#summary How to install 3d Brain Atlas Reconstructor on Ubuntu?

3d Brain Atlas Reconstructor Installation (Ubuntu)

Note: This procedure is valid for _Ubuntu 9.04_ and _Ubuntu 10.04 LTS_ and was tested on 4.08.2010. For guides related to _Ubuntu 8.04_ see [InstallationUbuntu?804 here]. Installation on other Ubuntu versions or other Linux distributions is simmilar, however not yet described.

<wiki:toc max_depth="3" /?>

==Installing required packages==

Installation consists of following steps (just paste code blocks into terminal it should be fine (Ubuntu 9.10).

Installing Visualization Toolkit and other graphic libraries:

```
sudo apt-get install \
libvtk5.2 libvtk5-dev libvtk5.2-qt4 libvtk5-qt4-dev \
tk8.5 tk8.5-dev \
python-vtk libgtkgl2.0-1 libgtkgl2.0-dev libgtkglext1 librsvg2-2 python-nifti
```

Installing python-related packages:

```
sudo apt-get install \
python-gtkglext1 python-rsvg python-opengl python-numpy python-scipy python-wxgtk2.6
```

Other packages:

```
sudo apt-get install \
potrace pstoedit python-setuptools subversion python-epydoc
```

If You are developer, you may also want to install optional packages with documentation:

```
sudo apt-get install vtkdata vtk-doc vtk-examples
```

If you use Ubuntu 10.04 install following packages:

```
sudo apt-get install \
libvtk5.2 libvtk5-dev libvtk5.2-qt4 libvtk5-qt4-dev \
tk8.5 tk8.5-dev \
python-vtk libgtkgl2.0-1 libgtkgl2.0-dev libgtkglext1 librsvg2-2 python-nifti

sudo apt-get install \
python-gtkglext1 python-rsvg python-opengl python-numpy python-scipy python-wxgtk2.6

sudo apt-get install \
potrace pstoedit python-setuptools subversion python-epydoc
```

If you use Ubuntu 10.10 install following packages:

```
sudo apt-get install \
libvtk5.4 libvtk5-dev libvtk5.4-qt4 libvtk5-qt4-dev \
```

```
tk8.5 tk8.5-dev \
python-vtk libgtkgl2.0-1 libgtkgl2.0-dev libgtkglext1 librsvg2-2 python-nifti

sudo apt-get install \
python-gtkglext1 python-rsvg python-opengl python-numpy python-scipy python-wxgtk2.8

sudo apt-get install \
potrace pstoedit python-setuptools subversion python-epydoc
```

Once all packages are installed, it's time to create directory structure: ==Getting code== It is assumed that main directory dedicated for software is `/home/$USERNAME/3dbar`. if You want to install to another directory, please replace `3dbar` with desired path.

In order to get latest stable version use following command:

```
svn checkout http://3dbrainatlasreconstructor.googlecode.com/svn/tags/latest/
```

or get working code snapshot:

```
svn checkout http://3dbrainatlasreconstructor.googlecode.com/svn/trunk/ /home/$USERNAME/3dbar
```

then create directory where datasets will be stored:

```
mkdir -p /home/$USERNAME/3dbar/atlases
```

Created directories have following purposes:

- *bin*: Holds all executable files, atlas parsers and auxiliary scripts
- *lib*: Holds 3dBAR api
- *atlases*: Directory, where source data, _CAF_ _datasets_ and reconstructed models are stored. Each dataset (denoted as DATASET_NAME) contains following subdirectories:
    - atlases/DATASET_NAME/src : Here source data is located. It may be put manually by user or ie. downloaded from internet depending on particular parser.
    - atlases/DATASET_NAME/caf : Is the directory where CAF dataset is generated by particular parsers.
    - atlases/DATASET_NAME/reconstructions : Here performed reconstruction are generated using 3dBAR GUI.

<wiki:comment?> ==Initial build== In order create initial CAF datasets, generate documentation use following command in /home/$USERNAME/3dbar/ directory:

```
make -B -j N all
```

where N is number of parallel processes You want to use. If everything is installed correctly processing should be performed without any errors. Then 3dBAR GUI should be launched

```
./3dbar.sh
```

and used to perform reconstructions. If everything went fine, You may proceed to :

==Getting parsers for additional datasets==

</wiki:comment?>