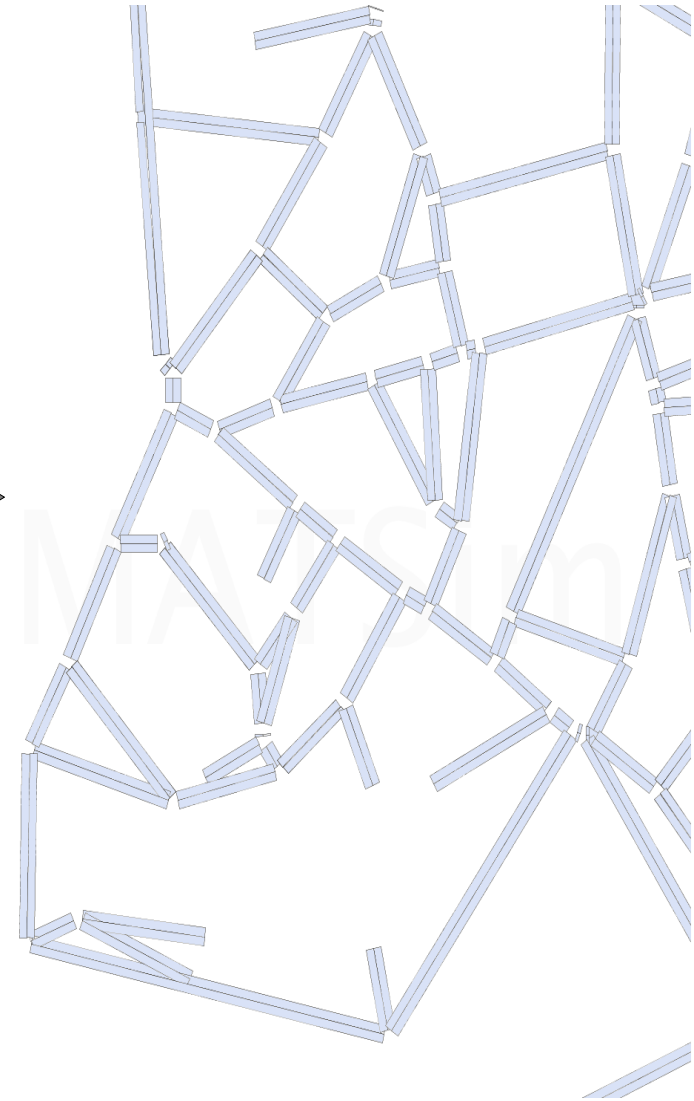
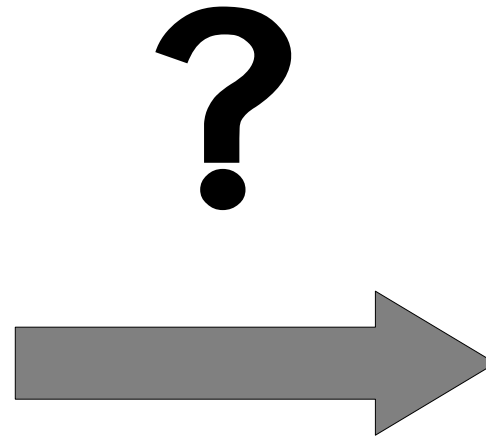


MATSim and GIS



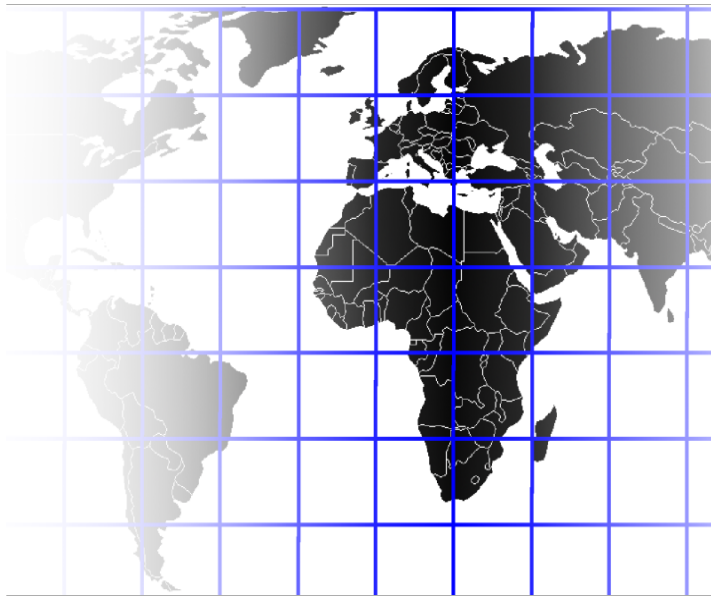


?

DEMO

A large, light gray arrow pointing from the left graph towards the right graph, indicating a transformation process.

Universal Transverse Mercator



- Grid based
- Consists of 60 zones
- Each zone has its own projection



WGS84 - World Geodetic System



- Reference geoide
- Grid of latitude, longitude and elevation

There is no need to reinvent the wheel
there are the Geotools

„Geo Tools is an open source (LGPL) Java code library which provides standards compliant methods for the manipulation of geospatial data, for example to implement **Geographic Information Systems (GIS)** . The Geo Tools library implements **Open Geospatial Consortium (OGC) specifications** ...“

Standard GIS functionality

- Geometries (Point, Line String, Polygon, ...)
- Spatial relations defined by the 9-Intersection Model (contains, intersects, disjoint, ...)
- distance measures (important for non-euclidean geometries)
- Coordinate transformation (e.g. UTM47S <--> WGS84)
- ...

Data formats

- Shapefiles (ESRI shapefile)
- GML - Geography Markup Language
- KML - Keyhole Markup Language (Googleearth)
- ...

package org.matsim.utils.geometry;
Definition of MATSim coordinates --> shared.Coord

package org.matsim.utils.geometry.transformations;
various coordinate transformation

class org.matsim.utils.geometry.
transformations.GeotoolsTransformation
coordinate transformation using geotools (any to any)

class org.matsim.utils.geometry.MGC
Converter factory for various conversion from Geotools
to Matsim and vice versa

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