



SINERGISE



REPUBLIKA SLOVENIJA
MINISTRSTVO ZA KMETIJSTVO,
GOZDARSTVO IN PREHRANO

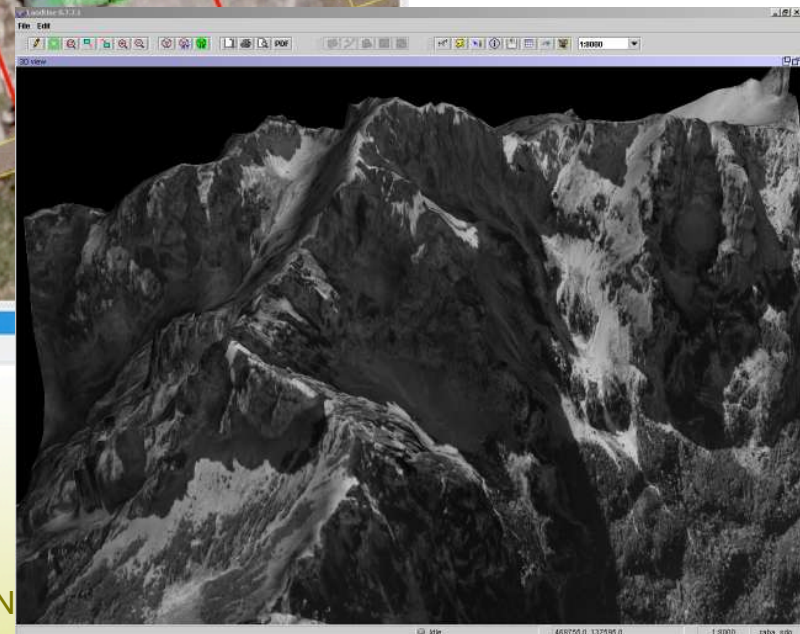
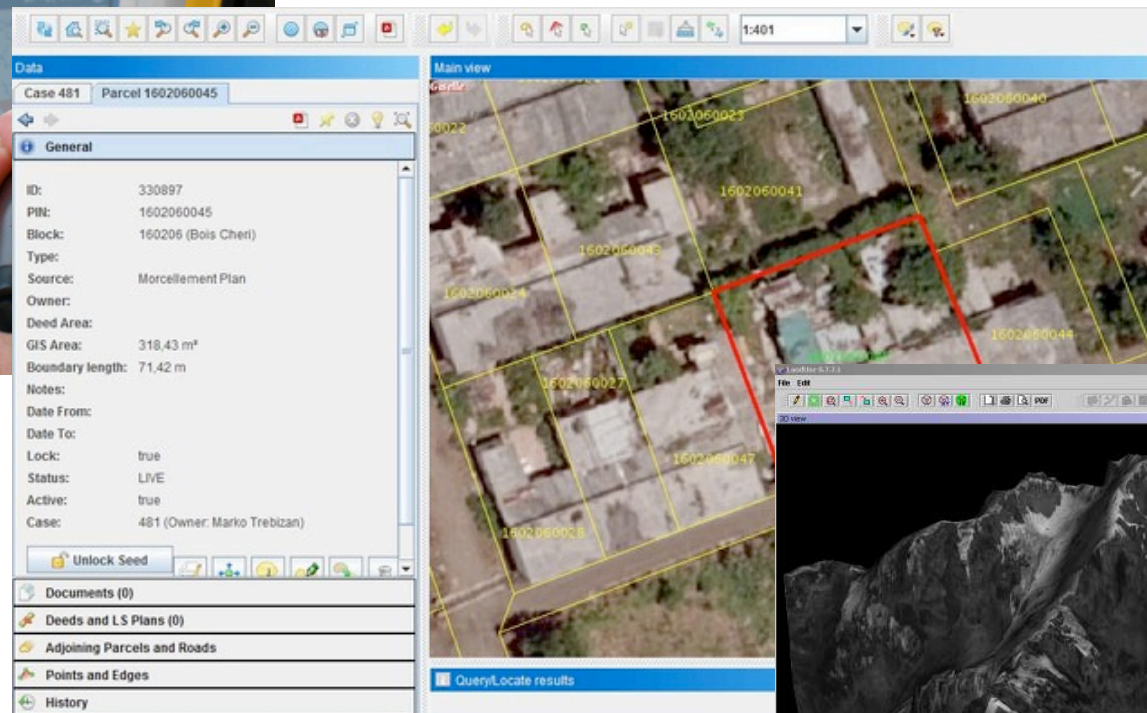
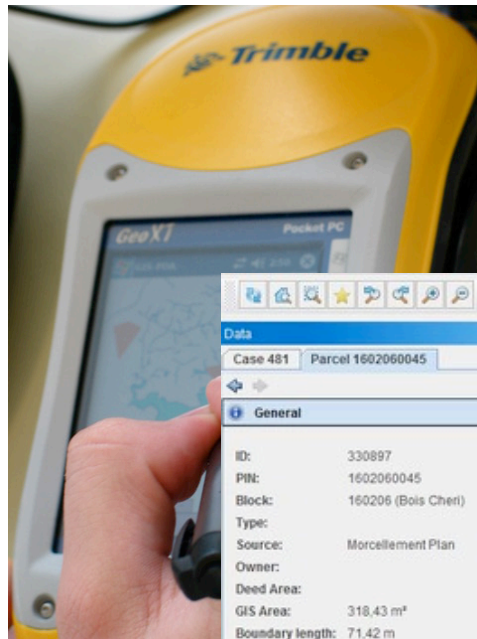
LPIS - Evolution from a small application to Slovenia's largest NSDI

Grega Milčinski

grega.milcinski@sinergise.com

Alenka Rotter, Tine Petkovšek, Ministry of Agriculture, Forestry and Food

About Sinergise



LPIS - Evolution from a small application to Slovenia's largest NSDI, N

About Sinergise

The image displays three screenshots illustrating the evolution of the Geopedia application:

- Top Left:** A screenshot of the 'PREGLEDNIK' (Overview) interface, showing a search bar and a map view.
- Bottom Left:** A screenshot of the 'IZBIRKA VREDNOTENJA NEPREMIČNIN' (Real Estate Valuation Selection) interface, featuring various filters and a 'MODEL' section.
- Right:** A screenshot of the 'Geopedia - Beta' web application running in a Mozilla Firefox browser. It shows a map with an orange route and a detailed information window for 'Gorska pot-Uskovnica - Konjščica - Zajamniki'.

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About Sinergise

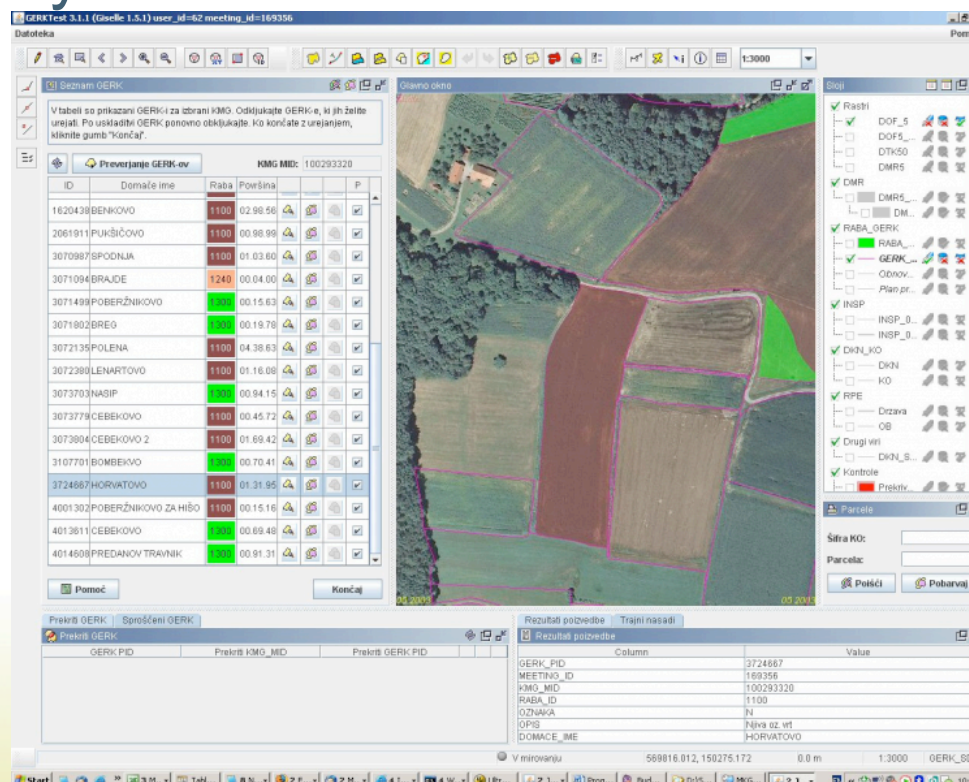
- 8 years in GIS
- 20 people, mostly programmers
- Governmental Solutions
 - Real-estate Management
 - Agriculture – IACS
- We run GIS in Slovenia and going outwards
 - 2008 - IACS in Croatia
 - 2009 – Real Estate in Africa
 - 2010 – IACS in Macedonia
- Geopedia.si running since 2007

SDI and Inspire

- An SDI is a coordinated series of agreements on technology standards, institutional arrangements, and policies that enable the discovery and use of geospatial information by users and for purposes other than those it was created for. (Kuhn, 2005)
- INSPIRE Directive in May 2007, establishing an infrastructure for spatial information in Europe to support Community environmental policies...

LPIS as SDI

- LPIS = Land Parcel Identification System
 - Agriculture subsidies (EU)
 - Agriculture parcel registry



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Short history of LPIS in Slovenia

- **Pre 2003**
 - Methodology for LandUse and outsourced digitization
- **2003**
 - Infrastructure for internal update of LandUse layer
 - 10-15 MAFF staff setting up the initial land use layer
- **2004**
 - Development of the LPIS solution starts
 - The methodology and legislation is shaping up
- **2005**
 - The methodology is being finalized
 - Education of end-users starts
 - The methodology is still being finalized
 - Initial LPIS layer is set-up (100.000 meetings with farmers in 6 months)

Short history of LPIS in Slovenia

- 2006
 - LPIS update started
 - LPIS is being used for subsidy claims for the first time
- 2007
 - GERK goes to administration districts
 - Data linking with other record, cross-checking

LPIS in Slovenia - 2007 onwards

- control, cleaning of data, cross-checking, updating

REPUBLICA SLOVENIJA
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GOZDARSTVO IN PREHRANO

RKG Domov
eRKG Kazalo
KataKoma Kontakt
KatMeSiNa English

Vinogradništvo

- Obnove vinogradov
- Vinogradni obdelki

NATURA 2000 (NATURA_07)

- Območja velikih zverí (ZVE_06)

Stoljniki (STE_07)

- Ptice vlažnih ekstenziv. travnikov na Naturi 2000 (VTR_07)

Krajski parki (+10%) (KZO)

- Regijski parki (+15%) (KZO)
- Narodni parki (+20%) (KZO)

Gozdni rezervati (nov.2010)

- Varovalni gozdovi (nov.2010)
- Krčitve (mar.2011)

SIR - Čebele

- Čebelnjaki
- 3 km. pas
- Stojišča
- Čebelarstva Društva
- RABA-Gozd
- Skupine rabe
- Drevesne Vrste

Obm, neprimerna za EKO čebele

- Avioceste
- EKO Degradirano
- Komunalno Odlagališče

Pedologija

- Pedološka karta
- Pedološki profili
- Karta Talnih Števil

Hidrografska mreža 2010

- HG Točke
- HG Linije
- HG Poligoni

LPIS - Evolution from a small applic

LPIS – incoming data

- State mapping authority
 - Ortho-photo, DEM, land cadaster, municipalities, addresses, hydrology, topografy,...
- Ministry of agriculture
 - Vineyards, pedology, forests, meliorations, bee houses,...
- Ministry of environment
 - NATURA 2000, LFA, habitats,...
- Ministry of internal affairs
 - Central person registry,...

More than 100 different spatial layers (+time series)

LPIS – incoming services

- Database replication
- WMS/WFS
- Import/export (rarely)

LPIS SDI – users of services

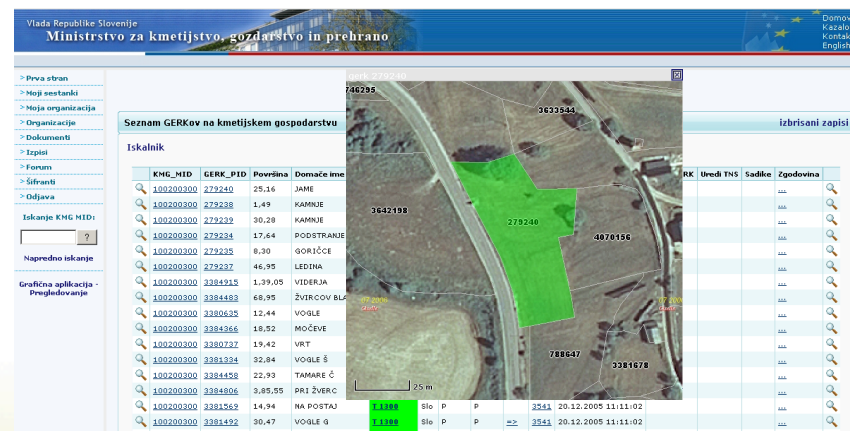
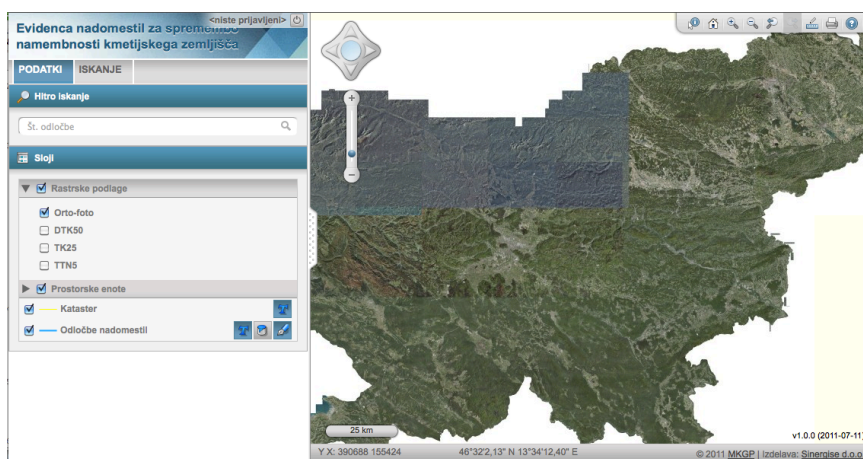
- Core use (within the LPIS group)
- Ministry for agriculture, forestry and food
- Veterinary administration
- Phytosanitary administration
- Forestry service
- Agency for agricultural markets and rural development
- Insurance companies
- State mapping authority
- Joint research center
- General public (through public viewer)

LPIS SDI – use of services

- Image server
- WMS
- Dedicated services
- Application infrastructure

LPIS SDI – application infrastructure

- 95% of the GIS use is viewing the data
- easily configurable GIS viewer with URL callbacks
- service for embedding the image/viewer



LPIS SDI – statistics

- in peak times more than 1000 power users from different organizations (+4000 viewers)
 - 350 concurrent users
- more than 2 MIO spatial requests per day
- 50 Gb of data transferred per day
- 850.000 of images created per day

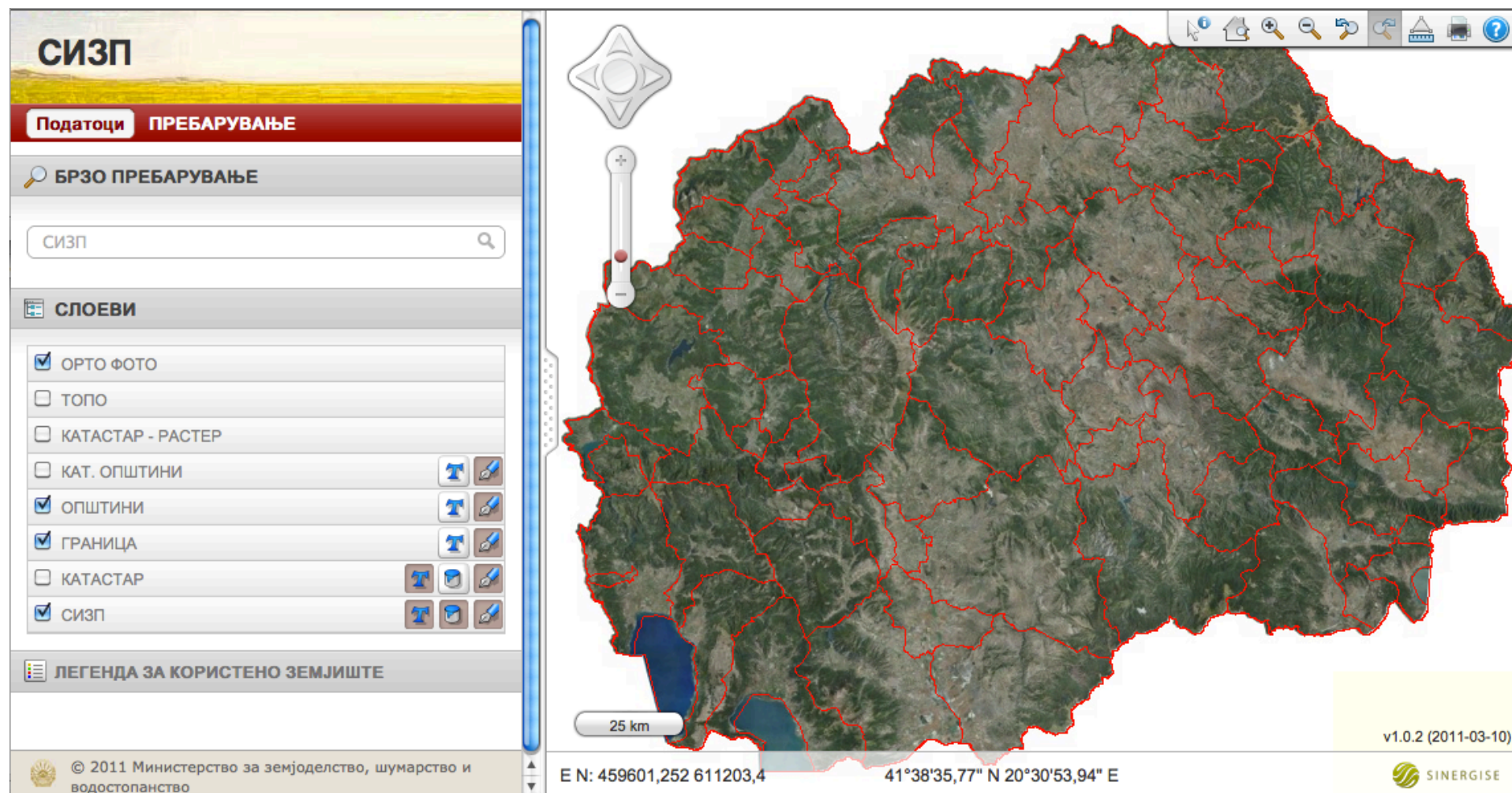
Conclusions

- The motivation behind the evolution
 - Reuse of data contributes to the quality of the data (cross-checks, different use cases)
 - Feasibility (easier to have everything at one place)
 - EU legislation – penalties (9 bn EUR EU-wide in 2009)
 - Actual revenues support development (54 bn EUR 2009)

Conclusions

- There were no directives on how to establish LPIS SDI, it evolved naturally through users' wishes
- SDI/INSPIRE groups should take a look at agricultural SDI systems as they are usually well developed (LPIS is for some reason not in INSPIRE)

Thank you



<http://www.sizp.gov.mk>

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