

# Pharo3

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

*Inria*  
INVENTEURS DU MONDE NUMÉRIQUE

# What is it?

- ✦ Language + Environment
- ✦ Simple Language (Smalltalk)
- ✦ Object-Oriented, Dynamic, Reflective
  - ✦ Explore + Change running systems
- ✦ **The Ultimate Programming Environment!**

# Pharo

- ✦ MIT license
- ✦ Mac, Linux, Windows, (Android, iOS)
- ✦ Great community
- ✦ Improving steadily
- ✦ Many excellent libraries

# Started 2008

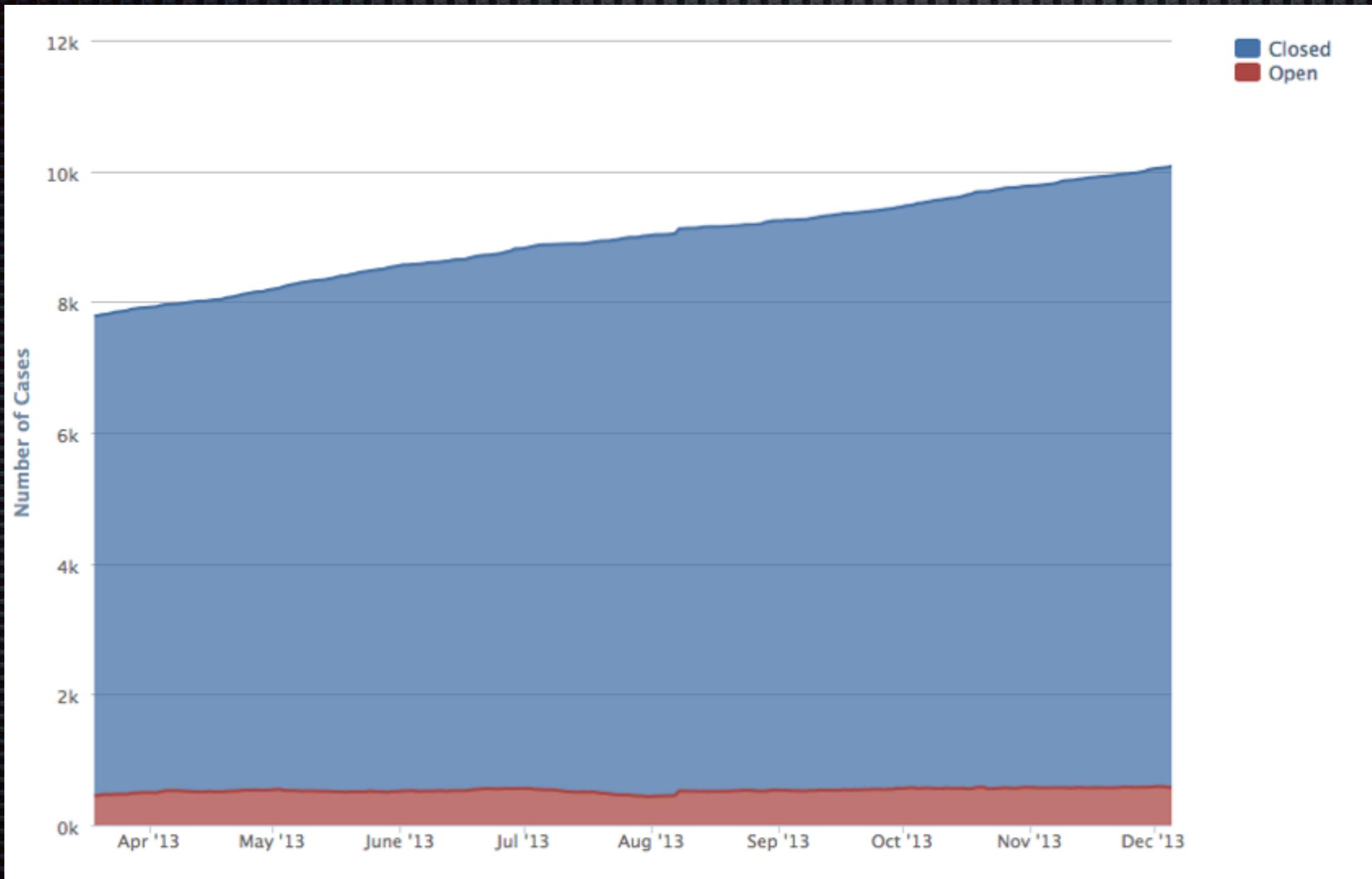
- ✦ Pharo 1.0 released October 2009
- ✦ 2.0 is the current stable (5th release)
- ✦ Released March 2013

Plan: 1 Release per Year

# Pharo3: Release March 14

- ✦ Started March 2013
- ✦ 2021 Issue tracker entries with Pharo3 tag closed
- ✦ 733 Updates
- ✦ 40 issue as TODO for release

# Lots of Activity



# Infrastructure: CI

- ✦ <https://ci.inria.fr> is stable and used **a lot**
- ✦ Every fix is validated automatically before human review
- ✦ Every update triggers test run on 3 Architectures
- ✦ over 80 projects in pharo-contribution

# ci.inria.fr/pharo-contribution/

The screenshot shows the Jenkins web interface for the Pharo Contribution CI server. The browser address bar shows `ci.inria.fr/pharo-contribution/`. The page title is "Pharo Contribution". Below the title, there is a description: "The Pharo-Contribution CI server contains projects that are actively maintained by the Pharo Community." and a list of requirements for Jenkins jobs: "A project description" and "A contact person, either in the description or in the email configuration of the job".

On the left side, there is a sidebar with navigation links: People, Build History, Project Relationship, Check File Fingerprint, Pharo Jenkins, Pharo Issue Tracker, Pharo File Server, Disk usage, Job Import Plugin, and Global configuration. Below the sidebar, there is a "Build Queue" section showing "No builds in the queue." and a "Build Executor Status" table with columns for "#", "Status", and "Name".

The main content area features a table of Jenkins jobs. The table has columns for "S" (Success), "W" (Warning), "Configure", "Name", "Number of builds" (with a sub-row for Success, Warning, and Failure counts), and "Last Success".

Helper	NBOpenGL	Pharo-Kernel-2.0	Pharo-Kernel-3.0	Phobos	ProtectedSmalltalk	RaspberryPi	RaspberryPi-Experimentation	VM	Versions and Dependencies	all
S	W	Configure	Name ↓	Number of builds			Last Success			
●	☀️		<a href="#">AndrSNDK</a>	● 2	● 0	● 1	11 mo - <a href="#">#10</a>			
●	☁️		<a href="#">Artefact</a>	● 24	● 2	● 5	22 hr - <a href="#">#301</a>			
●	☀️		<a href="#">AsmJit</a>	● 24	● 0	● 1	17 hr - <a href="#">#571</a>			
●	☁️		<a href="#">ASTInterpreter</a>	● 18	● 0	● 10	9 days 2 hr - <a href="#">#149</a>			
●	☀️		<a href="#">Athens</a>	● 1	● 0	● 0	5 mo 9 days - <a href="#">#87</a>			
●	☀️		<a href="#">BitmapCharacterSet</a>	● 26	● 0	● 0	10 hr - <a href="#">#272</a>			
●	☀️		<a href="#">Bootstrap</a>	● 38	● 17	● 0	2 hr 0 min - <a href="#">#214</a>			
●	☀️		<a href="#">CI</a>	● 0	● 27	● 0	14 hr - <a href="#">#361</a>			
●	☀️		<a href="#">Citezen</a>	● 24	● 0	● 2	22 hr - <a href="#">#278</a>			
●	☀️		<a href="#">Cog-Git-Tracker</a>	● 9	● 0	● 0	13 hr - <a href="#">#1654</a>			
●	☁️		<a href="#">CogDroid</a>	● 1	● 0	● 4	11 mo - <a href="#">#65</a>			

# Infrastructure: Misc

- ✦ <http://files.pharo.org>
- ✦ <http://get.pharo.org>
- ✦ SmalltalkHub: <http://smalltalkhub.com>
  - ✦ 1025 users, 1200 repos, 15mill hits/day

# Small Stuff

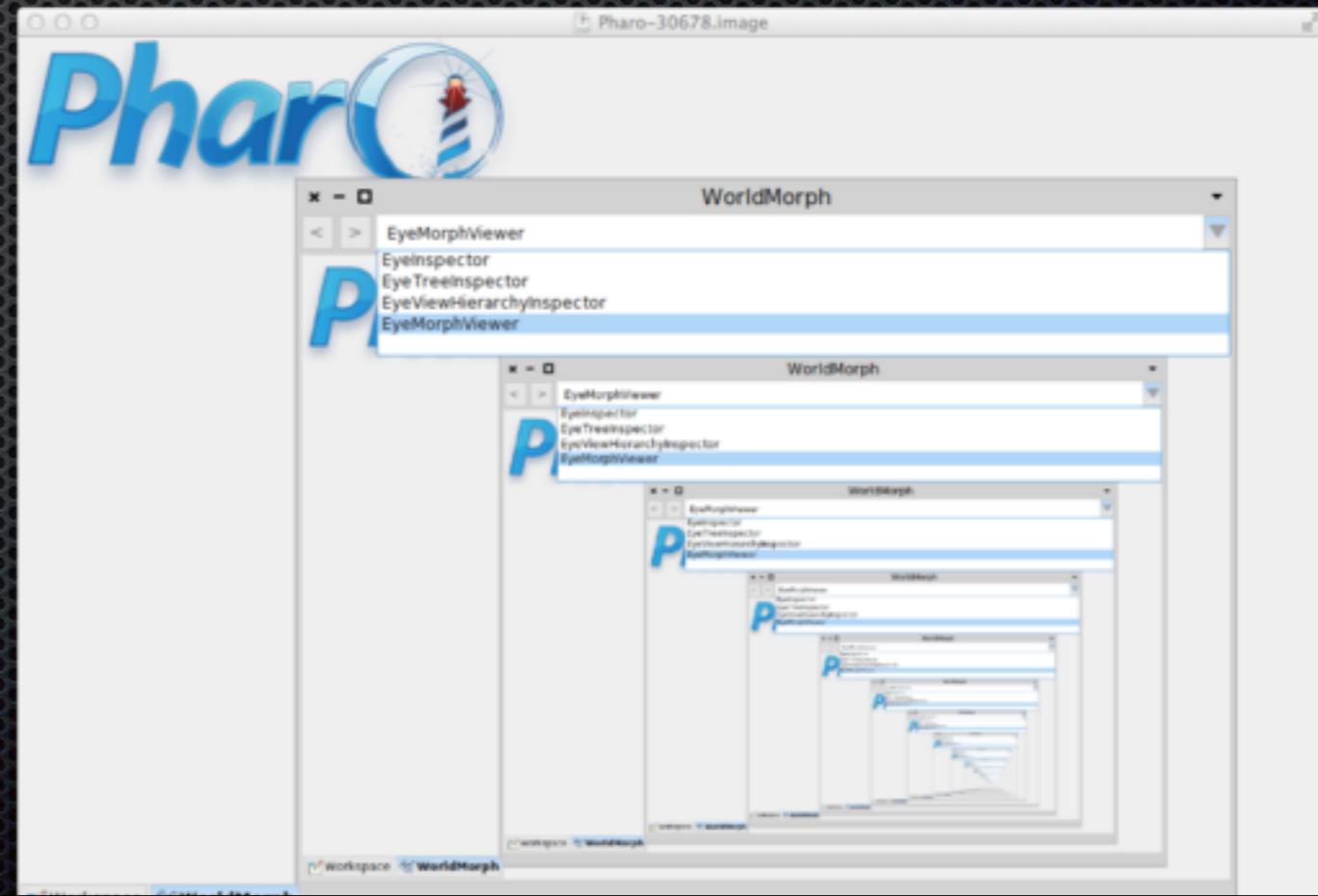
- ✦ Lots of Cleanups
- ✦ Lots of tuning (performance, memory)
- ✦ Lots of small improvements

# Lots of larger things

- ✦ Closure class now standard in Pharo3
- ✦ Terminal output for stderr
- ✦ Cleanup Source file related code
- ✦ AST Interpreter
- ✦ AST based Navigation in Browser
- ✦ Komitter
- ✦ Launcher
- ✦ Font Speedup
- ✦ ....

# New Inspector

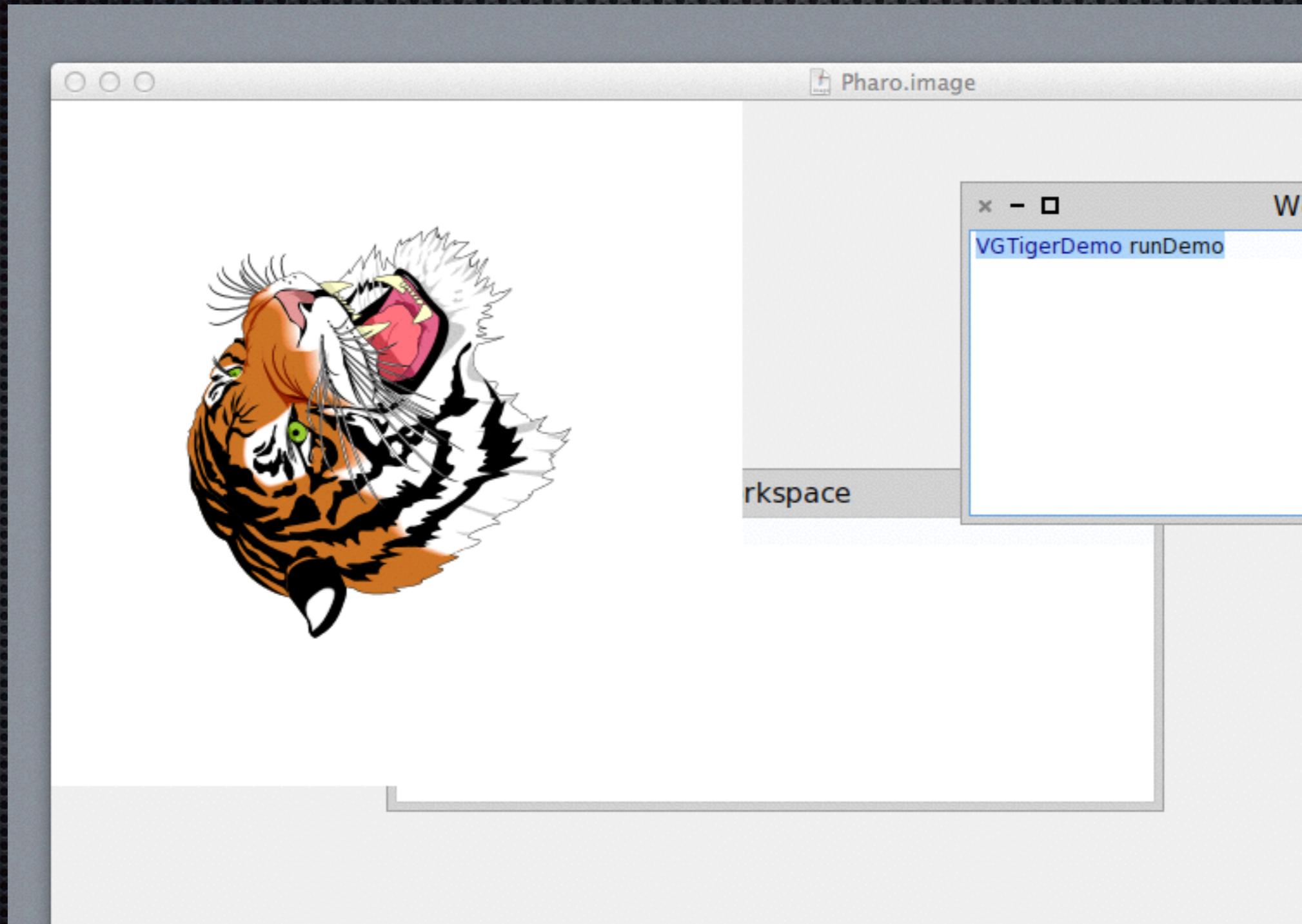
- ✦ Unify Inspector and Explorer
- ✦ Make specialised inspectors visible



# Athens: Vector Graphics

- ✦ New API for Vector Graphics
- ✦ Independent of Backend
  - ✦ For now: Cairo
  - ✦ Balloon3D for Debugging
  - ✦ Future: OpenGL

# Athens: Demo



# Opal Compiler

- ✦ Uses RB AST
- ✦ IRBuilder: Bytecode backend with high-level builder
- ✦ Much easier to change
- ✦ Basis for Reflectivity (see Pharo4 talk)

# New ClassBuilder

- ✦ Replaces the old ClassBuilder
- ✦ Easier to understand and more flexible
- ✦ Basis for Slots (see talk about Pharo4)

# New Debugger

- ✦ Model now separate from View
- ✦ Model is scriptable
- ✦ Debugger is extensible with Commands

# Command Line

```
denker$ ./pharo Pharo.image --list
```

```
Currently installed Command Line Handlers:
```

Fuel	Loads fuel files
config	Install Configurations
save	Rename the image and changes file
update	Load updates
printVersion	Print image version
st	Loads and executes .st source files
test	A command line test runner
clean	Run image cleanup
eval	Directly evaluates one line scripts

# Pharo Consortium

Started 2013

- ✦ 13 Members
- ✦ 6 Academic Partners
- ✦ 3 Sponsors

<http://consortium.pharo.org>



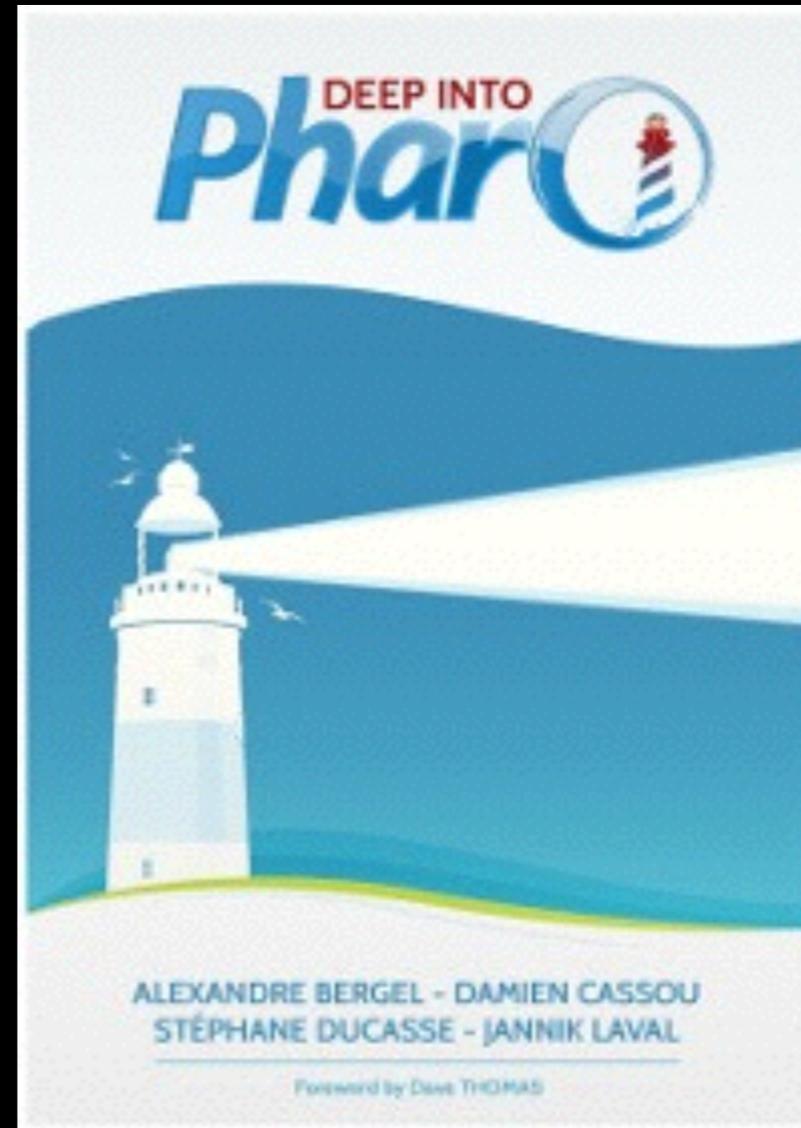
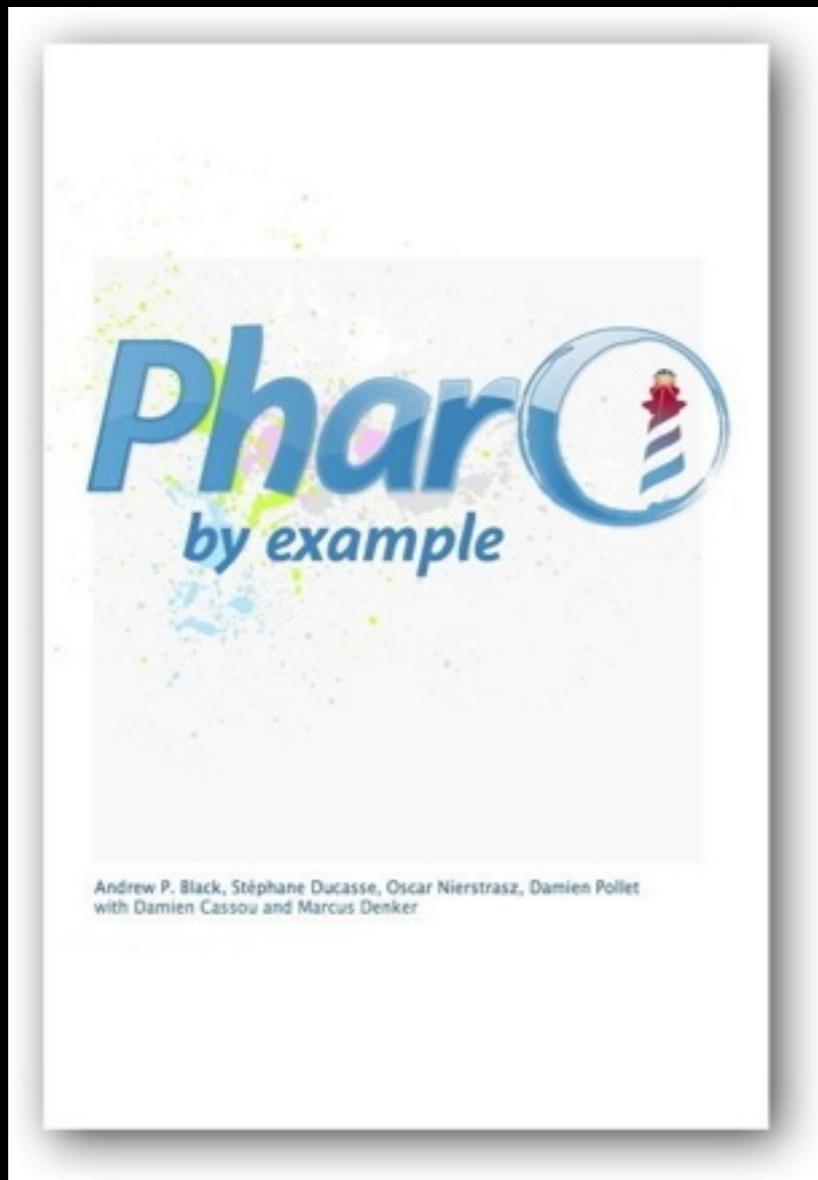
# Pharo Association

Started 2013

- For individuals
- around 60 Members
- Consortium and Association will merge

<http://association.pharo.org>

# Pharo Books



# Open Pharo Sprints

May 2008 Bern

July 2009 Bern

October 2009 Lille

November 2009 Buenos Aires

March 2010 Bern

May 2010 Buenos Aires

June 2010 Bern

June 2010 Bruxelles

July 2010 London

September 2010 **Barcelona**

September 2010 Lille

January 2011 Lille

July 2011 Lille

October 2011 Bruxelles

February 2012 Bern

April 2012 Lille

September 2012 Ghent

October 2013 Lille

November 2013 Buenos Aires



