

JUMP Project

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Intro

- Young project
- Wide community from:
 - Germany
 - France
 - Spain
 - Japan

Objective goals

- Give new GIS open source tool
 - Programming mapping components
 - Framework for building desktop GIS software

JUMP Workbench

- Framework for desktop GIS software
- Extensible
- Java language
- <http://www.jump-project.org/>

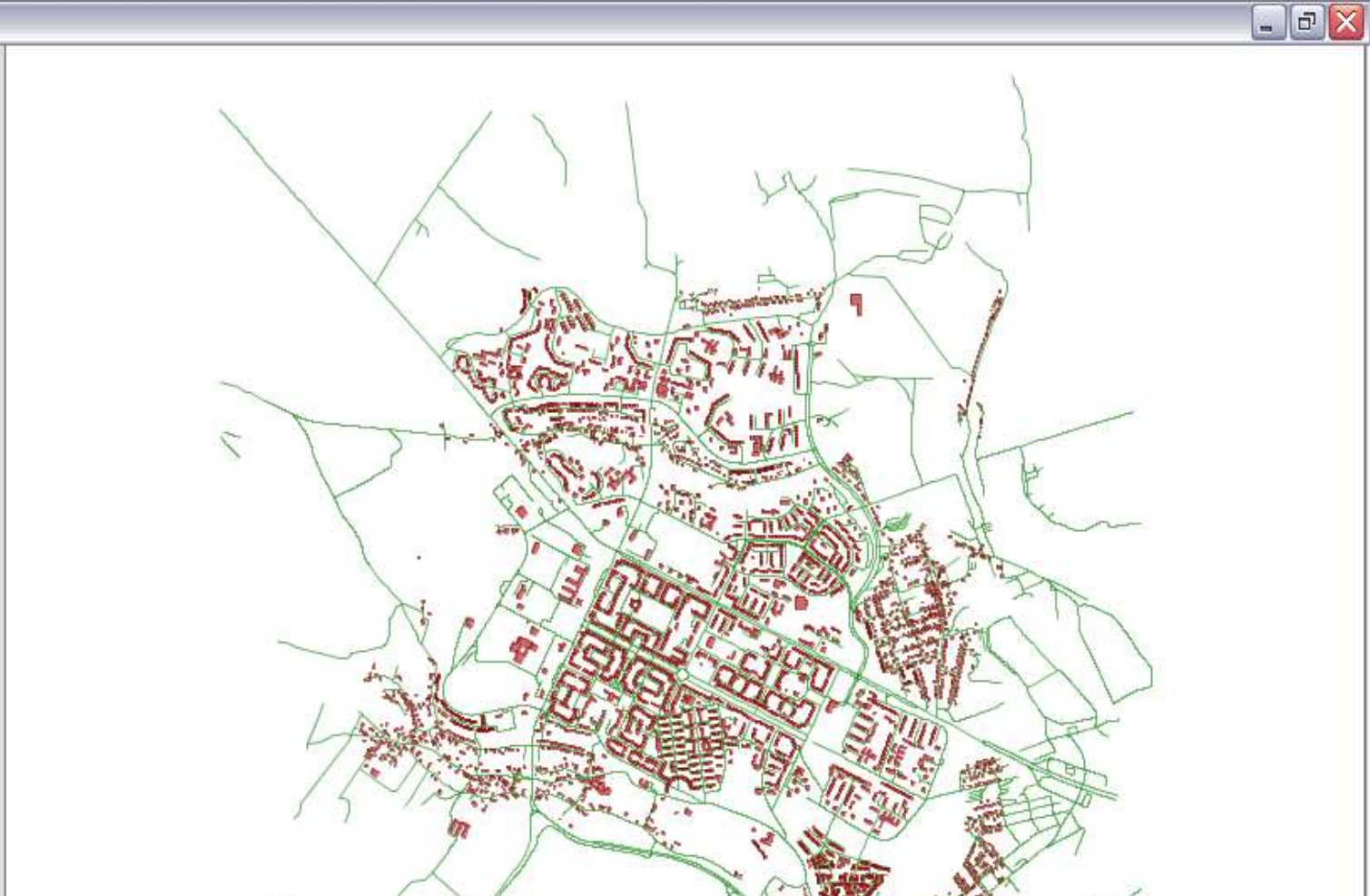
JUMP WB - Stable core

- Version 1.1.2
- Visualization
- Data access
- Data editing
- Queries, Analyses



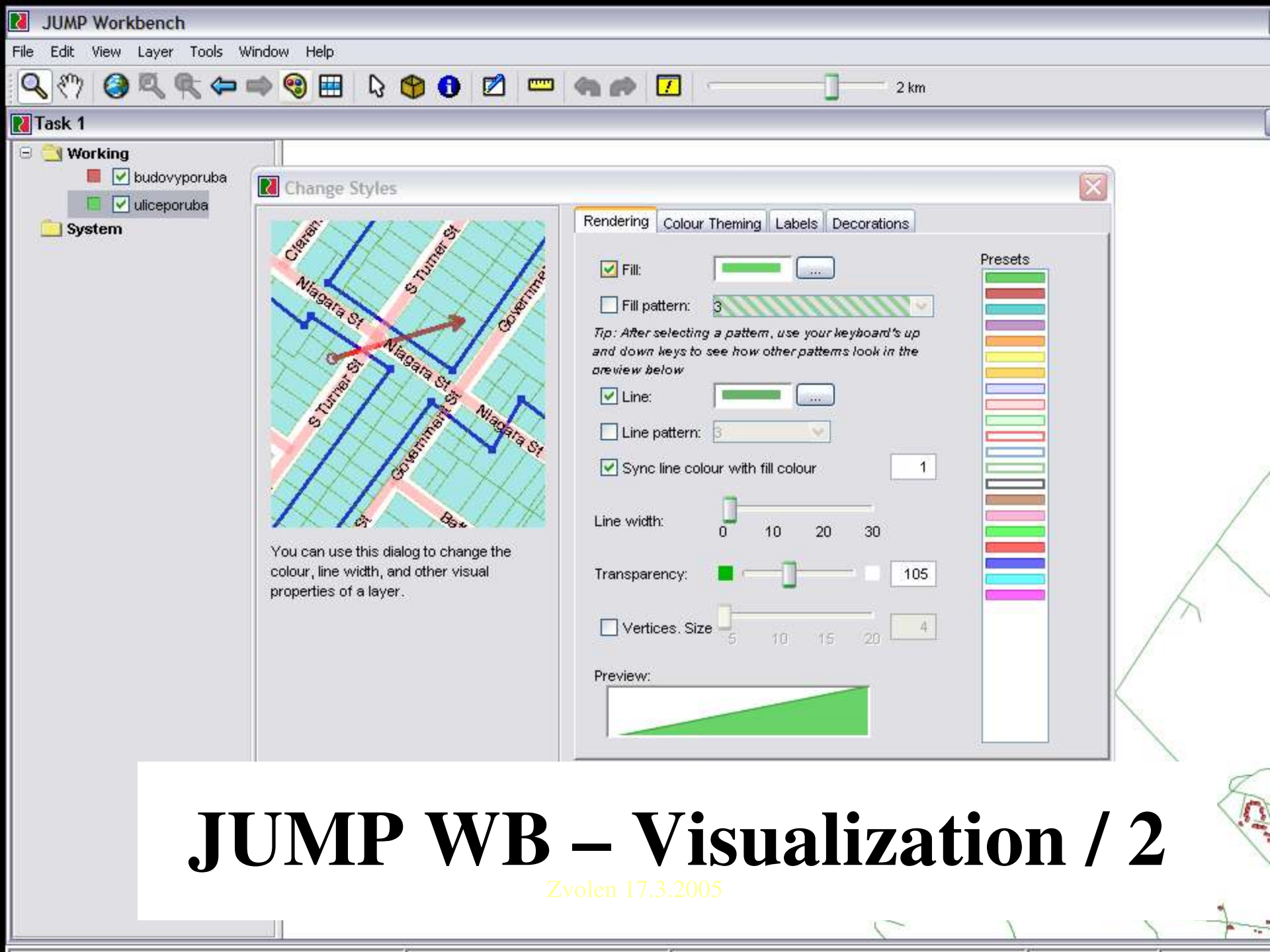
Task 1

- Working
 - budovyporuba
 - uliceporuba
- System



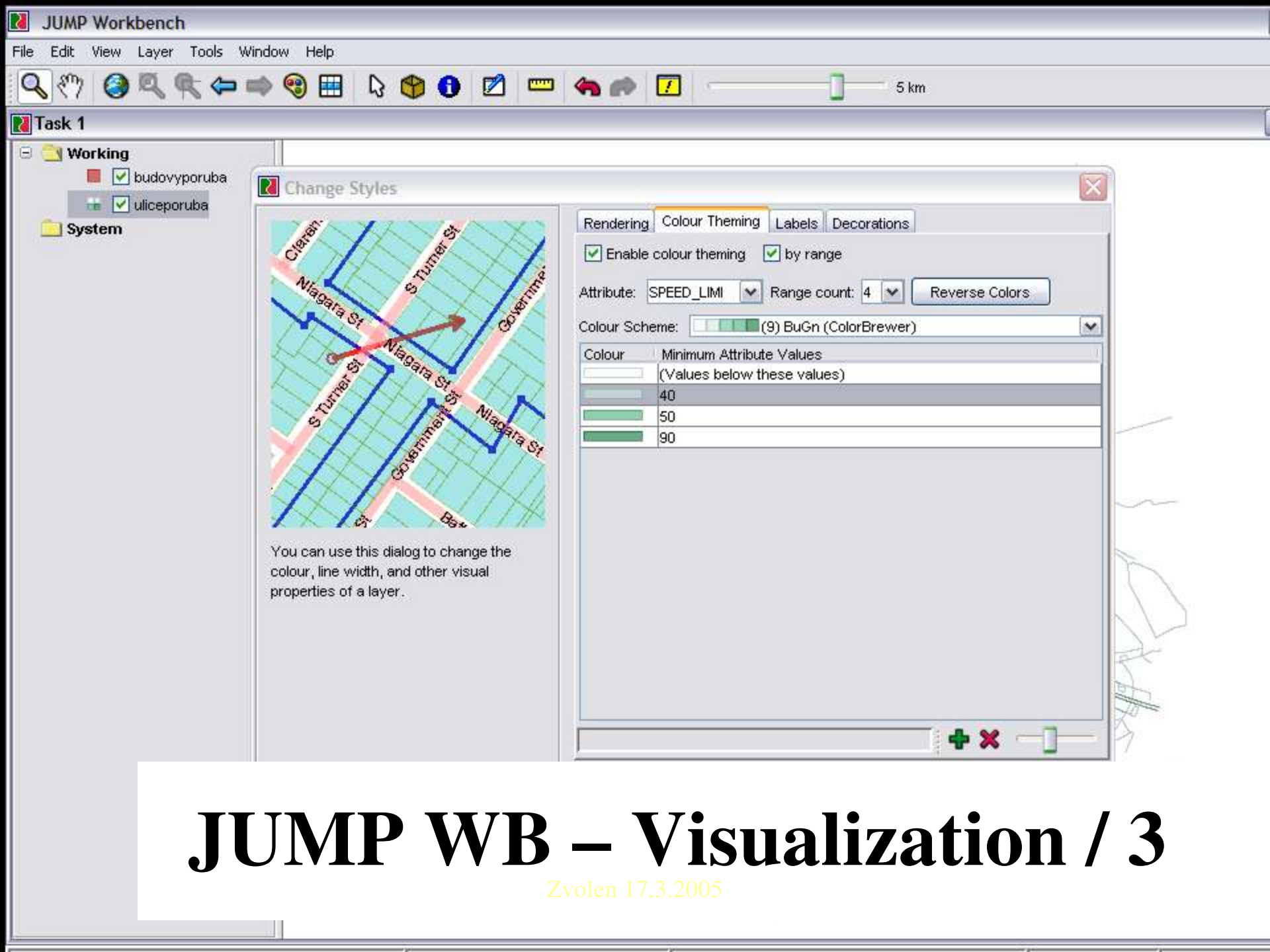
JUMP WB – Visualization / 1

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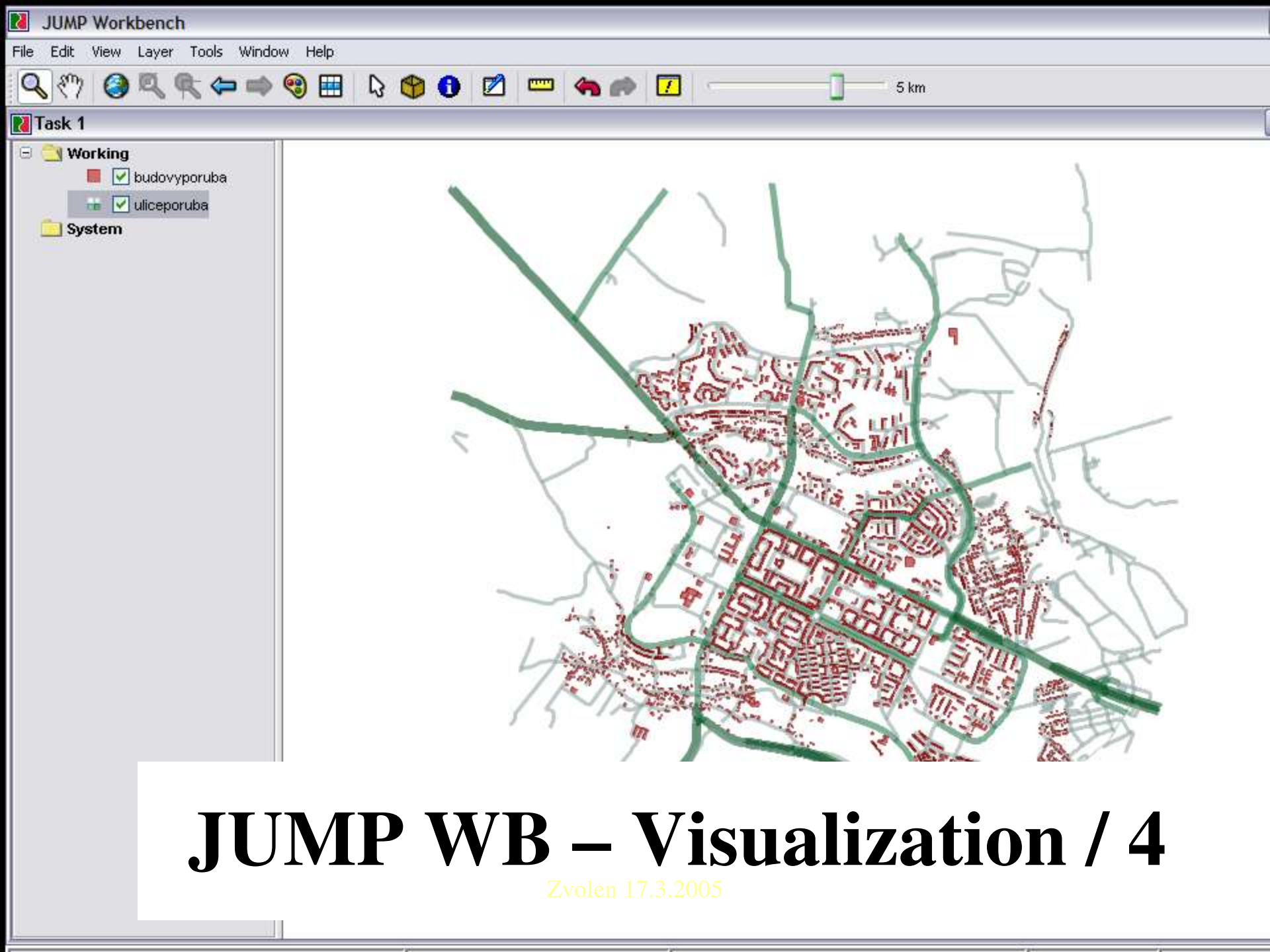
JUMP WB – Visualization / 2

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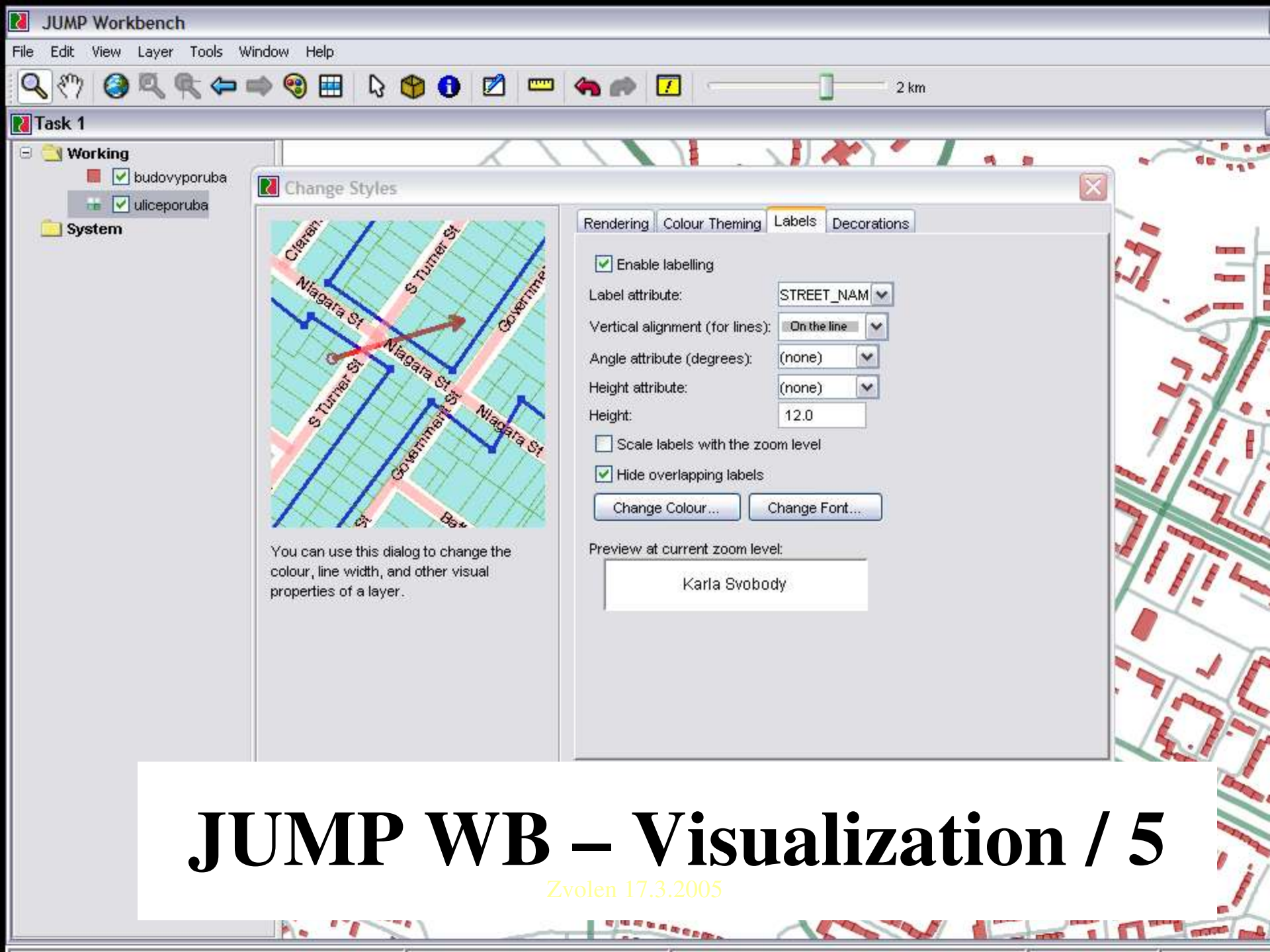
JUMP WB – Visualization / 3

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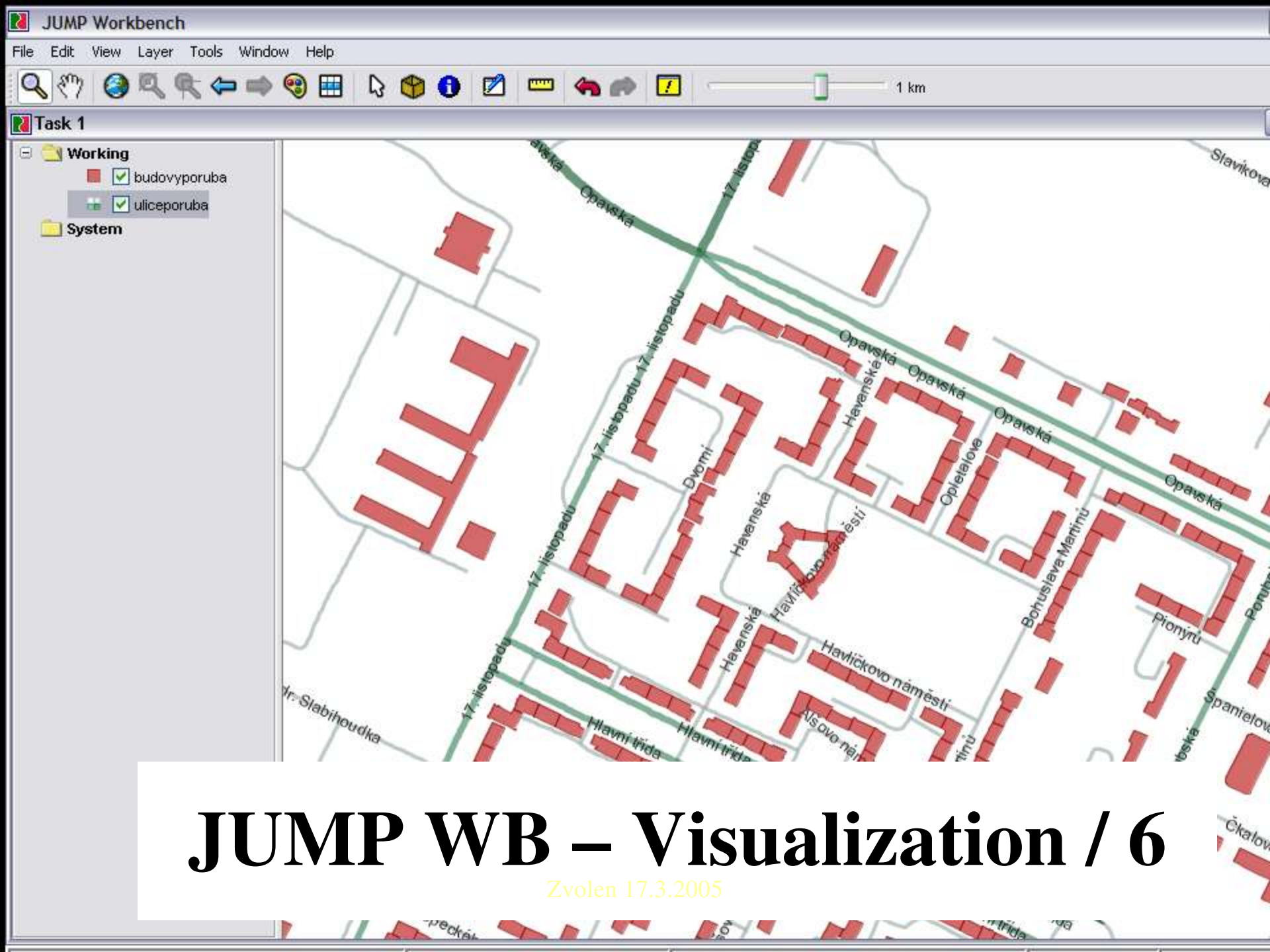
JUMP WB – Visualization / 4

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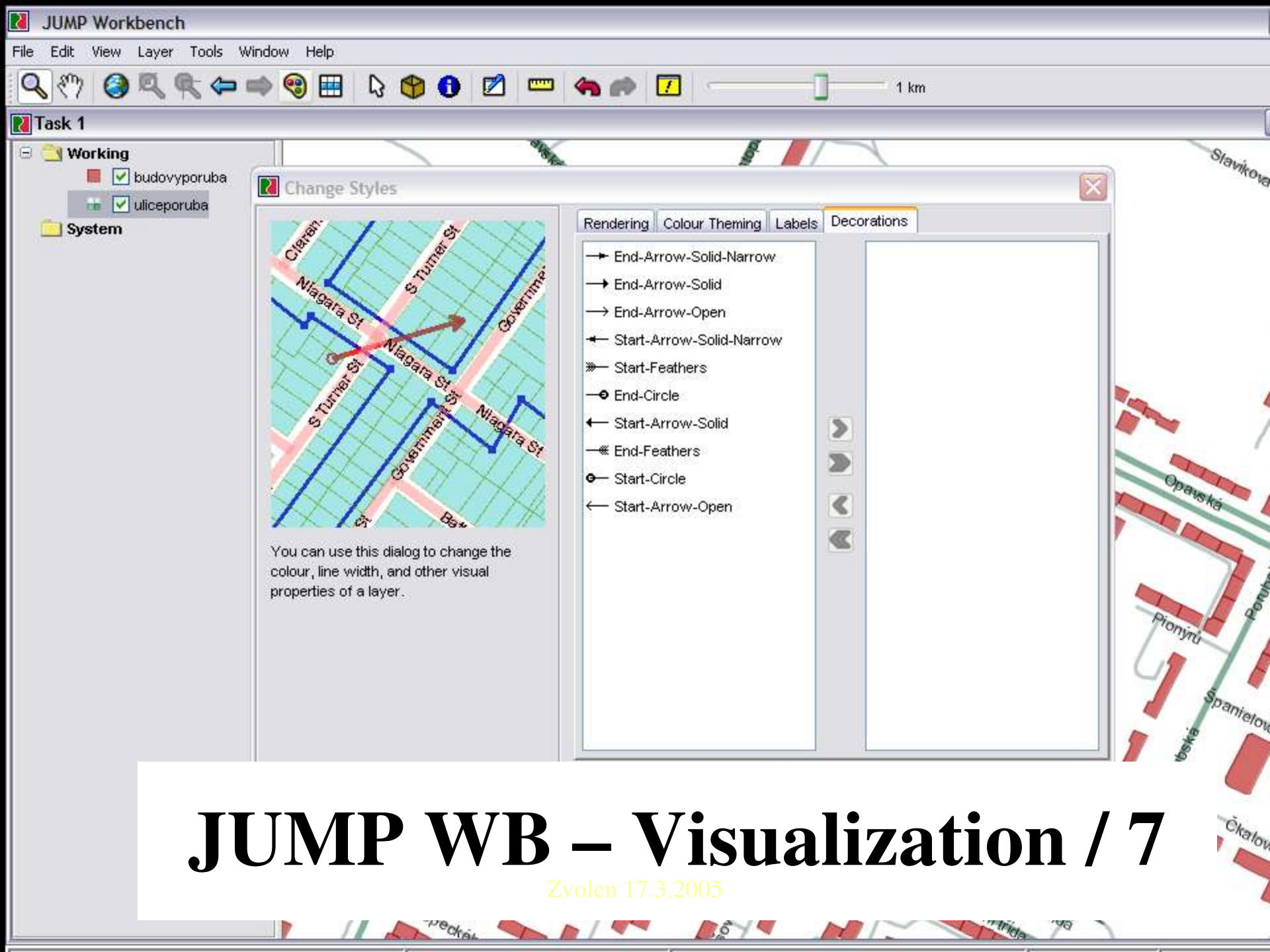
JUMP WB – Visualization / 5

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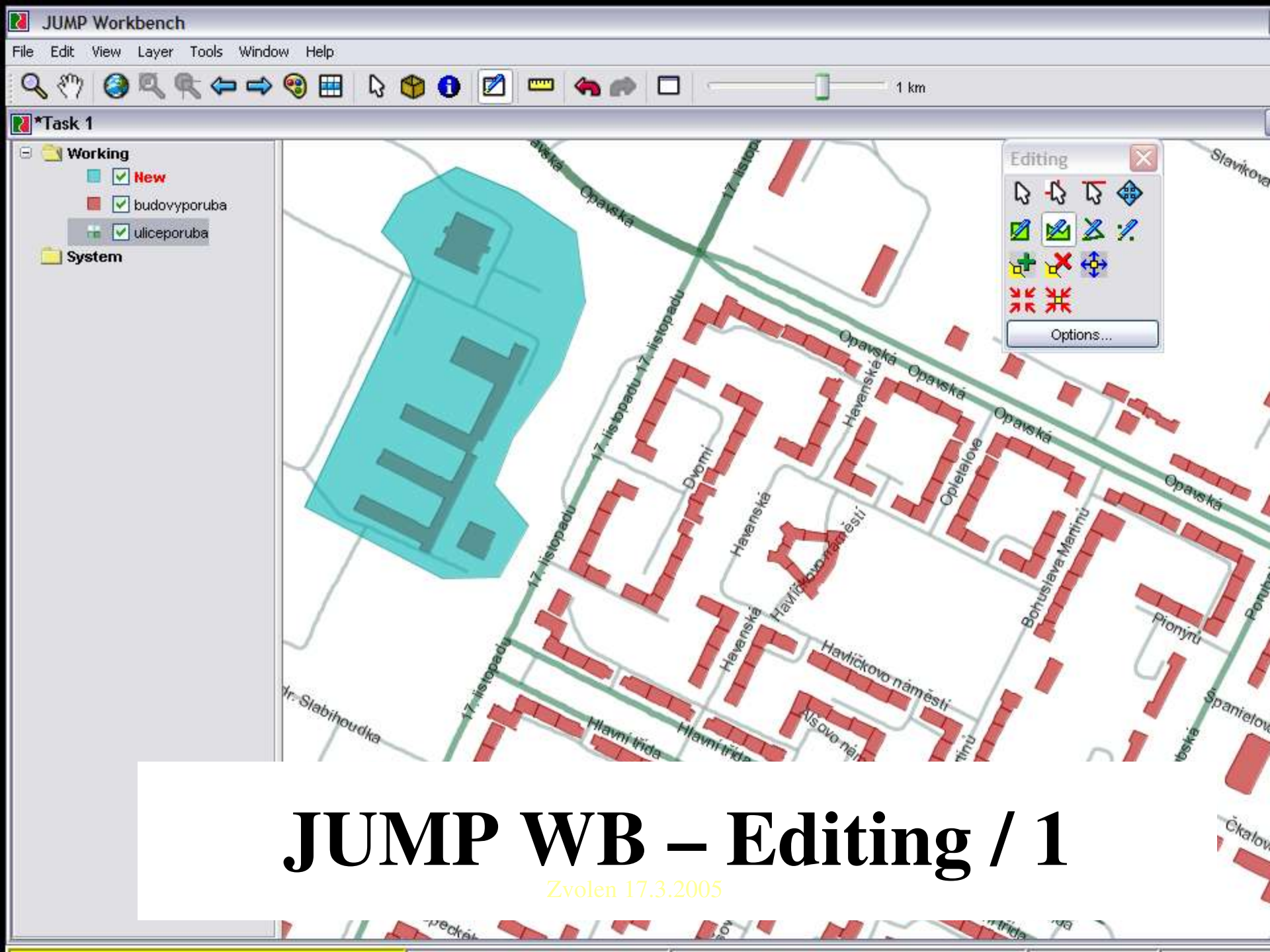
JUMP WB – Visualization / 6

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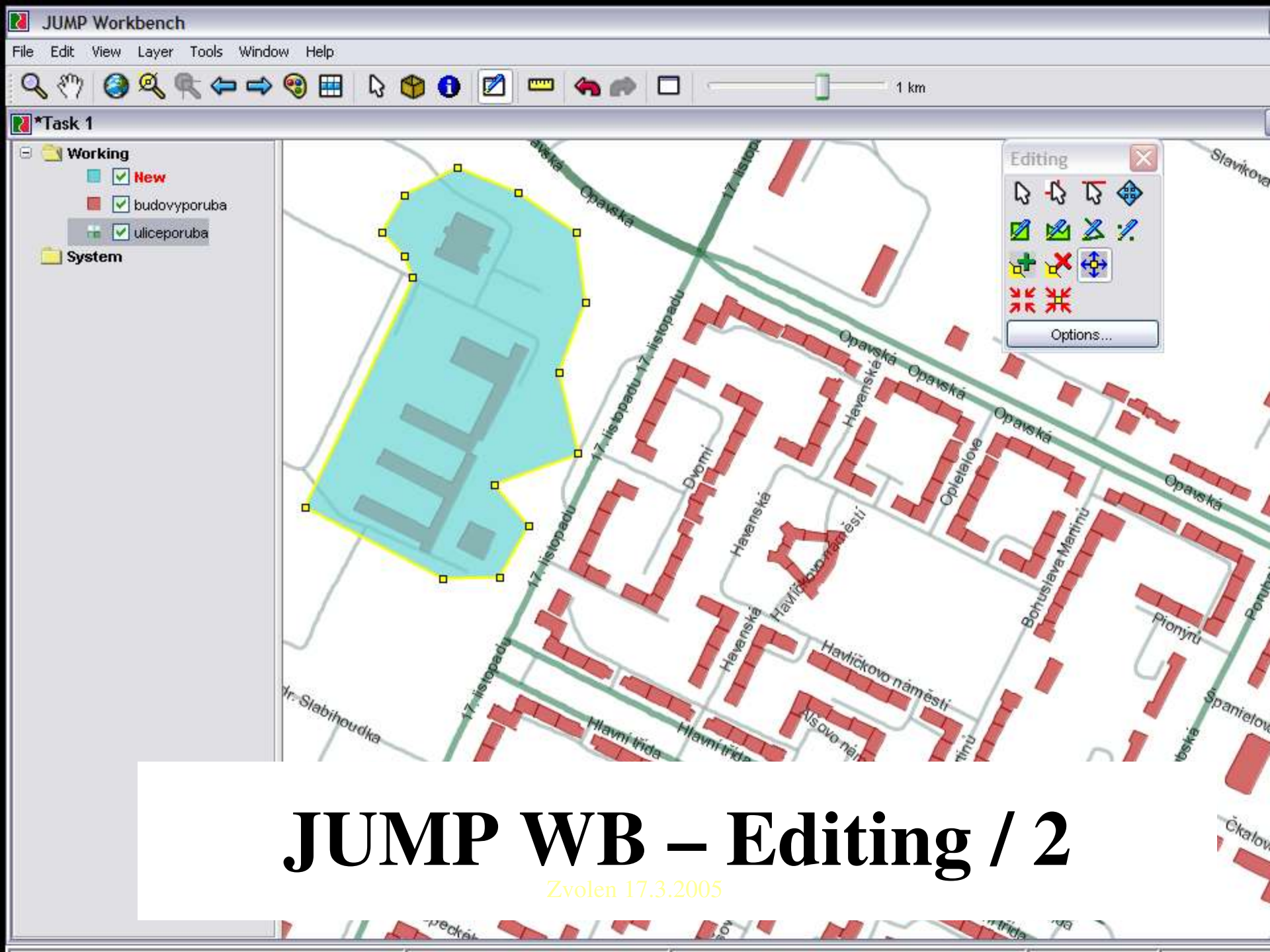
JUMP WB – Visualization / 7

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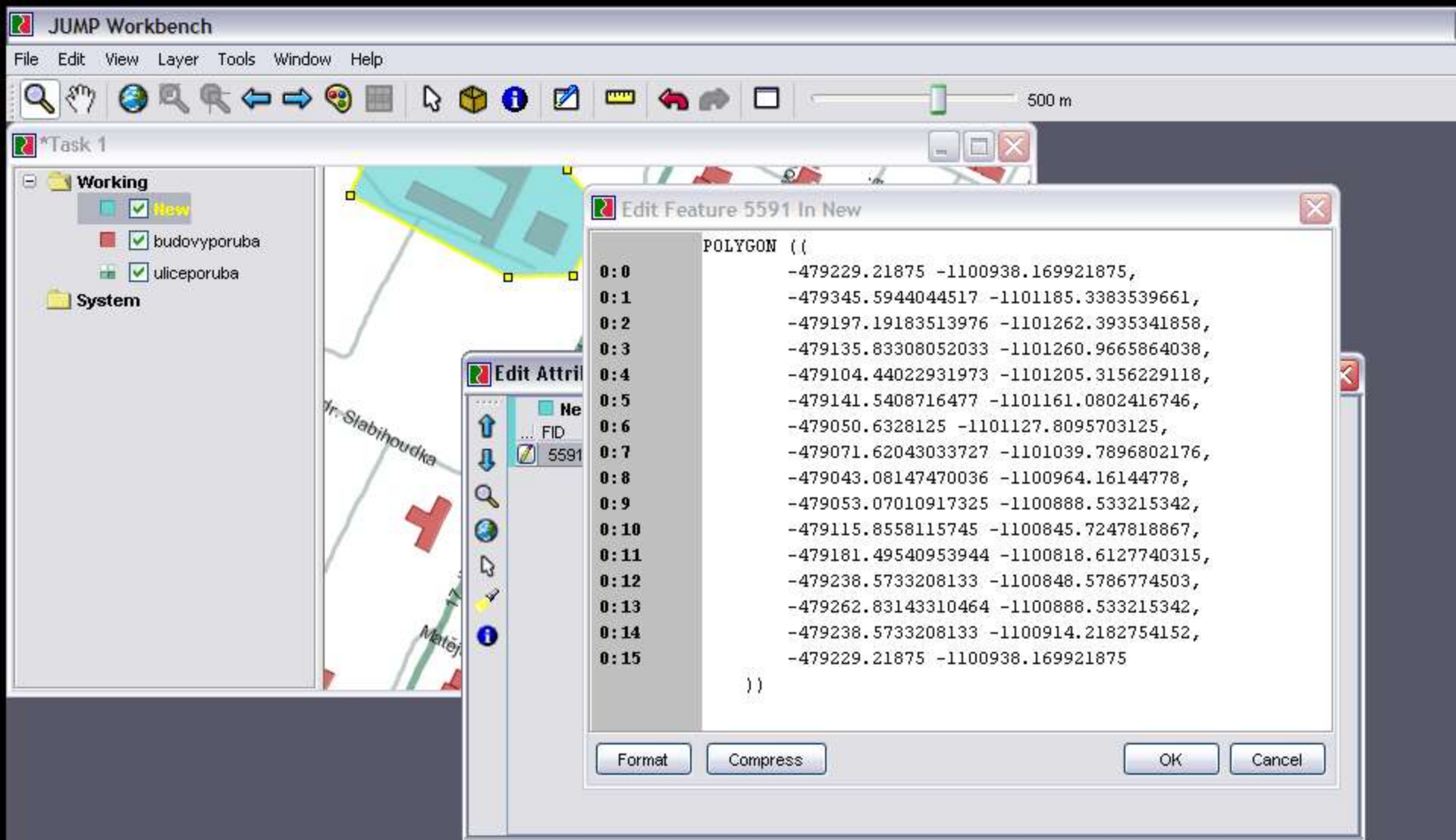
JUMP WB – Editing / 1

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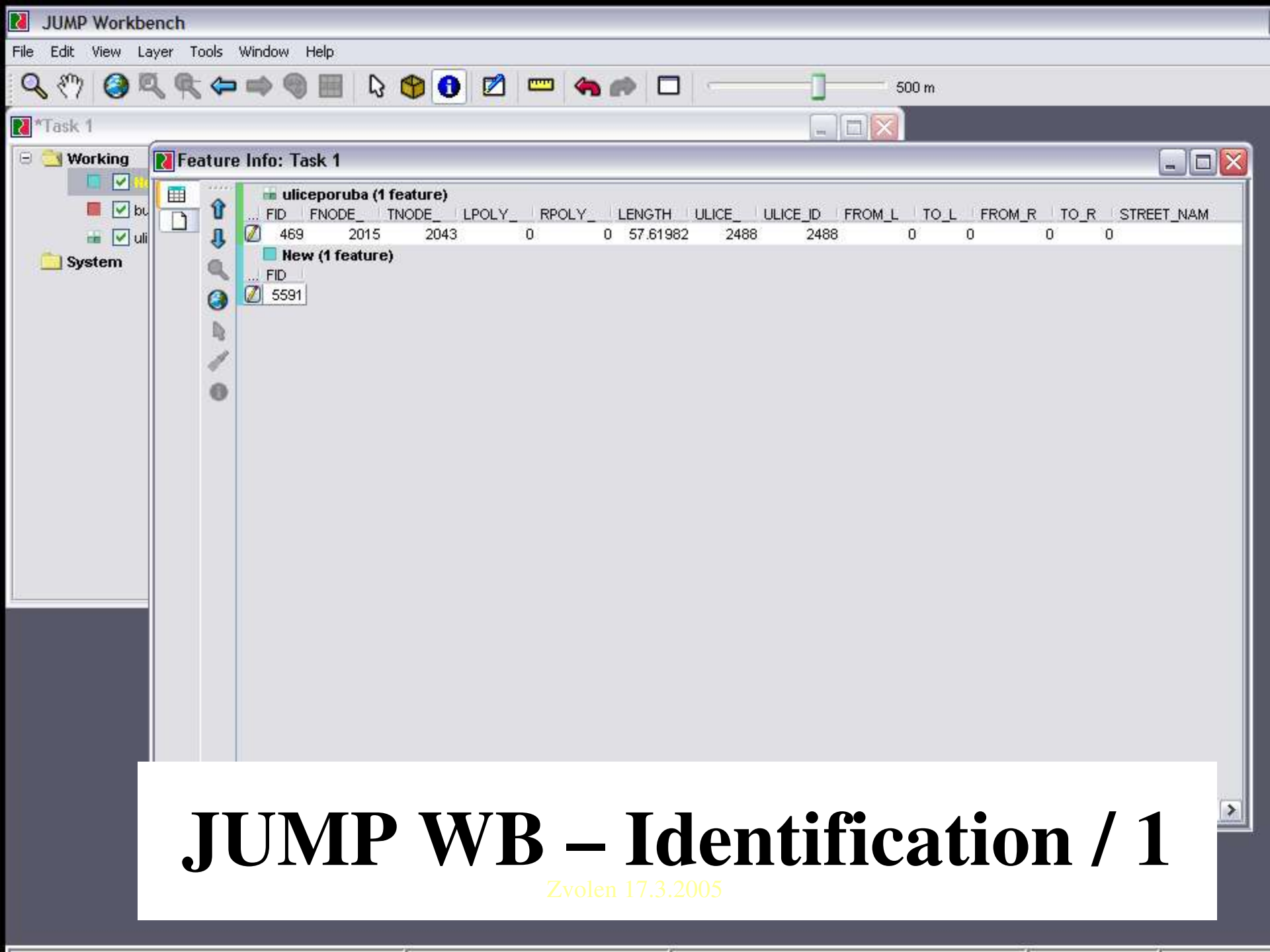
JUMP WB – Editing / 2

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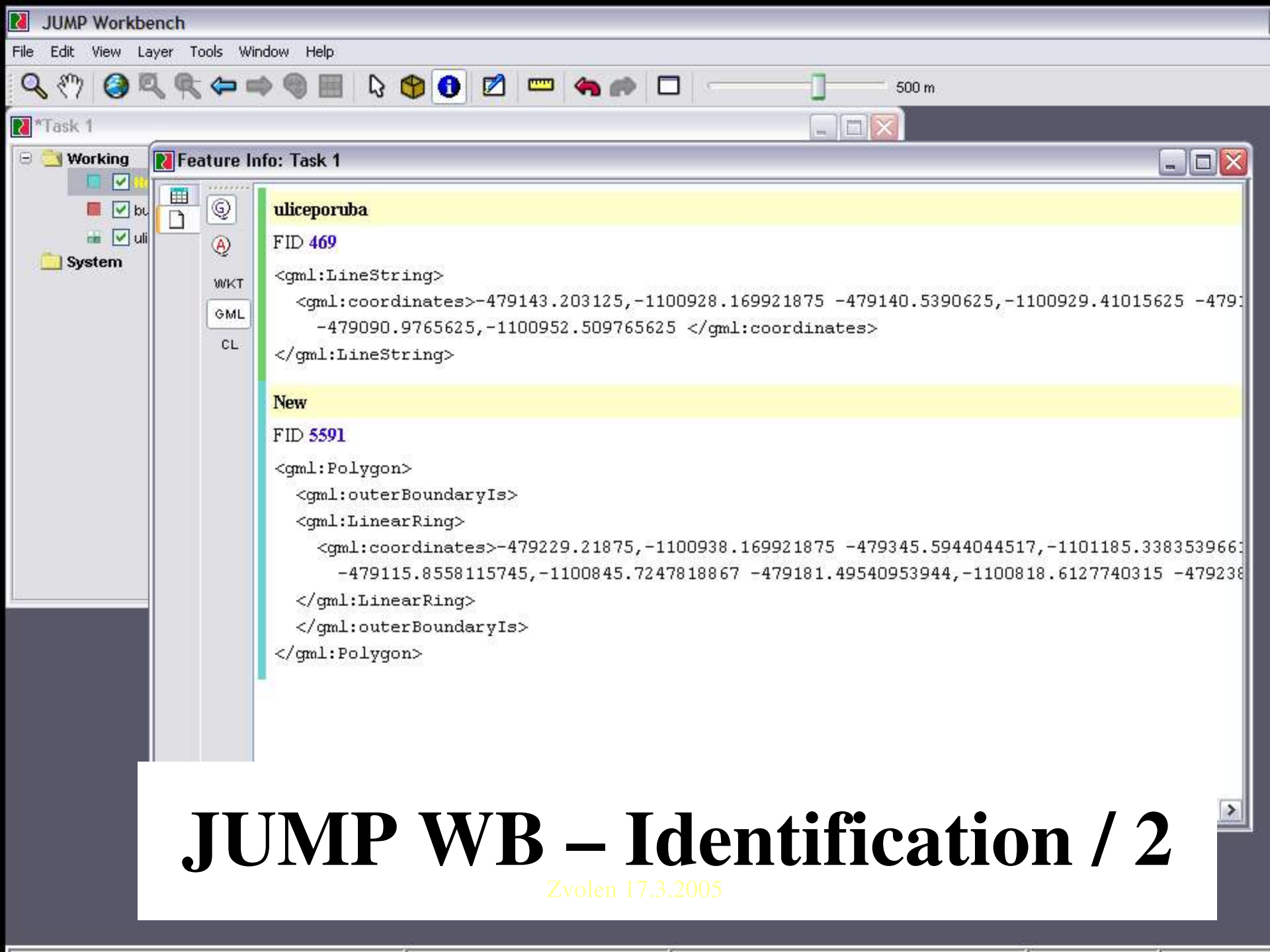
JUMP WB – Editing / 3

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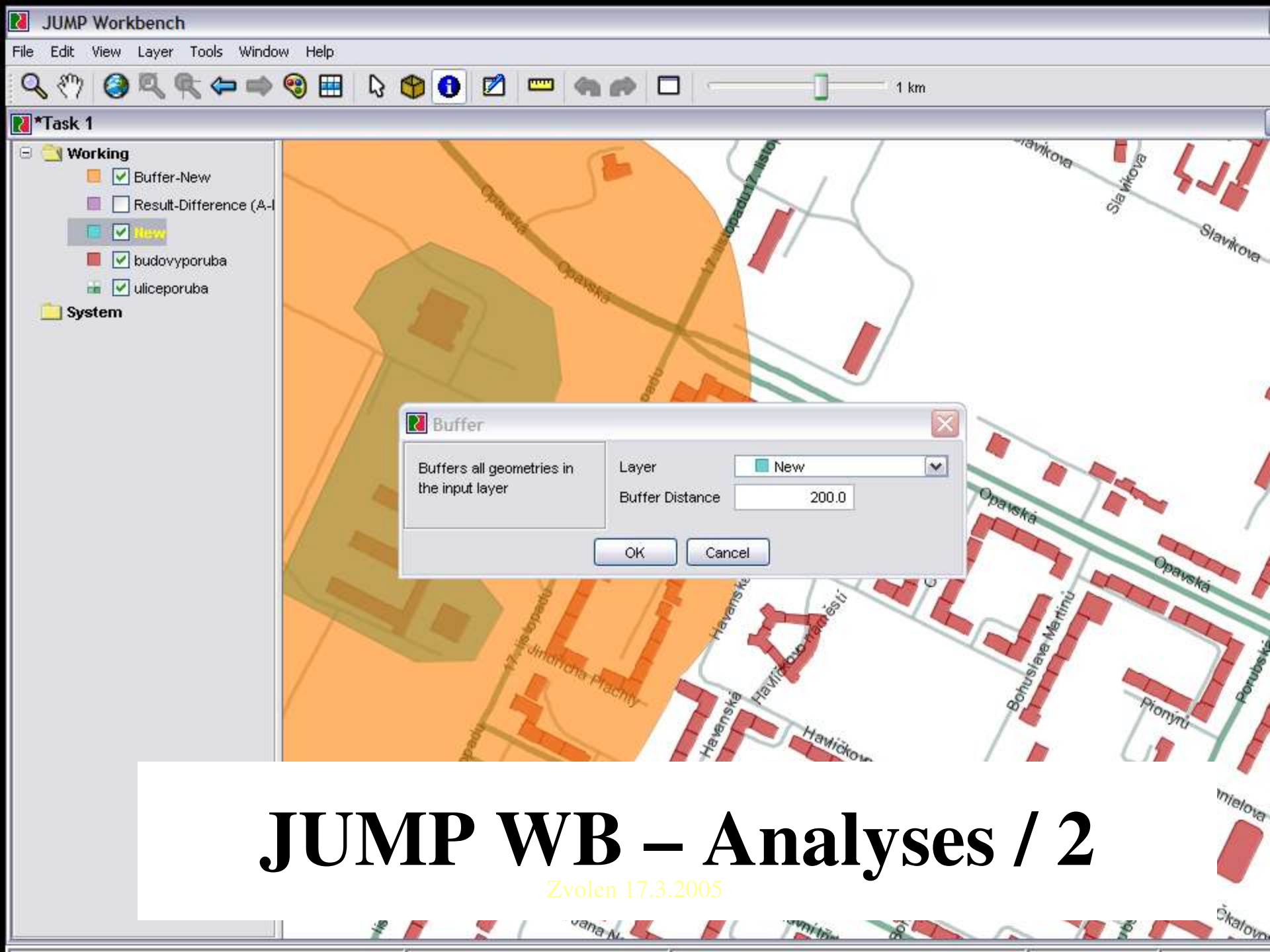
JUMP WB – Identification / 1

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JUMP WB – Identification / 2

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JUMP WB – Analyses / 2

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Working

- Buffer-New
- Result-Difference (A-I)
- New**
- budovyporuba
- uliceporuba

System

Load Dataset(s)

Format: ESRI Shapefile

Look: HP

My Recent Documents

Desktop

My Documents

My Computer

My Network Places

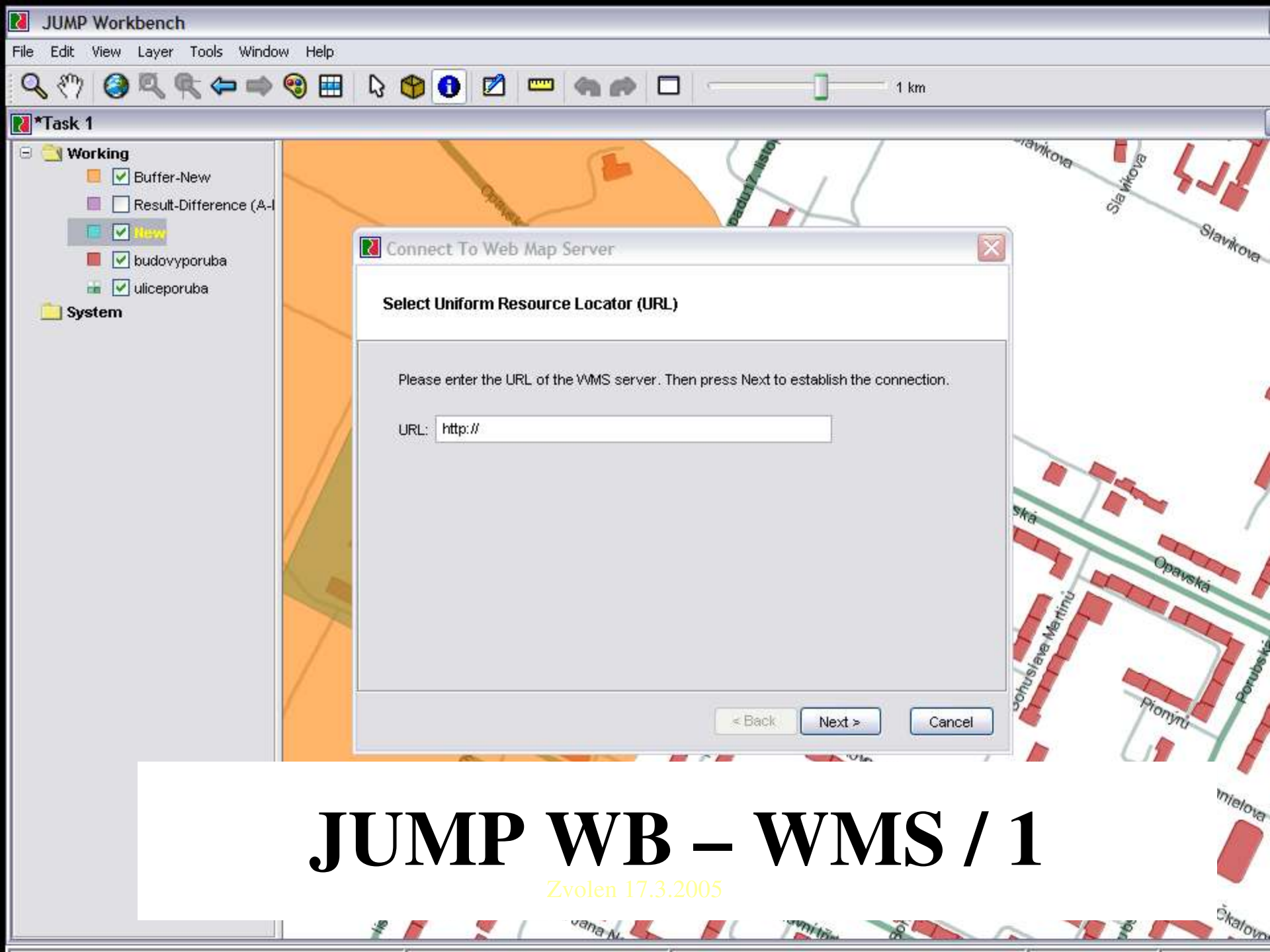
body.dbf	budovyporuba.shp	Silnice.shx	uliceporuba
body.sbn	budovyporuba.shp	spatial_ref_sys	uliceporub
body.sbx	budovyporuba.shx	ulice.dbf	ULICKY.D
body.shp	Mesta.dbf	ulice.sbn	vusc.dbf
body.shp	Mesta.shp	ulice.sbx	vusc.shp
body.shx	Mesta.shx	ulice.shp	vusc.shx
BUDOVY_AIH	mestske_obvody.dbf	ulice.shx	vusc
BUDOVY_AIN	mestske_obvody.sbn	ulice	vusc
BUDOVY_DBF	mestske_obvody.sbx	uliceporuba.dbf	vusc2.dbf
BUDOVY_SHP	mestske_obvody.shp	uliceporuba.sbn	vusc2.shp
BUDOVY_SHX	mestske_obvody.shx	uliceporuba.sbx	vusc2.shx
Budovy	postgis	uliceporuba.shp	vusc2.shx
budovyporuba.dbf	postgis_undef	uliceporuba.shp	vusc2.shx
budovyporuba.sbn	Silnice.dbf	uliceporuba.shx	vusc2.shx
budovyporuba.sbx	Silnice.shp	uliceporuba2.dbf	vusc2.shx

File name: budovyporuba.shp

Files of type: All Files

JUMP WB – Data / 1

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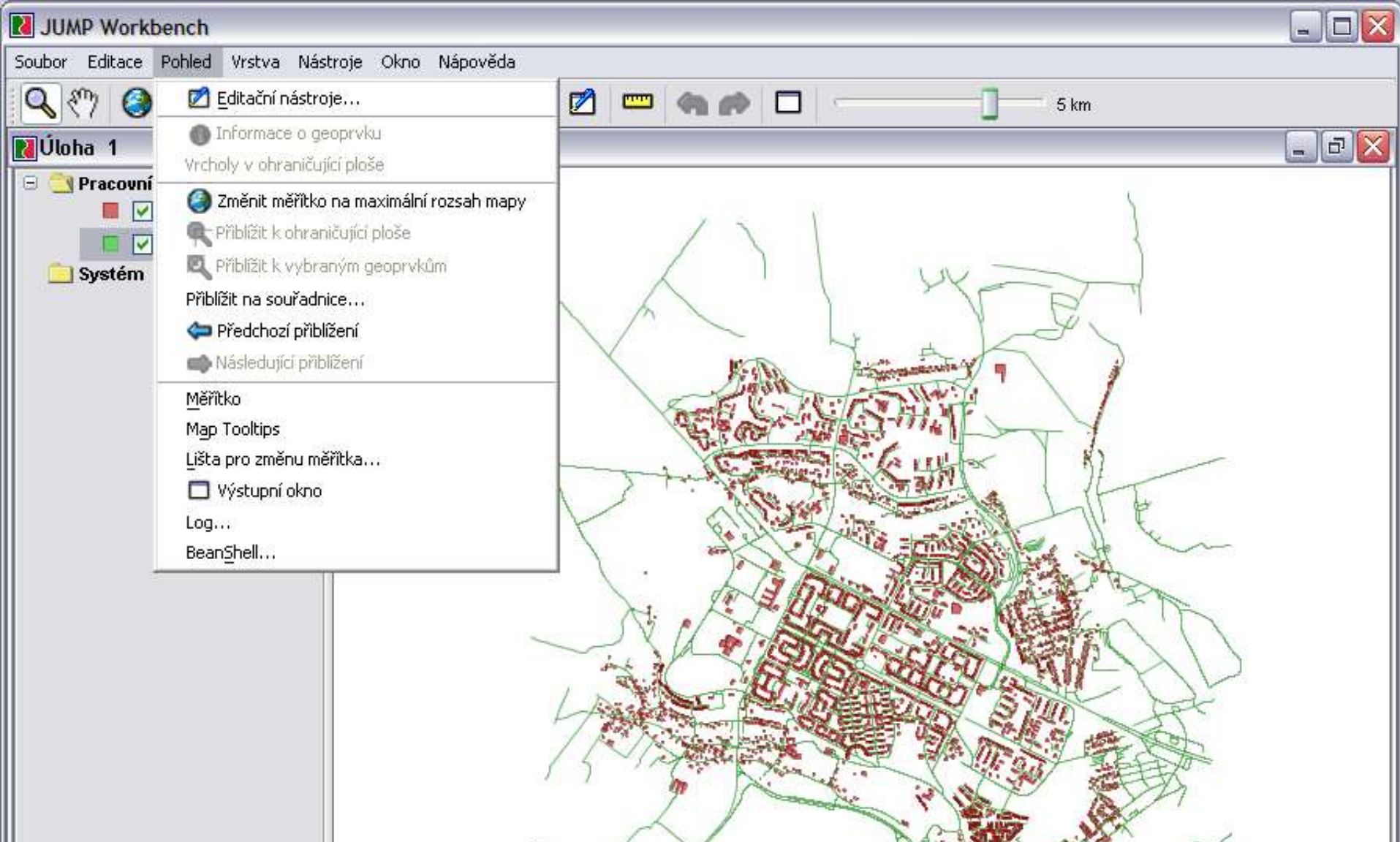


JUMP WB – WMS / 1

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JUMP WB - Internacionalization

- Since version 1.1.2 I18N
- Simple to internacionalize (with some small specific problems in Czech)



JUMP WB – Czech environment

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JUMP WB – Translation

- Text file
- Example:

com.vividsolutions.jump.workbench.datasource.
SaveDatasetAsPlugIn=Ulo\u017Eit data jako
com.vividsolutions.jump.workbench.ui.cursortoo
l.SelectFeaturesTool=N\u00e1stroj pro v\u00fdb\u011Br

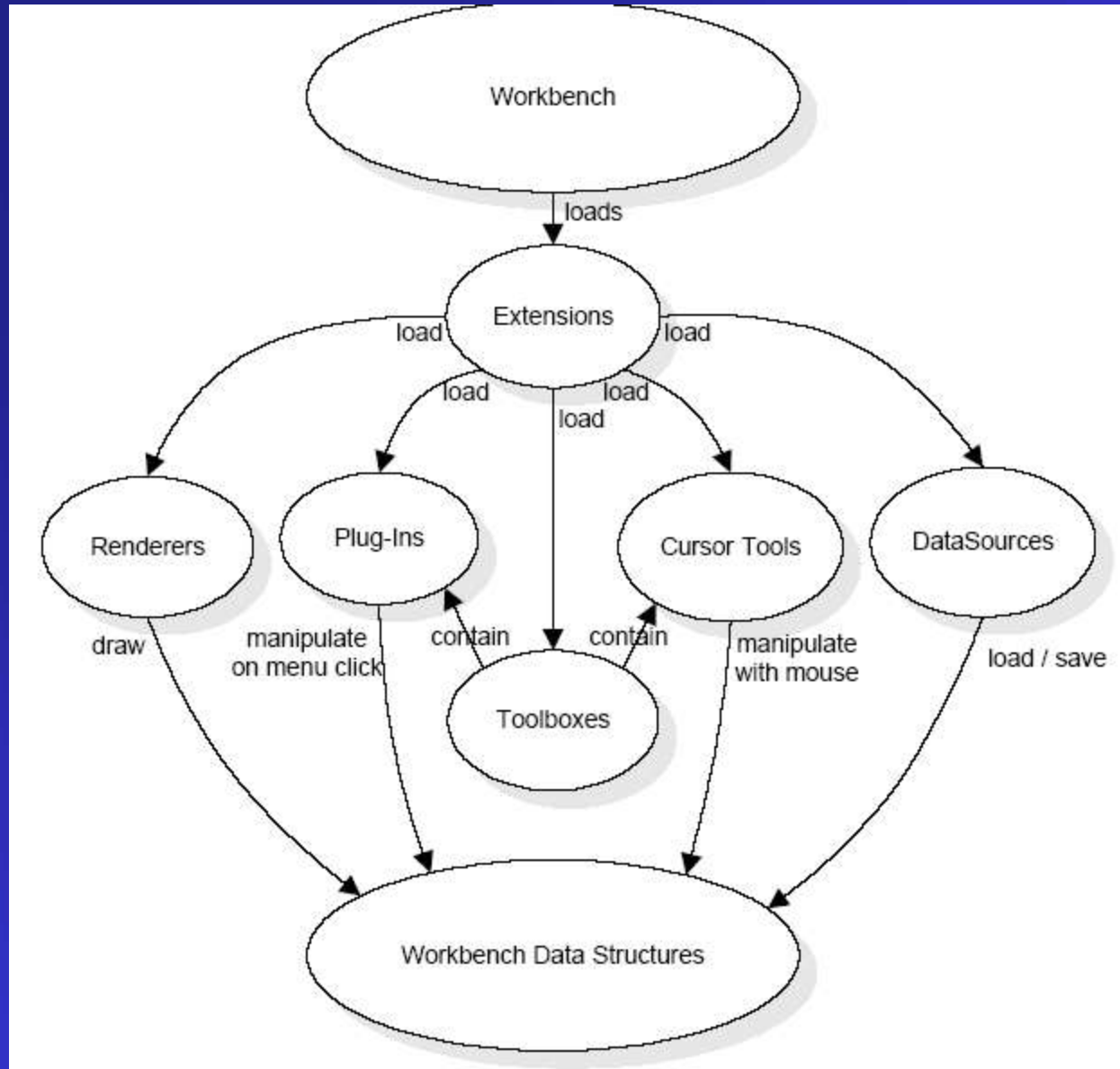
JUMP WB – Extensions

- Many existing:
 - Image
 - ArcIMS
 - Find Route
 - Multi Agent
 - ...
- <http://jump-pilot.sourceforge.net/>

How to write extensions

- Know Java language
- Use JUMP WB architecture
- Start with one existing extension
- Use JPP pages

JUMP WB architecture



Simple extension

- New class extending class Extension
- New class extending class AbstractPlugin

Plugin / 1

```
package example;
```

```
import com.vividsolutions.jump.workbench.plugin.AbstractPlugIn;
```

```
import com.vividsolutions.jump.workbench.plugin.PlugInContext;
```

```
public class HelloWorldPlugIn extends AbstractPlugIn {
```

```
    public void initialize ...
```

```
    public boolean execute ...
```

```
}
```

Plugin / 2

```
public void initialize(PlugInContext context)
    throws Exception{
    context.getFeatureInstaller().addMenuItem(this,
        new String[] { "Tools", "Test" }, getName(), false,
        null, null);
}
```

Plugin / 3

```
public boolean execute(PlugInContext context)
    throws Exception {
    context.getWorkbenchFrame().getOutputFrame().
        createNewDocument();
    context.getWorkbenchFrame().getOutputFrame().
        addText("Hello, World!");
    context.getWorkbenchFrame().getOutputFrame().surface
        ();
    return true;
}
```

Extension

package example;

import com.vividsolutions.jump.workbench.plugin.Extension;

import com.vividsolutions.jump.workbench.plugin.PlugInContext;

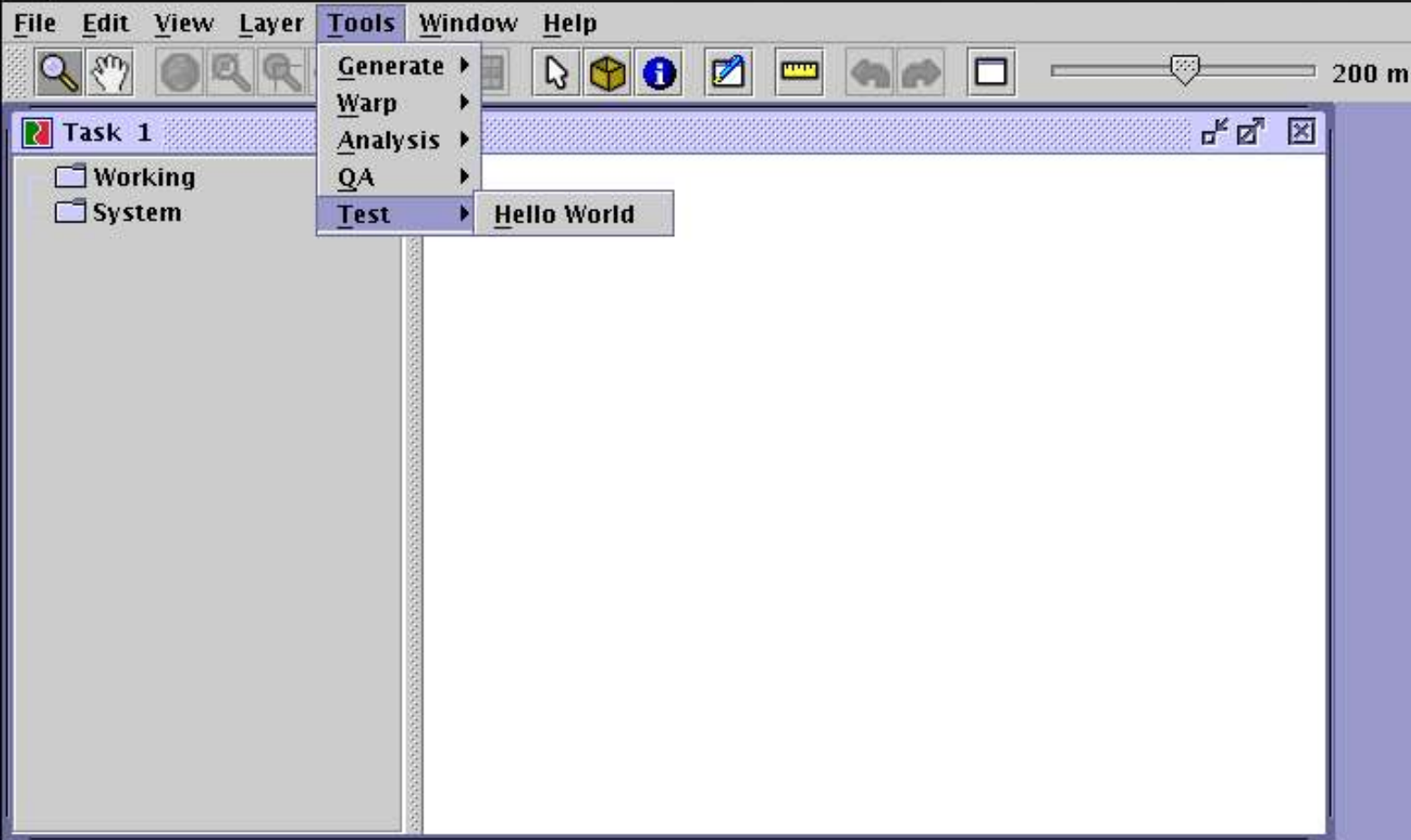
```
public class MyExtension extends Extension {  
    public void configure(PlugInContext context)  
        throws Exception {  
        new HelloWorldPlugIn().initialize(context);  
    }  
}
```


Compiling / Archiving / Installing

```
javac example/*.java
```

```
jar cvf example.jar example/*
```

```
cp example.jar jumphath/lib/ext/example.jar
```



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JUMP WB – Extension / 2

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Small change to execute method

```
String area; String id;
```

```
Collection fcA = ((SelectionManagerProxy)  
context.getActiveInternalFrame().getSelectionManager().  
createFeaturesFromSelectedItems();
```

```
for (Iterator ia = fcA.iterator(); ia.hasNext(); ) {
```

```
    Feature fa = (Feature) ia.next();
```

```
    id = String.valueOf(fa.getAttribute(2));
```

```
    Geometry ga = fa.getGeometry();
```

```
    area = String.valueOf(ga.getArea());
```

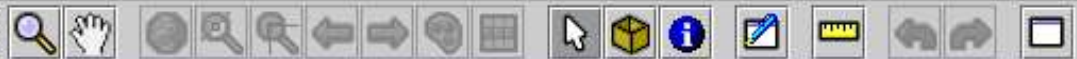
```
    context.getWorkbenchFrame().getOutputFrame().addText("Area  
of the selected feature (id = " + id + ") is: " + area);
```

```
}
```



JUMP WB – Extension / 3

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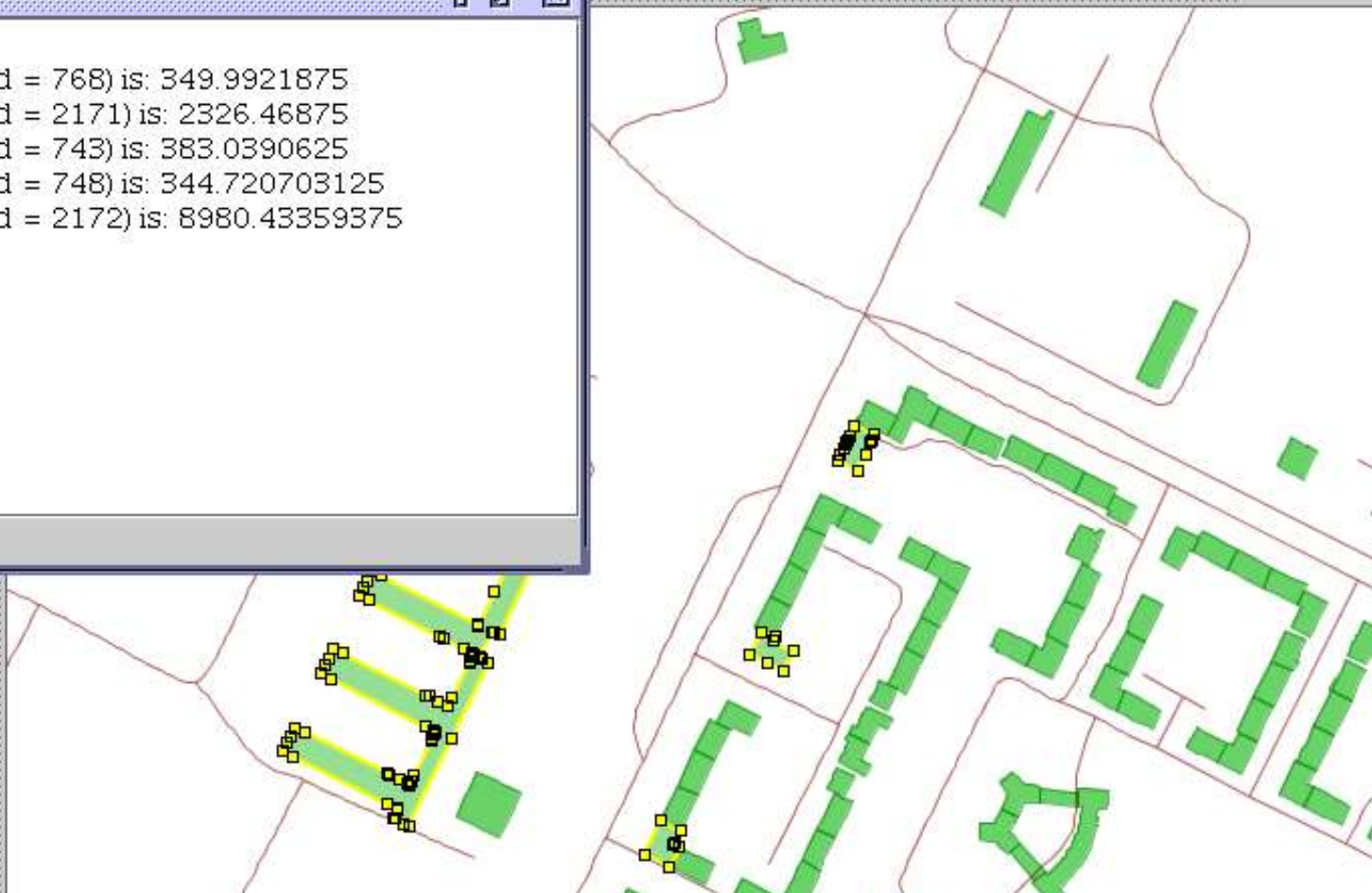
500 m

Output

Hello, World!

Area of the selected feature (id = 768) is: 349.9921875
Area of the selected feature (id = 2171) is: 2326.46875
Area of the selected feature (id = 743) is: 383.0390625
Area of the selected feature (id = 748) is: 344.720703125
Area of the selected feature (id = 2172) is: 8980.43359375

1



JUMP WB – Extension / 4

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Contact

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<http://gis.vsb.cz>

<http://gisak.vsb.cz/gportal>