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ZB GIS – new electronic services

ITAPA, november 2010

Ľuboslav Michalík

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TVORÍME VEDOMOSTNÚ SPOLOČNOSŤ
Európsky fond regionálneho rozvoja

Objectives

- ZB GIS as database of reference spatial data on national level (ÚGKK competence)
- ZB GIS – data structure and reference framework
- Demonstration of ZB GIS map services prototype
- Information about the national OPIS project - status, goals

ZB GIS – introduction

- Historical aspects
- Legislative aspects (ACT from September 12th, 1995 about geodesy and cartography as amended by the Act No. 600/2008 Coll.)
- Existing status of providing spatial data via electronic media
  - high geocommunity demand!

Several aspects...

- Existing public´s perception of ZB GIS (Yeti´s association)
- Several years of data processing in cooperation with Ministry of Defence
- Ready-to-go status for data publishing and sharing
- Missing infrastructure
- National project ESKN – ZB GIS (OPIS) – infrastractural framework for publishing data as electronic services – the main aspect

Project specification and goals

- Three main goals:
  - Creation and update of reference source data for national spatial data infrastructure (NIPI)
  - Access to ZB GIS reference data and information via electronic services including update of services
  - Effective integration of spatial data from public administration information systems (ISVS) through electronic services into global eGov architecture , i.e. providing ZB GIS data via electronic services to other ISVS modules and vice versa

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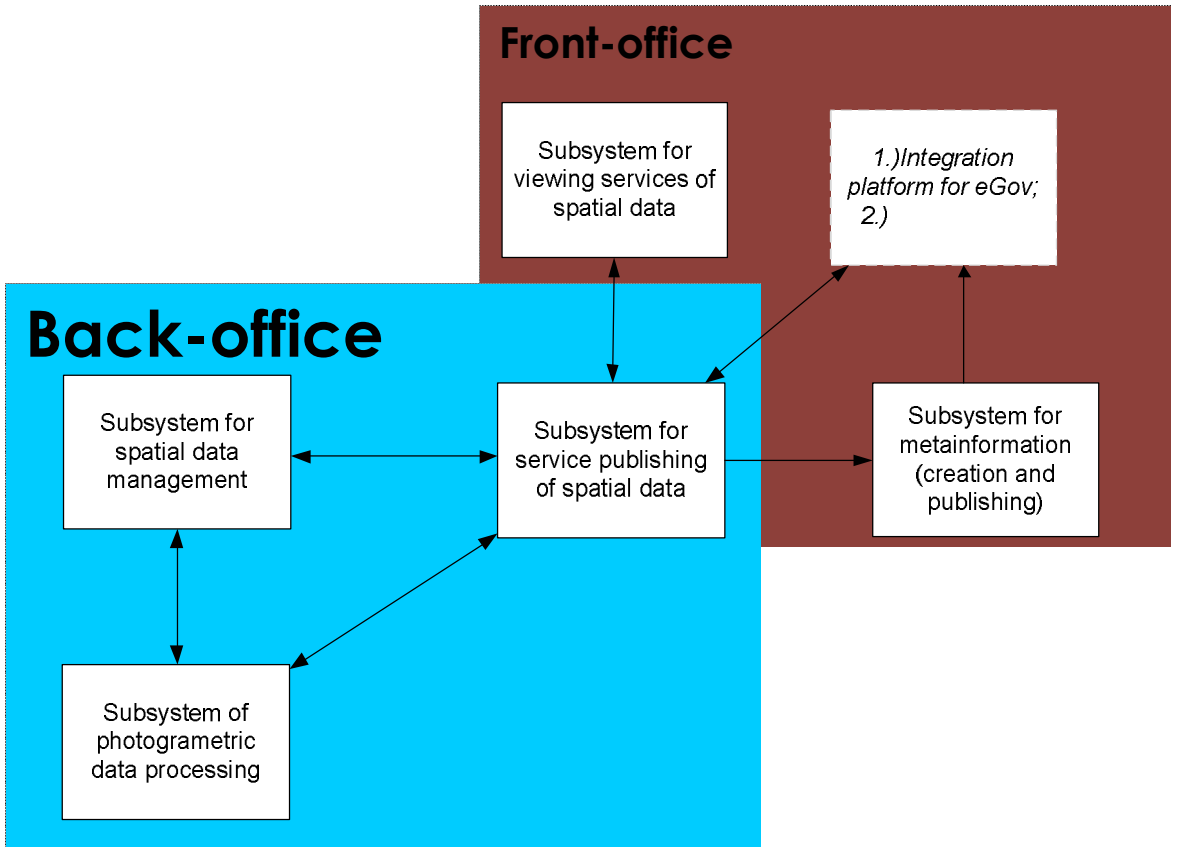
Proposed system architecture



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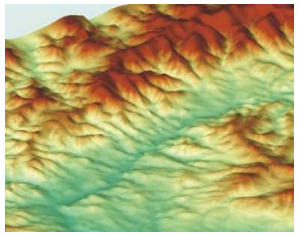
Data structures and properties

- Feature catalogue ZB GIS – structure and definition of feature classes for spatial database
  - modification of structures,
  - elimination of functional properties of topographical objects
  - focus on effectiveness – data collection and simplification of data processes
- Primary coordinate system ETRS89

vector topography (3D)



digital terrain model

geodetic reference points

orthophoto

Bratislava
Becherov
Malý Šariš
Liptovská Mara
Javorina

geographical names

administrative boundaries

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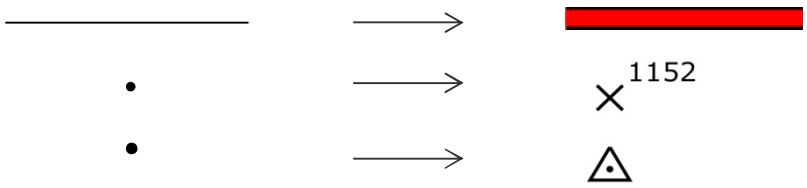
Data and representation

- Digital data model
  - Independent from scale
  - Definition of precision (geometry, time)
- Cartographic model
  - New approach to distribution and representation
  - Scale-dependent symbology
  - Level of detail portrayal, cartographical generalization
  - Issue of standardization



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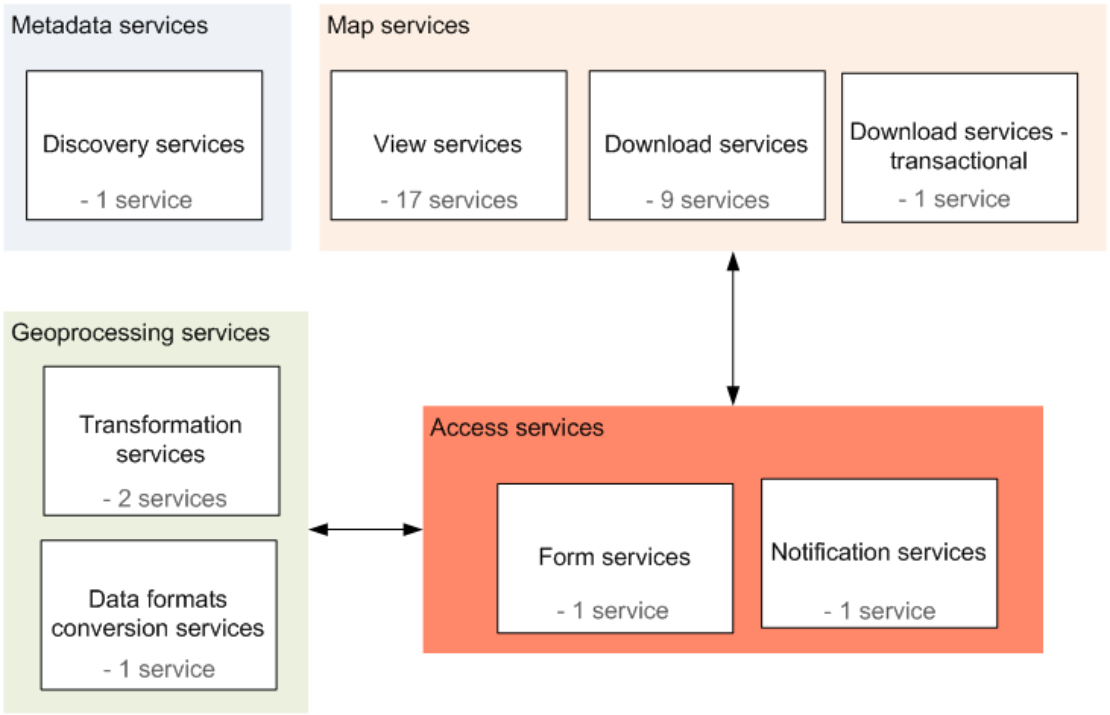
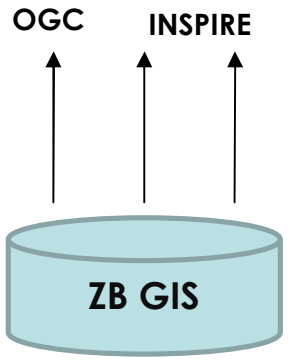
Schema of provided services



standards based services reflecting national specifications



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ZB GIS – service prototyp demonstration

- view service type – WMS 1.3.0 with map layers:
  - vector topography
  - digital elevation model (DEM)
  - geographical names (geonames)
  - administration boundaries
  - geodetic reference points
- Limited performance – on testing virtual infrastructure
- Limited and authorized access – selected organizations
- Simple cartographic model

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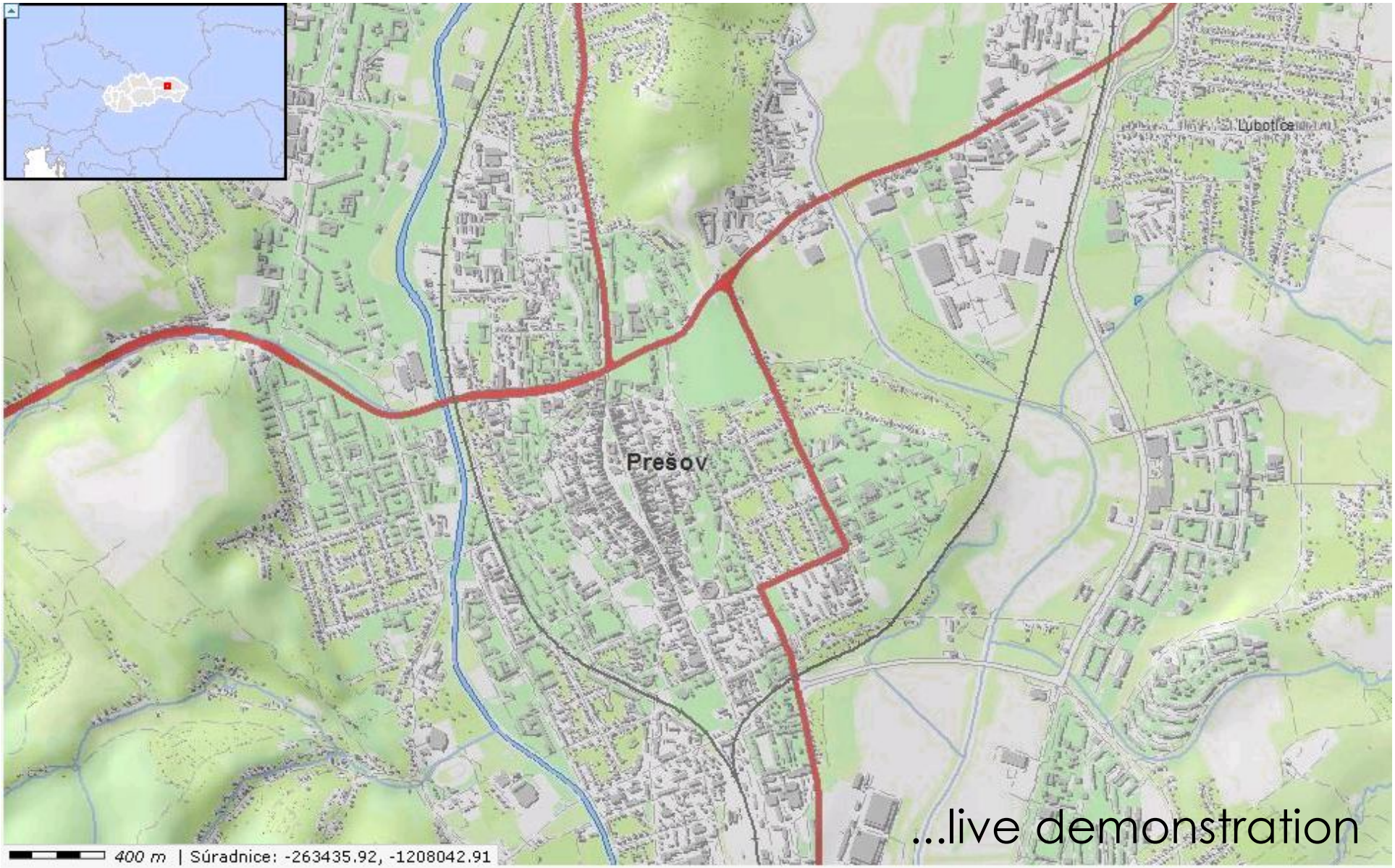
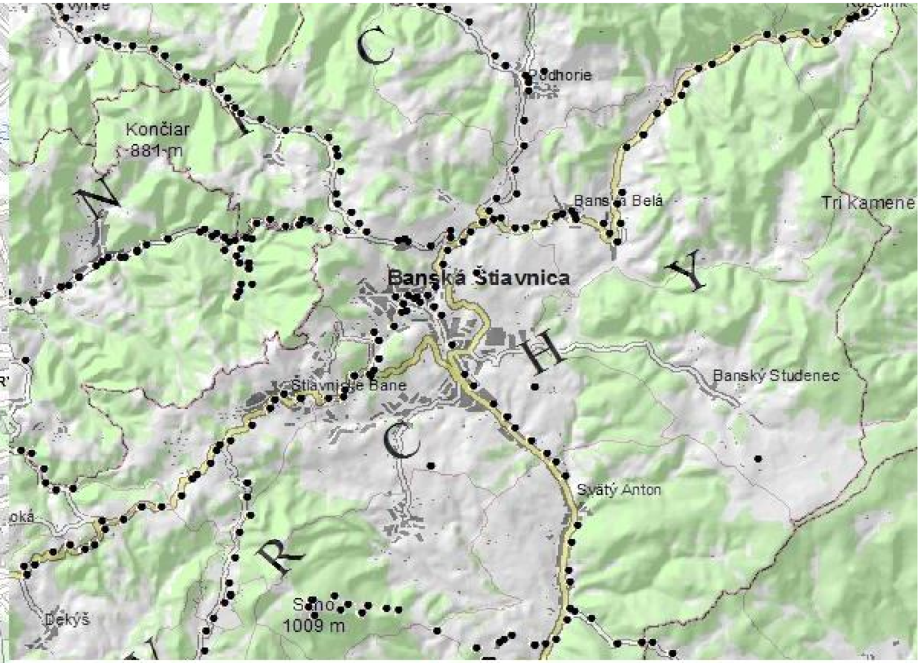
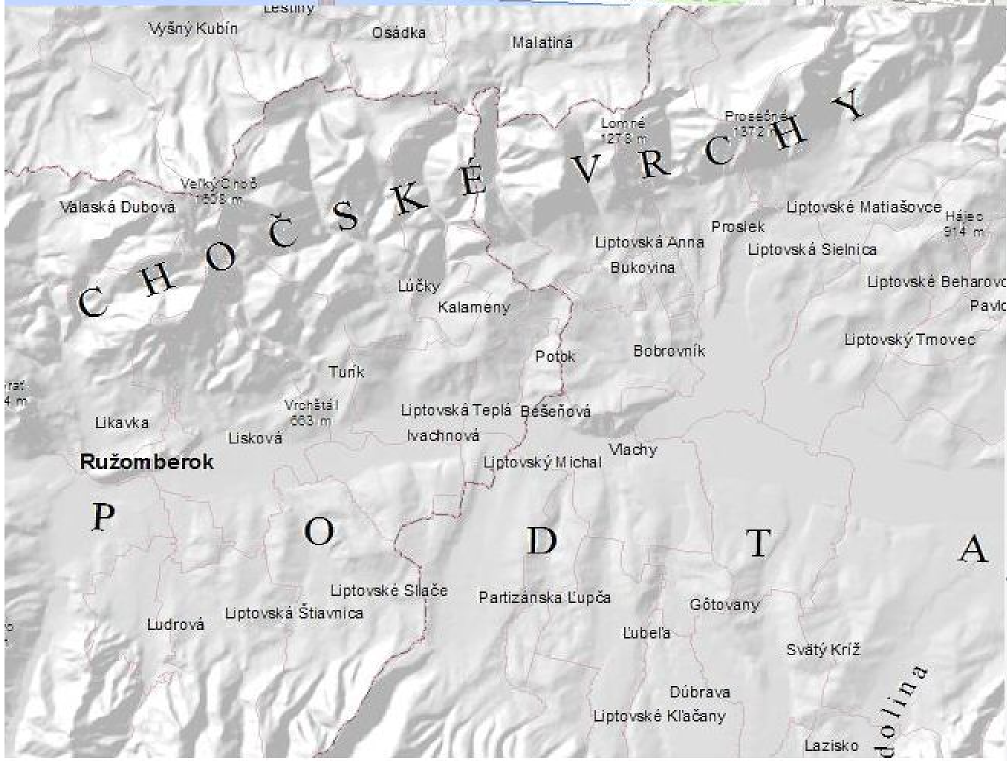


...live demonstration


KOSTOL SV. TROJICE
KALVÍNSKY KOSTOL
ALŽBETÍNSKY KOSTOL
KOSTOL SV. LADISLAVA
Bratislavský hrad
DÓM SV. MARTINA
KOMÍN LIEČEBNÉHO ÚSTAVU


Končiar
881 m
Podhorie
Banská Belá
Tri Kamene
Banská Štiavnica
Štiavnické Bane
Banský Studenec
Svätý Anton
Dekýš
Sitno
1009 m

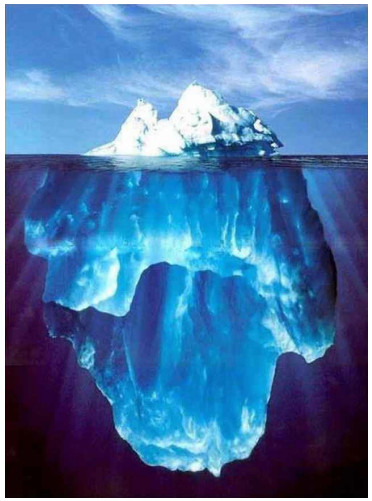

Vyšný Kubín
Osádka
Malatina
Lomné
1278 m
Prosečné
1372 m
CHOČSKÉ VRCHY
Valaská Dubová
Liptovské Matiašovce
Prosiek
Liptovská Anna
Liptovská Sielnica
Bukovina
Liptovské Beharovce
Lúčky
Kalameny
Liptovský Trnovec
Potok
Bobrovník
Turík
Likavka
Liptovská Teplá
Bešeňová
Lisková
Ivachnová
Ružomberok
Liptovský Michal
Vlachy
PODTA
Liptovské Sliače
Partizánska Ľupča
Gôtovany
Ludrová
Liptovská Štiavnica
Ľubeľa
Svätý Kríž
Dúbrava
Liptovské Kľačany
Lazisko
dolina


Žilina
Trenčín
Prešov
Banská Bystrica
Košice
Trnava
Nitra
Bratislava


Dolné pole
PRI MEDOKÝŠI
Štiavničky
Havranské
FONČORDA

Project scopes and status

- Presented published service prototype – tip of iceberg
- complex back-end and front-end office processes:
  - Data collection and processing
  - Data quality issues – geometry, attributes and topology (quality control processes)
  - Metadata
  - Transformation of data structures (INSPIRE)
  - Integration to eGov and UGKK systems (ESKN, ISGZ)



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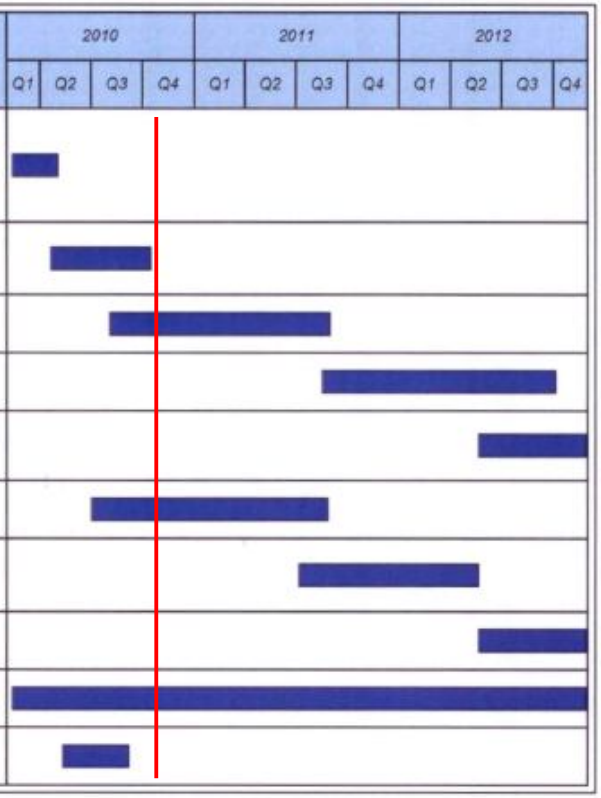
Project schedule and milestones

Č.	Technické etapy projektu	Začiatok	Koniec	Trvanie
1	Analýza súčasného stavu; Analýza existujúcich metodík, smerníc a procesov; Analýza požiadaviek; Analýza údajových zdrojov	11. 2. 2010	3. 5. 2010	58d
2	Návrh riešenia ZB GIS	20. 4. 2010	15. 10. 2010	129d
3	Nasadenie systému ZB GIS - Prototyp	3. 8. 2010	30. 8. 2011	281d
4	Nasadenie systému ZB GIS - Pilot	16. 8. 2011	5. 10. 2012	299d
5	Nasadenie systému ZB GIS - Rollout	21. 5. 2012	28. 11. 2012	138d
6	Nasadenie infraštruktúry – Prototyp	1. 7. 2010	26. 8. 2011	302d
7	Nasadenie infraštruktúry – Pilot	5. 7. 2011	21. 5. 2012	230d
8	Nasadenie infraštruktúry – Rollout	21. 5. 2012	28. 11. 2012	138d
9	Integrácia riešenia	11. 2. 2010	28. 11. 2012	730d
10	Riešenie informačnej bezpečnosti	11. 5. 2010	6. 9. 2010	85d



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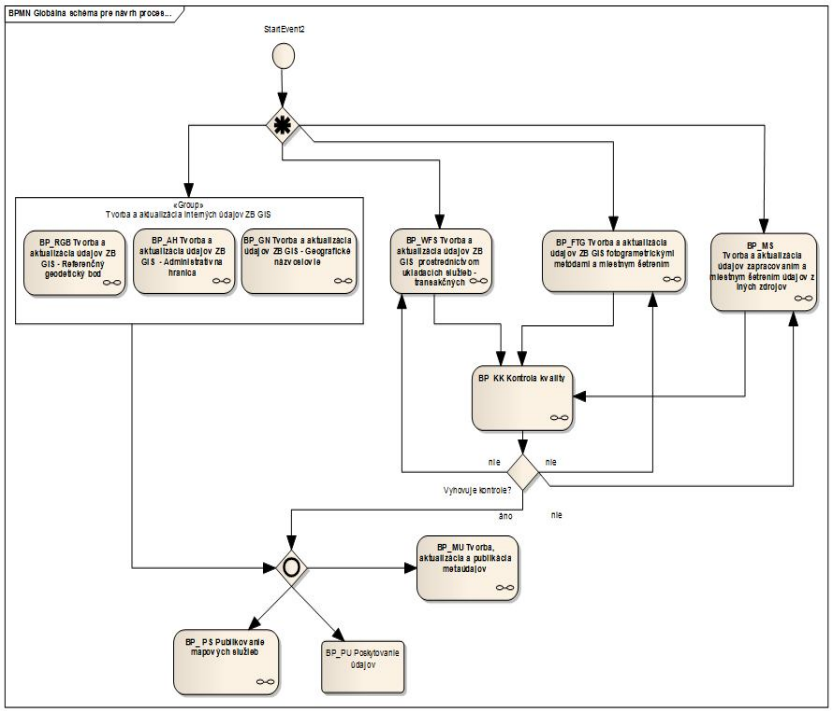
Data updating – the main focus

- Definition of processes
- Time-frame reference for data updating
- Decision-making policy for data updating process
  - where and when
  - UGKK competence
  - public administration authorities participation



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Integration issues

- eGov (ISVS)
- Geodesy, cartography and cadaster authority system´s (ESKN)
  - Integrated data and services

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Conclusion / Discussion

- Early phase of implementation
- If … then …
  - Up-to date spatial reference data vie electronic services soon
  - ZB GIS as basic reference infrastructure for integrated eGov architecture in geospatial context
- Bring long expecting services to geocommunity in Slovakia

…. Thank you!

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