

# IPython: a quick update

Fernando Pérez

Helen Wills Neuroscience Institute, U.C. Berkeley

Caltech  
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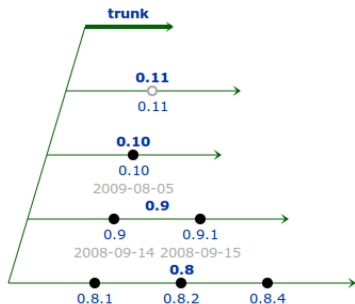
# Cast of Characters

(those in **boldface** are here today)

- **Brian Granger** - Physics, Cal State San Luis Obispo
- **Gael Varoquaux** - Neurospin (Orsay, France)
- **Robert Kern** - Enthought
- **Stefan van der Walt** - Applied Math, U. Stellenbosch, South Africa
- **Ondrej Certik** - Physics, Czech Republic
- **Darren Dale** - Physics, Cornell
- Ville Vainio - CS, Tampere University of Technology, Finland
- Min Ragan-Kelley - UC Berkeley
- Barry Wark - Neuroscience, U. Washington.
- Jorgen Stenarson - Sweden
- Laurent Dufrechou - France
- Vivian De Smedt - Belgium
- Many more I'm forgetting...

# Hitting our stride with Launchpad

## IPython Timeline



### **trunk series** *focus of development*

Bugs targeted: None

Blueprints targeted: None

The main branch of development for IPython. Stable releases are made from this branch, it is the equivalent of a trunk in a traditional SVN-style setting.

As of August 4 2009 (when version 0.10 was released), the trunk is undergoing significant changes and API stability is NOT guaranteed. This will result in a significantly refactored IPython, and will be released as 0.11 (and later) once ready.

So unless you are actively following our development and are aware of the potential compatibility issues, do not update regularly from trunk in your production environment. We will update this notice when the API stabilizes again.

# Bzr has its problems, but DVCS still rocks

launchpad **IPython** Fernando Perez • Log Out

Overview **Code** Bugs Blueprints Translations Answers

## Bazaar branches of IPython

[Register a branch](#)

68 branches owned by 17 people and 2 teams, 137 commits by 7 people in the last month

4 pending proposals, 0 unmerged proposals

You can browse the [source code](#) for the development focus branch or get a copy of the branch using the command:

```
bzr branch lp:ipython
```

There are [download files](#) available for IPython.

Branches with status:  by most interesting

Name	Status	Last Modified	Last Commit
<a href="#">lp:ipython</a> Series: trunk, 0.11	★ Mature	41 max commits 90 days - Last commit 2009-08-13	1210. Fernando's fix to %paste.
<a href="#">lp:ipython/0.10</a> Series: 0.10	Mature	2 weeks ago	1208. Final rev number and tag update for 0...
<a href="#">lp:~ipython-dev/ipython/ipython-app</a>	Development	8 hours 50 minutes ago	1256. Removed shell.py entirely and made th...
<a href="#">lp:~ipython-dev/ipython/config-refactor</a>	Development	2 days ago	1251. The IPython dir is now created by App...
<a href="#">lp:~ipython-dev/ipython/inputhook</a>	Development	5 days ago	1233. General work on inputhook and the doc...
<a href="#">lp:~ipython-dev/ipython/set_trace</a>	Development	3 weeks ago	1177. Imports the Shell variable, which is ...
<a href="#">lp:~ipython-dev/ipython/ipythondistarray</a>	Development	7 weeks ago	38. First draft of DistArrayProxy for a n...
<a href="#">lp:~villemvainio/ipython/trunk-dev</a>	Development	10 weeks ago	1163. merge from trunk
<a href="#">lp:~pivanov/ipython/devel</a>	Development	14 weeks ago	1175. Improved Vim integration (running a v...
<a href="#">lp:~pierre-raybaut/ipython/qt_frontend</a>	Development	17 weeks ago	<i>This branch has not been pushed to yet.</i>
<a href="#">lp:~jorqen-stenarson/ipython/ipython-</a>	Development	18 weeks ago	1168. Fix for #315392. Crash on win32 when

## Brian Granger: lots of hard work in

- **Module reorganization**: a rational package layout.
- **Configuration system** rethought (this sounds trivial. **It isn't**).  
Initialize, validate, ...
- IPython broken into **components**.
- Many things we've wanted to do for a long time will be now **much easier**.
- Lots of **cruft removed**: **some API breakages**.

**Thanks to NIPY project for funding support!**

## Traitlets!

```
from IPython.utils.traitslets import HasTraitlets, Int
class A(HasTraitlets):
    a = Int
    def _a_changed(self, name, new):
        print name, 'has changed to:', new
...
In [11]: a = A()
In [12]: a.a
Out[12]: 0
In [13]: a.a = 100
a has changed to: 100
```

## What, why???

- Pure Python (Jython, IronPython)
- We use parts of Enthought's Traits code
- As compatible with Traits as possible

# A clean way to do all these, and more...

The screenshot displays a multi-windowed development environment. The top-left window is IPythonX, showing a Python prompt with several commands and a `ZeroDivisionError` traceback. The top-right window is emacs-maqroll, displaying a code editor with a Python class definition: `class Component(HasTraits):`. The bottom-left window is a terminal showing the execution of `import numpy as np` and subsequent `cd` commands, followed by another `ZeroDivisionError` traceback. The bottom-right window is WxIPython, which contains an IPython Shell with a directory listing of `ipython/` and a `ZeroDivisionError` traceback. A tooltip is visible over the `np.compl` command in the terminal window, listing various NumPy complex number types and their corresponding `np.` attributes. The system tray at the bottom shows the date and time as 01:30.

# If you use IPython as a library...

- Enthought
- Cyrano (STScI)
- Others...

**Talk to us!**

We'll be here for the sprints...