uDig Walkthrough I

uDig installation and introduction





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I Introduction

Welcome to the User-friendly Internet Desktop GIS (uDig) application!

uDig is collaborative effort brought together by a diverse project management committee from organizations across the world:

- Andrea Antonello, <u>HydroloGIS</u> (Italy)
- Jesse Eichar, Camptocamp (Switzerland)
- Jody Garnett, LISAsoft (Australia)
- Mauricio Pazos Spain)

uDig was originally started by <u>Refractions Research</u> in Canada with funding from <u>GeoConnections</u> Canada.

uDig is intended to be used in conjunction with your existing investment in spatial information. We are of the opinion that data (your data) is what is important. To that end we support a wide range of formats, compatibility with a range of spatial databases and accessing of information services such as WMS and WFS. This information is combined with excellent desktop integration.

The use of an open source license (<u>LGPL</u>) allows the uDig project to be used by your organization with no per seat license. Any fixes you make to the core uDig codebase; do have to be passed on to your users. May we recommend submitting a patch as an easy way to accomplish this goal.

For more information and a selection of case studies:

- <u>http://udig.refractions.net/files/tutorials/uDigCaseStudies.pdf</u>
- <u>http://udig.refractions.net/gallery/</u>

In addition to supporting an open source license, uDig is also offers an open development model with clear procedures allowing your team to take part.

2 Installing and Running The uDig Application

In this section, you will install and run the Eclipse Application, which will be used for viewing map information.

Windows install:

1. Double-click the installer.

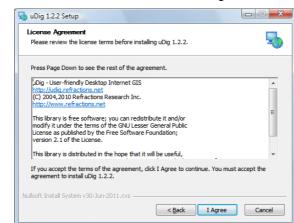


If you are in a workshop your instructor has included the uDig². installer DVD or flash drive.

The installer will allow you to install uDig into the directory of your choice.

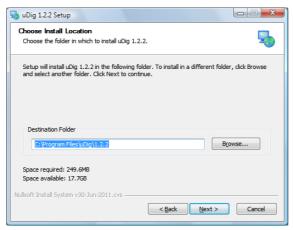


3. We have a number of license agreements to click through.





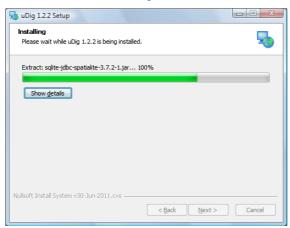
ECW/JP2 support is freely available to desktop applications. 4. By default uDig will be installed into your Program Files directory.



5. Shortcuts will be created in your start menu.

🎭 uDig 1.2.2 Setup	
Choose Start Menu Folder Choose a Start Menu folder for the uDig 1.2.2 shortcuts.	5
Select the Start Menu folder in which you would like to create the progr can also enter a name to create a new folder.	am's shortcuts. You
uDig 1.2.2	
7-ZIp Accessories active/DF Administrative Tools AniPX 1.0 Aspell Catalyst Install Manager Debugmode Extras and Upgrades	4 H
EDO Toolbox FWTools 2.2.1	-
Do not create shortcuts Nullsoft Install System v30-Jun-2011.cvs Relation of the system v30-Jun-2011.cvs	tall Cancel

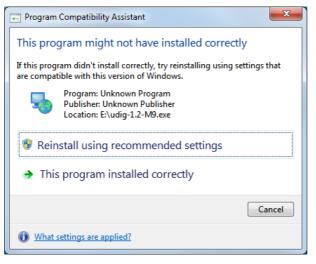
6. Please wait while uDig is installed.



7. Congratulations you have installed uDig!



• We have a known issue telling Windows 7 that the installation was successful. Please click "This program installed correctly".



3 Welcome

Now that everything is installed we can start up the application for the first time.

1. After completing the installation, run the uDig application from the Windows Start->Programs menu.



2. Initially you are presented with the uDig workbench. The uDig workbench consists of a number of panels called views.

	🌆 uDig		
	File Edit Layer Map Data Window I	Help	
	Projects 🛛 🕹 🗸 🖓 🖓 🖓		🗖 Welcome 🛛 👘 🗇 🗢 🗖
			Welcome to uDig
			Getting Started Access the introductory tutorial.
	िक Layers ⊠ 🕮 Bookmarks 🗧 🗆 े ि ि ा े ा 🖉		Official Website Check out the official uDig website.
		Gatalog ⊠ □ Web 🔗 Search 🔲 Table 🚵 💥 🖓 🗆	
		C Decoration	
u can return to			
e welcome			
reen at any			and the second sec
ne using the			
lp menu.			
ip menu.			
lp			

Help Help Contents **Tips and Tricks** Submit Log... · a link to the Official Website 🔗 Find and Install... About uDig 4. To close the **welcome view** click the **x** next word welcome.

- 3. The Welcome view runs along the right hand side of the screen. This view contains:
- a link to the Getting Started tutorial from the online documentation. We cover the use of the online documentation in the next section

4 Online Documentation and Tutorials

In this section you will open up the online tutorial, and access reference information.

1. Open up the Help menu and select Help Contents

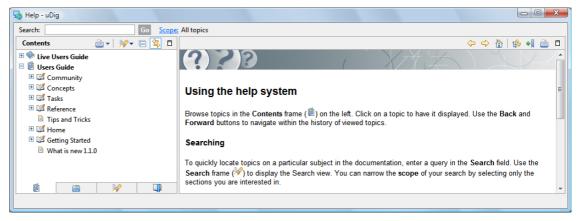
You can access
the tutorials
directly by
pressing "Getting
Started" on the
welcome screen.

Help	•
	Welcome
?	Help Contents
Ŕ	Tips and Tricks Submit Issue Find and Install
	About uDig

2. The windows firewall will need to allow the help application to startup.

Windows Secur	ity Alert	×	
💮 Windo	ws Firewal	II has blocked some features of this program	
Windows Firewall ha		e features of Java(TM) Platform SE binary on all public, private	
((Name:	Java(TM) Platform SE binary	
Ê	Publisher:	Sun Microsystems, Inc.	
	Pat <u>h</u> :	C:\program files\udig\1.2-m9\udig\jre\bin\javaw.exe	
Allow Java(TM) Platform SE binary to communicate on these networks:			
Domain networks, such as a workplace network			
Private networks, such as my home or work network			
Public networks, such as those in airports and coffee shops (not recommended because these networks often have little or no security)			
What are the risks of allowing a program through a firewall?			
		Allow access Cancel	

3. This will bring up the online help system; the help system is a web application that makes use of a **Contents** view to allow you to navigate between **Pages**.



Bhow in Table of Contents find your place in the table of contents

- 4. The Contents view organizes Pages into Books. The following books are included with the uDig application
 - User Guide
- Live User Guide live access to the uDig web site

Additional books may be available depending on the community plug-ins you have installed.

The Live Users Guide is a "wiki" allowing any member of the community to update the documentation.

4.1 HELP CATEGORIES

You can access additional reference information in the following categories:

Getting Started

 Dig User Guide Getting Started Concepts Concepts Tasks 	This section contains tutorials that will help users to familiarize themselves with UDIG and its user interface. At this time there is one tutorial available:	
	_	

Concepts

IDig User Guide Image: Image of the second seco	High-Level description of ideas, architecture. Provides background information to understand what is going on.
 Image: Concepts Im	Related concepts

Tasks

Dig User Guide Concepts Concepts	Task descriptions are step by step instructions for performing specific actions and tasks in the Workbench. For example, the Tasks section contains step by step instructions for connecting to a Web Map Server, and for adding a layer into a Map. Related tasks
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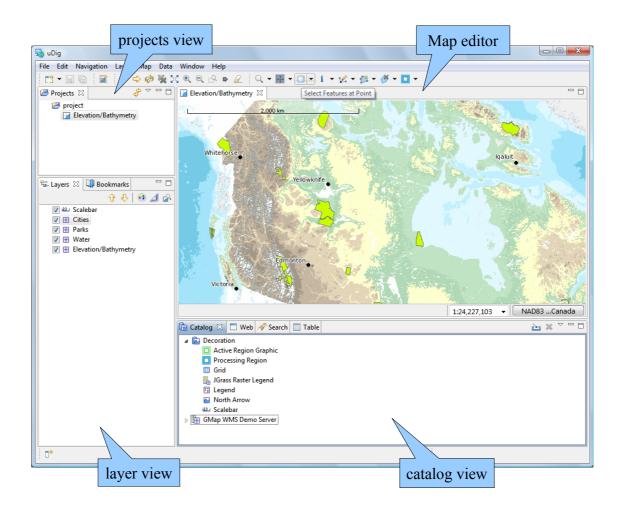
Reference

 uDig User Guide uB Getting Started uD Concepts 	Related reference
E III Tasks	 Views and editors
🗄 💷 Reference	Menus
🖽 💷 FAQ	Toolbars
	Preferences

5 The Workbench

Before we start playing with maps, let's take a look at the default layout of the uDig workbench and what some of the key components are.

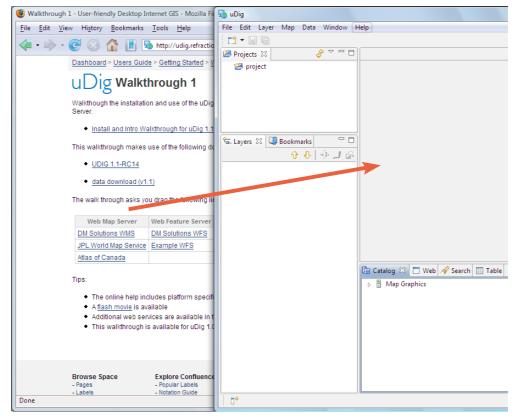
Shown below is a typical session of uDig with the Map, Projects, Layers, and Catalog views labeled. These views will be described further as we demonstrate their uses.



6 Connecting to a Web Map Server

In this section you will learn how to drag and drop a Web Map Server (WMS) link into uDig for the purpose of viewing its layers.

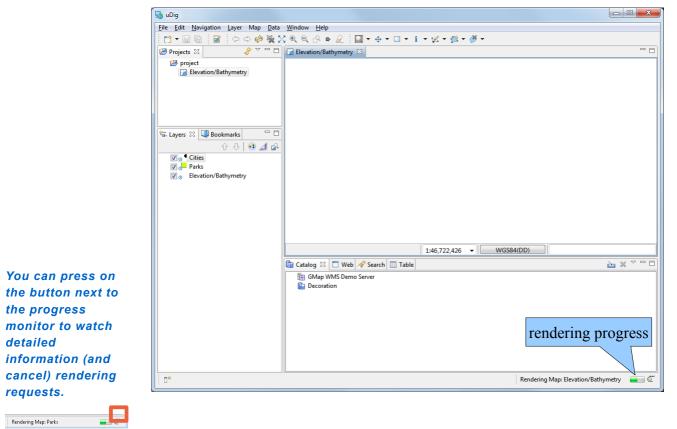
- 1. There are many ways to load map data into uDig, including drag and drop. To drag a Web Map Server (WMS) link into uDig, open up a web browser.
- 2. Please connect to the Walkthrough 1 page with your web browser:
- <u>http://udig.refractions.net/confluence/display/EN/Walkthrough+1</u>
- 3. Click and drag the DM Solutions WMS link from the web page onto the Map Editor on the left, and drop it there.



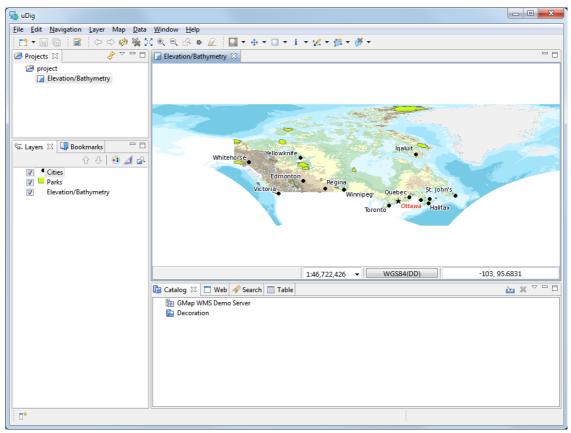
If working with your windows maximized: 1) Drag from the web browser 2) Hover on the uDig application in the windows task bar to switch applications 3) Drop into the Map Editor. 4. The **Add Layers** wizard will appear asking you what layers from this WMS you want to show in your map. Select **Elevation/Bathymetry, Parks, Cities** and press the **Finish** button.

👆 Add Data	
Resource Selection Please select a resource.	+••
GMap WMS Demo Server GMap WMS Demo Server GMap WMS Demo Server Elevation/Bathymetry Foreign Lands P arks O Parks O Trainage O Trainage O Province A Federal Limit A Railroads O Roads O Cities O Grid Resources Selected: 3	
< <u>B</u> ack <u>N</u> ext > Finish	Cancel

5. The map layers will now **render** in the Map view. Notice the bottom right corner of the uDig Application will display a **processing notice** while it is requesting and drawing the layers.



6. When the layers are done rendering, the **Map** view will display the visible layers



The mouse scroll wheel can be used to zoom in and out quickly regardless of the currently selected tool.

7. Now that you have some data on screen try the following tools:

– Q Zoom Tool: (keyboard short cut Z)

Click or drag the left button to zoom in, or right button to zoom out.

Click and drag to move the display.

– 🔀 Extent Tool: Press to show all layers enabled in the Layers View

The Layers view shows the order in which layers are drawn. Please select the Cities 8. layer and press the Move up button from the Layer view toolbar.



9. The order is now changed. You can also

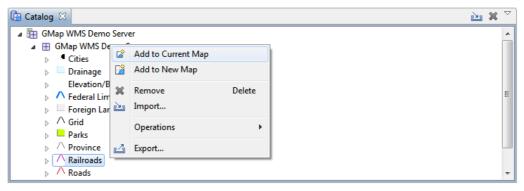
drag layers up	😼 Layers 🛛 💷 Bookmarks	
and down in the	ት 🗘 🐽	⊿ 🖧
layer view to change the order.	✓ ★ Cities ✓ Parks ✓ Elevation/Bathymetry	

7 Adding Layers from the Catalog View

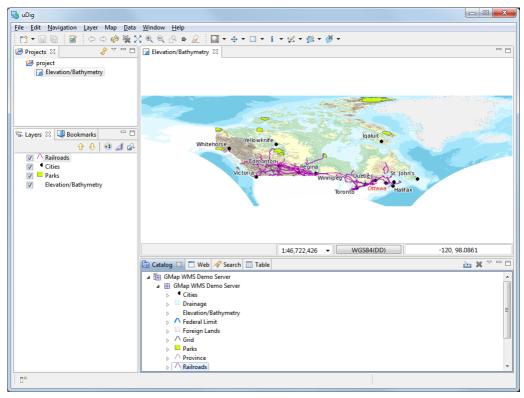
In this section you will learn how to add additional layers to your map from a previously connected data source (the DM Solutions WMS).

Adding a Layer from a previously connected WMS:

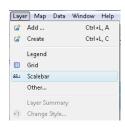
 In the Catalog view of uDig expand the Catalog record for the DM Solutions' WMS Demo Server by clicking on the triangle beside the record. Right-click on Railroads and select Add to Current Map.



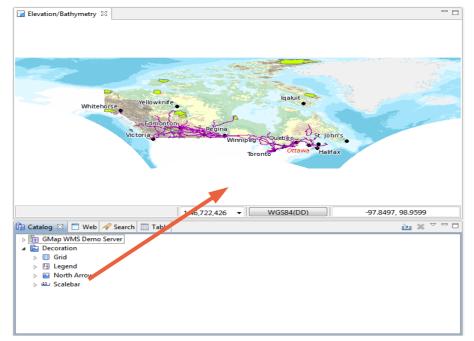
2. The new layer will appear in the **Layers** view, and it will automatically start to render. When it finishes rendering, you should see a new borders layer drawn as purple lines.



Decorations are also available directly from the Layer menu.



3. The catalog also comes equipped with a built in service called "Decoration". Select **Decoration > Scalebar** in the Catalog view and drag this layer onto the Map



8 Adding a Layer from PostGIS

This section shows how you can add a Layer from a PostGIS table. PostGIS is an extension to the popular open source PostgreSQL database. uDig handles other databases like Oracle and DB2 in a similar manner:

If you are trapped behind a firewall please feel free to skip this section.

The online help does have some advice about "Runnin uDig"

1. In the File menu, select New -> New Map.

😼 u	Dig							
File	Edit I	Navigation	Layer	Map	Da	ta	Window	Help
	New			•	Ê	Ne	w Layer	
	Close		Ctrl+	w		Ne	w Map	
	Close A	П			1	Ne	w Project	
	Save		Ctrl+	⊦S	1	Otł	ner	

- behind a firewall. 2. In the Projects view, right-click on Map and select Add.

😕 Projects 🛛		Ŷ	~	🛃 Ele
 ▲ EP project ▶ Elevation/Bathymetry ▶ Map 				
		Open		
		Open Project		
	×	Delete	De	lete
		Rename		
😼 Layers 🖾	Ľ	Add	Ctrl +	L, A
,		Operations		•
	4	Export		
		Properties		

3. Select **PostGIS** as the data source and click **Next**.

No Add Data		x
Data Sources	4	
Connect to a PostGIS Server.	1	2
ArcSDE		
DB2		
☐ Files		
Map Decoration		
MySQL host		
Cracle Spatial		
PostGIS		
Web Feature Server		
111 Web Map Server		
111 Web Map Server Tile Cache (WMSC)		
< Back Next > Einish	Cance	el

4. Enter the following connection information: Host: www.refractions.net Port: 5432 Username:demo Password:demo Store Password:check

둸 Add Data			×
PostGIS Connect to a PostGIS	Server.	4	2
Previous Connections			•
Host:	www.refractions.net	Port:	5432
User Name:	demo		
Password:	••••		
Store Password			
Remove Connection			
	< <u>Back</u> <u>N</u> ext > <u>Finish</u>	Canc	el

Once the connection information is entered press Next.

This page lists the databases available to the current user. The <u>www.refractions.net</u> does not publish a public list – so rather then choose from a nice easy list we are going to have to enter in "demo-bc" by hand.
 Database: demo-bc

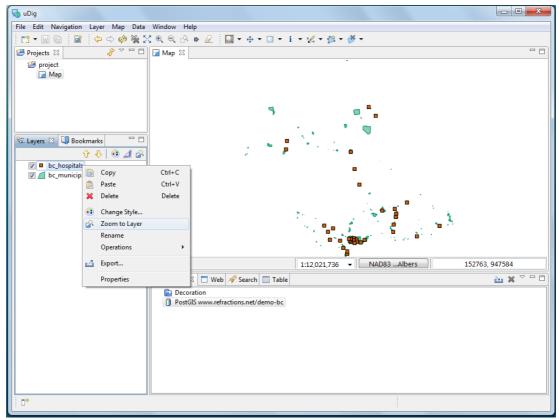
👆 Add Data					
Connection A You do not have permissions to access the list of all databases, Please enter the database to connect to					
Database demo-bc			-		
List Table Filter			Public Schema		
Table	Schema	Geometry Name	Geometry Type		
bc_border	public	the_geom	LINESTRING		
bc_hospitals	public	the_geom	POINT		
V bc_municipality	public	the_geom	POLYGON		
bc_pubs	public	the_geom	POINT		
bc_voting_areas	public	the_geom	MULTIPOLYGON		
< <u>Back</u> <u>N</u> ext > <u>Finish</u> Cancel					

6. We can now press the List button to list the available tables. Please choose **bc_hospitals** and **bc_municipality** and press **Next**.

7. The resource collection page confirms that **bc_hospitals** and **bc_municipality** are published as spacial layers. We can press **Finish** to add these layers to our Map.

No Add Data	
Resource Selection	+ -
Please select a resource.	
PostGIS www.refractions.net/demo-bc	
🔲 🔁 public	
🔲 🖬 bc_border	
✓ ■ bc_hospitals	
🔽 📶 bc_municipality	
bc_pubs	
🔲 📶 bc_voting_areas	
Resources Selected: 2	
< <u>B</u> ack <u>N</u> ext > <u>F</u> inish	Cancel

- 8. It may take a short while to fully render since you are zoomed out so far.
- 9. Head on over the the Layer view and right click on **bc_hospitals** layer in order to choose **Zoom to Layer**



The map will now zoom in to show the extent of the bc_hospitals layer.

10. You can return to your previous position in the world by selecting Back in the Navigation menu.

Zoom to Layer is very useful when adding new layers that happen to be off screen or not visible at the current scale.

You can also

select Back on

the tool bar, a history of your position is kept similar to a web

browser.

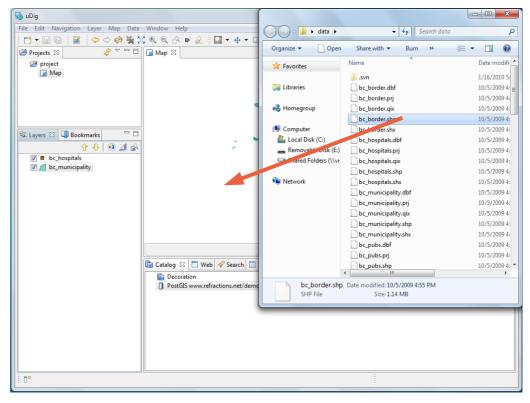
9 Working with Files

You can work directly with files from the file system:

1. Please connect to the Walkthrough 1 page with your web browser:

You instructor has placed the data directory on your 2. dvd – please copy this folder to your machine prior to use. 3

- You instructor has . http://udig.refractions.net/confluence/display/EN/Walkthrough+1_
 - . Click on the data "data download" link and save the zip file to your local computer. At the time of writing the file was:
 - http://udig.refractions.net/files/data/data_1_2.zip
 - 3. Unzip the download to create your **data** directory. The **7-Zip** application is recommended.
 - 4. Drag and Drop the file bc_border.shp onto your open Map5

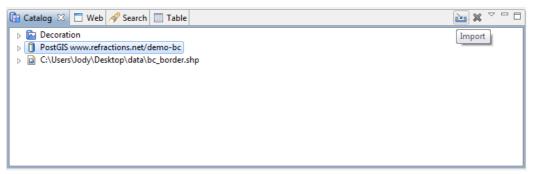


5. This provides a bit of context for your PostGIS layers. When working with uDig you will often find yourself combining information from several different sources.

10 Import Directly to The Catalog

Earlier we learned how to work with content from the Catalog view, in this section we will import content directly into the catalog.

1. On the Catalog View please press the Import button:



2. Select Data and press Next.

S Import	
Select Import from a data source.	Ľ
Select an import source: type filter text Data Import imagery folder as mosaic	
< <u>B</u> ack <u>N</u> ext > <u>F</u> inish	Cancel

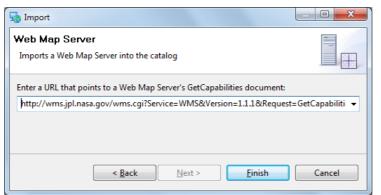
3. Please choose Web Map Server from the list and press Next.

Namport	
Data Sources Imports a Web Map Server into the catalog	
🕅 🕅 ArcSDE	
DB2	
🖬 Files	
Map Decoration	
MySQL host	
📝 Oracle Spatial	
1 PostGIS	
Web Feature Server	
Web Map Server	
🖽 Web Map Server Tile Cache (WMSC)	
< <u>B</u> ack <u>N</u> ext > <u>F</u> inish	Cancel

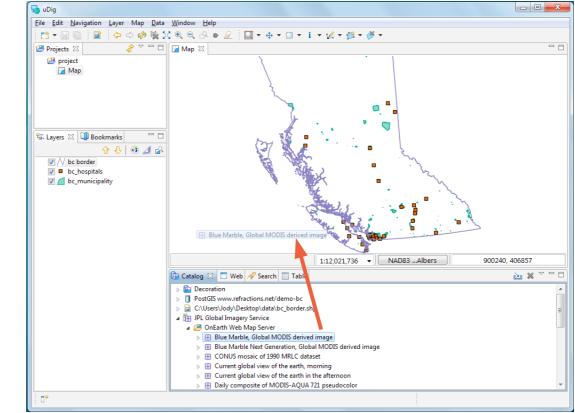
4. This time we are going to import the JPL World Map Service from the following Capabilities document:

You can copy this URL from the walkthrough page.

- <u>http://wms.jpl.nasa.gov/wms.cgi?Service=WMS&Version=1.1.1&Request=GetCapabilities</u>
- 5. Press Finish to import the Web Map Server into the Catalog view.



6. Now that we have imported the WMS into the catalog we can add it to our Map. Please Drag and Drop the **Blue Marble, Global MODIS derived image** layer directly onto **Map**



 Earlier we used the the layer view to reorder using the up and down buttons, this time we will drag the layers into the right order. Select the **Blue Marble** layer in the layer view and drag it to the bottom of the list.



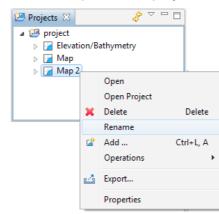
You can also try dragging a layer from the catalog view directly into the layer view.

The JPL server is very busy; if the layer does not render you can look for a warning in the status bar. You may try another layer or the downloaded bluemarble.tif

II Themed Data

Some data contains attributes we may use to thematically style a layer. In this section we will create a "Styled Layer Descriptor" (SLD) with the uDig **SLD Editor** in order to interpret these attributes:

- 1. Create a new map using File > New > New Map
- 2. Select "Map 2" in the project view, and right click to choose Rename.



- 3. Enter the name "Blue Marble" and press OK.
- 4. In the Layer menu, select Add...
- 5. Choose Files from the provided list and press Next

😼 Add Data	
Data Sources Open one or more files	
Image: ArcSDE Image: DB2 Image: Files Image: Map Decoration Image: MySQL host Image: MySQL host <t< td=""><td></td></t<>	
< <u>B</u> ack <u>N</u> ext > <u>F</u> inish	Cancel

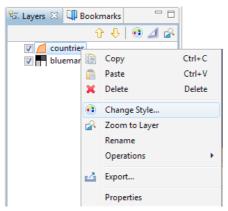
6. Select the following files from the data directory: **bluemarble.tif**

countries.shp

You will need to hold down the control key when selecting multiple files.

Solution Open			×	-
😋 🗢 🗣 🕨 🗸 🗸		✓ 4 Search	data	P
Organize 🔻 New folde	er		:= - 1 0)
☆ Favorites	Name	Date modified	Type Si:	^
	bc_hospitals.shp	10/5/2009 4:55 PM	SHP File	
🔚 Libraries	bc_municipality.shp	10/5/2009 4:55 PM	SHP File	
	bc_pubs.shp	10/5/2009 4:55 PM	SHP File	
🍓 Homegroup	bc_voting_areas.shp	10/5/2009 4:55 PM	SHP File	
	🛃 bluemarble.tif	6/9/2005 10:17 AM	TIFF image	Ξ
💻 Computer	cities.shp	10/5/2009 4:55 PM	SHP File	
	🔄 clouds.jpg	10/5/2009 4:55 PM	JPEG image	
年 Network	countries.shp	10/5/2009 4:55 PM	SHP File	_
_	newyork_census.shp	10/5/2009 4:55 PM	SHP File	
	statscan_roads.shp	9/22/2007 6:30 AM	SHP File	-
	•	III	•	
File <u>n</u>	ame: "bluemarble.tif" "countries.shp"		if;*.tiff;*.sid;*.ecw;*.img; 💌	
			en Cancel	

- 7. Press Open and **both** layers will be added and rendered with a default style.
- 8. The default style for the **countries** layer is slightly transparent so can see the base raster layer.
- 9. Right click on the countries layer and select Change Style



- 10. The Style Editor is arranged into a series of pages, you can use the **Simple** style page to add labels to the countries **layer**.
- Check the box next to Label
- Choose "CNTRY_NAME" from the list.

You can experiment with	Style Editor	
other settings, use the Set Font button to change to a lighter color that will show up against the WMS layer.	type filter text he v Simple Feature Theme XML	Theme Attribute: Classes: Break: Normalize: Else: POP_CNTRY Solution Show: All Solution Solution Show: All Solution Soluti
	Import Exp	Defaults Revert Apply cont OK

- 11. You can press the **Apply** button to see what your map will look like with labels.
- 12. Please switch to the **Theme** style page and select the following options:
- Attribute: POP_CNTRY
- Normalize: SQKM

Style Editor		
type filter text he 🔻	Theme	↔ • ⇔ •
Simple Feature Theme XML	Attribute: Classes: Break: Normalize: POP_CNTRY 5 Quantile SQKM Show: All SQKM Palette: SQKM Accents: includes lightness and saturation extremes to accent s Blues: light to dark blue BrBG: dark brown to light to dark blue-green BuGn: light blue to dark green BuGn: light blue to dark purple Dark2: darker version of Set 2 GnBu: light to dark gray Greens: light to dark green OrRd: light to range to dark red	Else:
Import Exp	Ort Cancel	Apply OK

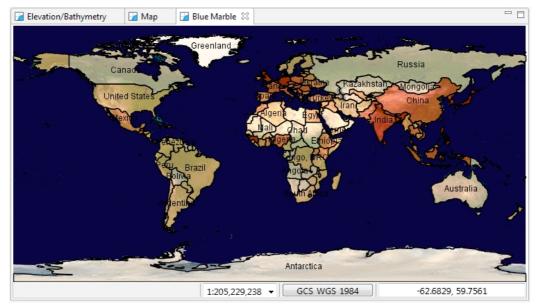
These options will color the countries layer by population density.

- 13. Filter the available colour palettes to show a subset of those available:
- Changing from show "All" to show "Sequential"
- Press the Colour-blind, LCD and CRT buttons

which are a ramp – Select the "light orange to dark red" palette

type filter text he 👻	Theme 🔶 👻 🖒
Simple Feature Theme XML	Attribute: Classes: Break: Normalize: Else: POP_CNTRY 5 Quantile SQKM HIDE Show: Sequential Palette: All OrRd: light orange to dark rei Oranges: light to dark orange PuRd: light purple to dark rec Categorical VIOrBr: light yellow to orange to dark brown
	Defaults Revert Apply

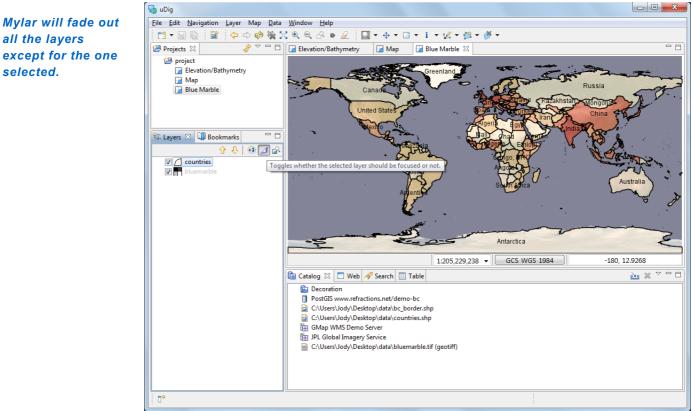
14. Press the **OK**button



These options show palettes which are a ramp of color suitable for viewing by color blind people on either an LCD or CRT monitor. 15. Open up the Layer menu and choose Legend



16. Press the Mylar button in the Layers View. Select each layer and observe the effect.



all the layers

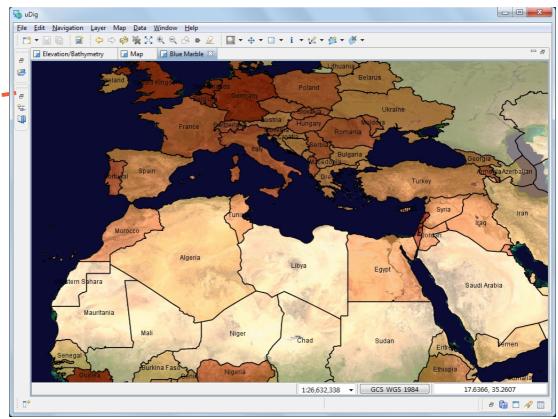
selected.

Your layer view is still available on the left hand side of the screen.

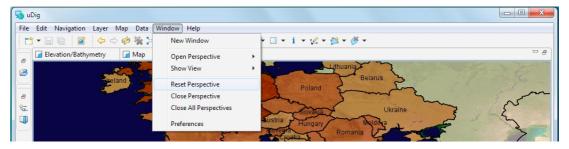
8



Your layer view is 17. Double click on the **Blue Marble** tab at the top of the screen to maximize the editor. Use using the zoom tool to explore the world while the editor is maximized.



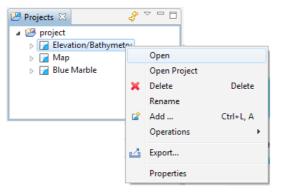
18. Double click on the "Map tab" at the top of the screen to restore the previous size. You can use **Reset Perspective** from the **Window** menu to restore any views you accidentally close during experimentation.



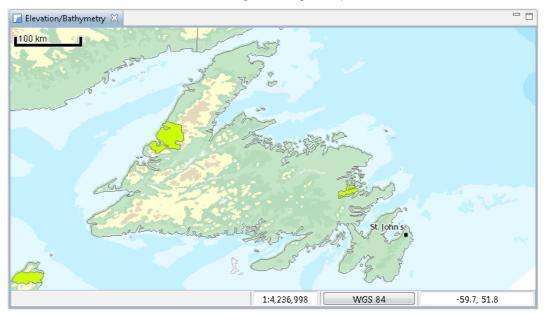
12 Information Request

In this section, you will learn how to use the Information Tool.

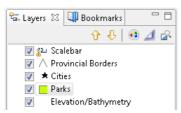
1. Let us open up our first map again, which was labeled Elevation/Bathymetry



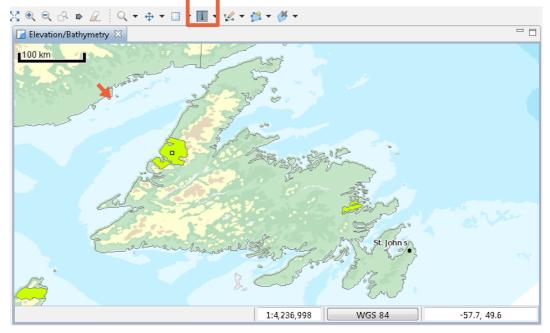
2. Let's zoom to somewhere interesting, like a green park.



3. Select the Parks layer in the layer view



You can also double click on a Map to open it. 4. Change to the Info Tool in the tool bar, and click on a Park.



5. The **Information View** is brought into focus, showing information about the park layer at the location you clicked.

📴 Catalog [🗂 Web 🔗 Search 🔲 Table 🚺	Information	×	i	- 8
Cities					
Parks					*
	Name	Year Est.	Area (sq.km)		
	Gros Morne National Park	1970	1942.500		
				 	Ŧ

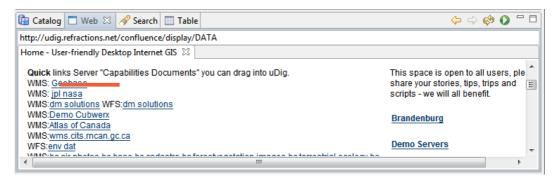
- 6. You can switch to requesting information on another layer on the **left pane**. Available information, if any, is displayed on the **right pane**.
- 7. Not all Web Map Servers support the "GetFeatureInfo" operation; as such information may not be available for all layers. The application uses a normal browser to display HTML content; you can drag the view out of the workbench if you find you need more elbowroom.

You can use the keyboard shortcut 'i' to choose the info tool

13 Web View

In this section you will learn how to use the embedded web browser:

- 1. Create a **New Map**, and press the tab for the **Web** view (located along the bottom of the window near Catalog).
- 2. Click on the WMS link for dm solutions.



Web Catalog with your own website for easy spatial visualization.

You can use the

3. The Add Layer wizard will open (uDig can recognize links to spatial content). Choose the **Parks, Provice, Roads** and **Cities** and press **Finish**

👆 Add Data						
Resource Selection +						
Please select a resource.						
< Back Next > Finish	Cancel					

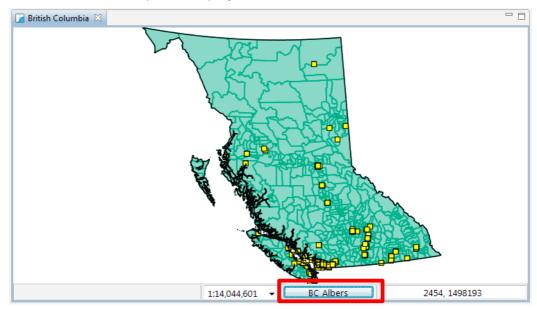
14 Re-projection

Since the world is not flat, maps are projected to line up with a Co-ordinate Reference System (CRS).

1. Create a new map using the bc_border, and bc_pubs shapefile and bc_voting areas shapefiles.

🔾 🗸 🖡 k data	▶	✓ 4 Search	adata 🔎
Organize 🔻 New fo	older		
쑦 Favorites	Name	Date modified	Type Si:
	遤 .svn	1/16/2010 5:32 PM	File folder
🥽 Libraries	bc_border.shp	10/5/2009 4:55 PM	SHP File
	bc_hospitals.shp	10/5/2009 4:55 PM	SHP File
🤣 Homegroup	bc_municipality.shp	10/5/2009 4:55 PM	SHP File
	bc_pubs.shp	10/5/2009 4:55 PM	SHP File
🖳 Computer	bc_voting_areas.shp	10/5/2009 4:55 PM	SHP File
	🛃 bluemarble.tif	6/9/2005 10:17 AM	TIFF image
辑 Network	cities.shp	10/5/2009 4:55 PM	SHP File
	Clouds.jpg	10/5/2009 4:55 PM	JPEG image
	countries.shp	10/5/2009 4:55 PM	SHP File
Fil	e <u>n</u> ame: "bc_voting_areas.shp" "bc_borde	er.shp" "bc_pubs.sh; 🔻 🛛 *.asc;*.t	if;*.tiff;*.sid;*.ecw;*.img; 🔻
		Op	en Cancel

 The map will take on the coordinate reference system of the added layers. You can right click on bc_border and use **Operation > Set Map Projection from Layer** to use "BC Albers" - this is an equal area projection.



3. Press the "BC Albers" button to bring up the CRS Chooser.

4. This brings up the a preference page allowing you to change the Coordinate Reference System for your map. Please enter in **4326** and press enter to re-project the map to the "World Geodetic System 1984" CRS commonly used to represent lat/lon information.

Coordinate Systems	Coordinate Systems	
	Standard CRS Custom CRS	
	Coordinate Reference Systems:	
	4326	
	WGS 84 (4326)	
	Restore <u>D</u> efaults	<u>A</u> ppl
	ОК	and

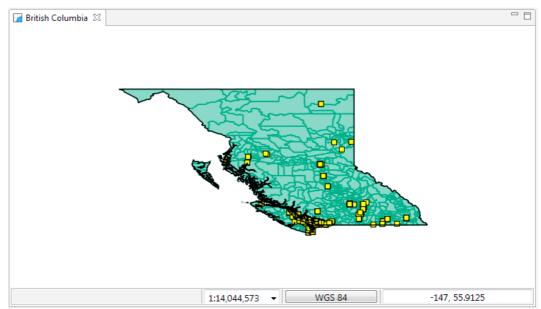
5. You can have a look at the formal definition of "EPSG:4326 by switching to the "Custom CRS" tab

The definition is provided in "Well Known Text" you can use this format for your own custom CRS.

You can also search by name, try typing in "WGS84" to list

matching projections

Coordinate Systems	Coordinate Systems
	Standard CRS Custom CRS Keywords:
	Coordinate Reference System WKT:
	GEOGCS["WGS 84", DATUM["World Geodetic System 1984", SPHEROID["WGS 84", 6378137.0, 298.257223563, AUTHORITY["EPSG", "7030"] AUTHORITY["EPSG", "6326"]], PRIMEM["Greenwich", 0.0, AUTHORITY["EPSG", "8901"]], UNIT["degree", 0.017453292519943295], AXIS["Geodetic longitude", FAST], AXIS["Geodetic latitude", NORTH], AUTHORITY["EPSG", "4326"]]
	۲ (الساب
	Restore Defaults Apply
	OK Cancel

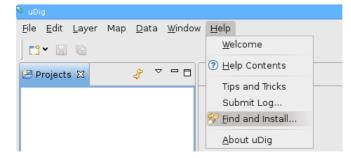


6. Press the **OK** button to change the coordinate reference system of your map.

15 Community

One of the nice things about uDig is the ease to download and install additional plug-ins provided by the developer community.

1. Open up **Help > Find and Install**



2. Select Search for New Features to Install and press Next

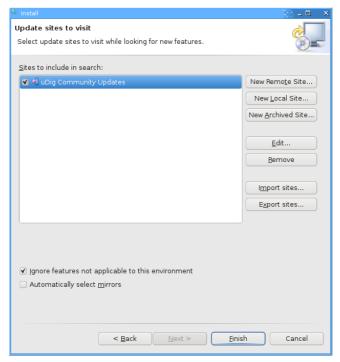
🤨 Install/Update	_ 🗆 🛛 🗡
Feature Updates Choose the way you want to search for features to install	
\bigcirc Search for <u>u</u> pdates of the currently installed features	
Select this option if you want to search for updates of the features you already installed.	have
Search for new features to install	
Select this option if you want to install new features from existing or new update Some sites may already be available. You can add new update site URLs to the	
< <u>B</u> ack <u>N</u> ext > <u>F</u> inish	Cancel

3. Press the New Remote Site button and type the following parameters: Name: uDig Community Updates

URL: http://udig.refractions.net/update/1.2/community

🎐 New L	Ipdate Site 🗾 🛁 🗙
Name:	uDig Community Updates
URL:	://udig.refractions.net/update/1.2/community
	OK Cancel

4. Check the new uDig Community Updates option and press Finish



5. Please wait while the program checks the update site for new features.

5	Update Manager	800 - E	×
	Searching		
	Checking uDig Community Updates		
	checking abig community opdates		
	□ Always r <u>u</u> n in background		
	Run in <u>B</u> ackground Cancel	<u>D</u> etails >>)

6. Once the program finishes getting the complete list of plug-ins, you will see something like this:

S Updates	_ 🗆 🗙
Search Results Select features to install from the search result list.	¢
Select the features to install:	
👻 🖃 🖏 uDig Community Updates	Deselect All
🗸 🖃 🚥 Axios Extensions for uDig	More Info
🗹 🏇 es.axios.udig.editingtools 1.3.0.201006141043	
🔲 🏇 es.axios.udig.spatialoperations 1.3.0.201006141043	Properties
 Image: Image of the second seco	<u>S</u> elect Required
JGrass Import-Export tools	Error Details
Editing Tools: Split, Trim, Merge, Arc.	
1 of 5 selected.	
✓ Show the latest version of a feature only	
Filter features included in other features on the list	
< <u>B</u> ack <u>N</u> ext > <u>Finish</u>	Cancel

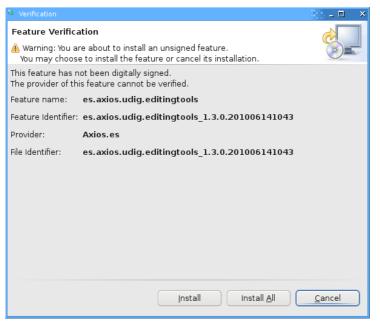
- 7. Check the latest *es.axios.udig.editingtools* version from the list and press **Next**.
- 8. Accept the terms in the license agreement and press Next.

🧕 Install	×						
Feature License							
Some of the features have lic before proceeding with the ins	ense agreements that you need to accept tallation.						
<pre> es.axios.udig.editingtools </pre>							
○ I do not accept the terms in the license agreement							
< <u>B</u> a	ck Next > Einish Cancel						

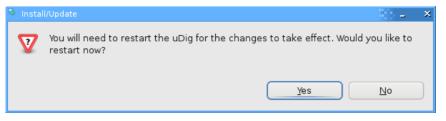
9. Finally confirm the installation location and press **Finish**.

🧕 Install				100	_ 🗆 🛛 🗙
Installation The following features	s will be installed. You o ature will be installed.	an select a f	eature and	change the	
Features to install:					
Feature Name	Feature Version	Feature Siz	Installation	n Directory	
🖗 es.axios.udig.editi	1.3.0.201006141043	Unknown	/opt/udig-:	1.2-RC3.linux	.gtk.×86,
Install Location: /oj	ot/udig-1.2-RC3.linux.g	tk.×86		Change Loc	ation
Required space: Unk Free space: Unk	nown nown				
(< <u>B</u> ack	ext >	<u>F</u> inish		ancel

10. Many of the community features have not been formally signed, please click **Install All** when presented with a warning.



11. You will need to **Restart** uDig when the installation finishes.



12. You may have noticed some new options in the toolbar. We are going to test the **Merge** feature.

13. Load a test layer, like *countries*, and select the **Merge** option as shown below.



14. Select some features in your layer.





15. A new View called **Merge Tool** will appear in the lower box.

🎦 Catalog 🗖 Web 🛷	Search 🛄 Table 📓 Merge Tool 🛛			√ % ⊓ ⊑
Deletes the selected features (in source panel) and creates a new merged feature				
(1) The result of geometry merge will be: Union				
Sources			Merge Feature	
Feature	Value		Property	Value
🕶 🔲 countries.134		=	the_geom	MULTIPOLYGON (((-91.66389465332031 -0.31611
the_geom	MULTIPOLYGON (((-91.66389465332031 -0.3161	1	FIPS_CNTRY	EC
FIPS_CNTRY	EC		GMI_CNTRY	ECU
GMI_CNTRY	ECU		ISO_2DIGIT	EC
✓ ISO_2DIGIT	EC		ISO_3DIGIT	ECU 🗘
SO_3DIGIT	ECU	~	Result geometry:	Union
~	1	*	The sale geometry.	onon

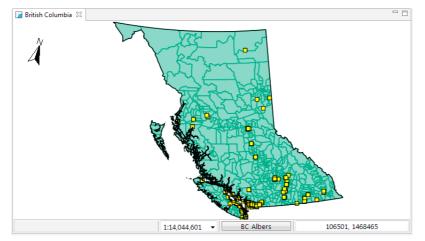
16. Click on the **green check** on the upper-right corner of the **Merge Tool** view to run the merge of the features. The result will be something like this:



16 What to do Next?

Congratulations you have finished the first walkthrough. This is just the start of what uDig can do!

• Try out the north arrow – change projections in order to see how it works.



- There is more data available in the data directory have a look !
- Try right-clicking on a Layer there is plenty to do (try the operations menu).
- Does your organization publish any spatial information on the web?
- Try out the navigation tools such as Zoom and Pan (the Navigation menu lets you go back to previous locations like a web browser).
- Advanced: Use the **Style Editor** to switch automatically from the bluemarble.tiff to the JPL Web Map Server blue marble layer. Switching based on scale allows for performance when zoomed out, while still providing full resolution blue marble imagery from NASA when you are closer.
- Advanced: Open the Style Editor, have a look at the Advanced (XML) page and see what you make of it.

Perhaps you have an idea for the tool you always wanted?