BeeWare – The IDEs of Python

Shai Berger

PyWeb-IL, 5-Dec-2016

The Visionary

The Vision, V1

- Make a GUI Python development environment, which adheres to the Unix Philosophy
    - Our screens are too nice for text-only tools...
    - Everything should be pip-installable
    - Separate parts
    - Each does one task well
    - Parts can be combined

The Implementation, V1

- Standard parts
  - A debugger in the "Turbo-X" tradition (Bugjar)
  - A test runner (Cricket)
  - An installer-maker (Briefcase)
- Unique parts
  - A documentation (Sphinx) editor/presenter (Galley)

The Implementation, V1

- Python comes from the box with a GUI toolkit, and even a so-called IDE

  - TkInter

  - IDLE

- Let's build on those!

The Problems, V1

- Tkinter is ugly

- Tkinter is not native anywhere

- Tkinter has no web-browser widget
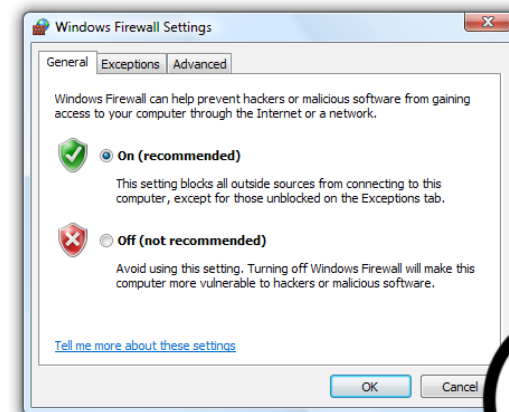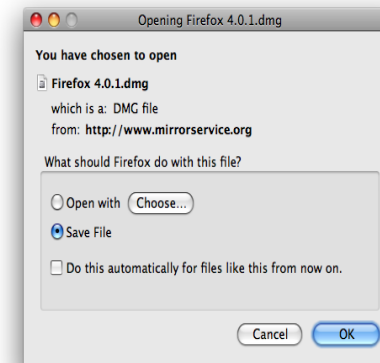 - Which makes Galley practically impossible

The Solution: Native Widgets Everywhere

- Mac/OSX: Objective-C is callable as C

- Linux/GTK: Can treat Python bindings as part of system

- Windows: Win32API is C

- C is callable from Python with ctypes!

- Oh, and for this new thing – Python 3 only!

Problem and Opportunities

- Different systems have different conventions

- So we can abstract over them!

- Obj-C gives us also iOS – so let's include mobile!

- Write once, run everywhere!

Python all the Things - Toga

- Linux, Windows, Mac OS/X, iOS covered

- What's left? Android and Web

- Problem: Python doesn't really run there

  – Jython/Brython/etc don't quite do the right thing, mostly reimplement the Python syntax

- Solution: Implement from ByteCode

  – Batavia: Python VM in JS

  – VOC: Compile Python Bytecode to JVM

Where We Are Now

Python all the Things

- Linux, Mac OS/X, iOS: Toga basically works

- Android: Compiler partially works

- Web: VM partially works

- Windows: Basically waiting for someone who cares

In the Works

- Cricket (test runner) basically works, TKinter

- Bugjar (debugger) basically works, TKinter

- Galley doesn't really work, Tkinter

- Briefcase works (setuptools plugin)

A Great Project to Join

- Beginner-friendly attitude

- Communications mostly in chat (Gitter)

- Plenty of tasks of all difficulty levels

    - From the smallest missing features

    - To designing abstractions of communications

- A revolution in the making

BeeWare – Come Join Us!

http://pybee.org/
https://github.com/pybee/

Thanks!

Shai Berger
shai@platonix.com
@shaib_il