



REPUBLIC OF ESTONIA
LAND BOARD

Recent developments regarding spatial data services in Estonian Land Board, X-GIS 2.0

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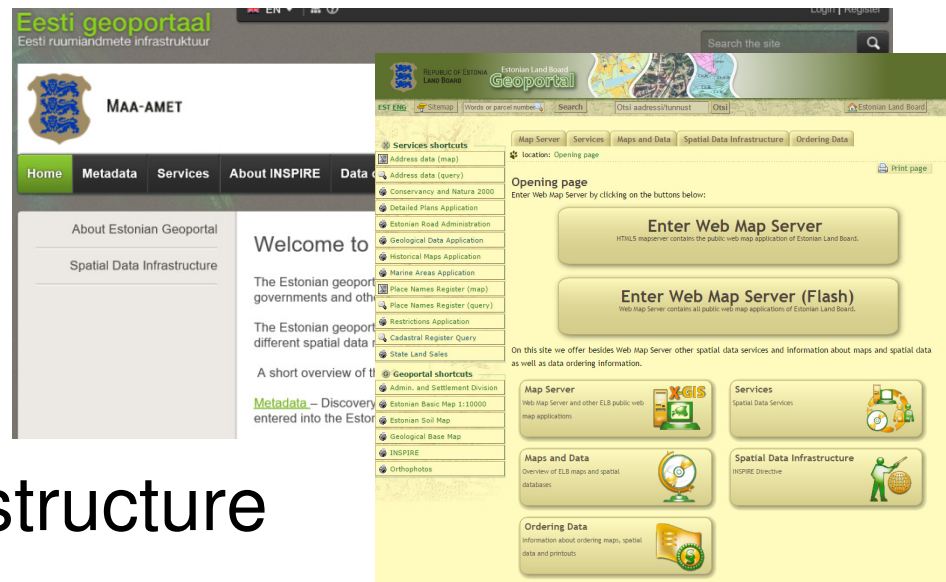
21. – 24.05.2018, Vilnius

Services

- Spatial data services
 - Geoportal
 - Web Services
 - Web Map Applications, Map server, X-GIS
- Recent developments

Geoportal

- For publishing the data and information about the data
- Map Server
- Services
- Maps and Data
- Spatial Data Infrastructure
- Ordering and downloading data



Web Services

- OGC standard services – WMS, WMTS ...
- X-ROAD services – registers data is available through X-ROAD services. X-road version 6
- Register based services, Place name register, Cadastre, Address register, Geodetic points and geodetic calculators, in-ADS ...
- Geocoding services – one or many addresses
- Different kind of URL based queries
- INSPIRE compatible services
- Google maps support

Web Map Application X-GIS

- Web map application for data publishing and management
- Map Server (X-GIS)

Web Map Applications and services

- 2001 - first web map server launched for publishing Land Cadastre data, ortophotos and topographic base map
- 2007 – second version of a map application was launched (X-GIS), based on open software and standards (Mapserver, WMS, WFS, Gazetteer, ...)
- Geoportal, INSPIRE compatible applications
- 2016 – subversion of a X-GIS application HTML5, mobile version, multilingual user interface ...
- 08.2018 – new version of X-GIS 2.0

X-GIS 2007

The screenshot displays the X-GIS 2007 web application interface. The main map shows Estonia with various cities and roads. A search panel on the right contains the following elements:

- Language selection: EST, ENG
- Identify button
- Map application: Land Information V
- select county dropdown
- select range dropdown
- select scale dropdown
- Search by address/ID section with a search input field containing "ex. „Mustamäe tee 51, Tallinn“" and search buttons.
- Instructions: "Using comma while entering the search, a full address is searched. Using space, a proximate address is searched." and "As result the first 100 items are displayed. When the searched object is not among them, specify the search criteria or use the link at the end of the search. [Addressregister](#)"
- Filter options: "Kuva lisafiltrite paneel" and "Sulge lisafiltrite paneel"
- Search button: "Otsi" with tooltip "Lisafiltrite režiimis vajuta ka otsimiseks nupule, siin eelvalik ei paku kohe vasteid"
- Search settings: "Exclude recurrence" (unchecked) and "Search without commas" (checked)
- Search results: "Search (0/0)", "Object info", "Printings", "Error reporting"

At the bottom of the interface, there is a scale bar (0-150km), a scale of 1:2102849, and contact information for X-GIS Estonian Land Board.

X-GIS Estonian Land Board. All Rights Reserved.
 e-mail: kaardirakendus@maaamet.ee phone: 6 750 866
 System solution by DATEL AS

Thematic web map applications (50+)

Geographical names and addresses

Geology

Heritage objects

Historical maps

The image displays four overlapping screenshots of web map applications. Each screenshot shows a map interface with various layers and legends. The top-left screenshot shows a map with a legend for 'Geographical names and addresses'. The top-right screenshot shows a map with a legend for 'Geology'. The middle-left screenshot shows a map with a legend for 'Heritage objects'. The bottom-right screenshot shows a map with a legend for 'Historical maps'. Each screenshot also includes a search bar, a map navigation toolbar, and a sidebar with additional information.

X-GIS 2016

The desktop version interface includes a search bar with the text "mõisa na" and a list of search results:

- Mõisa tn (Narva linn, Ida-Viru maakond | 1720414)
- Mõisa tänav L1 (Narva linn, Ida-Viru maakond | 51102:002:0054)
- Mõisa tänav L2 (Narva linn, Ida-Viru maakond | 51102:005:0034)
- Mõisa tänav T2 (Narva linn, Ida-Viru maakond | 51101:001:0430)
- Mõisa park (Narva linn, Ida-Viru maakond | 51102:005:0041)

Map controls include a legend, map style selection (Hybrid, Orthophoto, Map, Basic Map, Relief), and a "full layout" button. A detailed information panel for parcel 29202:001:1430 is shown, containing the following data:

- Registered parcel (29202:001:1430)
- County: Rapla maakond
- Municipality: Kehtna vald
- Settlement unit: Kehtna alevik
- Address: Masti
- Identifier: 29202:001:1430
- Registration date: 19.juuni 2001. a.
- Intended use 1: Ärimaa 100%
- Intended use 2: -
- Intended use 3: -
- Area: 12884 m²
- Register part: [1812737](#)
- Land registry area: Tartu Maakohtu kinnistusosakond
- Surveying date: 01.august 2000. a.
- Surveyor: Kalev Türk
- Surveying method: moodsistatud, L-EST
- Valuation zone: [180292002](#) 100%
- Fertility zone: -

Mobile version

Desktop version

X-GIS. Maa-amet. Kõik õigused kaitstud.
e-post: kaardirakendus@maamet.ee telef: 6 750 866

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e-mail: kaardirakendus@maamet.ee phone: 6 750 866

Links

- Geoportaal

<https://geoportaal.maaamet.ee/>

- Sevices

<https://geoportaal.maaamet.ee/eng/Services-p40.html>

- X-GIS

<https://xgis.maaamet.ee/maps/>

X-GIS 2.0 2018

The screenshot displays the X-GIS 2.0 2018 web application interface. The browser window title is "Geoportaal" and the address bar shows "Geoportali aadress". The application is in Estonian, with "MAA-AMET" and "EST" visible in the top left. A search bar contains "Tartu".

The left sidebar contains several sections:

- Maainfo teenus**: A dropdown menu.
- Maa-ameti kihid**: A list of layers with checkboxes and icons. The "Katastrikaart" layer is checked.
- Minu kihid**: A list of user layers with checkboxes and icons.
- Scale**: A slider from 100% to 0%.

The main map area shows a satellite-style map of the Tartu region. A search results dropdown is open, listing:

- Addressid: Tartu linn, Tartu maakond, Tartu
- Kaardikihid: Tartu koolid, Tartu WMS

At the bottom of the map, there is a scale bar (10 km) and coordinates: X:6616187.5, Y:752250.0, L:944882, B:59.607381, L:28.470785. The bottom right corner features logos for "Tartu maakond" and the "European Union European Regional Development Fund".

X-GIS 2.0 major updates

- Layers and data directory
- Open design of query functionality
- Flexible design of map applications
- Everyone from EU can become a registered user
- Bookmarks – create, share ...
- User data management and layers
- Add user services layers WMS/TMS
- Support mobile devices, data collection, navigation and positioning
- Data export
- Compare maps and transparency
- Modular – possibility to add functionality

Layers

- All X-GIS layers can be combined
- User based design
- Add layers to existing maps
- Add layers form services and datasets
- Managed by Estonian Land Board

Open query design

- Describe and manage query layers
- One query and multilayer management
- Add dataset from the results of query
- Search also using ID-s and coordinates
- Groups and lists

Otsing kihtide kataloogist Aadressiotsing Otsing kihi andmetest

Nimi:

Otsing kihtide kataloogist Aadressiotsing Otsing kihi andmetest

Address:

EHAK VK LP KÜ H

Otsi

Otsing kihtide kataloogist Aadressiotsing Otsing kihi andmetest

Katastriüksuse tunnused

Sisestage katastriüksus(t)e tunnus(ed) kujul XXXXX:XXX:XXXX. Mitme tunnuse sisestamisel tuleb tunnused eraldada püstkriipsuga.

Tunnus:

Uus reg.osa:

Vana reg.osa:










Otsi

Flexible design of map applications

- Add extra layers to the blank or existing map
 - From the directory of layers
 - From WMS/WFS services
 - Add data, draw points, lines and areas
- Save data and create bookmarks
- Share results or add link as a map to webpage (DIV / iFrame tag)

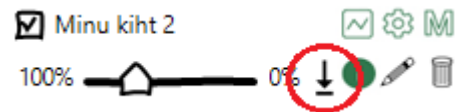
Registered user

- Map composition and bookmarks management
- Design map window only for external web applications
- Generate the tags to embed user map within the HTML document.

Nimi	Kirjeldus	Loodud	Muudetud	Viimati avatud	Vaatamiste arv	Halda
Kaart1	Seenemetsad	02.10.2017		17.11.2017	8	  
Kaart2	Linnuvaatlus	30.09.2017	02.10.2017	17.11.2017	121	  
Kaart3	Sugulased	27.09.2017		17.11.2017	1	  

User data management and layers

- Add features, save points, lines and areas
- Design user layers
- Create labels
- Create and share bookmarks
- Download the data
- Add WMS/TMS layers



Results

- Find and access to the spatial information
- Value added layers, applications and services
- Share data, services, applications and GIS components
- Avoid data duplication



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Thank you!

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