

President's Message

Are Open Source Solutions Right For You?

By Nick Stadnyk, ADC President

Open source software is gaining in popularity, and with it more and more companies are providing training and support. It provides a broad spectrum of possible solutions and the ability to perform functions that are not feasible with commercial off-the-shelf software.

At ADC, we take pride in our ability to stay current with the latest software and emerging technologies. We view it as a way to continually provide the best solutions to our customers. By knowing all the open source and software technologies available, we can better match a solution to fit each client's needs.

Open source software has several key advantages as compared to commercial software, as well as some disadvantages.

The open source solutions can sometimes provide a familiar look to the client applications, making them easier to use and more visually appealing. And, when money is an issue, these open source solutions are oftentimes cheaper than traditional software development environments. Open source also allows us to perform functionality for our customers that is not always available with traditional solutions.

For example, open source also uses open standards that can improve the inter-operability between applications. Users have the ability to modify the application to meet their specific needs.

Open source solutions are not, however, without disadvantages. Because of the wide range of developers, there is no guarantee of the quality of the software. Also, it is still possible to have open source software with very little or no support. Finally, in order to modify the software, the user has to know how to program, or pay for someone to modify the code. For commercial software companies, open source software is difficult to use due to the licensing which makes it very difficult to sell.

If you choose to use open source software, I would suggest researching the available options and verifying the quality and level of support, as well as the programming language used.

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ADC4WEB.com...Coming in January!

Our talented web programmers, graphic designers, information technology staff, and software engineers are combining their expertise to bring customers ADC4WEB.com, a new division of ADC that will develop, create and host websites.

The new division will focus on website development, but will feature a mapping component in each website. Our Foundation Plan starts at just \$499. Stay tuned for more details!



www.adc4web.com - COMING SOON!

The State of Geospatial Open Source Development (Part I)

By Ron Bruder, Director of GIS Technology

As noted in our President's Message, the decision whether to adopt open source software in an organization is not an open and shut case. There are numerous factors to be considered, from the success of matching the business needs of the organization to the available open source offerings, to the support and documentation for the potential software that will ultimately define its total cost of ownership.

This article will explore the key defining elements of open source software projects, and then put those in the context of the current state of open source tools in the geospatial arena. This will offer our readers some guidance when weighing the available proprietary versus non-proprietary GIS packages for their organizations.

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Employees of the Year Recognized at ADC Awards' Banquet

Each year, employees at ADC vote for a colleague in our Eau Claire and Omaha offices who has demonstrated exemplary commitment to his/her work, colleagues and customers. Winners receive a plaque and a gift certificate in recognition of their accomplishments.

This year's winners are Brandon Thatcher, ADC Eau Claire's Information Technology Director, who has been with ADC for three years, and Jason Haith, ADC Omaha's .NET Software Engineer, who joined ADC a little more than a year ago as a subcontractor, and is now a valued employee.

Brandon is in charge of equipping and maintaining ADC's new state-of-the-art server room, and ensuring that all of the applications hosted at ADC run seamlessly. Under Brandon's watch there are over 50 websites and advance applications hosted at ADC.

Jason has worked on several applications for ADC, including the RODdirect application for county register of deeds' offices, and for a host of other programs for various clients.

Both received accolades from fellow employees for their hard work, dedication and commitment to their work.



Nick Stadnyk, Brandon Thatcher, Jim Ward



Nick Stadnyk, Jason Haith, Jim Ward

ADC Celebrates GIS Day

As one of the largest GIS firms in the Midwest, ADC was pleased to participate in several events to help promote GIS in the community in November.

ADC hosted class tours for the Messiah

Students from Messiah Lutheran School in Eau Claire visited ADC to learn more about GIS. Technicians at ADC mapped each of their homes to show them where they live in proximity to each other in Eau Claire.



Sue McDonald, County Coordinator, participated in GIS Day events with members of the Douglas County Land Information Office in Bayfield.



Lutheran School seventh and eighth grade class and UWEC's Introduction to GIS class. In addition, Sue McDonald, County Coordinator, participated in GIS Day events with members of the Douglas County Land Information Office in Bayfield.

News Briefs

Beaver Creek Wins "Program of the Year" Award

Congratulations to Beaver Creek for winning the "Program of the Year" award for their Citizen Science Program from the Citizen-Based Monitoring Network of Wisconsin.

ADC is proud to have created the web mapping customizations for the NatureMapping component of the program, which allows citizens to log their personal encounters with Wisconsin wildlife.

ADC Receives High Marks from Dun and Bradstreet

ADC is pleased to report that it received a 96 in the business relations' category of its recent Dun and Bradstreet report, and an overall performance rating of 90.

The Dun and Bradstreet report is like a "Good Housekeeping" gold seal of approval for businesses. As one of the best known business reporting agencies in the world, its ratings are coveted by businesses and examined closely by financial institutions and investors who want to know the financial health of any business.

The Dun and Bradstreet rating is prepared by a thorough examination of the financial records, statements and dealings of the business with its customers, clients, investors and shareholders.

ADC Announces New GIS Consultant Team

With all technology, staying ahead of the curve is the greatest challenge. This is especially true for GIS technology, which is changing faster than most now that it's become more mainstream. That's why ADC created a new segment of the company dedicated solely to ensuring that ADC stays on the cutting edge.

Ron Bruder, an employee of ADC's for the last 10 years, was recently named the Director of GIS Technology and will be leading the team. ADC is pleased to announce that Matt Rantala, Zach Felling and Jeremy Holt are joining Ron's team as GIS Consultants.



Ron Bruder

As GIS Consultants, Matt, Zach and Jeremy will be tasked with researching and developing new and emerging trends in GIS to share with programmers, GIS technicians, other ADC employees, and customers.

The consultants will also help to drive sales, marketing, project management, programming, and technical work. Their collective skills will help ADC to stay flexible, and to respond to growth and opportunities more quickly.

ADC views the new team as essential to providing the best GIS tools possible for our customers. According to Jim Ward, CEO, the

"Excellence" Awarded

Marketing Manager Jamie Hagen recently received the "Excellence Award" for her contributions to ADC's marketing efforts. The award is presented by management to recognize employees who have gone above and beyond what is required of them in their day-to-day duties.

Jamie was instrumental in giving ADC a "face lift" with her designs, and has also provided graphic design expertise to customers on their websites, logos and brochures.

She recently volunteered her time to design the logo (*see below*) for the Wisconsin Land Information Association to use on their marketing materials at their annual conference, which will be held in February.



idea to have consultants within a consulting firm is a novel approach, but one that will ensure that ADC continues to be the leader in GIS consulting into the future.

"We are making the commitment to appointing three of our top technicians and programmers to this post because we know that research and development are critical to providing our customers all the tools they need to stay ahead of their competitors," said Jim. "In a company of 45, this is one-tenth of our workforce that will be entirely devoted to keeping abreast of new technology. It is a huge commitment on our part, but one that

// ...one-tenth of our workforce will be entirely devoted to keeping abreast of new technology. //

we're confident will pay dividends for our customers and for us."

Matt, who is a 14 year veteran of the GIS field, has been with ADC for seven years and is an accomplished GIS scripting and application developer who has contributed to successful ADC projects both small scale and large. He is especially seasoned in GIS processing and analytical techniques. He will lead ADC's desktop GIS au-



Matt Rantala

tomation efforts, as well as direct all spatial database programming projects.

Zach, who has been with ADC for eight years, is a graduate of UW-Oshkosh and serves as ADC's resident spatial database administrator, including management of ArcSDE integration with SQL Server, and PostGIS implementations for both ESRI and open source GIS projects. His experience with GIS data development, data modeling and the practical demands of real-world, client GIS application makes him an integral part of many ADC projects.



Zach Felling

Jeremy, an employee of ADC for the past three years and a graduate of the Chippewa Valley Technical College's GIS program, is adept in geodatabase design, data development and geoprocessing. He also serves as the lead designer and web administrator for all ArcGIS Server and GeoServer projects. He has conducted several GIS training workshops and is currently pursuing ESRI Authorized Training Program certification for select ArcGIS Desktop product courses, allowing ADC to expand its current training curriculum.



Jeremy Holt



TIPS FOR TECHS

Here are some favorite tips and short cuts used by our team of GIS technicians:

1. In ArcGIS 9.3 bookmarks are now easier to use, through the new menu dropdown. Adding bookmarks to your everyday maps can be a big time saver. With the ease of creation and access to your bookmarks, they can significantly reduce drawing time for your map and navigation from one working area to another. With the area desired on your screen simply click the Bookmarks Tool bar and click create, give the bookmark a useful name and it is easy to navigate back to that geographic extent at any time.
2. ArcGIS 9.3 has also includes a feature long awaited by some, especially those who are used to CAD zoom functionality. You can now choose how the wheel zoom acts in the Tools->Options dialog window; under the general tab specify either Display or Cursor for the Wheel Zoom Center On option.

Customer Appreciation Party



ADC Garden



Breaking Ground



Halloween



Omaha Holiday Party

We had a wonderful 2008 and hope you did, too...

Wishing you the happiest of holidays and a prosperous 2009!

From our ADC family



Round Lake, WI Picnic



Festivus



Sledding



Eau Claire Holiday Party



Ribbon Cutting



New Addition



Omaha Picnic



ADC Globe-Kickers



Omaha Picnic

CUSTOMER SPOTLIGHT: BAYFIELD COUNTY, WISCONSIN



ADC is proud to serve a diverse group of clients – from local municipalities to national corporations. To honor our clients, we are featuring a segment each quarter that will highlight a client, discuss how the customer has used GIS, and will include other interesting information about the client.

In addition to being featured, the client will receive an appreciation gift from ADC. If you would like to be spotlighted, please contact Susan Marcott at Susan.Marcott@adc4gis.com.

Scott Galetka, Land Records Administrator
Holly Hemingway, GIS Technician
<http://www.bayfieldcounty.org/landrecords/index.htm>

By Sue McDonald, WI Business Coordinator

Our Customer Spotlight is Bayfield County, which is located in the northwestern part of the state. It is a prime Wisconsin tourism location bordering Lake Superior and is the gateway to the Madeline Islands.

Bayfield County was originally named LaPointe County and was created in 1845 with lands taken from Ashland County. The County was renamed after Henry Bayfield, the British Naval Lieutenant who made the first survey of the Great Lakes area. The county seat is Washburn. The land area encompasses 1,476 square miles of land and 565 square miles of water. The population is approximately 15,200.

Scott Galetka, Land Records Administrator, has been with Bayfield County for a year and a half and has been integral in updating the county's GIS program. Scott brought ADC on-site to install and configure ArcSDE. He then designed a geodatabase and migrated all of the existing CAD and GIS data into a seamless county-wide database in SDE.

After ArcSDE was in place, Bayfield County began work on editing and improving the existing data. One major goal was to clean up and populate existing data to get a better match between the parcels and the assessment roll. With ADC's

ADC is very easy to work with. They make you aware of any issues that may surface so you can plan for it accordingly starting from the RFP process through to the completion of the project.

~ Scott Galetka, Land Info Office - Bayfield County, WI

assistance, the final outcome was to have over 99 percent success at matching parcel data polygons to the assessment roll records.

The Bayfield County Land Records department is also involved in producing the county plat book. The plat book had been managed in-house in previous editions. However, due to limited staffing, Bayfield chose to have ADC do the 2008 book working with the existing layouts and making the updates and annotation changes. The book has the same look and feel of previous books, but has many new options such as more insets, aerial photos, contour lines and also shows open MFL/FCL lands.

Bayfield County's professional attitude and quest for quality and accuracy has made its GIS system more robust to the benefit of its users. ADC hopes to continue working with Bayfield County to improve the county's data sets and GIS functionality.



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Please send any comments, questions, or feedback regarding our newsletter to Susan Marcott, Marketing Director, at Susan.Marcott@adc4gis.com.

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The essential characterization of open source software is that the product, or source code is made freely accessible to others beyond the original developer or development team. It is also considered a model for development wherein the coding and decision making are managed collaboratively among a group of interested developers.

With these properties in place, the history of open source software development is filled with a collection of stories of success mixed with an equal amount of those meeting failure. Some projects start out successfully and then may ultimately meet their demise. Although there are many exceptions, the general recipe for success from both a functional and organizational perspective is one that contains a focus that is clearly defined and intentionally narrow. Projects launched specifically to address a certain problem or fill a particular need, especially given the inherent disparate nature of open source development groups, establish the best foundation for success. The Apache HTTP Server and the Mozilla Firefox web browser are fitting examples of the success of this approach.

While Apache had the potential to be a broad development project, aiming to be an all-encompassing web server, it was intentionally targeted at the base need of serving static and dynamic pages to the World Wide Web. To al-

low it to expand, however, it was designed in a modular fashion, such that extension modules could be added. Language support for the Perl and Python languages are made available in this fashion, for example. Open source projects that adopt this lean, yet extensible model are less apt to suffer from the bloating or unmanaged expansion encountered by many others that generally leads to poor software quality and substandard associated documentation. Fortunately, the overall maturation in open source development has resulted in this type of focused approach being the current generally applied standard.

The application of the open source model to geospatial applications was much slower in taking hold as compared to the general software community. While the United States Army Corps of Engineers GRASS application (Geographical Resources Analysis Support System) dates as far back as 1982, its implementation was mostly limited to federal and scientific applications. It is only in the past 6-8 years that a broad development community has developed within and around GIS. That, however, has been advantageous in that the pitfalls and mistakes of many of the early open source projects noted above were avoided, resulting in many highly focused and lean programs and applications. There now exists a broad array of both server-side and client-side desktop GIS applications available to all levels of GIS users. In addition, there are a number of modular, con-

sumable geospatial libraries that can be used by developers as the foundation for building high quality applications. In The State of Geospatial Open Source Development (Part II) we will explore the available offerings so that you are better informed should you consider adopting open source GIS.

Look for part II in the Q1 2009 newsletter.

ADC Facts and Fun Trivia

DID YOU KNOW?

- ADC is now your full-service web design and hosting source, with over 50 sites to date being hosted here.
- Rudolph the Red-Nosed Reindeer was originally created for Montgomery Ward department stores as part of a promotional gimmick.
- Michelle Schultz, GIS Project Manager in Omaha, is also a dance instructor and an accomplished dancer herself, performing at various dance venues in Omaha.