Framework driven Mobile Asset Attribution/Management Applications

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Overview

- Who are the users of mobile apps?
  - Field engineers, response teams, public users, customers, government etc.
- What is the general focus today?
  - Mobile apps development – business strategy, product based, Sales & marketing.
- Where are these used?
  - E-governance, defense, utility, transportation, facilities etc.
- Why the mobile apps are required?
  - Global demand for mobile apps on various devices to meet different business needs.
- When is the program evaluated?
  - Business planning, project management stages
- How is it done?
  - Development frameworks, tools, quality of apps, revisiting ROI

Introduction/Objectives

- ## Communication at a faster pace has become a necessity
  - Asset management is increasingly becoming popular across many domains Facility management, e-governance initiatives etc.
  - Public safety
    - Emergency response which demands almost immediate response times
    - Planning phases which requires accurate data availability at all times
  - E-governance activities which needs improved public service
  - The list continues….
- ## Technology is rapidly moving from desktop to web to mobile…
  - Advancements in technology made mobile devices accessible to the general public at affordable costs
  - Earlier mobiles were used to make calls and then as smartphones which are being used to handle multiple activities.
  - Device based "Apps" are growing in millions across online stores
  - GIS based "Apps" are contributed both by companies and general public through collaboration.

Growth of Mobile Industry

- Business apps deployable on various devices like Iphone, Ipad, Android.
- GIS based apps driven by business usage
- IPad based GIS apps are already used across various continents.
- Phone based GIS apps being used in India but level of implementation & usage still not at comparable levels to other countries. A huge potential market!
- Developer skill levels for mobile GIS apps not available in the market.
- The skills are being developed in-house so large scope in growth specific to India market.

The Growth of Mobile Technologies

In 2011, there were 835 million smartphone users worldwide[1]

During 2012, Google and Apple each announced that users have downloaded more than 25 billion apps to date.[2]

While interacting with a mobile device, 64% of users' time is spent engaged in applications (texting, social networking, and other purchased or free applications).[3]

68% of companies have produced and / or distributed mobile apps.[4]

Mobile Technology Frameworks

Mobile Frameworks Comparison Chart

Looking for the right mobile framework? Compare all major mobile frameworks and choose the one that fits best.

Mobile Technology Frameworks

Top 20 Mobile App Development Frameworks		
Fries	Spine Mobile	Zepto.js
Appium	Zoey	jQuery Mobile
Junior	iUI	Jo
Enyo	Lungo.js	Sencha Touch
Sidetap	Wink toolkit	WebApp.Net
Mobello	The M Project	Helios
Moobile	The DHTMLX Touch	

Mobile App Testing

Issues to be addressed	How testing is done?	What are testing scenarios?
Map based testing	Emulators	User experience
Unavailability of automation tools	Devices	Hardware
Online/Offline modules	Automation	Performance
GPS accuracy levels for LBS	Manual	Software
		Network
		Security

- **What percentage users run developed apps on emulators?**
  0%

Business Case Analysis

- **Available tools to perform the analysis**

- **Forecast benefits**

- **Project costs**

- **Map benefit and cost projections**
    - **Software & maintenance**
    - **Application development**
    - **Data center charges**
    - **Ongoing team costs**

- **Calculate key financial metrics**
    - **ROI**

Conclusion

- APIs allow the developers to extend the framework using custom modules.
- APIs also provide the developers a good start through samples, help documents.
- Online/Offline modules are also available but innovative thoughts contributed by GIS developers across the globe continue to improvise the functionalities.
- Just GIS development skills are not good enough or just IT development skills are not enough!
- Innovative IT integration methods, tools, APIs combined with GIS industry knowledge, product knowledge need to be integrated to deliver high performing mobile GIS apps.
- Organizations have to develop and utilize innovative methods to build mobile frameworks which have reduced TTM at reduced costs.
- 3G & 4G networks will definitely play a pivotal role in performance of mobile GIS apps where data size is critical.
- Avineon utilizes GIS technology products, APIs combined with opensource technologies (testing, design) to build cost effective mobile based GIS apps for the customers.

Hyderabad

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Search Results | My Survey Tasks | Allocate Counting Area | Counting Area List | Assign Parcels | Parcels List | Reassign Parcels | Survey/Surveyor Reports

Reassign Parcels to Surveyor

User Id:	County Area:	Survey Type:	Parcel	New User:	
Surveyor1 ▾	132 ▾	Survey1 ▾	1321258 / 1320869 / 1320937 / 1321019	Select User ▾	Reassign

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Survey Application

Legend Logout

Survey Report - Windows Internet Explorer

Survey Name : Survey1

User id	Total Allocated	Completed	Pending
possurveyor	5	0	5
Surveyor1	17	0	17
Surveyor2	27	0	27
Surveyor3	10	0	10

Survey Name : Survey2

User Id	Total Allocated	Completed	Pending
Surveyor1	11	0	11
Surveyor2	10	0	10
Surveyor3	8	0	8

RE, USGS, METI/NASA esri

🔍 100% ▾

Search Results | My Survey Tasks | Allocate Taluk Area | Taluk Area Allocations | Assign Panchayat | Panchayat Allocated List | Reassign Panchayat | Survey/Surveyor Reports

Survey Report
Start Date: 07/01/2013   End Date: 02/04/2014   Surveyor: Surveyor2 ▾
[Survey Summary] [Survey Report] [Surveyor Report]

Survey Report - Windows Internet Explorer

Survey Name : Survey2

User id	Total Allocated	Completed	Pending
Surveyor1	12	1	11
Surveyor2	10	0	10
Surveyor3	10	0	10

🔍 100% ▾

Search Results | My Survey Tasks | Allocate Counting Area | Counting Area List | Assign Parcels | Parcels List | Reassign Parcels | Survey/Surveyor Reports

Survey Report
Start Date: 08/01/2012   End Date: 02/04/2014   Surveyor: Surveyor1 ▾
[Survey Summary] [Survey Report] [Surveyor Report]

Survey Report - Windows Internet Explorer

Survey Name : Survey2

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🔍 100% ▾

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Survey Report
Start Date: 08/01/2012   End Date: 02/04/2014   Surveyor: Surveyor1 ▾
[Survey Summary] [Survey Report] [Surveyor Report]

Legend

▬	Primary Overhead
▬	Primary Underground
▬	Dist. Boundary
○	Pole
△	Unassigned High Priority
△	Unassigned Low Priority
○	Assigned / Enroute
●	Severity 1 - Responder/Guard On Site
●	Severity 2 - Responder/Guard On Site
●	Severity 3 - Responder/Guard On Site
●	Severity 4 - Responder/Guard On Site
●	Responder/Guard - Left Site
◆	Closed
◆	Other

Closed/Total Count: X/Y

IAP 13 FEB ▼   Wires Down ▼   ALL ▼   ALL ▼   Query   Apply

	LOG	STATUS	ASSIGNEE	LOCATION	CASE
Go To	T333420	Un Assigned		Sagar Engg Collage, Costal Bakery Road	437187
Go To	T333407	Closed		Hotel Novotel, Varun Beach	432013
Go To	T333380	Closed		Chermas Mall, KGH Down Road	432013
Go To	T333474	Un Assigned		ISLE paradise, Beach Road	436361

1 2 3 ...

About

Avineonics

ORMS: Outage Restoration Management Suite

Version 4.0

Map Layers (Visible 16-18)

☐ Pole
☐ Primary Overhead
☐ Primary Underground

(Address, City, State, Zip)

Find
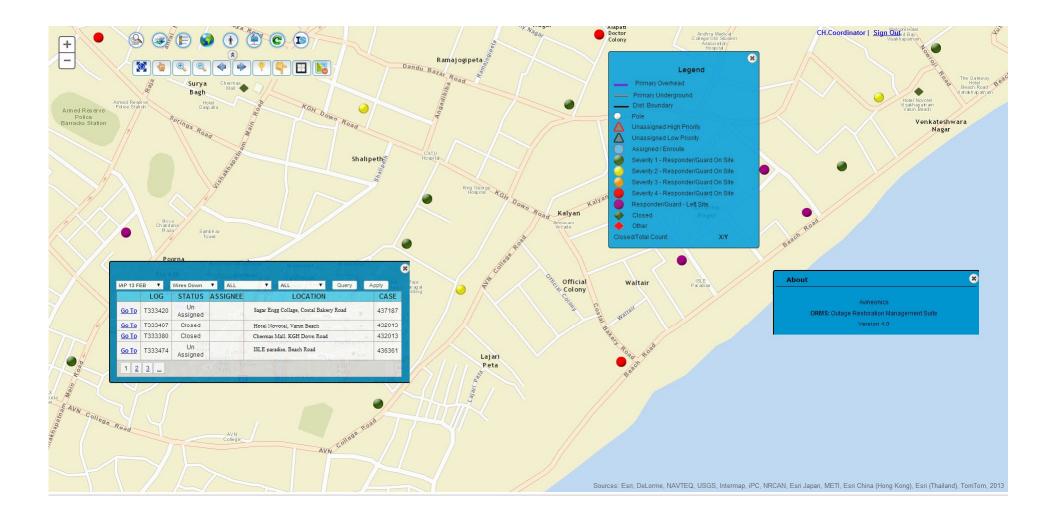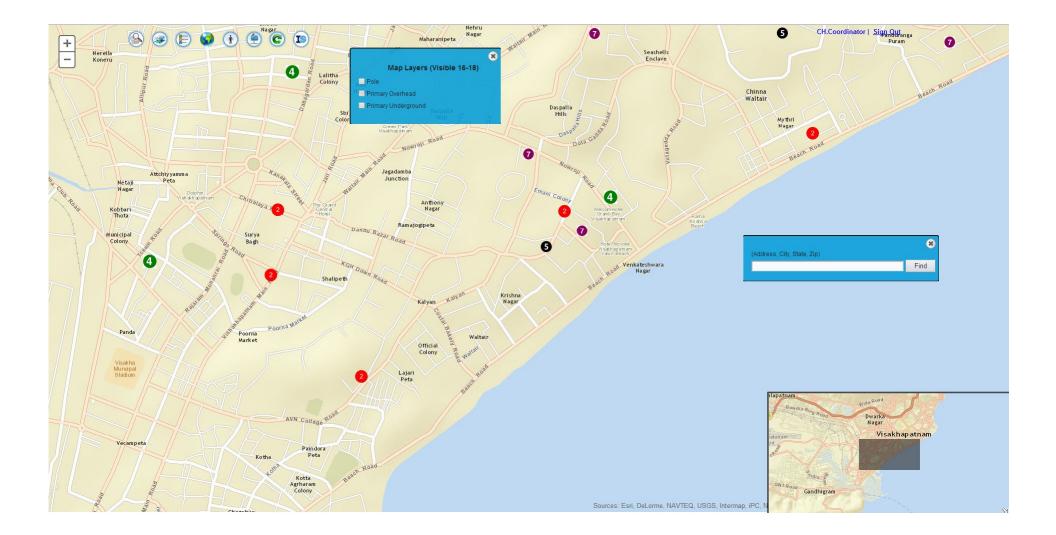
Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, iPC, N

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3. www.isprs.org/proceedings/XXXVI/5-C55/papers/**magni_diego**.pdf
4. www.tfpllc.com/.../**Constructing**%20a%20**Business**%20**Case**%20**Analysis**.
5. http://codegeekz.com/mobile-frameworks-for-developers/
6. http://www.apptive.com/uploads/resources/Apptive-ROI%20of%20a%20Mobile%20App.pdf
7. http://testdroid.com/testdroid/5837/10-best-practices-for-mobile-app-testing

Avineon Services Overview

Geospatial Services

Engineering Services

IT Services

Discussion/ Q & A