson with at least a twenty-four hour notice to discuss and take action on critical issues.
- Sec. 4 Committees shall meet, discuss, study and/or resolve assigned issues as needed to carry out the objectives of IGIC. Committees shall meet at least quarterly. These meetings may be held in connection with IGIC meetings.
- Sec. 5 If physical presence is not feasible, then written, facsimile, electronic or ICN shall substitute for a group meeting.
- Sec. 6 The Chairperson may call meetings of Committee Chairs to obtain progress reports to be presented to the IGIC.

Article X. Nomination and Election of Officers

- Sec. 1 IGIC members who desire to serve as officers of IGIC can provide nominations to the Chairperson.
- Sec. 2 Voting will take place at the final meeting of the IGIC calendar year. (Ref. Art.9, Sec. 1)
- Sec. 3 The State GIS Coordinator will tally the results of the election, notify the newly elected and incumbent officers, announce the results to the IGIC and post the results .to the Clearinghouse.

- Sec. 4 Elections shall be conducted by secret ballot, with officers selected by a majority of votes cast.
- Sec. 5 The Vice Chairperson will ascend to the office of Chairperson at the end of the Chairperson's term and a new Vice Chairperson will be elected to fill the vacancy.

Article XI. Administration

- Sec. 1 Whenever possible, IGIC meetings will be posted six months in advance.
- Sec. 2 The State GIS Coordinator shall keep the official current and complete books and records of the decisions, members, actions and obligations of IGIC. The Secretary, in cooperation with the State GIS Coordinator, shall coordinate newsletters, meeting notices and locations, and shall keep a record of names and addresses of the members of the IGIC and the Iowa GIS Community. All books and records may be inspected by any member of the IGIC for good purposes at a reasonable time and location.
- Sec. 3 Nothing in these bylaws is intended to restrict IGIC from sponsoring of or collection of fees from meetings, conferences, workshops, seminars or symposia or sharing of Geographic Information related to the State of Iowa.

Article XII. Dissolution of IGIC

- Sec. 1 In the event the Council is dissolved, the State GIS Coordinator will be responsible for the books, records and distribution of any other assets to the Voting Member Agencies of IGIC.

Article XIII. Quorum and Amendment of By-Laws

- Sec. 1 A Quorum is established when more than one-half of the members of IGIC, exclusive of vacancies, are present in a meeting of IGIC.
- Sec. 2 A majority of affirmative votes from the quorum on any issue will establish IGIC decision.
- Sec. 3 Voting may be by proxy, when a proxy is designated in writing by the Member or designated alternate.

Sec. 4 Power to repeal or amend these bylaws and to adopt additional By-Laws is hereby delegated to the IGIC and may be executed at any meeting of the IGIC; provided that notice, at least 15 days prior to the meeting, has first been given to the IGIC. These bylaws may be amended by a 2/3 vote of Board members voting.

Article XIV. Parliamentary Procedure

Sec. 1 Meetings may be conducted in an informal manner by the Chairperson, but Robert's Rules of Order (Revised) may be invoked at any time by a majority vote of the members present.

Article XV. Obligations and Expenses

Sec. 1 It is the intent of these bylaws to set a basis for coordination between member agencies.

Sec. 2 All IGIC Members will cooperate with the State GIS Coordinator in efforts to develop funding for IGIC activities, and are expected to assume a leadership role in obtaining funds committed to IGIC by their organizations.

Sec. 3 All obligations and expenses for participation in IGIC shall be borne by each Board member's agency or organization, unless other arrangements are approved by the quorum of the IGIC.

Sec. 4 The Chairperson and Treasurer shall jointly authorize the dispersal of funds on IGIC sponsored events.

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Exhibit A

EXECUTIVE ORDER 65
PROVIDING FOR THE ESTABLISHMENT
OF THE
IOWA GEOGRAPHIC INFORMATION COUNCIL

I, TERRY E. BRANSTAD, GOVERNOR OF THE STATE OF IOWA, by virtue of the authority vested in me by the Constitution and the applicable statutes, do hereby issue this Executive Order.

WHEREAS, the State of Iowa is a large geographic region including both finite and renewable resources, diverse economic activities, valuable public and private infrastructure, numerous business firms and government organizations, and a diverse population; and

WHEREAS, the management of geographic information about the character and location of the state's natural, physical, economic, and cultural resources and human activity is becoming more important to both the public and private sectors; and

WHEREAS, there are various spatial information technologies available to assist Iowa businesses and organizations meet their various and unique information needs; and

WHEREAS, there are various governmental, business, and educational users of spatial data technologies who would benefit from data sharing, coordination of technology development activities, the development of common standards and conventions, and educational activities; and

WHEREAS, there is a need to coordinate the various activities in geographic information systems (GIS) and related technologies in order to better exchange and share information and to enhance the stewardship of geographic information in the management of public resources; and

WHEREAS, the current Iowa Geographic Information Council, a volunteer organization, has been involved in a variety of educational, communications, and information sharing activities but lacks the explicit authority to recommend policies, guidelines, and standards; and

WHEREAS, there is a need to recommend policies, guidelines, and standards to the Office of Information Technology Services and other units of government for developing and sharing geographic information; and

WHEREAS, there is a need to avoid duplication of effort so as to reduce the costs that would otherwise be involved if each organization developed its own GIS and related capabilities independently; and

WHEREAS, there is a need to establish a formal forum in order to discuss, debate, and decide general issues related to geographic information; and

WHEREAS, there is a need to establish a formal forum in order to discuss, debate, and issue guidelines on confidentiality and privacy issues related to geographic information; and

WHEREAS, there is a need to prioritize and schedule the development of public-funded data programs, define the roles and responsibilities of data stewardship, and formulate policies for the access, distribution, and pricing data; and

WHEREAS, there is a need to support the ongoing development of a geographic information clearinghouse in order to foster the sharing of geographic data; and

WHEREAS, there is a need to provide education, training, and support for users of geographic information to support the better management of public resources; and

NOW, THEREFORE, I hereby order that:

1. The Iowa Geographic Information Council (hereinafter referred to as IGIC) shall be formally established.
2. The members of the IGIC shall be appointed by the Director of the Office of Information Technology Services from nominations received for the existing IGIC. The IGIC shall be composed of members with knowledge and interest in the GIS field representing state government, federal government, city government, county government, regional and metropolitan planning, universities and private colleges, community colleges, and GIS user(s) in the private sector.
3. The IGIC shall formulate and adopt a charter and bylaws for its own operation and elections and for the formation of topical subcommittees.
4. The IGIC shall receive administrative staff support from the Office of Information Technology Services.
5. The IGIC shall prepare an annual report to the Governor by June 30th of each year to be submitted to the Director of the Office of Information Technology Services describing accomplishments from the previous year and recommendations for the future.
6. The annual report due on June 30, 1998 shall include recommendations with respect to the future organizational structure of the IGIC and detailed recommendations in the form of a plan for addressing the needs described in this executive order.
7. Policies, guidelines, standards, and conventions developed by the IGIC shall be widely distributed throughout Iowa for discussion and shall be recommended for implementation through the Office of Information Technology Services and other organizations as appropriate.

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**lowAccess Project 8 - Coordinated GIS
Current and Projected Expenditures
7-Jul-98**

	Through 4/30/98	May	June	July	August	September	Total	Subtotal per category
Salaries and Contractors								
GIS Coordinator - Ann Peton	45,557.46	4,480.00	4,480.00	4,480.00	4,480.00	4,480.00	67,957.46	
GIS Specialist - Michele Lantermans	0.00	0.00	0.00	0.00	2,957.00	2,957.00	5,914.00	
CDROM sampler development					4,325.00	4,000.00	8,325.00	
CDROM Imaging - duplication						16,950.00	16,950.00	
CDROM jacket						4,000.00	4,000.00	
ISU Extension - GIS Seminars					6,000.00	6,000.00	12,000.00	
Clearinghouse /Web page development					7,200.00	7,200.00	14,400.00	
Marketing and Evaluation						5,000.00	5,000.00	
Equipment								133,546.46
HW/SW for GIS Coordinator	20,688.75	0.00	3,171.21				23,859.96	
HW/SW for GIS Specialist					12,127.00		12,127.00	
HW/SW for Clearinghouse		42,034.00	7,285.00		3,040.00		52,359.00	
Miscellaneous								88,345.96
Supplies	334.90		305.45		1,000.00		1,640.35	
Travel Booth		822.00					822.00	
Telephone	166.35	166.35	171.25	150.00	200.00	200.00	1,053.95	
Printing	145.00	160.59	50.00	50.00	50.00	50.00	505.59	
GIS Library			200.00			2,000.00	2,200.00	
Seminar books						3,000.00	3,000.00	
Training								
GIS Coordinator						1,000.00		
GIS Specialist						1,731.82		
Travel								
NSGIC	1,535.12					1,550.00	3,085.12	
ESRI - GIS Coordinator & Specialist					5,500.00		5,500.00	
ESRI - Todd Bishop					2,885.00		2,885.00	
MAGIC - Lincoln, NE			1,000.00				1,000.00	
Miscellaneous trips		187.45	574.19			722.11	1,483.75	
Trip to USGS for IGIC				1,200.00			1,200.00	
	68,427.58	47,850.39	17,237.10	5,880.00	49,764.00	60,840.93	250,000.00	26,760.76

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Allocation of Work
For
Ann Peton
Iowa's GIS Coordinator
April - August 1998

Task	Description	Percent of Time
Project 8	Clearinghouse/web site development, CDROM development, interactive Web mapping tool, GIS resource guide, Staff hiring, GIS Education, Presentation, Marketing, etc	50
Emergency Management Div.	Staffing issues, State Hazard Mitigation Team, technical support, procurement issues	5
Blackhawk county	Candidate review and interview, E911 contract review	10
Federal Involvement	NSDI survey, NSGIC, Federal GPS workgroup	10
Regional Involvement	Mid-American GIS Consortium, professional certification programs, regional training, etc.	10
Other assistance to counties/cities/state agencies/organizations	Non-technical and technical support, hiring of staff, review of workplans, negotiating contracts, presentations, education, etc.	10

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EXECUTIVE ORDER NUMBER 65

- WHEREAS,** the State of Iowa is a large geographic region including both finite and renewable resources, diverse economic activities; valuable public and private infrastructure, numerous business firms and government organizations, and a diverse population; and
- WHEREAS,** the management of geographic information about the character and location of the state's natural, physical, economic, and cultural resources and human activity is becoming more important to both the public and private sectors; and
- WHEREAS,** there are various spatial information technologies available to assist Iowa businesses and organizations meet their various and unique information needs; and
- WHEREAS,** there are various governmental, business, and educational users of spatial data technologies who would benefit from data sharing, coordination of technology development activities, the development of common standards and conventions, and educational activities; and
- WHEREAS,** there is a need to coordinate the various activities in geographic information systems (GIS) and related technologies in order to better exchange and share information and to enhance the stewardship of geographic information in the management of public resources; and
- WHEREAS,** the current Iowa Geographic Information Council, a volunteer organization, has been involved in a variety of educational, communications, and information sharing activities but lacks the explicit authority to recommend policies, guidelines, and standards; and
- WHEREAS,** there is a need to recommend policies, guidelines, and standards to the Office of Information Technology Services and other units of government for developing and sharing geographic information; and
- WHEREAS,** there is a need to avoid duplication of effort so as to reduce the costs that would otherwise be involved if each organization developed its own GIS and related capabilities independently; and
- WHEREAS,** there is a need to establish a formal forum in order to discuss, debate, and decide general issues related to geographic information; and
- WHEREAS,** there is a need to establish a formal forum in order to discuss, debate, and issue guidelines on confidentiality and privacy issues related to geographic information; and
- WHEREAS,** there is a need to prioritize and schedule the development of public-funded data programs, define the roles and responsibilities of data stewardship, and formulate policies for the access, distribution, and pricing of data; and

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WHEREAS, there is a need to support the ongoing development of a geographic information clearinghouse in order to foster the sharing of geographic data; and

WHEREAS, there is a need to provide education, training, and support for users of geographic information to support the better management of public resources.

NOW, THEREFORE, I, Terry E. Branstad, Governor of the State of Iowa, by the virtue of the authority vested in me by the Laws and Constitution of the State of Iowa, do hereby order that:

1. The Iowa Geographic Information Council (hereinafter referred to as IGIC) shall be formally established.
2. The members of the IGIC shall be appointed by the Director of the Office of Information Technology Services from nominations received from the existing IGIC. The IGIC shall be composed of members with knowledge and interest in the GIS field representing state government, federal government, city government, county government, regional and metropolitan planning, universities and private colleges, community colleges, and GIS user(s) in the private sector.
3. The IGIC shall formulate and adopt a charter and bylaws delineating its operation, elections and formation of topical subcommittees.
4. The IGIC shall receive administrative staff support from the Office of Information Technology Services.
5. The IGIC shall prepare an annual report to the Governor by June 30th of each year to be submitted to the Director of the Office of Information Technology Services describing accomplishments from the previous year and recommendations for the future.
6. The annual report due on June 30, 1998, shall include recommendations with respect to the future organizational structure of the IGIC and detailed recommendations in the form of a plan for addressing the needs described in this Executive Order.
7. Policies, guidelines, standards and conventions developed by the IGIC shall be widely distributed throughout Iowa for discussion and shall be recommended for implementation through the Office of Technology Services and other organizations as appropriate.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and caused the Great Seal of the State of Iowa to be affixed. Done at Des Moines this twentieth day of May in the year of our Lord one thousand nine hundred and ninety-eight.

GOVERNOR

ATTEST:

SECRETARY OF STATE

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