UNITED NATIONS
GROUP OF EXPERTS ON GEOGRAPHICAL NAMES

Twenty-third session
Vienna, 28 March – 4 April 2006

Item 8 of the Provisional Agenda

Activities relating to the Working Group on Toponymic Data Files and Gazetteers

Digital Environment for Geographical Names*

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Environment for geographical names

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Part 1

☐ Yesterday / digital : Digital map system

☐ Tomorrow / digital : Structured digital dataset
Yesterday /digital

- Map data was put into file oriented systems with no special attributes to the point or lines. One map - one feature - one file.

- The geographical names were looked upon just as text together with height/depth digits and other sort of textual information on and around the map. This is still the situation for some production lines.

Digitally produced map with textual place names.
Tomorrow

- The geographical datasets will be built up with structured information in still scale related databases with a National Place Name Database/NPND as a main source.

- Geographical names will not be attached directly to their objects as attributes, but exist as an own database. This database will be built up with identifiers as keys to the real physical object.

- Each name object has a structured content valued as a geographical name with onomastic and legal attributes and not as a map name with presentation attributes.
Part 2

- Database
- "Place name network"
- Integration with other systems
- Future developing

Database

Data model:

- Physical object
  - 1
  - 1 - M
- Name unit
  - 1
- Spelling
  - 1
  - 1 - M
- Occurrence
  - 1
  - 1 - M
Database example

**Data model:** An example of one object with place names in three different languages. The majority language has one place name with two dialect forms and the two minority languages has one place name each.

![Diagram showing the relationship between place names in different languages and the object they represent](image)

Example from the Norwegian-database

<table>
<thead>
<tr>
<th>Physical object-ID (SIR-OBJID)</th>
<th>2271164</th>
<th>Norway</th>
<th>700279</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name unit 1.0</td>
<td>Bissojokka</td>
<td>North sami</td>
<td></td>
</tr>
<tr>
<td>Name unit 1.1</td>
<td>Bissojokka</td>
<td>Land 1:50 000</td>
<td></td>
</tr>
<tr>
<td>Name unit 2.0</td>
<td>Pyssjoki</td>
<td>Finnish/Even</td>
<td></td>
</tr>
<tr>
<td>Name unit 2.1</td>
<td>Pyssjoki</td>
<td>Land 1:50 000</td>
<td></td>
</tr>
<tr>
<td>Name unit 3.0</td>
<td>Borselva</td>
<td>Norwegian</td>
<td></td>
</tr>
<tr>
<td>Name unit 3.1</td>
<td>Borselva</td>
<td>Sea 1:50 000</td>
<td></td>
</tr>
</tbody>
</table>

| Occurrence | Oslo | 12/03/2009 | |
|------------|------|-----------| |
| Location | 104.3 | 39.7 | |
| Map key | 3789989 | 3789989 | |
| Date for description, feature | 12/03/2009 | 12/03/2009 | |
| Last changed data, occurrence | 12/03/2009 | 12/03/2009 | |
Possible technical solution for a "Place name environment"

Internet / WEB-service

- New and updated place names in a future developed "National Place Name Database / NPND" are direct accessible "on the fly" in an active WEB-service.

- All local and governmental geoportals can use the central NPND as the sole system for place name search on their local internet sites.
Prospective standardising

Academic onomastic place name groups → Place name register group → Presentation groups

ISO Standardising ???

Onomastic elements → Legal elements → Cartographic elements

In future: Extract of Onomastic, Legal and Cartographic elements (together ??)

Thank you for your Attention

Johnny Andersen