WALKTHROUGH 1

uDig Install and Introduction

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uDig Install and Introduction

Submitted By

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Document Tracking

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CONTENTS

1	Goals2				
2	2 Installing and Running The uDig Application				
3	Online Documentation and Tutorials7				
	3.1 Help Categories8				
4	The Workbench9				
5	Connecting to a Web Map Server10				
6	Adding Layers from the Catalog View12				
7	Adding a Layer from Projects View14				
8	Working with Files17				
9	Import Directly to The Catalog18				
10	Reordering Layers20				
11	Themed Data21				
12	Searching25				
13	Re-projection				
14	Information Request				
15	Finished Already?				

1 GOALS

After completing this walkthrough, you will have:

- Installed uDig from the Windows installer.
- Learned the basic uDig functionality

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 udig1.1.exe (located in the same directory as this walkthrough)



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

😼 uDig 1.1.RCO Setup	
	Welcome to the uDig 1.1.RC0 Setup Wizard This wizard will guide you through the installation of uDig
	Note that this is the first attempt by the uDig project to create a Windows executable installer. Please report any problems or suggestions for improvement to udig-devel@lists.refractions.net. Click Next to continue.
	Next > Cancel

3. Agree to the License Agreement – uDig is made available under the LGPL.

uDig 1.1.RCO Setup	
icense Agreement Please review the license terms before installing uDig 1.1.RC0.	5
Press Page Down to see the rest of the agreement.	
GNU Lesser General Public License	<u>^</u>
Version 2.1, February 1999	
Copyright (C) 1991, 1999 Free Software Foundation, Inc. 59 Temple Place, Suit: Boston, MA 02111-1307 USA Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.	
[This is the first released version of the Lesser GPL. It also counts as the success the GNU Library Public License, version 2, hence the version number 2.1.]	sor of
If you accept the terms of the agreement, click I Agree to continue. You must accept agreement to install uDig 1.1.RCO.	ot the
illsoft Install System v2,10	Cancel

4. By default uDig will be installed into your Program Files directory.

Choose Install Location Choose the folder in which to install uDig 1.1.RCO.	5
Setup will install uDig 1.1.RCO in the following folder. To install in a different fo Browse and select another folder. Click Next to continue.	lder, click
C:\Program Files\uDig\1.1.RC0	rowse
Space required: 115.0MB Space available: 61.8GB Nullsoft Install System v2,10 < Back Next >	Cancel

5. Shortcuts will be created in your start menu.



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



7. Click on the **Workbench** arrow in the top right corner of the uDig welcome screen to open the uDig workbench area.



3 ONLINE DOCUMENTATION AND TUTORIALS

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

1. From the Welcome screen you can access an online tutorial.



Access the introductory tutorial.

2. 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.

📲 Help - UDIG			
Search:	GO Search scope: All topics		
Contents 🔗 🗄			
🧼 uDig User Guide	This tutorial provides a step by step Workbench.		
i 😽 🖉 🖫	 <u>The Workbench</u> <u>Editors and views</u> o Editors 		

Ros **Refresh / Show Current Topic**

Can be used to find your place in the table of contents

E Show in Table of Contents

Can be used to find your place in the table of contents

You can also access online help at any time from the Help menu.



Warning if you have the windows firewall enabled you will need to allow the help application to startup.



3.1 HELP CATEGORIES

You can access additional reference information in the following categories:

• Getting Started

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UDig User Guide Getting Started Getting Started Concepts Guide Co	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			
UDig User Guide USer	High-Level description of ideas, architecture. Provides background information to understand what is going on.		
 I Tasks I Reference I FAQ 	Related concepts		
Tasks			
UDig User Guide Getting Started Concepts Tasks Reference	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.		
🕀 💷 FAQ	Related tasks		

• Reference

 uDig User Guide u Getting Started u Concepts 	Related reference		
•	 Views and editors 		
🗄 💷 Tasks			
🗈 🛄 Reference	Menus		
🗄 💷 FAQ	Toolbars		
-			
	Preferences		

4 THE WORKBENCH

Accessing the workbench from the welcome screen:



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.



5 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:
 - http://udig.refractions.net/confluence/display/UDIG/Walkthrough+1
- 3. Click and drag the DM Solutions WMS link from the web page onto the Layers View on the left, and drop it there.
- 4. The Add Layers a wizard will appear asking you what layers from this WMS you want to show in your map. Select **bathymetry, park, popplace** and press the **Finish** button.



If working with your windows maximized: 1) Drag from the web browser 2) Hover on the uDig application in the windows taskbar 3) Drop into the Map area. 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



- 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.
 - [‡] Pan Tool: (keyboard short cut P) Click and drag to move the display.
 - 🔀 Extent Tool: Press to show all

You can press on the button next to the progress monitor to watch detailed information (and cancel) rendering requests.

When using the zoom or pan tools the mouse scroll wheel can be used to zoom in and out quickly.

6 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:

1. In the **Catalog** view of uDig (center bottom), expand the connection you have to **DM Solutions' WMS Demo Server**. Right-click on the **prov_bound** layer and select **Add to**



2. The new layer will appear in the **Layers** view, and it will automatically start to render. When it finishes rendering, you should see black lines representing the provincial borders on the map (the new layer).



7 ADDING A LAYER FROM PROJECTS VIEW

Adding a Layer from a PostGIS database:

 In the File menu, select New -> New Map. Then in the Projects view, right-click on Map2 Select Add... to bring up the Add Layer wizard.



2. Select PostGIS as the data source and click Next.

🍜 Add Layers to Map	
Select a Data Source	No.
Files Map Graphic PostGIS Web Feature Server Web Map Server	
< <u>B</u> ack <u>N</u> ext > ⊟nish	Cancel

3. Enter the following connection information:

초 Add Layers to Map	X
PostGIS Connect to a PostGIS Server.	
Host: www.refractions.net Username: postgres Password:	Port: 5432
Database: demo-bc	
< <u>B</u> ack <u>N</u> ext >	

- 4. Once the connection information is entered, click on the database drop-down. Select the **demo-bc** database and press **Next**.
- 5. Select only the **bc_hospitals** and **bc_municipality** data, and click **Finish**.

🍜 Add Layers to Map			
Layer Selection Select resources that the new map will be composed from.			
PostGIS www.refractions.net.postgis.jdbc De_hospitals De_bospitals Debospitals D			
	1		
<pre>Eack Mext > Einish</pre>	Cancel		

6. It may take a short while to fully render since you are zoomed out so far, but your new map should look something like this:

 Image: Image and the map and the

8 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:
 - http://udig.refractions.net/confluence/display/UDIG/Walkthrough+1
- 2. Download the "data download" zip file to your local computer and unzip to create your data directory.
 - <u>http://udig.refractions.net/docs/data-v1_1.zip</u>
- 3. Navigate to the included data directory using windows.
- 4. Drag and Drop the file **bc_border.shp** onto **Map2**; this provides a bit of context for your PostGIS layers.



9 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

Select Data and	a press	ITCAL.		
🍜 Import				
Select Import from a data source	э.			Ľ
Select an import source:				
📓 Data				
	< <u>B</u> ack	<u>N</u> ext >	Einish	Cancel

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

- Catalog Import		
Select a Data Source		
 initial files Map Graphic PostGIS Web Feature Server Web Map Server 		
	< <u>B</u> ack <u>N</u> ext > ⊟r	ish Cancel

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

http://wms.jpl.nasa.gov/wms.cgi?Service=WMS&Version=1.1.1&Request=GetCapabilities

You can copy this URL from the walkthrough page

•

5. Press Finish to import the Web Map server.



6. Now that we have imported the WMS into the catalog we can add it to our Map. Please Drag and Drop the **global_mosaic** layer directly onto **Map2**.



Now that the **global_mosaic** layer is rendered on top of your existing content let's proceed to the next section, reordering layers.

10 REORDERING LAYERS

In this section you will learn how to reorder layers in your map.

1. At the end of the previous section we left **Map2** in the following state:



The **Layers view** is used to describe the content of the map, and the order in which the content is drawn.

2. To change the layer order, select the WMS Global Mosaic, pan sharpened layer and click on the Down arrow.



3. You can also just select a Layer and Drag it to the position you desire. Let's do that now, Drag and Drop the **WMS Global Mosaic, pan sharpened** layer to the bottom of the list.



Moving layers up and down will change their visibility in relation to each other, and it will automatically restart rendering the map.

11 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:

- In the Catalog view of uDig (center bottom), under the "JPL World Map Service" tree, right click on "modis" and select Add to New Map.
- 2. In the Layer menu, select Add...
- 3. Choose Files from the provided list and press Next:

Add Layers to Ma	р			
Select a Data Source				
Image: Files Image: Map Graphic Image: Second Sec				
	< <u>B</u> ack	<u>N</u> ext >	Einish	Cancel

4. Select the file countries.shp from the data directory and Open:

Open		? 🔀
Look jn:	🔁 data 💽 🗢 🖻 👘 📰 •	
My Recent Documents Desktop My Documents My Computer	bc_border.shp bc_hospitals.shp bc_pubs.shp bc_yoting_areas.shp clouds.jpg clouds.jpg countries.shp earthlights.jpg mework_census.shp timezone.shp usa_counties.shp	
My Network Places	File name: countries.shp Files of type: *.shp;*.gif;*.jpg;*.jpg;*.png	<u>O</u> pen Cancel

- 5. The countries layer will be added, and rendered with a default style.
- 6. Select the **countries** layer in the **Layers View**, and click on the up arrow to make it visible.

Right effek off the ex	suntiles layer, and select Change Style
type filter text	Theme (r_{2}, \cdot, \cdot)
Simple Theme XML	Attribute: Classes: Break: Normalize: Else: POP_CNTRY 5 Quantile < NONE > HIDE Show: All Palette:
	Accents: includes lightness and saturation extremes to accent small or i Blues: light to dark blue BrBG: dark brown to light to dark blue-green BuGn: light blue to dark green BuPu: light blue to dark purple Dark2: darker version of Set 2 GnBu: light green to dark blue Grays: light to dark gray Greens: light to dark green OrRd: light orange to dark red
	 Oranges: light to dark orange PRGn: dark reddish-purple to light to dark green Paired: light/dark pairs for namable hues Pastel1: lighter version of Set 1 Pastel2: lighter version of Set 2 PiYG: dark magenta to light to dark yellow-green
Import Export	Apply Revert Close

7. Right-click on the countries layer, and select Change Style...

- 8. Please select the following options:
 - Attribute: POP_CNTRY
 - Normalize: SQKM

These options color the countries layer by population density.

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

These options show palettes which are ramp of colors suitable for viewing by colour-blind people, and are well displayed on both CRT and LCD monitors.

10. Select the "light orange to dark red" palette, and click the **Apply** and **Close** buttons.



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

Mylar will fade out all they layers except the one selected.

12 SEARCHING

In this section, you will learn how to use the Search View.

- 1. Select the Search View.
- 2. Insert the cursor into the text box and type "atlas". Press enter.



- 3. Once the entries appear expand the atlas.gc.ca result, rightclick on Water Areas (1:15 000 000) and select Add to New Map.
- 4. Drag-and-drop the following to the new Map:
 - Roads network (1:15 000 000)
 - Provincial and Territorial Boundaries
 - Boundaries
 - Capitals (symbols)



All sorts of interesting content is available on the web. What can you find?

13 RE-PROJECTION

Since the world is not flat, maps are projected in a Co-ordinate Reference System (CRS). We will now make 2 identical maps, perform a re-projection on one, and compare.

- 1. Repeat steps 3 and 4 from the previous section in order to create a map identical to Map4. Zoom to an appropriate level.
 - Water areas (1:15 000 000) - -🕝 Water areas (1:15 000 000)2 🛛 \mathbf{O} Θ 1:24,153,112 -78, 41 WGS 84



2. Drag-and-drop Map 5 to the rightmost edge of the Map View.



3. With Map5 selected, click the button labeled "WGS 84", which is centered at the bottom of the uDig workbench. Enter in the EPSG code **42304** and press enter to re-project the map to the "NAD83/NRCan LCC Canada" CRS. Use the zoom tools to find a pleasant view.



14 INFORMATION REQUEST

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

1. To start with let's open up our first map again, which was labeled **bathymetry**.



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



3. Select the **Info Tool** from the toolbar, and click on a nice green park.



4. Note how the Information View is brought into focus.

You can use the keyboard short-cut 'i' to choose the info tool 5. Select the layer name **Parks** in the left pane of the **Information View**. Information regarding the area you clicked is displayed in the **right pane**.

Catalog	Default Feature Editor 1 Information X	- 0
Elevation Parks		
Provincia		~
Cities	Name Year Est. Area (sq.km)	
	Gros Morne National Park 1970 1942.500	
	😂 DM Solutions Group	
		\sim

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.

15 FINISHED ALREADY?

If you finish early here are some challenges.

- 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).
- Search for information in your area.
- Is your organizations content available via search?
- 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: 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?