



Interactive Notebooks with IPython

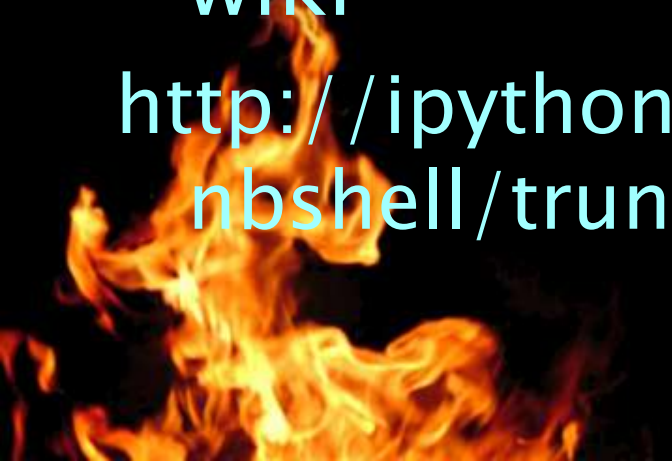
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What is a notebook?

A notebook is a document that mixes text, graphics, and an interactive interpreter.

<http://projects.scipy.org/ipython/ipython-wiki>

<http://ipython.scipy.org/svn/ipython/nbshell/trunk>



Prior Art

- Mathematica
- TeXmacs
- LyX
- Leo



Why not TeXmacs / LyX / etc.?

- Because we want a component
- Because we don't want to be tied to X11
- Because we want to code in Python, not Scheme or C++
- Because we could



Notebook Format

- Many long discussions about the file format
- Pure Python has an appeal, but Python is not Lisp
- XML is ugly, but it solves more problems than it creates



Working Code
Ends All
Arguments



XML APIs

- The traditional APIs (SAX, DOM) are terribly unPythonic
- ElementTree API is quite nice, and lxml also provides important XML standards support
- XPath (`/notebook/sheet[@id="chapter02"]`), XSLT, Schemas



DocBook

- Can be simplified down to 5 or so tags
- Can be transformed to HTML and LaTeX via XSLT
- Very flexible tweakability
- But we don't have to implement anything



Status

- Pre-alpha, GUI still prone to crash
- Document generation is stable
- It's configurable ... if your name is Robert Kern
- We will be changing the format, but your old documents will be converted



Acknowledgements

Fernando Pérez

Tzanko Matev

Toni Alatalo

John Hunter

Enthought

Google

