



Aalto University
School of Arts, Design
and Architecture

MAR-E1004 Basics of GIS: Final session

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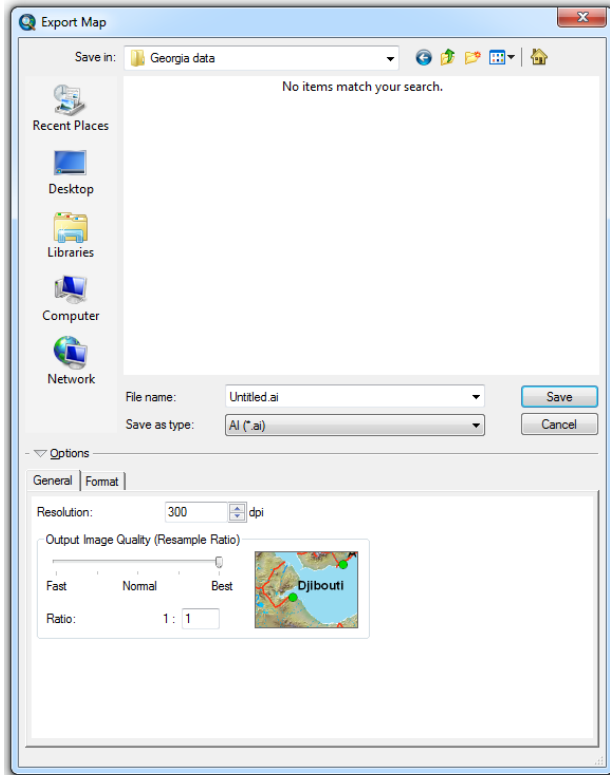
What was hoped for

- **Visualization**
- **Model builder**
- **Addition useful tools**
- **Network (routing) analysis**
- **Recap**

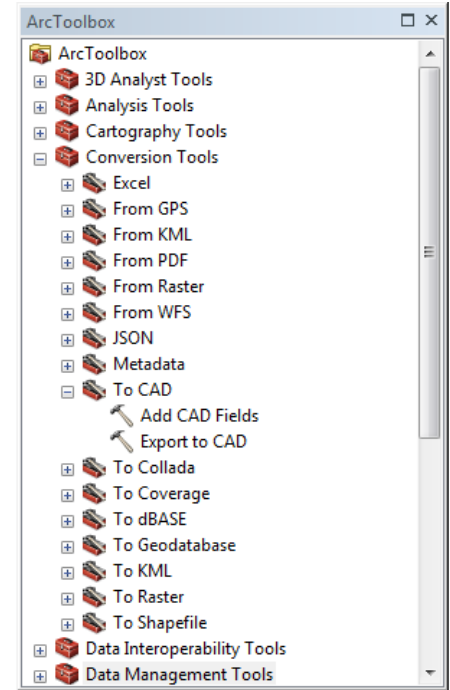
Visualization

See the slide set [S5.2_maps_in_arcgis](#)

Conversions



- **Layers and maps can be exported to CAD and Illustrator**
- **ArcToolbox -> Conversion Tools -> To CAD**
- **File -> Export Map**



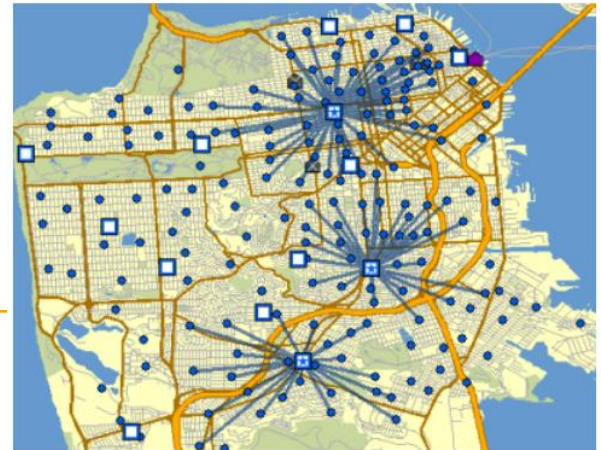
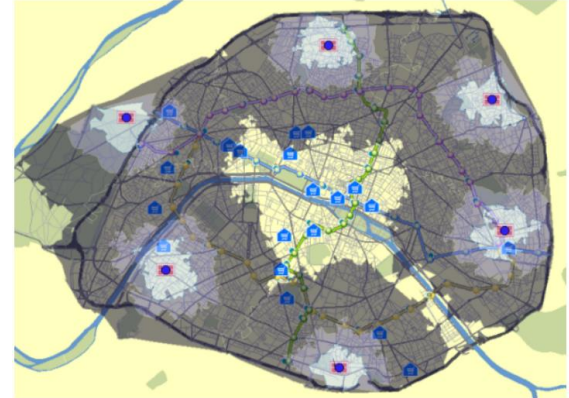
Model builder

- **Useful for storing an analysis process and repeating it**
- **Visual programming; no need for learning a language**

- **For more information, see**
<https://desktop.arcgis.com/en/arcmap/latest/analyze/modelbuilder/what-is-modelbuilder.htm>

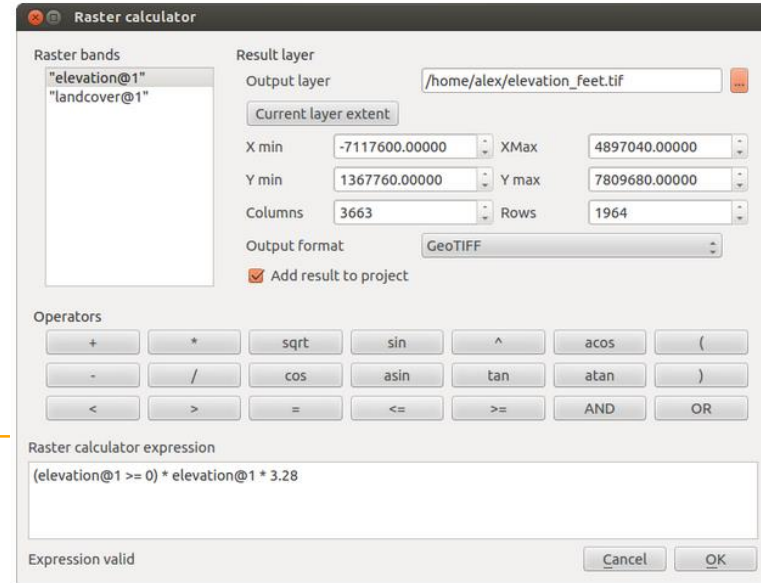
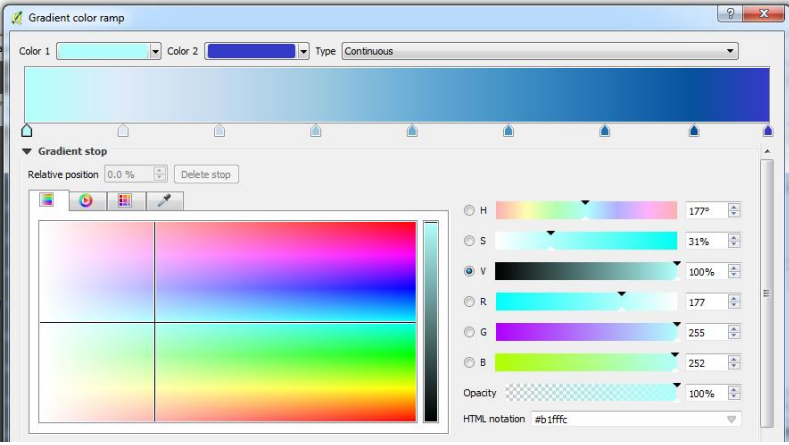
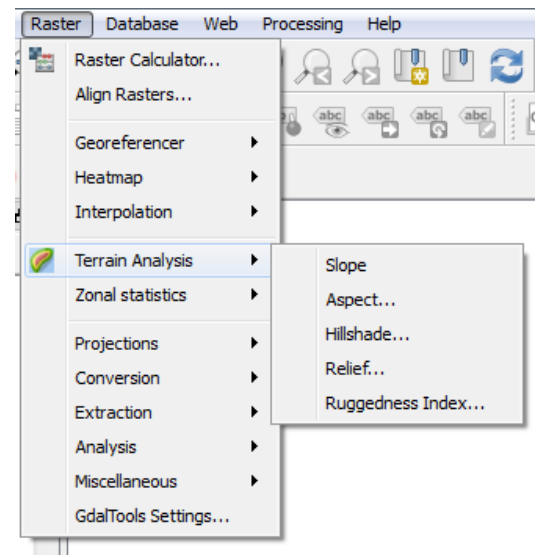
Network analysis

- Useful for calculating routes along roads
- You can, for example, calculate shortest routes between points, show areas that are accessible within a certain time limit, and find an optimal location for a hospital to minimize travelling time for customers
- For more information, see <https://desktop.arcgis.com/en/arcmap/latest/extensions/network-analyst/about-the-network-analyst-tutorial-exercises.htm>

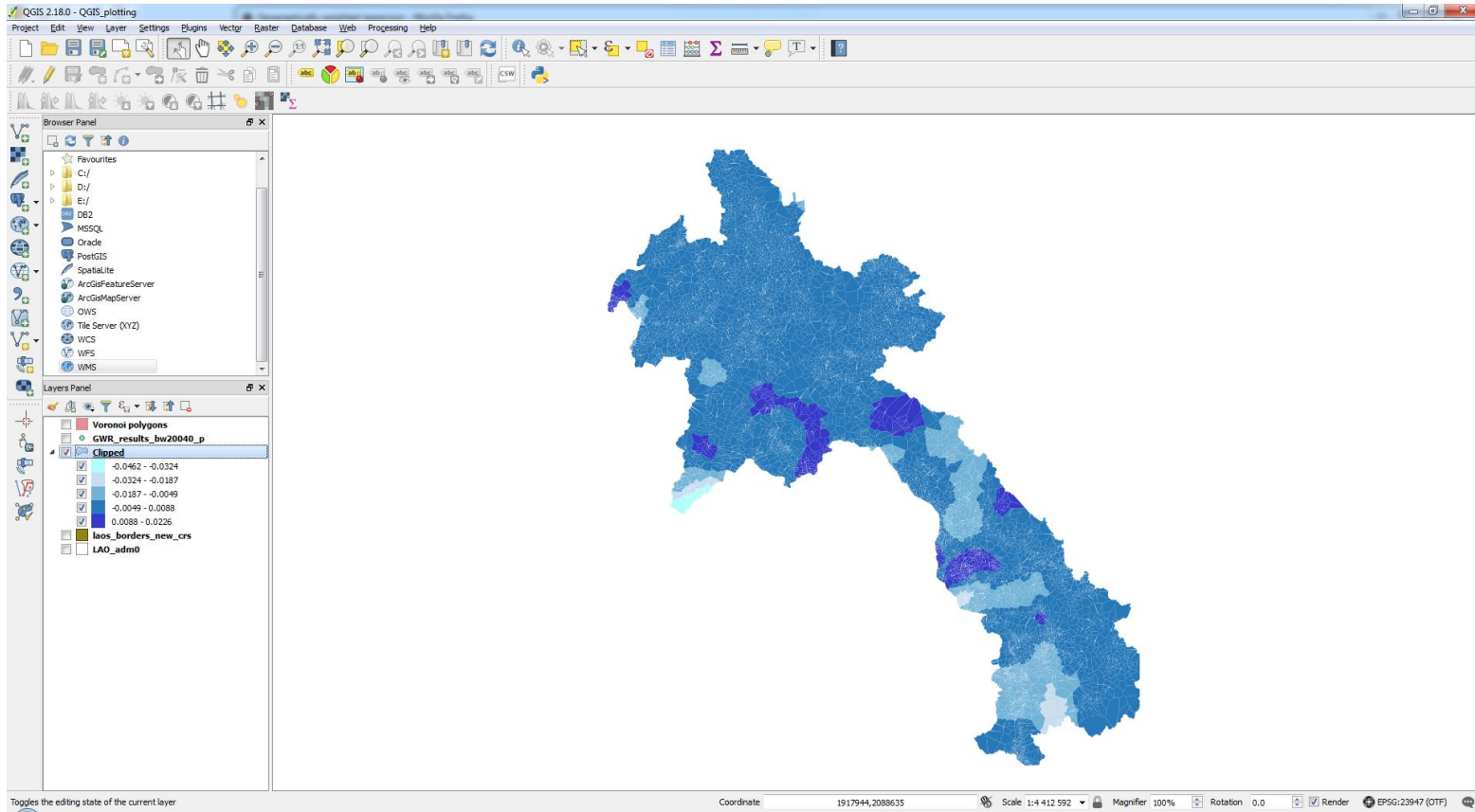


QGIS

- **Open source GIS software; available for free for Windows, Linux & MacOSX**
- **Has just about the same functions as ArcMap, just different names/locations**



QGIS



QGIS

- **Pros comparing to ArcGIS:**
 - Free, open source, wide user base
 - No troubles with Aalto networking, also faster
 - Lots of tools; users can publish their own tool
- **Cons**
 - Python required for running many tools
- **For more information, see <https://qgis.org/> and https://docs.qgis.org/2.2/en/docs/user_manual/index.html**

General solutions for ArcMap problems

- **Running tools in ArcMap can be problematic in Aalto computers. Here's a general list you can try, if the tool doesn't work**
 - Read the tool help pages to ensure you are doing everything correctly
 - Make sure you have the required extensions on from Customize -> Extensions
 - Run the tool again
 - Change the output location between the Default.gdb-folder and your own personal folder
 - If you're dealing with raster data, try running the tool with and without the extension .tif for the output layer
 - Save your work and restart ArcMap
 - Change computer