
Database and GIS based logistic solutions for subdeveloped regions in eastern Europe

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Introduction

♦ high interest of forest companies in eastern europes forestry after the break down of socialism

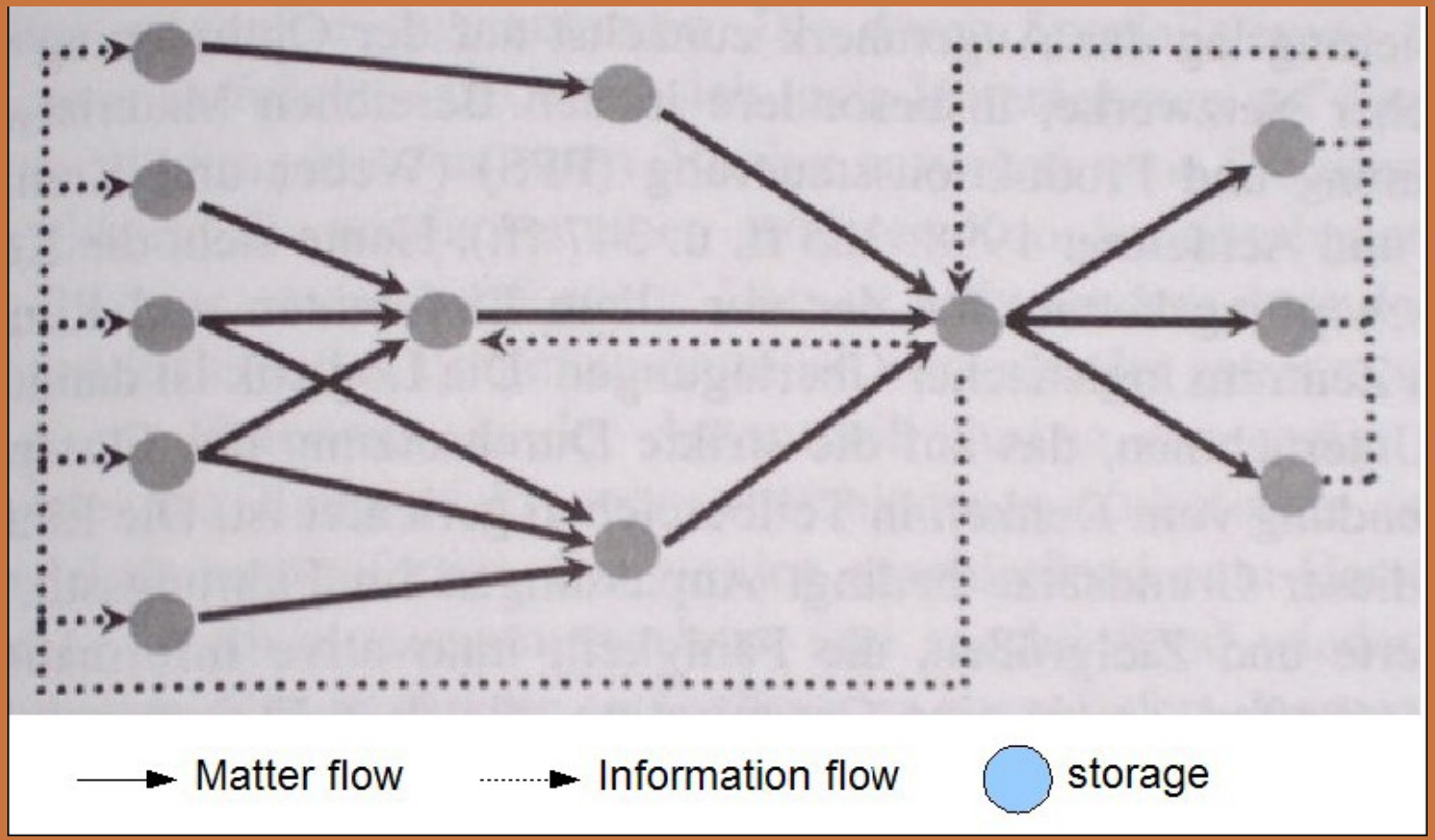
♦ often negative experiences by foreign companies through:

high bureaucracy
corruption
lack of infrastructure
difficult environmental conditions
cultural and educational differences

What is logistic?

The term logistic can briefly defined as the science of planning, organizing and managing activities that provide goods or services (LOGISTICS WORLD 2007).

► Physical Logistics: deals with the transport, storage and handling of matter and goods;
►Administrative Logistics: deals with the gathering, processing, transport and storage of, for a
well- regulated production flow relevant, information (data);
►Dispositive Logistics: keeps busy with the decision processes that are needed for effective and efficient production flow;
SCHÖNSLEBEN (in HEINIMANN 1999)



SCHMITHÜSEN et al. 2003

Characteristics of forest logistics in eastern Europe

- steady change of pick up sites
- great seasonal change in forest accessability
- huge spatial extension of activities
- difficult monitoring of activities
- lingual problems
- high amount of parallel processes
- etc.

My Concept

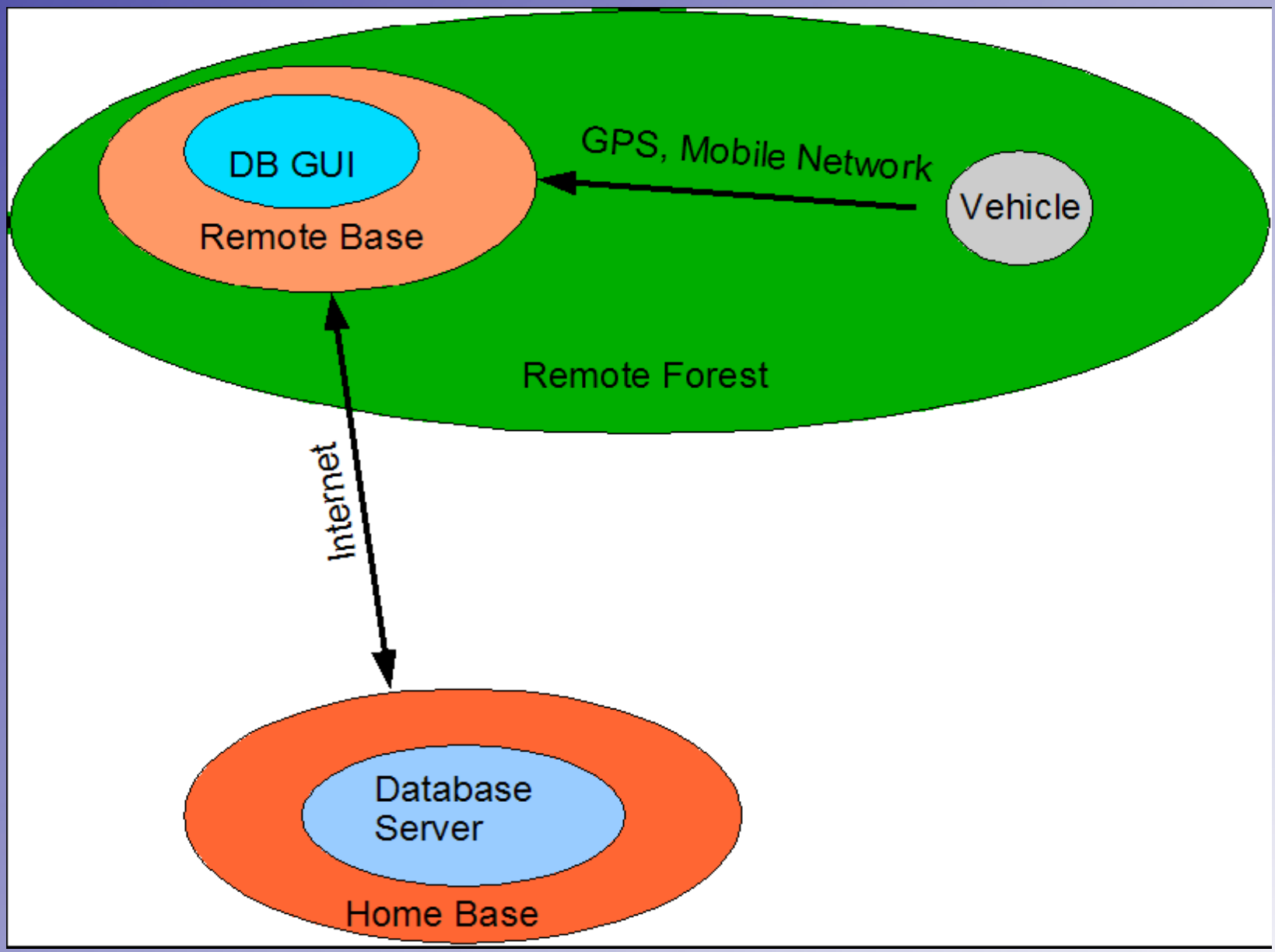
Basic Idea:

Especially transport costs represent a major cost factor, but are often not monitored. Monitoring in such areas shows up with

- high amount of spatial related data

- high requirements for the technical equipment

- quite easy to handle


DB GUI
Remote Base
GPS, Mobile Network
Vehicle
Remote Forest
Internet
Database
Server
Home Base

Requirements for a Logistic Database

- able to deal with spatial data
- able to be driven by a web application
- able to connect with a GIS and other software
- good documentation and support
- easy to handle
- cheap
- etc.

The Candidates

Comparison of Software

	MySQL	PostGIS	Oracle	IBM
Costs	١	١	٤	٣
Documentation	٤	٢	٢	٣
Support	٤	٤	١	٢
Connectivity with other software	٣	٢	١	٣

Spatial Data in Oracle

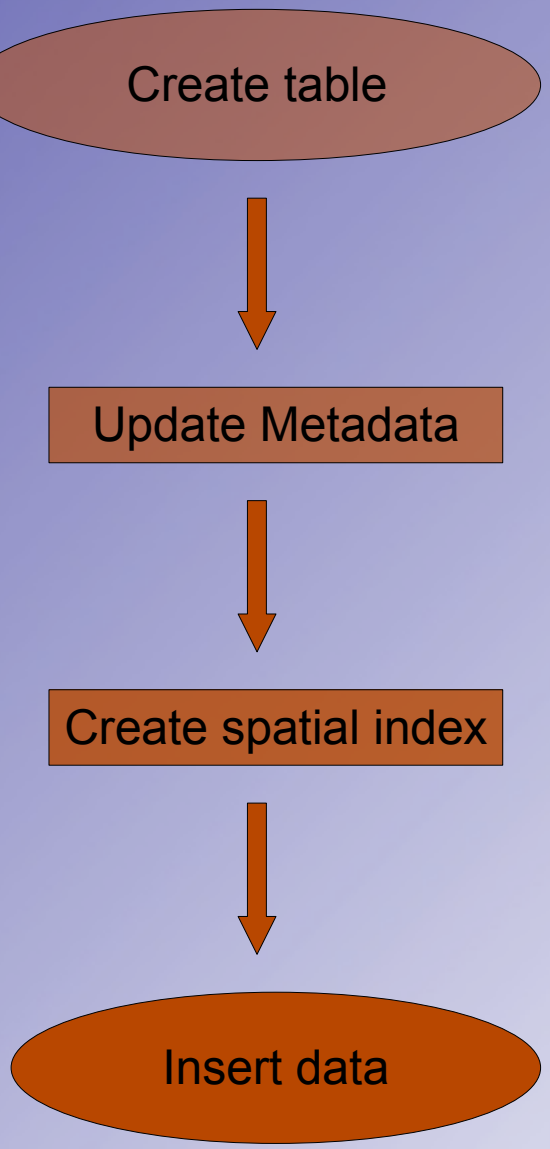
Oracle Locator

- part of every DBMS
- indexing spatial data
- query spatial data
- input spatial data

Oracle Spatial

- additional package
- much more features like locator
- load spatial data (.shp and others)
- deals with raster data
- etc.

Use of SDO- Geometry



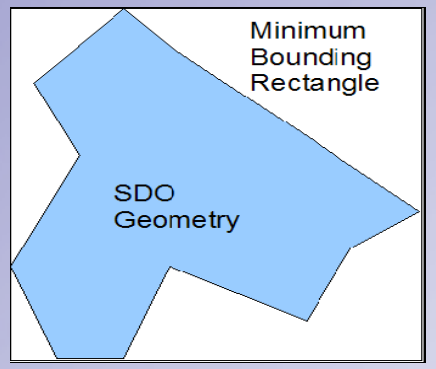
Input dataset

Primary filter

Candidate set

Secondary filter

Result



Problems, Remarks

- Choice of software
- Working from a remote place
- Software Problems
- Literature

References

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