



# Place names + codes

Jānis Sprūds

- society “Latvijas Ezeri”
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# Place names + codes

1. The name of a place isn't enough to identify an object
2. Identificators (codes) with only one meaning are needed
3. The codes should be: spread between groups of objects, international, include all objects, convenient for human reading, attachable additionally...
4. A system is needed for giving out the codes and their maintenance



# Shortly about us

I'm representing society "Latvian Lakes". 20 years ago we created a Latvian lakes data warehouse [www.ezeri.lv](http://www.ezeri.lv), currently there's:

- 237 parameters (info types)
- 212605 pieces of info
- 22913 photos about
- 3992 water bodies
- 8806 water bodies names

The screenshot shows the Ezeri.lv website with the following elements:

- Navigation:** DATUBĀZE, DISCUSSIONS, JOURNAL
- Search Section:**
  - Database: Ezeru meklēšana
  - By name: [input] SEARCH
  - By district: Aizkraukles SEARCH
  - 20 ezeru atlasīšana
  - Links: Largest, Deepest, Dirty, Overgrown, Highest, Most photographed, Recently updated, Latest comments, Endangered, Latest images, Public lakes
  - Search: Advanced search
  - Summary: Lake count: 3992, Artificial lakes: 1468, Record count: 212605, Parametr count: 237, Images: 22913, Maps: 832, Comments: 5349
  - Briefly about ezeri.lv
- Database Section:**
  - Database
  - Text: Ezeri.lv database contains information about all lakes in Latvia. Our data is used on a daily basis by state agencies and private organizations, as well hundreds of lake owners, fishermen and other friends of nature.
  - Database like no others: The database contains aggregated information from books, research papers, and other sources. The development of the database was started in 1999, and we're now the leading information source about lakes in Latvia. We have recently added geo-location information to our database, and we're proud to be one of the first websites in Latvia which use Google Maps to display location of it's objects. More about database information see (in latvian).
  - State-of-the-art technology: We're using Memcached servers to store the most frequently accessed information. Because of our cache servers, we're able to return information from our huge database in just microseconds. We have also developed an AJAX based "Advanced Search" tool which allows you to search our database and instantly see results to even the most complex search queries.
  - Searching lakes: You should be aware that a lake can have many different names. Only the official name will be shown in the results.
  - Adding information in the database: You can also supplement the information in the database
  - Database access: To prevent unauthorized copying of our database, unregistered users have access to limited information only. Furthermore, we are required by the law to restrict access to certain sensitive information about endangered animals and vegetation.
- Supporters Section:**
  - Supporters
  - e-formas
  - SOROSA FONDS - LATVIA
  - Others
  - UKLakes
  - VISS Sverige
  - LAKE-NET
  - www.2004.lv
  - baikai.ru
  - labaslaivas.lv

# I'll introduce myself

My name: **Jānis**

My surname: **Sprūds**

**Error: identification isn't possible**

Hmm.... The computer didn't like something, let's figure out what



# name

# possibilities

name:  
Jānis

=  
**49941**  
people

Name search

Vārdu meklēšana

The Office of  
Citizenship  
and Migration  
Affairs

Name	Vārds	incidence	Sastopams
<a href="#">JĀNIS</a>		49941	
ROBERTS	JĀNIS	79	
JĀNIS	MĀRTIŅŠ	53	
KRISTAPS	JĀNIS	51	
JĀNIS	IMANTS	46	
KĀRLIS	JĀNIS	46	
MĀRTIŅŠ	JĀNIS	46	
GUSTAVS	JĀNIS	43	
EMĪLS	JĀNIS	40	
JĀNIS	VOLDEMĀRS	40	



# Let's look at Facebook

Name: **Jānis** +  
Surname: **Sprūds**  
= **more than 5**

**Personal No. is recommended to use**

facebook E-pasta adrese vai tālruna numurs

Cilvēki vārdā **Janis Spruds**

Atrodī draugus Facebook tīklā  
Ienāc vai reģistrējies Facebook, lai sazinātos ar draugiem, ģimeni un paziņām.

Pieslēgties vai Reģistrēties

- Janis Spruds** Skatīt attēlus
- Janis Spruds** Skatīt attēlus
- Janis Spruds** Skatīt attēlus  
Mācījās DALP 5. vidusskola
- Janis Spruds** Skatīt attēlus
- Jānis Sprūds** Skatīt attēlus

Name: **Jānis**

+

Personal nr: **270658-11308**

Identification OK!

Jānis Sprūds

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+371 29418761

# The name of the place isn't enough for identification

- The place name could be used for different types of objects
- A lot of objects with the same place name
- A single object has multiple place names
- The place name's variations in writing
- There are objects without a name



# The same place names

- Malta - a city in Latvia or a country in the Mediterranean sea?
- Baltezers: 23 objects, including 18 lakes
- Melnezers: 25 - 30 objects
- Garais: 13 objects
- Bižas ezeri: only 3 - but big, close, and similar

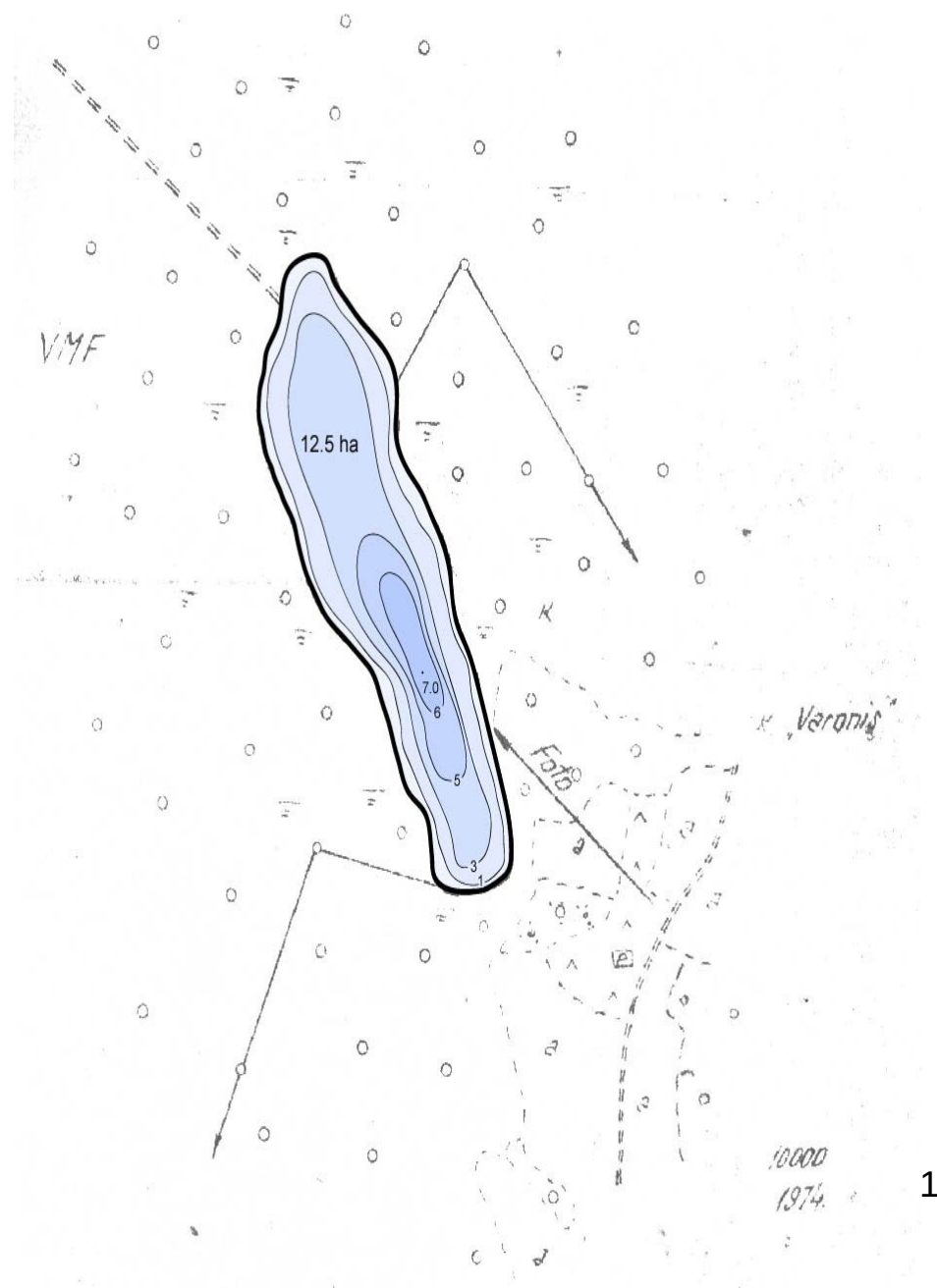
# Bižas lakes (the special case of identification)

Lake				WGS84	Code
Bižas	Dagdas	174 ha	Andrupenes	56.1661, 27.3695	42123
Bižas	Ludzas	166 ha	Rundēnu	56.2584, 27.7234	43008
Bižas(Bižu)	Rēzeknes	140 ha	Griškānu	56.5277, 27.4912	42043

All 3 lakes are included in the countries monitoring program. IN order to use the data, checking the data serie's accuracy to the specific lake by the parametres of physiochemistry (electrical conductivity, colorfulness) is considered necessary.

# one object with multiple place names

- Gružņa ezers?
- Gružnis?
- Grūžnis?
- Grūženes ezers?
- Velnamārka ezers?
- Grūžņu ezers?
- **NO !**
- ----> **Griuznis (Gryuznis)**





# Extra info for unequivocal identification

Addition methode	Plusses	Minuses
geographical coordinates	identifies the point well	difficult to use; isn't unequivocal for curved objects; could be faulty if the objects are close by; could be faulty when used for big objects
area name	easily useable makes searching easier	multiple names could be the same in one area; ocasionally identical area around the objects
the parameter (surface area for water body)	easily useable	you must have knowledge about the object; the parameter values could be close (Bižas lakes)
<b>code</b>	easily useable identifies unequivocally and fast	the code list maintainance is labor intensive



# Country code

	Latvija	Lietuva	Eesti	Россия	Polska	Україна
Domain names	lv	lt	ee	ru	pl	ua
ICAO International Civil Aviation Organization	EV	EY	EE	U (-UA, UB, UD, UG, UK,UT, partly UM)	EP	UK
Country calling codes	371	370	372	7	48	380
GS1 bar code	475	474	477	460 - 469	590	482
ISO 3166-1 alfa-2	LV	LT	EE	RU	PL	UA
ISO 3166-1 alfa-3	LVA	LTU	EST	RUS	POL	UKR
ISO 3166-1 num.	428	440	233	643	616	804



# The codes of lakes (for WFD)

IT	IT00_I028_LAGO_TALVACCHIA_A; IT01AL-9_005PI; ITF015LWLAGODIMACCHIONI; ITI-R16-148-01ME-1; ITI027_ME_4; ITN005_POSTAFIBRENO_ME1
DE	DEBY_NRS01; DEHE80001239150000; DELW_DEBB8000158125699; DELW_DEBW_1
SE	SE001-3041-L; SE313-365-L; SE615375-137087; SE765901-169486
UK	UKGB30228429; UKGB30328671; UKGB31231482; UKGB906001000113; UKSC100004
LV	LVE001; LVE003SP; LVE262
CZ	CZ104060090009; CZBER_0165_J; CZDYJ_1255_J; CZOHL_0575_J
NO	NO001-3180-L; NO001-3559-L; NO002-153489-L; NO002-171-L
FI	FI01_011_1_001_001; FI01_075_1_006_001; FI04_114_1_017_001; FI14_934_1_011_001;

Politically correctly saying: the use of codes like these could be complicated



# The codes of lakes (for WFD)

PL	PLLW10001; PLLW10002; PLLW10007; PLLW11103; PLLW20001
HU	HUAIG924; HUAIG989; HUAIG999; HUAIH001
AT	ATOK10500000; ATOK10500400; ATOK1500000; ATOK9506600
BE	BEVL05_119; BEVL05_201; BEVL11_155
BG	BG1DU000L1001; BG1IS100L028; BG4ME700L1009; BG4ST900L1012
IE	IEEA_07_178; IEEA_10_32; IENB_06_244; IENW_36_409
FR	FRAL01; FRAL04; FRB1L34; FRCL25; FRDL118
EE	EE2001000_1; EE2001300_1; EE2001600_1 ..... EE2156700_1
DK	DKLAKE1; DKLAKE107; DKLAKE125; DKLAKE16; DKLAKE225

In my opinion, these systems of codes are worth looking into.



# the requirements for codes

- Every object is given a code (official list)
- The system of the codes has to be united (regulation or convention)
- The structure of the codes has to be the same (standard?)
- Additions to the list must be predictable





# Water body codes in Latvia

- regulations of Minister Cabinet No 403 (04.07.2017)
- 1004 water bodies
- 5 digits: 2 digits - code of major river basin; next 3 digits - number of water body
- “+”:
  - major river basin codes are international, numeration is shared for the Baltic sea
- “\_”
  - There’s no second level river basin code
  - The addition of new objects in the system isn’t possible (only papildināt lielbaseinu kopskaita galā)

# Major river basins

117 watersheds that comprise the Baltic Sea drainage area (82 major watersheds and 35 coastal areas)

Map from  
<https://ccb.se/publications/map-of-the-baltic-sea-river-basin/>





# Codes in action

Luoksniai

Upių, ežerų ir tvenkinių kadastras

Hidrotechnikos statiniai  
 Vandens tyrimų vietos  
 Vandens matavimų stotys  
 Salos (nuo 1:500.000)  
 Ežerai  
 Tvenkiniai  
 Dirbtiniai nepratekami vandens telkiniai  
 Kiti vandens telkiniai  
 Ekologiniu ir kultūriniu požiūriu vertingi upių ruožai  
 Upės  
 Kanalai  
 Vietovardžiai

Vandens telkinių apsaugos zonos ir juostos  
 Vandens telkinių nuoma  
 Ortofotografinis žemėlapis 1995-2001  
 Ortofotografinis žemėlapis 2005-2006

Pridėti paslaugą

Matavimo įrankiai  
 ETK objektų paieška  
 Kelavimas pagal teritorijas  
 Ustatymai

Vietovės paieška

Pagrindas

Padidinti

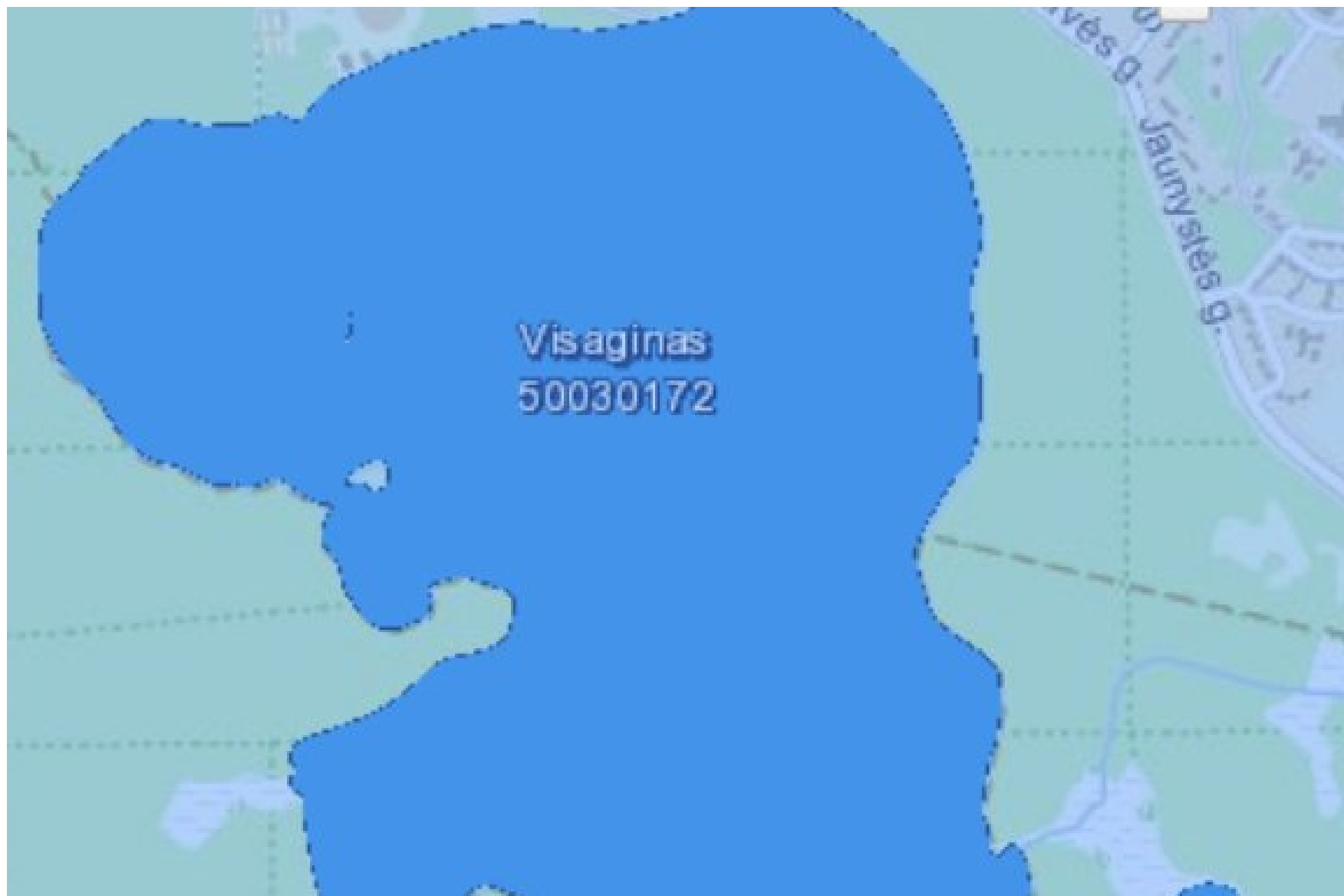
Mastelis 1: 25000

Visaginas 50030172  
 Bestani 1417  
 Gulbinis 50030170  
 X: 6163173  
 Y: 655521  
 Tiltelis  
 0 0.3 0.6km

UETK © Aplinkos apsaugos agentūra, 2019  
 GDR10LT, ORT10LT, SŽNS\_DB10LT © Nacionalinė žemės tarnyba prie ŽŪM, © geoportal.lt



# Codes in action (+)



# reccomended codes for lakes or groups of ponds

- LVLACUSXXYYNNNM:KK
- LV: country code
- LACUS: object type in latin (MONTIS, CIVITAS, SILVA)
- XX - number of great basin
- YY - number of subbasin
- NNN - number water body
- M - a number for the future (for addition)
- :KK (facultative) - the number of the pond in a group

# Some apocolypses

Object codification should be controlled otherwise it could get uncontrollable



Вопросы?