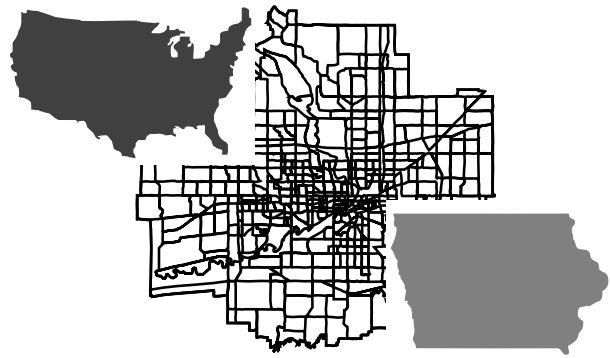


# Coordinated GIS



Sharing data, exploring standards, and facilitating cooperation among Iowans who use Geographic Information Systems

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## This could be your last issue of Coordinated GIS!

*Coordinated GIS* is moving to a new dimension—the World Wide Web. Beginning with this issue, you can access *Coordinated GIS* through the Center for Transportation Research and Education's (CTRE) home page (<http://www.ctre.iastate.edu/>).

Now that the newsletter is available on line, we are paring down our mailing list to save printing and postage costs.

Of course, if you don't have access to the World Wide Web, or if you prefer to get paper copies of the newsletter, we'll be happy to continue sending them to you.

**To remain on the mailing list** for *Coordinated GIS*, complete the form below (or attach your address label from the back of this newsletter) and return it to Sharon Prochnow at CTRE.

Subscribers who do not return the form by March 1, 1997, will be dropped from the newsletter mailing list.

Look for future quarterly issues of *Coordinated GIS* on the Web (or, if you notify us, in your mail) in March, June, September, and December. ♦

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**coordinated GIS** is a publication of the Iowa Geographic Information Council. The council is a partnership consisting of representatives of the geographic information system (GIS) user community in Iowa.

The GIS community includes federal, state, and local government agencies; universities; businesses; and nonprofit organizations who now use or are planning to use GIS or global positioning system (GPS) technologies. These powerful technologies combine electronic maps, databases, and precision locations and can be used to improve decisions, save money, and enhance the quality of life of Iowa's citizens.

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We welcome your comments and suggestions regarding **coordinated GIS**. What would **you** like to see in this newsletter?

Submit suggestions or questions to Reg Souleyrette

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- by mail (disk copy preferred; see the address listed above) or
- by fax to 515-294-0467,

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The opinions, findings, or recommendations published here are those of the authors and do not necessarily reflect the views of the Iowa Geographic Information Council.

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Cover depiction of traffic analysis zones courtesy of the Des Moines MPO.



## Activity across Iowa

### Formal Iowa GIS council proposed

Geographic Information Systems (GIS) and related technologies, such as global positioning systems (GPS), have a tremendous range of potential applications for many government and private-sector organizations in Iowa. For example, GIS and GPS technologies are now being used to improve farm profitability, protect ground water, deploy police units, plan new highways, and track epidemics.

GIS and GPS can be expensive technologies to adopt in terms of training personnel and collecting data. Sharing GIS/GPS data and expertise provides almost instant benefits to many organizations, especially government, since sharing means organizations can avoid some development costs and flatten out steep learning curves.

Several states, including some surrounding Iowa, have formally organized intergovernmental councils that coordinate development of GIS and related technologies. One likely recommendation of the Iowa Intergovernmental Information Technology and Telecommunications (IITT) Task Force's GIS work group will be to create, staff, and fund a formal Iowa GIS council built from the informal council that already exists.

Currently, the informal Iowa Geographic Information Council (IGIC) has no staff (all staff work performed is voluntary) and no dedicated funding source.

This project would formalize IGIC and find additional resources so it could accomplish its mission more

effectively. Formalization can be accomplished through an executive order from the governor. (Kansas formalized its state GIS council in this manner). The executive order would specify the council's makeup, mission, duties, staffing, and operations. In addition, bylaws would be developed to govern the council.

The project would also provide a full-time staff member dedicated to GIS coordination and development of intergovernmental/private GIS and GPS partnerships in Iowa.

Most of the funds needed to support this project would be used to support staff work; however, some funds would be used for education and outreach activities.

The formalized council's mission would be similar to IGIC's existing mission statement but could be further developed. Currently, the mission of IGIC is to:

1. Act as a network for sharing GIS information and expertise and a forum for discussing GIS/GPS issues
2. Encourage open GIS standards (so that data can be more easily shared)
3. Facilitate voluntary exchange of information and expertise
4. Encourage the use of telecommunications networks like the Internet and Iowa Communications Network (ICN) to transfer data
5. Serve as a champion for GIS/GPS technologies and for cooperation on GIS/GPS matters

*continued on page 3*

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6. Improve policymakers' knowledge of GIS/GPS
7. Serve as a focal point for inter-governmental GIS/GPS efforts
8. Act as an educational organization for GIS/GPS in Iowa

An enhanced IGIC could:

1. Assess Iowa's GIS/GPS needs and priorities
2. Facilitate sharing agreements
3. Develop data collection and distribution recommendations
4. Provide standards and policy recommendations
5. Promote education, training, and technical support for organizations in Iowa interested in using GIS/GPS
6. Facilitate pursuit of outside funding for key Iowa GIS/GPS projects

The estimated cost to formalize and commence operations of IGIC is about \$100,000. Potential funding sources include appropriations from the state, contributions from participating agencies, net proceeds from the annual Iowa GIS conference (typically about \$5,000), and federal funds from the U.S. Geological Survey/Federal Geographic Data Committee.

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## **GIS at University of Northern Iowa**

The University of Northern Iowa (UNI) College of Social and Behavioral Sciences opened the Geographic Information Technology and Computer-Assisted Drafting and Design (GIT/CADD) laboratory in October 1996.

The GIT/CADD lab contains 15 Pentium Pro workstations with digitizers, networked plotters and printers, and Internet access. Software used for instruction and research includes Idrisi for Windows, AutoCadd 13, ArcView 3.0 with Spatial Analyst, PC Arc/Info, Geographic Calculator, and Atlas GIS.

The UNI Department of Geography currently offers the following courses in geographic information technology (GIS, GPS, CADD, and remote sensing) for undergraduate and graduate credit:

\*970:163(g) Aerial photo interpretation and photogrammetry

\*970:164(g) Geographic information systems I

\*970:165(g) Thematic cartography

\*970:173(g) Remote sensing of the environment

\*970:174(g) Geographic information systems II

970:190(g) Field studies in geography (GPS field survey methods and techniques)

Students who successfully complete the above (\*) courses with a GPA of 3.0 in the 15 credit hours will

receive a program certificate in cartography and geographic information systems.

Beginning in January 1997, students may also receive certification in ArcView 3.0 and Spatial Analyst.

Geographic information technologies (GIT) research opportunities at UNI include both basic and applied research. Research interests of students and faculty are currently focused on the following areas: environmental; natural resource management; health, economic and business; and transportation applications. UNI faculty members are also participating in the Black Hawk County GIS project.

Remote sensing of the environment (970:173g) and geographic information systems II (970:174g) is being offered during the spring semester, beginning January 13, 1997. A global positioning system (GPS) survey methods and techniques course (970:190g) will be offered during the first half of the summer session, beginning June 9, 1997.

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## Activity across Iowa

### 1996 Iowa GIS Conference: another big success!

The second annual Iowa Coordinated GIS conference was held October 7–8, 1996, at Iowa State University's Scheman Continuing Education Center. Judging by the attendance of well over 300, vendor booth sales, and participant evaluations, the conference was a great success. Attendees came from all across Iowa, and many had not attended the 1995 conference in Iowa City.

Two particularly popular events at the conference were 1) a session covering legal issues involving GIS and 2) a session at which attendees were able to compare features on a



number of major and lesser-known desktop and specialized GIS software products.

Attendees indicated at a closing session that they'd like next year's conference to showcase successful GIS efforts in and around Iowa.

Thanks to the staff at Scheman, conference chair Reg Souleyrette, the conference committee, the speakers, the vendors, and all the participants who combined to make this a great event. Additional

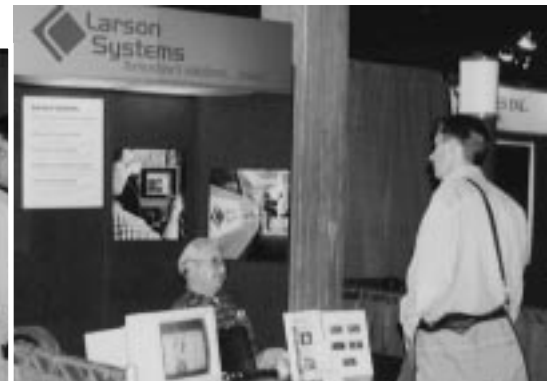
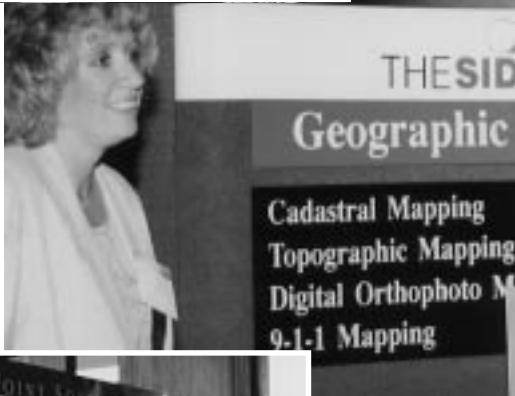


thanks to Sharon Prochnow, who coordinated the logistics of the conference, and Ed Raber, who coordinated booths for the vendors.

The next annual conference is tentatively scheduled for October 1997 at the University of Northern Iowa in Cedar Falls. See you there! ♦



# Activity across Iowa



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## Activity across Iowa

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### IITT GIS work group issues findings

GIS technology uses computers to organize and analyze complex data through digital mapping. The GIS work group of the Intergovernmental Information Technology and Telecommunications (IITT) Task Force studied issues related to the implementation of GIS technology at all levels of the public and private sectors.

GIS was first used in Iowa's academic institutions in the mid-1970s. In the past eight years, GIS has become an integral data management tool in private business as well as state, city, county, and federal offices. Applications vary widely and include management of emergency and utility services, inventories of natural resources, law enforcement, and studies of retail marketing, among others.

Iowans can benefit enormously from the expanded use of GIS in both the public and private sectors. To achieve widespread and efficient use of GIS in the public sector, public institutions and organizations, along with units of local government, will need to share fiscal resources and technological expertise; develop cooperative GIS training programs; and develop guidelines regarding data format, access, and retention.

One function of GIS is to refine/distill voluminous data (e.g., data from police departments, assessors offices, various departments in universities, and the census bureau) to manageable and meaningful proportions.

An important step toward achieving the widespread and efficient use of GIS in the public sector is through improving the coordination of resources among and within agencies at every level of government. Some agencies may 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.

Standards for GIS information development, exchange, and interpretation already exist. State government should play a role in overseeing the use of GIS standards in Iowa. As more information is developed and used by growing numbers of entities, the use of these standards will become important. Growth in the number of GIS users will be fueled by rapidly improving and lower costing GIS hardware and software.

Growth in the number of users will also create an expanded number of potential cooperation and partnering opportunities between organizations in both the public and private sectors. A wide range of social and economic impacts across both sectors can be anticipated. While most GIS-related impacts are positive, potential pitfalls (e.g., privacy, confidentiality, and ownership of data, among other issues) need to be mitigated.

The project proposed by the IITT GIS work group addresses the primary issues discussed in the work group report. Three components of this project are to (1) provide for an authorized Iowa Geographic Information Council to oversee standards and facilitate interorganizational cooperation, (2) increase the capability of the existing Iowa Geospatial Information Clearinghouse that will improve access to GIS-related data from a large number of sources, and (3) coordinate a statewide approach to education and training on GIS technology and applications at all levels. ♦

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**SEDAC makes geographic boundary files available**

Geographic boundary files for the U.S. Public Use Micro Sample (PUMS) data files are now available from the Socioeconomic Data and Applications Center (SEDAC). Boundary files are available for the five percent and one percent Public Use Micro Sample Areas (PUMA). The boundary files are the latest addition to the Archive of Census Related Products and can be accessed publicly via file transfer protocol (FTP) or any browser. (Other recent additions to the archive include the 1990 voting district (VTD) boundaries and the 1980 census blocks).

The PUMA boundaries were developed based on equivalency files generated by *Geocorr*, the geographic correspondence engine. A national census tract to the PUMA geography correspondence file was used in merging the former file into the new PUMA geographies. The results are available in three standard formats for easy use within desktop geographic information systems (GIS).

SEDAC hopes to add demographic data files to the archive that match the PUMA and VTD boundary currently available. Consult the file *whatsnew.txt* on the archive for the latest information.

To access the Archive of Census Related Products, Geocorr, or Ulysses, enter the following commands:

Archive of Census Related Products:

```
ftp ftp.ciesin.org
login: anonymous
password: <email address>
cd /pub/census
get archive.ann (description of
archive)
cd usa
cd pums
get readpuma.txt (detailed
description)
```

or via browser:  
<ftp://ftp.ciesin.org/pub/census>

Geocorr (and mirrors):  
<http://plue.sedac.ciesin.org/plue/geocorr>  
<http://www.oseda.missouri.edu/plue/geocorr>  
<http://www.census.gov/plue/geocorr>

Ulysses:  
<http://plue.sedac.ciesin.org/plue/ulysses>  
telnet ulysses.ciesin.org  
login: ulysses

This service is provided by SEDAC. The Consortium for International Earth Science Information Network (CIESIN) has been designated by the National Aeronautics and Space Administration (NASA) to create and operate SEDAC—one of the data centers in the Earth Observing System Data and Information System (EOSDIS).

SEDAC's mission is to develop and deliver information products and services that integrate social and natural science data in methods useful for decision making.

For additional information about MABLE/Geocorr, SEDAC, or CIESIN, contact user services at [ciesin.info@ciesin.org](mailto:ciesin.info@ciesin.org) or call (517)797-2727 Monday–Friday, 8:00 a.m.–5:00 p.m., eastern standard time.

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### Internet newsgroups and GIS/GPS

With most attention focused on the World Wide Web, it is easy to forget about the other useful features of the Internet. One of these useful features is *newsgroups* (also called *usenet news*). Newsgroups are on-line forums or discussion groups where questions can be asked and answered (often very quickly), sometimes by experts. Newsgroups are particularly useful for locating information on GIS- and GPS-related topics. There are literally tens of thousands of these forums on a variety of topics.

Two very active newsgroups related to geospatial data are:

comp.infosystems.gis  
sci.geo.satellite-nav

The first covers general GIS topics, including technical discussions, new products, and employment opportunities. The second covers global positioning systems and GPS receivers.

Newsgroups also contain a hierarchy of Iowa newsgroups. All of these start with the letters *ia*. Groups in this hierarchy can give you current Iowa weather forecasts, road conditions, and road construction projects, among other information.

Reading newsgroups is easy once you find a news server to access. (A news server is a computer on the Internet that stores and serves newsgroup articles on request). The best way to find a news server is to contact your Internet service provider's (ISP) system operator. You'll also need some kind of newsreader software, such as Netscape Navigator version 2.0 and later. Alternatively, you can use a shareware or freeware newsreader—WinVN and Free Agent are two good newsreader programs for Windows you can download from the Internet, free of charge.

To get started, simply input the Internet address of the news server into the newsreader software and then subscribe to the groups that interest you. If it turns out you don't find the group informative, simply unsubscribe.

Happy newsgroup reading!

(Next issue: GIS and GPS-related Internet e-mail lists.)

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**Remember: coordinated GIS** is now on line at <http://ctre.iastate.edu/publications/>

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## We want your e-mail address!

The IGIC is developing a group e-mail address list. Please help us reach you by e-mail with announcements, updates, etc., by adding your e-mail address to the group list.

To get on the e-mail address list, contact Reg Souleyrette or David Plazak (their telephone numbers and e-mail addresses are listed on page 11).

To send a message to everyone on our e-mail address list, address your message to [igic@iastate.edu](mailto:igic@iastate.edu).

Thanks for your help!

**P486-1066**

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