



A Geographer's role in a Google Maps World

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ESRI



It is a good time to be a Geographer.

Microsoft, Google, Yahoo, and others are pushing geographic awareness to the general public

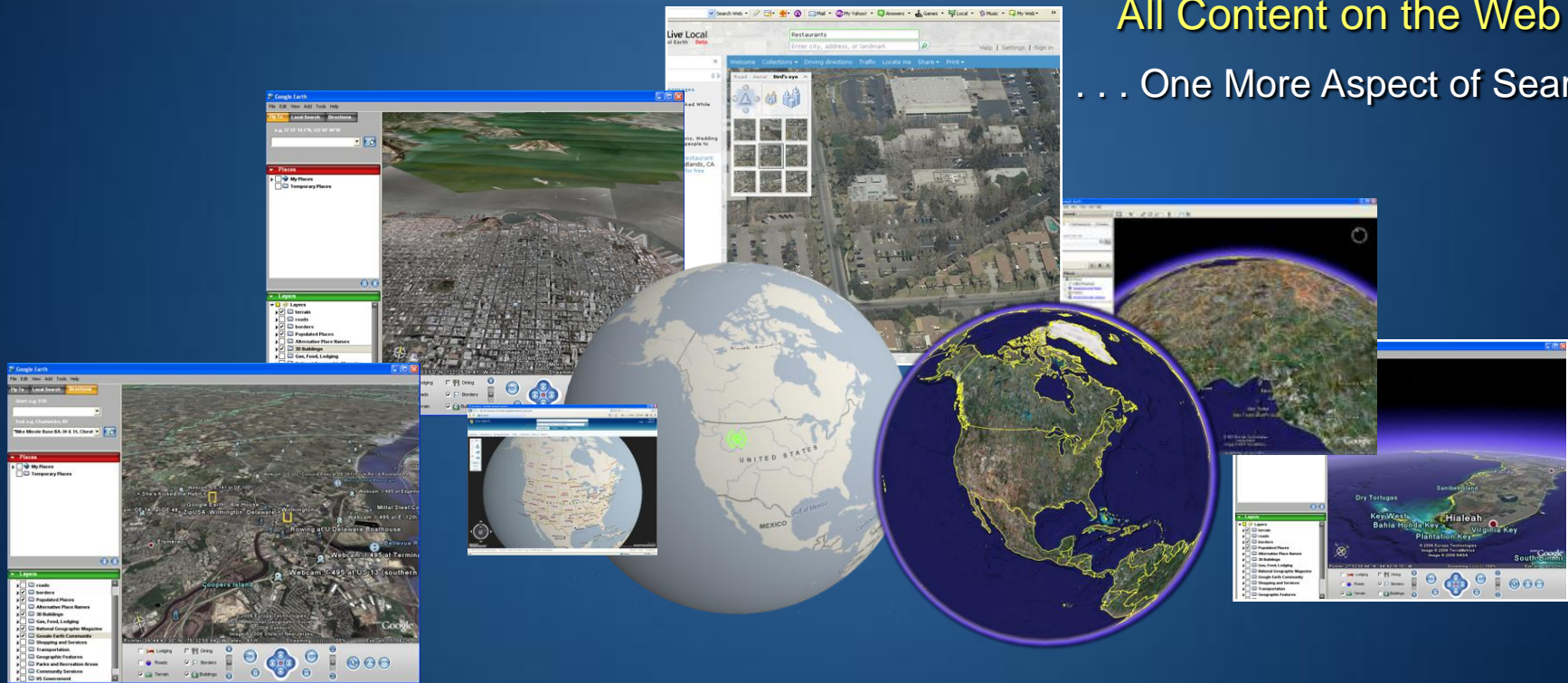
Providing Image Basemaps for the World

For Consumer Focused Geospatial Visualization and Mashups

Their Vision is to Georeference

All Content on the Web

... One More Aspect of Search



... They are Demonstrating the Reach and Value of the Web Environment



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- 0% Down Loan
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Vacation Homes

Vacation Homes

- Condo Hotels
- Fractional Villas

- Condo Hotels
- Fractional Villas

Home Services

Home Services

- Real Estate Agent
- Home Inspections
- Homeowner Insurance
- Title Insurance
- Sell My Home

- Real Estate Agent
- Home Inspections
- Homeowner Insurance
- Title Insurance
- Sell My Home

Real Estate Blogs

Real Estate Blogs

- CA Real Estate Blog
- Burbed
- Transparent Real Estate

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- Burbed
- Transparent Real Estate

Ads by Google

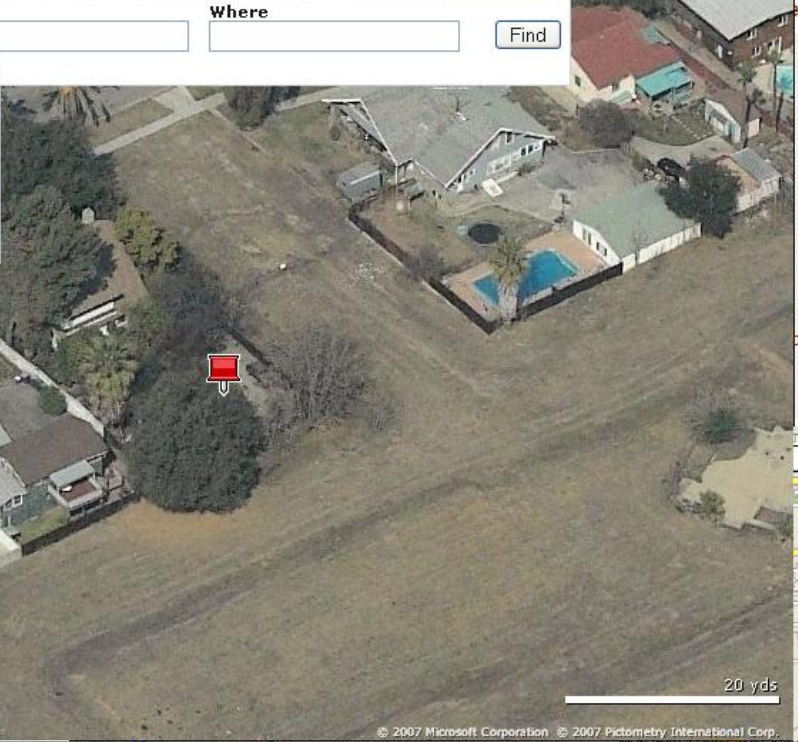
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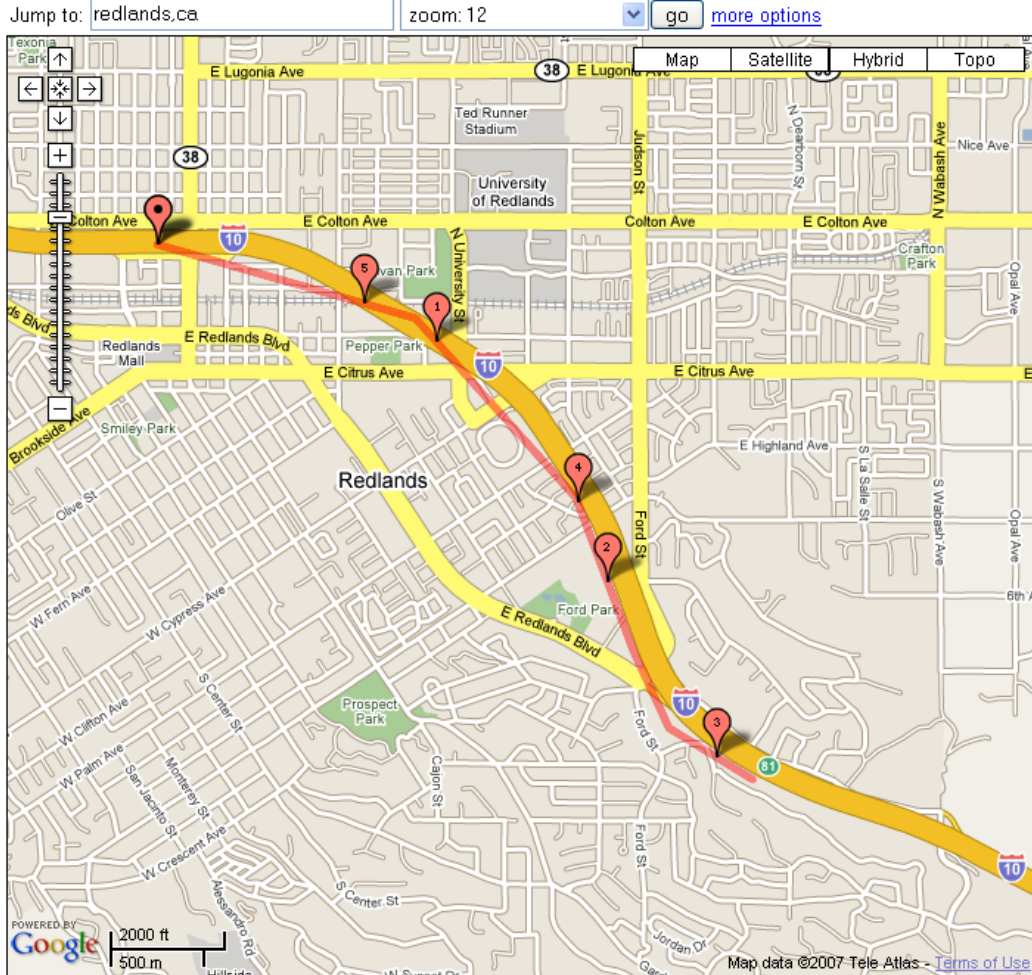
Gmaps Pedometer

Recording...
 Undo last point
 english metric
 Total Distance: miles
 Last Leg: miles
 Turn [off](#) mile markers
 Turn [on](#) calorie counter
 Elevation: off [small](#) [large](#)
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Google and Microsoft provide good implementation examples

- Ready-to-use, useful basemaps
- An out-of-the box application with a multi-resolution basemap
- Easy to add layers (e.g., KML)
- Supports getting answers
 - Where is it?
 - How do I get there?
 - **What's around here** – “Exploration”?
 - What does my information look like in this context?
- Visualize users content

Google, Microsoft, and others make it...

- Easy to create content
 - Google MyMaps, Microsoft collections, KML
- Easy to discover content
 - Google Search, Microsoft collections.live.com
- Easy to build applications that showcase content
 - Google Map API, Google Map Mapplet, MS Virtual Earth API
- Easy to answer questions
 - Integrate data

There is more though...

As Geographers, we can learn a lot from these sites

Geographers must also reach out and teach more about what else is possible

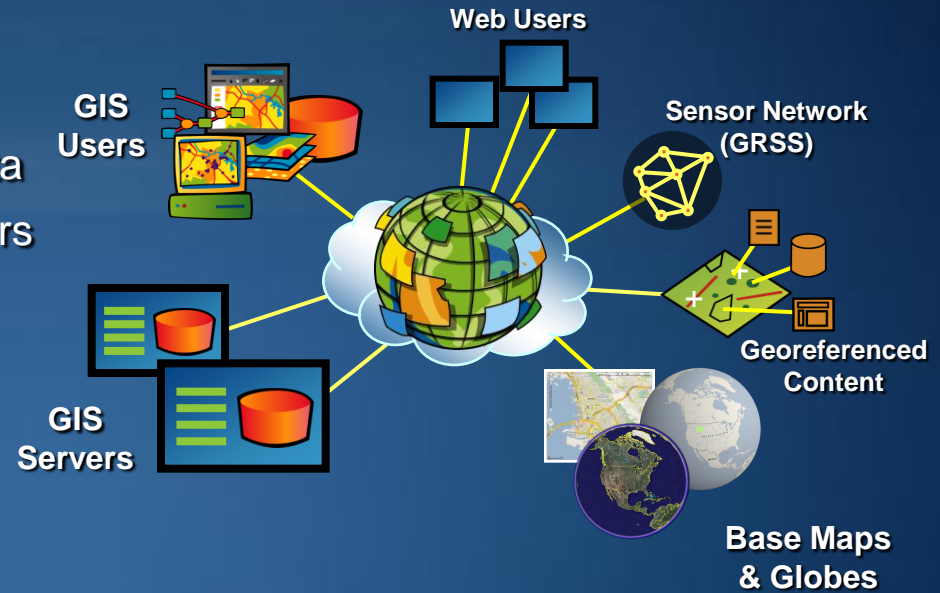
Geographers need to

- Add professional knowledge
- Increase Geographic awareness
- Publish research to web
- Push the geographic approach to general public
- Build new basemaps
 - Multi-scale maps are the future
- Build and publish geospatial tasks
- Build Mashups!

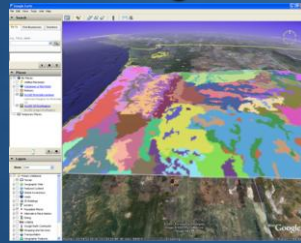
Soon We'll Be Fusing Everything

Providing New Possibilities for Sharing, Integrating and Using

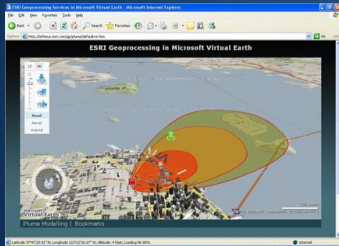
- Creating Mashups among GIS Servers
- Integrating Consumer Basemaps with GIS Data
- Publishing GIS Services into Consumer Viewers
- Integrating Georeferenced Web Content (Geo-RSS, Photos, Documents . . .)



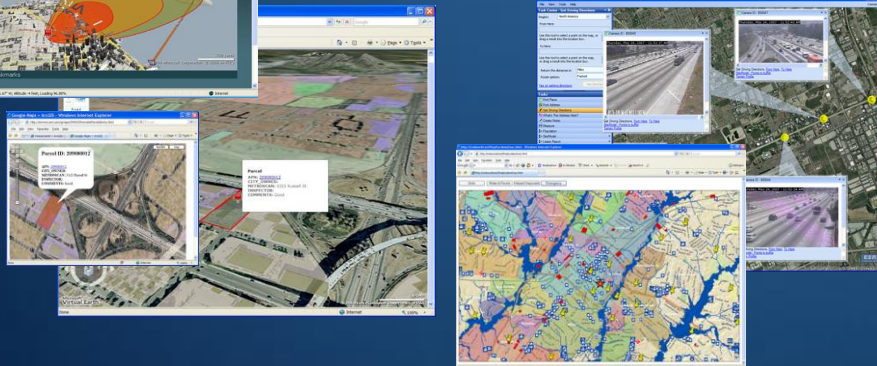
Google



Microsoft



ArcGIS



*Integrating Professional GIS
with Everything on the Web*

. . . Extending the Geographic Approach



How can we do all that?

ESRI ArcGIS Server 9.3

Server



Making GIS Knowledge Available To Anyone . . .

. . . Integrates With Other Systems Via Standards

ArcGIS Server is Open & Interoperable

Using Standards to Integrate with Any System

Web

- REST, SOAP XML, JavaScript, KML, V.E.

...

OGC

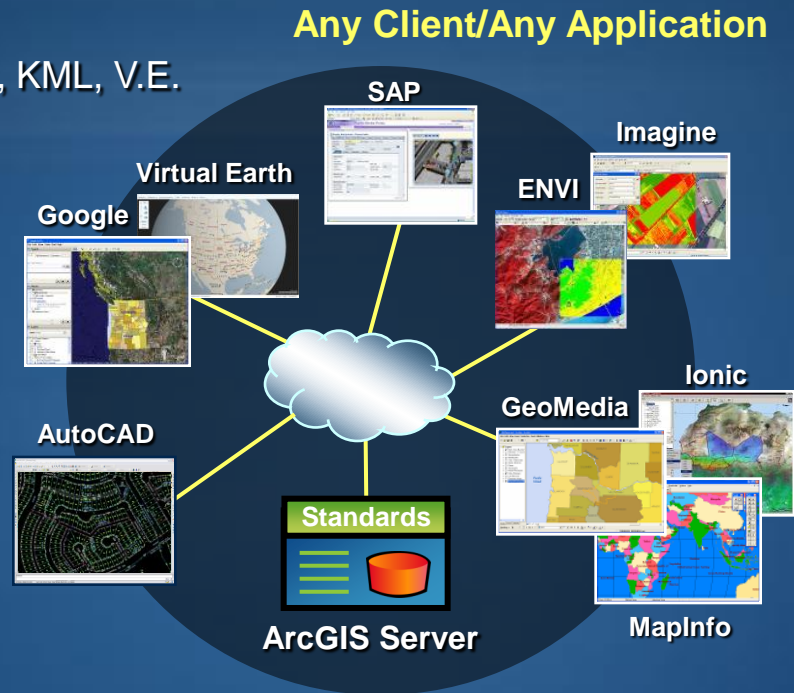
- GML, WFS, WMS, WCS . . .

Enterprise Integration

- SOAP, XML, EJB, SQL

Application Content

- CAD, Image, PDF



Enhancements

- REST/JavaScript
- Stronger OGC
- Google (KML 2.1) & Microsoft

ArcGIS Server 9.3 key enhancements to support the consumer mapping world

- REST API for ArcGIS Server
 - Access geospatial resources using a RESTful architecture
- Services Explorer for ArcGIS Server
 - Browse, search, and access published geospatial resources
- Open and Easy KML access
 - Provide access to maps (raster and vector), query results, geoprocessing results, geocoding results, image service results
- JavaScript APIs
 - ArcGIS JavaScript API
 - Google Maps Extender API ArcGIS Server
 - Traditional API and Mapplets
 - Virtual Earth Extener API for ArcGIS Server



Demos

Demos

- Services Explorer
 - View spatial footprints
- View in Google Earth
 - Super-Overlay (regionated network link)
- Google Maps
 - Mashup:
 - Serverz uc demo of Riverside (parcels only)
 - Mapplet:
 - Riverside + query
 - Service Area
- ArcGIS JavaScript API
 - Query population by Poly (Spatial Analysis) (zonal stats)
- Virtual Earth
 - Message in a bottle (particle tracker)

Skills for the Geography Student

- Geographers are well rounded
- GIS
- Spatial Statistics
- Programming...JavaScript!
- Cartography
- Physical understanding of the Earth's system
- Cultural understanding of the Earth's people



Thanks!

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