UTILITY CADASTER, ESTONIA

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LEGAL BASIS

• By the Estonian Building Act buildings are divided to houses and facilities. Building which cannot classify as a house, is facility.
• It means infrastructure utilities are also facilities.
• Utility data maintenance in Estonia is divided (as well as Surveying) between the:
  • Ministry of Economic Affairs (Register of Buildings – old Register of Houses by the ministry)
  • Ministry of the Environment (Restrictions information system – together with the maps and Land Cadastre). Utilities are causing restrictions to the landowners, that’s why this register has to record also utility data.
PRACTICS

• Register of buildings (as former register of houses) has no modern tools to import infrastructure utilities geodata. Tools are under development.

• Restrictions information system has pretty good tools, but it concentrates more on restriction areas than objects causing restrictions. It hopes to get data from Register of buildings or from the owners.
„HOLES“ IN LEGAL BASIS

• Each utility company has to register his cables/pipelines to Register of buildings. But as it has no modern tools to import, this obligation was repeatedly postponed.

• If there is restriction causing object, then restriction exists also without it’s registration. Registration is not mandatory for owners.

• Good willing owners are tired with this situation.

• „Not so good“ owners are using this situation to stay away from this and do not give utility data either at all.
„HOLES“ IN PRACTICE

- Each new utility line has to be as-built measured by the Surveyor by the open trench (if open building technology was used).
- Builder often forgets to invite the surveyor in right time.
- Surveyor is obliged to deliver the as-built drawing not to the register, but to the MUNICIPALITY which collects geodetic data, but HAS NO REGISTER.
- Registration is only utility owners duty.
REGISTER OF BUILDINGS, NEW CONCEPT (VRIS)

• VRIS – Infosystem of the Utility Networks by the Register of Buildings.

• It’s based on owner’s obligation to register at least his interest areas (for the case if exact location is unknown or owner has plans to develop the network to new certain areas.

• Each body, interested to have utility data, will send his request and recieves automatically list of owners having interest to requested area.
REGISTER OF BUILDINGS, NEW CONCEPT (VRIS)

• Further data exchange will happen between interested body (mainly surveyor) and utility owner.
• Data exchange results will be stored in VRIS and made available to the next interested bodies.
• Responsibility for data update stays on Utility owner.
• Owner, who’s interest area is not registered, does not exist!
VRIS USER PLATFORMS

- Land owners
- Municipalities
- State institutions
- Utility owners (or holders)
- Designers, architects, real estate developers
- Builders
- Surveyors
- Open platform
PRINCIPAL CONCEPT (VRIS)
VRIS TECHNICAL POSSIBILITIES

- It will be possible to have more attribute data than just fixed location.
- It will be easy connection with 2 registers – Owners have to give data only for Building register – Restriction register (KPO IS) will use the same data for creating the restriction areas.
- As location quality in KPO IS is sometimes poor, it will be increase this quality.
Example
VRIS TECHNICAL POSSIBILITIES

• It will be possible to add attribute data which can help transform data to BIM-model and to be workable with different database solutions (.xml, .gml, ...)

• Entity types are:
  • Manhole
  • Post
  • Cable / overhead line
  • Pipeline
  • Manifold (collector)
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Utility networks in Estonian Restrictions Information System

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Restrictions: legal grounds

Object which gives rise to restrictions are

- Any land objects which:
  - gives rise to restriction zone (42 different zones)
  - can spatially identified (X,Y,Z)
Restrictions Information System

Main principles of the RIS are:

- Able to collect restriction object data from different sources
- Generate and renew restriction zone according to valid law
- Spatially relate restriction objects and zones to cadastral unit
- Able easy data exchange and represent for interested persons
Restrictions: Open web map service

Web based restriction map is public: http://geoportaal.maaamet.ee

Land board geoportal restrictions WMS:
- Able to search cadastral unit
- Able to search restriction object
- Able to print A4 and A3 paper formats with scale
- Able to save prints in pdf
- Able to directly link to searches
Restrictions: Future services

- This service is available already from 2002: Land Board (Mr. Priit Kuus) as a holder says that it’s ancient already
- Plans to add functionalities in close future like:
  - History of restrictions
  - Planned / designed future objects
  - Tool for holding / changing the data for utility Network owners
Thank You for Your Attention!