

2014 Washington GIS Conference – Full Day Workshop

Date

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Title

Extending ArcGIS for Desktop Using Python and .NET Add-Ins

Presenters

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Workshop Description

Depending on your interests and needs, you can think of Esri's ArcGIS for Desktop as a rich set of GIS functionality made available through the standard Windows mechanisms of menu items, buttons and forms, along with a comprehensive set of geoprocessing tools. For many users, this "out-of-the-box" functionality provides all the capabilities they need to be successful. Many other users, however, may find it helpful to make some changes to the software, for example, to take a process they have to repeat frequently and reduce it from, say, 20 clicks of the mouse to one or two clicks and, thus, save their time for other tasks. Alternatively, they may want to extend the capabilities of the software, building on what's already there to provide new and valuable functionality. However, while this may sound appealing, the reality is that many users find the thought of changing or customizing the software quite intimidating. Through this workshop, we aim to show that this need not be the case.

The goal of the workshop is to show how to extend the ArcGIS for Desktop functionality through add-ins, a customization option introduced at ArcGIS 10.0. In simple terms, add-ins can be thought of as small programs that may be incorporated easily into ArcGIS for Desktop and may be made available for use with a minimum of effort.

The first half of the workshop will focus on core add-in concepts and possibilities using the Python programming language. The second half of the workshop will build on this introduction and cover the development of add-ins using the Microsoft .NET programming environment and, specifically, the C# programming language. Attendees should be able to leave the workshop having a strong basis for recognizing and pursuing their customization needs, increasing the value of their ArcGIS investment and enhancing their standing and employability as GIS professionals.

Intended Audience

GIS professionals familiar with ArcGIS for Desktop and Python programming in ArcGIS.

Learning Objectives

- Extend the capabilities of ArcGIS for Desktop using either Python or .NET (C#)
- Understand the Esri ArcGIS add-in framework
- Explore the relative merits and applicability of the Python and .NET add-in options

Presenter Details

David A. Howes

David Howes is the geospatial information scientist and owner at David Howes, LLC (www.dhowes.com) in Seattle, WA, specializing in the development of GIS tools, processes and supporting infrastructure for

a variety of clients from small operations to multinational corporations. With 23 years of academic and private sector experience in both the United Kingdom and the United States in geography, Geographic Information Systems (GIS) and fluvial geomorphology (including a Ph.D. in Geomorphology from the State University of New York at Buffalo and an M.Sc. in GIS from the University of Edinburgh, Scotland), David has a diverse background that is well-suited to developing innovative solutions to spatial problems. He is the founder of the Lone GIS Professional Initiative, helping GIS professionals working on their own or in small groups help each other, and is a regular supporter of Washington URISA, for which he is currently a Board member, actively involved in upgrading the chapter's technology capabilities and in organizing the annual conference.

Jason Pardy

Jason Pardy is a Product Engineer for Voyager Search in Redlands, CA. With 15 years of GIS and software development experience, he has a large array of knowledge and hands-on experience with building, automating and optimizing GIS workflows in a desktop and server environment. Currently, Jason plays a major role in the design and implementation of the Geoprocessing framework for Voyager Search. For 14 years, Jason was a member of the Geoprocessing and Spatial Analysis team at Esri and lead the development for Python add-ins in ArcGIS for Desktop. Whenever Jason is not designing and developing new product features at Voyager Search, he can be found delivering presentations about spatial analysis, Python and geoprocessing.