

	Commonwealth of Kentucky Transportation Cabinet Department for Information Systems	
	Meeting Minutes	Date: 12/08/2010
	<i>GIAC Committee</i>	By: Blake Bennett
Invitees:	<i>Brad Bates; Jon Clark; Steve Cordiviola; Kevin Cornette; Will Holmes; Ann Miller; James Riney; Marvin Terry; Jerry Weisenfluh; Kent Anness; Kim Anness; Roberta Young; Glenn Thomas; Brian Kiser</i>	
Attended:	<i>James Riney; Marvin Terry; Jerry Weisenfluh; Brad Bates; Kevin Cornette; Jon Clark; Steven Cordiviola; Kent Anness; Glenn Thomas; Will Holmes; Jim Fisher; Jon Clark; Jennifer Browning</i>	
Absent:	<i>Brian Kiser; Kim Anness; Roberta Young; Ann Miller</i>	

Meeting Topic: GIAC Standards Committee: SharePoint site, Workstations, LIDAR, and Future Directions

Items Discussed:

SharePoint should help us collaborate and communicate more. Today's agenda is fairly modest: mostly to talk about our SharePoint site and allow for questions and answers. We will show the site today and give an overview.

Workstation Status Report: please get workstation purchases approved by our Enterprise Architecture board. Votes are solicited on this--include 32-bit versus 64-bit support. Will and/or Jim will talk about their testing efforts.

LIDAR: Transportation is involved in some of the projects using this technology. We will talk some on where we want to go with LIDAR.

Last, if there is any particular standard or technology that you'd like to bring forward for discussion, please do so.

This group has made some excellent progress. We've each had separate efforts over the years, but there's no reason we can't still work together today.

First Topic: SharePoint

The SharePoint site

This is our pilot to the world outside of KYTC. Jennifer Browning will be helping us show the site today-- she has been a tremendous help in implementing and educating. If you see opportunities here please tell us what you'd like to try.

SharePoint is Microsoft's web content management system. At KYTC, it is being used both for internal deployment and for an extranet outside of the Cabinet. Jon Clark's site was KYTC's Pilot site for the Extranet.

SharePoint offers

Calendars,

Lists & Libraries - places to store information like links, documents, etc.

Announcements

Tasks

The Home Page

Jon has designed the main page with links that GIAC's members have supplied. There is a Global navigation across the top of the site, and then the "Quick Launch Navigation" is the left-hand menu. This may not fully function at this time, (particularly Search), but down the road features will improve. Search will allow keyword searches that can drill down into the document's content. It can do this for many file types, with some exceptions (for example, proprietary drawing file types).

Document Libraries

When you click on "Shared Documents", there are folders for Meeting Agendas and Meeting Minutes. Basic information is collected in the root level of these folders--for example, a list of GIAC members, their contact information, etc.

Documents can be configured for specific sharing or read-only as needed. They can also have versioning applied to them so that changes can be rolled back.

When you open a document in Office 2007 or 2010, you will see that the default opening of a document is Read-Only and across the top will be a colored band indicating that the document will need to be checked out if you wish to modify it. This is simple to do - just click the "Check Out" button in the band across the top. The Office 2003 and below interface is very different--it's a bit harder to interact with the documents. The SharePoint environment is SharePoint 2010.

As you drill down into folders, notice that the icons will show you what type of file it is (Word, Excel, etc.). The icon will also show a green checkmark in one corner if the document has been checked out. The page will show you who has checked it out. If you want to modify a document that has been checked out, you can do so without contacting the person with the checked out document, but be aware that attempting to check a changed document back in may be problematic for the person who has it checked out.

"Libraries" are just another word for "views of your documents". Adding your own documents to a library is simple and can be accomplished in one of two ways. Each Library will give you an "Add Document" link and icon to click that will Upload Document, or you can do this from the ribbon across the top: click the "Documents" tab and then choose "New Document" to create new or "Upload

Document" to upload an existing document. The Upload dialog will also allow you to add a comment or note about the document for others to see.

The Document Ribbon also exposes the "Share & Track" box, which will let you set alerts (e.g., "alert me when someone changes this document"). You will receive an e-mail notice when your alert happens. If you prefer working offline, you will want to explicitly Save As to a local folder; the default Save action in SharePoint will save you changes back into the document on the SharePoint Portal.

The Ribbon is a new feature in Office 2007 and Office 2010. What it does is change the older way of using menus and toolbars into a "ribbon" (or band) of categorized boxes that contain all the typical controls you are used to accessing through the menus. In Office 2007, whenever you clicked on different parts of the document, your options in the Ribbon would change to reflect the things you can do with that part of the document. Office 2010 adds the ability to click tabs across the top of the Ribbon to manually change the Ribbon to different sets of options as well.

Calendars

Calendars also figure in your document management, but they interact differently and offer different functions based on what you want to do.

Calendars allow you to see the same sorts of functions that your Outlook Calendar, and with more. Each item in a Calendar is called an *event*. And each event can have items attached to it (like files you want to discuss in a meeting being linked to in the calendar under that event). You can also set alerts to notify you when events are added, removed or changed. If you have a meeting, you could put a URL link to a Meeting Minutes document, but keep in mind that this would just be a hyperlink: it wouldn't offer any of the SharePoint functionality that is obtained by manually navigating to the document's location in SharePoint. You can also have your own Workspace in the Calendar. You can create Workspaces off of meetings: these are collaboration areas specific to a meeting (or "event") that you have created in the Calendar. This sort of sub-site allows your invitees to interact.

Calendars Overlay is a tool that may not be used much by GIAC. How it works though: OIT might set up the ability to show multiple calendars, overlay your SharePoint Calendar with an Outlook Calendar, or display both Calendars as one in SharePoint. There isn't a need for this now, but if you need it in the future the functionality will be there for you.

The Links List

This is the same list of links that display on the GIAC home page. Jon Clark has taken a view of the list and dropped it on the home page to show any links in the Links area on the home page. You managed the links using the Links list. You can edit the link or add new links, and each link can have notes next to it to explain how the work.

The List tab will change the Ribbon and make it easier for you to view Links in more of an Outlook or Excel format. Your List can be exported to Excel and saved locally if you'd like. When you create a new link, you are required to fill in a URL. You should also add a Description: this is the text that the URL will have for the link. Notes will let you describe the link in more detail but be aware that the Notes piece will only show up in the Links list and will NOT show in the Link section of the GIAC home page.

The Task List

GIAC may use this more as they work with SharePoint down the road. It's similar to Tasks in Outlook, and can even be synchronized with your Outlook tasks. Be aware that tasks can only be assigned to one person in Outlook: if you create a Task in SharePoint and assign it to multiple people, it can't be synchronized with Outlook because Outlook can't assign tasks to more than one person. Your list will work fine in SharePoint, but tasks with multiple people assigned to them will not show in any of the assignees' Outlook Task List.

Discussions

These resemble forums and can also have e-mails copied/pasted into them: this would be another way to make sure everyone is kept in the loop. You might want to periodically check the Discussion threads to be sure you've caught all the pieces of a discussion, just in case you got dropped off a CC list at some point. This also works better than an e-mail chain because it's always going to be in a known place: no more searching Outlook to find every e-mail in a chain and hoping you were included in all of the e-mails in that chain.

Alerts can be configured differently for you: for example, you can have the Alerts send you a weekly digest of the new posts for that week, but also update you immediately any time someone sets up a meeting or event...and then also get a daily notice if someone changes a document.

Can permissions and lists be structured to accommodate different subcommittees? Content may not, but permissions can of course be customized. All SharePoint users have a *presence*, which is a set of properties both describing the user and containing important information such as a picture or a link to their e-mail address.

As Transportation's staff has dropped from 10,500 to 4,500 employees, this tool is helping us work together more easily. It should help cut down on redundant information and it is expected to become a way of life for the Cabinet.

Next Topic: Workstations

This is a proposal to upgrade the 1420 workstations. These machine specifications refer to users needing GIS/CAD levels of hardware. This proposal is not for all machines, but only those justified for the user--users who regularly perform high-end work like GIS and CAD almost daily for a long period of time.

Monitors will be split into a separate purchase item. This facilitates inventory management, and also addresses the fact that a user doesn't need a new monitor every time they get a new machine.

Jim Fisher and Will Holmes have researched Workstation. 64-bit hardware is present in all modern computer design today. Operating Systems are now available in 32-bit and 64-bit versions. 64-bit Operating Systems are able to better use larger and more powerful hardware, freeing up resources for 32-bit (ESRI) applications. Utilizing "Lock Memory Pages" allows a 32-bit application to exploit additional RAM above the 4GB limit of 32-bit Operating Systems and increase performance. The application that is Memory Page locked would not use the hard drive for paging but would specifically page to physical RAM.

A lot of 32-bit applications are pre-configured to only use 1-2 GB of physical RAM. The act of paging to and from the hard drive to fill the gap causes performance to drop. Using physical RAM is now possible and should be taken advantage of.

All out warranties will expire at the end of May 2011. Expired machines would be more costly to maintain than updating leased equipment. Jim ran ArcGlobe and ArcMap while Microstation was calculating 4 million triangles (TIN) and experienced no noticeable performance issues with this configuration. The performance hits typically come from multi-tasking: switching repeatedly from one process to another.

Will and Jim handed out the COT Enterprise Architecture Standards sheet for hardware. Changes are highlighted in yellow. Largest changes are in Processor, RAM, and especially video (video card technology is constantly changing). "Desktop Computers" standards were added to this sheet for a basis of comparison.

Will and Jim have obtained ESRI's certification on their hardware configuration. They have tested it very thoroughly and found no problems.

Although Will and Jim have tested a lot of the common tools, they have not yet tested AutoCAD. They may do so in the near future, however the triangle-count test Jim has performed should be considered a good benchmark: running it he only ever reached 50-60% CPU utilization during the test.

Windows 7 64-bit has a much cleaner 32-bit subsystem: the old "XP" based "WOW" ("Windows on Windows") was far less stable and prone to memory leaks over time. The newer 64-bit subsystem in Windows 7 is far more efficient and stable. Thus far the only application found to cause trouble is the old Amgraf e-Forms, which may be a 16-bit application.

Windows Compatibility Mode has supported most other apps thus far; this is Windows 7's native ability to simulate earlier versions of Windows for a program that needs to be launched in a backwards-compatible way. Amgraf's e-Forms' compatibility may be resolved by Windows *XP Mode*, which is an additional feature that virtualizes a Windows XP machine and embeds it under-the-covers in the Windows 7 OS. Jim has tested this technology as well.

Jon would like to ask the GIAC committee for approval that this standard can be submitted for approval by the Enterprise Architecture & Standards Committee. A motion is put forward by Jim Riney that this should be supported using the 64-bit configuration as a target unit but allowing for individual reviews in the future for improvements or upgrades. This specification should be considered as a *base configuration* that can be extended or exceptions requested on a case by case basis.

The motion is seconded and with no opposed, the ayes have it.

Next Topic: LIDAR

Imagery and Orthography.

DGI has been moved. With new leadership and new management, they have revitalized their efforts, calling the committee back together with the goal of preparing an RFP for release by March 1st. The RFP will be for Ortho and LIDAR across the state, spanning at least a biennium. They have engaged Federal

and Local entities to discover funding sources. Prior to the committee having been put on hold, they had developed standards. These standards are still available. They have had minor updates made from FEMA and USGS for the 2010 Calendar year. If you are curious, please examine the Specification document: it can be found in the SharePoint portal under "Photogrammetry-->All Documents". FEMA has given the program a shot in the arm for water systems tracking. Some partnering with KYTC will help have 32% of the state covered by LIDAR by March or April 2011. Working with Division of Water, they have a large amount of data. The group are also working on a mosaic that is very impressive: they'd like to present this at the next meeting.

The group has a resource with RFP preparation experience: she is using content from the last presentation and conferring with the staff to assemble the RFP for them. It has been a tremendous help to have her. There are some outstanding questions that will help the RFP. How water is tracked and how staging will be stated within the RFP are examples. Standards may change slightly between now and when the RFP hits the streets, and the RFP will have to be keep current on this.

Mike Ritchie has assured the group that everything that has been delivered through FEMA/DOW is within the specs. Before doing the flyovers, everyone's needs were addressed as thoroughly as possible: the group wanted to gather as much technical information as they could in advance of "sending the planes up". There is a resource who is very good at collating and organizing LIDAR data after it has been collected. FEMA makes it clear that their funding only comes through strict compliance with their specs. As a result, information is down to two-foot and rendered in phenomenal detail. Image Server's role is another discussion the committee will have in their next meeting. Dealing with raw LIDAR data is an issue: you want to know what you're doing and understand what you're looking at. "LIDAR data has more information in it than the eye or the mind can understand".

Pictometry images may not be perfect for measurement, but the ability to see oblique views has been indispensable to some groups: these views can capture much more information that may not be perceptible using just an overhead. Emergency services are an example.

Counties and PVAs are buying Pictometry data. It's very nice, and clear, but not engineering-level of quality. For example, one sample had an 8-foot offset. If they could take half or three quarters of that money and apply it to this project, they'd definitely get a lot more out of it. Communication with the stakeholders may help with this situation.

Signoff will be obtained at next week's meeting: parties agreeing that their latest specs are being satisfied and their needs are being met. Since this is a somewhat small community, obtaining consensus should not be too difficult. If the updated standard is posted on the site, then everyone can read, absorb, and possibly vote by conference call. Yea, Nay, and Hold for Discussion can be called for, and if necessary further review could be held. Just being able to reduce the task of going through the procurement process will probably be of value; local authorities often spend a lot of time just getting through procurement.

The next pieces of data should be out within the next 4-6 weeks. These should provide a glimpse into the huge improvement of the new data set and its enormous potential for the future. Apart from the PVA conference, it is unclear if there is any easy way to engage all the PVAs directly at the same time.

Can we hold a special meeting to present Photogrammetry options? The group will be holding 3 stakeholder meetings:

- Federal Stakeholders
- State Government stakeholders
- Locals/PVAs/ADDs/etc.

We want to be more proactive, singling people out and engaging the right players in each of these meetings.

Excess property can often require many unique negotiations. A lot of money is spent on purchase of parcels. These things could be made easier with more detailed information.

The RFP will include LIDAR and Ortho imagery. Oddly enough, LIDAR flights don't also do photography: they have to do each in separate flights. It turns out there are some very good reasons for this. For example, it's preferred to do Ortho in the Spring and photography right now. Meanwhile, LIDAR works best in the dark, which makes photography a bad idea. It takes so long to process elevation data that often the imagery is in the can while the data is still being crunched. Collectors like to have 3-6 months to process the LIDAR so that once they come off the plane with the Ortho imagery, they can start with the data crunching process.

If you know how to mine the data, you can pull rich information. The spec calls for the vendor to provide a DIM or DTM, with first returns, bare earth returns, and the raw LAS files. Above and beyond the spec, there might be a need to return to the vendor. The Vendor would store the cloud for us, and anything we need mined from the data set could be provided. Stakeholders are much more interested in LIDAR than they are in imagery. Most people want the DIM. Many different parties will turn up a wide variety of possible uses for the data.

Next meeting: in a couple of months. Some issues in the meantime will be handled separately.

Any other issues?

Standards versus Specifications: if various organizations are collecting the same kinds of data, what is out there that needs to be addressed? For example, parcel data: are the people collecting this data using standards or do we need to encourage them to start using it. They are not required to use State procurement. From a database perspective and a spatial perspective, the data isn't fitting together well. Some PVAs haven't been updated for a long time - 5 or 6 years in some cases. Some of them have a backlog of information needing to be keyed in, or hand-drawn information, etc. With the way things change, a lot of information isn't going to be capable of being current without the resources to manage it.

There's a whitepaper from approx.2007/2008 on the Parcel issue. It was presented at the top level in 2008 but not extensively discussed. Beshear's statement was, "If KYTC is going to buy the data, then everybody will get the data." Secretary Miller didn't comment. Maybe KYTC needs to send out the line again, "recycle" this topic. If possible, try to do a financial deal of some sort with the GIS community. PVAs need to acknowledge how much this information enables them to do their job. Without all these layers of data they would be very lost. Ironically, they are at the mercy of the vendor's standards...if they could buy into our standards, they wouldn't be beholden to the vendor. With a standard, the vendors would have to fall in line. Or better yet, KYTC can get ahead of the game and provide a better product than the vendor.

Standards don't have to apply all the way down: for example, an owner of data can keep that data in whatever way they wish. They would just need to properly transform the data when transmitting it out such that the data sent is within the standards.

A lot of entities don't have an Enterprise Licensing Agreement (ELA): they often purchase per-seat licenses. Until the current ELA lapses this can't be changed. PVAs often call the shots in the ELA even if they're not directly involved in its use.

Action Items: