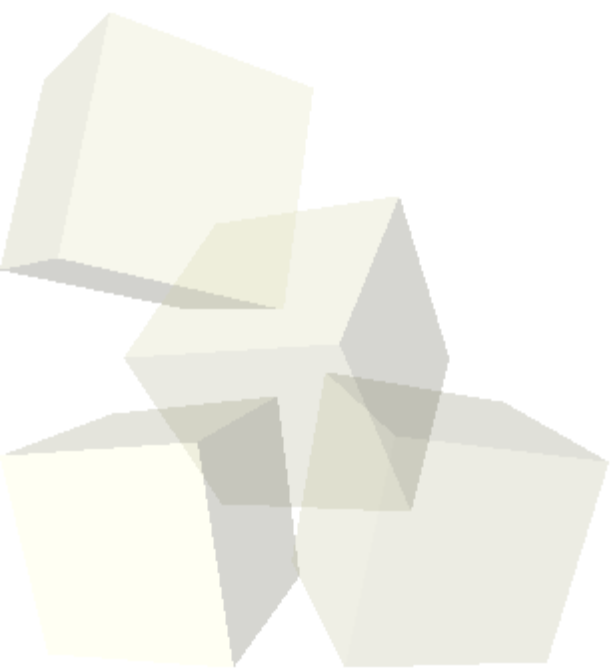


# **PrimaGIS: Web Mapping with Plone**

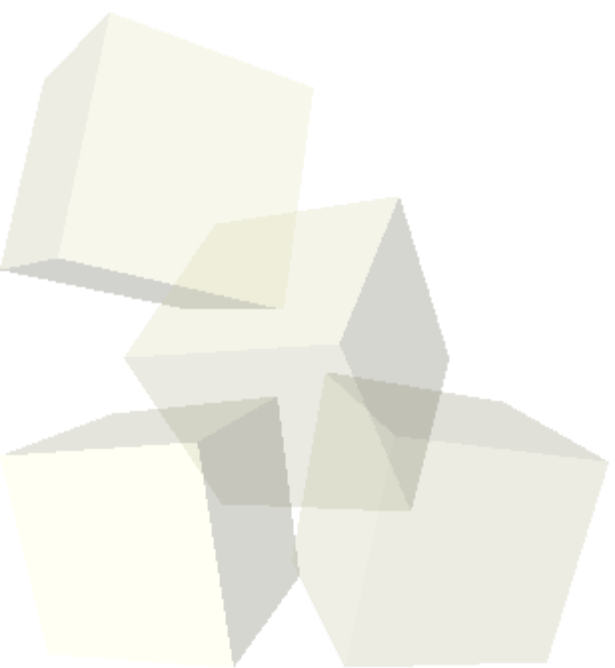
**Plone Conference  
Seattle 2006**

**Kai Hänninen**





# GIS basics





- What is spatial data?
  - ◆ Arbitrary data + Location
  - ◆ Metadata
- Raster and Vector Data
- Local vs. Remote Data Access
  - ◆ Filesystem (shapefiles, GeoTIFF, ..)
  - ◆ RDBMS (PostgreSQL, MySQL, ..)
  - ◆ Web
    - Web Map Service (WMS)
    - Web Feature Service (WFS)



- Different ways for expressing locations
- Reference frames
- Spatial units

Example: Helsinki, Finland

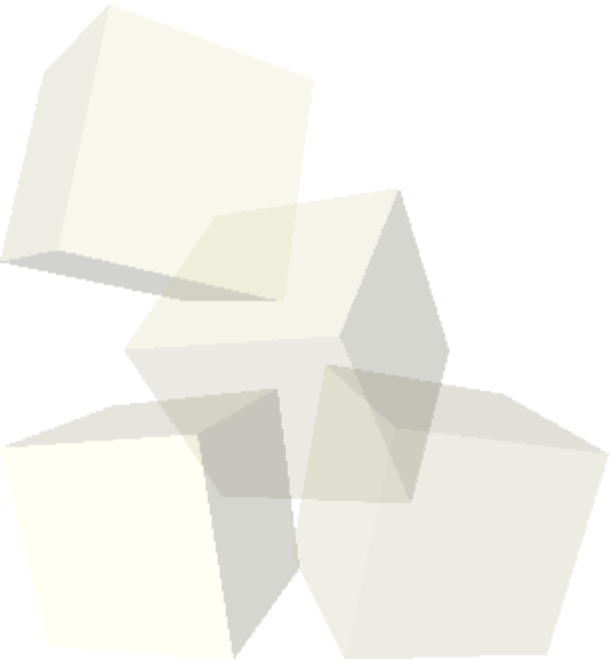
- Longitude  $24^{\circ}56'24''$ , Latitude  $60^{\circ}10'12''$  (WGS84)
- North 6674929 m, East 3385824 m (UCS)
- “80 km north of Tallinn, Estonia”

- Problem: Map coordinates from a 3D sphere to a 2D plane
- Different projections for different purposes
- Spatial Reference Systems (SRS)





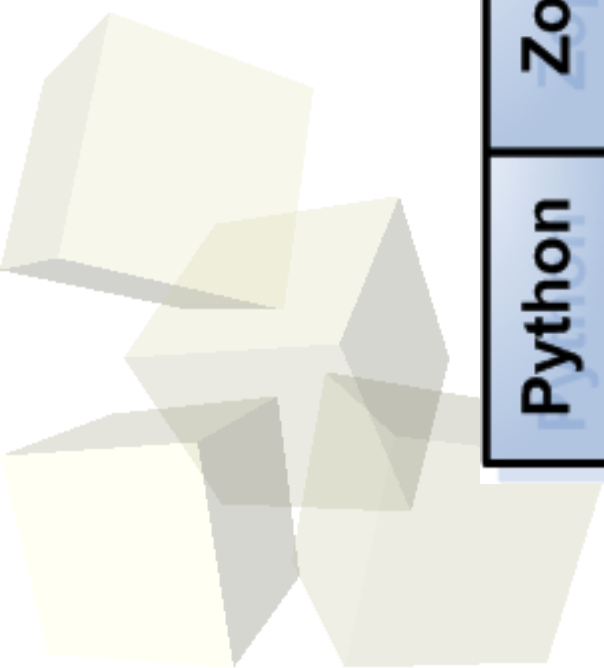
# PrimaGIS components





# Software stack

PrimaGIS components	
Plone	PrimaGIS
Zope	Cartographic Objects for Zope (ZCO)
Python	Python Cartographic Library (PCL)



- Rendering engine
- Feature model
  - ◆ Points, Lines, Polygons
- Data abstraction
- Styling
- Domain objects
  - ◆ Data stores, layers, styles, ...

- Framework for developing web mapping applications in Zope
- Map rendering service
- Persistent datastores

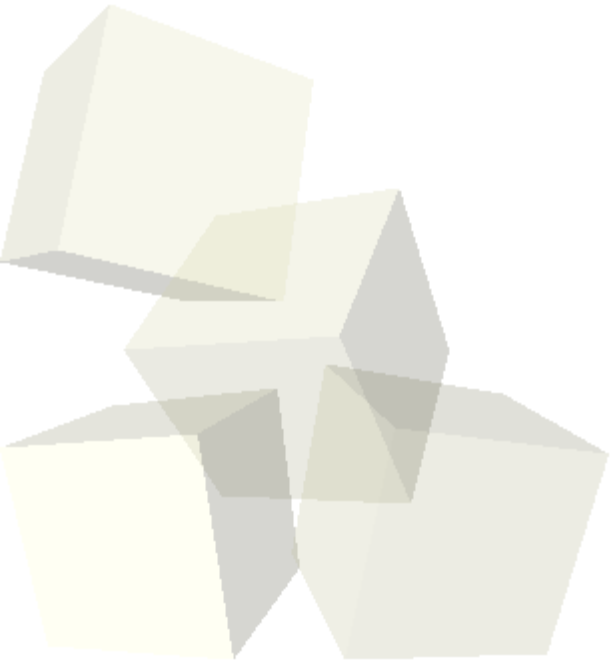


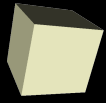


- Archetypes based web mapping application for Plone
- AJAX driven UI
- Spatial extensions for AT content types
- Supports custom spatial content
- Google Earth integration

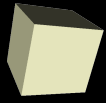


# DEMO





- Zope3 codebase
- Total rewrite of ZCO and PrimaGIS using the Zope3 Component Architecture
- Web Map Service (WMS) and Web Feature Service (WFS) support
- OpenLayers integration
- Geospatial sprint after the conference!



- Google Maps integration
  - ◆ Plone Google Maps
  - ◆ AT Google Maps
  - ◆ Map Location
- PleiadesOpenLayers
- PloneWorldKit

<http://plone.org/products/by-category/geospatial>



# Questions?

<http://www.gispython.org/>

