**Installation**

First make sure that you remove all previously installed versions of the Hive system.

**Easy installation in Windows**
*(Installation is easiest under Python 2.7. If you are a Python 3.x user, or if you use multiple Python versions, see General Installation instructions below)*
1. Go to http://www.python.org/download/ and download Python 2.7 (32-bit)
2. Download and run https://launchpad.net/spyder-framework/trunk/3.2/+download/Spyder-3.2.5-windows-py2.7.exe
3. Download and run https://launchpad.net/hivesystem/trunk/0.91/+download/hive-0.91.4-windows-py2.7.exe

Check that it works:
- Go to Start => All programs => Python 2.7 => Python (command line)
- Type "import spyder; from Spyder import Coordinate; help(Coordinate)"
  You should now get info on Coordinate, that it consists of Float x, Float y, Float z.
  Press q
- Type "import bee; import dragonfly", this should give no exception messages
- Type "exit()"

4. Download and run http://releases.qt-project.org/pyside/PySide-1.1.2.win32-py2.7.exe
Check that it works:
- Go to Start => All programs => Hive system => hivegui

5. Go to http://www.blender.org/download/get-blender/ and install the latest Blender (version 2.65 or later)
6. Go to https://launchpad.net/hivesystem/+download and download hive-0.91.4.zip
7. Go to https://launchpad.net/spyder-framework/+download and download Spyder-3.2.5.zip
8. Go to C:\Program Files (x86)\Blender Foundation\Blender\<blender version>\python\lib
9. Unzip hive-0.91.4.zip and Spyder-3.2.5.zip there
Check that it works:
- Start Blender
- In the lower-left corner, select "Editor type: Python console"
- Type "import spyder; from Spyder import Coordinate; help(Coordinate)"
  You should now get info on Coordinate, that it consists of Float x, Float y, Float z.
- Type "import bee; import dragonfly", this should give no exception messages

**Easy installation in Ubuntu**
1. In a terminal, type the following:
sudo apt-get install python-pip
wget https://launchpad.net/spyder-framework/trunk/3.2/+download/Spyder-3.2.5.tar.gz
wget https://launchpad.net/hivesystem/trunk/0.91/+download/hive-0.91.4.tar.gz
sudo pip install Spyder-3.2.5.tar.gz hive-0.91.4.tar.gz
Check that it works:
- Type "python"
- Type "import spyder; from Spyder import Coordinate; help(Coordinate)"
  You should now get info on Coordinate, that it consists of Float x, Float y, Float z.
  Press q
- Type "import bee; import dragonfly", this should give no exception messages

Type “exit()”
2. Type the following:
sudo apt-get install python-pygments
sudo apt-get install python-pyside
Check that it works: type “hivegui.py”
3. Go to http://www.blender.org/download/get-blender/ and install the latest Blender (version 2.65 or later)
4. Go to https://launchpad.net/hivesystem/+download and download hive-0.91.4.zip
5. Go to https://launchpad.net/spyder-framework/+download and download Spyder-3.2.5.zip
6. Go to <blenderdir>/<blenderversion>/python/lib/python3.3
7. Unzip hive-0.91.4.zip and Spyder-3.2.5.zip there
Check that it works:

- Start Blender
- In the lower-left corner, select “Editor type: Python console”
- Type “import spyder; from Spyder import Coordinate; help(Coordinate)”
  You should now get info on Coordinate, that it consists of Float x, Float y, Float z.
- Type “import bee; import dragonfly”, this should give no exception messages

**Easy installation in Mac OSX**
You will need OSX Lion or later, since your Python version must be at least Python 2.6.

1. Open a command line and type the following commands:

wget https://bitbucket.org/pypa/setuptools/raw/bootstrap/ez_setup.py
sudo python ez_setup.py
sudo easy_install pip
wget https://launchpad.net/spyder-framework/trunk/3.2/+download/Spyder-3.2.5.tar.gz
wget https://launchpad.net/hivesystem/trunk/0.91/+download/hive-0.91.4.tar.gz
sudo pip install Spyder-3.2.5.tar.gz hive-0.91.4.tar.gz

Check that it works:
Type “python”. Take note of your Python version (2.6 or 2.7; 3.2 and 3.3 are also OK).
Type “import spyder; from Spyder import Coordinate; help(Coordinate)”
You should now get info on Coordinate, that it consists of Float x, Float y, Float z.
Press q
Type “import bee; import dragonfly”, this should give no exception messages
Type “exit()”
2. Install Qt and PySide: Go to http://qt-project.org/wiki/PySide_Binaries_MacOSX and install both Qt and PySide for your Python version.
Check that it works: type “hivegui.py”
3. Go to http://www.blender.org/download/get-blender/ and install the latest Blender (version 2.65 or later)
4. Go to https://launchpad.net/hivesystem/+download and download hive-0.91.4.zip
5. Go to https://launchpad.net/spyder-framework/+download and download Spyder-3.2.5.zip
6. Go to <blenderdir>/<blenderversion>/python/lib/python3.3
7. Unzip hive-0.91.4.zip and Spyder-3.2.5.zip there
Check that it works:

- Start Blender

- In the lower-left corner, select “Editor type: Python console”
- Type “import spyder; from Spyder import Coordinate; help(Coordinate)”
  You should now get info on Coordinate, that it consists of Float x, Float y, Float z.
- Type “import bee; import dragonfly”, this should give no exception messages

**General installation instructions**

For those who a different version of Linux than Ubuntu, and for advanced users in general.
There are three things about installing the hive system:

- The hive system itself, that loads and runs the hivemaps
- The engine to run the top-level hive: Blender, Panda3D or just the command line
- The HiveGUI to edit the hivemaps in a visual format

**a. Installing the hive system itself**

This requires a separate installation of Python 2.6, 2.7, 3.2 or 3.3
1. You can download the hive system at https://launchpad.net/hivesystem
2. If you use the Windows installer, 32 bit Python is recommended; installers seem to have problems with the registry for 64 bit Python.
3. The hive system requires Spyder to be installed. Download the latest version at https://launchpad.net/spyder-framework
*To check that Spyder has been installed correctly*: open a Python command line and type “import spyder; from Spyder import Coordinate; help(Coordinate)”
You should now get info on Coordinate, that it consists of Float x, Float y, Float z. Press q to end it.
*To check that the hive system has been installed correctly*: open a Python command line and type “import bee; import dragonfly”

**b. Choosing an engine to run the hive**

The simplest hives run under the commandline, but usually you want to have Blender, Panda3D or both installed.

*Installing Blender*

- Go to http://www.blender.org/download/get-blender/ and install the latest Blender. The hive system requires Blender version 2.65 or later.
- Alternatively, you can change PYTHONPATH to include C:\PythonXX\Lib\site-packages, /usr/local/lib/pythonX.X/dist-packages, or the equivalent folder on your OS.
- Blender is bundled with its own version of Python3.3, and it needs to be able to find the hive system and Spyder. You can just download the hive source code (https://launchpad.net/hivesystem/trunk/0.91/hive-0.91.4.zip) and the Spyder source code (https://launchpad.net/spyder-framework/trunk/3.2/+download/Spyder-3.2.5.zip) and unzip them in the Blender add-ons folder or another folder of Blender's sys.path. Alternatively, you can install Python3.3 separately, run the Py3.3 installers for Spyder and Hive, and add Py3.3's site-packages to Blender's sys.path.

*Installing Panda3D*

For Ubuntu and similar, just install the .deb file at http://www.panda3d.org/download.php?sdk with gdebi. After that, fire up a Python command-line and type “import panda3d” to check that it works.
Using Panda3D under Windows is a bit more tricky, because it is bundled with its own version of Python2.7. It is best to install Python2.7 yourself *before* Panda3D; Panda will then ask to make its bundled version the default, to which you can respond “No”. You will then have to add “C:\Panda3D-1.8.1;C:\Panda3D-1.8.1\bin” to PYTHONPATH. Alternatively, if you choose to use Panda's Python2.7

as the default, it should put itself into the Windows register and the 2.7 installers for Hive and Spyder should then be able find it.

**c. Installing the HiveGUI**

The HiveGUI is currently a stand-alone program using Qt. Eventually, HiveGUI will run inside Blender using Pynodes, but this has not yet been completed.

1. The GUI runs under Python 2.6, 2.7, 3.2 or 3.3.
2. You will need PySide or PyQt to run the GUI. Both of them should work, but PySide has been tested more thoroughly. Under Ubuntu, PySide can be installed with “sudo apt-get install python-pyside”. Kubuntu comes with PyQt pre-installed, but you can still install PySide. if HiveGUI finds both PyQt and PySide, it will use PySide, unless you specify “--pyqt” on the command line. Under Windows, PySide can be downloaded at http://releases.qt-project.org/pyside.
3. The GUI scripts (HiveGUI, WorkerGUI, SpyderGUI) are installed into the Python scripts folder (C:\PythonXX\Scripts, or their Linux/Mac equivalents).

In addition, under Windows, shortcuts are installed into your Start Menu under "Hive System", but this does not work for Python3.x (bug in Python).

4. For syntax highlighting, you can install the Pygments library, using “sudo apt-get install python-pygments” under Ubuntu, or with pip/easy_install under any other platform.

**Known bugs**

- *If you use IDLE, and run your code inside it, then you can't use Esc to stop pandahives or consolehives; use Ctrl+C instead.*