CAGIS Firebird: Dispatch Integrated Mobile GIS for emergency services

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The Cincinnati Area GIS (CAGIS)

City of Cincinnati and Hamilton County, OH
Approximately 0.9 million in population
495 square miles
~ 425,000 parcels
~ 329,000 structures
~ 56,000 businesses
~ 3,000 miles of sewer
~ 3,380 miles of road
49 cities, villages and townships
5 EMS 911 agencies
Approximately 14,000 employees
The Cincinnati Area GIS (cont.)

- **1993:**
  - Initial data conversion completed
  - 25 workstation users of CAGIS
  - Data (~50% in network environment)
  - Applications limited to making and plotting maps
  - No business plan, No documentation of benefits

- **Today:**
  - Integrated work order, customer service and billing systems
  - Workflow management supported by GIS
  - Integral part of permitting, licensing, service requests and capital project coordination as well as code enforcement
  - Development of real-time applications for counter, desktop, and field.
  - Professional and highly motivated team of 19 staff members, 1 doctoral fellow, ~3-5 interns
What is Cagis Firebird?
What is Cagis Firebird?

- Mobile GIS with *integrated* dispatch is the main task.
- Easy to use access to images and preplans.
- Countywide *address look-ups* in real-time.

- ArcEngine based to have lower licensing costs
- One application for all firehouses in Hamilton County; specific configuration possible
- GIS application with little training needs.
● Modular approach as VB.NET stand-alone application based on ESRI ArcEngine

● Independent sections:
  - Data communication including dispatch processing and GPS integration
  - Map interface
  - Specific project plug-in as business logic
  - Configuration via XML-file
Inside Cagis Firebird

Data communication

- Linking to existing MDC dispatch controls
- Enabled Download from SDE/SDO or Oracle Environment
- GPS integration to represent fire truck’s position
- Implemented Geolocator for Hamilton County specific geocoding with accurate addressing.
- Preplan and Image Inventory
Inside Cagis Firebird

Map interface/ control

- Built on ESRI Mapcontrol
- Implements ArcEngine standard navigation toolbar controls
- Integrated CAGIS Address Search and zoom-to-location
- GPS guided mapping

http://cler.uchicago.edu/gis/gis.htm
Who uses Cagis Firebird?

- Forest Park FD
- Colerain Township FD
- Indian Hills FD
- Next in implementation: Sycamore Township
- Phase in other FD after presentation to Regional Fire Chiefs Committee
• Screenshot vs Demo
Startup screen
Aerial Imagery And Map Layer Control
Routing
Thank you