Hacking EU Funding for a FOSS project

holger.krekel@merlinux.de

hacking?

- Hacking is the art of understanding and tweaking a formal system and its rules to self determined needs (in a legal way, mind you)
- Hacking is not limited to computer code: lawyers and lawmakers can be hackers as well as people modifying bikes
- Hacking is obviously not always good as it can be used for rather destructive goals

Free and Open Source?

- Openly Developing and Collaborating in a chaotic international environment of communities and experts is great fun and a worthwhile challenge
- Free and Open Source projects shape the information infrastructure today and probably even more so in the future
- Governments and the main stream are already changing to adopt more FOSS-friendly policies

EU Funding?

- The European Union has large research and development funds which it distributes to international collaborative R&D groups
- The EU as well as governments are getting ever more interested in FOSS projects
- Larger **FOSS projects and communities** are fundamentally internationally organized
  → **a good starting position!**

Meta Notes

You can especially use the *italic terms* as keywords in google queries to discover more details for each of the topics

I am not going to talk much about the technical aspects of PyPy here.

EU Framework Program 6

- The EU spends 17.5 Billion Euros from 2002 till 2006 for the *FP6*
- Collaborating Groups (*Consortiums*) submit *Proposals* for specific *Calls* from EU *directorates*
- Each *Proposal* is peer-reviewed by undisclosed technical experts
- *Proposals* getting the most points from reviewers enter *negotiation* with the EU, after which they usually get accepted

Dealing with the EU

- The EU is one of the largest existing bureaucracies ... which implies formal procedures for every move you make
- But is the API to the EU larger than the one to Win32 or J2EE?
- I don't think so!
- Let's go through the process that the PyPy project, rooted in various Python communities, went through

Bootstrapping PyPy

- PyPy was triggered from a thread on the python-de mailing list January 2003
- Armin Rigo, Christian Tismer, Holger Krekel decided to invite to a first one-week coding "sprint"
- The sprint took place in the "Trillke-Gut" in February 2003 and attracted 12 people

But what is a Sprint?

- a multi-day meeting among interested developers to hack together
- pair-programming and writing lots of tests (to allow easy changes in the future)
- *egoless programming* (google finds you the C2 wiki)
- a great way to get to know each other and reach out for larger goals

What is PyPy?

- A novel *Python* implementation written in Python, translated to low level languages
- we seek configurability of memory & threading models
- we want to generate a Just-In-Time compiler
- orthogonal persistence, new interpreter-level distribution of objects ...

June 2003, Belgium

- During our 3rd sprint Laura Creighton and Jacob Hallén began to push for the idea of the PyPy group responding to a Research *Call* from the EU, meeting their strategic objectives:
  - **Open development platforms for software and services**
  - Cognitive systems
  - Embedded systems
  - Applications and services for the mobile user and worker
  - Cross-media content for leisure and entertainment

PyPy's approach to funding

- From September on we collaboratively worked on writing the proposal, trying to read the EU's and our minds
- as a collection of textfiles representing the formalized chapters of a *proposal*, freely accessible to the public, fully version controled
- working on the textfiles followed the same mechanics as our coding development process (mailing lists, subversion, IRC, generating html from text files on the main site, issue tracker)

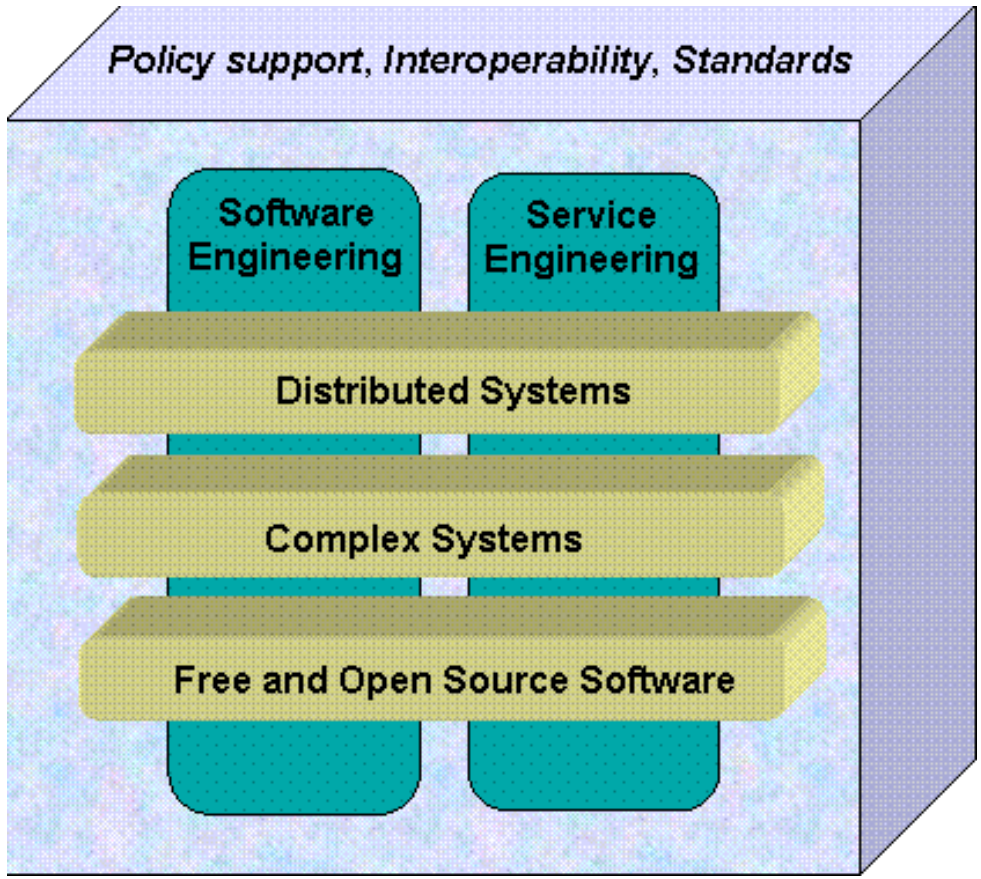
“Coding a Proposal”

- We distributed different chapters to different people (preferably pairs who peer review)
- Diff-Notifications were a means to notice what was going on in the Chapters and who improved what and how
- In a 10-14 day intense IRC/writing session we came up with the final version of the proposal, generated through OpenOffice as a PDF
- just to meet the deadline at 15th October 2003!

Basic concepts of EU funding

- There are different *instruments* of EU funded projects
- PyPy's a *special targeted research proposal* (*STREP*)
- we mainly went for the "open development platforms" *strategic objective* of the *call*
- *Calls* are issued by *directorates*, for software usually from the *Information Society Technology* general directorate (which has various sub-directorates).

Software Technology and distributed systems model (IST-Direct. D Unit 4)



Source: http://www.cordis.lu/ist/directorate_d/st-ds/index.htm

The *Coordinator*

- The EU wants to speak to the project through a single point of contact, the *coordinator*
- It increases credibility if this person has some track record with EU projects
- the coordinator has to be a reliable and communicative person, and he or she should be comfortable dealing with formal procedures

Good to know

- The EU's representatives will usually be very careful when answering (to say the least)
- Background: **they are liable with their two-year salary if they give wrong information which leads to financial damage.**
- Better to ask your *national EU office* which is usually very helpful and supportive! Or hire a consultant for very specific problems.

PyPy got answer early 2004!

- The EU notified us that we got some 26.5 points out of 30 and were invited to negotiations in March 2004
- Apart from some technical clarifications they demanded large changes in our consortium
- No freelancers! No non-profit associations! (especially not ones without employees)

Learning the hard way

- The EU only funds *actual costs*, and only 50% of such costs for companies (100% for universities)
- Individuals (such as freelancers) can take part but they only get their *indirect costs*, i.e. no work costs!
- So you need (to found) companies employing yourself or otherwise work through a university, (or possibly a foundation or association)
- Obviously the 50% rule can be a tough problem!

A Company model

- you can found a company and employ yourself, ask your *chamber of commerce* to help!
- however, where to get the 40-50% co-financing?
- in our case some companies got a private loan with low interest that the companies have to pay back after the project ...
- maybe there are better solutions. But we also had time pressure so there was not enough time to further investigate or negotiate with the EU

Compromising

- Changing the structure, founding companies and various other changes lead to a new *proposal* version and a modified *consortium* in August 2004
- on the 30th of November 2004 the European Commission finally signed the contract!
- Note btw, that before the signature there is no legal certainty whatsoever.
- “Hurry up to wait! Hurry up to wait!”
- no news is good news

How does it go on now?

- PyPy's funding is for 2 years
- We will have to write reports and get *audit certificates* to prove that we spend the money correctly
- There is still formal work waiting for us ...
- especially getting sprint attendants (*individuals/ physical persons)* a refund of their travel & accomodation costs

PyPy Consortium

- AB Strakt Goetheborg
- HHU Düsseldorf
- Logilab Paris
- DFKI Saarbrücken
- Changemaker Goetheborg
- merlinux Hildesheim
- tismerysoft Berlin

contributors (incomplete)

Armin Rigo
Samuele Pedroni
Michael Hudson
Jacob Hallén
Richard Emslie
Anna Ravencroft
Anders Lehmann
Jiwon Seo
Jens-Uwe Mager
Guenter Jantzen
Dinu Gherman
Rocco Moretti
Theo de Ridder
Holger Krekel
Christian Tismer
Laura Creighton
Alex Martelli
Seo Sanghyeon
Guido van Rossum
Tomek Meka
Stephan Diehl
Jonathan David Riehl
Stefan Schwarzer
Patrick Maupin
Andreas Friedge
Bea During

Consortium Agreement

- It makes sense to sign a *consortium agreement* between the different organizations (partners are each liable with their full funding amount!)
- However, the EU *model consortium agreement* **does not fit** FOSS projects and their common culture
- Mainly the "IP Rights" and "Communication" Paragraphs are very unfitting (think of "closed and controlled", patents and what not)
- By now there are *consortium models* from several GPL/BSD licensed projects, make use of them!

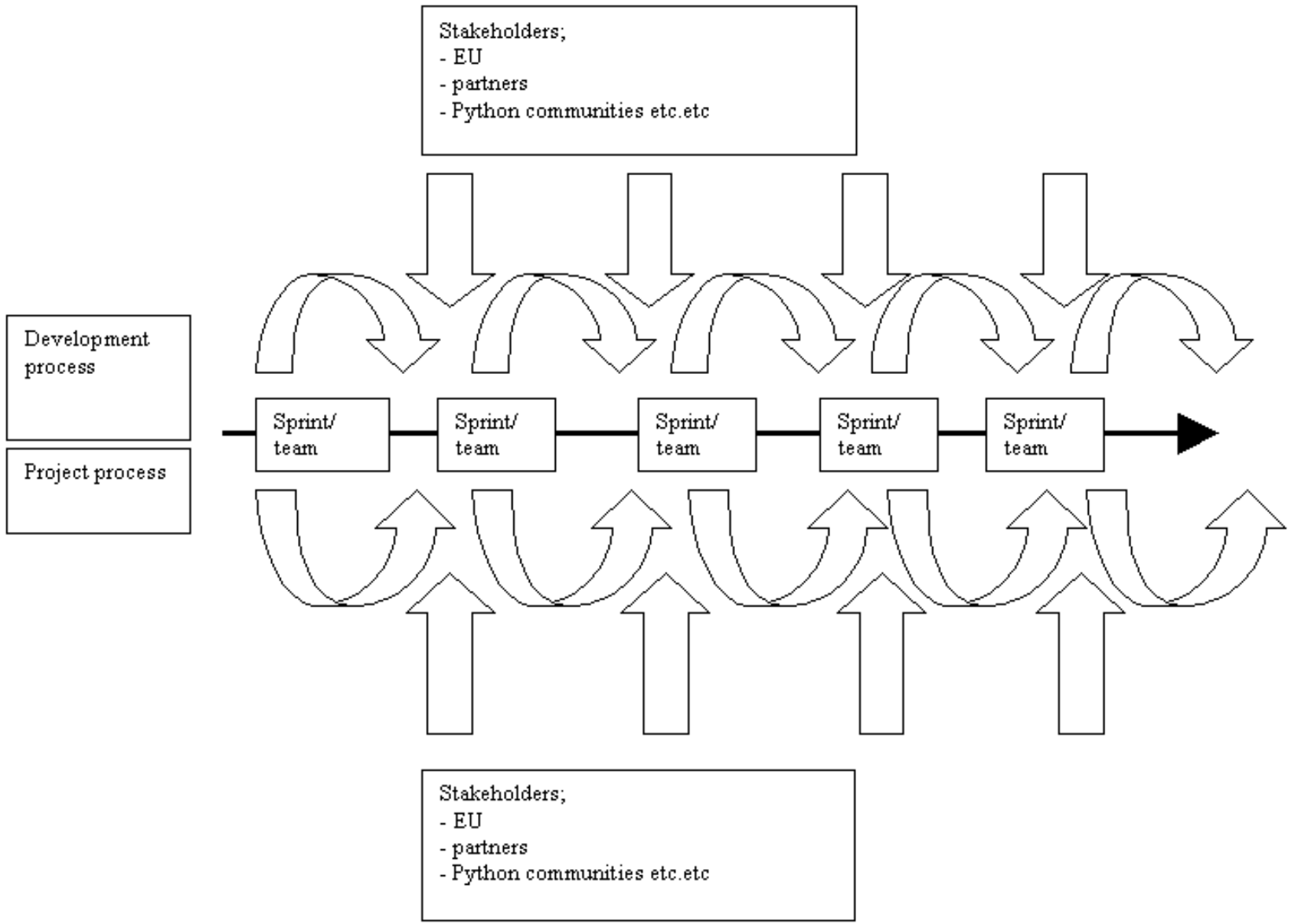
Other lessons learned

- employ as much transparent communication as possible, it helps to prevent irritations that kind of naturally evolve when money is involved!
- Think about a lightweight and bottom-up management and decision model or do you really want top-down hierarchies?
- Reach out for help from national or regional institutions, and existing EU/FOSS projects!
- (Maybe we should try to setup a common FOSS/EU website?)

PyPy's selling points

- These are guesses but the following cornerstones probably helped to get EU approval for PyPy
  - ambitious industry relevant technical and research goals
  - a true FOSS-project rooted in real communities (not just a license!)
  - Stressing relevance with respect to EU/US competition
  - technical experts seemingly able to do the job!
  - employing *agile development methods*

Agile development method



Closing notes

(Google) Search Keywords:

Framework Program 6 (**FP6**)
Call, Information Society Technology, **IST**,
national EU office (in your language: e.g. **EU Büro**)
financial guidelines FP6

Questions please!

- Thanks for listening!

This talk is downloadable from

http://codespeak.net/~hpk/2004-pypy-eu.pdf

holger krekel <krekel@merlinux.de>
merlinux GmbH, Hildesheim