

The Pharo Roadmap

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<http://www.pharo-project.org>

Leuchttürme

55



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* H Ö R N U M *



**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
- ✦ **pinsoft.co.uk:** 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)


```
[ 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 Enterprise
 - ✦ 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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