Howto Setup Eclipse – Slicer3 Development Environment:

PreRequirements for compiling Slicer3:

- 1. <u>CMake (2.4.1 or later)</u>
- 2. <u>Tcl/Tk (8.4 or later)</u>
- 3. <u>incrTcl (3.2.1)</u>
- 4. <u>VTK 5.0</u>
- 5. <u>ITK 2.8</u>
- 6. KWWidgets CVS head

Installing Eclipse:

I installed Eclipse 3.3 M2, but this should also be applicable with Eclipse Versions under this. Download Eclipse from <u>www.eclipse.org</u> and unpack the downloaded archive to the destination you want. You start Eclipse with ./eclipse from the base directory of your eclipse installation.

Configure Eclipse:

To get Eclipse handling these big source packages in a good manner it is good to tweak a little the properties of the eclipse startup. First it is very advisable to use Eclipse with JRE 1.5. Download it from <u>http://java.sun.com/javase/downloads/index.jsp</u> and put it in your project folder (or elsewhere). In addition I increased the size of the memory Java can use with the lower bound switch -Xms and the upper bound -Xmx. So my Eclipse command looks like this:

./eclipse -Xms64m - Xmx512m -vm /<path to your jre base-directory>/bin/java

Modules for Eclipse you need:

Before integrate the source-code into Eclipse we need two separate modules.

- 1. CDT C++ Environment: http://www.eclipse.org/cdt/downloads.php
- 2. SubClipse: <u>http://subclipse.tigris.org/install.html</u>

To install these Modules, start Eclipse and go to Help->Software Updates->Find And Install

Install/Update		
Feature Updates Image: Choose the way you want to search for features to install		
Search for updates of the currently installed features		
Select this option if you want to search for updates of the features you already have installed.		
Search for new features to install		
Select this option if you want to install new features from existing or new update sites. Some sites may already be available. You can add new update site URLs to the search.		
Image: Second		

Click on "Search for new features to install" and then on "Next":

	Install	0
Update sites to visit	looking for new features	
Select update sites to visit while	looking for new reacures.	
Sites to include in search:		
🗆 🔩 Subclipse update site		New Remote Site
🗆 🔩 The Eclipse Project Upda	ates	New Local Site
		New Archived Site
		<u>E</u> dit
		Remove
		Import sites
		Export sites
✓ Ignore features not applicab	le to this environment	
Automatically select mirrors		
0	< Back Next >	Einish Cancel

Now click the "New Remote Site..." Button and insert the appropriate informations in the input fields.

For CDT this should look like this:

	0	New Update Site 😔		
	Name:	CDT		
	URL:	p://download.eclipse.org/tools/cdt/releases/callisto		
	?	OK Cancel		
For SubClipse:				
	0	New Update Site 🛛 😔		
	Name:	SubClipse		
	URL:	http://subclipse.tigris.org/update_1.2.x		
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	?	OK Cancel		

After adding these to module Site just click on the "Next" Button and Install both items.

You will be prompt to restart Eclipse. After the restart you're ready to get the sources into Eclipse.

Creating Project and getting the Source-Code for it:

Now that you have setup eclipse we can focus an getting the code and compile it. One of the disadvantages of eclipse is the inability to use Cmake and CmakeLists.txt files directly. So some manual configuration is still necessary. But hopefully the <u>Eclipse on Linux</u> Project will close this gap in the future.

Go to the <u>na-mic.org Slicer3-Development</u> website and create for each listed application a new project in Eclipse. For CVS based projects create a new CVS-Checkout-Project and for SVN the SVN counterpart.

Then to checkout the source select the branch or the head sources and create a "Standard C++ Makefile Project".

(right now it is recommend to use for tcl and tk the 8.4 branch, because till now VTK, KWWidgets and ITK are not modified to match tcl/tk 8.5)

Configure all projects in the sequence as stated above. All projects besides Cmake, VTK, ITK, KWWidgets and Slicer3 itself are autoconf/ configure based application.

For tcl/tk it is necessary to change the default source path to unix.

- Right-Click on the project folder
- click on properties (or just press Alt+Enter)

\bigcirc	Properties for tcl
type filter text	Resource 🗇 🕆 🐡 🕆
Resource	Path: /tcl
C/C++ Documentatic	Type: Project
C/C++ File Types	Location: /projects/birn/keilhack/workspace/tcl
C/C++ Include Paths	Last modified: November 26, 2006 7:29:41 PM
C/C++ Indexer	
C/C++ Make Project	Text file encoding
C/C++ Project Paths	Inherited from container (UTF-8)
CVS	O Other: UTF-8
	New text file line delimiter
	Inherited from container
	O Other:
4) 4)	Restore Defaults Apply
0	OK Cancel

• then at C/C++ Make Project

0	Properties for tcl	D
type filter text	C/C++ Make Project 🗇 🔶	Ŧ
Resource	Make builder settings.	
C/C++ Documentatic		
C/C++ File Types	Make Builder Environment Error Parsers Binary Parser Discovery Options	
C/C++ Include Paths	Build command	1
C/C++ Indexer	√ Use default	
C/C++ Make Project	Build command: make Variables	
C/C++ Project Paths		
CVS	Build Setting	
	Stop on first build error.	
	Workbench Build Behavior	
	Workbench build type: Make build target:	
	Build on resource save (Auto Build) all Variables	
	Note: See Workbench automatic build preference.	
	✓ Build (Incremental Build) all Variables	
	✓ Clean Variables	
	Build Location	
	Build directory: /tcl/unix	
	Workspace) Filesystem) Variables)	
۱	Restore <u>D</u> efaults <u>Apply</u>	
0	OK Cancel	

- click on "Workspace..."
- select the unix folder from tcl or tk

Folder Selection
Selection Location to build from.
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🚰 doc
🚰 generic
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OK Cancel

Compile the projects:

After successfully configuring all projects eclipse should start automatically building the application. If this is not the case, right click on project and select "Build Project" and see how the project is compiling.