



imagin NEWS

what's inside

Do You Know Where Your Registered Sex Offenders and Parolees Are?

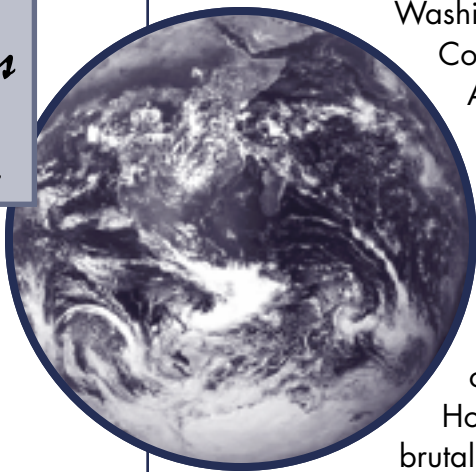
By Yichun Xie, Michael Dueweke, Kenneth Bouchard

Sex Offenders and Parolees

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Washington State's 1990 Community Protection Act included America's first law authorizing public notification when dangerous sex offenders are released into the community.

However, it was the brutal 1994 rape and murder of seven-year-old

Megan Kanka that prompted the public demand for broad based community notification. On May 17, 1996, President Clinton signed Megan's Law. Megan's Law requires the following two components:

Sex Offender Registration –

The 1994 Jacob Wetterling Act requires the States to register individuals convicted of sex crimes against children. Sex offender registration laws are necessary because:

- Sex offenders pose a high risk of re-offending after release

from custody.

- Protecting the public from sex offenders is a primary governmental interest.
- The privacy interests of persons convicted of sex offenses are less important than the government's interest in public safety.
- Release of certain information about sex offenders to public agencies and the general public will assist in protecting the public safety.

Community Notification –

Megan's Law compels states to make private and personal information on registered sex offenders available to the public, but allows them discretion to establish criteria for disclosure. This constitutes "community notification" and includes:

- Assisting law enforcement in investigations
- Establishing legal grounds to hold known offenders
- Deterring sex offenders from committing new offenses

Who's Doing What in GIS and Spatial Technology



GREAT LAKES INFORMATION NETWORK

Population: Anyone interested in aspects of the Great Lakes, including the Great Lakes basin as a whole, a state or province in the region (Michigan, Minnesota, Wisconsin, Illinois, Indiana, Ohio, Pennsylvania, New York, Ontario, and Québec) or one lake in particular.

Geographic Coverage: GLIN's focus is the Great Lakes Basin, which covers approximately 295,000 square miles (767,000 km²) of land area and 94,000 square miles (244,000 km²) of water area.

Number of Staff: Three staff at the Great Lakes Commission are specifically engaged in GIS and contribute to content and services on GLIN, while numerous contributors from around the region provide data and other input.

The Great Lakes Information Network (GLIN) is a partnership that provides one place online for people to find information about the bi-national Great Lakes - St. Lawrence region of North America. GLIN offers a wealth of data, information and links to other online resources about the region's environment, economy, tourism, education, and more. Thanks to its strong network of state, provincial, federal and regional part-

ner agencies and organizations, GLIN has become a necessary component of informed decision making, and a trusted and reliable source of information for those who live, work, or have an interest in the Great Lakes region.

The geography of the Great Lakes basin is broad and multifaceted. It includes many different landscapes, binds together numerous political jurisdictions, is impacted by a number of environmental conditions, and hosts a complex mix of people, institutions, industries and transportation networks. In the early 1990s, the Great Lakes Information Network was conceived as a means of using the Internet to foster information sharing about the Great Lakes region. With the development of the World Wide Web, GLIN was transformed into an information resource for both regional institutions and the public at large.

The backbone of GLIN is hosted by the Great Lakes Commission, a binational public agency dedicated to promoting the orderly, integrated, and comprehensive development, use, and conservation of the water and related natural resources of the Great Lakes Basin. The Great Lakes Commission adopted GIS as a tool in the mid-1990s and GIS products began showing up on GLIN soon thereafter. GLIN's GIS elements have expanded rapidly as other agencies in the region have adopted GIS and begun sharing their resources.

PROGRAM STATUS

Much of the early GIS work done specifically for GLIN showed up as thematic maps and regional statistics. GIS staff produced maps highlighting social, economic, and environmental aspects of individual lake basins, the Great Lakes basin as a whole, the shoreline of the lakes, individual political units within the basin, and the states and provinces of the region. GIS was used to compile data that had been gathered at the state/provincial or national level and then extract facts and figures that described the basin and its component parts. That work continues to this day. GLIN users routinely ask for updates to basic facts and figures about the region, many of which are most easily developed using GIS techniques.

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- Offering citizens information they can use to protect children from victimization

As a result of Megan's Law, many states have implemented safety zones as a means to protect the public. Safety zones are areas where released sex offenders cannot reside. Colorado and Minnesota studied safety zones and decided against them. Iowa's safety zones were criticized as blocking access to affordable housing. This case ran all the way up through their Supreme Court. Ultimately it was decided that an offender's right to housing is secondary to the public's right to safety – the safety provided by buffer-zones. In Ohio, people have been removed from their homes because their new buffer-zone laws did not grandfather in offenders. The Michigan Sex Offenders Act, P.A. 295 of 1994, (Act) mandates that certain registered sex offenders be prevented from residing, loitering, or working within a student safety zone. A student safety zone is defined by the Act as the area that lies 1,000 feet (304.8 m) or less from school property.

From these few examples, you can see that the laws surrounding this topic vary significantly. Some states think the bigger the boundary the better, some states don't even use them. The fact that these area restrictions exist here in Michigan led researchers at the Institute for Geospatial Research and Education (IGRE) to investigate how a handful of local communities handle the verification and spatial components of Michigan's law; if they enforce them and how GIS technology can be used by local law enforcement agencies to improve public safety.

In the Institute's research, it interviewed representatives from police departments in three large communities located in Wayne, Oakland, and Washtenaw counties. Although it asked 15 questions, the two primary questions were:

1. Does your agency verify whether or not an address provided by a released sex offender is valid?
2. Does your agency map the location of the addresses given to identify if this address falls within the 1000 foot (304.8 m) buffer zone as

provided for in Michigan Law?

All three police agencies answered "no" to these questions!

In Michigan, the Act directs the Michigan State Police (MSP) to develop and maintain a public registry and provides guidelines on the type of offender information available to the public (www.mipsor.state.mi.us). The registration requirements of the Act are intended to provide the people of Michigan with an appropriate, comprehensive, and effective means to monitor those persons who pose a potential danger. However, as noted earlier, if offender addresses are not verified when these individuals leave custody, no one knows, not even law enforcement, where these people reside.

The Michigan Auditor General's July 2005 Performance Audit of Michigan Sex Offender Registries Report cited, "MSP could improve the effectiveness and usability of the Public Sex Offender Registry (PSOR) Web site by providing the public with more information and better ways to search for sex offenders..."

After the initial registration with MSP, a convicted sex offender must report address changes and confirm address verifications to one of over 600 agencies in Michigan. MSP also informed the State Auditor that, "offenders routinely provide incorrect data to the entering agency."

In the study of the largest community in Wayne County, IGRE identified a great number of registered sex offenders presently residing within designated student safety zones (January 2007 data). The study also noted that a large number of discrepancies exist between valid parcel addresses listed with the local tax assessor's office and the sex offender addresses listed on the MSP Sex Offender website.

Many Michigan agencies tasked with verifying sex offender addresses and distance requirements lack the means to make this determination in a cost-effective, timely, and accurate manner. Based on the study, current methodologies for verifying student safety zone distance requirements varied greatly and ranged from using a paper map to sending out police officers to

WHO'S DOING WHAT *continued from page 2*

Beyond the GIS work done specifically to enhance GLIN's role as an information resource lies the work done at myriad state/provincial and federal agencies and academic institutions across the region. The Maps and GIS section (<http://gis.glin.net>) contains a mix of data, GIS-derived information on Great Lakes topics, and links to other programs that provide relevant data or tools. An index of GIS agencies and organizations with programs in the region can be found on the Resources page at <http://gis.glin.net/resources.php>. This page includes links to regional entities that house and distribute GIS data, allowing users to quickly find and download existing datasets created and served by other agencies. Such a service, while "old fashioned" (to the extent that designation can be applied to the World Wide Web), still lies at the heart of GLIN's mission and purpose. In some cases, the data are created by institutions focused on and located in the region. In other cases, the data are housed at national programs entirely outside the region. In all cases, they are of use to people interested in the basin and are therefore linked via GLIN. Where the data are part of larger national datasets, GIS staff connected with GLIN extract the basin-related elements and provide them as custom products.

NEW PROGRAMS AND ACTIVITIES

The advent of mapping services and larger data handling capacities has led to the current focus of GLIN's GIS-related activities, linking regional users directly to the broadest possible variety of existing regional data. This is done in part via the basic collections of links described above, in part within topic-focused sections on GLIN, and increasingly through the latest in web mapping services and web features services.

Beyond links to resources of interest, GLIN hosts live links to data that are routinely or automatically updated. Lake conditions data such as lake levels, for example, are provided continuously by agencies and monitoring stations in the basin and are accessible through links on GLIN (see www.glin.net/conditions/). Lake level data can be accessed through

www.glin.net/envt/water/levels/hydro.html. Beach conditions and closure notifications are provided by individual states/provinces on a daily basis but are accessible for the region through GLIN at www.glin.net/beachcast/. These services, while not GIS-driven when they are viewed on GLIN, are developed using GIS tools.

In the future, services like these will be directly connected to GIS tools. As programs in the region make their monitoring data available through web services, GLIN will be able to make use of live maps that allow users to select themes and locations and retrieve near-real-time data for specific areas.

GLIN recently revived its Great Lakes Information Network Data Access (GLINDA) project, a tool for sharing and accessing GIS data directly via GLIN. The project makes use of a collection of data conversion software to provide region-specific datasets in multiple formats. Users can view metadata for any dataset in the collection and obtain shapefiles, graphics files that show the data as a simple raster image, SVG format for use with open-source GIS software, and a KML version for use with Google Earth. GLINDA is essentially a data warehouse used to store and retrieve data related to the Great Lakes basin. In some cases, the data are created as part of GLIN projects. In many more cases, they are developed as part of regional projects that create data but were not designed with distribution in mind. If the data are not proprietary and the developers are willing, GLINDA can serve as a means of making these datasets available across the region.

For the most part, GIS staff working on projects for GLIN use ESRI's ArcGIS software. However, GLIN's internet mapping tools are driven by open source applications, non-proprietary computer programs that have been developed and refined by communities of interested programmers and users. Details about the software behind the mapping services on GLIN can be found at gis.glin.net/glindaFAQ.php.

LESSONS LEARNED/RECOMMENDATIONS

As this point, information access and retrieval on

From the President

The excitement and dedication of professionals committed to the future of IMAGIN was clearly evident at this year's annual conference in Kalamazoo. A common remark shared by many colleagues attending this year's conference was the event was more personal and members appreciated the opportunity to share their impressions directly with the Board of Directors at the best attended Annual Meeting ever convened. From my perspective, the message to the Board was clear... the members want to better understand how the organization operates and they want to participate more actively in its future. I personally view this response as a call to action with the next (November/December) edition of the *IMAGINews* featuring an article describing the IMAGIN organization, leadership, committees, and short/long term objectives as adopted by the Board's leadership during its annual planning session (see the Board's June 2007 meeting minutes online for more information). A number of recommendations were received at the Annual Meeting this year. The first included requests to transfer past editions of the *IMAGINews* from the restricted membership only section of the web site (www.imagin.org) to the open access area of the site - we listened and it happened. Visit the site and share these informative, descriptive articles among your colleagues, interested stakeholders, and non-members who might enjoy learning more about our organization. Other member suggestions included the establishment of an IMAGIN Speaker's Bureau. The Bureau or speaker referral listing will be a resource for the organization to refer its own members interested in speaking on geospatial applications/issues they have experience and expertise in managing. In order to assess each member's background, IMAGIN is conducting a complete census of its membership this fall. Upcoming E-news and email announcements are coming soon to direct you to

participate in the online questionnaire so please take a moment and help our organization build a valued resource you can leverage. Your participation will enable the organization to identify member talent and expertise areas to serve on this voluntary, Speakers Bureau network. Additionally, the census will improve ability of the organization to better target future conference content and seminars to members who have an interest within any geospatial application area. This year's annual conference participant surveys showed resounding support to continue providing and expanding the number of technical workshops available. Your participation in the census will ensure relevant content is featured at next year's conference and will help to ensure the membership's broadest interest areas are represented.

As President, I am joined by the 14 members of the Board who are fully committed to delivering IMAGIN member benefits representing organization's mission centered on professional development, networking, and advocating geospatial applications/resources enhancing our ability to serve our many vested interests. As members of the rapidly evolving geospatial community, this is necessary to sustain a forum promoting the exchange of ideas and facilitate the learning process as we grow together. I encourage you to participate and shape the future of this organization by sharing your thoughts with the Board directly via email at info@imagin.org, by contacting me directly at cblough@cityofnovi.org, and by participating in the upcoming membership census! I look forward to hearing from you very soon and keeping you well apprised of the latest news and membership development opportunities.

IMAGIN President Chris Blough can be reached at (248) 347-3279 or cblough@cityofnovi.org

From the Nominating Committee

The Nominating Committee of IMAGIN is pleased to announce the results of the 2007 IMAGIN Board of Directors Election. Members' ballots were tabulated during IMAGIN's 2007 Annual Conference in Kalamazoo this past May. This year's election brought one new member to the Board.

The following individuals were re-elected to the IMAGIN Board of Directors:

- Steve Aichele, Geographer, US Geological Survey-Geographic Information Office
- Scott Ambs, GISP, GIS Coordinator, Jackson Community GIS
- Chris Blough, GIS Manager, City of Novi
- Charlie Bristol, President, Bristol Technical Services, Inc.
- Brian Buckley, Senior GIS Specialist, Hubbell, Roth, & Clark, Inc.
- Lori Schultz, GIS Specialist, Public Health, Delta & Menominee Counties
- Laurie Spencer, Equalization/GIS Director, Grand Traverse County
- Kimberly Wraight, GIS Coordinator, Washtenaw County IT

The new member welcomed to the Board was:

- Andrew Brenner, General Manager, Sandborn

IMAGIN would like to express its gratitude to the following Leader who concluded her term on the Board of Directors:

- Dawn Siegel, Supervisor, Land Implementation Services, Oakland County Department of Information Technology – 3 years of Service

The Board's annual meeting was held Tuesday afternoon at the Conference, at which time the Board officers were elected. The Executive Committee will consist of Chris Blough, President; Kimberly Wraight, Vice President; Brian Buckley, Treasurer; and Tara Maguire, Secretary. We wish the new Directors and Officers much success in leading IMAGIN into the challenges of the next year.

Bill Rowe, Chair-Nominating/Governance Committee, can be reached at (906) 225-8170 or by email at BRowe@mqctcy.org

Member News

Grand Traverse County has received a grant from Rotary Charities of Traverse City for the public implementation of the County's GIS Internet Map Application over the coming year. Rotary Charity's goal for this grant is to enable the County to better serve its constituents through increased access to public information, which will lead to a more empowered and informed citizenry. The County has developed, maintained, and improved a software application that serves GIS information to County employees via the County's intranet. Now Rotary Charities, with a match from the County, is providing another server and the necessary firewalls for public dissemination.

Brooks E. Kelley, senior consultant of **InfoGeographics, Inc.** – a Traverse City-based GIS services and products company – recently met the standards and requirements as established by the GIS Certification Institute to become a certified GIS professional (GISP).

Did you Know?

Oakland County has almost twice the number of beekeepers than any other county with 43. Ingham, Livingston, Wayne and Macomb round out the top five list. Beekeeping is highly correlated with non-forested landcover. For more fun with beekeeping and honey production facts, see <http://www.cyberbee.net/>

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physically walk and measure distances between student safety zones and sex offender parcel addresses.

Using the results of this research, the Institute's developers created an application to demonstrate how computer mapping tools can be used to aid the law enforcement community to verify the accuracy of an address provided by released parolees and registered sex offenders. By using this application, an address that cannot be verified to a known parcel address via assessor data is flagged and a warning is provided immediately to the registering police official. This application also conducts a spatial check for compliance with the school safety zone distance requirements of the Act.

1. Offender addresses are parsed, standardized, and then geocoded using a state-wide service based on CGI Framework data
2. Offenders are queried by a known student address with a distance buffer
3. School locations are integrated and buffered to create exclusion zones and to query offenders in the exclusion zones
4. Administrative or service boundaries can be added to query offenders
5. Query results are shown in both maps and tables

The benefits of using this application are:

1. Instantly identifies whether or not a sex offender's residential address is valid by comparing this address with local government address records
2. Instantly provides law enforcement agencies with a standardized means to identify if an address is located in a defined student safety zone
3. Instantly provides law enforcement agencies with a visual representation (map) of the distance between the sex offenders address and designated student safety zones

Community Implementation

This web application was developed using the Open Source tools, MapServer© and PostgreSQL. A demo can be seen at <http://164.76.128.98/pso/>. This

software architecture makes it an easy to use and license-free platform for any size law enforcement agency. The sex offender information displayed in this application is obtained directly from the Michigan Public Sex Offender Registry website. Other required GIS layers, such as schools, parcels, and street center-lines, are usually available through governmental agencies. However, this application needs to be installed by professional GIS or IT staff due to varied configurations of web services in government agencies or community organizations.

MapServer is Copyright © 1996-2007 Regents of the University of Minnesota

Eastern Michigan University Institute Director of Geospatial Research and Education and GIS Professor, Dr Yichun Xie, can be reached at (734) 487-8655 or yxie@emich.edu

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Eastern Michigan University Institute Director of Geospatial Research and Education's Kenneth Bouchard can be reached at kboucha1@emich.edu

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GLIN is still heavily keyword driven. As GLIN navigation evolves, a new geographic focus is emerging and GLIN's GIS component is becoming steadily more committed to internet mapping. Mapping services such as Google Earth offer sophisticated background imagery while allowing other applications to overlay spatial data from their own sources. A growing collection of geographically referenced data streams are available from agencies and monitoring programs and can be incorporated as well. The result will be tools within the many topic sections on GLIN that let interactive, user-controlled maps lead people to information.

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IMAGIN is a non-profit 501(c)3 organization comprised of individuals and organizations interested in the use and application of geographic information system (GIS) technology in Michigan.

Our members are committed to improving the quality and availability of digital data necessary to make good use of GIS.

We believe that cooperation and open communication are necessary to achieve these objectives.

Christopher Blough, IMAGIN President

Tara Holmes and Matt Malone,
Co-chairs/Services and Benefits Committee

imagiNEWS

ISSN 1545-4819

is published bi-monthly

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