

The status of PyPy

Maciej Fijałkowski

merlinux GmbH

Pycon 2010, February 20th 2010, Atlanta



Introduction

- What we did in the last year?
- What we achieved?
- Plans for near future

Last year highlights

Last year highlights

JIT

February 2009



- we merge experiments into mainline PyPy

February 2009



- we merge experiments into mainline PyPy
- compiles assembler, slows things down

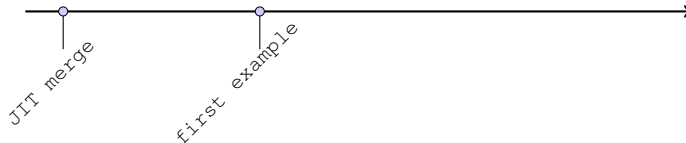
March 2009



JIT merge

- first python example works!

```
i = 0
while i < 10000000:
    i = i + 1
```



- we manage to speed first non-trivial benchmark
- **richards** - a simple, object oriented code
- a variety of optimizations involved

February 2010 - now



JIT merge

first example

richards

We run a variety of benchmarks nightly.
Pictures!

Status

Status of today

- JIT is fairly good

Status

Status of today

- JIT is fairly good
- can consume a lot of memory

Status

Status of today

- JIT is fairly good
- can consume a lot of memory
- can recompile code too many times

Status

Status of today

- JIT is fairly good
- can consume a lot of memory
- can recompile code too many times
- GCs are pretty good

Status

Status of today

- JIT is fairly good
- can consume a lot of memory
- can recompile code too many times
- GCs are pretty good
- runtime algorithms are not as polished as CPython ones (eg strings, regexes)

Near future

- release March 2010

Near future

- release March 2010
- first PyPy release to contain a working JIT!
- mostly to try it out

Near future

- release March 2010
- first PyPy release to contain a working JIT!
- mostly to try it out
- we just got a bit more **EU funding**
- we're actively looking for **sponsoring** to continue PyPy development

Come to my next talk!

speed of PyPy

... or how to write programs that play well with the JIT

That's all

Thank you for your attention

- <http://morepypy.blogspot.com>
- <http://pypy.org>
- <http://merlinux.eu>
- these slides are already online:
- <http://tinyurl.com/pypyslides>