

# Pharo: Live objects for complex projects



<http://stephane.ducasse.free.fr>

<http://www.pharo.org>



JPMORGAN  
CHASE & CO.



feenk

ZWEI DENKER  
THALES



projector  
software



inspired!



SORABITO

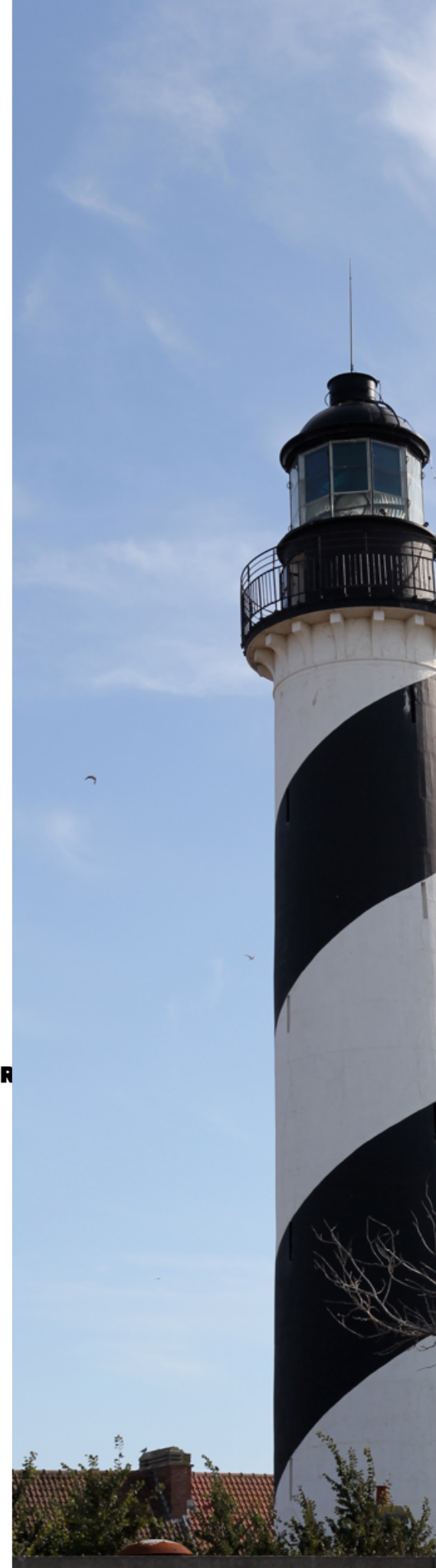
knowroaming

TA MÈRE SCR  
BADASS MOBILE DEVELOPMENT

Systems that make sense  
Sensus



Yesplan  
Let's make it happen





**A word of presentation**



# **Expert in language design**

**Traits in Php7.0, Perl60  
Influenced Traits in Scala**



# **Expert in maintenance**

**Program analysis, Metamodels,  
visualization, testing, refactorings,  
metrics....**



# synectique

Inventive | Analysis

Building *specific* analysis tools for important running business software (Ada, Cobol, 4D, C, C++, Java...)

*Dedicated* tools to support decision making process

THALES



GENERALI  
Solutions d'assurances

SIEMENS

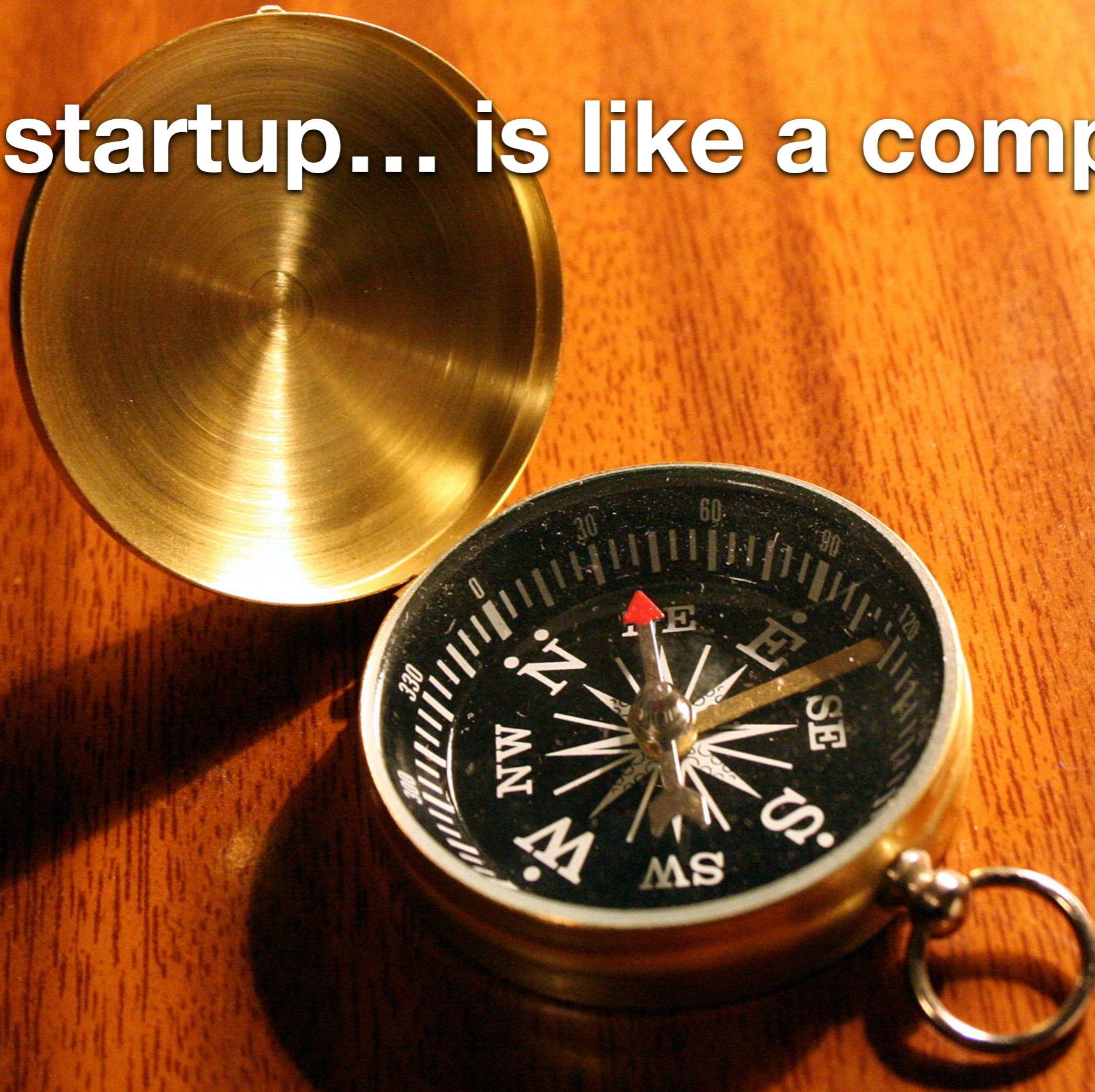


GENERALI BELGIUM

moose



**A startup... is like a compass**











# Pharo?



Name	Current branch	Loaded version	Status
iceberg	dev-0.4	f9c63ee (15 May 2017)	Up to date
libgit2-pharo-bindings	master	1f582be (18 April 2017)	Up to date

Name	Value
Origin	https://github.com/pharo-vcs
Remote User	pharo-vcs
Remote host	github.com
Repo Owner	pharo-vcs
Location	/tmp/src/te...

Date & time	Id	Author	Parents
2017-05-13 18:16	ec03...	Esteban Lorenz...	644d53e
2017-05-13 16:22	64dd...	Esteban Lorenz...	8837...
2017-05-12 22:47	ee52...	Esteban Lorenz...	9680...
2017-05-12 17:11	8837...	Esteban Lorenz...	fefad...
2017-05-12 14:24	9880fcb	Esteban Lorenz...	3f3e063, 7969c6c
2017-05-12 09:40	fefadb2	Esteban Lorenz...	5382135, 535238f
2017-05-12 09:32	7969c6c	GitHub	5382135
2017-05-11 15:18	535238f	Max Leske	127aa13, 4326664
2017-05-10 10:47	5382135	Esteban Lorenz...	4036888
2017-05-10 10:43	4326664	Esteban Lorenz...	

Date & time	Commit Id	Parent(s)	Author	Comment
2017-05-13 16:22	64dd53ea288990466e2b94095d33fa25764c7100 [64dd53e]	ee52967	Esteban Lorenz...	remove not used method





# Pharo!

- System: Pure object language + full IDE
- Powerful, elegant and fun to program
- Great community / industrial consortium
- Living system under your fingers
- Works on Mac OSX, Linux, iOS, Android, Windows, Pi - 100% MIT



# Elegant!

- Full syntax on a postcard
- Simple and powerful objet model



# Full Syntax!

exampleWithNumber: x

“A method that illustrates every part of Smalltalk method syntax”

<menu>

| y |

true & false not & (nil isNil) ifFalse: [self halt].

y := self size + super size.

#\$a #a 'a' 1 1.0)

do: [ :each | Transcript

show: (each class name);

show: (each printString);

show: ' '].

^ x < y

Leuchttürme



\* H Ö R N U M





**Yes the full Syntax!**







# Full Syntax!

exampleWithNumber: x

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Leuchttürme



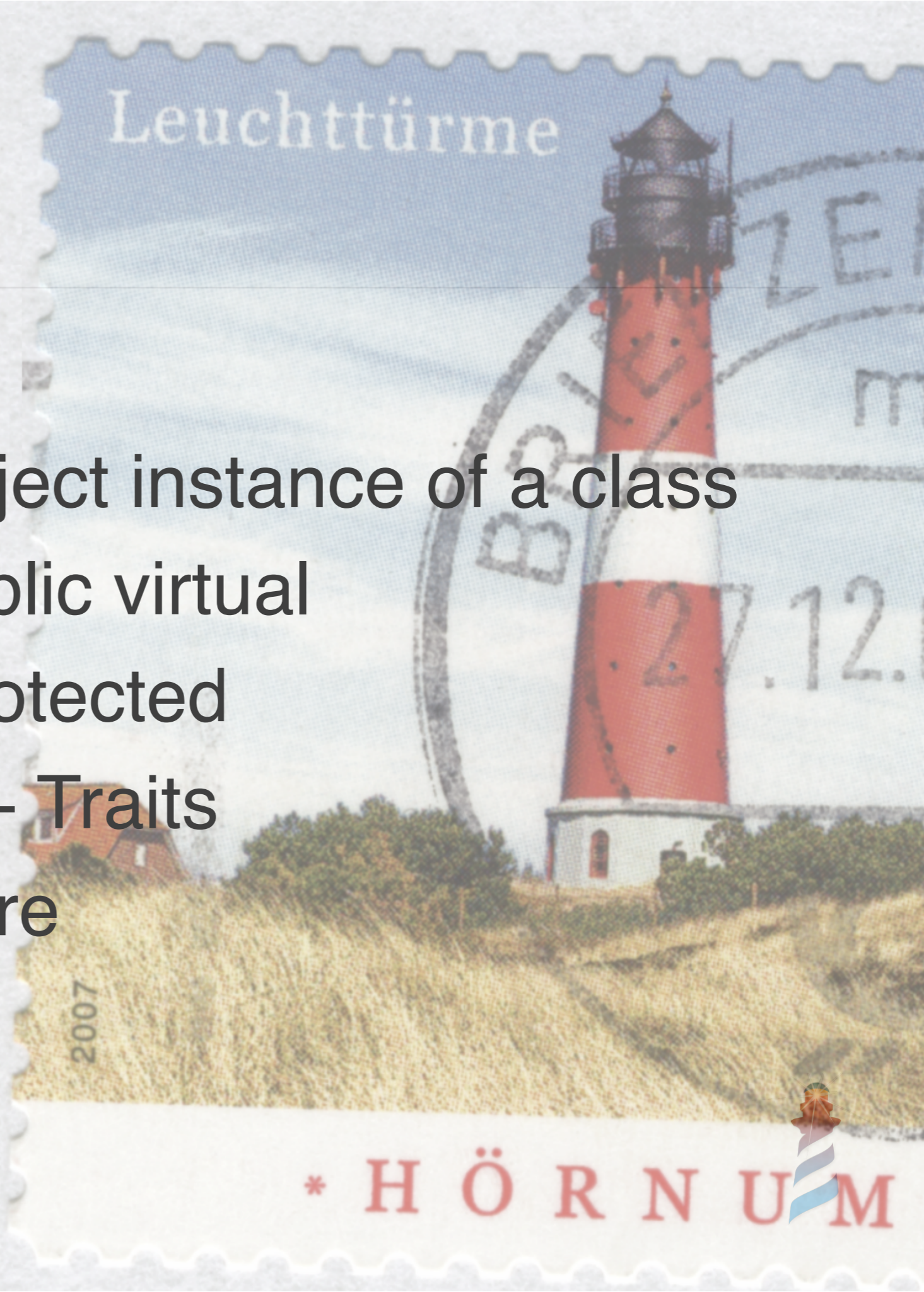
\* H Ö R N U M





# Full Model!

- \* Dynamically typed
- \* Everything is an object instance of a class
- \* All methods are public virtual
- \* All attributes are protected
- \* Single inheritance + Traits
- \* Closures everywhere





**Focus on intrinsic complexity**

**Eliminate accidental complexity**



A hand holding a red pencil is shown in the upper half of the image, drawing a hand holding a black pencil in the lower half. The drawing is done in red ink on a white background. The text "Fully Written in Itself" is overlaid on the upper hand.

# Fully Written in Itself

- Everything is written in Pharo
- One simple syntax/model to access everything



**Learn**  
**Adapt**  
**Modify**



**Pharo is highly immersive**



**Most languages do not  
expose much**



# Looking inside

- \* Pharo is not a blackbox
- \* Pharo is fully inspectable and reflective
- \* You can get immersed in objects





# Immersed and interacting

A virtual reality simulation of an underwater environment. A diver in a black wetsuit and scuba gear is positioned in the center, surrounded by a large school of rays. The scene is set against a backdrop of large, textured rock formations and a sandy ocean floor. The lighting is a deep blue, creating an immersive underwater atmosphere.

- \* You can interact with objects



Workspace

```
| elements lay |
```

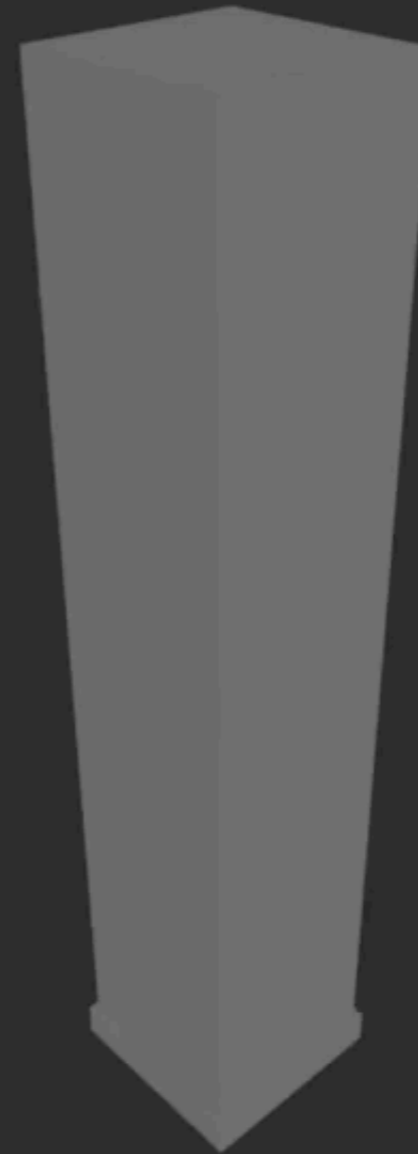
```
elements := (1 to: 5) collect: [ :ob |  
  (R3CubeShape new) elementOn: ob ].
```

```
I
```

```
lay := R3WallLayout new.  
lay on: elements.
```

```
UberPresenter present: elements
```

Uber Presenter



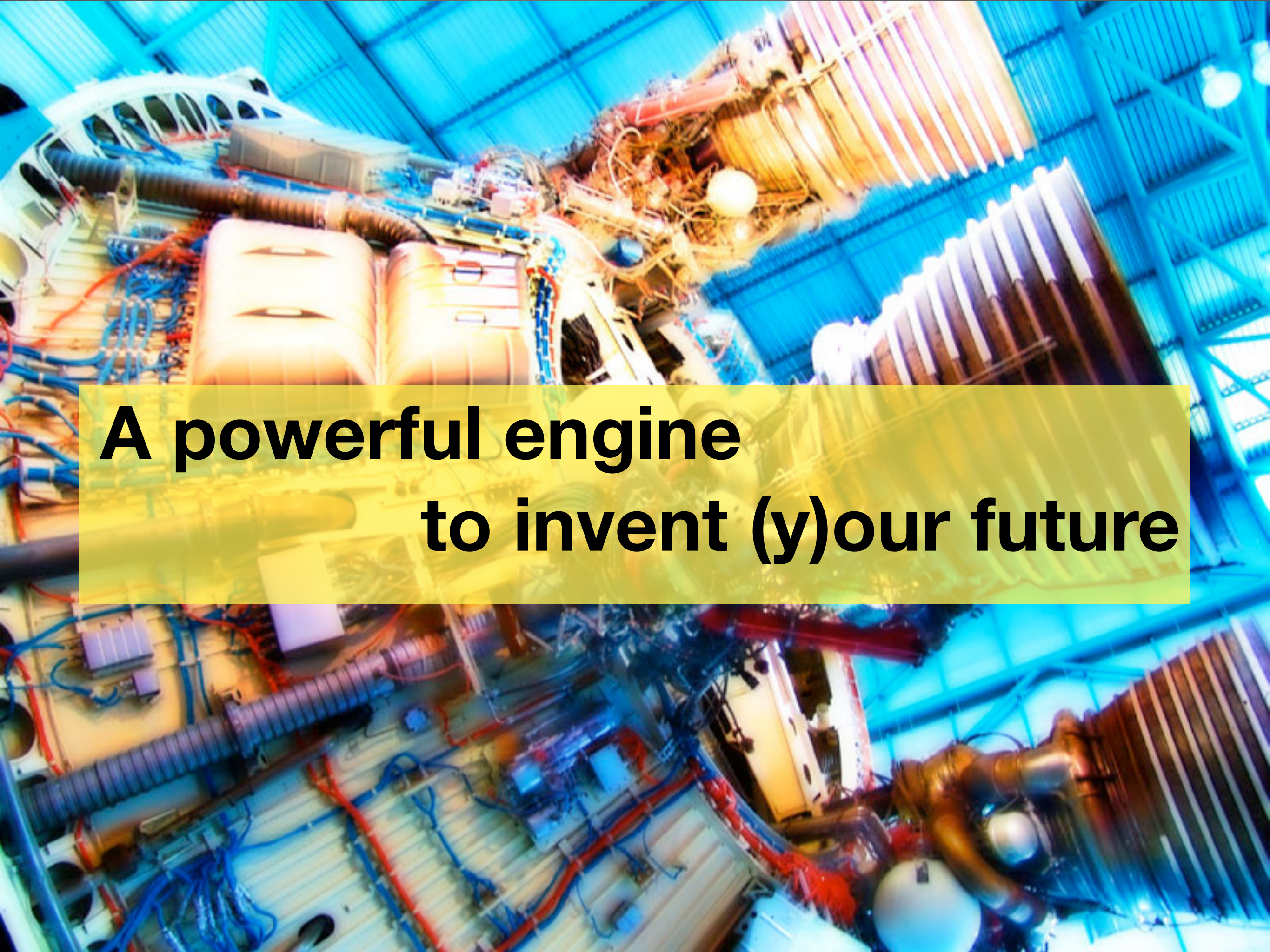


**We can do the same with  
web app, sockets, networks,  
sensors, living programming....**




**Pharo's goal...**



A photograph of a large, complex industrial machine, likely a particle accelerator or fusion reactor, with a central yellow semi-transparent box containing text. The machine is filled with various components, including pipes, cables, and structural elements, all set against a blue background. The text is centered within the yellow box.

**A powerful engine  
to invent (y)our future**





**An ecosystem where  
innovation/business bloom**



... that **\*\*you\*\*** can make money with Pharo.

... to be able to invent solutions to existing problems.

... a powerful **innovative dynamic** language where we can build (y)**our** future.



**trentosur**

Soluciones móviles para retail y trade marketing

Nos enfocamos en lo que importa del negocio sin perder de vista los detalles de su implementación.

Primer móvil, Plataforma Android, En la nube

**PharoCloud**

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Pharo platform as a Service: put your Smalltalk web-application online at PharoCloud in just 3 clicks

Try it for FREE

Watch how it works

**Romax TECHNOLOGY**

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Pioneering new ways of maximising sustainable wind energy yields. Our products and services optimise asset availability, wind turbine performance and drivetrain reliability. We work with owners, operators, manufacturers, insurers and service providers worldwide.

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Related links: InSight, RomaxWIND, Butterfly platform, Forensic engineering, Analysis service, Monitoring service

Wind Energy: Pioneering new ways of maximising sustainable wind energy yields.

**WEBDRUCK.CH**

Web-To-Print Solution

- Design and create individual printed matter
- eShop with credit card payment
- High quality PDF output with Printing Process integration
- Thousands of orders for seven Swiss printing companies

**Quuve**

**iBizLog** - <http://www.ibizlog.com>

Have your WebSite

A product by Smallworks

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Funktionen, Aktuelles, Forum, FAQ, Presse

**Pinesoft MBagger**

Dedicated and cost-effective tools for software evolution

Dedicated Analyses, Dedicated tools, Decision making

# Some Success Stories

**Yesplan is veelzijdige software voor het efficiënt plannen van evenementen.**

Yesplan is uiterst gebruiksvriendelijk, flexibel en makkelijk te koppelen met andere software.

**Need: disaster scenario recovery**

ID	Quadrant	Verhulpingsoord	Interactieschets	Soort	PK
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9
10	10	10	10	10	10
11	11	11	11	11	11

**Moose** is a platform for software and data analysis.

Call for help: weblogs

Download 4.7

The Moose Book

**Dr. Geo**

**CSOB**

**airflowing**

Organize your creative work

Sales, tasks and finances: your team and all that's essential in one place

Plans and Pricing

Manage your simple way

**OBJECT PROFILE**

**Das Content Management mit System**

100% Inline-Editor

Das cmsbox ist ein Content Management System der nächsten Generation. Die Benutzeroberfläche ist nahtlos in die Webseite integriert. Alle Texte werden direkt auf die Seite geschrieben!

Drag & Drop, Copy / Paste

**2denker**

Continuous API Testing

keep your services under control 24/7

**t3**



# LAMRC

Back-End Wafer-Level Packaging



50% microprocessors  
of your mobile/PC/tablet



The image shows a circular microprocessor wafer with a green surface, positioned inside a processing chamber. The wafer is held in place by a mechanical arm. The chamber has a metallic, perforated appearance. The Lam Research logo is visible in the bottom right corner of the image.

Your mobile hardware as  
a high-chance to have  
been produced by a  
robot controlled via a  
smalltalk





# LAMRC

Back-End Wafer-Level Packaging



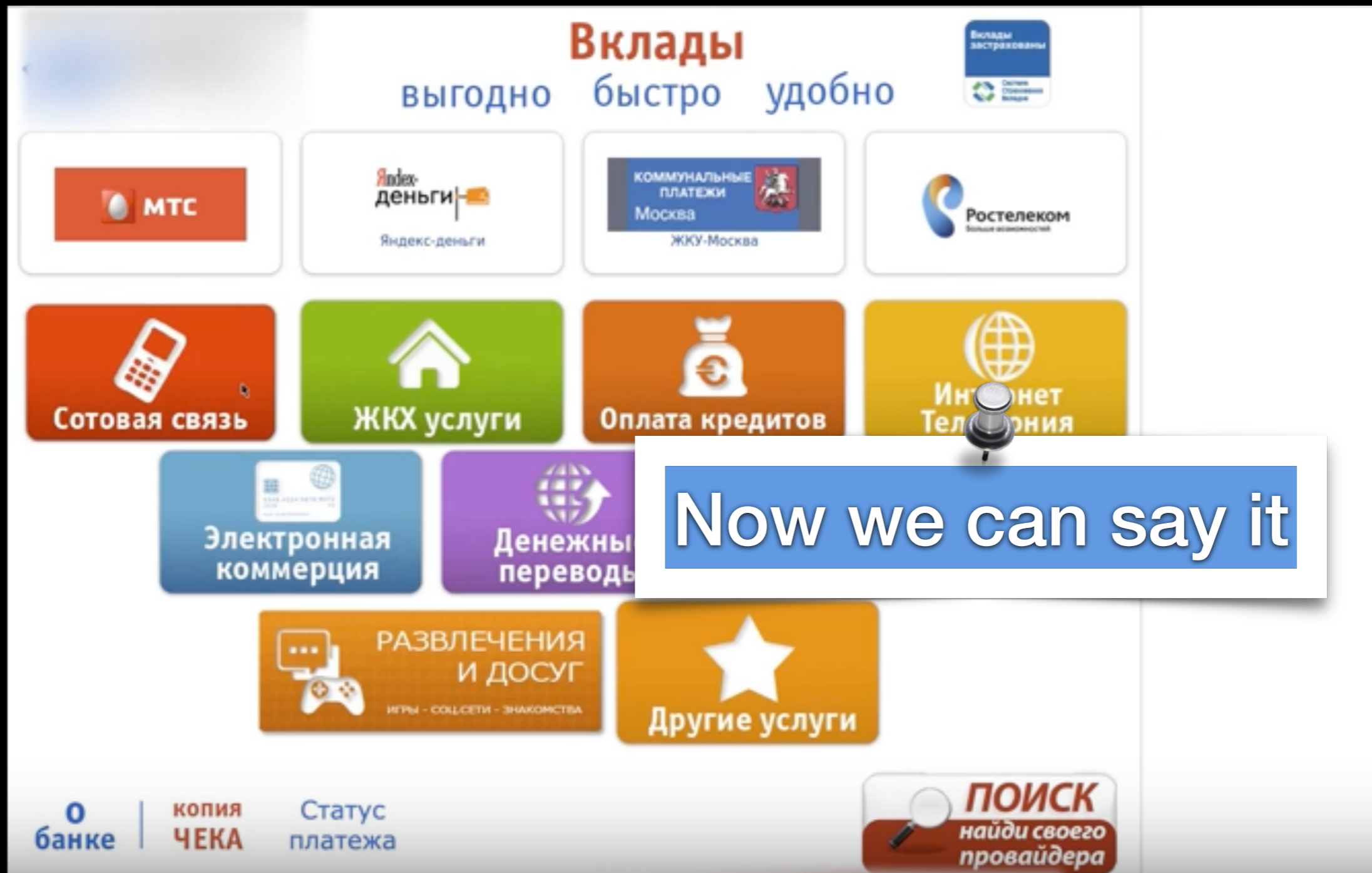
Your mobile hardware as a high-chance to have been produced by a robot controlled via a smalltalk

**Starting to experiment with Pharo**





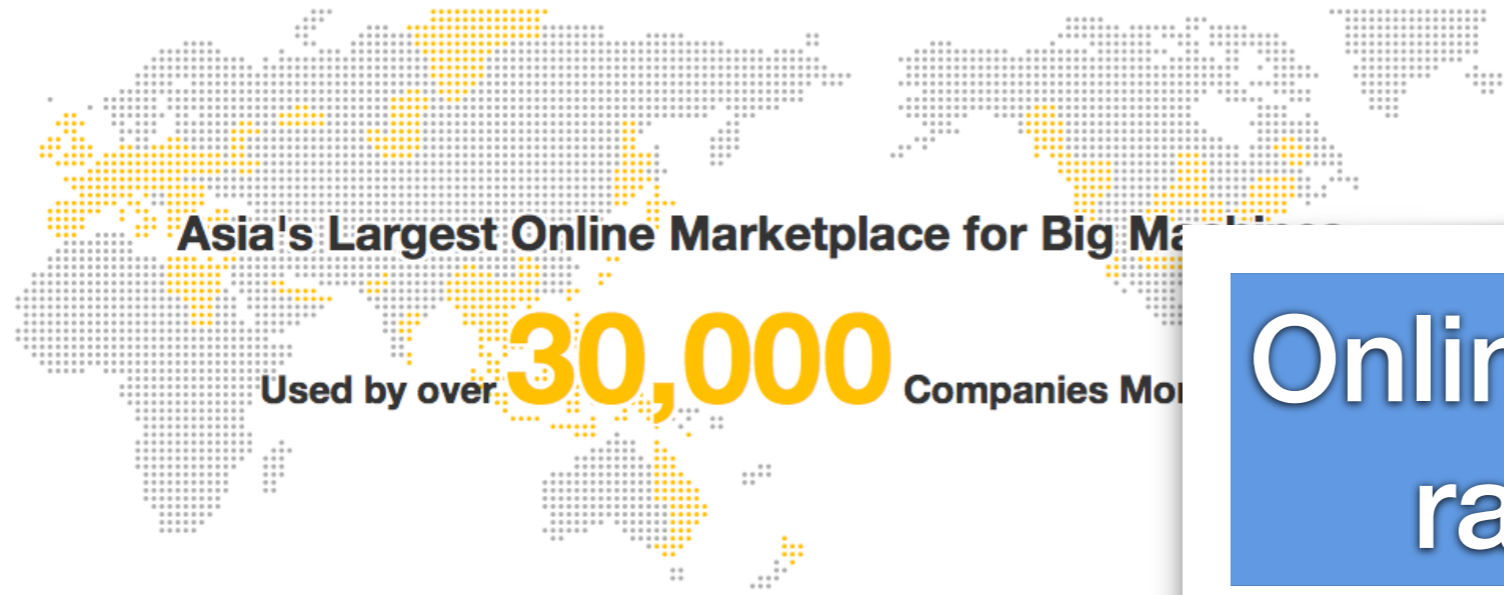
# Pharo in ATM like Device in Moscow





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### Find Machines

#### Search by Category

##### Construction Machinery

 Mini Excavators	 Excavators	 Wheel Loaders	 Dozers
 Cranes	 Rollers	 Graders	 Finishers
 Generators	 Welders	 Compressors	 Small Items
 Other Construction Machinery			

##### Material Handling

Forklifts

##### Farm Machinery

 Tractors	 Other Farm Machinery
--------------	--------------------------

##### Vehicles

 Dumps	 Trucks	 Other Vehicles
-----------	------------	--------------------

##### Others

 Attachments	 Parts	 Others
-----------------	-----------	------------

#### Search by Keyword

Enter a keyword (e.g. KOMATSU PC200)

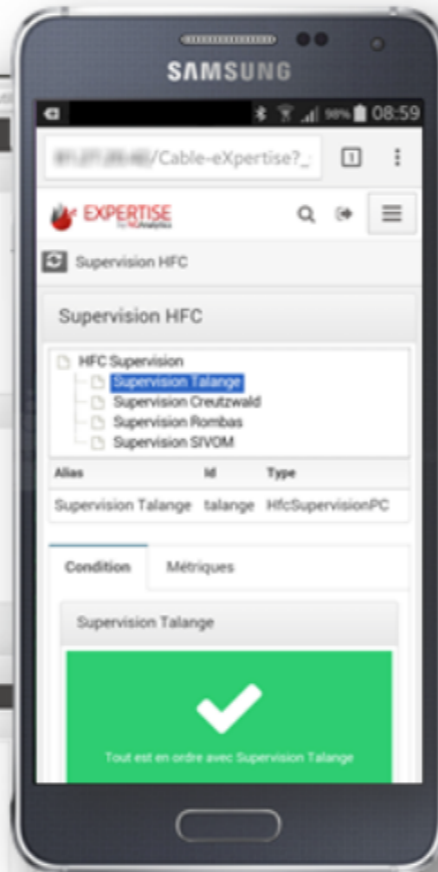
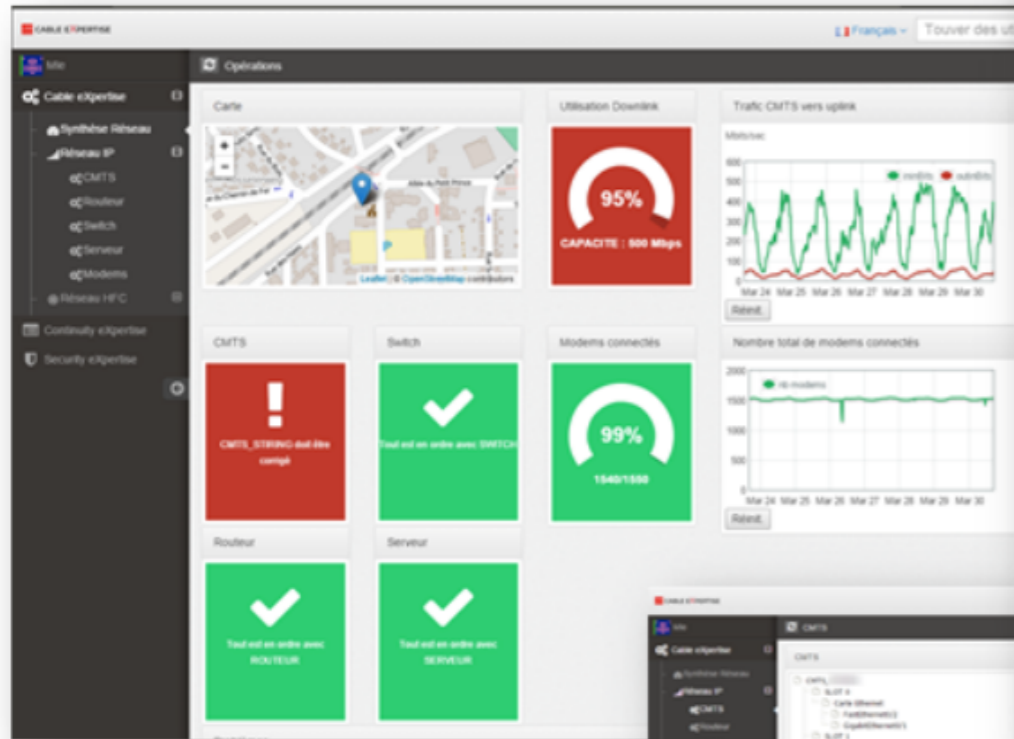
### New Machines Updated on: 2016/09/13 17:46:18 (JST)

[See More >](#)

 HOKUETSU PDS175S 400,000 JPY	 KUBOTA U-55-6 3,500,000 JPY	 OTHER MGR2500 133,100 JPY	 ISEKI HL407G 198,000 JPY	 OTHER MR6500 143,000 JPY	 OTHER GH250-GML 165,000 JPY
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# Network Monitoring for small ISPs

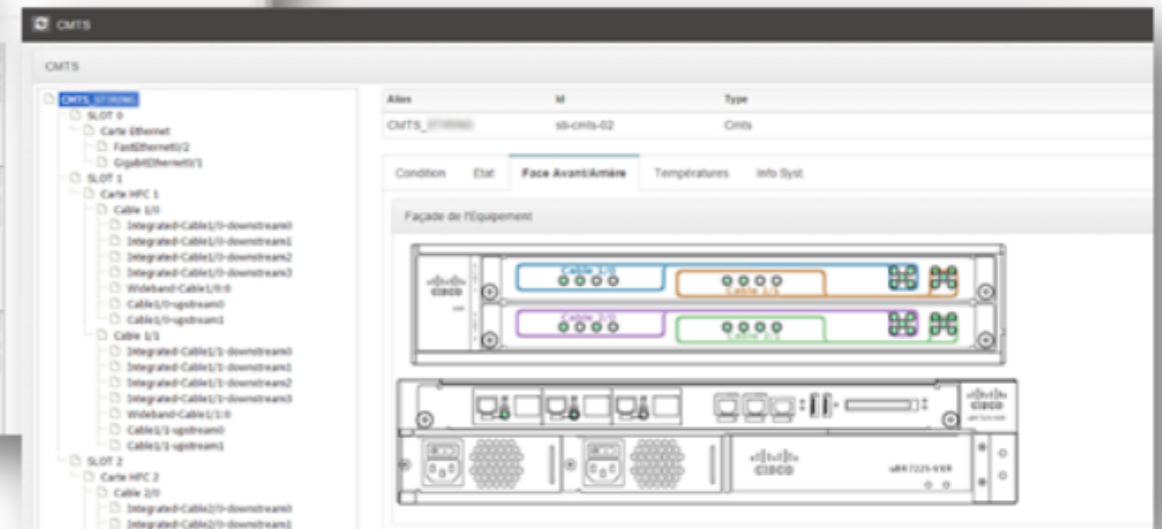
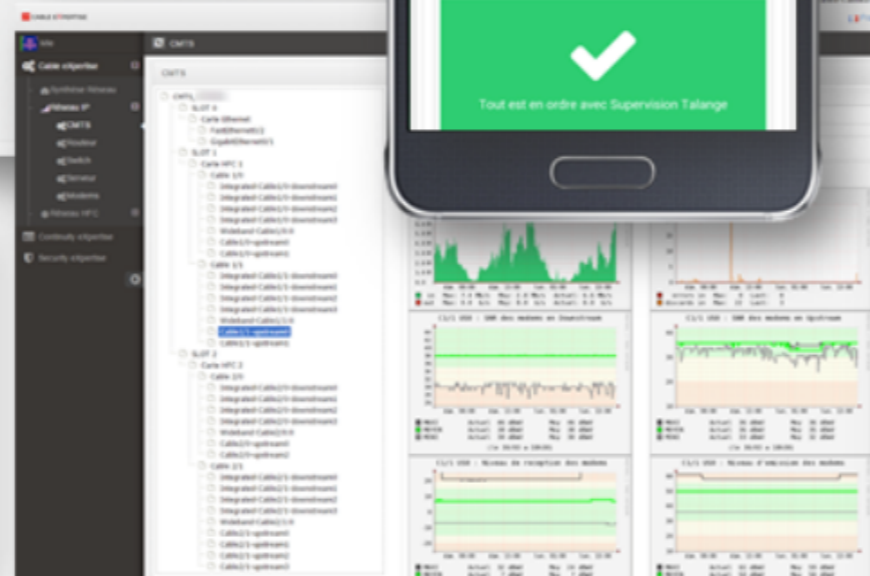


Modèle et Firmware	MAC et IP	Traffic Mo. V/D	Préj. V/D (Mbps)	No. Réception V/D (dBm)	SNR sur V/D (dB)	Préj. V/D (dBm)	No. Extension V/D (dBm)	SNR sur V/D (dB)
TC7200-20	SMPTC7R10001	00000 8824	130	14.10	38.30	36.0	41.20	36.10
ST00-01-02	NO 9 4 20 89 28 147 28		154	14.10	38.10			
NT00-2L_jeuclieur_3-mlt			122	13.30	37.90			
			138	14.10	41.40			
TC7200-20	SMPTC7R10002	00000 38	130	11.30	38.40	36.0	38.30	36.10
ST00-01-02	NO 9 4 50 89 28 146 16		154	14.10	38.20			
NT00-2L_jeuclieur_3-mlt			122	13.30	38.20			
			138	11.30	41.30			
TC7200-20	SMPTC7R1000A	00000 910	130	5.30	41.40	36.0	38.70	36.10
ST00-01-02	NO 9 4 108		154	7.30	38.30			
NT00-2L_jeuclieur_3-mlt	89 28 147 144		122	7.30	37.60			
			138	5.30	38.70			
TC7200-20	SMPTC7R1000F	00000 1096	130	7.30	38.80	36.0	31.30	36.10
ST00-01-02	NO 9 1 40 89 28 146 53		154	7.30	38.30			
NT00-2L_jeuclieur_3-mlt			122	7.30	38.30			
			138	7.30	41.90			
TC7200-20	SMPTC7R1000E	00000 2707	130	1.30	41.40	36.0	38.20	36.10
ST00-01-02	NO 9 4 89		154	1.30	38.80			
NT00-2L_jeuclieur_3-mlt	89 28 146 216		122	1.30	37.60			
			138	1.30	39.90			
TC7200-20	CAT7R0400F	00000 52325	138	10.30	46.40	36.0	46.30	36.10
ST00-01-02	NO 9 5 229		154	10.30	32.70			
NT00-2L_jeuclieur_3-mlt	89 28 150 58		122	10.30	38.00			
			138	10.30	41.90			

Alia	M	Type
CMTS_STRONG	sb-cmts-02	Cmts

Condition	Etat	Face Avant/Arrière	Températures	Info Syst
Températures du CMTS				
21°C	OK	MPE H&M	21°C	
21°C	OK	MPE Out&I	21°C	
21°C	OK	MP MPE H&M	21°C	
21°C	OK	MP MPE	21°C	
21°C	OK	MP LC H&M	21°C	
21°C	OK	MP LC	21°C	
21°C	OK	GPU De	21°C	







pharocloud

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Pharo platform as a Service: put your  
Smalltalk web-application online at  
Pharocloud in just a couple clicks

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**Deploy Pharo  
on the cloud in 3 min**







Neue Seite

Artikel

Formular

Tabelle

**CMS with full history**

## Das Content Management System

### 100% Inline-Editor

Die cmsbox ist ein Content Management System der nächsten Generation. Die Benutzeroberfläche ist nahtlos in die Webseite integriert: Alle Texte werden direkt auf die Seite geschrieben!

### Drag & Drop

Handlich: Boxen und Elemente frei auf der Seite positionieren.

✉ [mail@cmsbox.com](mailto:mail@cmsbox.com)

### Copy / Paste

Elemente ausschneiden oder kopieren und irgendwo auf der Webseite wieder einfügen.

Text einfügen

SYSTEM

WEBSEITE

Bearbeiten

Metatags

Statistik

Archiv

BENUTZER

SUPPORT

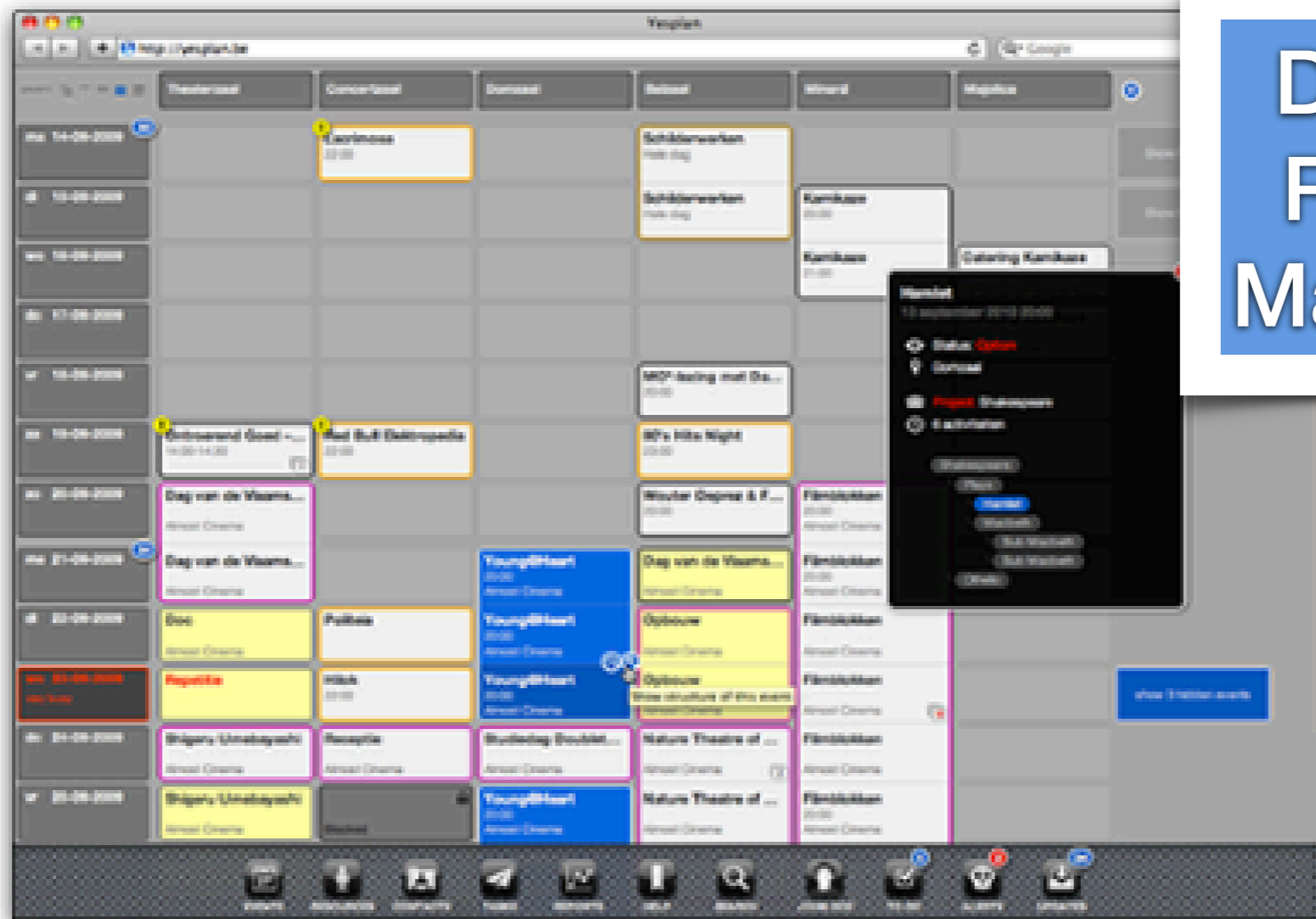


Eigene Bilder und Videos direkt auf die Webseite laden

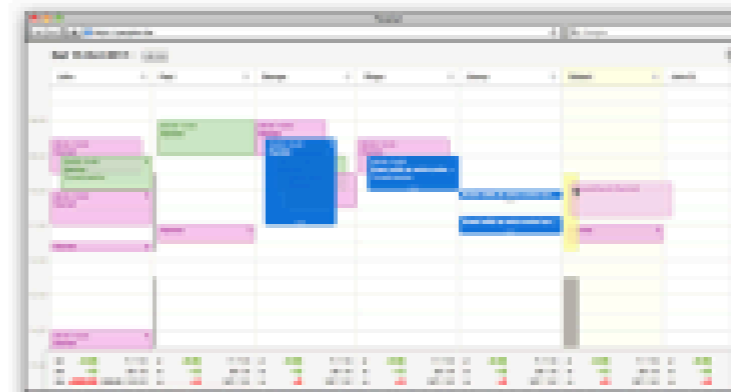
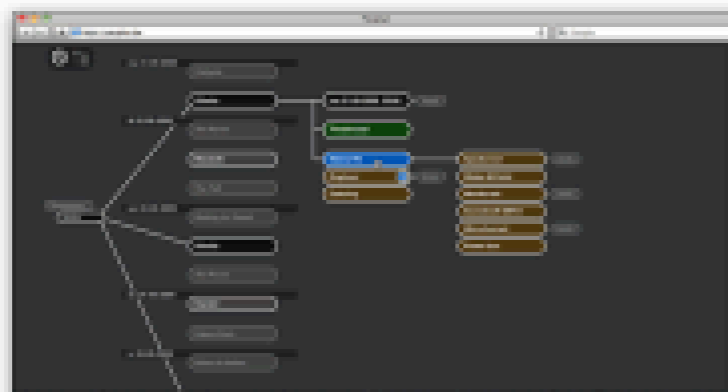


# Yesplan is veelzijdige software voor het efficiënt plannen van evenementen.

Yesplan is uiterst gebruiksvriendelijk, flexibel en makkelijk te koppelen met andere software.



Distributed  
Resources  
Management







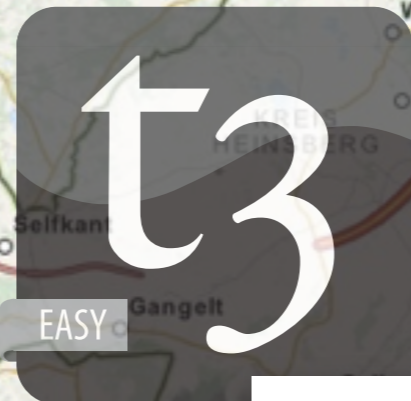
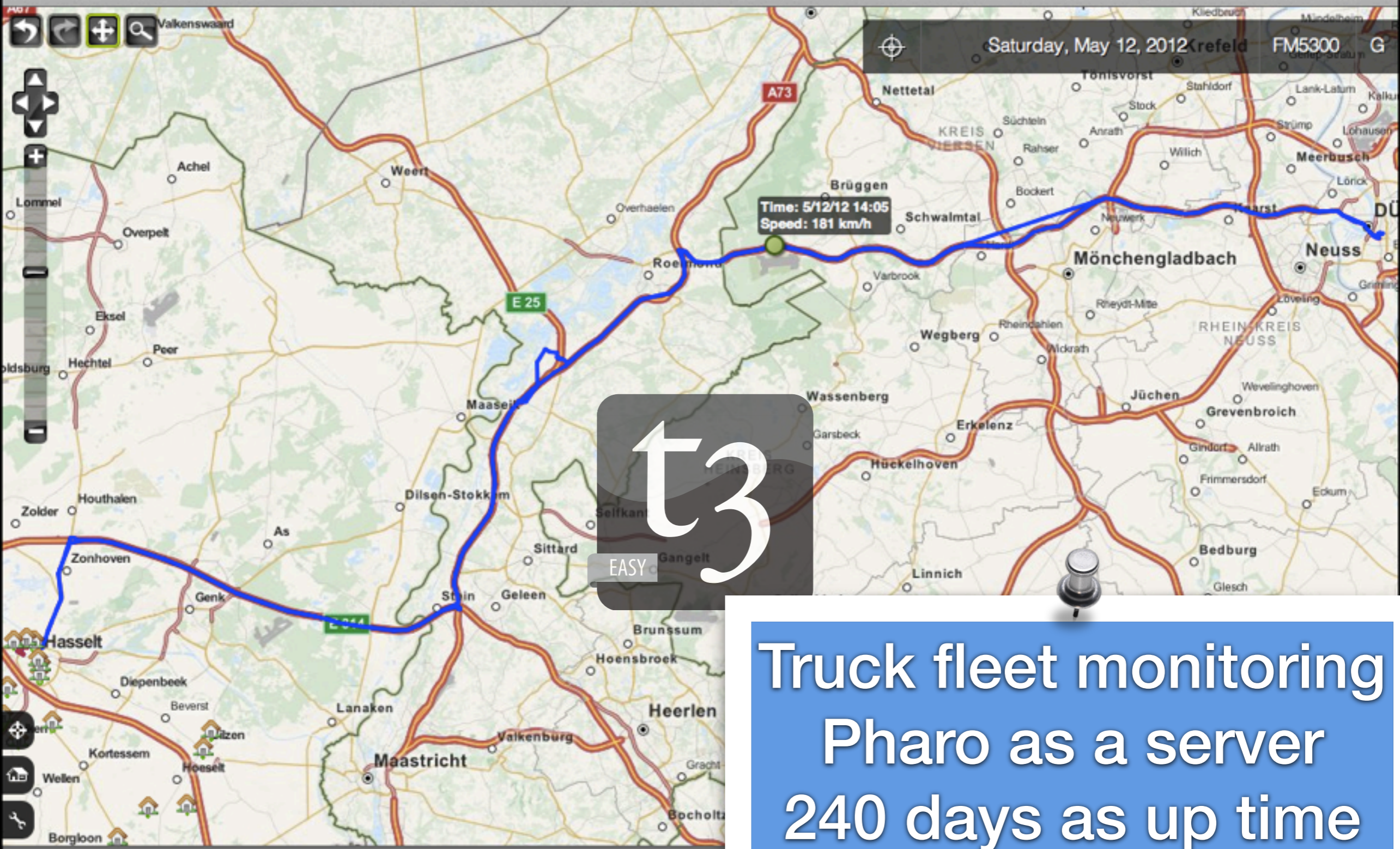
# Server Testing

## Continuous API Testing

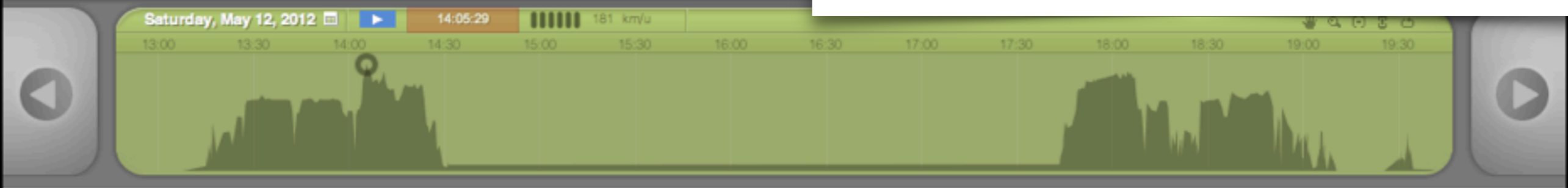
keep your services under control 24/7







Truck fleet monitoring  
Pharo as a server  
240 days as up time





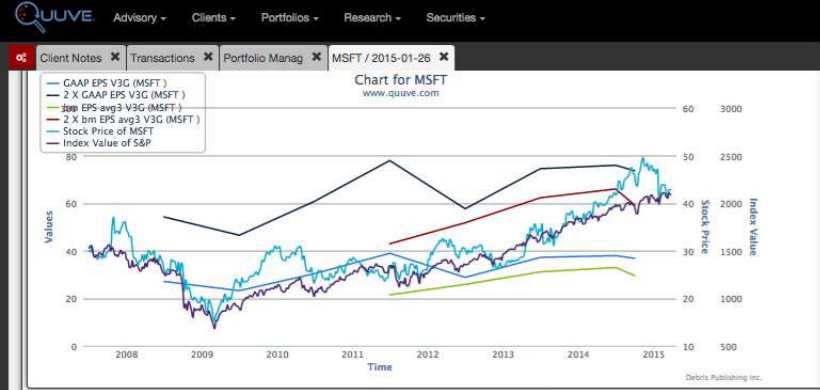
# WEBDRUCK.CH Web-To-Print Solution

- Design and create individual printed matter
- eShop with credit card payment
- High quality PDF output with Printing Process integration
- Thousands of orders for seven Swiss printing companies



The screenshot shows the Webdruck.ch website interface. At the top, the logo 'WEBDRUCK.CH' is followed by the tagline 'ONLINE DRUCKEN UND GESTALTEN'. Below this is a navigation menu with links for 'Produkte', 'Über uns', 'Kontakt', and 'Hilfe'. A main banner features a grid of product categories: 'Hochzeitskarten', 'Hochzeitskarten gefalzt', 'Geburtsanzeigen' (marked 'EX-PRESS'), 'Geburtsanzeigen gefalzt' (marked 'EX-PRESS'), 'Postkarten', and 'Karten'. A secondary row includes 'Geschenke', 'Geschäftsdrucksachen', 'Werbung', 'Trauer', 'Flyer', and 'Broschüren'. The central focus is a featured product, 'Geburtsanzeigen gefalzt', with a price of 'ab CHF 138.-'. It includes a 'Bestellen' button and a 'Gestalten Sie schnell und einfach im WEBDRUCK-Editor' link. Below the main banner, there are three promotional boxes: 'Schneller bestellen und Geld sparen?' with a link to 'Zu den Postkarten' and 'Zu den Visitenkarten'; 'In 5 Schritten zu Ihrer Drucksache.' with a 'Funktionsweise' link; and '100 % Schweizer Qualität' with a 'Die Partner' link. The footer contains a 'Newsletter abonnieren' link, a 'Folgen Sie Webdruck.ch auf Facebook' link, and a list of product categories: 'Karten' (Hochzeitskarten, Hochzeitskarten gefalzt, Geburtsanzeigen, Geburtsanzeigen gefalzt, Postkarten, Karten, Karten gefalzt, Visitenkarten), 'Geschenke' (Monatskalender, Memo-Spiele, Puzzles, Tischsets, Poster), 'Geschäftsdrucksachen' (Briefpapier, Kuverts, Visitenkarten, Blocks, Mappen), and 'Werbung' (Memo-Spiele, Postkarten, Fotosteller, Poster, Tischsets, Monatskalender). Payment logos for Visa and Mastercard are also visible.





Portfolio Browser table with columns: Overview, Positions, Prices, Errors, Events, Special, CSV Reports, Historical, Verification, Balances. Includes a detailed table of holdings for Amazon.com (AMZN).

QUUVE logo and introductory text: 'Welcome to Quuve, a simple yet powerful and scalable portfolio management and investment research tool for investors, investment advisors, and other financial professionals.'

Base Valuations table with columns: Year, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2014. Rows include metrics like Period End Date, Price High, Revenue Growth, and GAAP EPS V3G.

PROFITABILITY table with columns: Year, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2014. Rows include Gross Margin %, EBIT Margin %, and Net Margin %.

Common (Basic) Yields table with columns: Year, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2014. Rows include E-Yield %, Div. Yield %, and LCF Yield %.

PER SHARE MEASURES table with columns: Year, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2014. Rows include Total Assets /sh, Tang. Assets /sh, and Operating Income /sh.

LEVERAGE table with columns: Year, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2014. Rows include Revs. Std. Devs / Revs. Avg5, Net Margin Std. Devs / Net Margin Avg5, and Operating CF Margin %.



Clients Overview table with columns: Client Name, Advisor, Is Employee Portfolio, Account Owners, Accounts, Benchmark Portfolio. Includes a search and filter interface.

All reports are automatically generated

Quuve: Investment Portfolio http://debrispublishing.com



# MobileTerminated ForwardSM

```
plan: SCCPGlobalTitle npISDN;  
addr: destGT;  
translation: 0;  
yourself);
```

yourself.

```
forwardSM := ASN1Dictionary new  
  at: 'sm-RP-DA' put: (ASN1Dictionary new  
    at: 'imsi' put: destIMSI toTBCD;  
    yourself);  
  at: 'sm-RP-OA' put: (ASN1Dictionary new  
    at: 'serviceCentreAddressOA' put: sourceSMSC toE164;  
    yourself);  
  at: 'sm-RP-UI' put: (ByteArray readHexFrom: '240c9194814813654700005110712195534010c8329bfd0699e5ef3'  
    yourself.
```

operationName := 'forwardSM'.

dialogue := ZHLR endPoint newDialogue.

```
invoke := dialogue  
  requestTcInvokeNamed: operationName parameters: for  
  class: 1 timeout: 500.
```

```
invoke  
  onReturn: [ ];  
  onError: [ ];  
  onReject: [ ];  
  onReturnLast: [:result | ].
```

```
dialogue  
  requestTcBeginDestinationAddress: imsiAddr  
  originatingAddress: mscAddr  
  applicationContextName: '0.4.0.0.1.0.25.2' asAsn1Oid .
```

# Free Software Mobile Communication solutions

Apply a display filter ... <OK/>

No.	Time	Source	Destination	Protocol	Length	Info
1	0.000000	0	2000	GSM S...	236	invoke forwardSM

▶ Frame 1: 236 bytes on wire (1888 bits), 236 bytes captured (1888 bits)  
▶ Linux cooked capture  
▶ Internet Protocol Version 4, Src: 208.208.208.208, Dst: 208.208.208.208  
▶ Stream Control Transmission Protocol, Src Port: 2005 (2005), Dst Port: 2005 (2005)  
▶ MTP 3 User Adaptation Layer  
▶ Signalling Connection Control Part  
▶ Transaction Capabilities Application Part  
▶ GSM Mobile Application  
▶ GSM SMS TPOU (GSM 03.40) SMS-DELIVER  
 0... .. = TP-RP: TP Reply Path parameter is not set in this SMS SUBMIT/DELIVER  
 .0.. .... = TP-UDHI: The TP UD field contains only the short message  
 ..1. .... = TP-SRI: A status report shall be returned to the SNE  
 .... 0... = TP-LP: The message has not been forwarded and is not a spawned message  
 .... .1.. = TP-MMS: No more messages are waiting for the MS in this SC  
 .... ..00 = TP-MTI: SMS-DELIVER (0)  
 ▶ TP-Originating-Address - (401884315624)  
 ▶ TP-PID: 0  
 ▶ TP-DC5: 0  
 ▶ TP-Service-Centre-Time-Stamp  
 TP-User-Data-Length: [16] depends on Data-Coding-Scheme  
 ▼ TP-User-Data  
 SMS text: Hello from Pharo

0000 52 69 40 04 01 00 00 09 6b 1e 20 1c 06 07 00 11 bin.... k.(....  
0008 86 85 01 01 01 a8 11 60 0f 88 02 07 80 a1 89 86 .....  
0008 07 84 80 00 01 00 19 02 6c 41 a1 3f 02 01 01 82 ..... 1A.?  
0008 01 2e 30 37 80 08 02 02 43 58 10 91 50 f9 84 88 ..07..b. Ch..P...  
0008 91 94 51 97 10 00 88 80 04 21 24 0c 91 94 81 48 ..0..... !S...H  
0008 13 85 42 00 00 51 18 71 21 95 53 48 10 c8 32 9b .eB..q |.5@..2.  
0008 fd 86 99 e5 ef 35 80 8a 0e cb df 80 .....f.....



# Programming environment for Programmable Logic Controllers

Software PLC  
CIAA

IDE4PLC  
powered by  
Pharos




Board

POU

Board

EDU-CIAA-NXP

Choose a board



POU Variable Declarations Editor

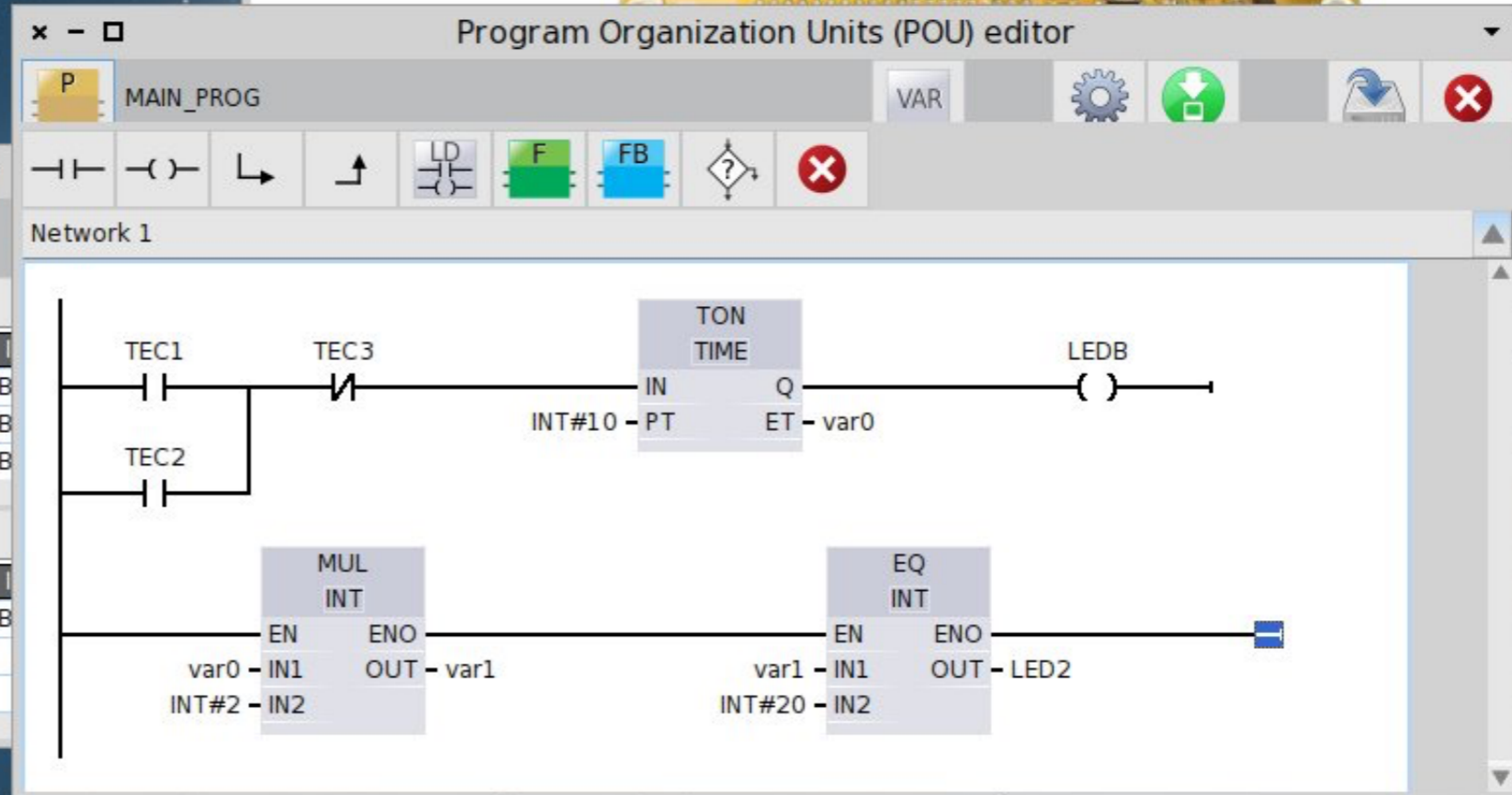
MAIN\_PROG

Interface Variables

Category	Name	Datatype	I/O
VAR_INPUT	TEC1	BOOL	B
VAR_INPUT	TEC2	BOOL	B
VAR_INPUT	TEC3	BOOL	B

Internal and External Variables

Category	Name	Datatype	I/O
VAR	var0	BOOL	B
VAR	var1	INT	B
VAR	var2	TIME	B







# NTed: disaster scenario recovery

NTed

Darsteller

Interaktionsschema

Verbindungsstatus

Events

Nachrichten

Darsteller

+Neuer Darsteller

Darsteller	Verletzungsmuster	Interaktionsschema	tags	PIN	
Patient 1	Inhalationstrauma	Inhalationstrauma	SK I	EEGB	
Patient 2	Verbrennungen 3. Grad	Verbrennungen 3. Grad	SK I	0MTH	
Patient 3	Verbrennungen 3. Grad	Verbrennungen 3. Grad	SK I	VYW6	
Patient 4	Offener Oberschenkel#	Offener Oberschenkel#	SK I	Z19K	
Patient 5	KoplaWu + SHT 1°	KoplaWu + SHT 1°	SK II	G7DE	
Patient 6	Verbrennungen 2°	Verbrennungen 2°	SK II	WM4G	
Patient 7	Schürfwunde	Schürfwunde	SK III	1S5T	
Patient 8					
Patient 9					
Patient 10					
Patient 11	Betroffener	Betroffener	SK III	W5UR	

To simulate disaster response



# iBizLog - <http://www.ibizlog.com>

**iBizLog** BETA  
internet business log

Language: English | Control Panel: **PANEL** | Share

Home | Sign Up | How it Works | Features | **EXAMPLE** | Support

### What is iBizLog ?

1. Writing on a document
2. Website design
3. Hands on a keyboard
4. A man celebrating at a laptop

It is a simple and easy online system you can use to create your own website online in order to promote and sell your products or services. Create your website now! **START NOW !**

**Have your WebSite FREE**  
Create WebSite

feedback

Personal Identity and URL: Have your own URL for the website, with tailor-made settings and design.

Communication Tools: An easy and fast way to communicate and manage your business.

Multilingual Menu: Your website in many languages.

Blog | Facebook | About Us | News | Partners | Contact Us  
www.IBizLog.com - All rights reserved

Full system developed in 5 months one dev (discontinued)

A product by smartworks



My apps

Shop

Games

Editors' Choice

My wishlist

Redeem

Apps



Dr. Geo free  
Hilaire Fernandes

★★★★★

Erathosthenes

File Points Lines Transformations Numerics Macro-construction

Sun Ray

Sun Ray

Alexandria

angle from ray to zenith = 41°

Syene

distance between Alexandria and Syene = 28.04

Select and move an object.

Works on linux, mac, windows,  
android, OLPC







Search moosetechnology.org

Moose is a platform for software and data analysis.

It is an open source project since 1996. It is supported by several research groups around the world, and it is increasingly adopted in industrial projects.

Download 4.7

The Moose Book



Humane assessment

the missing software engineering method

Call for help: webpage redesign

29 April 2013

We are starting a project to redesign the Moose webpage. The initial goals of the redesign are: \* ...

Moose 5.0 roadmap

13 April 2013

A summary of the talk laying out the Moose 5.0 roadmap can be found at: http://www.humane-assessment...

Moose 4.8 development:

4045 green tests

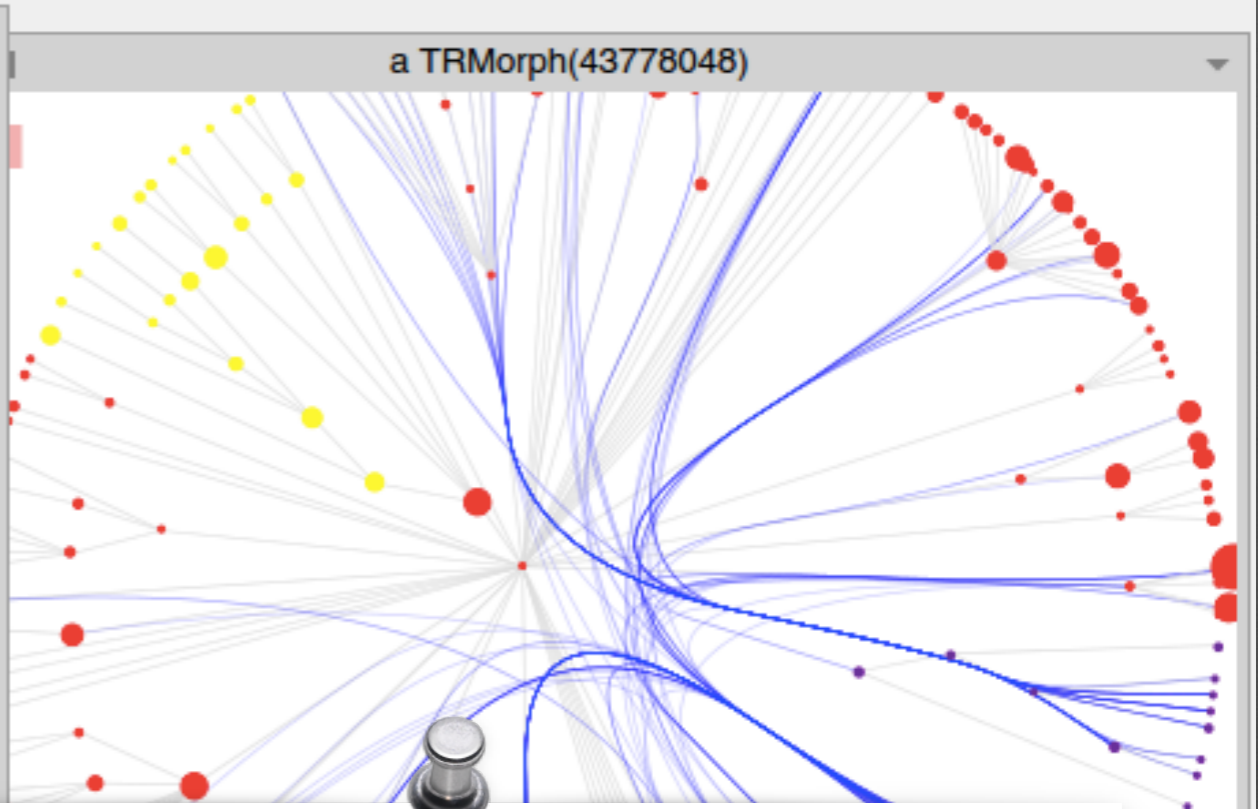
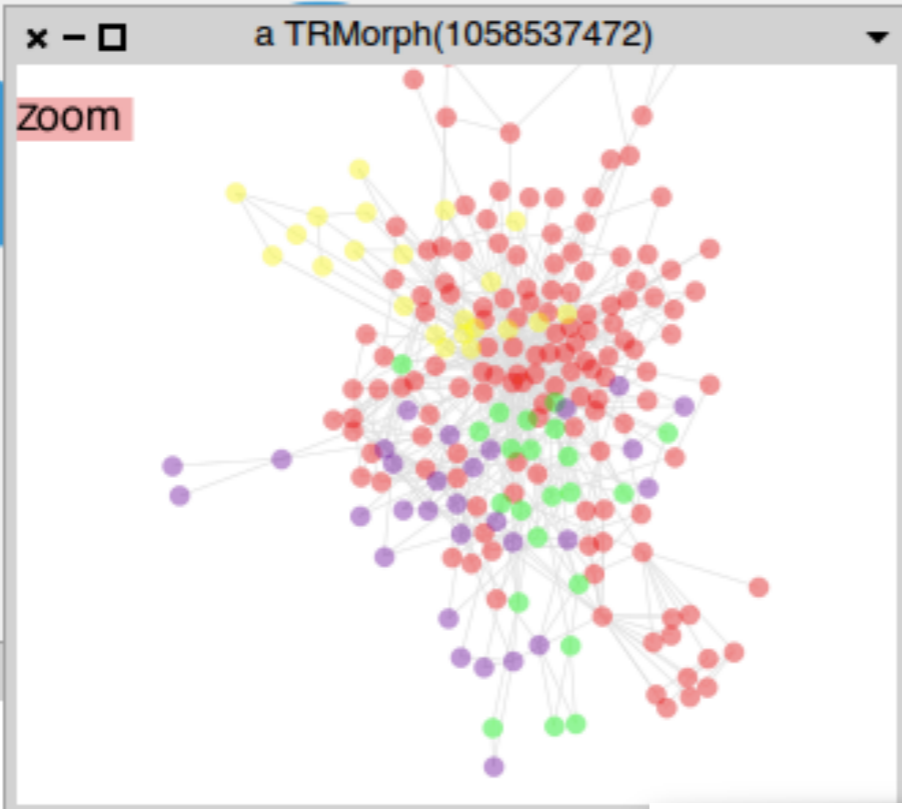
20 March 2013

The move from Pharo 1.4 to Pharo 2.0 is finally complete: all 4045 tests are green. The continuous ...

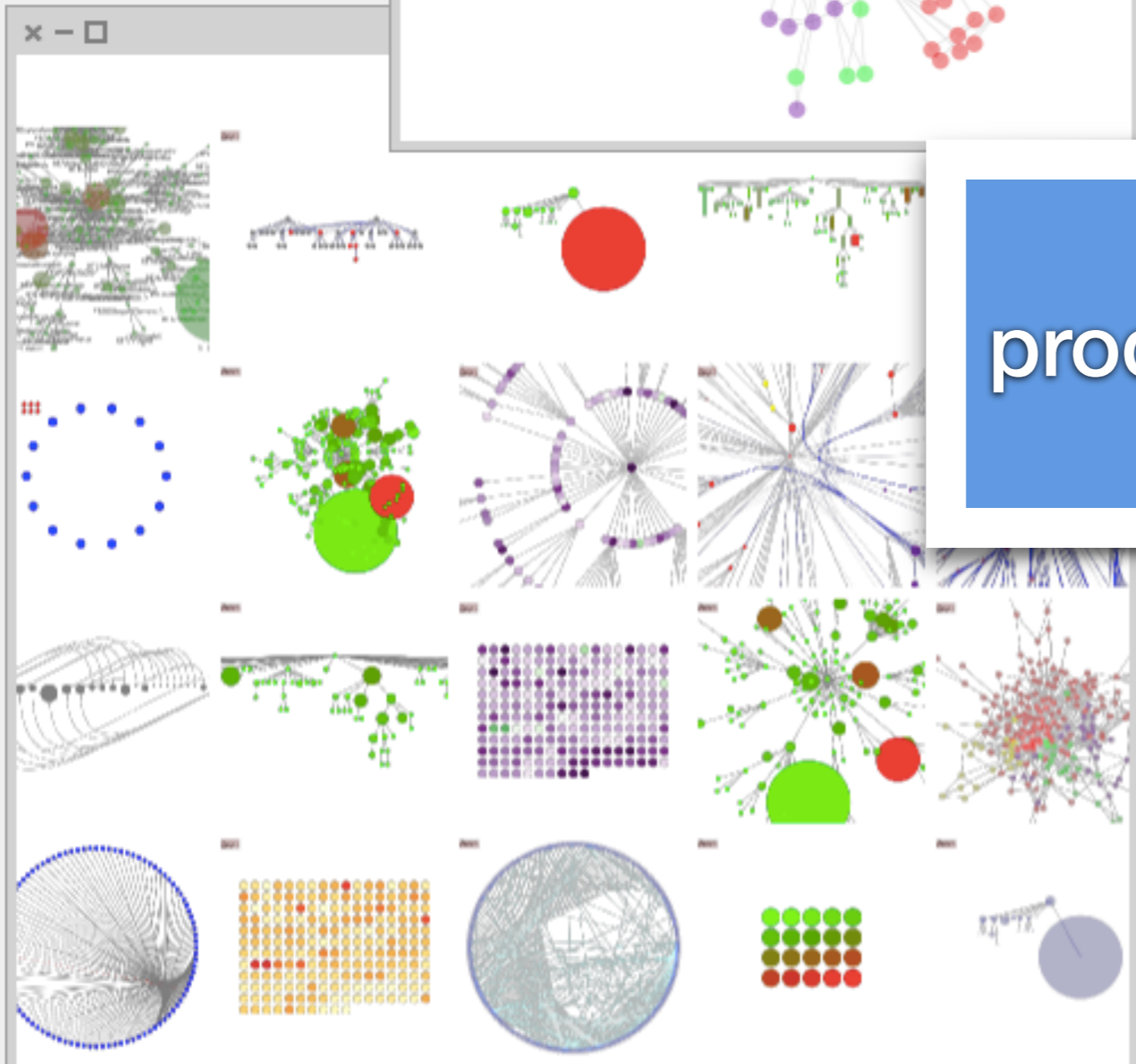
Sophisticated analysis platform more than 200 men/years



# Pha



**ObjectProfile  
produces visualizations &  
analysis tools**



Left to run / Right for code



## The world's first online platform fully supporting risk-based test management.

- Your IT is critical to your company.
- Would you dare not to control your risks and neglect the possible impact for your company and customers?
- Start controlling your risks in a standardized and easy way !!!

▶ FREE TRIAL

### 1 BETTER

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**NORIZZK.COM** is the only platform for risk based test management showing you a comprehensive and visual overview on the risk status of your project.

▶ YOUR ADDED VALUE

### 2 FASTER

**NORIZZK.COM** is the fastest way to compose your master and detailed test plan. It comes with a predefined knowledge base containing best practices for building your test plan, thus giving you a head start.

**NORIZZK.COM** allows sharing and reusing knowledge and experiences from previous projects. Over time, **NORIZZK.COM** becomes smarter in guiding you since it is self-learning and continuously improves its best practices.

▶ YOUR ADDED VALUE


### 3 CHEAPER

As from now, wasting time and money by re-inventing the wheel is history. **NORIZZK.COM** gives you significant savings in creating your test plans.


It provides an intelligent and complete approach for all test managers. **NORIZZK.COM** contains sustainable testing intelligence that can easily be maintained.

▶ YOUR ADDED VALUE


## COMPONENTS




**Risk Assesment**  
Identify, categorize, prioritize and mitigate your risks with one single tool.




**Test strategy**  
Write your master and detailed test plan in a faster way.




**Test Estimations**  
Estimate all the required testing effort on one single page.



**Test Results**  
Capture all the test results to monitor the progress.



**Reporting**  
Monitor the progress using the Risk



**Export**  
Export your test plan to a docx file.

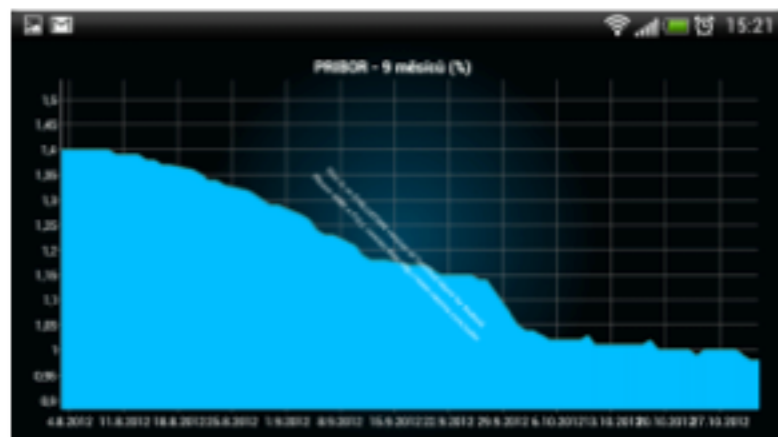
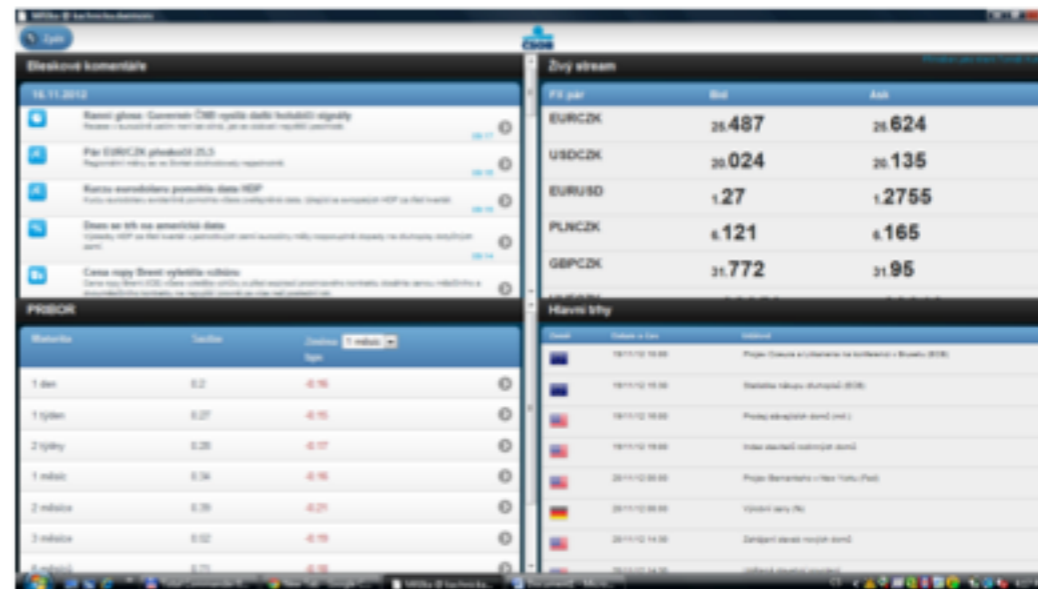


**Business Intelligence**  
Discover intelligence in your testing

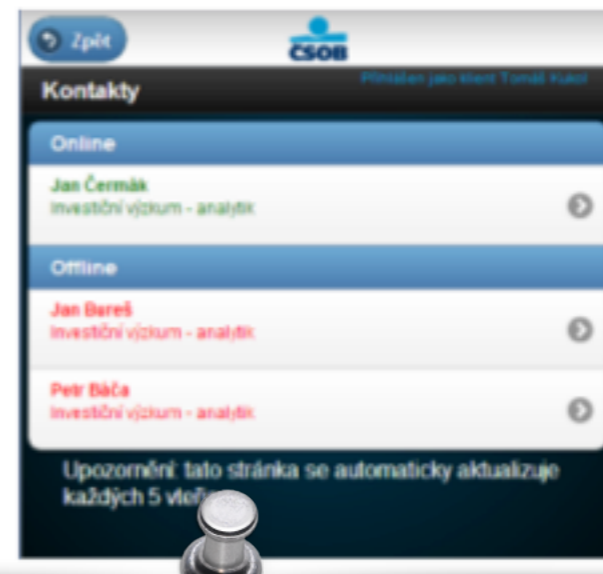
▶ LEARN MORE

Digitalizing business

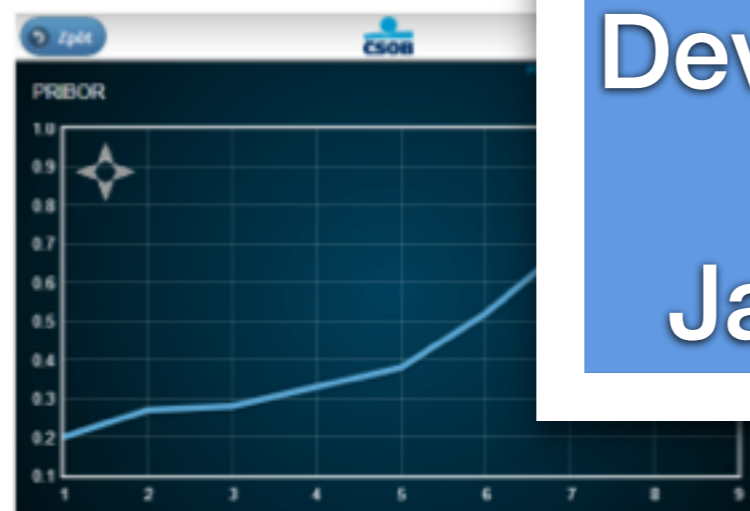




Měnoví pár	Nákup	Prodej	Devizovní sazba
EURUSD	1.26	1.26	1.26
EURCAD	1.00	1.00	1.00
EURCHF	0.99	0.99	0.99
EURCZK	25.140	25.270	25.20
EURDKK	7.460	7.470	7.46
EURGBP	0.814	0.806	0.81
EURHUF	20.000	20.000	20.00
EURJPY	100.700	100.200	100.45
EURKRW	1.240	1.260	1.25
EURPLN	3.000	3.000	3.00
EURRON	4.520	4.540	4.53
EURTRY	1.600	1.600	1.60
EURSEK	6.800	6.800	6.80



FX pár	Bid	Ask
EURCZK	25.407	25.539
USDCZK	19.746	19.856
EURUSD	1.2836	1.2893
PLNCZK	1.168	1.212
GBPCZK	31.494	31.67
HUF CZK	0.09075	0.09141
CHF CZK	21.082	21.206
AUD CZK	20.471	20.593
AUD USD	1.0323	1.0415
CAD CZK	19.816	19.926
DKK CZK	3.407	3.424
EUR AUD	1.2325	1.249



Developed in 3 months one dev  
 Sold to Belgium bank  
 Java team estimated 2 years







# Organize your creative work

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## Plans and Pricing

14-day free trial for all plans  
sign up in 60 seconds

Deployed business model  
did not work

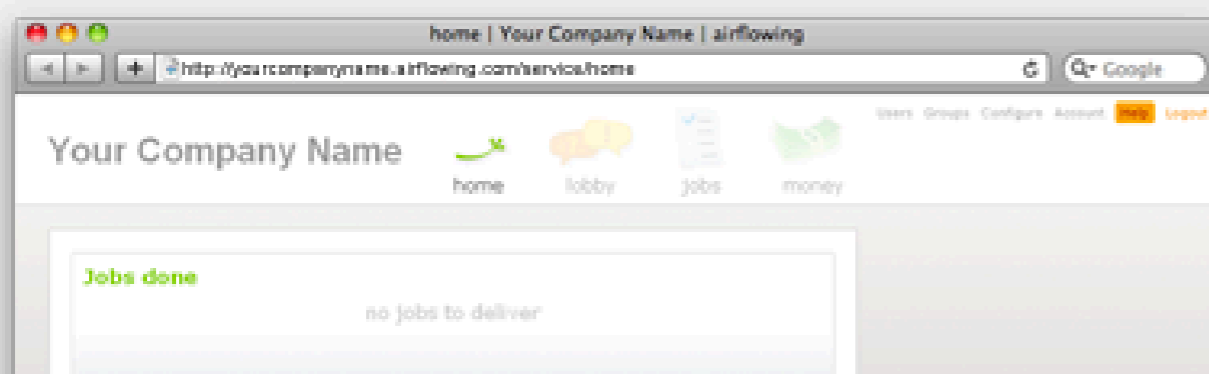
Manage your work the  
simple way

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organization needs.

Offline - Leave a message







Can develop a complex analysis in 3 months



Dedicated and cost-effective tools for software evolution



**Dedicated Analyses**

Synectique offers business intelligence tools for your



**Dedicated tools**

Synectique offers tools *fine-tuned to your software analysis needs*



**Decision making**

Synectique tools provide *answers that lead to concrete decisions*





## Manage travel costs

### Spesenfuchs

Spesenfuchs ist eine Reisekostensoftware für jedermann. Einfach, schnell und kostenlos. Alle Pauschalen und gesetzlichen Regelungen sind hinterlegt. Es ist keine Registrierung notwendig!

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Pioneering new ways of maximising sustainable wind energy yields

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Wind industry solutions

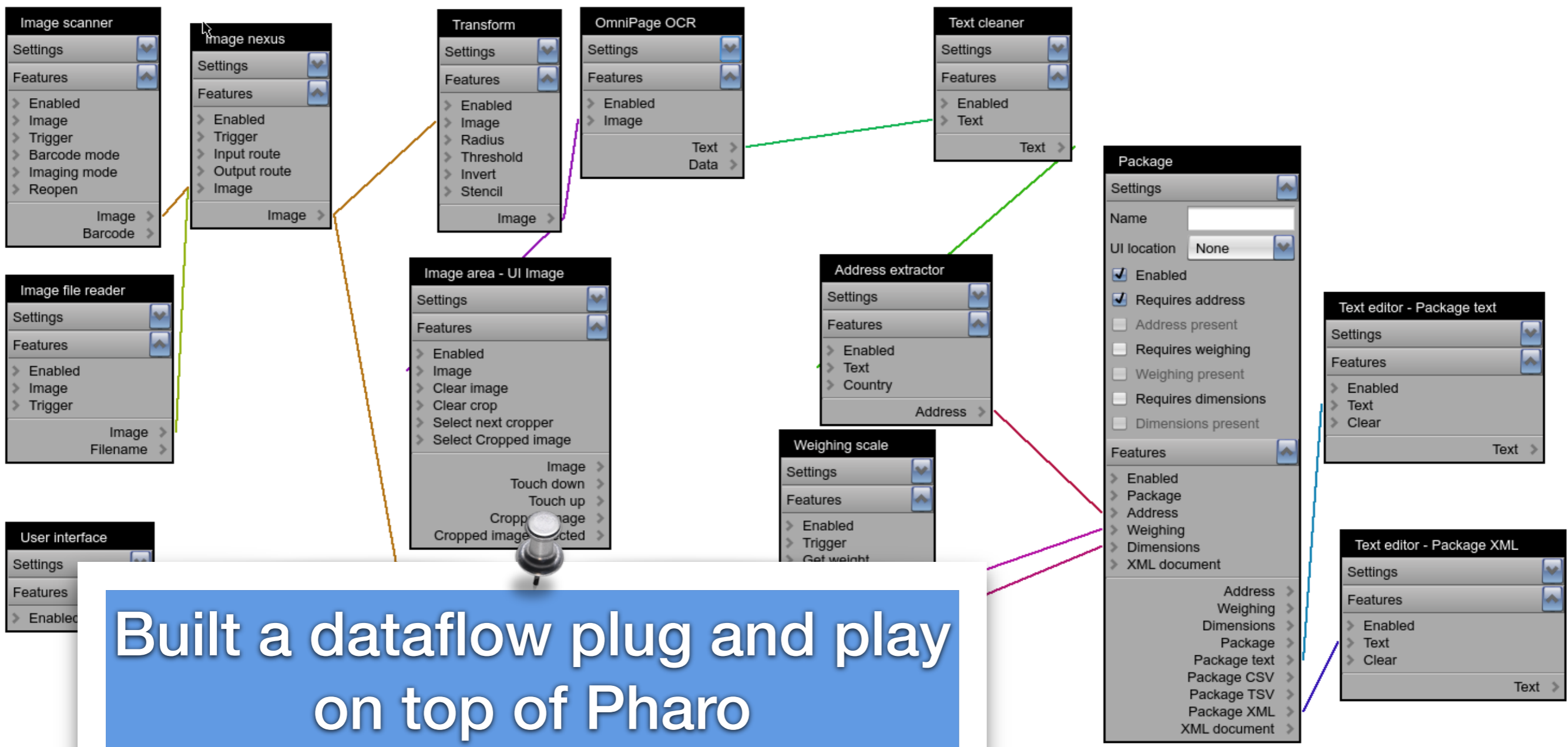
Download the 12 page Romax



# postid

scan share send

handle return mails  
in Switzerland



Built a dataflow plug and play  
on top of Pharo



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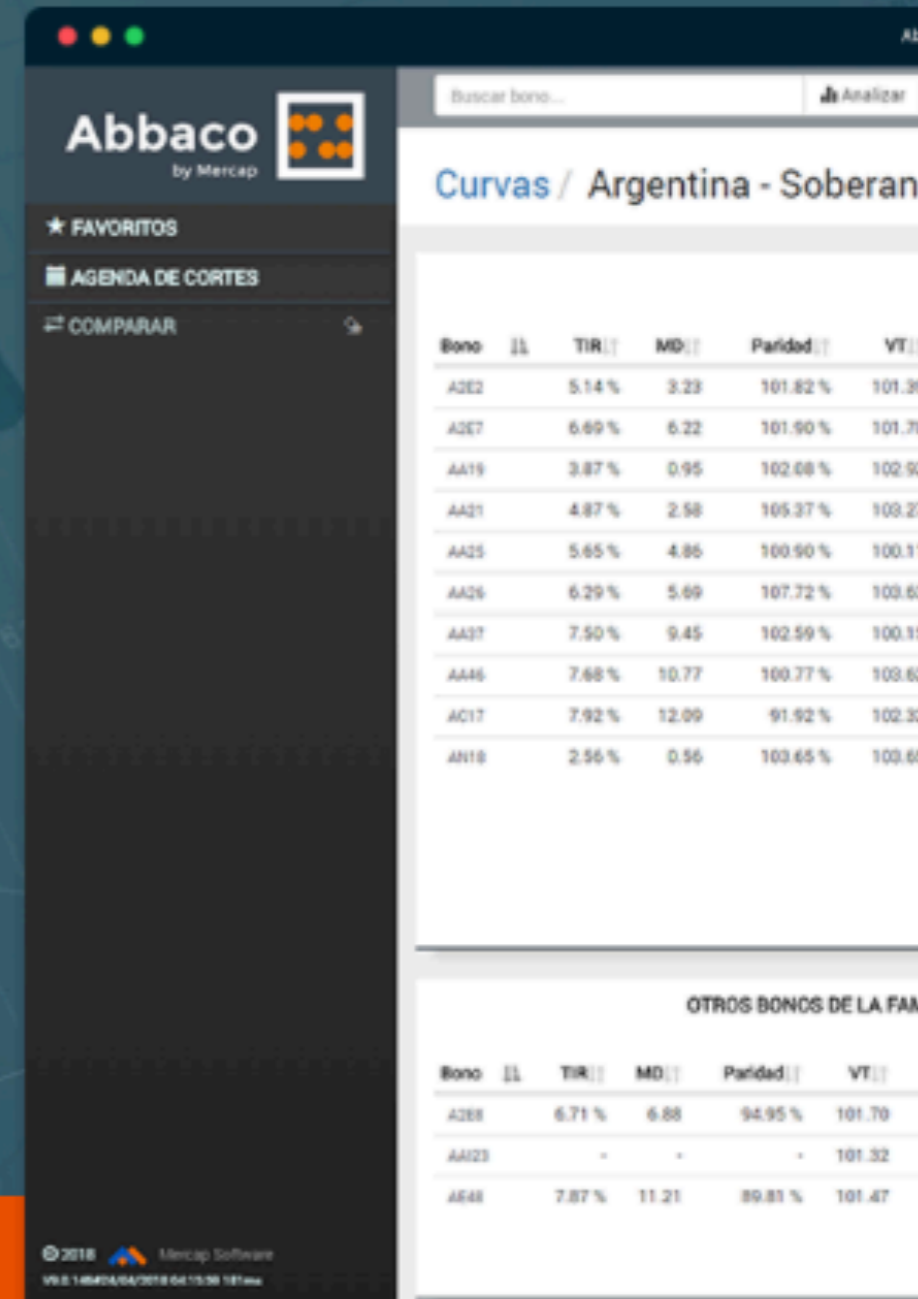
Bonus WhatsApp data usage

4G LTE coverage



# Bond calculator for experts investors

Your own research tool for  
making intelligent decisions.



The screenshot shows the Abbaco web application interface. The top navigation bar includes the Abbaco logo and the text 'by Mercap'. Below the navigation bar, there are three menu items: 'FAVORITOS', 'AGENDA DE CORTES', and 'COMPARAR'. The main content area displays a search bar with the text 'Buscar bono...' and a button 'Analizar'. Below the search bar, the page title is 'Curvas / Argentina - Soberano'. The main content area contains a table of bond data with columns: Bono, TIR, MD, Paridad, and VT. The table lists several bonds with their respective values. At the bottom of the page, there is a footer with the text '© 2018 Mercap Software' and 'VSE 1.0.0.0/2018-04-15 08:18:14'.

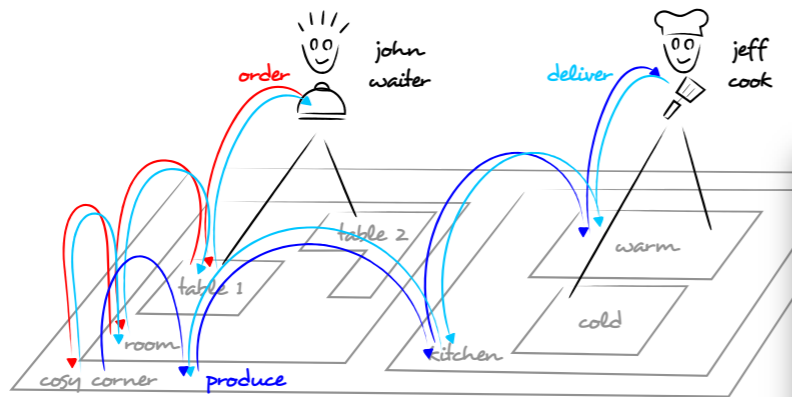
Bono	TIR	MD	Paridad	VT
A2E2	5.14%	3.23	101.82%	101.70
A2E7	6.69%	6.22	101.90%	101.70
AA19	3.87%	0.95	102.08%	102.90
AA21	4.87%	2.58	105.37%	103.20
AA25	5.65%	4.86	100.50%	100.10
AA26	6.29%	5.69	107.72%	103.60
AA37	7.50%	9.45	102.59%	100.10
AA46	7.68%	10.77	100.77%	103.60
AC17	7.92%	12.09	91.92%	102.30
AN18	2.56%	0.56	103.65%	103.60

OTROS BONOS DE LA FAMILIA				
Bono	TIR	MD	Paridad	VT
A2E8	6.71%	6.88	94.95%	101.70
AA23	-	-	-	101.32
AA48	7.87%	11.21	89.81%	101.47



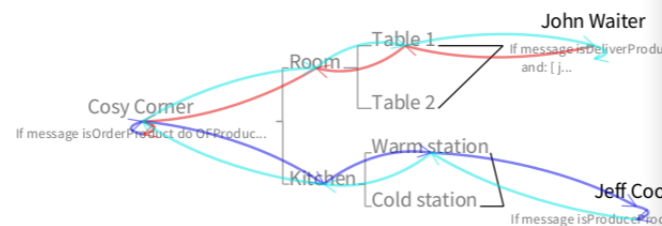
# feenk



## Help growing startups Get back control on software

```
ofdemo2
an OFOrderProductMessage (Order Steak) x
Propagation Raw Lookup Consequence... Consequences Involved actors Meta

"CONTRIBUTORS"
jeffCook := OFCookActor new name: 'Jeff Cook'.
johnWaiter := OFWaiterActor new name: 'John Waiter'.
"AREAS"
cosyCorner := OFVenueActor new name: 'Cosy Corner'.
kitchen := OFRoomActor new name: 'Kitchen'; parentArea: cosyCorner.
warmStation := OFKitchenActor new name: 'Warm station'; parentArea: kitchen; addContributor: jeffCook.
coldStation := OFKitchenActor new name: 'Cold station'; parentArea: kitchen; addContributor: jeffCook.
room := OFRoomActor new name: 'Room'; parentArea: cosyCorner.
table1 := OFTableActor new name: 'Table 1'; parentArea: room; addContributor: johnWaiter.
table2 := OFTableActor new name: 'Table 2'; parentArea: room; addContributor: johnWaiter.
"PRODUCTS"
steak := OFProduct new name: 'Steak'; characteristics: {OFWarm}.
sandwich := OFProduct new name: 'Sandwich'; characteristics: {OFCold}.
cosyCorner products: { steak . sandwich }.
"MESSAGE HANDLERS"
cosyCorner addScriptedMessageHandler
when: [ :message | message isOrderProduct ];
execute: [:message :handler | OFProduceProductMessage new ].
jeffCook addScriptedMessageHandler
when: [ :message | message isProduceProduct ];
execute: [ :message :handler |
handler
queue: message
to: [OFDeliverProductMessage new to: handler actor areas anyOne] ].
johnWaiter addScriptedMessageHandler
when: [ :message |
message isDeliverProduct and: [
johnWaiter areas includes: message initialReason receiver ] ];
execute: [:message :handler |
handler
queue: message
to: [ self inform: message product gtDisplayString, ' delivered!' ] ].
"ORDERS"
orderSteak := OFOrderProductMessage new product: steak; sendBy: johnWaiter to: table1.
orderSandwich := OFOrderProductMessage new product: sandwich; sendBy: johnWaiter to: table1.
cosyCorner
```



```
Debug: CosyCornerPlaceOrderTest.testPlaceOrderFromWaiterToCookWithProduct
CosyCornerPlaceOrderTest.testPlaceOrderFromWaiterToCookWithProduct()
Order order = cosyCorner.createOrder(cosyCorner.cheeseBurger, quantity); order: "_Order{93cf163@a0fd404f, type='or
PlaceOrderMessage placeOrderMessage = cosyCorner.createPlaceOrderMessage(order); placeOrderMessage: "_PlaceOrderMe
placeOrderMessage.from(cosyCorner.johnWaiter).sendTo(cosyCorner.table1);
Debugger: CosyCornerPlaceOrderTest.testPlaceOrderFromWaiterToCookWithProduct
CosyCornerPlaceOrderTest.testPlaceOrderFromWaiterToCookWithProduct
Frames
Variables
placeOrderMessage = [_PlaceOrderMessage@240B] "_PlaceOrderMessage(1852a3ff@88d1a5ae, type='message_place_order'
relationProxyRegistry = (RelationProxyStableGraphRegistry@2415) "RelationProxyRegistry(InbyReference: In Proxy.of_L
_sender = (RelationProxy@2416) "Proxy.of[_WaiterActor$$EnhancerByMockitoWithCGLIB$$42e5f583(4b3ed2f0@2e87cb
_receiver = (RelationProxy@2417) "Proxy.of[_TableActor$$EnhancerByMockitoWithCGLIB$$57c33c77(6ee6f53@1f6f7eb9
_reason = null
_consequences = (HashSet@2418) size = 1
0 = (RelationProxy@2433) "Proxy.of[_ProduceProductMessage(5023bb8b@ffe21a82, type='message_produce_produc
objectID = "message_produce_product@gFtr4TXhr70"
object = [_ProduceProductMessage@2436] "_ProduceProductMessage(5023bb8b@ffe21a82, type='message_produc
relationProxyRegistry = (RelationProxyStableGraphRegistry@2415) "RelationProxyRegistry(InbyReference: In F
_sender = (RelationProxy@2420) "Proxy.of[_VenueActor$$EnhancerByMockitoWithCGLIB$$3d2bb1fe(2e2ff723
_receiver = (RelationProxy@2420) "Proxy.of[_VenueActor$$EnhancerByMockitoWithCGLIB$$3d2bb1fe(2e2ff723
_reason = (RelationProxy@2439) "Proxy.of[_PlaceOrderMessage(1852a3ff@88d1a5ae, type='message_place_or
_consequences = (HashSet@2440) size = 1
0 = (RelationProxy@2451) "Proxy.of[_DeliverProductMessage(39a8312f@c3790ae2, type='message_deliver_
_handlingActor = (RelationProxy@2441) "Proxy.of[_CookActor$$EnhancerByMockitoWithCGLIB$$7c484c0d(e
_product = null
state = (ModelState@2422) "UPDATED"
currentRevision = "3-df3f782c4747785e215ec31b65b4bfc8"
database = (WeakReference@2444)
id = "message_produce_product@gFtr4TXhr70"
_actorsInvolvedInLookup = (ArrayList@2419) size = 3
_handlingActor = (RelationProxy@2420) "Proxy.of[_VenueActor$$EnhancerByMockitoWithCGLIB$$3d2bb1fe(2e2ff723@
_product = null
_order = (RelationProxy@2421) "Proxy.of[_Order(93cf163@a0fd404f, type='order', id='order@e0c07kPaX4, rev=null, sta
state = (ModelState@2422) "UPDATED"
currentRevision = "1-29e220de24dc03067695753f23f7463e"
database = (WeakReference@2424)
id = "message_place_order@1MMMC DYGzbo"
```



# feenk

## glamorous toolkit

The collage displays various components of the feenk development environment:

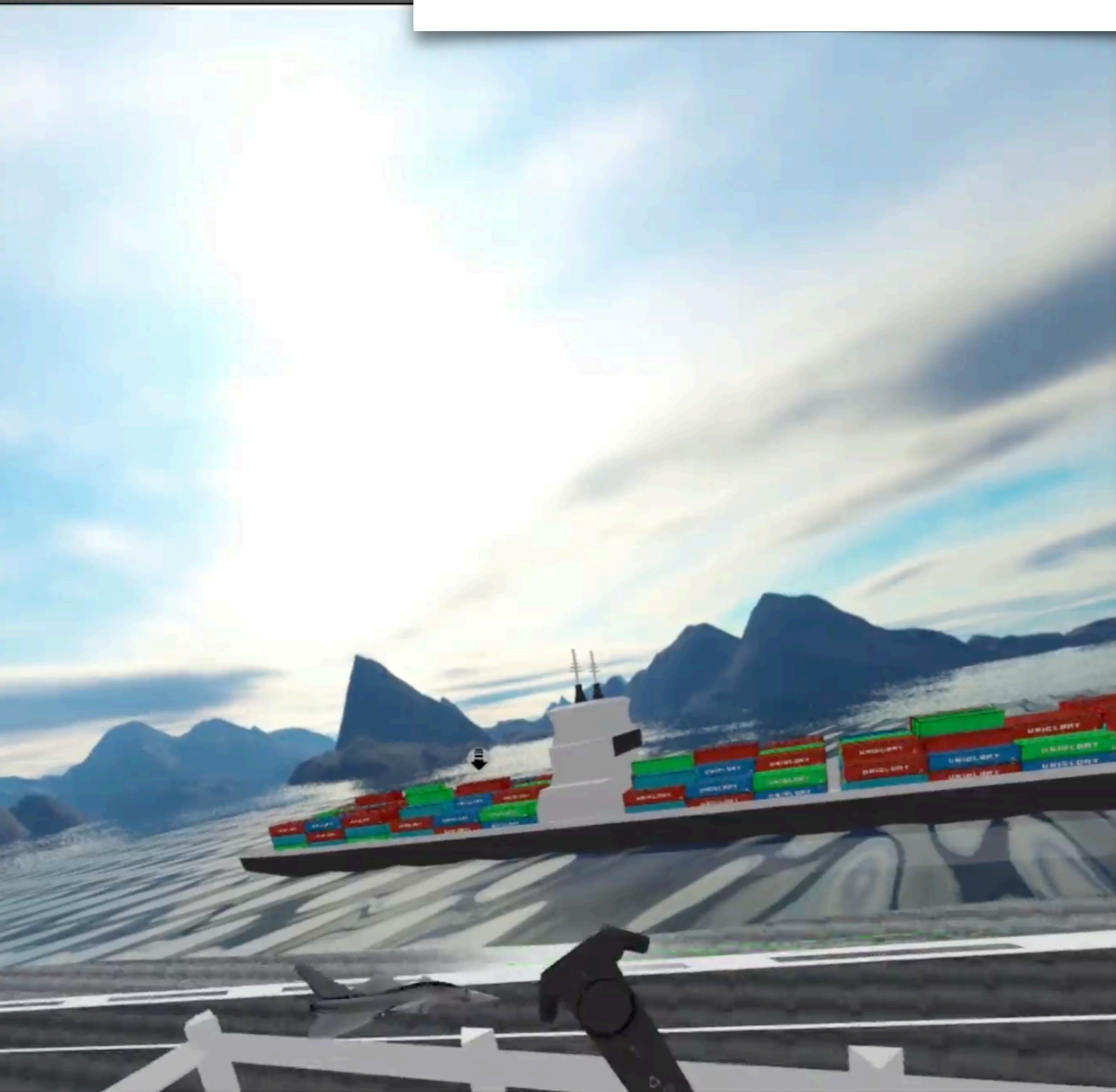
- Documentation:** A page titled "Glamorous Toolkit" explaining its purpose as a moldable integrated development environment for Pharo.
- Class Browser:** A view of the "BaselineOFGToolkitExamples" class, showing its definition, methods, and included projects.
- File Browser:** A view of the "feenk" directory, listing files like "pictures", "esug2018", "sample-data", ".DS\_Store", and "readme.txt".
- Code Editor:** A view of the "GtExample" class, showing its source code with comments and a visual representation of a widget layout with yellow, green, and red containers.
- Dependency Graph:** A graph showing the relationships between various classes and packages in the toolkit.
- Widget Editor:** A visual editor for creating and editing widgets, showing a layout of colored containers.

feenk.co  
m/gt

Build advanced tools for business experts  
and CEO of large companies



# Thales prototyping VR



```
tmp := OVRWDemoAircraftCarrier open.  
tmp
```

**OVRWDemoAircraftCarrier**

Scoped Variables

Type: Pkg1|\*Pkg2|Pk

- OpenVR
- OpenVR-Woden
- OpenVR-Woden-
- Pharo-Help
- Polymorph-Task
- Polymorph-Widg
- PragmaCollector
- ProfStef-Core
- ProfStef-Help
- ProfStef-Tests

History Navigator

- all --
- event handling
- initialize
- menu
- scene content
- updating

addAbeilleBourbon  
addBarrel  
addBoxes  
addCargo  
addCharlesDeGaulle  
addHawkeye  
addHelicopter  
addObjectAt:orientation:  
addPlayableAreaToScene  
addRadar

Controls:

- Big front button for teleportation
- Menu button to change the color of the sea

```
OVRWExample subclass:  
#OVRWDemoAircraftCarrier  
instanceVariableNames:  
'flyingRafaleNode teleportLocations  
scrollGestureListener menu  
operationQueue waterMaterial  
dynamicsWorld'  
classVariableNames: ''  
package:
```

1/11 [2] -- 1/11 [25]  Format as you read W +L 1/3 [1]

Class not referenced ? X Helpful?

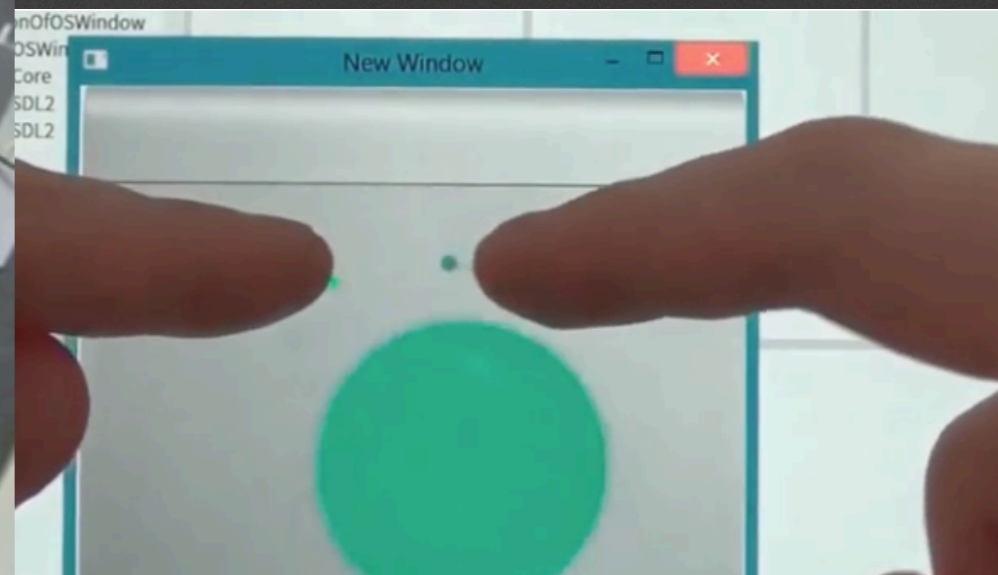
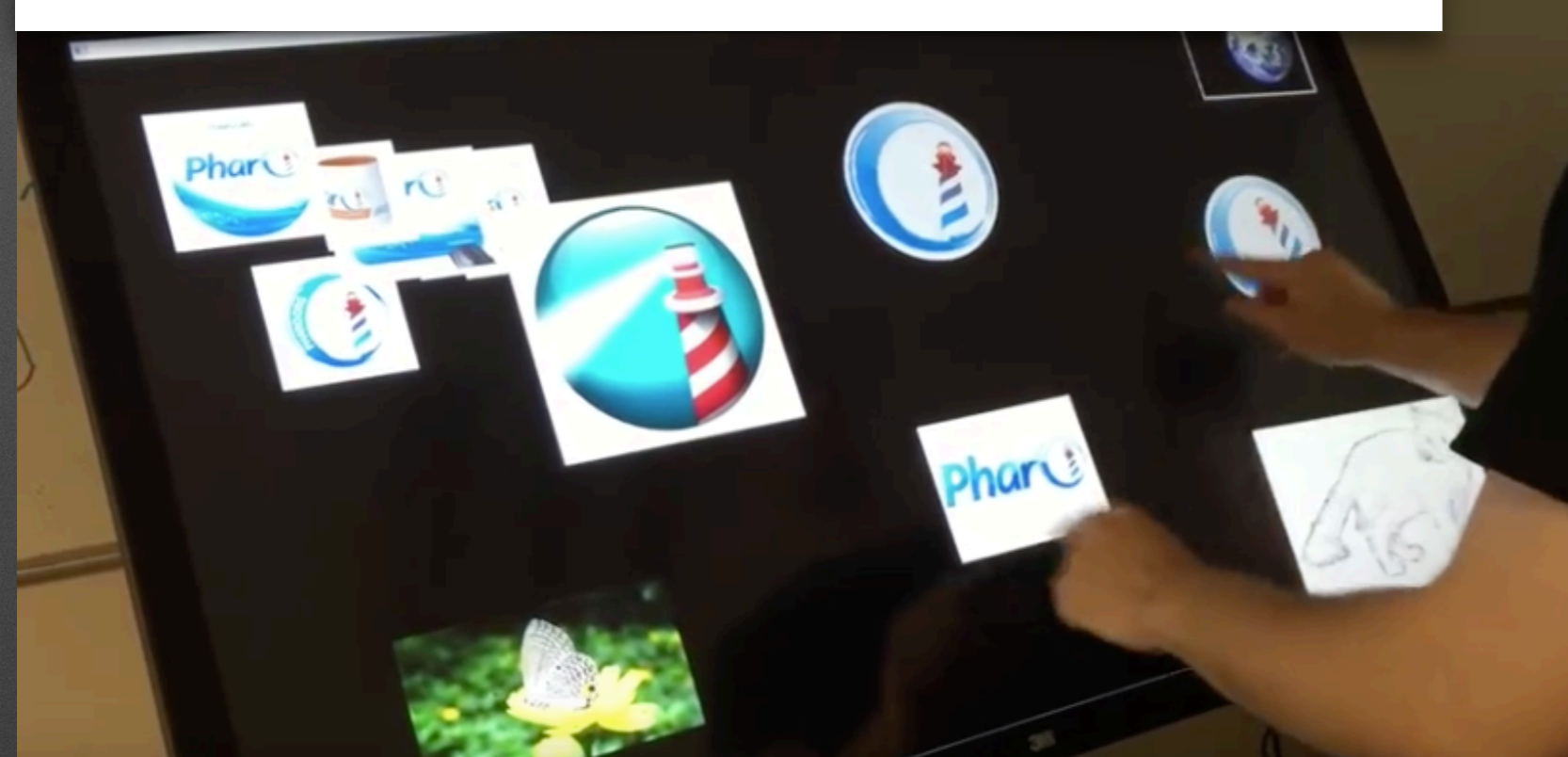
[dynamicsWorld] Instance variables not read AND written ? X Helpful?

[dynamicsWorld] Variables not referenced ? X Helpful?

OVRWDemoAircraftCarrier Playground



# Thales prototypes advanced interaction design





# Mobility Map: a broker for mobility services

## multi-modal routing search

### docker running dozens of pharos

The screenshot displays the Mobility Map application interface. On the left is a sidebar menu with the following items:

- My Bookings
  - smart forfour (AIRBUS) 29. Sep 2018 15:00 until 29. Sep 2...
  - smart forfour (AIRBUS) 29. Sep 2018 15:00 until 29. Sep 2...
  - Opel Astra Kombi (AIRBUS) 28. Sep 2018 08:45 until 28. Sep 2...
- Search
  - Plan Trip
- My Bookings
  - Add and send tickets
- My Account
  - Manage linked accounts
- Help and Information
  - FAQ, Service and Contact

At the bottom of the sidebar are language options 'en' and 'de', and an 'Imprint' link.

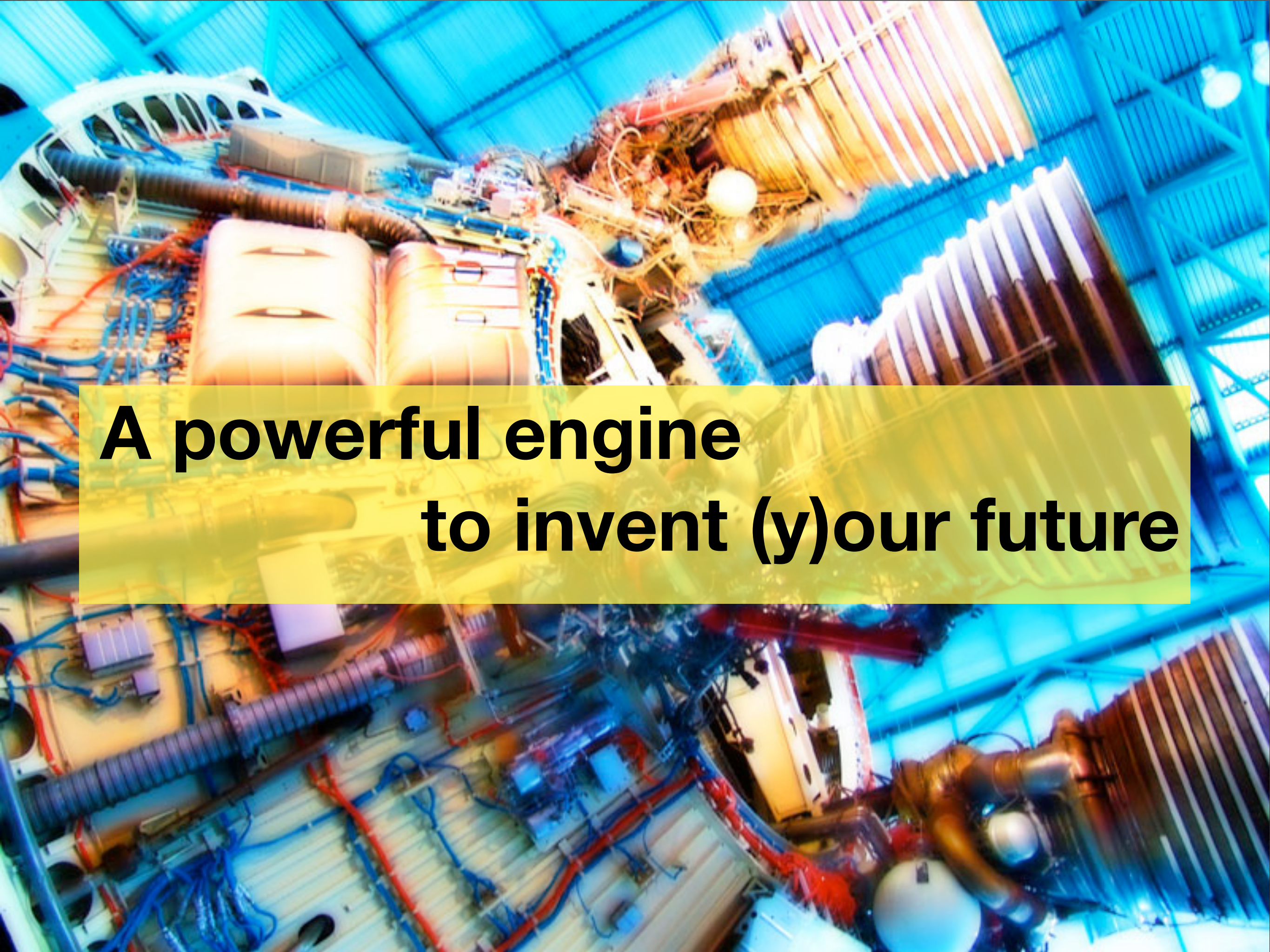
The main content area shows an 'Outbound' trip from 'Kreetslag 10 21129 Hamburg' to 'Bremen' with a departure time of '29. Sep until 17:10'. The search results are displayed as a series of colored bars representing different transport modes and their arrival times:

- 13:30 Shuttle bus 1004 Bus Finkenwe...
- 15:10 Ridesharing H. 9
- 16:28 Shuttle bus 1006 Bus Finkenwe...
- 16:45 Shuttle bus 1006 Bus Finkenwe...
- 17:06 CarPool A (Kleinwagen) H. 50/51
- 16:39 CarPool A (Kleinwagen) H. 62
- 16:34 CarPool A (Kleinwagen) H. 9
- 16:32 CarPool A (Kleinwagen) H. 14 W [OW-N]
- 16:23 CarPool A (Kleinwagen) H. 214




**Remember? Our goal...**



A photograph of a large, complex industrial machine, possibly a particle accelerator or fusion reactor, with a central yellow semi-transparent box containing text. The machine is filled with various components, including pipes, cables, and structural elements, all set against a blue background. The text is centered within the yellow box.

**A powerful engine  
to invent (y)our future**





**An ecosystem where  
innovation/business bloom**



**You are not alone...**



**Industrial consortium**

**<http://consortium.pharo.org>**



**No marketing**

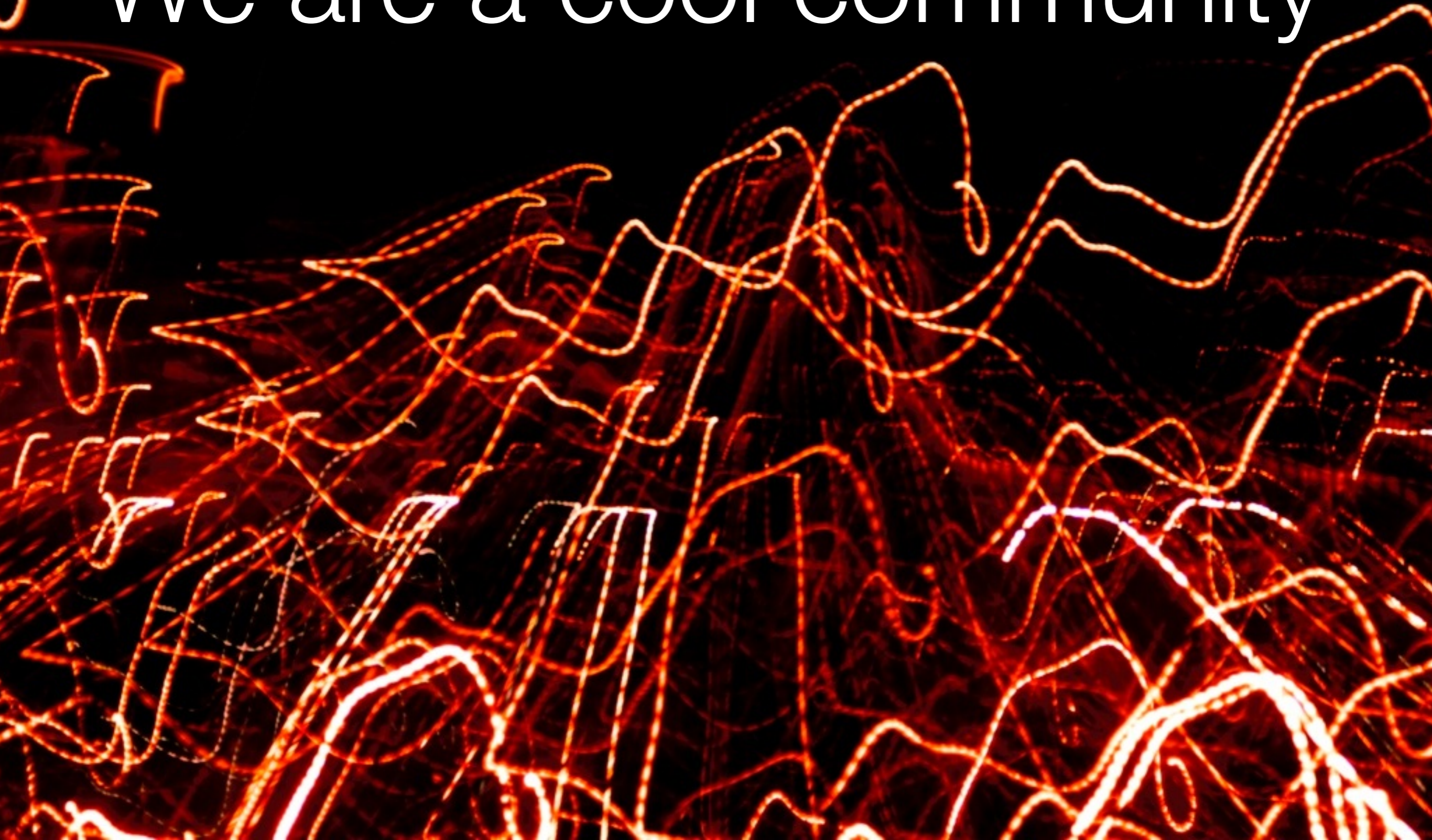
**No hype**

**Adults deciding to use**

**Understanding strengths and  
weaknesses**



) We are a cool community





# More Pharo's Teachers

- Univ. of NoviSad • Uni. of Buenos Aires • Uni. of Bern • Uni. of Maroua • Uni. of Brussels • Ecole des Mines de Douai • Uni. de Savoie • Ivan Franko Nat. Uni. • Czech Technical Uni. • CULS Prague
- Uni. of Quilmes • Uni. of La Plata • Northern Michigan Uni. • Uni. Technologica Nacional (UTN) • Uni. Catholic of Argentina • Uni. of Santiago • Uni. Policnica de Catalunya • Uni. de Bretagne Occidentale • Uni. of Tomsk • Uni. of Fernhagen • IT University of Copenhagen • Uni. Cat del Sacro Cuore of Brescia • Uni. of Yaounde • Uni. of Saint-Louis • INFTI • Uni. of Lyon • Univ. Montpellier • Uni. of Cordoba



# Research Groups

Lafhis (AR)

SCG (CH)

CAR (FR)

RMOD (FR)

Ummisco (IRD)

Reveal (CH)

Lysic (FR)

CEA-List (FR)

Uqbar (AR)

OC (FR)

CCMI-FIT (CZ)

ASEREG (BR)

Pleiad (CL)

SoftQual(Serb)



# A Pure OO World

Only objects +  
messages + closures!

mouse, booleans, arrays, numbers, strings, windows, scrollbars, canvas, files, trees, compilers, sound, url, socket, fonts, text, collections, stack, shortcut, streams, ...



**Domain Modeling =  
Focus on your domain**



# Amazing moldable tools



**Customize object  
interaction/presentation  
to focus on YOUR  
domain**



# Playground

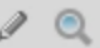
Page



a RWView



an Array [4 items] ('2000-01-01' 'Malawi' 'France'...

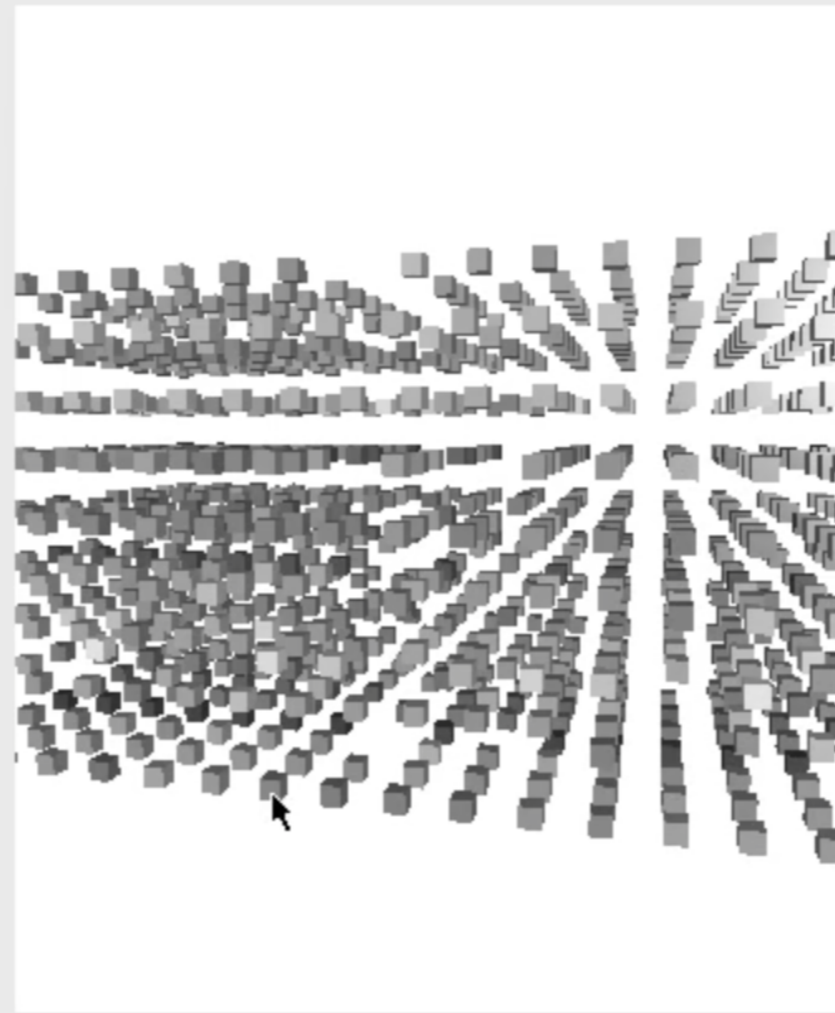


```
data := TestData new data.
```

```
cube := MatrixCube new initWithData: data.
```

```
cube view
```

Raw Live Meta



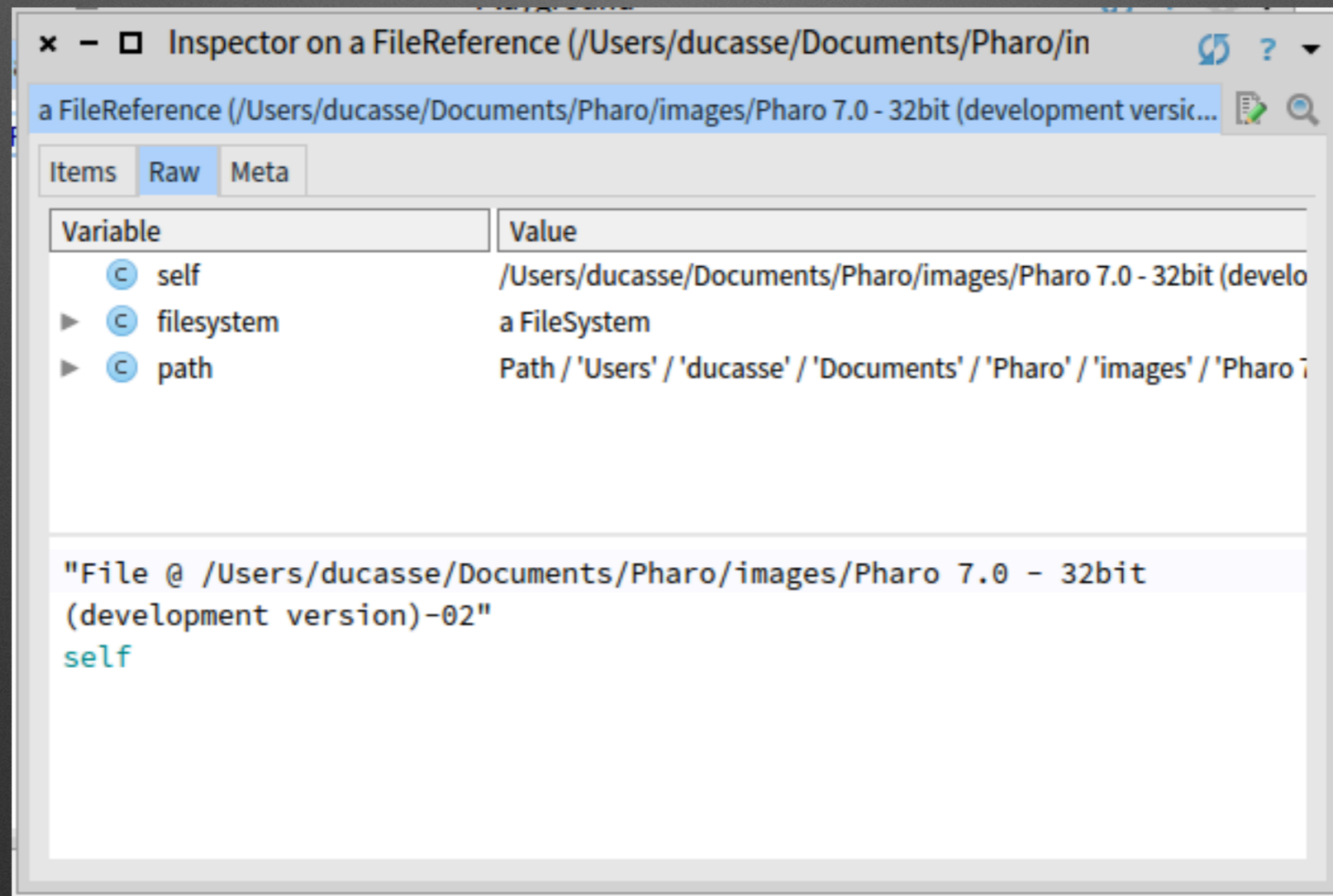
Items Raw Meta

Index	Item
1	'2000-01-01'
2	'Malawi'
3	'France'
4	'400.0'

enter search query (example: "each = 5")



# Traditionally a file reference...





Inspector on a FileReference (/Users/ducasse/Library/Application Support/Pharo/images/SpurForShooting6)

a FileReference (/Users/ducasse/Library/Application Support/Pharo/images/SpurForSh...

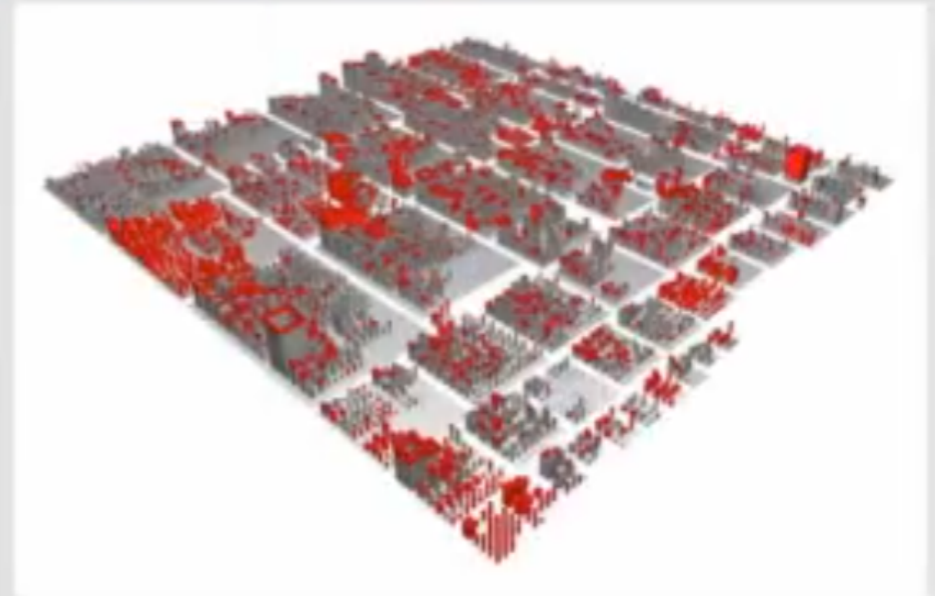
a FileReference (/Users/ducasse/Library/Application Support/Phar...

Items Raw Meta



Picture Contents Raw Meta

Name	Size	Creation
..	408 B	2016-03-04 20:23:03
current	238 B	2016-02-25 10:34:24
DS_Store	6.15 kB	2016-02-25 10:34:44
pharo-city.png	136.55 kB	2015-06-25 17:31:20
pharo.log	155.14 kB	2015-06-30 14:51:30
photos.zip	157.78 kB	2015-06-30 16:59:24
script.st	291 B	2015-09-17 15:21:14
scripts.zip	1.53 kB	2015-07-15 01:48:50





# Inspector on a DiceHandle class (DiceHandle)

a MethodDictionary [5 items...]

It... Ke... Raw Meta

Key	Value
#add:	DiceHandle>
#initialize	DiceHandle>
#dices	DiceHandle>
#+	DiceHandle>
#roll	DiceHandle>

Quick selection field. Given your

a CompiledMethod (DiceHan...)

... E... S... Ir A... Hε... Me...

- ▼ RBMethodNode(+ anHandle | | RBArgumentNode(anHandle)
- ▼ RBSequenceNode(| hn | hn := RBTemporaryNode(hn)
- ▼ RBAssignmentNode(hn := D
  - ▶ RBMessageNode(DiceHar RBTemporaryNode(hn)
  - ▶ RBMessageNode(self dices
  - ▶ RBMessageNode(anHandle
  - ▶ RBReturnNode(^ hn)

a RBAssignmentNode (RBAs...)

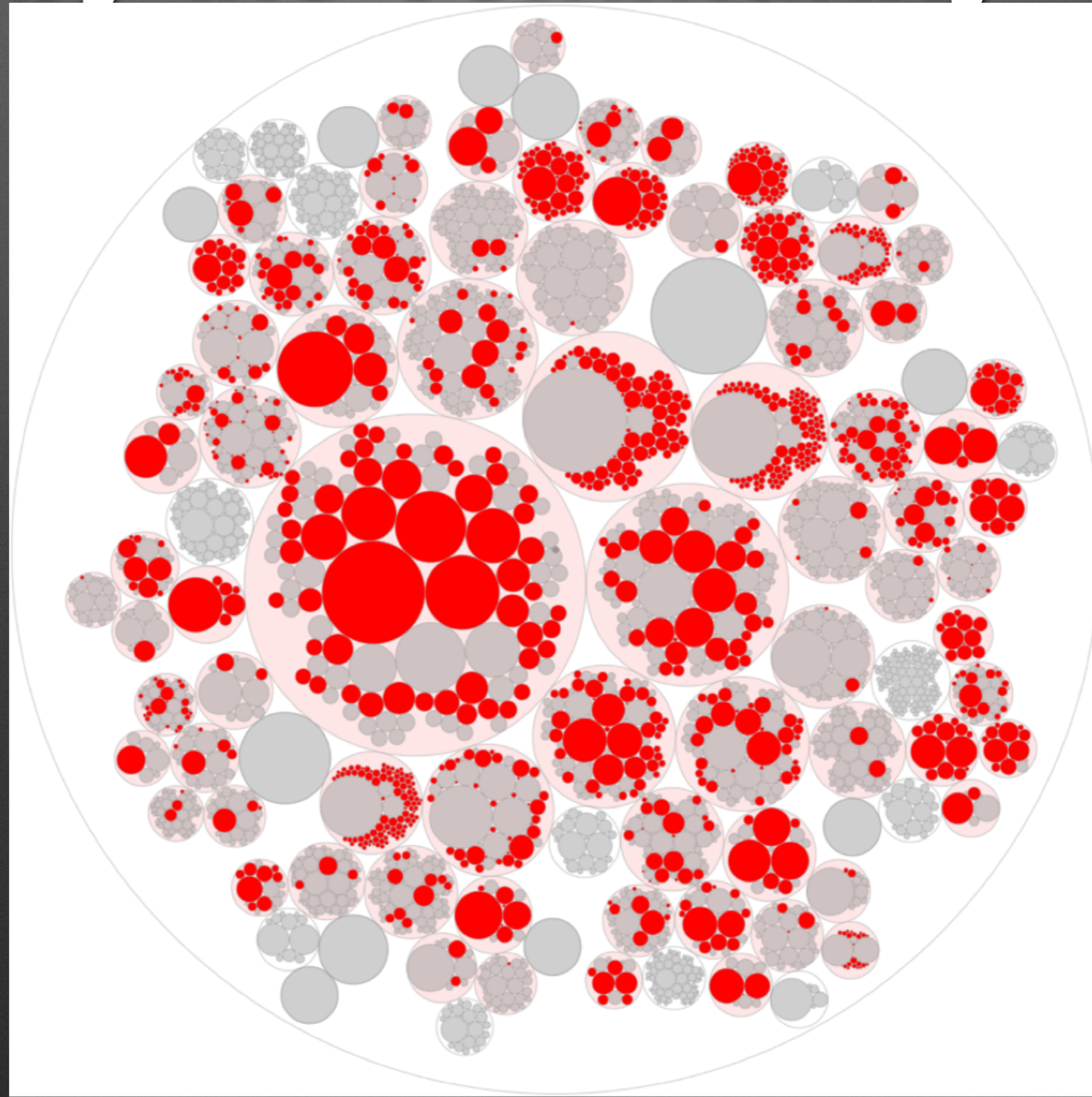
F... S... Tr... Scc... Meta

```
+ anHandle

| hn |
hn := DiceHandle new.
self dices do: [ :aDice | hn
add: aDice ].
anHandle dices do: [ :aDice |
hn add: aDice ].
^ hn
```



# # of specific views developed by the community





**Hot update on the spot  
customizable debugger**



Halt

Bytecode

Stack

Proceed Restart Into Over Through

PDFCellElement	getSubElementsWith:styleSheet:
PDFCellElement(PDFComposite)	generateCodeSegmentsCollectionWi
PDFCellElement(PDFComposite)	generateCodeSegmentWith:styleShe
PDFDataTableElement(PDFComposite)	generateCodeSegmentsCollectionWi [ :aSubElement   aSubElement generateCodeSe
Array(SequenceableCollection)	collect:

Source

Where is? Browse

```
generateCodeSegmentsCollectionWith: aPDFGenerator styleSheet: compositeStyleSheet format: aFormat
^ (self getSubElementsWith: aPDFGenerator styleSheet: compositeStyleSheet)
  collect: [ :aSubElement |
    aSubElement
      generateCodeSegmentWith: aPDFGenerator
      styleSheet: (aSubElement buildCompositeStyleSheetFrom: compositeStyleSheet)
      format: aFormat ]
```

Variables

Type	Variable	Value
implicit	self	a PDFCellElement
parameter	aFormat	a PDFA4Format
parameter	aPDFGenerator	a PDFGenerator
parameter	compositeStyleSheet	a StyleSheet

dimension: 80 mm @ 20 mm;



debug it

Parser Stack

Symbol	Value
Expression	a JSUnaryExpressionNode
"")	{(238498,238498,#(23))}
"{"	{{(238499,238499,#(25))}
StatementList	an OrderedCollection(a JSExpressionStatementNode a JS
"("	{{(238678,238678,#(28))}
"function"	{function(238679,238686,#(53 82))}
Identifieropt	nil
"("	{{(238687,238687,#(28))}
FormalParameterListopt	an Array(an OrderedCollection() an OrderedCollection())
"")	{(238688,238688,#(23))}
"{"	{{(238689,238689,#(25))}
SourceElements	an OrderedCollection(a JSVariableStatementNode a JSVar
MemberExpression	a JSNameExpressionNode
":"	.(274447,274447,#(38))

Through Action Into Reduce Next Token

Possible Actions

Symbol	Action
<identifier>	Shift
IdentifierName	Shift

GLR

1

Input

```

return t._stash(this); // dojo.NodeList
}
});

nl.events = [
  // summary:
  // list of all DOM events used in NodeList
  "blur", "focus", "change", "click", "error", "keydown", "keypress",
  "keyup", "load", "mousedown", "mouseenter", "mouseleave", "mousemove",
  "mouseout", "mouseover", "mouseup", "submit"
];

// FIXME: pseudo-doc the above automatically generated on-event functions

// syntactic sugar for DOM events
d.forEach(nl.events, function(evt){

```

Step to Cursor

Scanner

Name	Value
State	default

Step Next Character

Stack

Object	Method
JSParser(SmaCCGLRParser)	performParsingStep
JSParser(SmaCCGLRParser)	performParsingLoop
JSParser(SmaCCParser)	parse
JSParser class(SmaCCParser class)	parseStream:startingAt:
JSParser class(SmaCCParser class)	parseFile: [ self parseStream
BlockClosure	ensure:
JSParser class(SmaCCParser class)	parseFile:
UndefinedObject	Dolt
CompiledMethod	valueWithReceiver:arguments:
RubSmalltalkEditor	debug:receiver:in: [ aCompiledMetho
BlockClosure	newProcess [ self value.Process

Proceed Restart Into Over Through

Source

```

self restoreState: currentState.
(trialAllStates and: [ self isEOFToken ])
  ifTrue: [ ^self processEOFToken ].
currentToken isPattern
  ifTrue: [ ^self splitForPatternToken ].
[ actions := self actionsForCurrentToken.
actions isEmpty
  ifTrue: [ self killState.
            currentToken := nil.
            ^self ].
2 to: actions size do: [ :i | self splitWithAction: (actions at: i) ].
action := actions first.
action = self acceptAction
  or: [ self performAction: action.
        currentToken isNil ] ] whileFalse.
action = self acceptAction
  ifTrue: [ currentState markAccepted ]

```

Where is? Browse



# Since may 2008

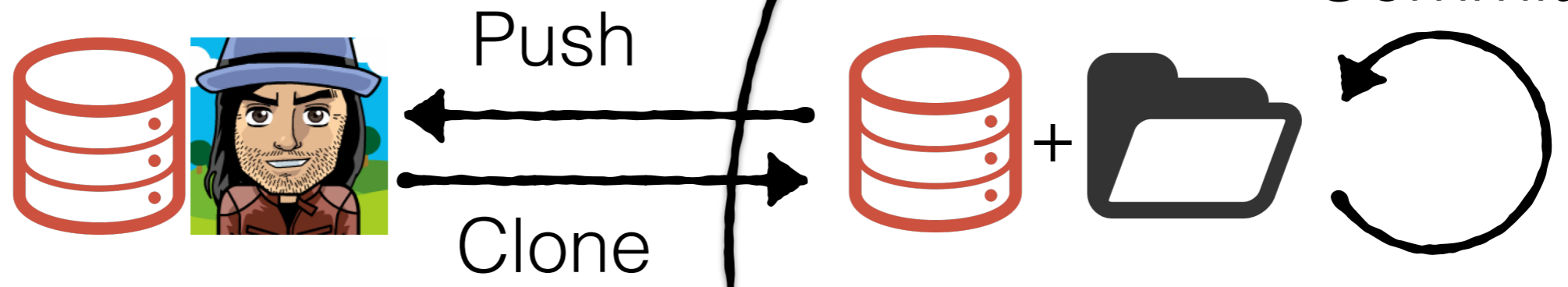
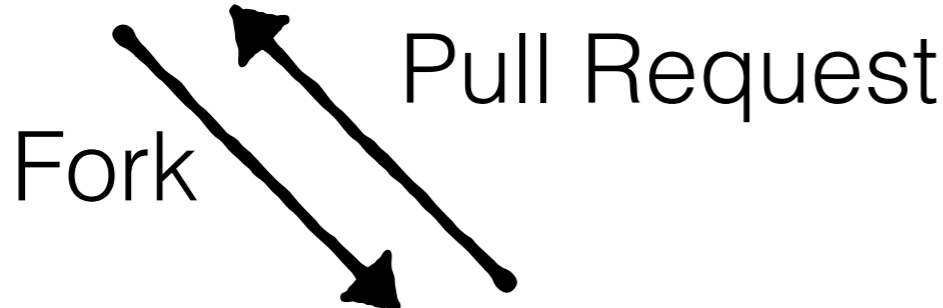
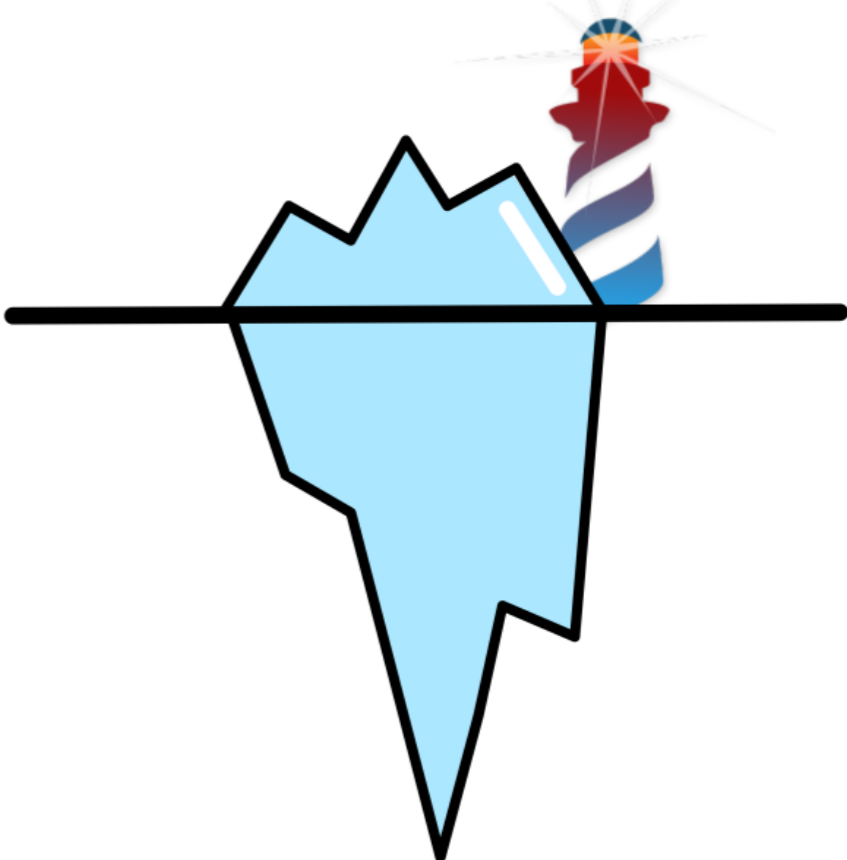
---

- Pharo 7.0 - Nov 2018 ... 63 contributors - 111 Forks.
- Pharo 6.0 - Apr 2017 100 committers (1700 issues closed)
- Pharo 5.0 - Apr 2016 90 committers (1600 issues closed)
- Pharo 4.0 - Apr 2015 70 committers (1271 issues closed...)
- Pharo 3.0 - Apr 2013 (2364 issues closed)
- Pharo 2.0 - Apr 2013 (1727 issues closed)
- Pharo 1.4 - Apr 2012 (860 updates)
- Pharo 1.3 (700 updates)
- Pharo 1.2 - mar 2011 (500 updates)
- Pharo 1.1 - jul 2010 (410 updates)

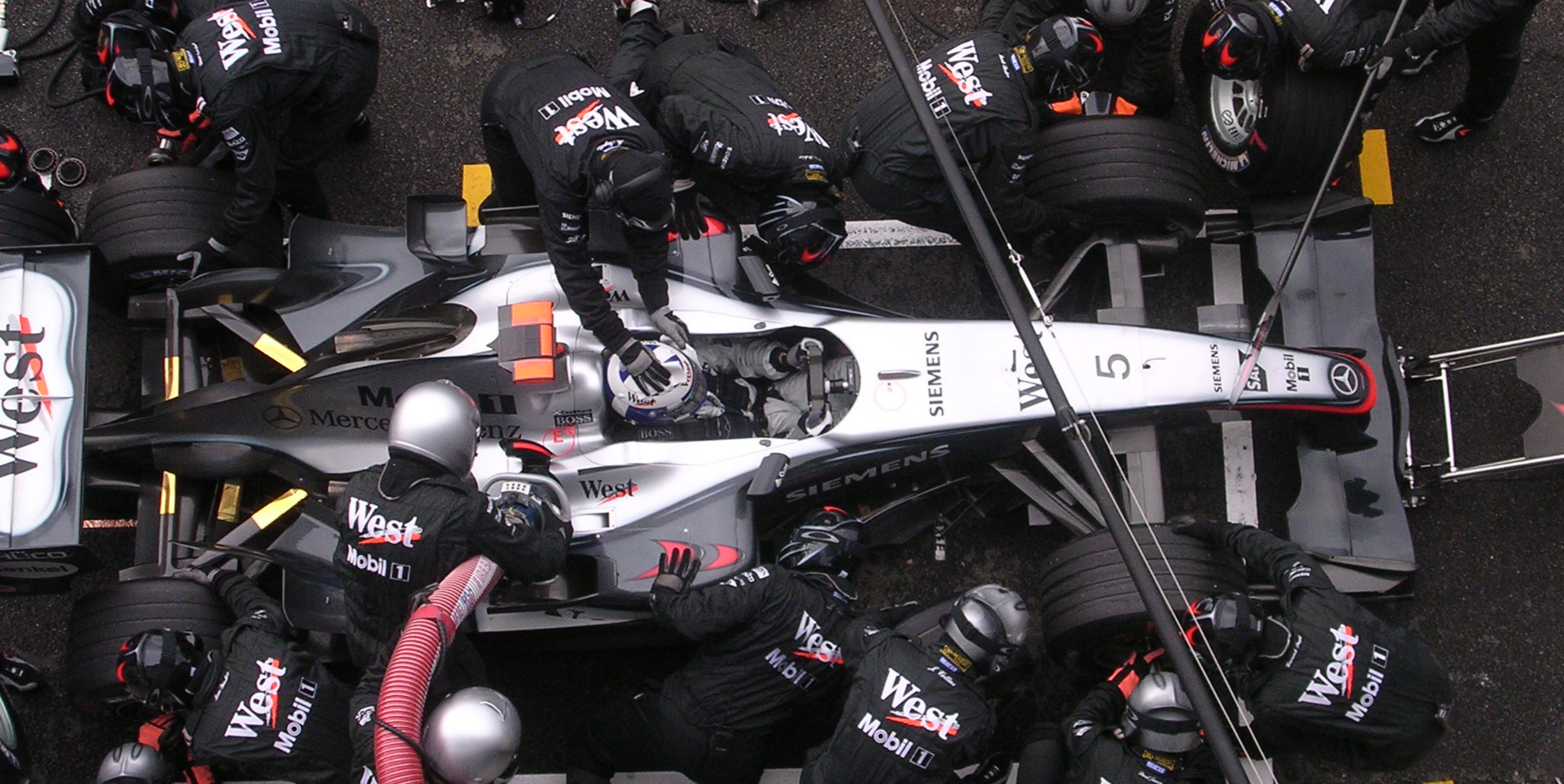




# Starting to get GitHub exposure







**Pharo is our vehicle  
We improve it everyday**



Of course not  
everything  
is perfect :)  
But it feels like





Pharo

is yours



- A powerful, innovative and flexible framework
- Dedicated to build complex Web applications
- Live coding and debugging
- Support reusable Web components
- Secure by default
- Web 2.0 support (Ajax, Reef, ...)
- REST integration



Concentrate on  
your application ...



... no manual  
request parsing



... no XML  
configuration files



# Natural Flow



We don't think in  
pages ...



..., but in stateful  
components





**Valid**



**Secure by default  
no injection**



WACounter   

[R|S]

# Development tools



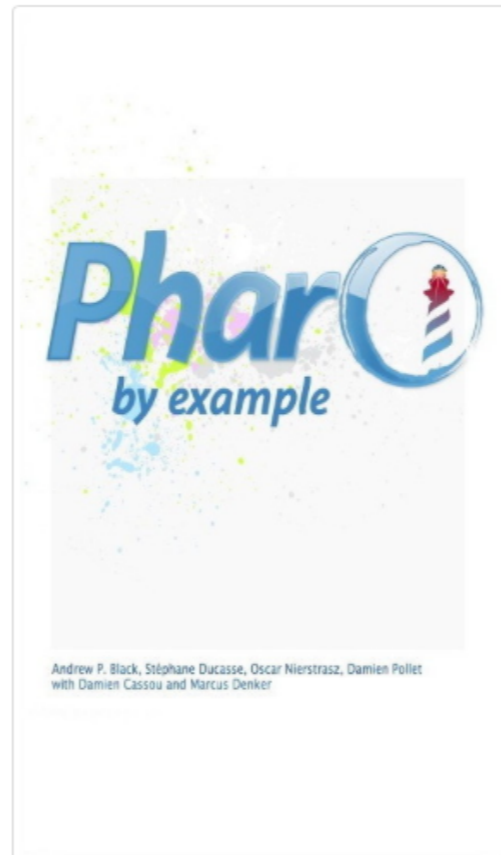
<http://books.pharo.org>

# Pharo Books

Pharo is a clean, innovative, open-source, live-programming environment.

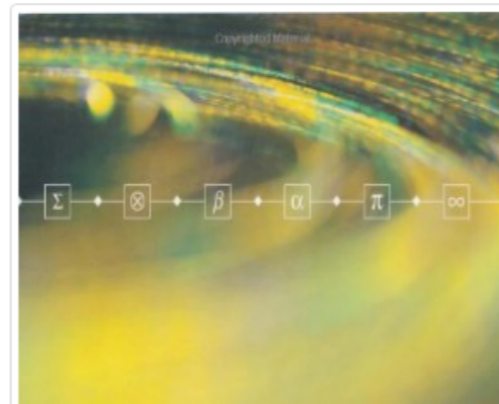
Contribute to the SquareBracketsAssociates community free books  
<https://github.com/SquareBracketAssociates/>

Access the book compilation farm!



*Pharo by Example*, intended for both students and developers, will guide you gently through the Pharo language and environment by means of a series of examples and exercises.

[View details »](#)



TinyBlog: Un Tutorial Web en Pharo



*Deep into Pharo* is the second volume of a series of books covering Pharo. Whereas the first volume is intended for newcomers, this second volume covers deeper topics.

[View details »](#)



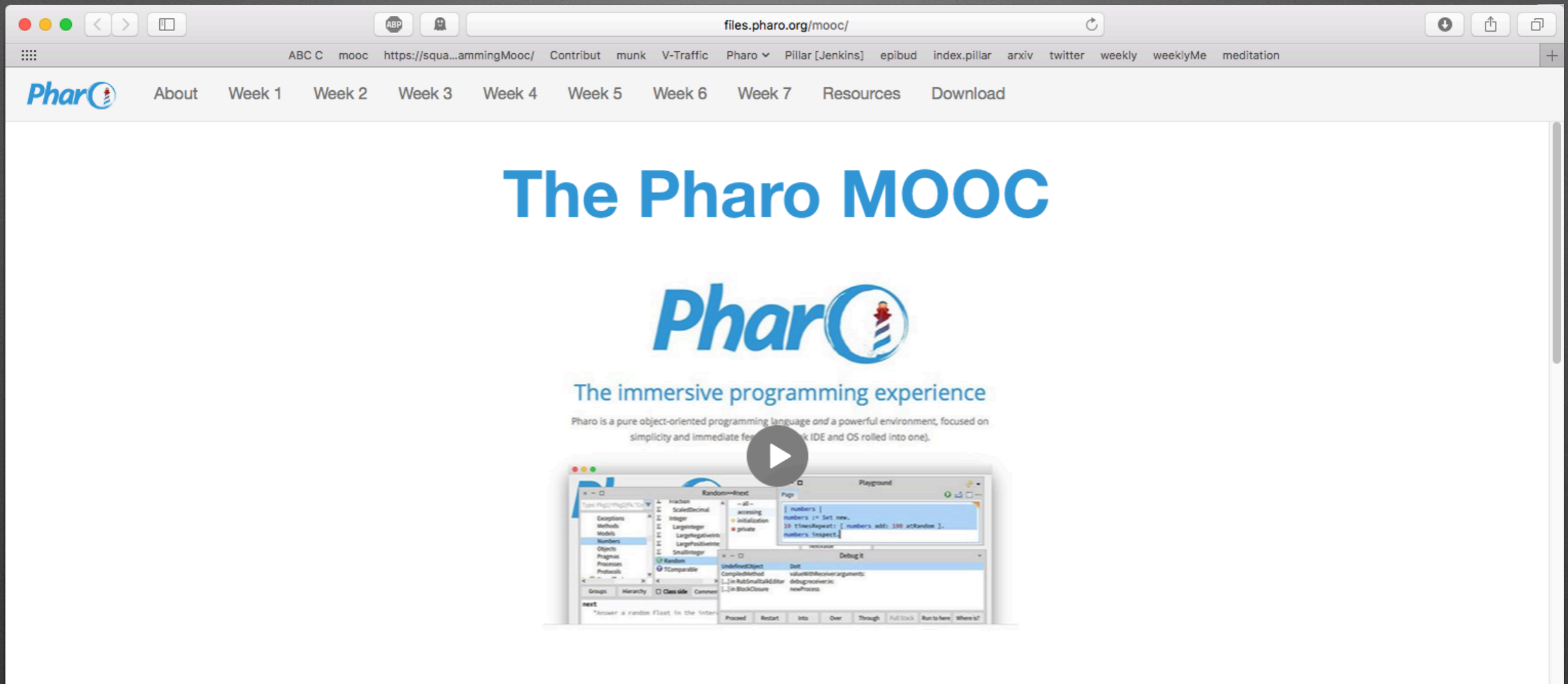
*Enterprise Pharo* is the third volume of the series. This book covers libraries and frameworks for enterprises, and in particular those doing web development.

[View details »](#)





# <http://mooc.pharo.org>



files.pharo.org/mooc/

ABC C mooc https://squa...ammingMooC/ Contribut munk V-Traffic Pharo Pillar [Jenkins] epibud index.pillar arxiv twitter weekly weeklyMe meditation

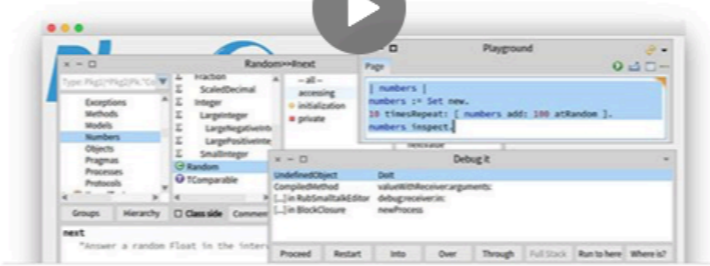
PharO About Week 1 Week 2 Week 3 Week 4 Week 5 Week 6 Week 7 Resources Download

## The Pharo MOOC

**PharO**

The immersive programming experience

Pharo is a pure object-oriented programming language and a powerful environment, focused on simplicity and immediate feedback (the IDE and OS rolled into one).



## About this course

If you are either a beginner or an expert in object-oriented programming, this MOOC will change the way you program with objects: come and learn or rediscover object-oriented programming with Pharo!

Pharo is a pure object-oriented programming language in the tradition of Smalltalk. It offers a unique developing experience in constant interaction with live objects. Pharo is elegant, fun to use and very powerful. It is very easy to learn and enables to understand advanced concept in a natural way. When programming in Pharo, you are immersed in a world of live objects. You have immediate feedback at any moment of your development on objects representing web applications, code itself, graphics, network. [More...](#)

## Obtaining the MOOC

We strongly suggest to follow the MOOC during the next session on [France Université Numérique](#) that will start **October 16th, 2017** because you will have support from the teaching team.

Join the discord channel mooc on the Pharo community (Invitation at <http://discord.gg/Sj2rhxn>)

But, you can also access all ressources of this MOOC offline on:



# http://discord.gg/Sj2rhxn

The screenshot shows a Discord server named "Pharo" with a channel named "#mooc". The interface includes a left sidebar with server navigation, a central chat area with messages, and a right sidebar with a user list. The chat messages are as follows:

- akgrant0710** (Last Saturday at 11:21 AM): dict includesKey: 'a key'  
Take a look through the testing protocol of Dictionary (and superclasses)
- Peter Uhnak** (Last Saturday at 11:26 AM): @Marek Erben especially at::ifPresent:, at::ifAbsentPut: & co.
- Marek Erben** (Last Saturday at 1:14 PM): Yeah, thank you @Peter Uhnak  
One more question - is there some simple way to remove one occurrence of item in Bag collection?
- Peter Uhnak** (Last Saturday at 1:34 PM): remove: should do it
- Marek Erben** (Last Saturday at 1:35 PM): But it removes all the occurrences of item, doesn't it?
- Yani** (Last Saturday at 2:20 PM): as in script of the day >url>
- Peter Uhnak** (Last Saturday at 2:36 PM): @Marek Erben did you try? 😊  
trying is for free 😊 (edited)

The right sidebar shows a list of users, including ADMIN-3 (Esteban Lorenzano, Juraj Kubelka, kilon), CHANNEL-ADMIN-7 (Alexandre Bergel, Clement Bera, PhilBack, Stepharo, Torsten Bergmann ...), and ONLINE-42 (akgrant0710, AlejandroInfante, awarenhem, Benoit Verhaeghe).



# https:// pharoweekly.wordpress.com

ABC C mooc https://squa...amingMooc/ Contribut munk V-Traffic Pharo Pillar [Jenkins] epibud index.pillar arxiv twitter weekly weeklyMe meditation

My Site Reader Write

## WEEKLY NEWS ABOUT PHARO

Everything you wanted to know about <http://www.pharo.org> without being forced to read 1000 mails

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[HITCHHIKER'S GUIDE TO ...](#) [SMALLTALK, TIPS'N TRICKS](#) [COG BLOG](#) [ABOUT](#)

---

**NOV 25 2017** **WHAT ABOUT CONTRIBUTING?**

UNSORTED

EDIT

Here is the testimony of Astares regularly contributing to Pharo 70.

What is not visible in the list are the many enhancements happening also on Calypso, Bloc, Grease and many many others.

Nonetheless the core image still needs love from more people. Remember even the smallest change can make a difference and shape the future. Also "a contribution per day keeps bad systems away".

Even one contribution per week or month.

So jump in – the water is just fine!

Bye  
T. (aka astares)

---

**NOV 22 2017** **EDUARDO 7.0.1 NEXT ENHANCEMENTS 2**



# Pharo by Example

---

- \* <http://books.pharo.org>
  - \* translated to french, merci!
  - \* translated to spanish, gracias!
  - \* translated to japanese, ありがとう!
- \* Currently updated to Pharo 50

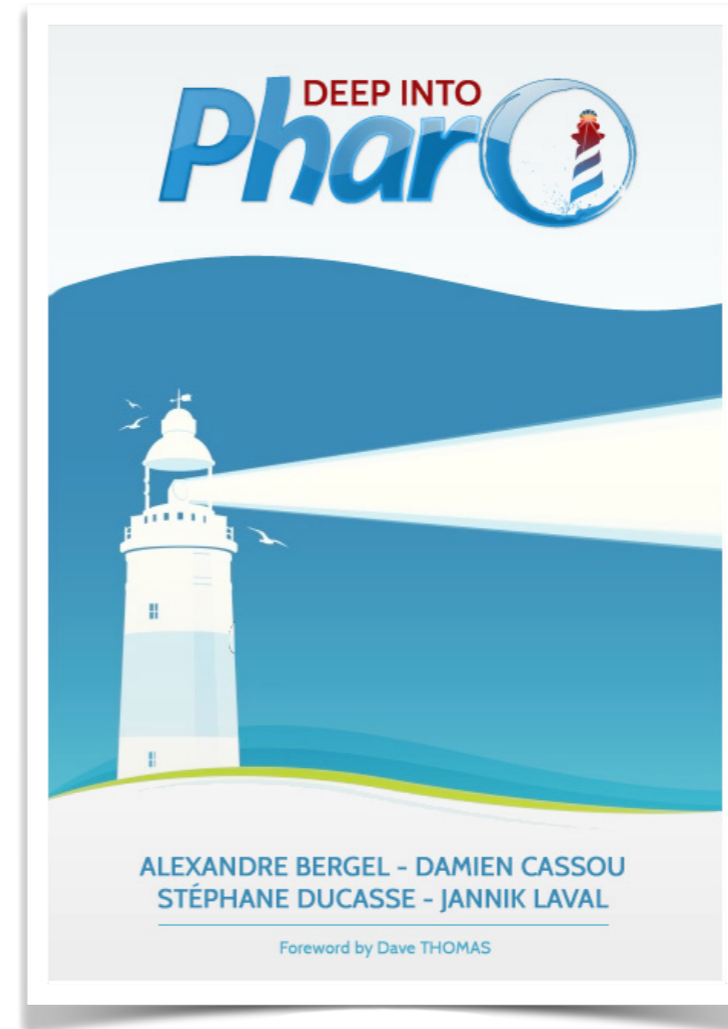




# Deep into Pharo

---

- \* <http://books.pharo.org>
- \* Some advanced topics
  - \* Libraries
  - \* Core language
  - \* Tools





# Entreprise Pharo

---

- \* <http://books.pharo.org>
- \* Web related
  - \* Encodings,
  - \* Mustache
  - \* JSON
  - \* WebSockets
  - \* HTTP/HTTPS

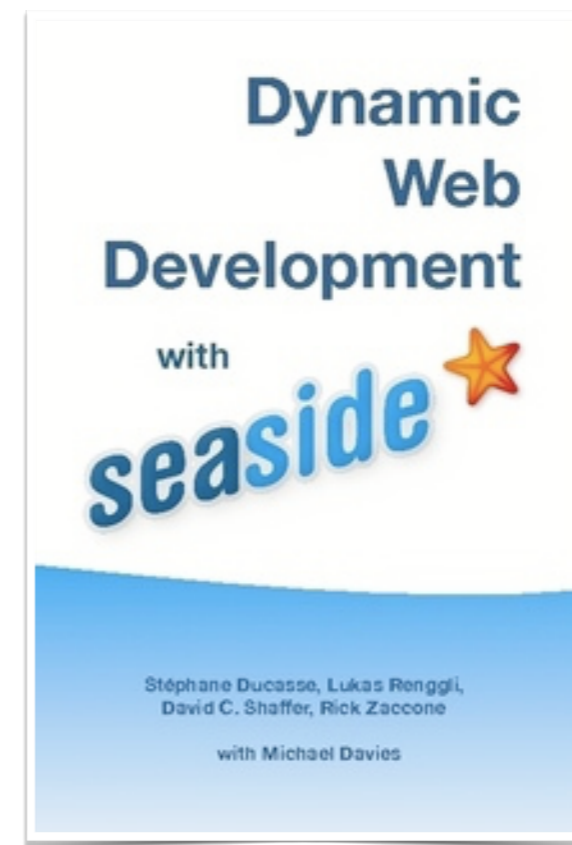




# Dynamic Web with Seaside

---

- \* <http://book.seaside.st>
- \* Full framework explained
- \* DSL + Call:/answer:
- \* Automatic form generation
- \* Deployment

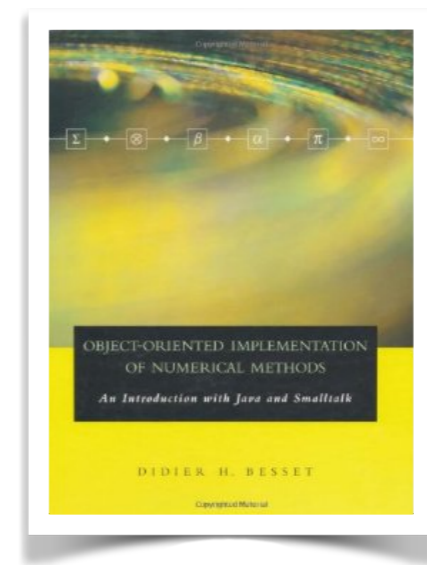




# Numerical Methods

---

- \* <https://github.com/SquareBracketAssociates/NumericalMethods>
- \* Data mining
- \* Clustering
- \* Iterative algorithms
- \* Series
- \* Statistical analysis







Fun, simple  
Pure & elegant  
Productive  
Empowering  
Addictive  
Full access



# Try Pharo now!

<http://pharo.org/download>



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## The immersive programming experience

Pharo is a pure object-oriented programming language *and* a powerful environment, focused on simplicity and immediate feedback (think IDE and OS rolled into one).

