Facelift
What does “uDig” mean?

- **“User-friendly”**
  - Automatic Integration
- **“Desktop”**
  - Native client
  - Operating system integration
  - Cut and paste
  - Drag and drop

- **“Internet”**
  - OGC Web Map Server
  - OGC Web Feature Server
  - Catalogue

- **“GIS”**
  - Analysis framework
  - Printing
  - Customizable
uDig is a Framework

- uDig is a framework
- Success measured by number of adopters
Based on Mature Technologies

- JTS (Java Topology Suite)
  - JUMP, PostGIS
- GeoTools
  - GeoServer
- Eclipse Rich Client Platform
  - Lotus Symphony, IBM's Eclipse

2D Spatial predicates and functions

Java GeoSpatial Development Library

Platform for building and deploying rich client applications
Eclipse RCP

- 944 projects at Plugin Central Alone
- Strategic Members:
  - IBM, Borland, BEA, NOKIA, ORACLE, ...
  - Going to be around for a while
What does uDig add to the mix?

- Integration Platform
- Very useful product before customization
- Many many degrees of customization
Mysteries of uDig - Searching
Mysteries of uDig - On the fly reprojection
Issues

Create Issues

Priority: WARNING

Group Id: Hydrological

Description: Hydrological Inconsistencies
Mysteries of uDig - Update Manager

Select the features to install:

- features/net.refractions.udig-site.community
- Axios
- es.axios.udig.extensions 0.1.0.rc2-200
- Jan Jezek
- Transform Feature 1.0.0

Spatial Operation: Buffer, Intersect, Clip. Editing Tools:

1 of 2 selected.

- Show the latest version of a feature only
- Filter features included in other features on the list

Feature License

Some of the features have license agreements that you need to accept before proceeding with the installation.

- I accept the terms in the license agreement
- I do not accept the terms in the license agreement

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Native Widgets
Many Many Eclipse plugins to add
Common Extensions

- Custom Feature Editor
- Issue
- Catalog
- Operation

- View
- Tool
- Service
- Map Interceptor
- Layer Interceptor
JGrass

- uDig application based on the famous Grass project
- Primarily dedicated to hydrological and geomorphological analyses
- CUDAM, HydroloGIS, ICENS
JGrass
Axios Spatial Operations

Collection of Operation and Tools

- Now Available
  - Buffer
  - Intersection
  - Clip
  - Split

- Coming Soon
  - Merge
  - Trim Line
  - Arc
  - Parallel
  - Dissolve
  - Spatial Join Geometries
## Axios Spatial Operations

### Buffer Operation

- **Operation**: Buffer
- **Source**
  - Layer: Selected features
- **Result**
  - Layer: Buffer-1
  - Geometry
- **Options**
  - Width
  - Map's units
  - Layer's units
  - Units Selection

### Advanced Options
Axios Spatial Operations
Eurobios Route Optimization Engine

- Waste Collection Route Optimization Engine
- First version deployed in 7 Areas in UK and France
- Each area services 50,000 - 100,000 households
Eurobios Route Optimization Engine
52° North

- 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
52° North
Google Summer of Code - Jan Jezek

- uDig extension that adds:
  - Feature transformation
  - Feature -> Coverage Generation

- Transformation Types:
  - Rubber Sheeting (Triangulation + Affine Transformation)
  - Thin plate spline interpolation
  - Inverse distance weighted interpolation
Google Summer of Code - Jan Jezek

Inverse Distance Weighted Interpolation

Thin-plate Spline Method
Proof of Concept for US State Department
- Integrate distributed information into common framework for decision making
- OGC services based
- Third-world populations and aid response
Title: SAHIMS population by district
Description: Population information developed by the US Census using a
EU GeoViste

- Developed in Italy
- IT system for management of parks and reserves
- Framework on a framework
  - uDig as core mapping component
DIVA GIS

- UN Food & Agriculture Organization
  - International Potato Center (CIP)
  - Lima, Peru

- Map and analyze species distributions
- Works with genebank data from CIP and other laboratories
ArboGIS

- Arbonaut of Helsinki, Finland
- Private company, bid development contract with uDig as core mapping component
- KuvioGIS
- Process automation for forest inventory update
  - Extract forest stand information from aerial maps
  - Attach information from old inventory to new stands
ArboGIS

- **TAAKA**
- Automation of customer's business process
  - Automatic creation of forest land parcels
  - Inheritance of attributes from old data
  - Road building planning and ditch repairing planning
  - Reporting
ArboGIS
EcoSensus

- The Open University of the UK
- Integrates uDig with “Compendium” a concept mapping application
- “Drag and drop digitization”
From uDig you can create a discussion map in Compendium about a particular icon on a map.
Souwhat.com

- Chinese language location search site
- Building base data from scratch
- Many ambiguities need to be worked out of (and into) the data
  - "Tsinghua East Gate", "Wu Dao Kou", and "Chengfu Street" are pretty much the same place
- Used uDig to create a map of Beijing basically from scratch
Line Cleaner

- British Columbia Ministry of Forests
- Needed algorithm to remove “redundant” line work from multiple road network files
  - Building TINs and networks from the data
- Built algorithm as uDig plug-in using Geotools / JTS as core libraries
So MANY Projects!

- Eurobios Routing
- Line Cleaner
- KuvioGIS
- TAAKA
- Diva GIS
- Populations @ Risk
- EU GeoVista
- Souwhat.com
- JGrass
- 52º North
- Axios's Spatial Ops
- Transformations
- All the ones I wasn't allowed to talk about...
Free uDig T-Shirts at the Booth!

Questions?
uDig
User-friendly Desktop Internet GIS