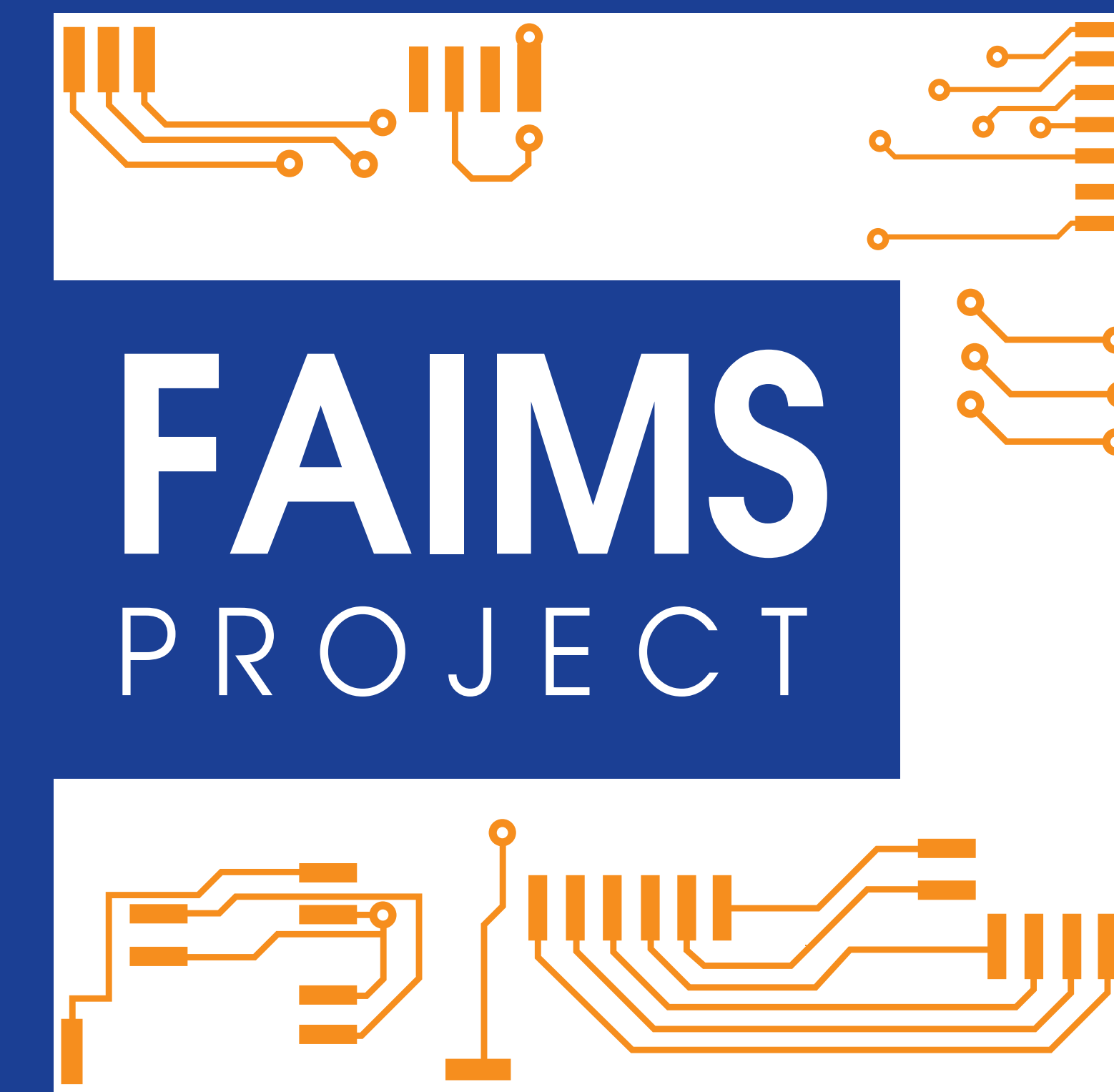


# GIS on Android – Not Ready for Prime Time?

## Mobile Apps and Spatial Recording during Fieldwork



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For more information on this poster:



[www.fedarch.org](http://www.fedarch.org)

Name	gvSIG Mini	GeoMobile for ArcGIS	GIS4Mobile 2013	Maps Data Collection	Locus Free
Version	1.2.0	3.2.4	1.0.1	?	2.8.6
Release Date	30-Mar-11	Jun-12	23-Jan-13	29-Oct-12	3-Feb-13
Open Source	Yes	No	No	No	No
Free (cost)	Yes	Yes	Yes (basic version)	Yes	Yes
Website	<a href="http://www.gvsigmini.org">http://www.gvsigmini.org</a>	<a href="http://www.webmapsolutions.com/free-mobile-arcgis-viewer-upgraded">http://www.webmapsolutions.com/free-mobile-arcgis-viewer-upgraded</a>	<a href="http://www.gis4mobile.com">www.gis4mobile.com</a>	<a href="http://www.aiscad-mobile.com/mgc_web/app_mgc_gb.html">http://www.aiscad-mobile.com/mgc_web/app_mgc_gb.html</a>	<a href="http://www.locusmap.eu/">http://www.locusmap.eu/</a>
Organization	Prodevelop / gvSIG Association	ESRI	GeoSite.dk, kloj.dk	Asesoría Informática de Sistemas CAD, S.L.	Asamm Software, s. r. o.
Works offline	gps works	No	No	gps and tracking works	cached maps and gps work
Basic Map Viewer	Yes	Yes	Yes	Yes	Yes
Simple vector editing	No	Yes	Yes	Yes	Yes
Advanced vector editing	No	Yes?	No	No	No
Own raster data display	No	Yes	No	No	No
Data input	WMS	WMS	WMS	WMS	No
Programming language	Java ME - CDC/Java Android	Unknown	Unknown	Unknown	Unknown
Android	Yes	Yes	Yes	Yes	Yes
iOS	No	Yes	Yes	Unknown	No
Windows/pocket PC	Yes	No	Yes	Unknown	No
License	GPL2+	Commercial	Commercial	Unknown	Commercial
Description	gvSIG is primarily a free map viewer of free-access maps (OpenStreetMap, etc.) with a WMS client. It supports address and POI search. It works best with good internet connectivity	GeoMobile is a cross-platform mobile ArcGIS viewer for visualization and analysis of spatial data. Users can load their own GIS map layers via a Web hosted configuration file and use basic tools such as anotation, measure, geo-coder, search, routing and geo-locator. It requires internet connectivity	GIS4Mobile is a webapp with an Android interface. It uses Open Layers/Open Street maps data as the background imagery and allows basic vector creation and editing. It requires internet connectivity. If you sign up and pay for business version, you can get much more functionality.	MDC is a web-based data collection application that works on Android. You can use it to collect and transmit basic vector data with associated pictures, audio and video. Its functionality is limited offline.	Locus Free is an online/offline map viewer for Android. It is very reliable for caching of maps for later use offline. It handles point and track recording.

Name	OruxMaps	qGIS (for Android)	gvSIG Mobile	ArcPAD	FAIMS Mobile App
Version	5.0.4	1.7	0.3/1.0 Alpha	10	production
Release Date	26-Jan-13	25-Oct-12	Nov-09	Jun-10	30-Sep-13
Open Source	No	Yes	No	No	Yes
Free (cost)	Yes	Yes	Yes	No (ca \$700 single user license)	Yes
Website	<a href="http://www.oruxmaps.com/">http://www.oruxmaps.com/</a>	<a href="http://www.opengis.ch/android-gis/">http://www.opengis.ch/android-gis/</a>	<a href="http://www.gvsig.org/web/projects/gvsig-mobile/description-2/view">http://www.gvsig.org/web/projects/gvsig-mobile/description-2/view</a>	<a href="http://www.esri.com/software/arcgis/arcpad">http://www.esri.com/software/arcgis/arcpad</a>	<a href="http://www.fedarch.org">www.fedarch.org</a>
Organization	OruxMaps	OS Geo, www.opengis.ch	gvSIG Association	ESRI	FAIMS project
Works offline	Yes	Yes	untested	Yes	Yes
Basic Map Viewer	Yes	Yes	Yes	Yes	Yes
Simple vector editing	Yes	Yes	Yes	Yes	Yes
Advanced vector editing	Yes	Yes	Yes	Yes	Yes
Own raster data display	Yes	Yes	Yes	Yes	Yes
Data input	WMS	direct	direct	direct	direct
Programming language	Unknown	C++	JAVA ME - CDC 1.1	C++	Java
Android	Yes	Yes	No	No	Yes
iOS	No	Yes	No	No	No
Windows/pocket PC	No	Yes	Yes	Yes	No
License	Commercial	GNU	GNU/GPL	Commercial	GPLv3
Description	OruxMaps is an online/offline map viewer for Android. It allows for the upload of vector and raster via a Map Creator (you need to follow the manuals). You can create basic vector data and display it offline.	qGIS is an open source mobile GIS software that runs on multiple platforms. It supports all kinds of vector, raster and db formats. You can use it to visualize, capture and edit field data.	gvSIG Mobile is a mobile version of gvSIG Desktop for PDAs, supports a variety of shapefiles (GPX, KML, GML, ECW, WMS) and rasters, capable of using internal/external GPS. It supports the display of local and remote information (via WMS standard), layers management, creating GPS tracklogs/waypoints.	ArcPAD is a mobile field-mapping and data collection software designed for GIS professionals. It includes advanced GIS and GPS capabilities for capturing, editing, and displaying geographic information. Data can be checked in and out of a multi-user or personal geodatabase and shared.	The FAIMS app is a free application for offline data collection and visualization. It renders most common vector and raster data formats. You can collect and edit spatial data with associated audio video files. The app supports variable data schemas, has a customizable UI, and can be tailored to any archaeological, ecological or geological workflow.

This assessment is a mid 2012 snapshot of the state of the GIS-aware mobile applications that archaeologists might use. We conducted this investigation to explore minimum requirements for our application and "holes" in features and development. Some of these "holes" have already been patched.

### Minimal Archaeological Needs for the App:

- display georeferenced data or base maps (rasters and vectors)
- create and edit vector data
- have tracking and current position
- connect to external sensors
- be customizable
- work offline

### Major problems with existing GIS-aware Android tools:

- Turn-key solutions, customizable apps are rare
- Limited vector editing capability (points and tracking often the only features)
- Limited raster data rendering or "own data" upload
- None or severely limited functionality when offline

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