Using GIS Technology on Smartphones

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Overview

- ArcGIS mobile
- Edit one map from four devices
- Create an Online map
- Consume an Online map
Mobile Platform Options*

- Symbian from Symbian Foundation
- Android from Google Inc
- IOS from Apple Inc
- RIM BlackBerry OS
- Windows Phone from Microsoft
- Linux
- webOS from HP
- MeeGo from Nokia and Intel
- Brew OS from Qualcomm
- Windows Mobile from Microsoft
- Palm OS/Garnet OS from Access Co.
- Maemo from Nokia
What is mobile GIS?

Extends the reach of ArcGIS from the office to the field

• With a mobile GIS solution you can
  - Carry your maps to the field
  - Collect and Update Geographic Information
  - Track and Geo-collaborate
What are the benefits of mobile GIS?

*Leverages the investment of your enterprise GIS*

- Improve Efficiency and Accuracy of Field Operations
- Rapid Data Collection and Seamless Data Integration
- Replaces paper based work flows
- Helps to Make Informed and Timely Decisions
The ArcGIS System

ArcGIS Online

Server Applications
- ArcGIS Viewers
- ArcGIS APIs
  - Javascript, Flex, Silverlight...

Desktop Applications
- ArcGIS Desktop,
  ArcGIS Explorer
- ArcGIS SDKs
  - WPF, Java, C++

Mobile Applications
- ArcGIS
- ArcGIS SDKs
  - iOS, Android,
    Windows Phone,
    Windows Mobile
### Lightweight Applications and Runtime SDKs

Configurable COTS applications and Native ArcGIS Runtime SDKs

<table>
<thead>
<tr>
<th></th>
<th>iOS</th>
<th>Android</th>
<th>Windows Phone</th>
<th>Windows Mobile</th>
<th>Windows</th>
<th>Linux</th>
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</thead>
<tbody>
<tr>
<td>Applications</td>
<td>ArcGIS</td>
<td>ArcGIS</td>
<td>ArcGIS</td>
<td>ArcGIS</td>
<td>ArcGIS, ArcGIS Explorer*</td>
<td>None</td>
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<tr>
<td>Runtime SDK</td>
<td>Objective C</td>
<td>Java</td>
<td>Silverlight</td>
<td>.NET</td>
<td>WPF, Java</td>
<td>Qt, Java</td>
</tr>
</tbody>
</table>

![iOS devices](image1.png)
![Android devices](image2.png)
![Windows Phone](image3.png)
![Windows Mobile](image4.png)
![Windows](image5.png)
![Linux](image6.png)
Green Valley

Map showing the results of the extractive industries siting analysis for the Green Valley area.

Key to unsuitable zones:
- Pearly drained
- Resevoir sites
- Clayookie

Key to roads:
- Gravel road
- Paved road

Elevation:
- 100 feet
- 1000 feet
- 5000 feet
Intelligent Maps in your pocket
Mistake?
Undo!
Perfect
Switch
To
Windows
Phone
Tap to identify locations and features.
Attributes

Name

Rating
3

Classification
Municipal

Website
Change

Attributes

Name

Rating
3

Classification
Municipal

Website
Change to Android
Add URL
Type "http://www.esri.com" into the Website field.
Tap URL
One Map, four devices
One way to make a map
ArcGIS.com - make a map

1. Choose an area.
   Pick and place the map in an area or search by its name or address.

2. Decide what to show.
   Choose a Basemap then Add layers or top of it.

3. Add more to your map.
   Create an editable layer to draw features on the map.
   Draw labels, descriptive text, images, and charts for map features in a pop-up.

4. Save and share your map.
   Give your map a name and description then share it with other people.
ArcGIS online – Basemaps and more
Add more layers
Yours, mine, and theirs
Where on Earth?
Make your own map

Follow these steps:

1. Choose an area.
   Pan and zoom the map to an area or search by its name or address.

2. Decide what to show.
   Choose a Basemap then add layers on top of it.

3. Add more to your map.
   Create an editable layer to draw features on the map.
   Display descriptive text, images, and charts for map features in a pop-up.

4. Save and share your map.
   Give your map a name and description then share it with other people.
Layer settings
Save the map
Share it

ArcGIS - South Dakota Weather - Winbox Internet Explorer

Share

Select one of the methods below to share your map.

Note: Your map is currently private which limits your sharing options. Make it public to enable all sharing options and ensure people can view it outside of ArcGIS.com.

- Share with everyone (public).
  - Post to Facebook
  - Embed this map
    - Embed in Website
    - Make a Web Application

Copy and paste link into email or URL:
http://sky3.arcgis.com

Close
Phone app users can see your map
Phone app users can see your map
Actual deployed app examples

University of Oregon
App Store
Actual deployed app examples

University of Oregon App Store
Actual deployed app examples

University of Oregon
App Store
Actual deployed app examples

University of Oregon App Store
Actual deployed app examples

WhereTo.sg
App Store
Add query intelligence to a map

• [http://explorer.arcgis.com](http://explorer.arcgis.com)
Log in and select one of your maps
Click Queries
Select a Layer
Set up the Query: field, operator, text, & prompt
Turn some fields off
Test the query
See the selected
Save the map
Move to a Smartphone app and open the map
Search to see predefined searches

Image of a search interface with a dropdown for selecting a state.
Type in a value
Selection is made
See the selection on the map
See the exposed attributes you set in Explorer.
Other resources

- Mobile Island (Hall B2)
- ArcGIS for Smartphones
- Mobile resource centers
  - http://resources.arcgis.com/content/mobilegis/about
- Free web course - Mobile GIS: Creating Web Maps for Lightweight Mobile Apps
Thank you