Mobile GIS
How to Get There from Here

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Overview

• Introduction
  – What is Mobile GIS?

• Developing Mobile GIS Applications
  – Architectures, Development Platforms

• Conclusion
  – Example Mobile GIS System
What is Mobile GIS?

• GIS on a Mobile Device
• Examples
  – Work Order Dispatching
  – GASB34 Inventory
  – Pipeline Inspection
Why Mobile GIS?

• Field Data Access
• Remote GIS Functionality
• Real-time Data Capture
Why *not* Mobile GIS?

- Limited Hardware Resources
- Limited Software Available
- Limited Connectivity
Mobile Device Trends

• Increasing Processing Power
• Increasing Memory
• Increasing Screen Size
• Increasing Wireless Connectivity
• Increasing Sophistication of OSes and Software
• Better UIs
• Decreasing Cost of Hardware, Accessories
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Architecture: Client-Server

- ESRI ArcIMS
- Web Services

- GIS Software
- Distributed Framework
- Custom App

Mobile Device

- GIS Software
- Distributed Framework
- Custom App

Mobile Device
Architecture: Peer-to-Peer

GeoData
GIS Software
Distributed Framework
Custom App
Mobile Device

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Platform: J2ME

- Java for Mobile Devices
- Configurations
  - CDC
  - CLDC
- Profiles
  - MILP
  - FP
  - PP
  - PBP
- http://java.sun.com/j2me/
Platform: .NET CF

- .NET for Mobile Devices
- Develop as Standard .NET Application
- Configure Build Properties to Deploy to Mobile Device
Lite GIS Software: ESRI ArcPad

- ArcPad 6.0.2
- ArcPad Studio
  - Custom Toolbars
  - Custom Forms
  - Scripts
  - Applets
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Mobile Oil Spill Response System

ArcSDE

ESRI ArcIMS

Web Services

GIS Software

Distributed Framework

Custom App

Mobile Device

Distributed Framework

Custom App

Mobile Device

Distributed Framework

GIS Software
Conclusion

• Hardware, Software Trends Making Mobile GIS a Reality
• Multiple Options for Development Platforms
• Robust, Reliable Mobile GIS Systems
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