User-friendly Desktop Internet GIS (uDig)

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• Started uDig in 2004
• Spatial Systems Consulting Company
  – Victoria BC based
  – 25 employees
  – In business for 10 years
• Clients
  – Canada/US/International
  – Federal/Provincial/Private Sector
LISAssoft

- Spatial Systems Integration
  - Open Standards
  - Open Source
  - Australia in Sydney, Melbourne, Adelaide
    ... and Brisbane

- Clients
  - Federal / State / Private Sector
  - OGC
Other Organizations

- **CampToCamp**
  - Switzerland
  - and France

- **HydroloGIS**
  - Based in Italy
  - Hydrology and Geomorphological

- **Axios**
  - Based in Spain
  - Advanced Edit Tools
So why open source?

- We need to get the job done
  - We use open source
  - We use proprietary
- Open source our own tools allows us to share maintenance costs
- Being active allowed me to meet you (good advertising)
- Access to experts
- Sharing development risk
Geospatial Architecture

- Spatial Database
  - Concurrency
  - Transactions
  - Seamlessness
- Internet Publishing
  - Feature Access
  - Map Access

- Data Manipulation
  - Direct Access
  - Editing
  - Cartography
ESRI Architecture

Web Pages

ArcGIS Image Server

ArcGIS Server

ArcSDE

ArcGIS
Open Source Geospatial Architecture

Web Pages

uDig

Map Server

GeoServer

PostGIS
Open Standards

- WMS Context
- OWS Context
- Web Map Server
- Web Feature Server
- SFSQL
Missing Link for OpenGIS

- Directly view WMS
- Directly edit WFS
- Search Catalogs
- Integrate standard GIS data
- Hide complexity of network access
Missing Link for Open Source Spatial

- Standards GIS Functionality
- Directly Edit GIS data
- Connect to PostGIS, MapServer and GeoServer
- Create paper cartography
- Integrate with proprietary infrastructures
User-friendly

- Direct hands on experience
  - Drag and Drop
  - Responsive user interface

- Sensible defaults
  - Optimize for the 90% use case
  - Make use of all the information

- Consistency
Desktop

- A normal Desktop Application
- Desktop integration; drag and drop
- Native OS widgets
- Web Map Server
- Web Feature Server
- Catalog Service Web
- Open Web Map Context
• Working with local data
• Integrate with existing infrastructure
• Paper Cartography
uDig Software Developers Kit

- the best of the open source stack
  - Plug-in System – Eclipse RCP
  - Topology – JTS
  - Standards Support – GeoTools

- Not limited to just Java
  - ImageIO-Ext project bridging GDAL to JAI
  - OSSIM integration

- LGPL means no per seat license
Successful Projects

- DIVA GIS
  - Front end to data-warehouse using R for stats
- JGRASS
  - Hydrology Project now in the help menu
- Axios
  - Advanced Editing Tools
- LISAssoft
  - SLIP Tile Download Plugin
- Refractions
  - Populations at Risk, Line Matcher, etc...
JGrass

powered by uDig
Axios Spatial Operations

- **Operation**: Buffer
- **Source**: Creates the buffer
- **Layer**: Selected features
- **Result**: Buffer-1, Geometry
- **Options**: Width, Units Selection
- **Advanced options**
Axios Spatial Operations - Buffer

Blue Marble Next Generation, Global MODIS derived image 2

Australia

New Zealand
Eurobios Route Optimization Engine
Eurobios Route Optimization Engine
From the city of Münster Germany
OGC Web Processing Client
Chaining of data services within the process request
Manage multiple WPS instances
Log interaction with Ganymede plugin
• Arbonaut – private company out of Helsinki,
• ArboGIS - automation for forest inventory update
  – Extract forest stand information from aerial maps
  – Attach information from old inventory to new stands
• TAAKA
From uDig you can create a discussion map in Compendium about a particular icon on a map.
So Many Projects

- Eurobios Routing
- Line Cleaner
- KuvioGIS
- TAAKA
- DivaGIS
- Populations @ Risk
- EU GeoVista

- Souwhat.com
- Jgrass
- 52° North
- Axios's Spatial Ops
- SOC Transformations
- All the ones I was not allowed to talk about...
Walkthrough 1

- Grab a friend (or make a new one)
- Grab a workbook
- It's time to meet uDig