

GIS Software Techniques and Implementation

A newsletter by Daniel Elroi

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It's Conference Time!

Howdy, folks. It's time to pack the bags for those lucky few of us who get to go to the annual San Diego Extravaganza. Arguably the best GIS conference around anywhere, this behemoth of a show keeps rolling on in its more or less usual format. 8,000 attendees, they tell us. Wow! In this issue I share my tips for successful attendance, at least according to me!

You will notice that I decided to devote considerable space to an unusual conference I recently attended in Washington DC. Please take the time to read the articles, because I think you may find them challenging and perhaps beneficial. Finally, I start in earnest into a series of ArcView articles and am posting my first freebie software.

See you by the bay,

Daniel

Where is the FGDC going with NSDI? Wait! Stop! Something *funny* is going on!

What's your reaction to FGDC and NSDI? "What is it? Who cares?" or "No, not that again!" But wait, something *funny* is going on here!

A few weeks ago I took time out from my consulting and programming schedule and went to Washington DC to try to gain a different perspective on GIS. I attended the Federal Geographic Data Committee's three-day *1999 National GeoData Forum: Making Livable Communities a Reality* conference. I *expected* to learn about the latest developments in the FGDC's metadata standards, and in its efforts to promote a National Spatial Data Infrastructure (NSDI). *Instead*, I witnessed something quite unexpected: You know all this business about rein-

venting government – Al Gore's thing? Well, guess what? It's actually happening, albeit at governmental speed.

The key speaker was not some bureaucrat or technocrat, but the guru of institutional reinvention himself, Dee Hock. This was not the speaker you would expect in a downtown Washington hotel meeting room, full of Federal, State, and local GIS know-it-alls, let me tell you! So what's so radical about Dee Hock and about his showing up at the FGDC forum? Mr. Hock founded the VISA International credit card organization in the 1960s. Now, you wouldn't expect something socially-redeeming or radical from a capitalist who for thirty years was the

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Floating buttons in ArcView

Want to do something cool in ArcView? Then float some buttons over a View, a Layout, or some other document. The buttons can move with the display (the buttons are tied to a geographical location) or they can remain in the same location in the display regardless of zooms and pans (tied to the display). Why would you want to do

that? Here are some examples:

- Associate buttons with specific buildings on a property map. Click on

a button and it fires off a script, a different application, or anything else you want. This is an alternative to using the built-in Hot Link

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Something *funny* is going on at the FGDC

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CEO of an organization that transacts 1.5 trillion dollars every year, would you? Well, Mr. Hock has since “turned on, tuned in, and dropped out.” And then reinvented himself. What makes Dee Hock toss and turn in his sleep these days? This:

- *Why are organizations, everywhere, whether political, commercial, or social, increasingly unable to manage their affairs?*
- *Why are individuals, everywhere, increasingly in*

conflict with and alienated from the organizations of which they are a part?

- *Why are commerce, society and the biosphere increasingly in disarray?*

These are topics that are causing great anguish to people now involved with the FGDC, who are concerned about the continuing discord between the Federal government’s efforts to streamline the collection and dissemination of spatial data, and seemingly *everyone*

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Floating buttons in ArcView

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feature.

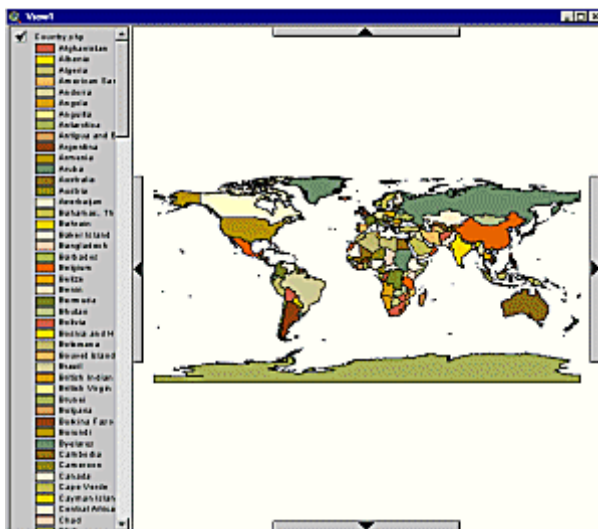
- Place a Done, Dismiss, or Close button directly on a Layout document.
- Place Pan Right, Pan Left, etc. buttons right on the View, so that if you click on the Pan Right button, for example, the display automatically pans right by a predetermined amount (see graphic).

I find that floating buttons come in really handy when I try to greatly simplify the functionality of ArcView for very basic end-users, especially where I have removed all menus, buttons, and tools.

You can add floating buttons manually. First load the Dialog Designer extension.

Then bring up the Control Tools dialog from the Window menu. Drag controls onto the desired document. Note that I have been making reference to buttons, but you can actually place other form controls on the document as well. Floating controls are tied to a particular document, not the GUI, so you will have to add them to each required document separately. Double-click on the control and adjust its behavior as you would with any dialog control. To compile the controls, choose the Run Controls selection from the Graphics menu. To return to design mode, choose the Design Controls selection from the same menu.

In addition to adding floating controls manually, you can add them through an Avenue script. I invite you to download an APR file and four GIF files from my Web site and try the third example above for yourself (www.elroi.com/floaters.zip). Please read the README.DOC file contained in the ZIP file first. Since these scripts are excerpts from larger code, they are not very flexible, and you will have to follow the instructions carefully. However, you should see results in no more than ten minutes, so it might be worth trying. Let me know what you think!



Free ArcView extension for *boring* people

Hey you, *boring* people. That is, people who deal with boreholes, drill holes, wells, test holes, or any other holes in the ground drilled with a drill rig. I have written a free ArcView extension for you to use to import hole data into ArcView, as 3D lines (PolylineZ). These lines can then be used in both regular Views and in 3D Analyst Scenes. Whichever data are in the original file will be imported, so you can query the hole information, set the legend with it, and so on. For more details and download information, go to www.elroi.com/software.htm.

Something *funny* is going on at the FGDC

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else. I believe that the FGDC, which embarked on an impressive agenda of standards and dissemination mechanisms in the early 90s, has made excellent progress. And yet it continues to be treated with suspicion and hostility from local government agencies, who feel that the FGDC is out of touch, too complex, too expensive, among a long litany of other complaints. However, some very high profile players, such as Al Gore and Bruce Babbitt, and many low profile players have taken a personal interest in changing this, hence Dee Hock's appearance at the conference.

Dee Hock's assertion, in my own words, is this: Given that most humans *do* care about their human *and* non-human environment and do not wish it harm, but also given that most humans realize that we *are* harming both the human and non-human environment, what is causing this behavior? It is his belief that the prevalent institutional/organizational structure in use today somehow promotes and rewards this behavior by its very nature. This structure, he maintains, is an antiquated structure developed to accommodate the industrial revolution in the 1700s. It treats all systems as mechanical systems, which can be broken down into their component elements, whereupon they can be understood and improved. In his opinion, a more appropriate model for our day and age is one which can accept the chaos and blinding speed of developments in our time, yet impose enough structure on them to channel the chaos into improvements rather than into sheer anarchy and collapse. Here is a simpler way of saying this: *Organizations that simulate the natural process of evolution will succeed and help us survive in the next millennium, whereas organizations that will continue to attempt to design themselves to the tiniest detail ahead of time will not.* Sounds heavy? It gets better. Don't go away!

This concept of ordered chaos is the basis for The Chaordic Alliance (www.chaordic.org), which he heads. In seeking organizations that are either already, or are on their way to being, *chaordic* in nature (a term made up of *chaos* and *order*), Dee Hock has found the FGDC. And the FGDC, in seeking a way to promote cooperation and integration, without stifling or alienating local needs and local creativity, has found Dee Hock. I find this a very interesting and coura-

geous way for a Federal organization to proceed, and encourage interested readers to follow these developments. The FGDC will soon publish the proceedings of the conference on their Web site (www.fgdc.gov), which will of course include all the *other* topics covered at the conference, which I have not even mentioned. I also encourage you to look these up, and to write to *me* with your comments and questions.

Lobbying for GIS on *the Hill*

While in Washington DC for the FGDC conference, I had two unique experiences which I would like to share with you. The first was sitting in the third row of the very first Congressional Hearing on GIS! This discovery hearing by the Government Management, Information, and Technology subcommittee of the House Government Reform Committee was chaired by California representative Stephen Horn, and attended by Pennsylvania representative Paul Kanjorski and Texas representative Jim Turner. The witnesses before the committee consisted of such luminaries as US Secretary of the Interior, Bruce Babbitt, the Governor of Wyoming, Jim Geringer, and ESRI President, Jack Dangermond, as well as a dozen or so local government representatives. Representatives Horn and Kanjorski are apparently two of the few representa-



Jack and Bruce went up the Hill

tives who have taken an active interest in GIS and its related technologies, and were interested in what the community had to propose.

Much of the policy recommendations made at this hearing were formulated by the luminaries and the regular folk, the likes of me, who attended the FGDC forum.

The second experience that was unique for me, was to climb up Capitol Hill and seek out one of my representatives from Colorado, and ask that he pay close attention to GIS related issues in the Congress as they come up. I wish I had time to actually make an appointment with him so I could explain in person the

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New clients, new projects

<p>I am pleased to welcome the AngloGold Jerritt Canyon Joint Venture (Elko, NV) to my client list. I am assisting the exploration group at this northern Nevada gold mine to migrate their geologic modeling, mine planning, and GIS data to a relational data management</p>	<p>system, and to make different software packages that they are using talk to each other.</p> <p>I am also excited about an ore control system implementation of ArcView that I am newly involved with in an open pit bauxite mine.</p>	<p>On this project I am collaborating with Condor Earth Technologies, Inc. (Sonora, CA) to assist a mining company in Jamaica, Kaiser Jamaica Bauxite Company – KJBC (St. Ann, Jamaica).</p> <p>Can I help <i>your</i> organization, too?</p>
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How to get the most out of the ESRI Conference

Here are a few quick observations from attending about 10 ESRI Annual User Conferences, on how to make the most of the conference attendance. See which of these work for you.

- Be brave. Introduce yourself to people. If you do this, you will have someone to look up next time. Believe it or not, even with over 8,000 people in attendance, you will see people year after year! I have had chance reunions with people I had not seen since high-school! By the way, you can look for long-lost pals or new friends in the conference e-mail system that is also accessible from the Internet for the duration of the conference.
- Go to technical sessions presented by ESRI staff. You get the hottest information from the top people, and they will answer your questions. Pick those over exciting-sounding paper presentations.
- There are some valuable paper presentations, *but* you are better off minimizing those. Go over the
- proceedings in detail ahead of time. If ESRI hands out the proceedings on CD try to look over the papers you are interested in on the first or second evening. If the paper is in the proceedings, chances are you do *not* need to see the speaker. And if the paper is *not* in the proceedings, beware.
- Allocate time to spend at the vendor exhibits. There aren't many such opportunities to pick up on the latest technologies and comparison-shop as the exhibit. *But be aware that the vendor exhibits are only open limited hours, so don't miss them.*
- Spending your lunchtimes or pre-dinner hours indoors may be a drag, but that is when your regional or vertical market (e.g. engineering, mining, academic) user groups meet. Few of us make the most of our peers' experience, and this is a good opportunity to hook up with such professionals.
- When it all gets to be a little too much, take a breather, walk along the bay. There is only so much anyone can absorb.

Lobbying for GIS

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various benefits that the population of Colorado, in my case, could realize from greater involvement by the Federal government in assisting and enabling the development of spatial data, applications, and education. Still, merely showing up at my representative's doorstep to lobby in favor of a professional and personal agenda was certainly illuminating, and hereafter less intimidating than it had been before. I recommend it!

GIS Software Techniques and Implementation is an on-line newsletter published freely by Daniel Elroi.

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