The Pharo Roadmap

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http://www.pharo-project.org

Leuchttürme

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* HÖRNUM *

Create an ecosystem where business/innovation can bloom

Some Pharo's success stories

- **Seaside.st**

- **Yesplan.be, netstyle.ch**

- **Pier**, **DrGeo**

- **Cmsbox.ch**: Content Management

- **beta9.be**: T3 Easy (Pharo server side)

- **Moose:** www.moose-technology.org

- **pinesoft.uk.com:** MBagger

- **Airflowing**

Be able to invent our future

Done so far

- 1.3 is released (a lot, a lot, and a lot of improvements :)

- 1.4 alpha started

- Jenkins server for everything

- All VMs are automatically generated using Jenkins

Community Ongoing Work

- Better widgets (A. Plantec, G. Chambers, B. van Ryseghem)

- Better browsers (B. van Ryseghem, C. Bruni)

- Key mapper (G. Polito)

- Serializer (M. Dias, M. Martinez-Peck), Full Proxy (M. Martinez-Peck)

- New source code model: Ring (V. Uquillas Gomez, A. Kellens, S. Ducasse)

- New compiler (J. Ressia/M. Denker/JB Arnaud)

- Zoomable interface (I. Stasenko)

- Bootstrap (B. van Ryseghem/S. Ducasse)

- Package distribution infrastructure (D. Henrichs)

- Network (Zinc S. van Caekenberghe, Ocean N. Bouraqadi, L. Fabresse, J. Laval)

- Remote Smalltalk (N. Papoulias and N. Bouraqadi)

Roadmap

- Building the infrastructure for the next generation

Code Model Infrastructure

* Able to query all the versions

* What were the senders of this method in version 13168?

* What is the diff between the senders in the past and the one now?

* Support for merging

* Distributed source code

Code Model Infrastructure

* Ring (V. Uquillaz Gomes/A. Kellens/S.Ducasse)

  * Source code metamodel

  * API compatible with Smalltalk objects

* Adding layers on top of it

* Porting all the tools to use it!

* Reuse tools

Next Steps

- Server for queries

- New source code model

Athens Graphics

- New Canvas
  - Vector Graphics API
  - Layered Architecture
    - Backend Cairo / OpenGL OpenVG....

Next Steps

* OpenGL bindings using NativeBoost

    * done on Windows

* Stabilize API

* Adapt Morphic

Opal

- We need a more flexible and simpler compiler

- Hooks for DSL support

- Better API

- New generation of tools

Next Steps

- Decompiler (was the last missing bit) is nearly finished

- Soon added in 1.4

- Throw away the old compiler

- Then improving the API

Fuel: Fast Serialization

- Done by M. Diaz, M. Martinez-Peck, (T. Bourgeois & S. Ducasse)

- Don't use ImageSegment (removed in 1.4)

  - Fuel is faster (!!)

  - Much more flexible and easier to understand

Next Steps

- Replace existing serializers

- Migration path

- Binary code loader

Scripting Syntax: Coral

- We want to write scripts in Pharo :)

- Headless

- REPL

- OS connexion (OSProcess for now)

- So we get Coral D. Pollet (and S. Ducasse)

```smalltalk
[ Console puts: 'Before the command'. ]

[ "Let's define a command"

  | command |

  Console puts: 'duuuuhhh'.

  command := (CLICommandParser named: 'dostuff')

      aliases: #('dostuff.coral');

      description: 'This command does a lot of stuff. I
really mean a lot.'.

]
```

Distributions: towards a certified catalog

- I want to go to Mars with just a DVD,

- and still be able to load the projects I want,

- and without internet, please!

Process

- You use Metacello!

- You publish in your repo!

- When you want you can release code to a distribution

- All the code then is recursively copied to the distribution space

- All the **tests and quality rules** are checked

- People use your code but with a certain level of confidence :)

Varia

- Making sure that we will be able to use announcements instead of SystemChangeNotifier

- Cleaning Morphic

- New package infrastructure

Package certification

- Packages should be more self contained

- Tests

- LintRules

- Meta data

- Run and automatically certified

Native Boost

- By Igor Stasenko (mac, linux and windows 32bits)

- Generate machine code on the fly :)

- Implement primitives

- FFI

VM

- Expand knowledge

- Welcome newbies and idiots (like Stef)

- Increase tests

- Release VM builders from stupid tasks

- Traceability/Branding

VM builds

- Anybody is now able to build a vm!

VM Infrastructure

- VM validation after ANY changes

- Automatic recompilation

- Automatic test regressions

Nautilus

* Throw away StringHolder hierarchy (Yes Browser inherits from StringHolder)

* Browser based on a model

* Nautilus by B. van Ryseghem

Next Steps

- Reimplement
  - ChangeSorter
  - MC UI
  - Debugger

Mini Image

- Pavel's Mini image

- 4.2 mb for Seaside

Future?

- Native boost

- Google native client

- Full bootstrap

- More secure system

Pharo Consortium

- How to sustain Pharo?

- How to structure the community?

- Should we always rely on people free time?

Consortium

- You can participate to the consortium: Pay a fee

- The consortium will pay a full-time engineer to support Pharo tasks

When

- Started discussions with INRIA two years ago

- INRIA is ok to put money on the table (under negotiation)

- More than 25 companies are interested

- Join!

Consortium FAQ

- Pharo will stay free!

- No negative impact: just a better Pharo

- People and organization should be able to pay too: a.k.a. Morale License

Pharo books

- Pharo by example
  - translated to french, merci!
  - translated to spanish, gracias!
  - japanese, german started

New books are coming

* Pharo by Example Volume Two (deep into Pharo)
* Pharo for the Entreprise
    * If you want to contribute...
* A glimpse at VM

Doing a Master with us :)

* Slim binaries (compressing AST as bytecodes)

* Virtual Filesystem

* Fuel-ing the code

* Source manager

* Peer to peer sources

* NativeBoost as a foundational engine

* Bootstrap next steps

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