

WEB PORTAL FOR DISSEMINATION OF SPATIAL DATA AND SERVICES PROVIDED BY THE AGENCY FOR REAL ESTATE CADASTRE OF REPUBLIC OF MACEDONIA (AREC)

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**Agency for Real Estate Cadastre of Republic of
Macedonia**

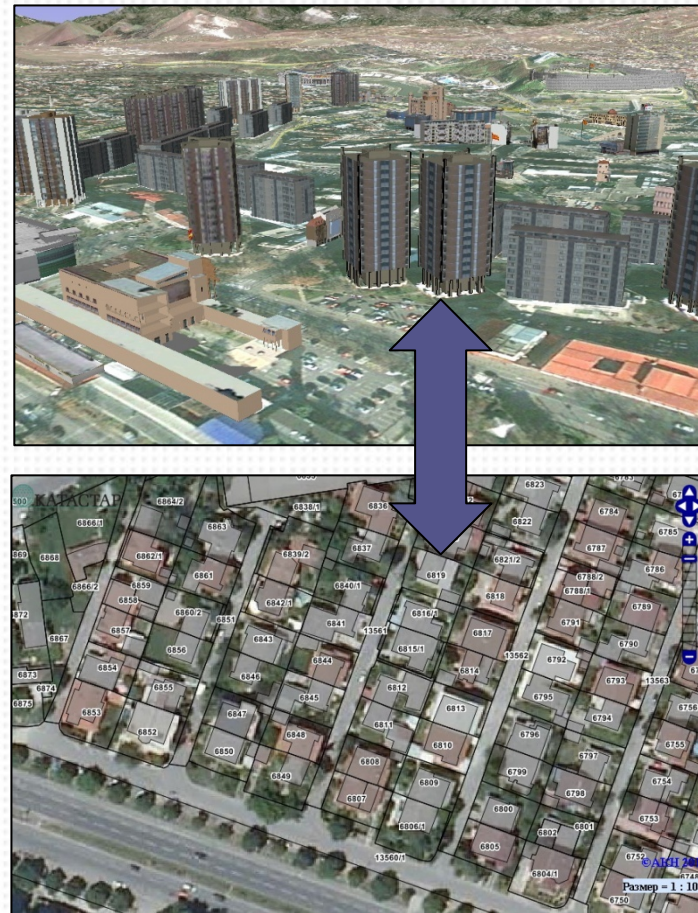


Content:

- 3D Cadastre – idea, need, purpose, reality
- Relation GIS – 3D Cadastre
- Where is the Republic of Macedonia in relation to this issue
- From idea to product
- Features (performances) and functionalities
- System architecture
- From data to information!
- Conclusion – current and future situation

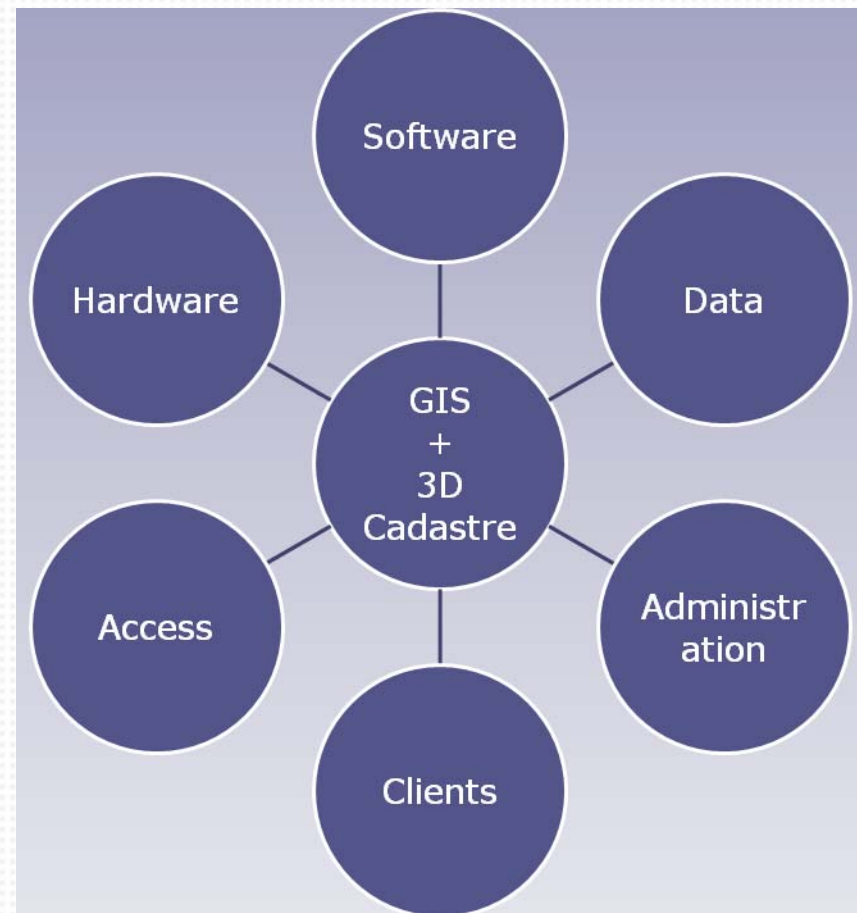
3D Cadastre – idea, need, purpose, reality

- It is a novelty in the world
- It is an idea that builds
- Builds relationships between countries
- Exchange ideas
- It gives an impulse of energy
- Model for implementation?



Relation GIS – 3D Cadastre

- It is a natural upgrade of 2D GIS
- Spatial information – realistic picture of the real world
- Inseparable part of the idea for creation and implementation of a 3D Cadastre
- Technical solution that offers numerous possibilities in terms of visualization
- WEB oriented GIS – unlimited possibilities
- Communication and data flow (transfer)

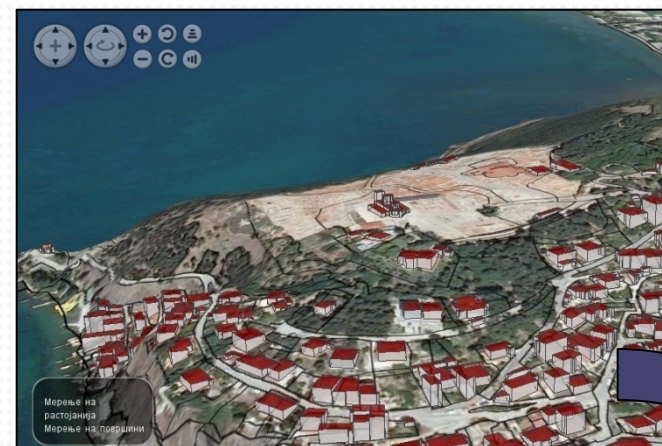


Where is the Republic of Macedonia in relation to this issue?

- AREC actively participate in implementation of a new an innovative ideas
- AREC has implemented the AREC GIS PORTAL with 2D and 3D functionalities
- Relation – building relationships between 2D and 3D cadastre in terms of technical aspect and visualization of the third dimension
- The AREC GIS PORTAL provides information from the cadastral-geodetic information system in terms of a full representation of the space (graphic + attributes)

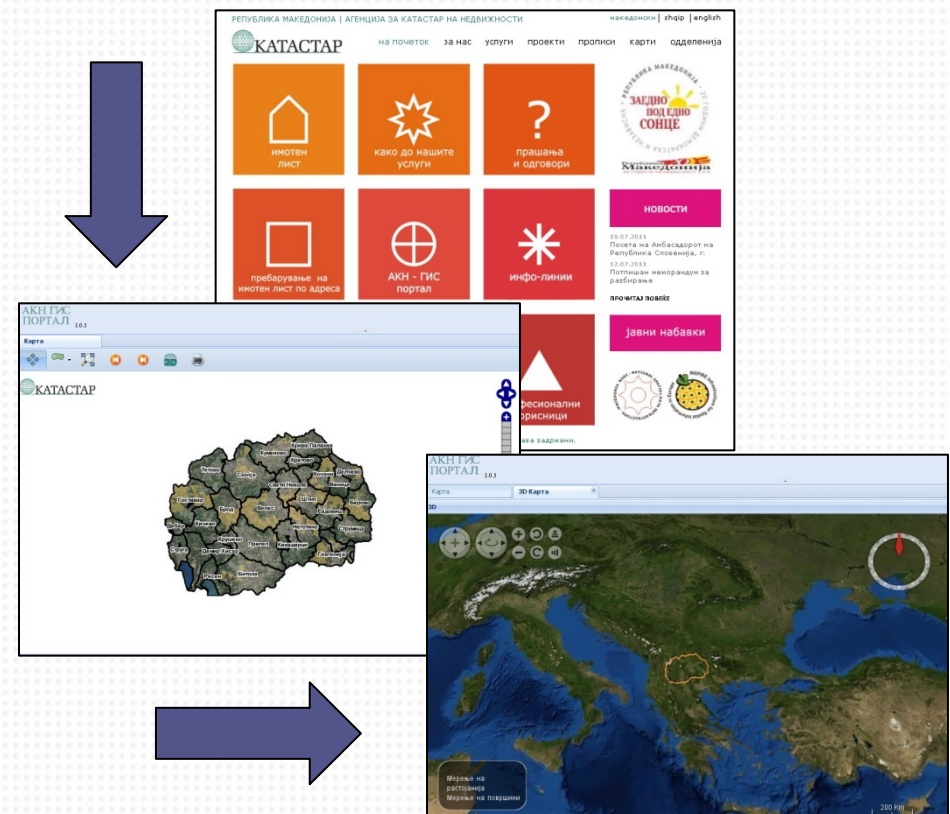
From idea to product

- Features – access to information, electronic communications, IT technology, safety standards, economically acceptable elements
- Systems and services that are innovative
- Information – available to anyone who needs it
- Simplification of the procedures, short time for receiving the information, free services, etc.

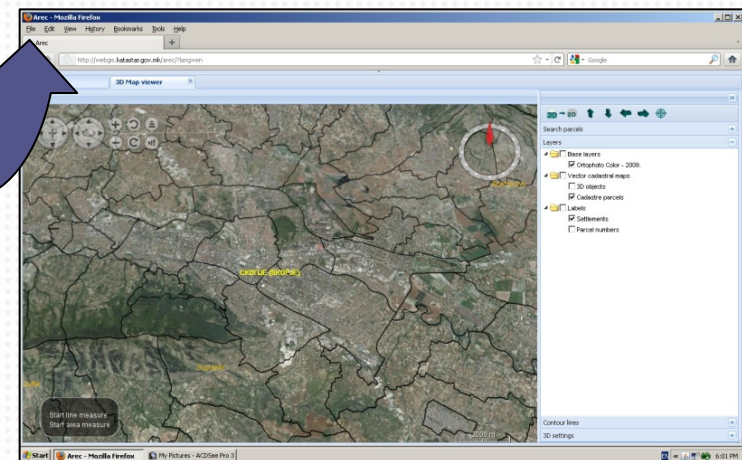
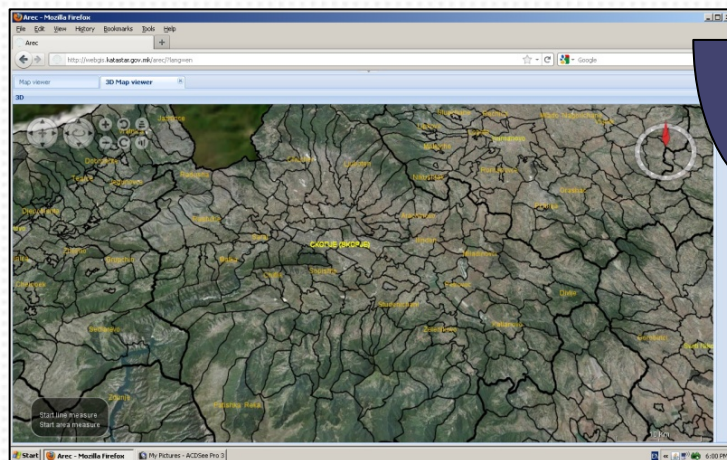
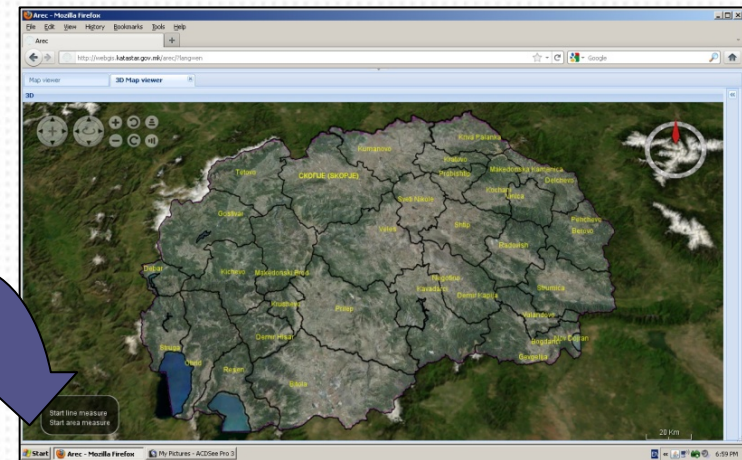
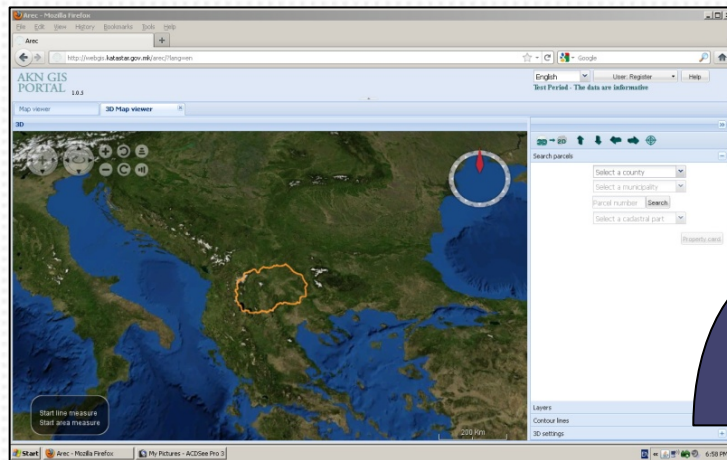


Features (performances) and functionalities

- It offers practical solutions for tasks
- Simple user interface
- Selection of features
- It is intended both for professional and ordinary users
- Usage of possibilities to different user groups



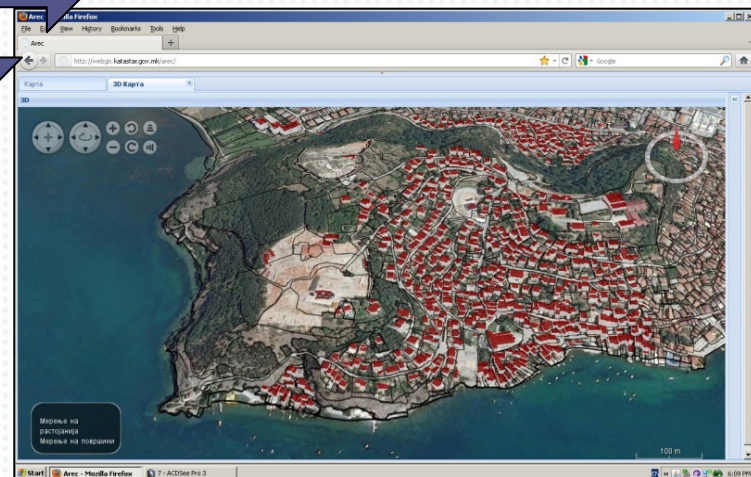
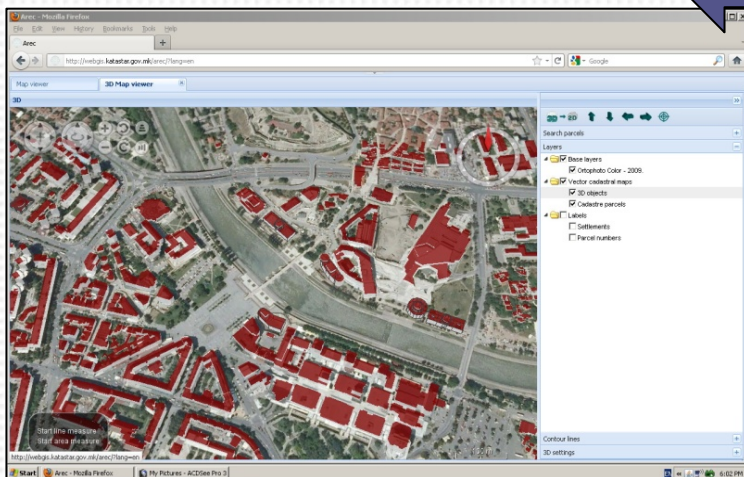
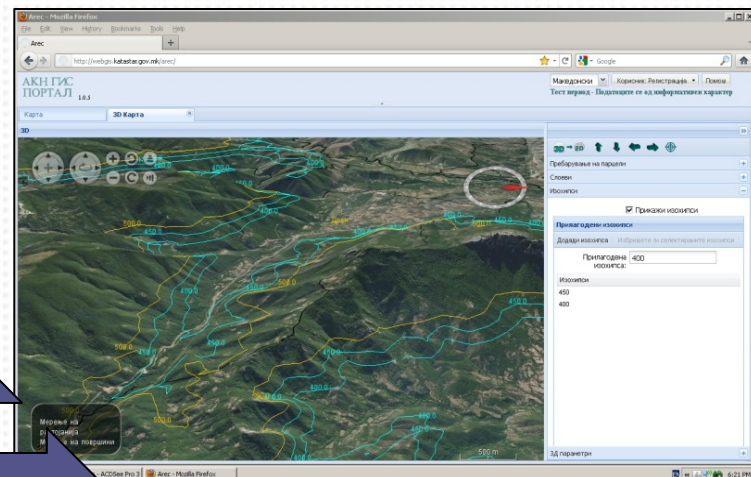
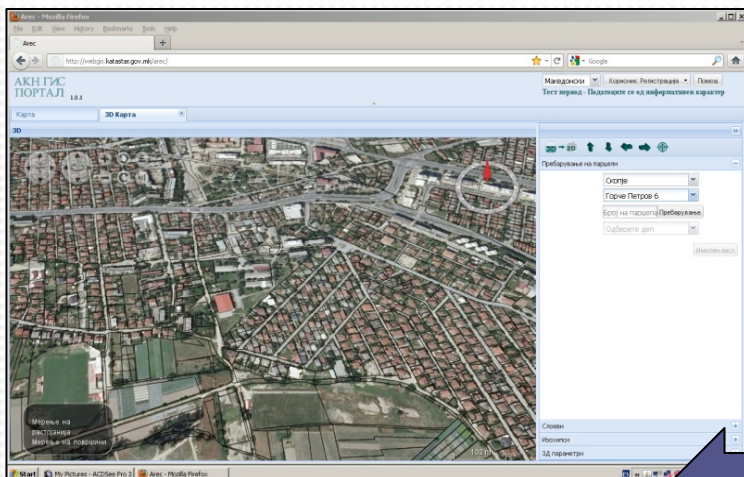
User interface



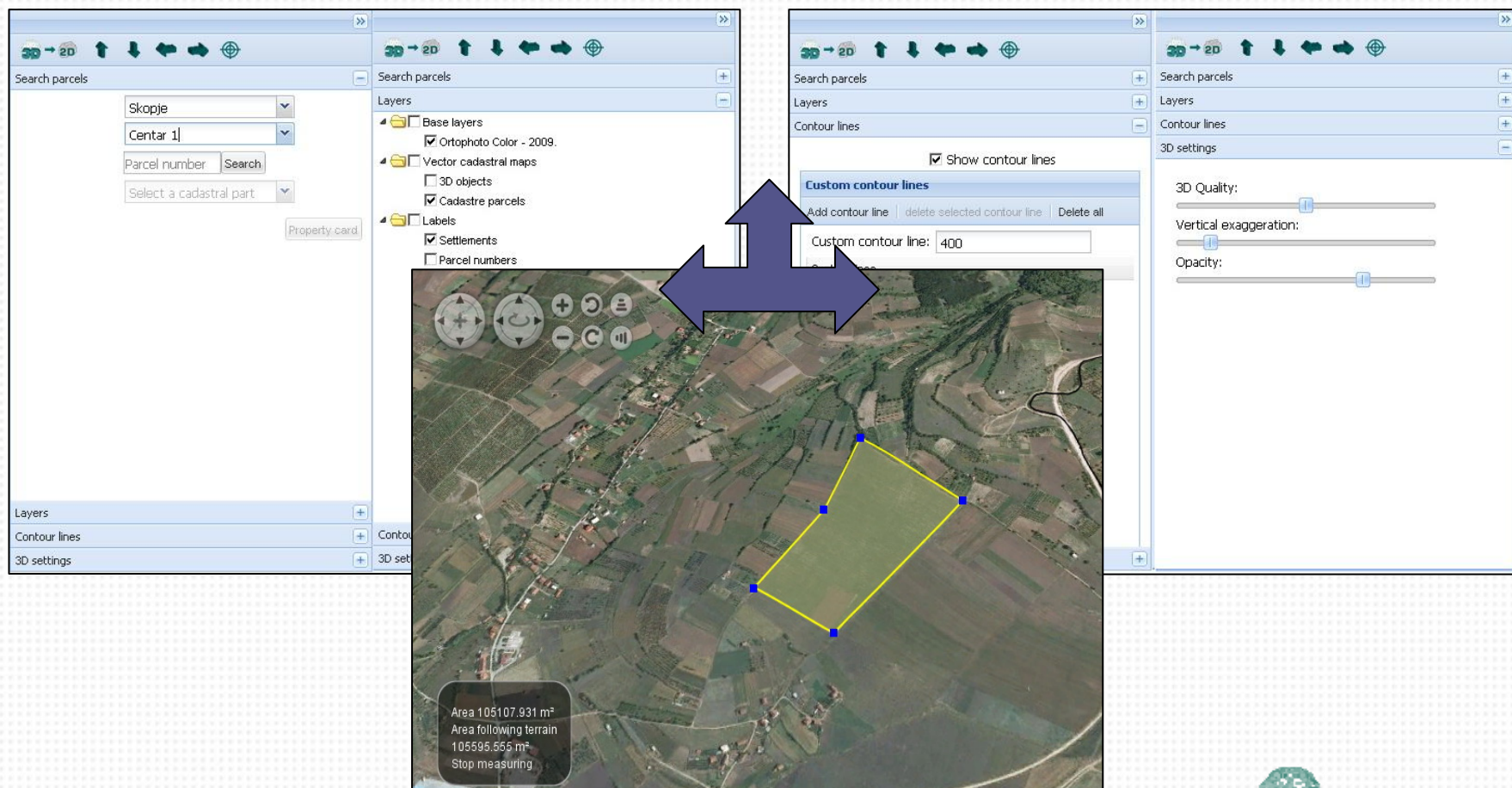
The 3D AREC GIS PORTAL provides the following features:

- Display of orthothotos
- Overview of digital cadastral maps
- Display – 3D visualization of terrain (digital terrain model)
- Terrain presentation using contour lines
- Display of 3D objects
- Measurement of lengths and area
- Preview of coordinates in wgs84 coordinate system
- Coefficient selection and quality for visual representation of the terrain
- Possibility to search by cadastral county/ cadastral municipality/ number of cadastral parcel
- Insight in the base of enrollment in the real estate cadastre in Republic of Macedonia
- Relationship between 2D and 3D functionality of the system

Visualization



Modules

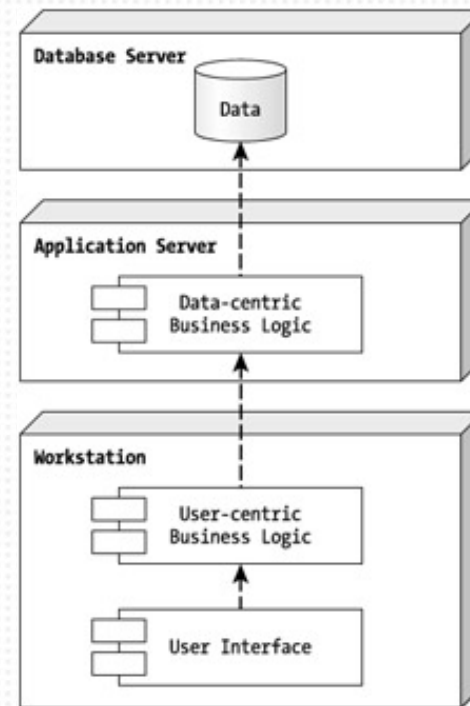


System architecture

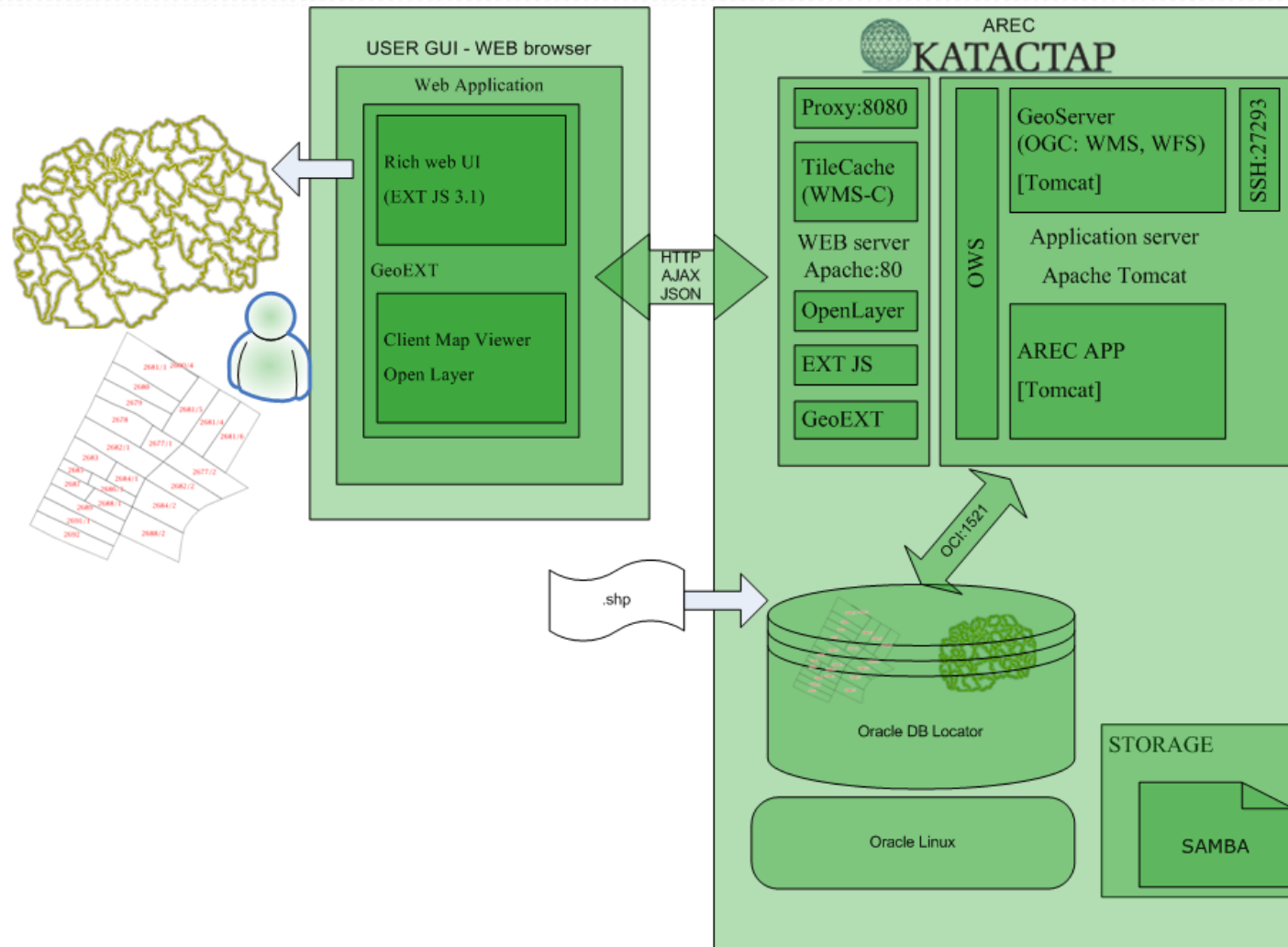
- Basic principles:
 - Interoperability
 - Safety
 - Accessibility
 - Flexibility
 - Scalability
 - Portable

System architecture

- Triple layer application, with three logically divided process:
 - Data base
 - Application layer
 - Presentation layer



System architecture



List of protocols and standard OGC protocols



ORACLE®

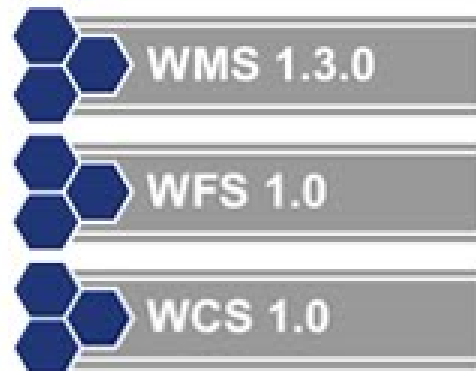
CQL

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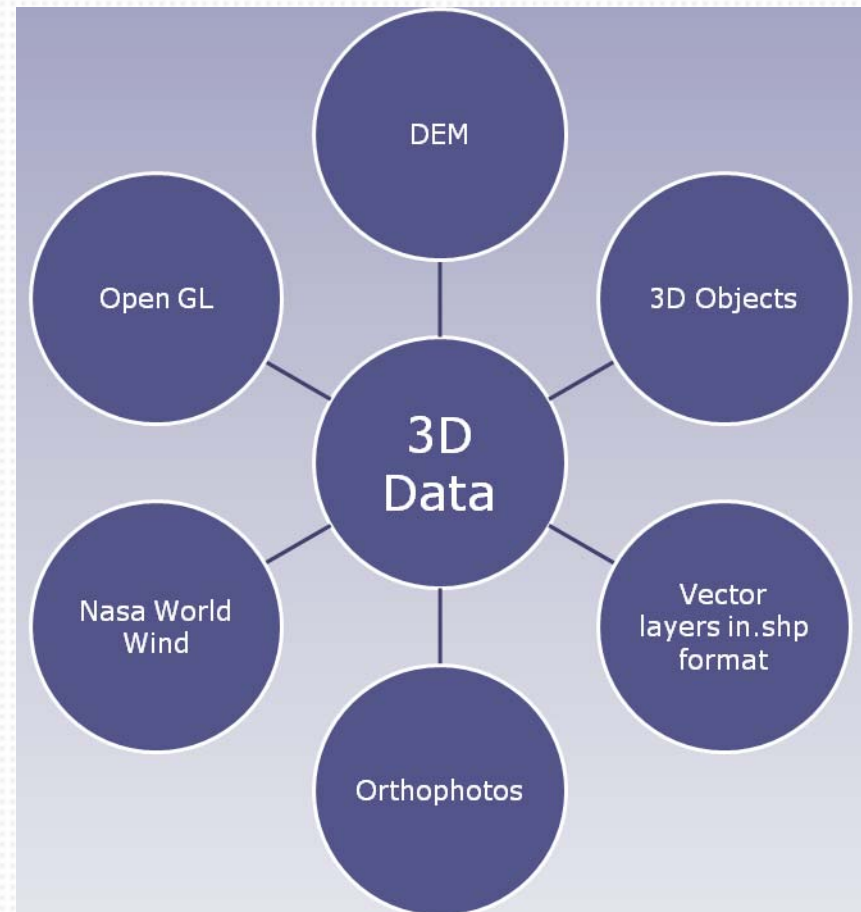
SQL

JSON Format BETA



From data to information!

- Set of graphical and attribute data
- Technologies that are mutually compatible
- Vector data format
 - cadastral county
 - cadastral municipality
 - cadastral parcel
 - 3D objects
- Attribute data
 - names of the countys
 - names of the municipalities
 - number of cadastral parcels
- Relation with the database entry in the Real Estate Cadastre



Conclusion – current and future situation

- Needs in term of access to information
- For the first time the third dimension is included in the Real Estate Cadastre – visual representation
- 3D WEB GIS solution – the possibility to a fully functional solution in terms of implementation and application of 3D cadastre
- Solution for the realization of numerical problems in the field of cadastre services and beyond

Video

РЕПУБЛИКА МАКЕДОНИЈА | АГЕНЦИЈА ЗА КАТАСТАР НА НЕДВИЖНОСТИ



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РЕПУБЛИКА МАКЕДОНИЈА
АГЕНЦИЈА ЗА КАТАСТАР НА НЕДВИЖНОСТИ

Сектор за катастар на недвижности 25

Катастарска општина: 997

Имотен лист бр. 1024

Легенда

НЕ Е ЈАВНА ИСПРАВА

состојба на ден: 21.09.2011



ПРОВЕРИ ТОВАР

СОПСТВЕНИЦИ

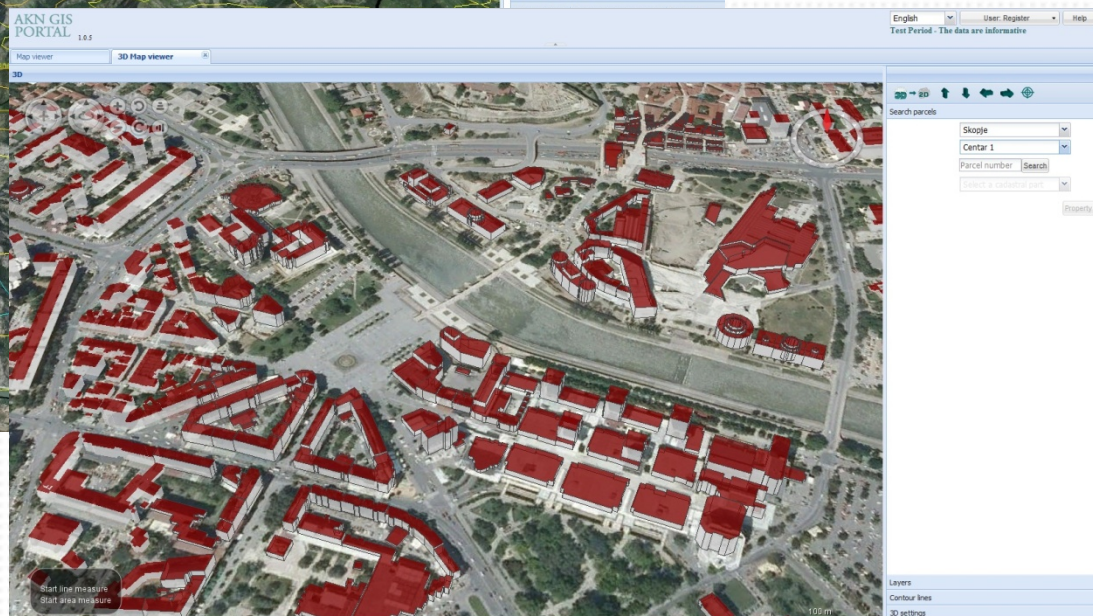
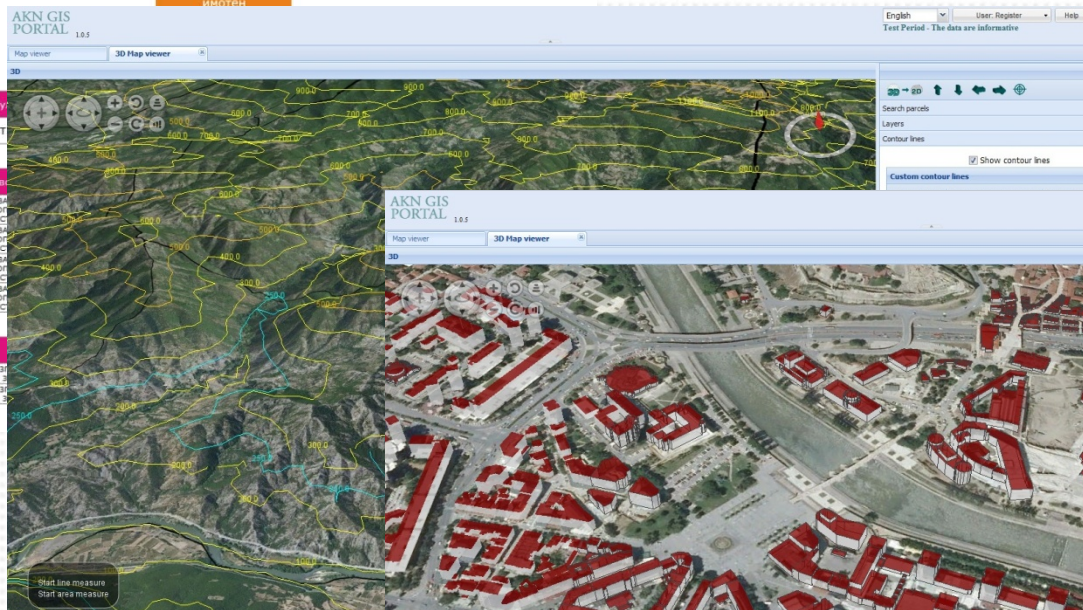
Имотен лист	Празниче и име	Место
1024	РМ. АГЕНЦИЈА ЗА КАТАСТАР НА НЕДВИЖНОСТИ	ОКОПИЈЕТ

ОБЈЕКТИ

Бр. парцела	Објект намена	М ²	Место	Кат. стан. право
1057	1 РЕПУБЛИЧКИ ОРГАНИ	716	Т. ХАЦИЈАНЕВ	01 000 ПРАВО ВО ОР СОП
1057	1 РЕПУБЛИЧКИ ОРГАНИ	1234	4	ПО 000 ПРАВО ВО ОР СОП
1057	1 РЕПУБЛИЧКИ ОРГАНИ	695	4	ДР 000 ПРАВО ВО ОР СОП
1057	1 ЛОГИИ, БАЛКОНИ И ТЕРАСИ	643	4	ДР 000 ПРАВО ВО ОР СОП

ПАРЦЕЛИ

Бр. парцела	Број/дел	Култура	М ²	Место	Право
1057	1057	ДВОР	2260		ПРАВО НА КОРИСТЕЊЕ НА ИЗЗЕМНИЦИТЕ ВОЗ КОЕ ПОСТОИ
1057	1057	ПОД ЗГРАДА	1480		ПРАВО НА КОРИСТЕЊЕ НА ИЗЗЕМНИЦИТЕ ВОЗ КОЕ ПОСТОИ



Thank you for your attention.

- Agency for Real Estate Cadastre of Republic of Macedonia
- www.kastastar.gov.mk
- <http://webgis.katastar.gov.mk/arec/>