S&T Solutions in GIS Market
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What is GIS?

- GIS links information about where things are with information about what things are like
- GIS links attribute data with graphical data
- GIS combines layers of information
Combining layers of Information

- Rivers
- Roads
- Lakes
- States
- Cities
G + IS = GIS

- Geographical information system (GIS) is like any other information system. It differs in the fact that a part of the data is geolocated (geocoded).
- Geographical information system means adding spatial dimension to an IS.
- 80-85% of all data has a spatial component which can be used in GIS.
- In GIS we can query our data also from the spatial perspective which adds us a tremendous ability in analyzing our data
  - What is where?
  - Why is it there?
  - Why do I care?
Where GIS is used

- **Government** – Local, State, Federal, Military
- **Education** – Research, Teaching Tool, Administration
- **Emergency Services** – Fire & Police
- **Environmental** – Monitoring & Modeling
- **Business** – Site Location, Delivery Systems
- **Industry** – Transportation, Communication, Mining, Pipelines, Healthcare
S&T and GIS

- We work on GIS projects since 1993
- Our solutions are usually based on top of relational database (ORACLE) where also all graphical data is stored
- We are using three-tier architecture but there are still some client/server solutions
- The software solutions are based on our own GIS tools and WEB Application Server developed in C++
S&T GIS Team

• Highly qualified team of developers in Oracle tools, C++, JAVA and Oracle DBAs’ – more than 20 developers
• Standardized development environment
  – Headstart,
  – Oracle Designer 6i and Developer 6i
  – three – tier architecture
  – attribute (non graphical) applications are 100% generated from repository
  – project management
• GIS standards for storing spatial data (Oracle Spatial, OGIS)
• Proprietary GIS tools and libraries
S&T GIS Solutions

• We are not selling GIS tools but offering complete software solutions
• Our GIS solutions are highly integrated in business processes
• We are using GIS standards for storing spatial data – GIS tools and utilities from other vendors can be used also
• We implement the office automation procedures and only necessary GIS functionality – ease of use and best performance
• Only one address for all problems
GIS Integration in Business Process

Processes

People

Intranet/Internet

Client/server

Network

Application Server
Graphical + Attribute

DATABASE
Tabular + Graphical data
GIS Project Prerequisite

• Available data sources – data infrastructure
  – raster data
    • scanned maps
    • digital orthophoto maps
    • digital terrain model
    • satellite images
    • ...
  – vector data
    • roads and streets network
    • address coding system
    • buildings
    • land cadastre
    • rivers
    • lakes
    • ...
S&T GIS Business Opportunities

- Government
  - agriculture – GIS should be used in IACS in year 2005 (EU regulation)
  - geodesy
- Telecom
- Utilities
- Transportation
S&T GIS Solutions for Government

- Agriculture – Ministry of Agriculture – European legislation
  - Subsidies – financial aids (IACS) – GIS should be used in controlling procedures in year 2005
  - Registry of farms
  - Registry of grape and wine producers
  - Animal identification and registration system (BSE disease)
  - Land use system
  - Less favorite areas (LFA)
  - Registry of orchards, olive groves and other permanent crops
  - ...
S&T GIS Solutions for Government

– Geodesy – Survey and Mapping Authority
  • registry of spatial units
  • registry of geographical names
  • central database of geodetical points
  • land cadastre

– Statistics – Statistical office
  • statistical data warehouse for Agriculture Census
  • regional data base for regional development
  • map production for Agriculture and Population Census
    (16,000 unique maps from A4 to A0)
  • dissemination of statistical data
S&T GIS Solutions for Government

- Education – Ministry of education and sport
  - school districts and school population prediction

- Governmental state GIS – replicated GIS databases for data dissemination
  - land cadastre
  - land use
  - land registry
  - registry of spatial units
  - registry of geographical names
  - ....
S&T GIS Solutions for Telecom

- Analysis of failures in network
- Database design for GIS applications in Telecom