Geoportal and Maps for emergency services (ASTRID Belgium)
All-round
Semi-cellular
Trunking
Radiocommunication network (...) with
Integrated (!)
Dispatchings
What is ASTRID?

- A.S.T.R.I.D. N. V. is a corporation owned by the Federal Government (100%), created in 1998
- Products and customers defined by law.
- Operate the systems at cost level
What is ASTRID?

- A digital radiocommunications network based on the TETRA standard, called RCS
- 11 provincial computer aided dispatchings for police, medical and fire, called CAD
- End user equipment (for RCS and CAD)
- One mobile operations center
- A paging system (for fire brigades)
- A MVNO network (3G/4G)
Where is geographical information used by Emergency services?

- **Telephony**
  (Geographical information about the caller provided by the telecom operator, ...)

- **Computer Aided Dispatching**
  (Help for the decision and the management of intervention based on the geographical environment by analysing and displaying intelligent maps, ...)

- **Vehicule Tracking**
  (GPS data, ...)

- **Field equipment**
  (Map and geographical data communicated to unit on terrain, ...)

- **Reports and Statistics**
  (thematics, proximity analysing, ...)

- **Location of Units**
  (GPS/Satellites)

- **Location of Event/Intervention**

- **Route calculation and means/unit recommendation**

- **Spatial Analysis**
  (query environment next to event, simulations, reports, ...)

**Geographical Information Systems**
How are maps used in the current Astrid’s Dispatching applications?

Content:
- **Commercial Streetnetwork map maintained manually** due to the fact that operational information is attached to map object (measures, response plan,.. On streetsegment, address points,..)

Constraints:
- **Operational informations** must be maintained at 100%
- Could be updated locally in emergency by the control rooms themselves
- Dispatching application supports **only 1 maps** (except rasters)

Technics:
- Map data must be **converted and integrated**
- Operational information must be **merged** with the map

Unique Operational map for:
- Location
- Route calculation
- Operational response
Astrid GIS Roadmap

User Goals

Strategic Guidelines

Objectives

Astrid’s Roadmap for cartography

Project A

Project B

Project C
How are maps used in the current map in the main CAD applications?

2 complementary systems

Dispatching application

- Unique Operational map for:
  - Location
  - Route calculation
  - Operational response

GeoPortal

- Multitude of maps:
  - Location
  - Map annotation

Interactions between both applications
Welkom  Bienvenue  Willkommen
New opportunities with Geoportal

Function of Geoportal:
- Location
- Consultation of different geographical information
- Communication tool between control rooms and emergency services in the field (with Map sketching module)

Content:
- Map source: several map data/services (NGI, AGIV, Openstreetmap, tomtom, SPW, CIRB,...)
- Maintenance/update on map data: Regular copy on Geoportal local database
- Maintenance/update on map webservices: automatic due to direct connection to map data provider/owner

Constraints:
none

Technics:
- Map data are copied or connected remotely. No transformation of data necessary
The fastest way between map data owner and users
Key success factors:

- intuitive interface
- avoid customer development, preference for configuration
- centralized
- high availability
- easy maintainable
- fast response time
- monitoring capabilities
- desktop and Mobile version
Architecture

2 identical data centers

In each data center:

- 1 Geocortex server
- 4 Arcgis servers (2 active and 2 passive for high availability)
- 1 database server & Geocortex optimizer
Geoportal
Operational Sketching Module.
Maps can now be annotated by the operators and shared with other Call&Dispatching centers, and units in the field.
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