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Welcome to the summer issue of *WorldView Connection*, a quarterly e-newsletter bringing you the latest news, solutions, and technology tips from the GIS consulting firm [WorldView Solutions](#). Our team provides spatial data and application services on dozens of projects and this newsletter is an opportunity for us to provide updates on our diverse work in the GIS community.

In this issue, you can read a staff profile of Jay Cummins, one of our application developers. Our featured client this issue is Henrico County, Virginia and our featured solution is an ArcGIS Mobile hydrant inspection application our team developed for the Spotsylvania County Department of Utilities. Finally, we are featuring some developer tips for working with layers in ArcObjects, particularly composite / group layers.

We encourage you to [contact](#) us with any feedback, questions, or ideas for future issues. If you know someone who you think would enjoy receiving this newsletter, please forward it along.

Enjoy,

The WorldView Team

Company News
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Meet Jay Cummins
GIS Specialist and
Application
Developer

How long have you worked for WorldView Solutions?
Since February 2011.

Just what is it that you do here?

I primarily develop ArcGIS tools and extensions using ArcObjects, but I occasionally build Silverlight applications using the ArcGIS API.

What recent project have you worked on where your key skills and specialties were utilized?
VDOT/VGIN Centerline Conversion Project. In addition to developing custom import and conflation functionality, this project also provides an ArcGIS Add-In Extension for editing VDOT Centerline GIS data.

Before working at WorldView, what was the most unusual or interesting job you've ever had?

My most interesting job was my first, full-time job as a contractor to the US Navy developing custom GIS software to collect, manage and analyze Unexploded Ordnance (UXO) information for various Dept. of Defense installations. I was able to not only contribute to mitigating a very serious and global issue, but I was also able to travel to interesting places and see some interesting weapons (ours, enemies, and former enemies).

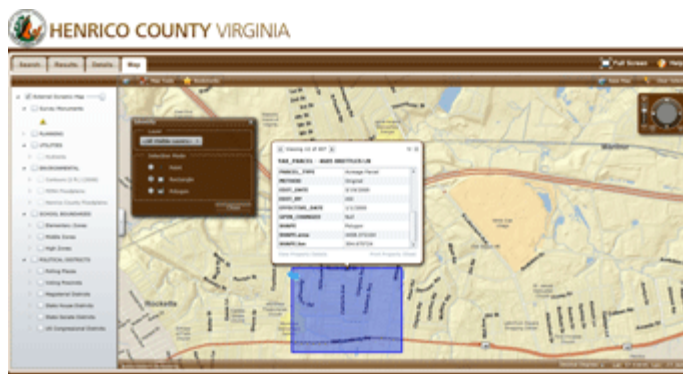
How did you become involved in GIS?

While in college, I took a GIS technician job over the summer because the job location was air-conditioned and I don't like the heat.

Featured Client

Henrico County

Henrico County is Virginia's fifth largest community, with nearly 300,000 residents and 22,000 businesses. For nearly fifteen years, the County has been a leader in the development of GIS for local governments in Virginia. Since 2006, WorldView has provided as-needed GIS services for the County, including application development, data development, data remediation, database design, field data collection, customized training, policy support and systems integration. Among the projects with which WorldView is currently supporting the County are an enterprise Work Order Management System implementation, the development of a Linear Referencing System for maintenance of County roads, and the development and deployment of the County's first public-facing [web mapping application](#), developed using the ArcGIS Server API for Silverlight and ASP.NET MVC.

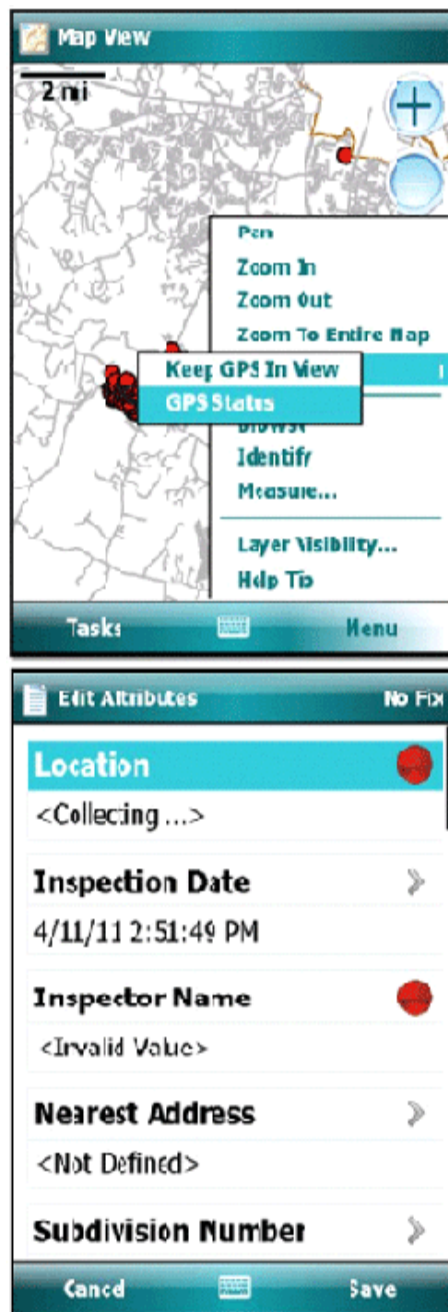


[Learn](#) more about WorldView's clients.

Featured Solution

Hydrant Flow Inspection Tool - Spotsylvania County

WorldView developed and deployed an Esri ArcGIS Mobile application for Spotsylvania County to use as part of its annual hydrant flushing efforts. Data collection is streamlined into a single form, collecting GPS data in the background, without the need for a map. The application integrates with the County's GIS database and is available using the County's six Trimble Nomad field data collectors.



Tips and Tricks

[ArcObjects Layer Visibility in ArcMap](#)

New ArcObjects developers often fail to take into account composite layers when designing tools for ArcMap. This results in tools that only work if the layers reside on the root of the table of contents. It is relatively easy to access all layers regardless of their level in the Table of Contents: simply specify 'true' on the IMap's `get_Layers` function (*help.arcgis.com*: <http://goo.gl/VLf5r>):

```
IEnumLayer layers = ArcMap.Document.FocusMap.get_Layers(null, true);
```

This can, however, highlight another mistake made by new ArcObjects developers: Using `ILayer.Visible` to determine if the layer is actually visible in the map. This

works if you don't have composite layers, but once layers are living inside of a composite layer (e.g. Group Layer), the Visible property value doesn't work as many would expect. Even the Esri documentation for ILayer.Visible is misleading: "Indicates if the layer is currently visible." It actually should read: "Indicates if the layer is currently checked to be visible." Actual visibility within the map is controlled by layer scale ranges and parent layer visibility. In order to determine true visibility within a map, use the IMapLayers.IsLayerVisible method ([help.arcgis.com:http://goo.gl/BzMU](http://help.arcgis.com/http://goo.gl/BzMU)):

```
IMapLayers2 maplayers = ArcMap.Document.FocusMap as IMapLayers2;
    if (maplayers.IsLayerVisible(layer))
    {
        MessageBox.Show(
            string.Format("Layer '{0}' is visible.", layer.Name));
    }
```

IMapLayers (or IMapLayers2) is what you use when actual layer visibility matters to your custom ArcMap tools. Visual Studio Project:

<https://s3.amazonaws.com/wvs/LayerVisibilityExample.zip>

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