



Ignite Spatial Vermont GIS Smartphone Apps

April 17, 2012

Ignite Spatial Vermont: GIS Smartphone Apps

GCS Research: Introduction

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- Our focus:
 - GIS Solutions
 - Research & Development
 - Strategic Consulting
- Our customers: local, state, tribal, federal government, and private sector.

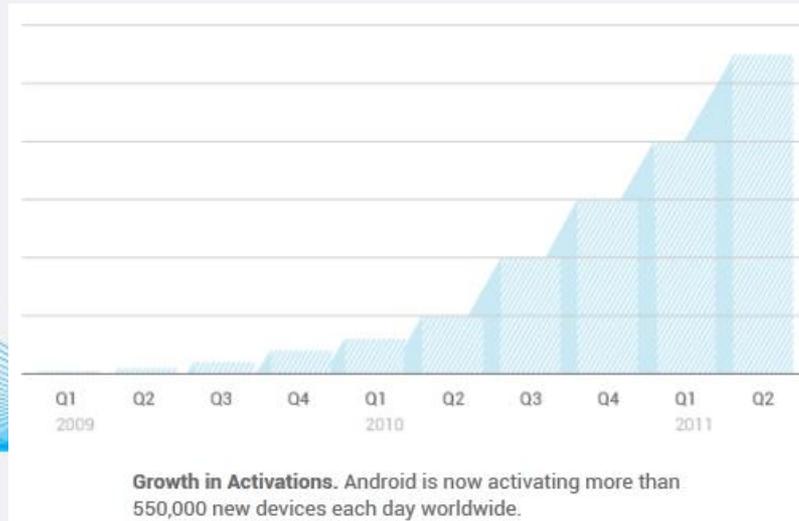


Smartphone Revolution

- Smartphone GIS mainstream in 2012
- Currently, led by Consumers
- Massive Business adoption in 2012
 - GIS Professionals: extend reach of their GIS out into the field, down the hall, and to their customers



89%
of Smartphone Users Use their Smart Phones throughout the day



80%
of the world's population now has a mobile phone



Number of Smartphones in U.S

91.4 Million



Mobile Phones in World

5 Billion

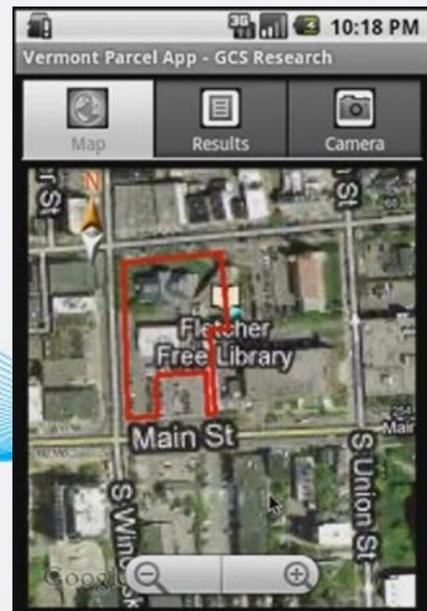
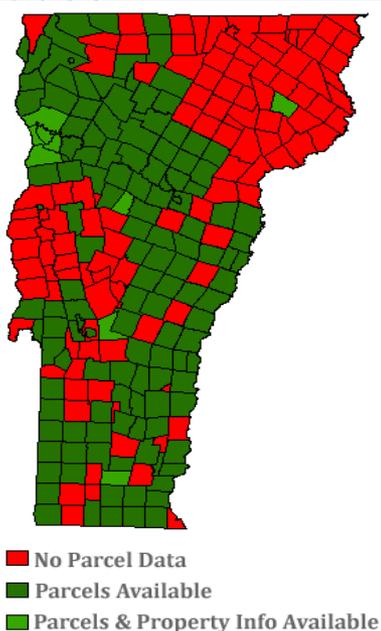


Out of which only **1.08 Billion** are smart phones



Vermont Parcel App

- Google Android
- ESRI ArcGIS Server
- Parcels from VCGI
- Grand List data from towns
- Data to be updated shortly

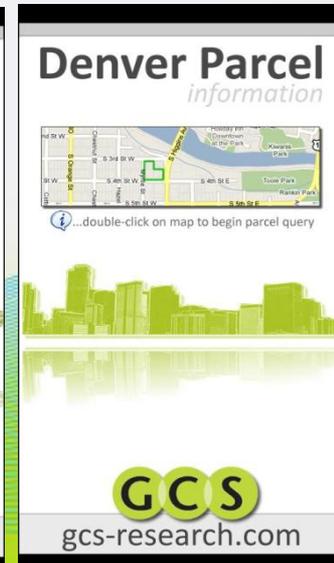


GCS Research Parcel Apps

- First published Google Android Apps to use Esri technology
- ~10,000 downloads
- Coming soon:
 - Data updates
 - iPhone/iPad & Windows 7
 - New Apps for states/cities

Current Apps for:

- Montana
- Vermont
- Washington
- Denver
- San Diego



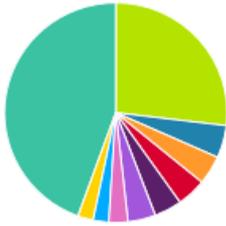
National Geographic World Map App



- Esri and National Geographic collaborated to produce a distinctive basemap that reflects National Geographic's cartographic design, typographic style, and map policies.

Released three days ago:

United States	107	26.88 %
India	19	4.77 %
Italy	17	4.27 %
Germany	17	4.27 %
Canada	16	4.02 %
United Kingdom	16	4.02 %
Spain	11	2.76 %
Saudi Arabia	9	2.26 %
Malaysia	9	2.26 %
Others	177	44.47 %

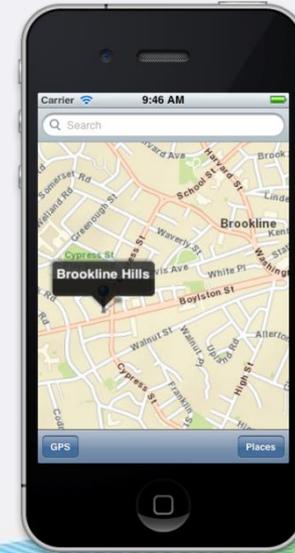
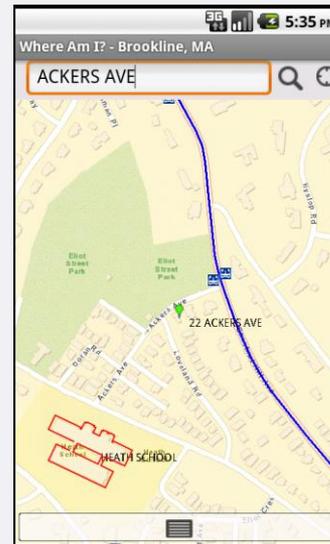
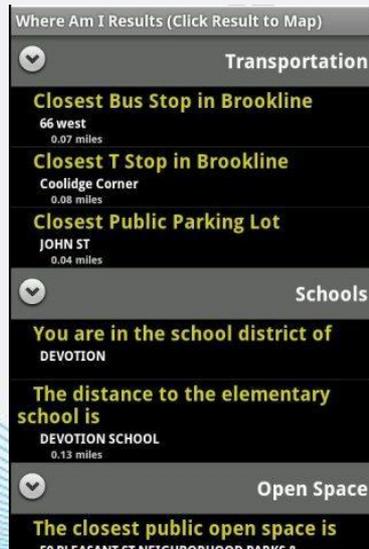
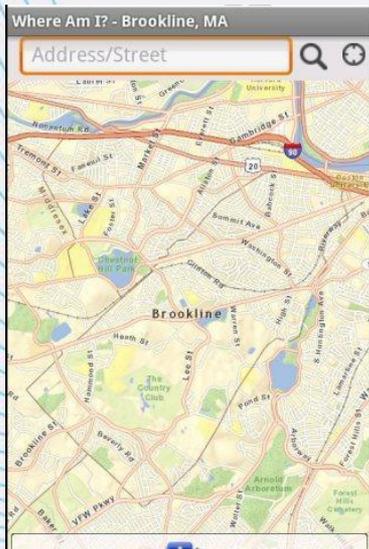


500+ downloads already



Town of Brookline, Massachusetts

- “Where Am I” App helps locate the closest public transportation, parks and public schools, library, parking lots and parking meters in town.
- Coming soon: iPhone



Stream Gauge Map App

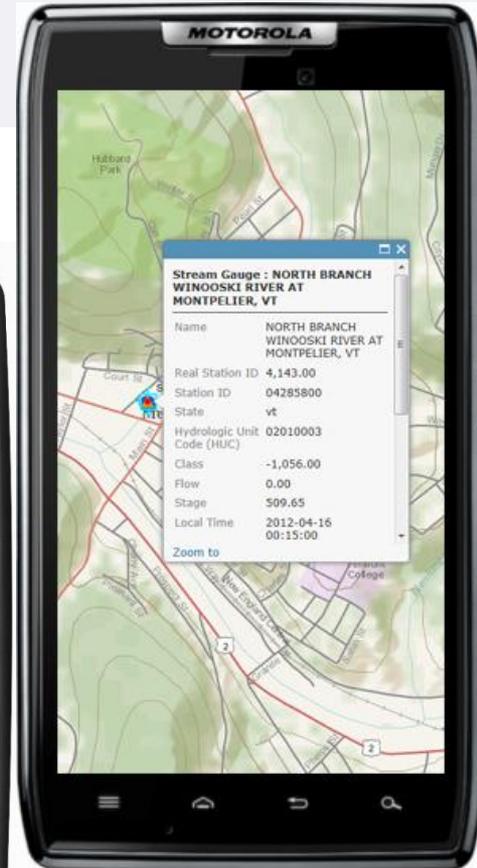


- Approximately 5,000 of the 6,900 U.S. Geological Survey sampling stations are equipped with telemetry to transmit data on streamflow, temperature, and other parameters back to a data base for real-time viewing via the World Wide Web.



- <http://waterwatch.usgs.gov/>

- GPS



USGS
science for a changing world

National Water Information System: Web Interface

USGS Water Resources

News updated March, 2012

USGS 04285800 NORTH BRANCH WINOOSKI RIVER AT MONTPELIER, VT
PROVISIONAL DATA SUBJECT TO REVISION

Available data for this site: Time-series Current/Historical Observations GO

Note: This real-time stage-only station is operated locally for for ice jam and flood warning purposes. Discharge data are not available for this site.
Station operated in cooperation with the City of Montpelier and the USACE Cold Regions Research and Engineering Laboratory.
Approximate elevation of mark 'CB' on Langdon ST Bridge is 515.0 ft.
Approximate elevation of State Street is 521.5 ft.
Elevation of the Flood of 1992 is 525.1 ft.

[Boating safety tips](#)

Available Parameters	Available Period	Output format	Begin date	End date
<input checked="" type="checkbox"/> All 1 Available Parameters for this site		<input checked="" type="radio"/> Graph	2012-04-09	
<input type="checkbox"/> 00065 Gage height	2012-03-17 2012-04-16	<input type="radio"/> Graph w/ stats		
		<input type="radio"/> Graph w/o stats	2012-04-16	
		<input type="radio"/> Table		
		<input type="radio"/> Tab-separated		



Fire Apps



Active Wildland Fires Map App

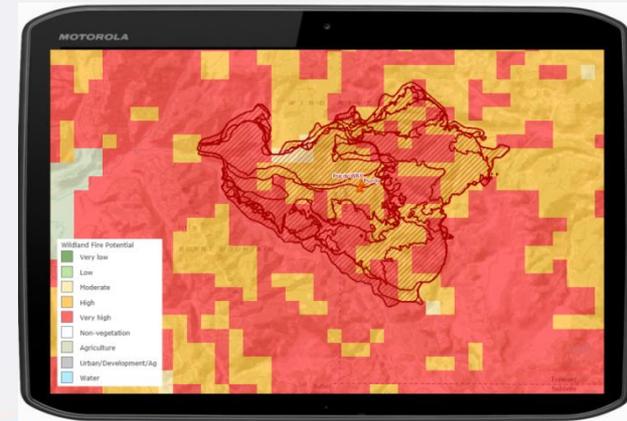
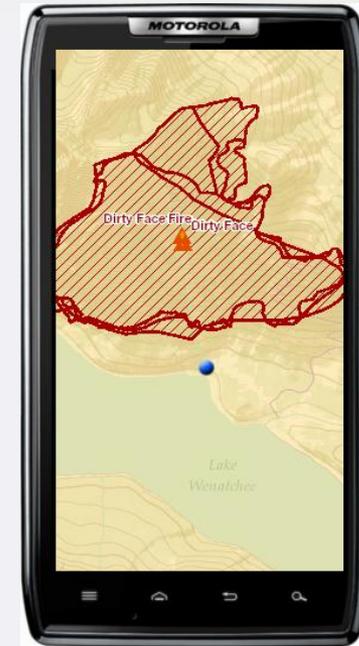
- In order to give fire managers near real-time information, fire perimeter data is updated daily based upon input from incident intelligence sources, GPS data, infrared (IR) imagery from fixed wing and satellite platforms.

US Fire History Map App

- Displays fire perimeter data from 2000 to 2009 on top of Wildland Fire Potential.

About the data

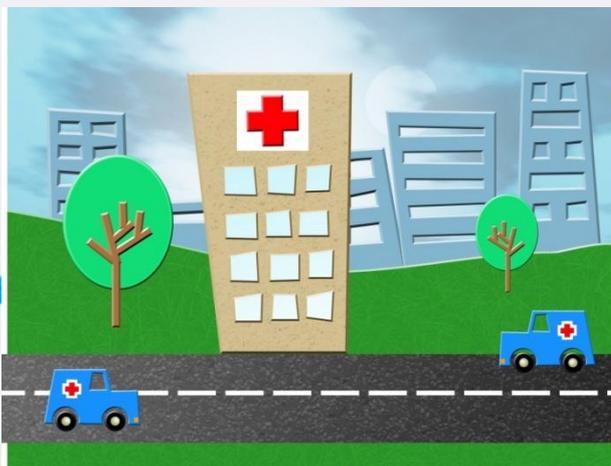
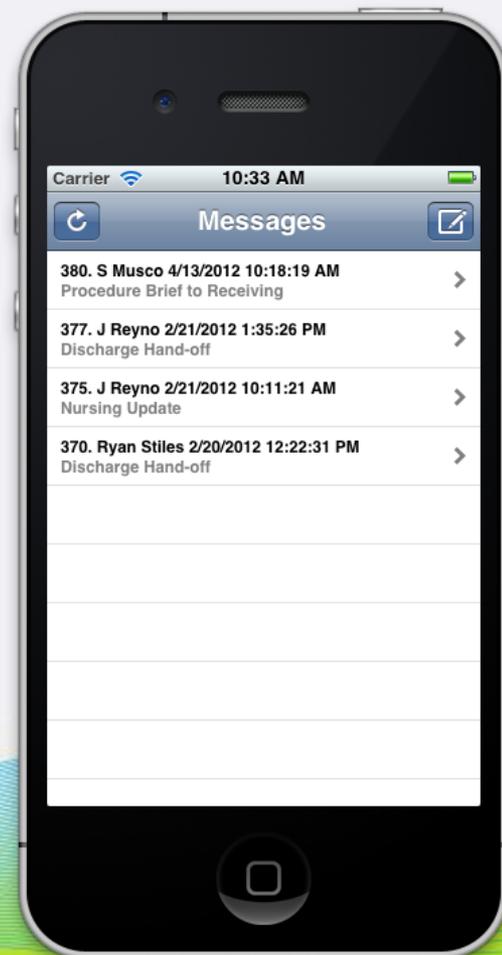
- Fire Perimeter data is a product of Geospatial Multi-Agency Coordination (GeoMAC).
- Fire Potential data is a product of USFS Forest Service Rocky Mountain Research Station (RMRS).



'Transfer of Care' App for the iPhone

- Secure information sharing App for medical community, i.e. hospitals
- Doctors share video and other relevant real-time information to medical staff
- Highly Secure App
- Sensitive medical information
- Map message locations
- **Not available in the Apple App Store**

iOS



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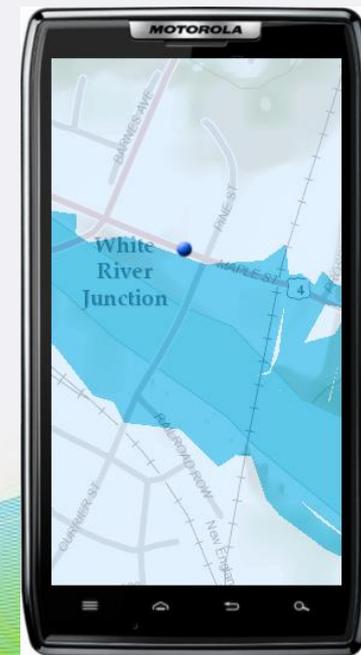
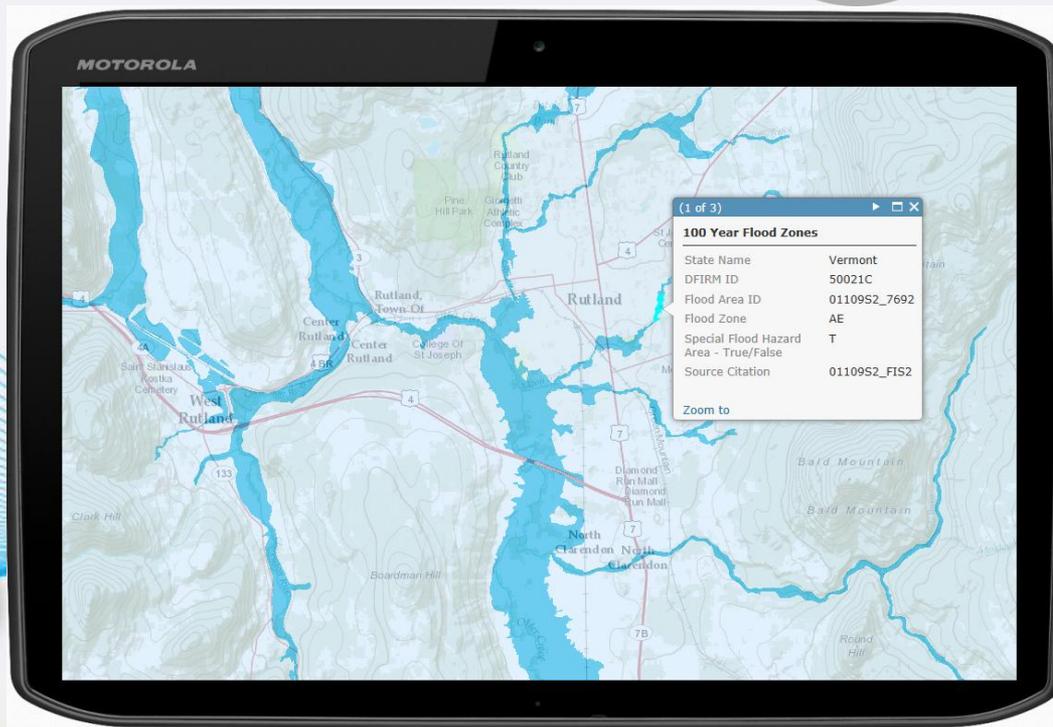
FEMA 100 Year Flood Zone Map App



- The 100-year flood is referred to as the 1% annual exceedance probability flood, since it is a flood that has a 1% chance of being equaled or exceeded in any single year.
- Flood zone data created by FEMA.
- GPS



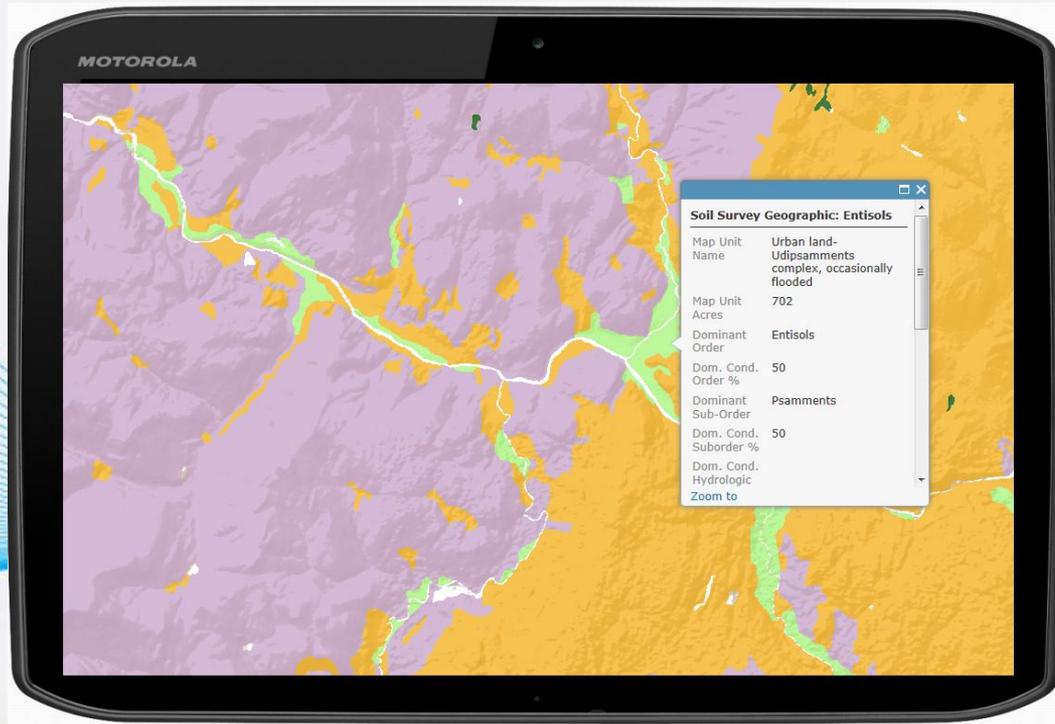
FEMA



Soil Survey Map App



- Features the Soil Survey Geographic (SSURGO) by the United States Department of Agriculture's Natural Resources Conservation Service.
- It also shows data that was developed by the National Cooperative Soil Survey and supersedes the State Soil Geographic (STATSGO) dataset.
- GPS



MPG Ranch – Data Collection App

MPG
RANCH



PROTECTING OPEN SPACE FOR FUTURE GENERATIONS

- Scientific sampling tool in the field
- For example, record bird observations using high resolution satellite imagery
- Targeted for iPad 3
 - iPad 3 has much better screen resolution than previous versions
- Connected and disconnected to the Internet
 - Mesh Wifi network in the field
 - Utilizing local cache for GIS data and imagery
- Not available in the Apple App Store



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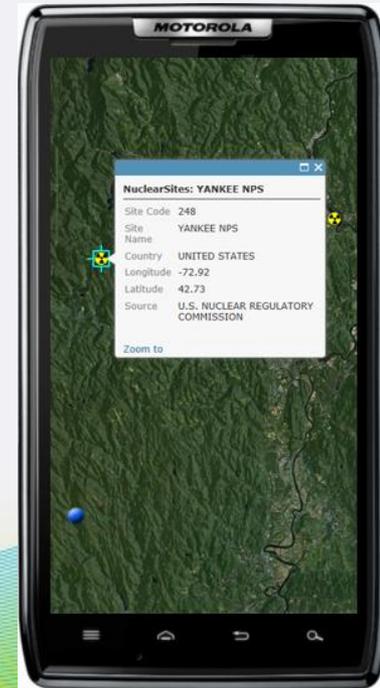
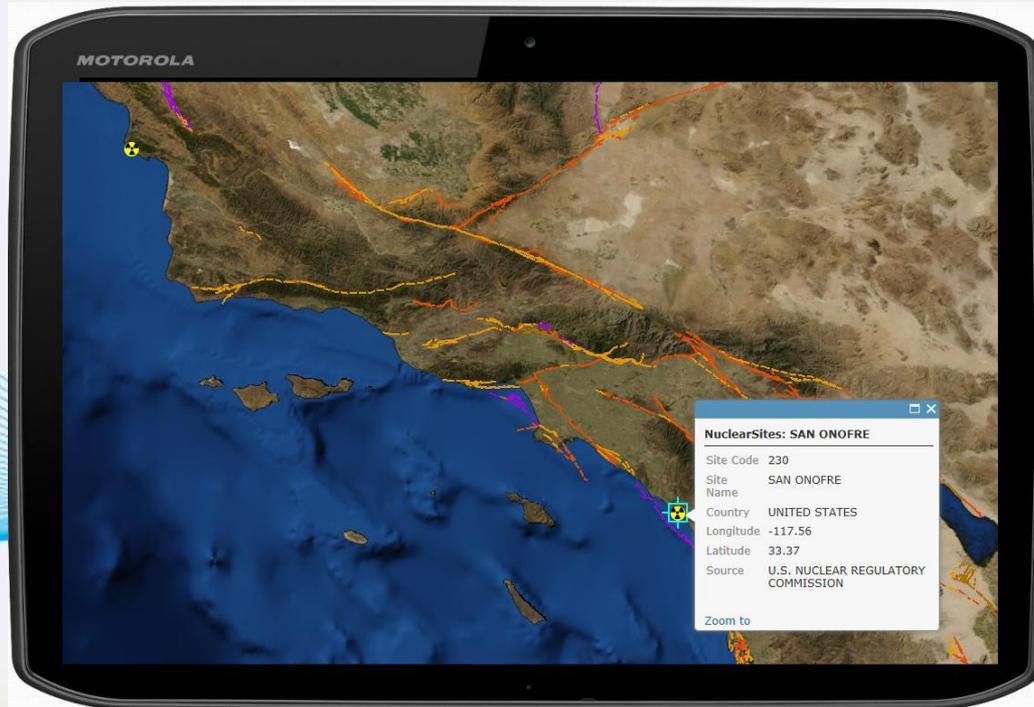


iOS

Nuclear Sites Map App



- Map contains approximate buffered (50 and 100 km) locations of world nuclear plants.
- The data has not been verified against the nuclear regulatory commission for each country.
- Quaternary faults and fold data provided by the USGS.
- Contains services from Esri ArcGIS Online.
- GPS



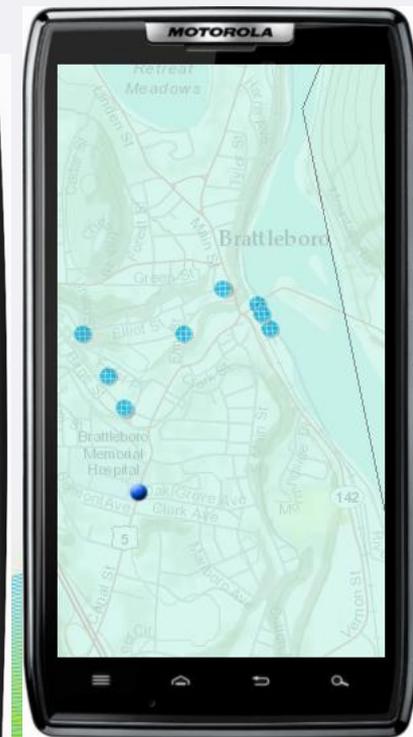
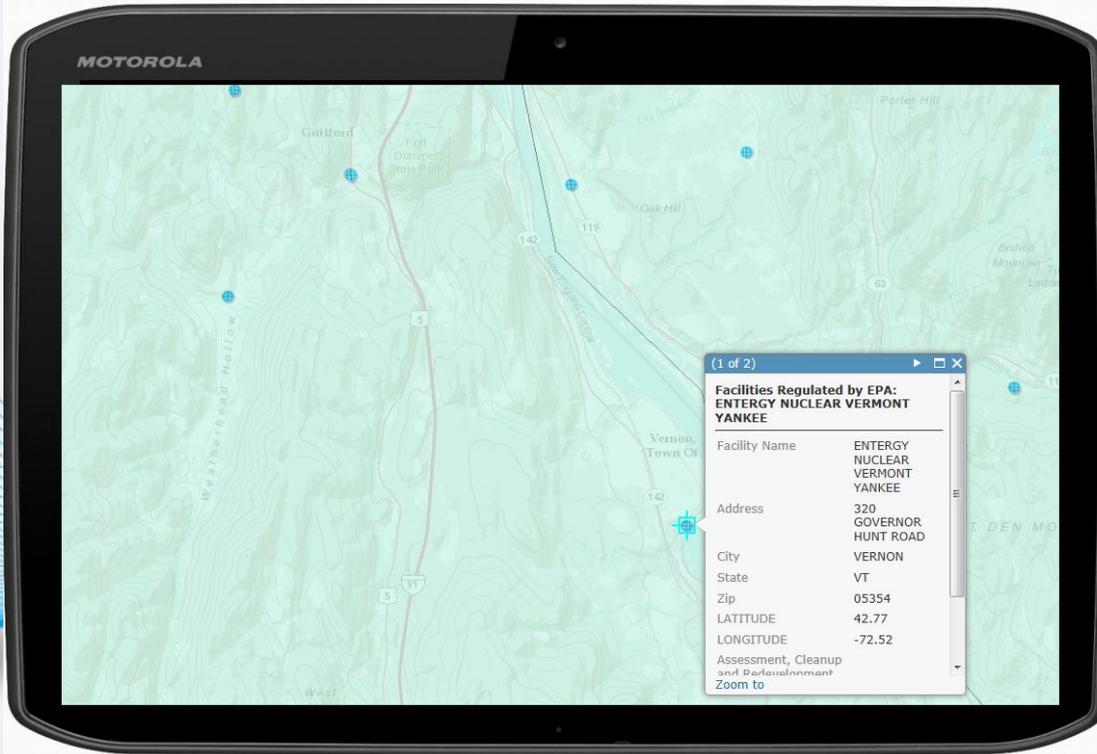
EPA Watch List Map App



- To improve public health and the environment, the United States Environmental Protection Agency (USEPA) collects information about facilities, sites, or places subject to environmental regulation or of environmental interest.



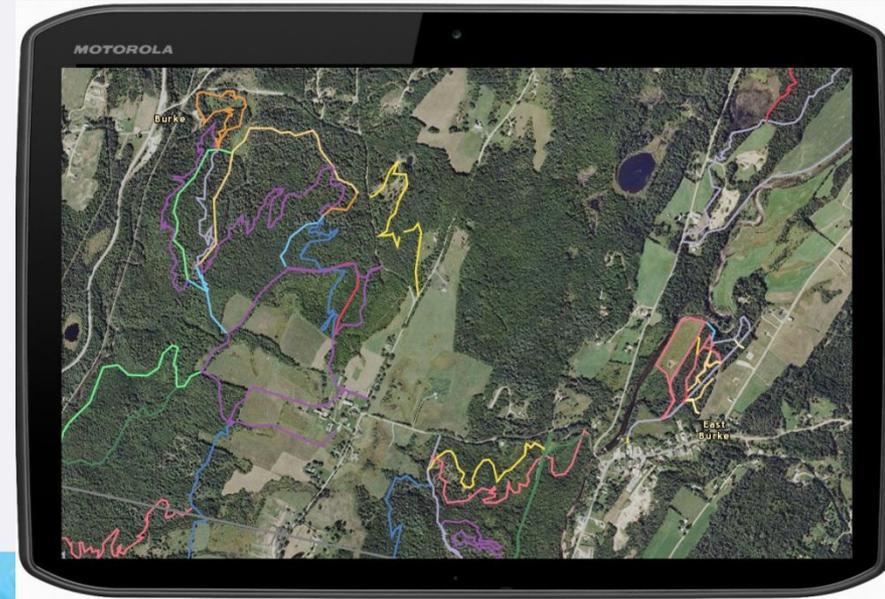
- GPS



Burke Vermont Bike Trails Map App

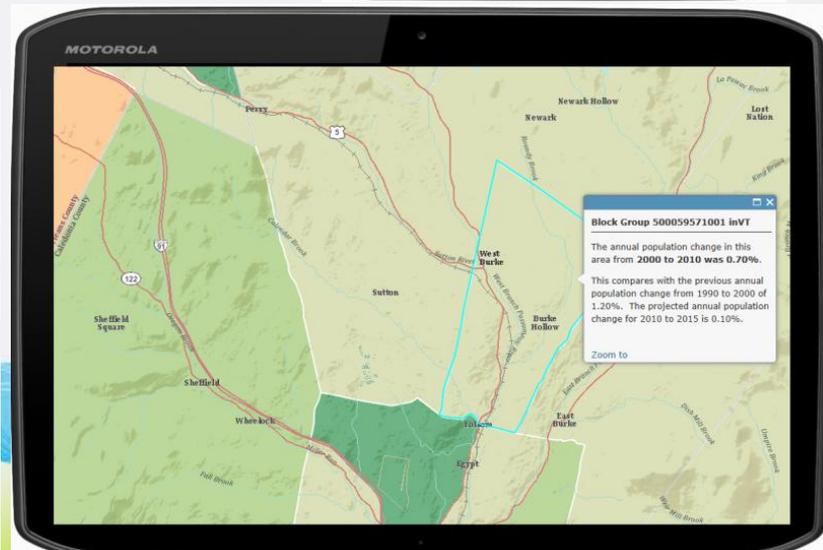
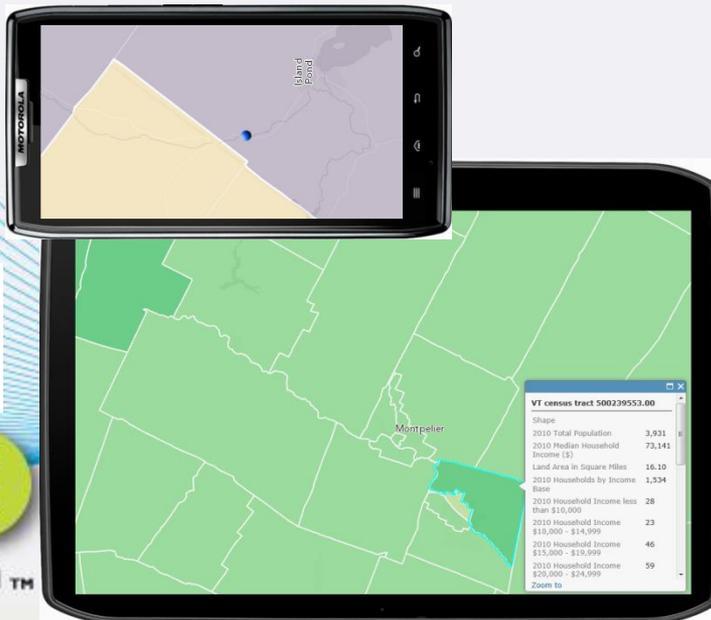
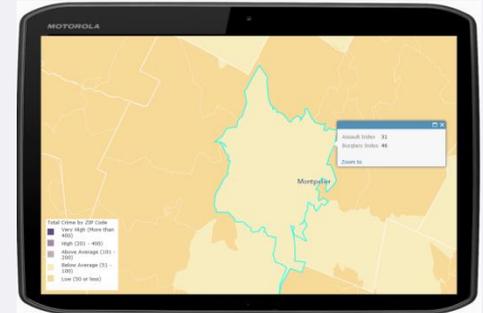
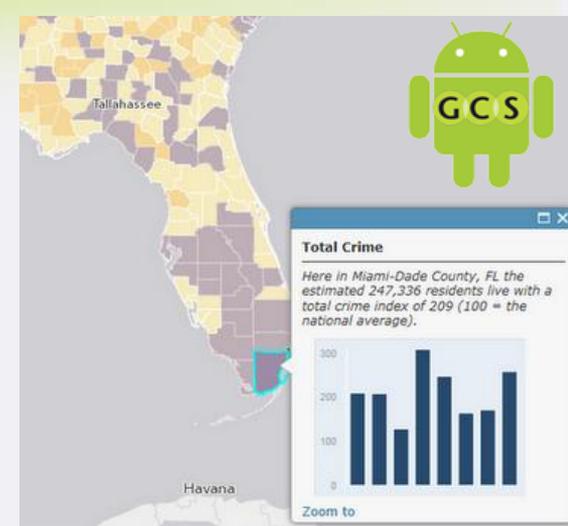


- Data published via ArcGIS Online



Demographic Apps

- **Median Household Income Map App**
 - Displays US median household income for the US in 2010
- **Population Change Map App**
 - Displays annual compound rate of total population change in the US from 2000 to 2010
- **Total Crime Map App**
 - Displays index of total crime in state, county, ZIP Code and block group
- Data and services provided by Esri ArcGIS Online



Modeling as a Service (MaaS)

I.D.E.A.S.™ - Intelligent Data Exploration and Analytics System

Finding the Right Geospatial Data and Models

I.D.E.A.S. is a concept that will simplify the discovery, processing and analysis of earth observation data and models. By providing a single interface into federated, disparate data repositories, I.D.E.A.S. will allow users on-demand access to a vast array of satellite and aerial imagery and maps to create value-added visualization products, to utilize data for modeling, and to generate decision-support tools.

Visualization and Analysis Power

I.D.E.A.S. will integrate a web storefront, smart engine and high performance computing backbone to rapidly deploy data, models and analytic capabilities. The web storefront will be a one-stop shopping experience to query, discover, access and execute data and models. The smart engine will leverage innovative methods, such as learned workflows based on a user's problem and solution, to provide near real-time Modeling as a Service (MaaS) functionality for product generation, model calibration, user feedback, and collaboration. The high-performance cloud computing backbone will provide the processing power to generate analytic and visualization products.

Tailored Services for a Variety of Users

I.D.E.A.S. will benefit a wide spectrum of users who want to use image, geospatial, weather, and other remotely sensed data from public sources like NASA and commercial sources for applied science and commercial applications that benefit society. Users will have the ability to upload models, discover other users' models, and download newly-developed products, and solutions. Additionally, I.D.E.A.S. will provide the means for users to develop, exploit, and utilize products and collaborate on solutions in a community of users with similar domain interests.

an Analytic Services and Delivery Platform available to a variety of users

I.D.E.A.S. makes Remote Sensing and Geospatial Information Systems data

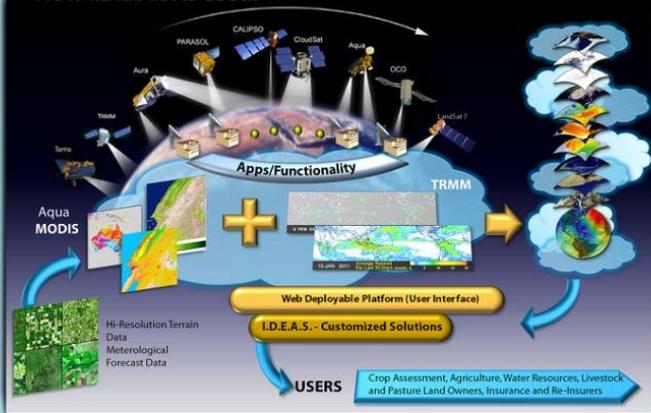
readily discoverable, accessible, visualized and useable

From NASA Data to End-User:

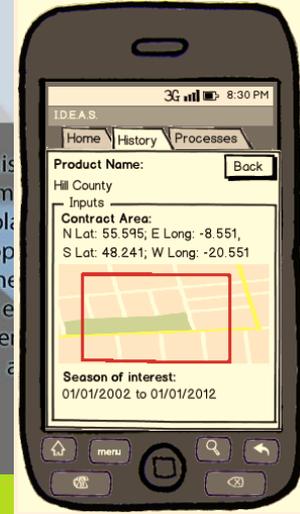
Problem Solved, Product Delivered



How I.D.E.A.S. is used:



The SI Organization, Inc. is a leading engineering and integration services to Defense and other agencies. Its simulation and analysis helps customers manage risk. This systems engineering provides cost-effective, modularized components delivering complex, system-of-systems to 2,000 people, with major locations in



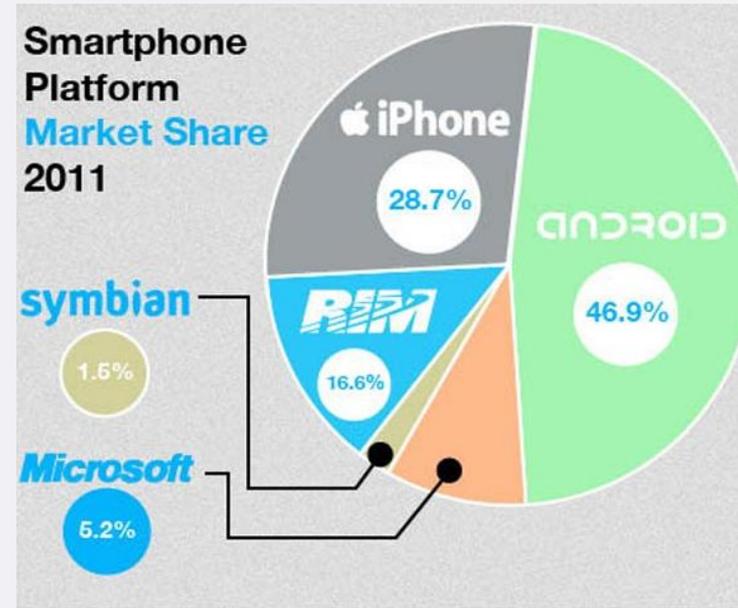
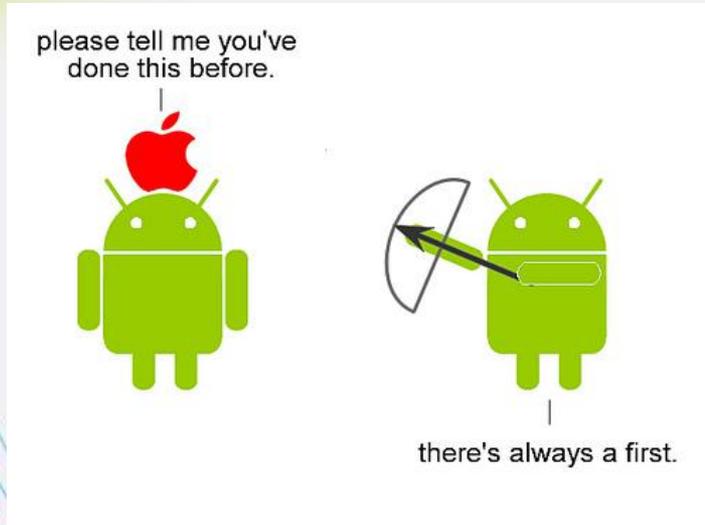
I.D.E.A.S. is being developed and implemented by the SI through corporate partnerships and licensed technologies



for more information, contact: charles.samuels@thesiorg.com

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Smartphone Platform Market Share (2011)

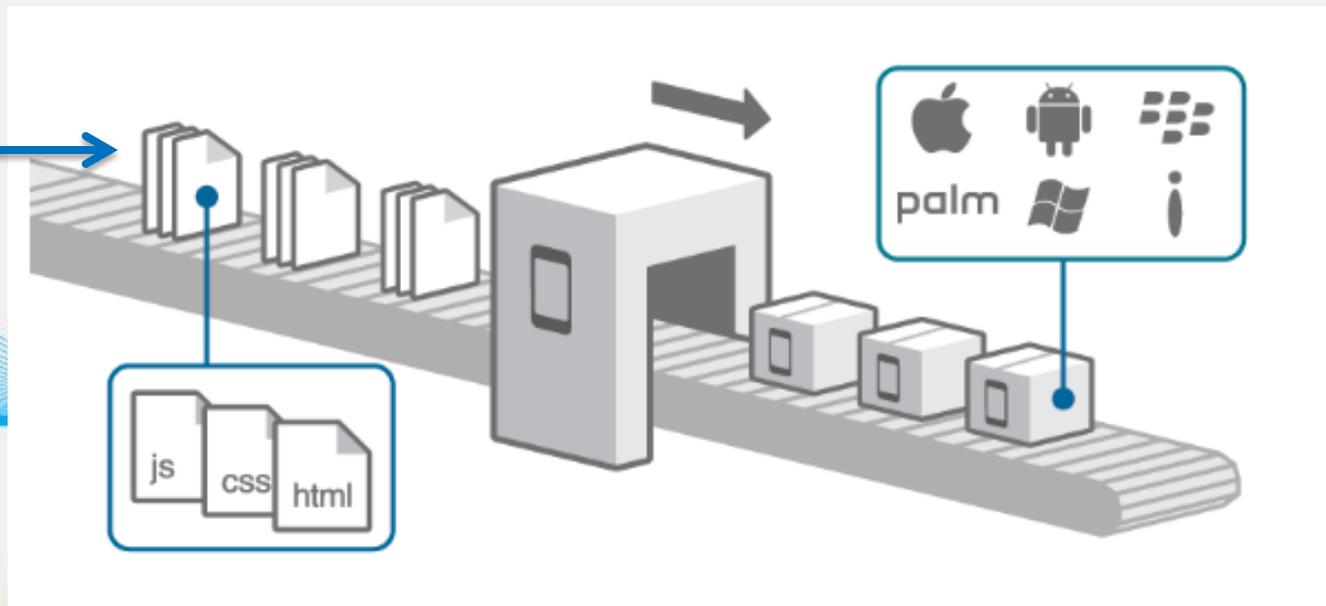


Droid 1: Released October 17, 2009

- Big gains expected in 2012 with Microsoft Window 7

Multi-Platform Mobile GIS Apps

- One solution: PhoneGap
 - open source mobile framework
 - Single code base deploys to multiple (7) platforms
- GCS Research integrating PhoneGap and ArcGIS Server to solve the multi-platform problem for Esri Enterprise GIS customers



Montana Site Selector

- Developed for businesses looking to open, expand or relocate in Montana.
- Developed by GCS Research; funded by the Montana Governor's Office of Economic Development and local governments
- Multiplatform mobile apps to be released

Montana Site Selector



Prospective business developers can search for available properties.



The Governor's Office of Economic Development

Results Details

1 / 241

127 West Galena Butte 59701

Sale Price: \$130,000.00
Lease Rate: \$0.25

Agent: Jim Smitham/Andy Zdinak - Butte Local Development Corp.
More...

2 / 241

743 South Wyoming Butte MT

Photo Currently Unavailable

Agent: Dan Gales - City Transfer Line
More...

3 / 241

200 Technology Way Butte 59701

Agent: Ruthmeri Gleason - MSE Technology Applications, Inc.
More...

MONTANA Site Selector

Log In | Subscriptions | Realtors

Search Reports Layers

35 5th Street West Columbia Falls, MT 59912

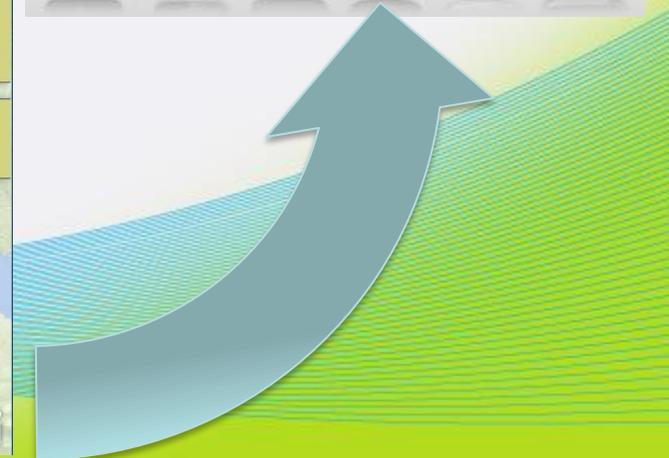
Type: Warehouse
Sale Price: \$240,000.00

Location may not be 100% accurate

GCS research

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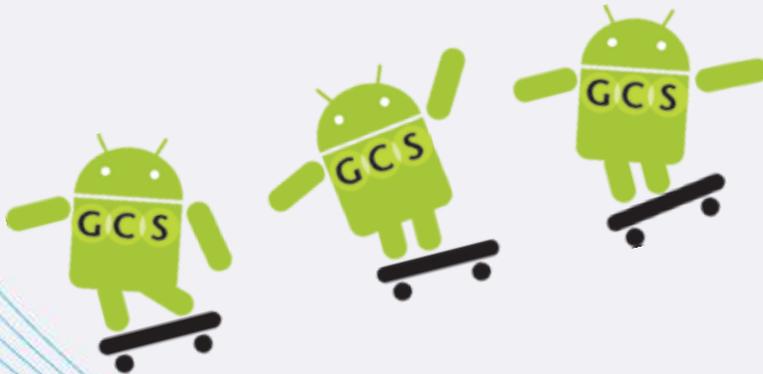
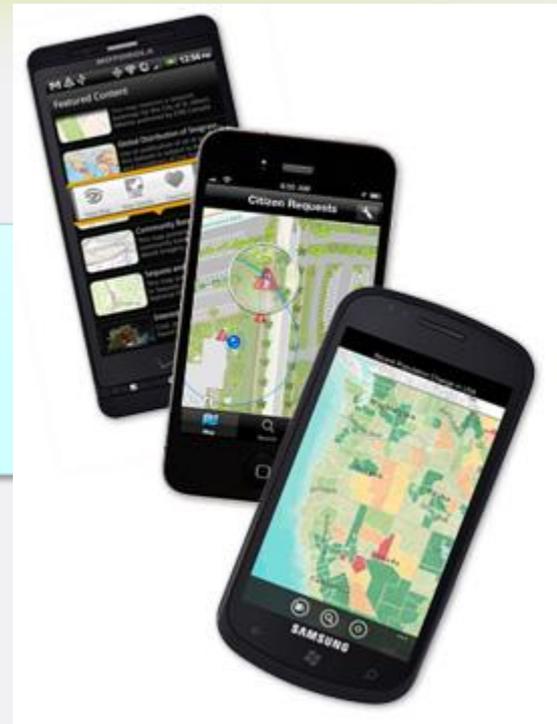


Questions?

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