CentropeMAP and CentropeSTATISTICS
Cross-Border Geodata Infrastructure with User-Defined Thematic Maps

on behalf of the
Planungsgemeinschaft Ost (PGO)
(Eastern Austrian Planning Association)

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I. The Centrope Region
II. CentropeMAP
III. CentropeSTATISTICS
IV. Technical Implementation
V. Live Demonstration
CENTROPE Partner Regions

- Czech Republic
  - Region: South Moravia
  - City: Brno
  - Interested: Olomouc

- Slovak Republic
  - Region: Bratislava, Trnava
  - Cities: Bratislava, Trnava

- Hungary
  - Region (county): Győr-Moson-Sopron
  - Cities: Győr, Sopron

- Austria
  - Region (federal states): Burgenland, Lower Austria, Vienna
  - Cities: Eisenstadt, St. Pölten, Vienna
  - Interested: Wiener Neustadt
CENTROPE Region

**Population**
- 6 million
- of which 3 million in cities

**Economy**
- 3.8 million employed
- 55 – 65 % employed in service sector
- unemployment rate between 4 and 14 %
- GDP growth between 0.8 % and 3.6 % since 2003

**Infrastructure**
- 3 international airports (Brno, Bratislava, Vienna)
- 2 Danube river ports (Vienna, Bratislava)
- Pan-European corridors

(Source: Wikipedia)
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Centrope MAP Challenges

- Legal planning responsibilities on different levels
- Data responsibilities on different levels
- Administrative boundaries = data boundaries
- No “common data infrastructure“ available, only “isolated applications“
<table>
<thead>
<tr>
<th>Geodata</th>
<th>Administrative borders</th>
<th>Statistical data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land use</td>
<td></td>
<td>Database</td>
</tr>
<tr>
<td>(Corine Land Cover 2000, Level 3, all layers separately)</td>
<td>NUTS 2, NUTS 3, LAU 2</td>
<td>NUTS 2, NUTS 3, LAU 2 (up to availability and meaning)</td>
</tr>
<tr>
<td>about 32 categories</td>
<td></td>
<td>Area:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>cadastral area, area of durable settlement, forest, water bodies,</td>
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<tr>
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<td>...</td>
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<tr>
<td></td>
<td></td>
<td>Population:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Development, migration balance, balance of births prognoses, age groups, nationalities educational qualification household size, secondary residences employed, unemployed structure of income, purchasing power settlement structure</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Occupation and Economy:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>places of work, business structure branch structure, value added jobs, commuter structure agriculture, forestry, tourism</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Infrastructure:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Data linked with punctiform infrastructure data) administration, education, social, leisure, recreation, tourism, culture, ...</td>
</tr>
</tbody>
</table>

**Visualisation**

of the data based on administrative borders (maps, diagrams)

**Remarks:**

Phase 1: downloadable print-ready maps (PDF)

Phase 2: online interactive maps
CentropeMAP Web Application

- datasets come directly from project partners → no redundancy, always up-to-date
- functions: Zoom, Pan, Query, Search, Tell-A-Friend, Measurement
- hundreds of layers for the whole region and sub-regions
- background maps from simplified views to high-resolution satellite images and aerial views (ortho-photos)
- map generation on the fly
Data Examples

elevation, road network, railway network, urban fabric, inland waters
Data Examples

high resolution orthophoto, environmental protected territory (Znojmo, CZ)
urban fabric, rivers, inundation risk areas, high ground water level (<2m) (Danube, Lower Austria)
Corine Land Cover Level 2 (Lake Neusiedl Region)
European Urban Atlas (Twin City Region Vienna-Bratislava)
Data Examples

Building Land (Residential/Commercial), Road Network
(St. Pölten, Lower Austria)
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CentropeSTATISTICS is a cross-border database project of these co-operating statistics offices/departments in the Centrope Region (on behalf of PGO - Planungsgemeinschaft Ost/Eastern Austrian Planning Association, and technically led by CEIT ALANOVA gemeinnützige GmbH)

- **Czech Republic:**
  CZSO - Czech Statistical Office – Český statistický úřad (ČSÚ)

- **Slovak Republic:**
  Statistical Office of the SR – Štatistický úrad Slovenskej republiky

- **Hungary:**
  HCSO - Hungarian Central Statistical Office – KSH - Központi Statisztikai Hivatal

- **Austria:**
  Statistics Departments of the three Austrian federal states Burgenland, Lower Austria and Vienna

**Workshops:**
September 2008 in Schwechat,
March 2009 in Schwechat,
September 2009 in Brno,
2010 t. b.a.
CentropeSTATISTICS User Interface

• Functions:
  - Show – Export – Query – Sort
  - All available indicators are displayed
  - Multiple choice allowed
  - Results are shown as table
  - Dynamic Database Live Query

→ On the fly Map Generation
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System Architecture

CentropeSTATISTICS (PHP, Javascript) ➔ MapClient MAPBENDER ➔ Application Server/Map Server [UMN]

- WMS
- WFS
- WCS

Distributed Services

Distributed Data
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Thank you for your attention!

www.centropemap.org

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