



Mashups: What are they and how can I benefit?

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Putting knowledge into place

What is a mashup?

- // The term Mashup has its roots in music
- // Creative (or bored) people combine the vocal and instrumental tracks from two or more songs to create a new song.
- // Today mashup is used to describe Web 2.0 'ish' sites that combine the features of one website with another.
- // The most common mashups involve maps
- // But there are also video mashups, picture mashups, search shopping and news mashups.
- // Developers use established sites such as ESRI, Google, Yahoo, Microsoft, Amazon, Ebay and others.

Ebay mashup – Bid Robot

- // a tool to help you win more auctions on Ebay
- // Pay less for your items by bidding your amount at the last minute
- // This hides your interest in an item and stops other bidders raising the price



Mapping mashups

// Weather Bonk

// City of Boston

// And the list goes on and on and on.....



The Simple ArcGIS JSAPI Demo

<http://resources.esri.com/help/9.3/arcgisserver/apis/javascript/arcgis/demos/Map/AddAMap.html>

Come on Ben, It can't be that easy.

What about Google Maps?

<http://resources.esri.com/help/9.3/arcgisserver/apis/javascript/gmaps/samples/maps/DynamicMapServiceUsingGOverlay.html>

Alright I give you those two.

You will never be able to do 3D in VE...

<http://resources.esri.com/help/9.3/arcgisserver/apis/javascript/ve/sdk/index.htm>

Building Enterprise Mashups with ArcGIS Server

- // Develop custom JavaScript applications that mashup ArcGIS services, Google Maps, and Microsoft Virtual Earth
- // You can build ArcGIS Server Web applications using pure JavaScript APIs powered by backend REST services
- // ArcGIS Server hosts a Services Explorer
 - / Used by developer while building mashup application
- // No development or deployment license is required on the Web server hosting your application

Why JavaScript?

// JavaScript is one of the most used languages in the world.

// Pure client development

// Its not early 2000 any more

/ JS Frameworks abstract away the browser complexity

// Stability

/ No new changes in ECMAScript since 1999

// A path for HTML Viewer developers



ArcGIS JavaScript API

ArcGIS JavaScript API

- // Embed maps and tasks from any ArcGIS Server into your website
- // Use content provided by ESRI or use your own content as a basemap
- // Map can be in any supported projection
 - / This is a big advantage...
- // Built on top of Dojo JavaScript toolkit.
 - / Graphics support, community, Dijits

ArcGIS JavaScript API

// Maps

- / Tiled
- / Dynamic

// Graphics (geometry + attributes + symbol + InfoWindow)

// Tasks

- / QueryTask
- / Locator
- / FindTask
- / IdentifyTask
- / Geoprocessor (synchronous or asynchronous)
 - / As data or as map image



ArcGIS JavaScript API

// Online SDK

- / <http://resources.esri.com/arcgisserver/apis/javascript/arcgis>

- / Sample driven

- / Samples powered by an ArcGIS Server sample server

- / <http://sampleserver1.arcgisonline.com/arcgis/rest/services>

- / <http://sampleserver2.arcgisonline.com/arcgis/rest/services>

// JavaScript hosted by ESRI

- / <http://serverapi.arcgisonline.com/jsapi/arcgis/?v=1>

- / Flexible release cycle

- / Hosted by ArcGIS Online

- / Akamai

- / 24/7



ArcGIS JavaScript API Applications

- // Can be a very simple user application, but still provides sophisticated functionality
- // It can also be a very sophisticated user application
 - / The power of dijit and other JavaScript libraries
- // Integrate with other Web 2.0 libraries
 - / Google Charts
- // Powerful and customizable Info Windows

ArcGIS JavaScript Extension for Virtual Earth

ArcGIS JavaScript Extension for Virtual Earth

- // Combine GIS content hosted in ArcGIS Server with content on top of Virtual Earth base maps.
- // Works with backend ArcGIS Server services.
- // Content (VE Shapes, Tiles) can be viewed in 2D or 3D
- // Tiled Maps are in the WGS 1984 Web Mercator projection
 - / WKID: 102113
 - / Same as Google Maps

ArcGIS JavaScript Extension for Virtual Earth

// Maps

- / Tiled

// VEShape (geometry + symbol + InfoBox)

- / All task results can be converted to
 - / VEShape
 - / VEShapeLayer

// Tasks

- / QueryTask
- / Locator
- / FindTask
- / IdentifyTask
- / Geoprocessor (synchronous or asynchronous)
 - / Only data, no map image results

ArcGIS JavaScript Extension for Virtual Earth

// Online SDK

- / <http://resources.esri.com/arcgisserver/apis/javascript/ve>
- / Interactive SDK
- / Samples powered by an ArcGIS Server sample server
 - / <http://sampleserver1.arcgisonline.com/arcgis/rest/services>
 - / <http://sampleserver2.arcgisonline.com/arcgis/rest/services>

// JavaScript hosted by ESRI

- / <http://serverapi.arcgisonline.com/jsapi/ve/?v=1>
- / Flexible release cycle
- / Hosted by ArcGIS Online
 - / Akamai
 - / 24/7

ArcGIS JS Extension for VE Applications

// Build Mashups with Virtual Earth

// Interact with your data on a VE base map

// Push GIS analysis to the general public



ArcGIS JavaScript Extension for the Google Maps API

ArcGIS JavaScript Extension for the Google Maps API

- // Combine GIS content hosted in ArcGIS Server with content on top of Google Maps base maps
- // Works with backend ArcGIS Server services
 - / REST API
 - / KML
- // Applications can be built in *traditional* Mashup form or as Google Mapplets
- // Tiled Maps are in the WGS 1984 Web Mercator projection
 - / WKID: 102113
 - / Same as VE

ArcGIS JavaScript Extension for the Google Maps API

// Maps

- / Tiled
- / Dynamic (via GGroundOverlay)

// GOverlay (geometry* + symbol)

- / All task results can be added to the map through the ESRI.ArcGIS.GMaps.MapExtension
 - / Takes care of InfoWindow, click listeners, overlayOptions, and infowindowOptions

// Tasks

- / QueryTask
- / Locator
- / FindTask
- / IdentifyTask
- / Geoprocessor (synchronous or asynchronous)
 - / As data or as map image



ArcGIS JavaScript Extension for the Google Maps API

// Online SDK

- / <http://resources.esri.com/arcgisserver/apis/javascript/gmaps>
- / Sample driven, SDK is in Google Maps Style
- / Samples powered by an ArcGIS Server sample server
 - / <http://sampleserver1.arcgisonline.com/arcgis/rest>
 - / <http://sampleserver2.arcgisonline.com/arcgis/rest>

// JavaScript hosted by ESRI

- / <http://serverapi.arcgisonline.com/jsapi/gmaps/?v=1>
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ArcGIS JavaScript Extension for the Google Maps API

// Build Mashups with Google Maps

// Interact with GIS data on Google Maps base map

// Push GIS analysis to the general public



ArcGIS JavaScript Extension for Google Mapplets

- // Mapplets are mini-applications that run within Google Maps.
- // ArcGIS Server Users could choose to publish Google Mapplets that expose a certain functionality to the user
- // Mapplets are accessible from <http://maps.google.com>

Questions?