



# I have a dream...

S. Ducasse [stephane.ducasse@free.fr](mailto:stephane.ducasse@free.fr)

The background is a light gray with a faint, textured map of Mexico. Overlaid on the map are numerous colorful splatters and dots in shades of yellow, pink, blue, and purple, primarily concentrated in the upper left quadrant.

yo tengo un sueño ... :)



# S.Ducasse

LISP ....1996: discover Smalltalk

1998: discover Squeak

~2000: harvester for 3.xx, 3.6, 3.7, started to clean Squeak

Responsible for Squeak3.9

2008: Pharo :)

**Book author:** Squeak (fr), Squeak by example (eng, fr), Pharo by example (eng)

Translated Etoys book and video in french

The background is a light gray surface with a faint, textured map of the African continent. Overlaid on this are numerous colorful splatters and dots in shades of yellow, pink, blue, and purple, primarily concentrated in the upper left quadrant. The text "I dreamed about ..." is centered in the lower half of the image in a bold, black, sans-serif font.

I dreamed about ...





A vehicle to ***reinvent*** the future



Let's stop to think that we are *that* cool!



The background of the slide is a light gray with a subtle, textured pattern. In the upper left quadrant, there is a cluster of colorful splatters in shades of yellow, pink, and blue. A faint, large watermark of an elephant is visible in the background, centered horizontally and slightly lower vertically.

Python, Ruby, Groovy, Lua...


Erlang...



Let's stop to live in a  
museum!







When do we ***really*** build on top of giant shoulders?

Thanks Dan and Alan. Now...

**I want *more*!**





We should be able to invent our future



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Where is Smalltalk innovation?

# Smalltalk as the language to define other languages

Advanced and stronger Mops

We deserve more than doesNotUnderstand:

New ways of defining languages

Domain specific language support

New generation of meta compilers



# Software Engineering

Tests: which ones should I fix first?

Continuous test running

Smoother refactorings and code manipulation

Continuous integration / Extreme integration

Better Lint Rules / Domain specific lint rules

Bug tracking

# UI

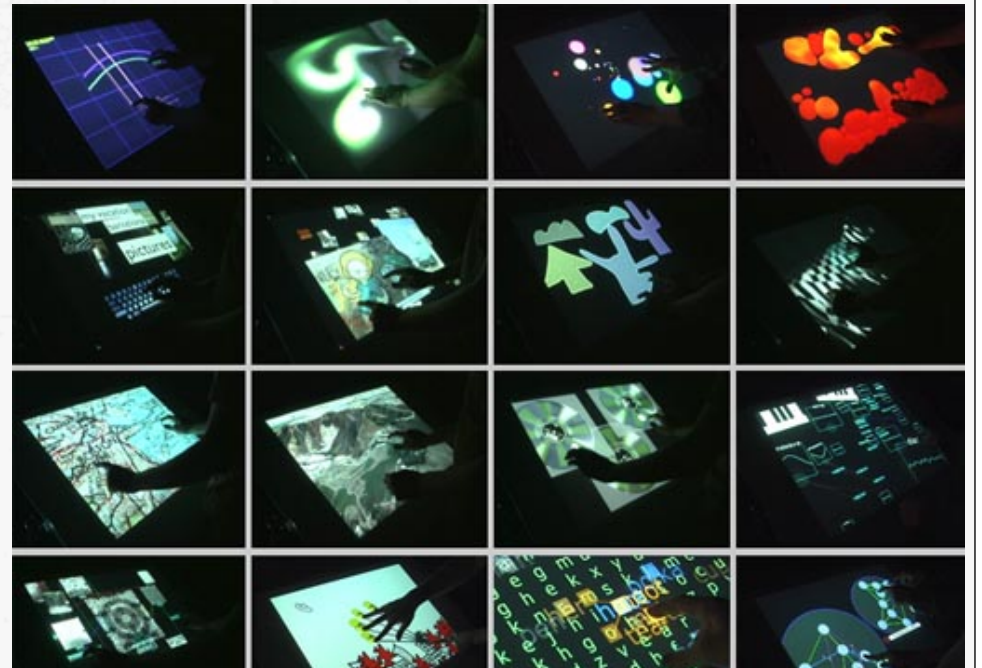
Multitouch support

New UI

When will we be able to reinvent UI

Cairo and others?

New IDEs





# Other

Security?

Micro modularity

Advanced runtime

Scripting syntax!

# VM/Languages

Multiple cores?

Open VMs?

New generation JITs?

Immutable



# They show us the way

ObjectPeople (Dave Thomas and others)

Resilient (128K) Smalltalk on hardware

S#: Dave Simmons 90ms boot fully embeddable in C Smalltalk

Dave Thomas Sapphire's vision (ESUG@douai)

TTY + Image as a cache

The background of the slide features several lit candles. Two are in red ceramic holders in the center, and several others are in shallow, round containers scattered around them. The warm, yellow-orange light from the flames contrasts with the dark background.

# There is some hope

Seaside

Reflectivity, NewCompiler, AOSTA?

Monticello, O'Meta, PetitParser, Helvetia,  
Glamour, Mondrian, Traits...

Newspeak, Pepsi/Coke....





# When do we make sure that we could invent Smalltalk 3000?

first class instance variables, modules?, immutability bits?, visibility?,  
image as cache?

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**We need a new state of mind**



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We are trying...



*A clean, innovative, open-source Smalltalk*

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





# Pharo?

A *progressive*, open-source Smalltalk platform  
for *professional* use.

Stable

Bugs fixed fast

***But innovative***



# Pharo?

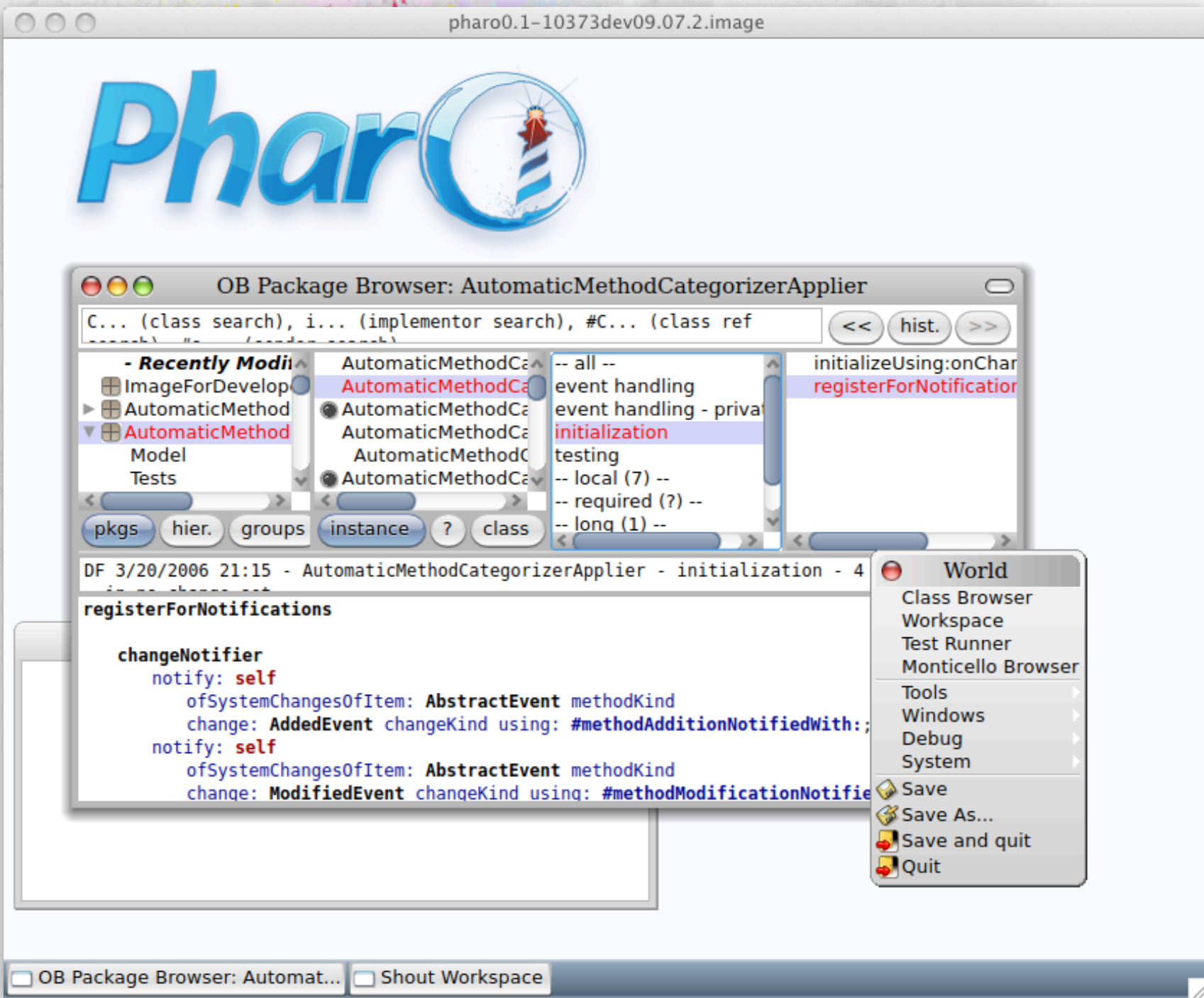
A ***flexible*** environment to support the  
***innovation*** in/of Smalltalk.

Stable

Bugs fixed fast

***But innovative***





# seaside

## The fast lane to HTTP

### About

[Screenshots](#)  
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[Merchandise](#)  
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### Seaside 2.8

#### Memory Requirements



### News

[\[Smalltalk Tidbits, Industry Rants\] Industry Misinterpretations 144: Children of Smalltalk](#) 12 July 2009

You'll have to listen to the entire podcast to understand where the title comes from :) This week ...

[London Geek Night](#) 10 July 2009

I have some pictures to share for people that missed the London Geek Nights with the title Seaside: ...

[Web Velocity released](#) 29 June 2009

Big news from Cincom on the Seaside mailing list today: they've made an evaluation version of their ...

[London](#) 23 June 2009

I'll be in London (UK) on Wednesday June 24 for 10 days or so. If anyone around there wants to meet ...

[Seaside 2.8.4 and Pharo](#) 5 June 2009

We just announced Seaside 2.8.4, the fourth maintenance release for Seaside 2.8. Again this release ...

[more](#)

### download



Seaside is a free and [Open Source™](#) web application framework distributed under the [MIT License](#).

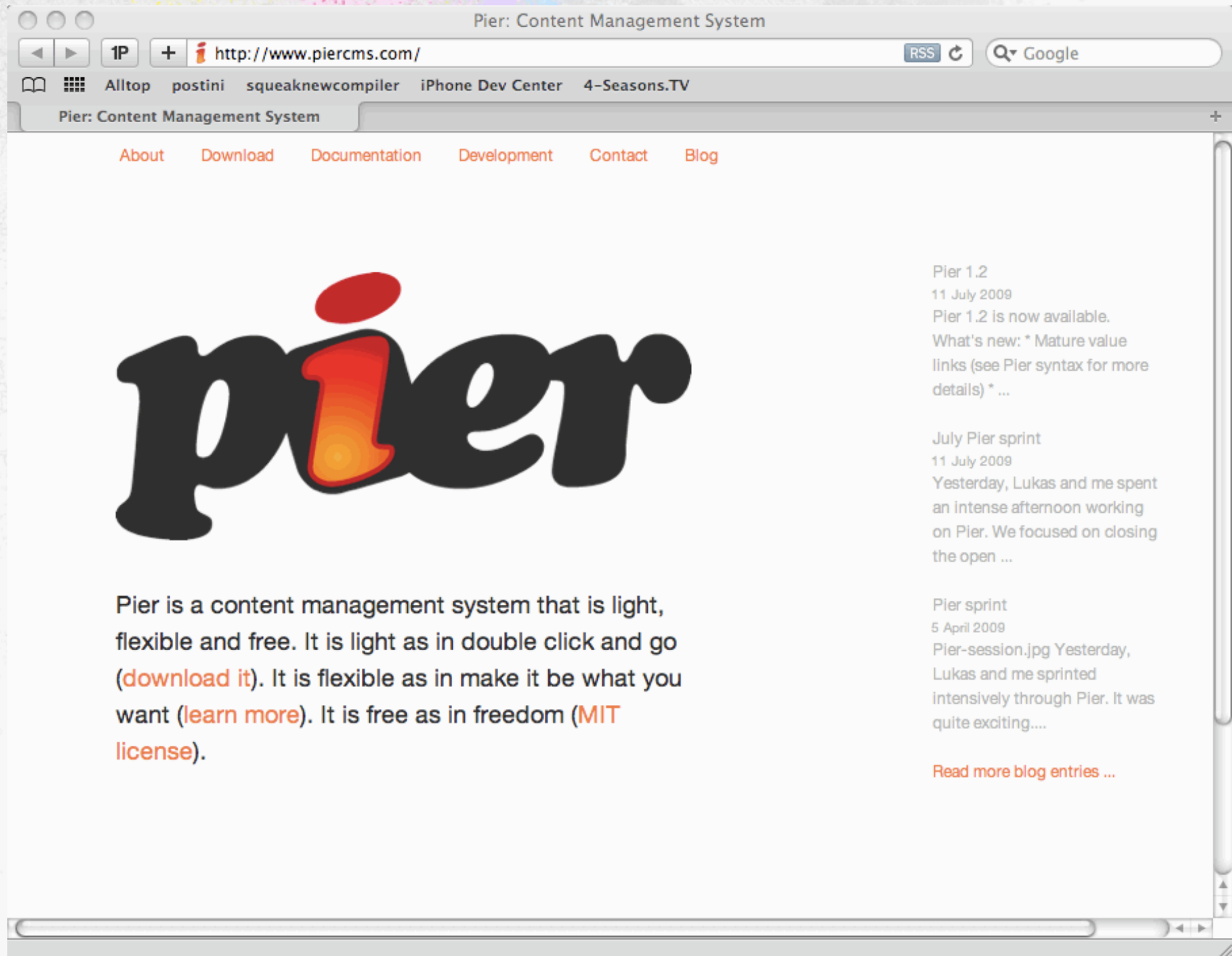
Seaside is available on the following Smalltalk platforms:

[Pharo Smalltalk](#) ([download](#))  
[Cincom Smalltalk](#)  
[Dolphin Smalltalk](#)  
[GemStone Smalltalk](#)  
[GNU Smalltalk](#)  
[VA Smalltalk](#)

[more](#)







Pier is a content management system that is light, flexible and free. It is light as in double click and go ([download it](#)). It is flexible as in make it be what you want ([learn more](#)). It is free as in freedom ([MIT license](#)).

#### Pier 1.2

11 July 2009

Pier 1.2 is now available. What's new: \* Mature value links (see Pier syntax for more details) \* ...

#### July Pier sprint

11 July 2009

Yesterday, Lukas and me spent an intense afternoon working on Pier. We focused on closing the open ...

#### Pier sprint

5 April 2009

Pier-session.jpg Yesterday, Lukas and me sprinted intensively through Pier. It was quite exciting....

[Read more blog entries ...](#)



# iPhone





**GEMSTONE**

Seaside under GLASS

GemStone • Linux • Apache • Seaside • Smalltalk

**Smalltalk with OO-Database**

**Pharo is the IDE**

# Companies

netstyle.ch

cmsbox.com

Pinesoft

Smallworks

Agilitic.be

Inceptive.be

IOPines

GemStone

SWEng

Denker2Denker

...



# Universities

Annecy

Lugano

Bern

Douai

Lille

Santiago

Bruxelles

Limoge

...

# A Simple and Pure Model


Everything is an object instance of a class

Public methods

Protected attributes

Single inheritance





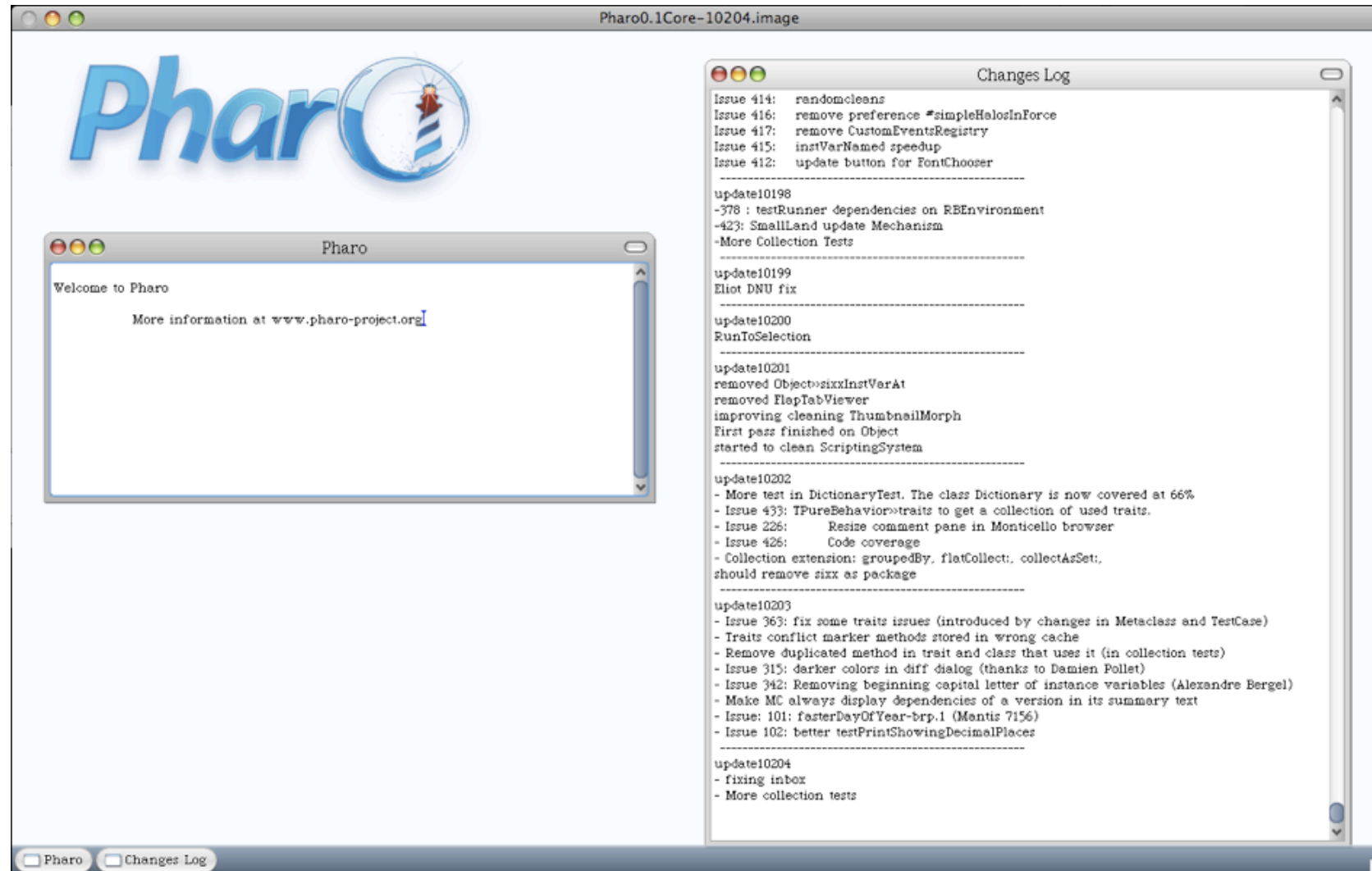
# Everything happens by sending messages to objects

1000 factorial / 999 factorial

(Smalltalk isCool) ifTrue: ['Yeahh']

#(1 -2 3) collect: [ :each | each abs ]

# Running Pharo

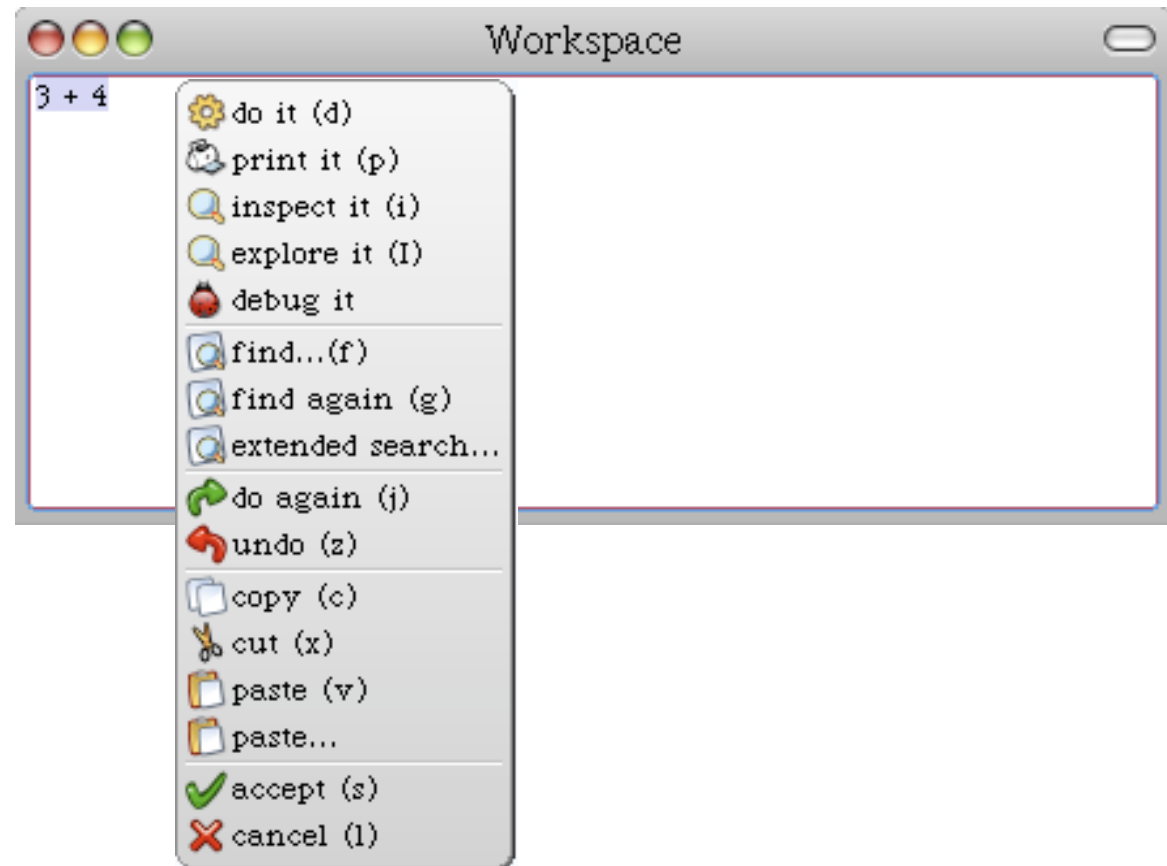




# Do it, print it

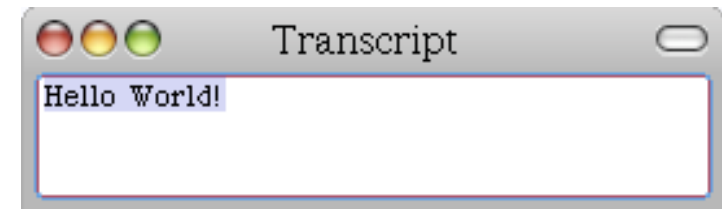
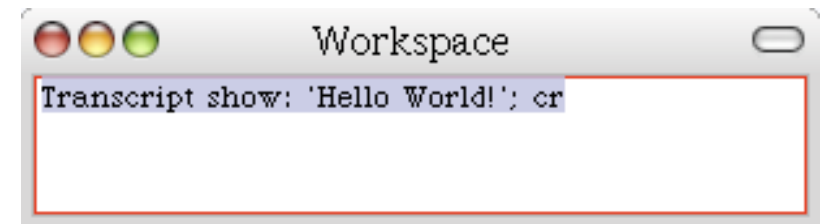
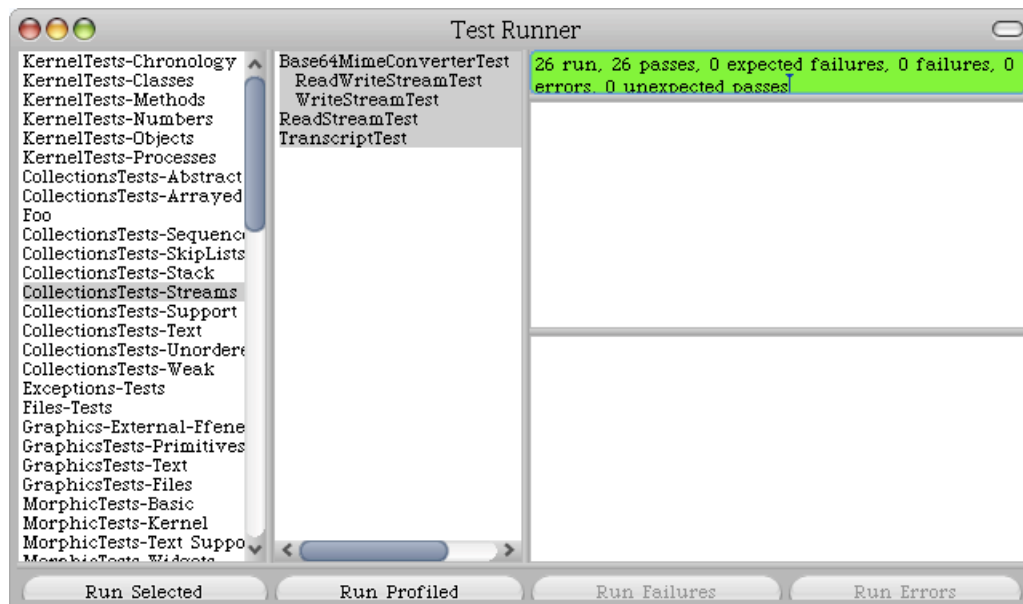
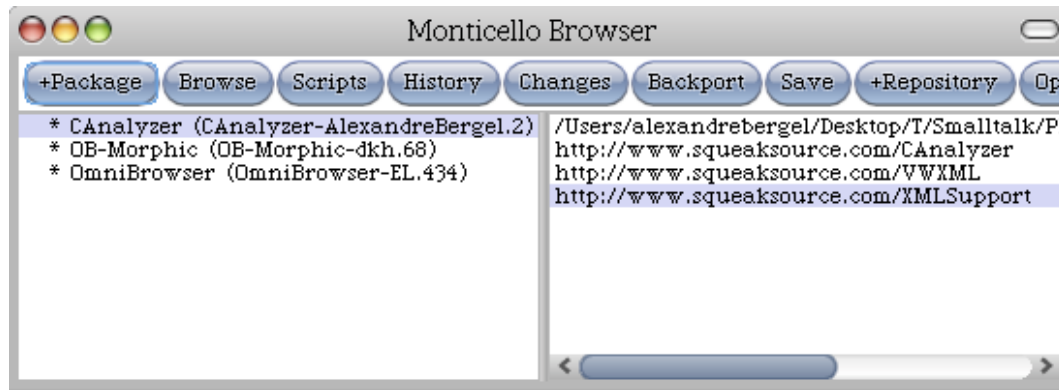
---

You can evaluate  
any expression  
anywhere  
in Pharo

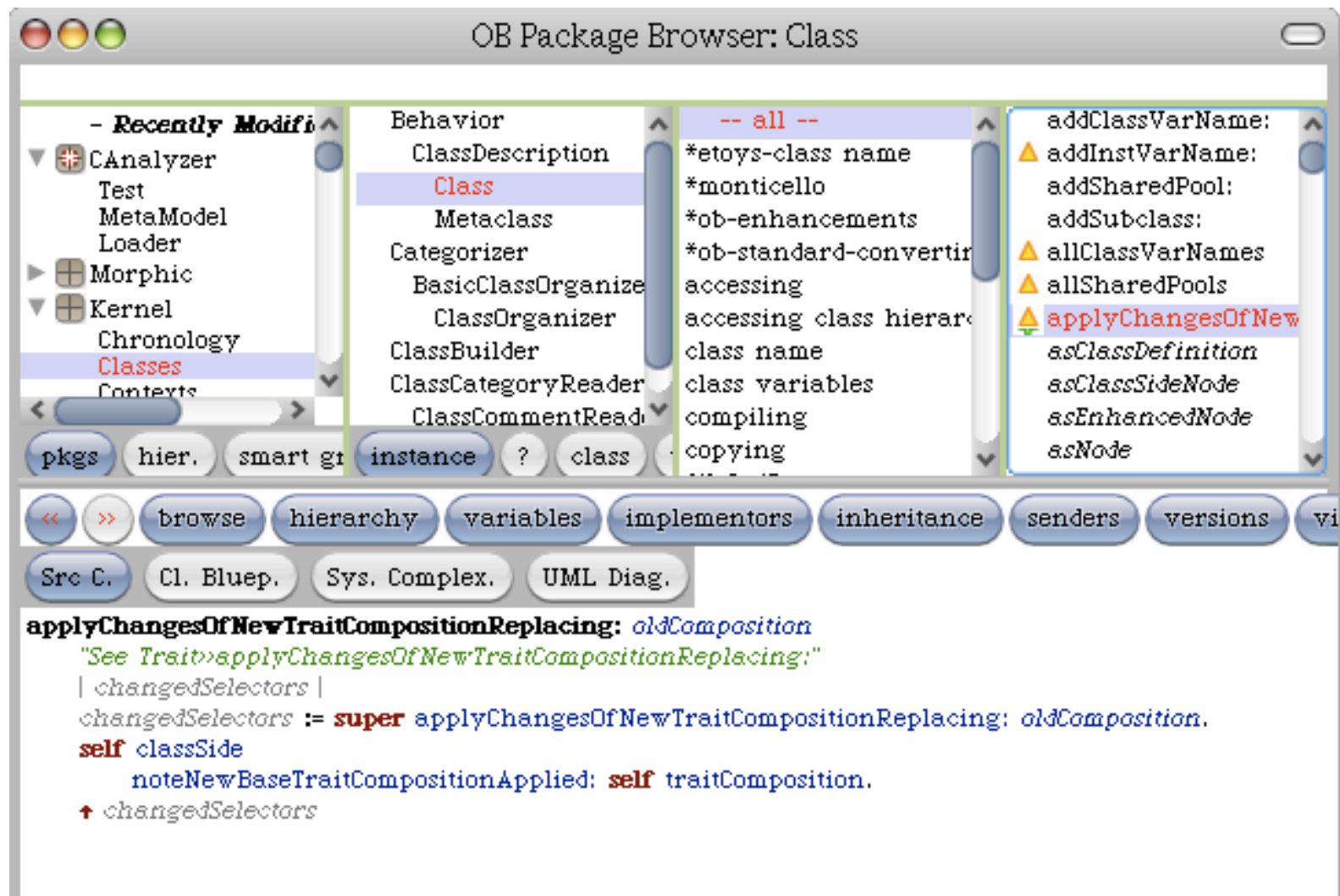


# Standard development tools

---

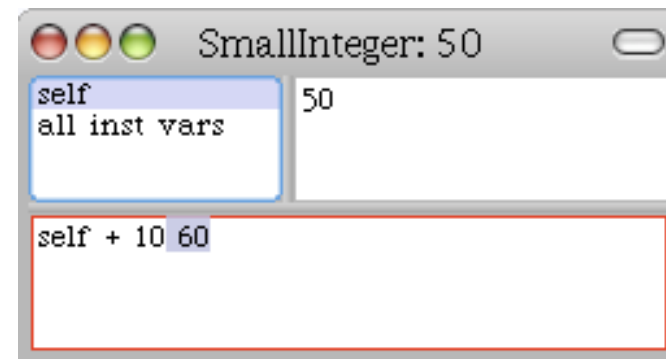
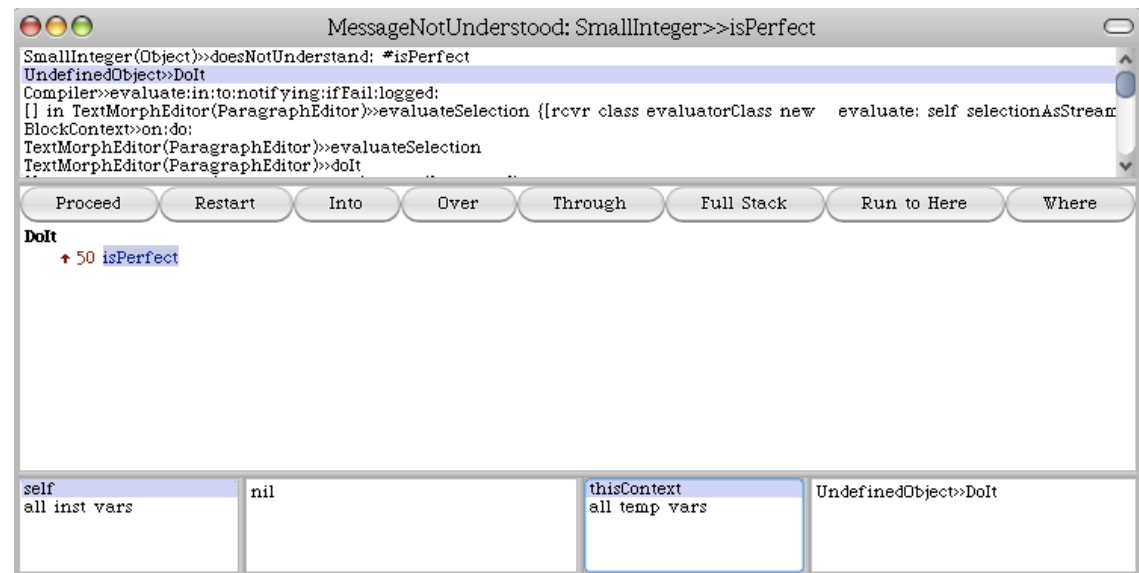
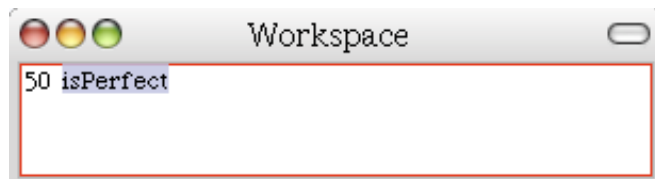


# Standard development tools





# Debugger, explorer, inspector



## 3 kinds of messages

---

Unary messages

```
5 factorial  
Transcript cr
```

Binary messages

```
3 + 4
```

Keywords messages

```
3 raisedTo: 10 modulo: 5  
Transcript show: 'hello world'
```

# From Java to Smalltalk

```
postman.send(mail,recipient);
```





# Removing

```
postman.send(mail,recipient);
```



# Removing unnecessary

## **postman send mail recipient**



**But without losing  
information**

**postman send mail to recipient**





**postman **send:** mail **to:** recipient**

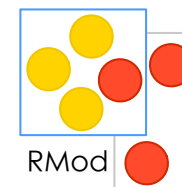
**postman.send(mail,recipient);**

# ***Precedence***

(Msg) > Unary > Binary > Keywords

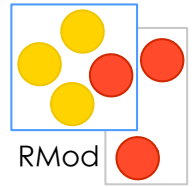
from left to right

No mathematical precedence

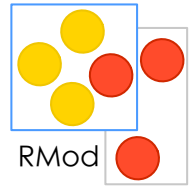


2 + 3 squared





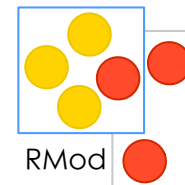
$$2 + 3 \text{ squared} \\ > 2 + 9$$



$2 + 3 \text{ squared}$

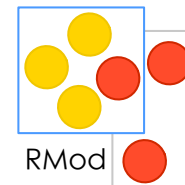
$> 2 + 9$

$> 11$

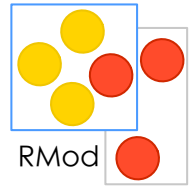


Color gray - Color white = Color black

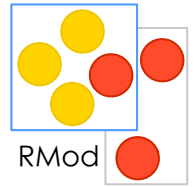




Color gray - Color white = Color black



Color gray - Color white = Color black  
> aColor = Color black



Color gray - Color white = Color black

> aColor = Color black

> true



# Statement and cascades

---

Temporary variables

Statement

```
| p pen |  
p := 100@100.  
pen := Pen new.  
pen up.  
pen goto: p; down; goto: p+p
```

Cascade

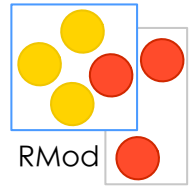
# Block Closures: aka Function

$$\text{fct}(x) = x * x + x$$

|fct|

fct:= **[ :x | x \* x + x ]**.

# Function Application



fct (2) = 6

fct (20) = 420

fct value: 2

> 6

fct value: 20

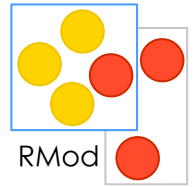
> 420

**[ :x | x \* x + x ] value: 2**

**> 6**

**[ :x | x \* x + x ] value: 20**

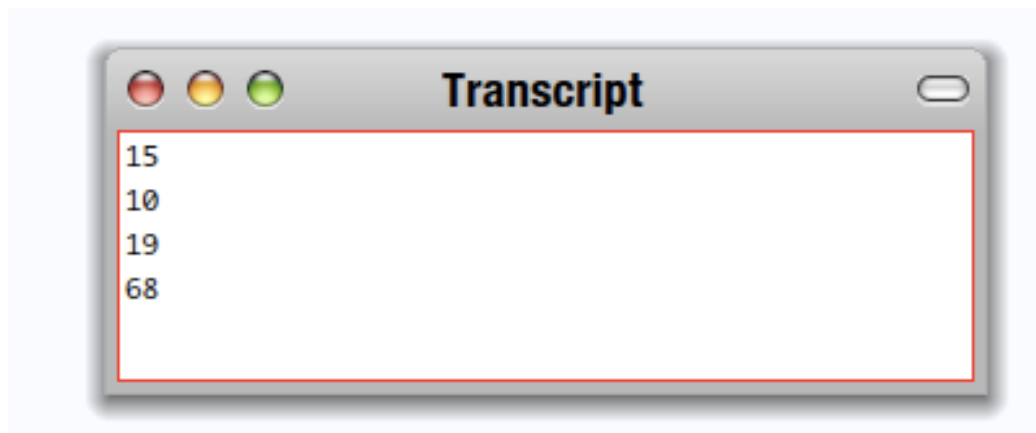
**> 420**

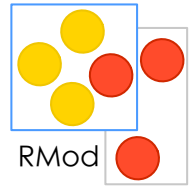


```
#(15 10 19 68) do:  
[:i | Transcript show: i ; cr ]
```



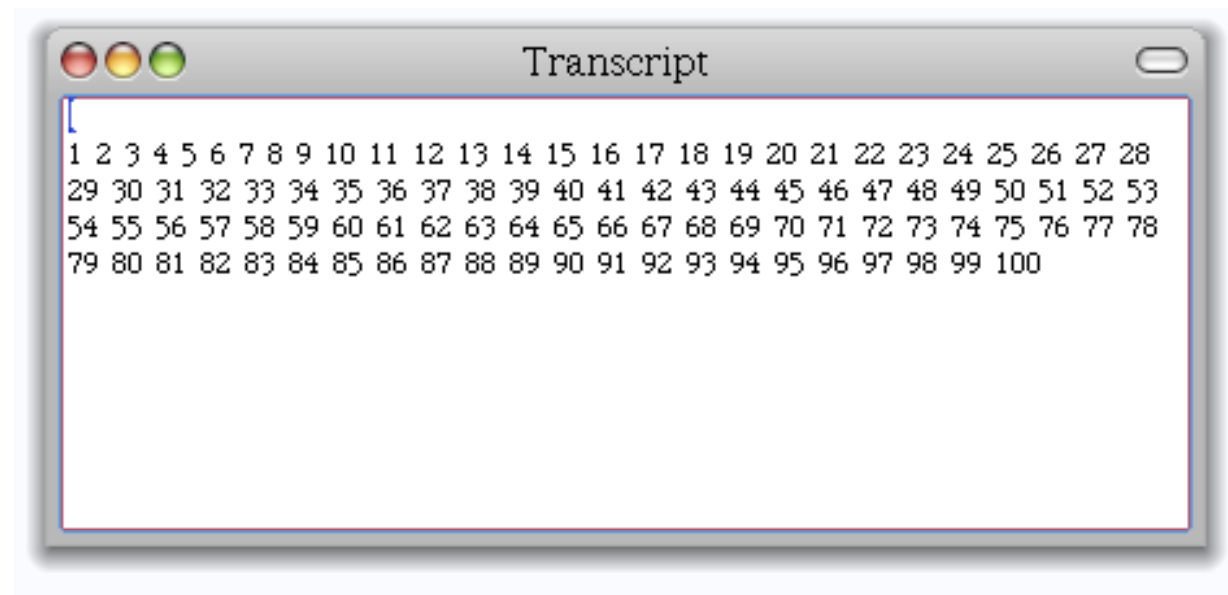
```
#(15 10 19 68) do:  
[ :i | Transcript show:i ; cr ]
```



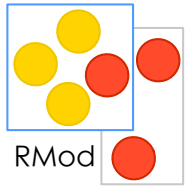


```
I to: 100 do:  
  [ :i | Transcript show: i ; space]
```

```
I to: 100 do:  
  [ :i | Transcript show: i ; space]
```



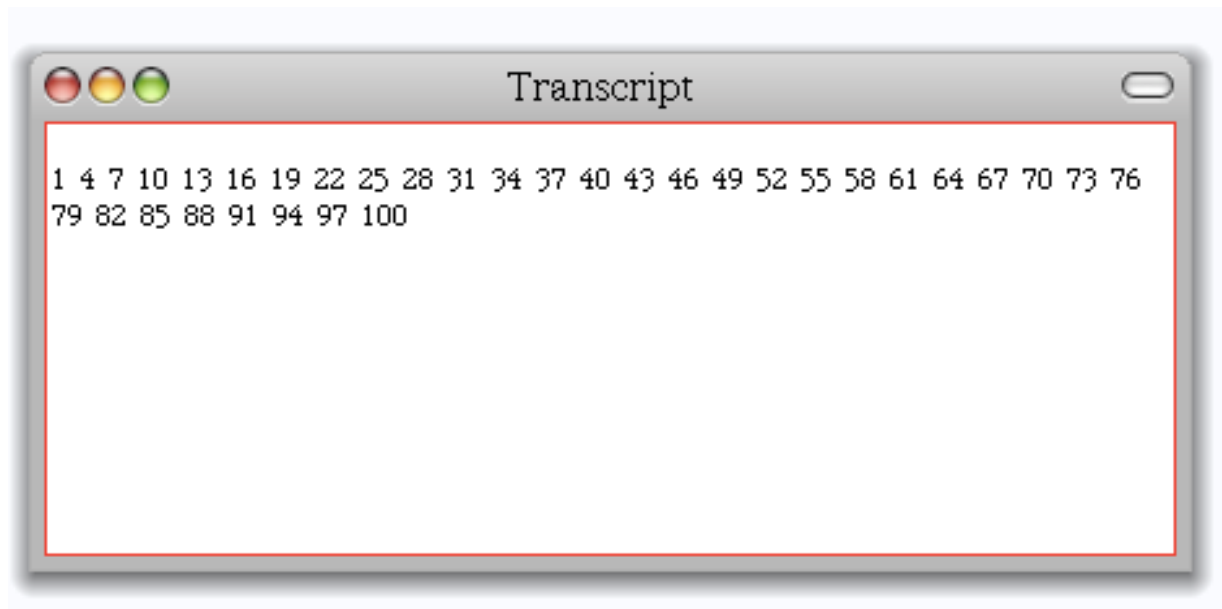
```
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28  
29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53  
54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78  
79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
```



```
I to: 100 by: 3 do:  
  [ :i | Transcript show: i ; space]
```



```
I to: 100 by: 3 do:  
  [ :i | Transcript show: i ; space]
```



# A typical method in Point

---

Method name      Argument      Comment

```
<= aPoint  
  "Answer whether the receiver is neither  
  below nor to the right of aPoint."  
  
^ x <= aPoint x and: [y <= aPoint y]
```

Return      Instance variable      Binary message      Keyword message      Block

```
(2@3) <= (5@6)
```

```
true
```

# Creating classes

---

Send a message to a class (!)

```
Number subclass: #Complex  
instanceVariableNames: 'real imaginary'  
...  
category: 'ComplexNumbers'
```



# 1.0

- + **Major** Cleanups (MVC, eToys)
- + New UI Look / TrueType
- + Tools
- + **Block Closures (thanks Qwak)**
- + **Lots** of bugfixes and small improvements
- + Preferences clean up
- + **MIT license clean**





Update ~1200 Bug-reports closed

470 Updates

Release Candidate: October 2009

The background is a light gray with a subtle, textured pattern. In the upper left quadrant, there is a cluster of colorful splatters in yellow, pink, blue, and purple. A faint, light gray world map is visible in the lower half of the image, centered around the equator. The word "Future" is written in a large, bold, black sans-serif font, positioned in the center-right area of the image.

**Future**

The background of the slide is a light gray with a faint, textured world map. Overlaid on the map are several colorful splatters and dots in shades of yellow, pink, blue, and purple, primarily concentrated in the upper left quadrant.

**...cleaner**

**started to run SmallLint... and fix**

The background of the slide is a light gray with a subtle, textured pattern. In the upper left quadrant, there is a cluster of colorful splatters in shades of yellow, green, blue, and pink. A faint, light gray world map is visible in the background, centered behind the text.

**...better**

**I.I has a lot of fixes and improvements**



The background of the slide is a light gray with a faint, textured world map. Overlaid on the map are numerous colorful splatters and dots in shades of yellow, pink, blue, and purple, primarily concentrated in the upper left quadrant.

**...smaller**

**small image is 2 Mb**

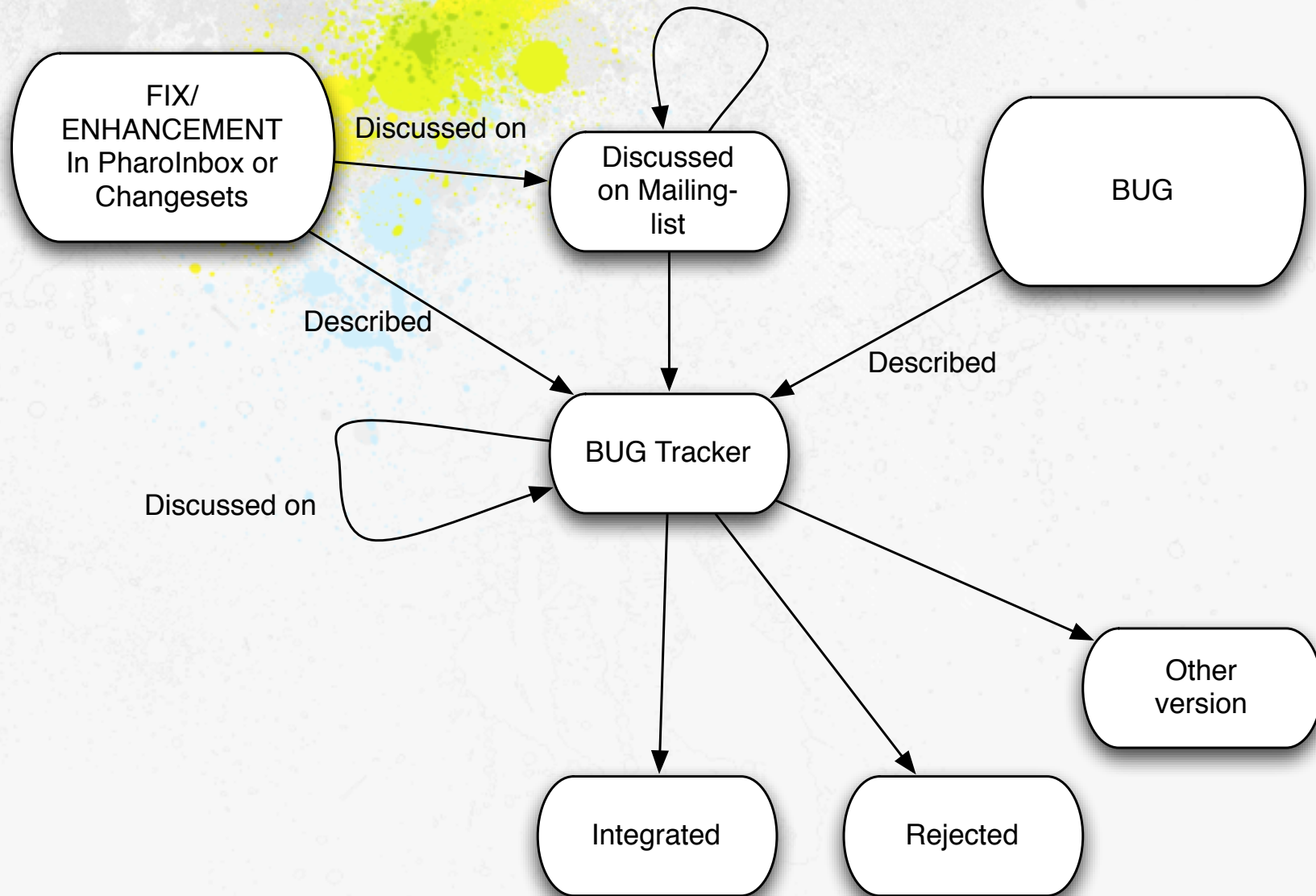
The background is a light gray with a faint, textured world map. Overlaid on the map are numerous colorful splatters and dots in shades of yellow, green, blue, pink, and purple, primarily concentrated in the upper left quadrant.

**...faster**

# Everybody can help

- Reporting bugs
- Confirming bugs
- Writing tests
- Writing examples
- Writing comments
- Simple contributing fixes
- Deep discussion...

# Process





# Pharo Sprints

May 2008 Bern

July 2009 Bern

October 2009 Lille

November 2009 Buenos Aires

Free access

# Books

Pharo by example  
vol. 1 is out

Pharo by example  
vol. 2 on preparation



# Thanks

Hans Beck  
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Nicolas Cellier  
Gary Chambers  
Miguel Coba  
Gabriel Cotelli  
Carlos Crosetti  
Cyrille Delaunay  
Simon Denier  
Marcus Denker  
Ramiro Diaz Trepas  
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Morales Durand Hernan  
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Adrian Lienhard  
Andreas Leidig  
Mariano Martinez Peck  
Dave Mason  
John McIntosh  
Johnaton Meichtry  
Eliot Miranda  
Hernan Morales Durand  
Philipp Marshall  
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Niko Schwarz  
Igor Stasenko  
Francois Stephany  
Serge Stinckwich  
Mathieu Suen  
Lawrence Trutter  
Andrew Tween  
martin von loewis  
Andres Valloud  
Juan Vuletich  
Steven Wirts  
Hernan Wilkinson



# Join Us!

Creating good energy, software quality,  
learning and having fun

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