

Visual Analytics Toolkit (a.k.a. CommonGIS) installation instruction

Installation of the local variant of the system

In order to install the local variant of the CommonGIS system, you should first extract the content of the provided archive with the system to some empty directory on your computer. Ensure that the directory structure of the archive is preserved. If you unpacked the archive correctly, your directory will have the following content:

- 1) several files with extension ***.jar** and ***.zip** (packed Java classes). These the CommonGIS system and the libraries it requires for its work;
- 2) file **system.cnf** specifying the path to a Web browser (the system uses it for displaying the help topics), the path to the help files, and the UI language (English or German);
- 3) batch files (having extension ***.bat**) starting the system (complete UI and student UI) and trajectory preprocessor;
- 4) subdirectory **help** with the files used for on-line help. These files having HTML format can also be read off-line using any browser. The content of the help is contained in the file /help/english/Contents.htm (or /doc/english/Contents.htm). Unfortunately, these help pages are not updated for a long time.
- 5) Subdirectory **doc** with various documentation, partly outdated.
- 6) Optionally, subdirectory **data** containing data for a few example CommonGIS applications (in further subdirectories).

In order to run the system on your computer, you need to download and install appropriate Java run-time environment (or Java SE Development Kit). Environment variable JAVA_HOME needs to be set correctly.

You can find recent releases of JRE/JDK by googling or, for example, at

<http://java.sun.com/products/>

<http://www.java.com/en/download/manual.jsp>

<http://www.oracle.com/technetwork/java/javase/downloads/jdk6-jsp-136632.html>

The system has been checked on Windows machine with Windows XP and Windows 7 64bit operation system.

You may need to edit the provided batch files. The main file **CommonGISresearch.bat** contains a command line that looks like follows:

```
@echo off
set CGIS_CLASSES=.\CommonGISResearch.jar
rem set EXT_CLASSES="c:\Program
Files\Java\Java3d\1.5.2\lib\ext\j3dcore.jar";"c:\Program
Files\Java\Java3d\1.5.2\lib\ext\j3dutils.jar";"c:\Program
Files\Java\Java3d\1.5.2\lib\ext\vecmath.jar"
set EXT_CLASSES=...
```

```

set CLASSPATH=%CGIS_CLASSES%;%EXT_CLASSES%
@echo on
java -mx16g -Djava.library.path="c:\Program
Files\Java\Java3d\1.5.2\bin" -classpath %CLASSPATH%
esda_main.RunDescartes %1
rem pause

```

A similar **StudentUI.bat** file has only a single difference: main class is `esda_main.RunStudentUI`

Similar **.sh** files for MAC users are included in the distribution.

The meaning of each command line item is explained in the table below. The table also explains which items must be changed and how.

<pre> rem set EXT_CLASSES="c:\P rogram Files\Java\Java3d \1.5.2\lib\ext\j3 dcore.jar";"c:\Pr ogram Files\Java\Java3d \1.5.2\lib\ext\j3 dutils.jar";"c:\P rogram Files\Java\Java3d \1.5.2\lib\ext\ve cmath.jar" </pre>	<p>In some system configuration Java3D does not work without explicitly specification of paths to its library. If it happens on your computer, remove “rem” in the beginning of this line and check path to Java3d installation.</p>
<pre>java</pre>	<p>Java interpreter.</p>
<pre>-mx16g</pre>	<p>An optional parameter defining how much virtual memory will be available for the Java application. If you are not going to work with large volumes of data, you may remove this item. At Windows 7 64bit operation system you can increase these values for allocating more memory to Java.</p>
<pre>%1 e.g. data/eu/eu.app</pre>	<p>This is an optional parameter. If it is absent, the system starts with an empty window. To load data in the system, use File->Load project or File->Load data. If the parameter is present, the system after its start will immediately load the data according to the specification contained in the designated file (in this example –in the file data/eu/eu.app).</p>

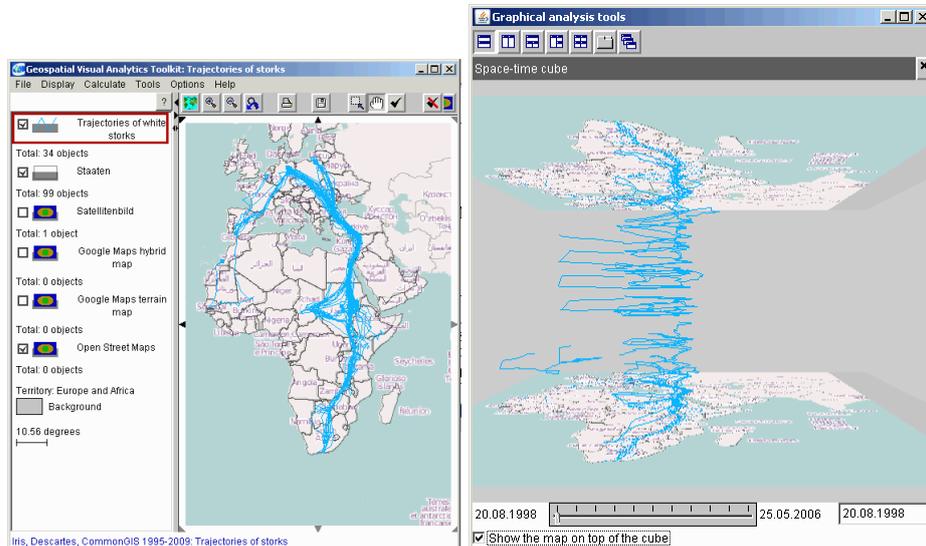
You should also edit the path to the browser in the file **system.cnf**, i.e. replace it by the actual path to the browser on your machine.

To check if everything is installed correctly, please run **CommonGISresearch.bat**. If Java is installed correctly, main window of the system should appear:



Otherwise, check error messages in CMD window. If this window disappears, remove “rem” from the last line of the batch file “rem pause” and run it again. A possible failure may be caused by too large value of –mx parameter that specifies amount of memory available to Java.

To check Java3d functionality, load project **storks.app** (File – Load project) and then display space-time cube (Tools – View Temporal Data in Space-Time Cube). The result should be like:



Another batch file, **TrajectoryPreprocessor.bat**, is used for creating trajectories in Oracle. It does not require any customization.