

# Pharo: 2.0 Update

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

# What is it?

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

# Pharo

- ✦ MIT license
- ✦ Mac, Linux, Android, iOS, Windows
- ✦ Great community of active doers
- ✦ Improving steadily
- ✦ Many excellent libraries

# Pharo Success Stories

# cmsbox - Content Management for Websites

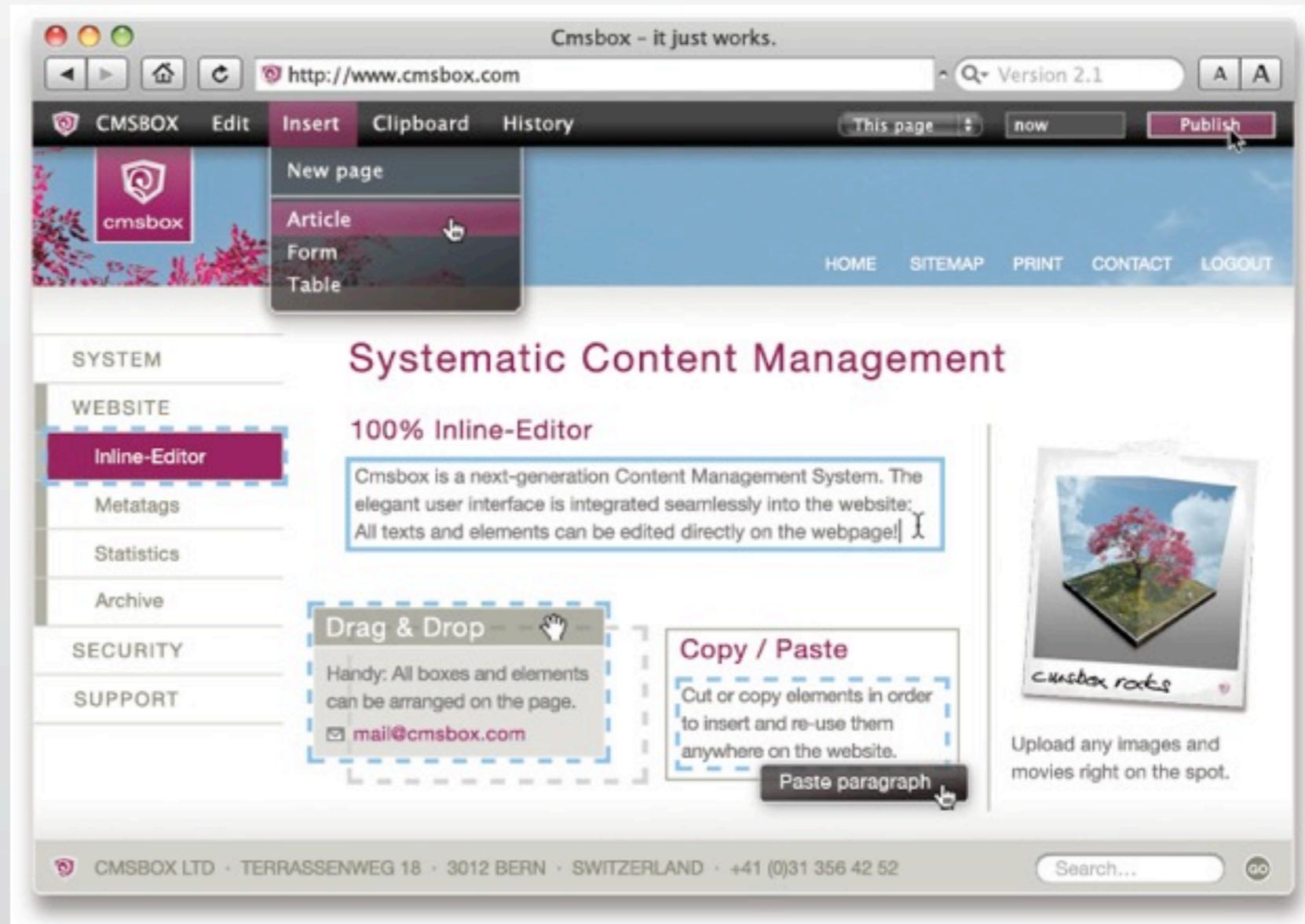
Simple to use, web-based Content Management System for SME websites

Unique User eXperience  
Inline Editor, Drag & Drop, Cut & Paste, Undo/Redo

## Advantages

Flexible designs, individual extensions, outstanding performance and stability

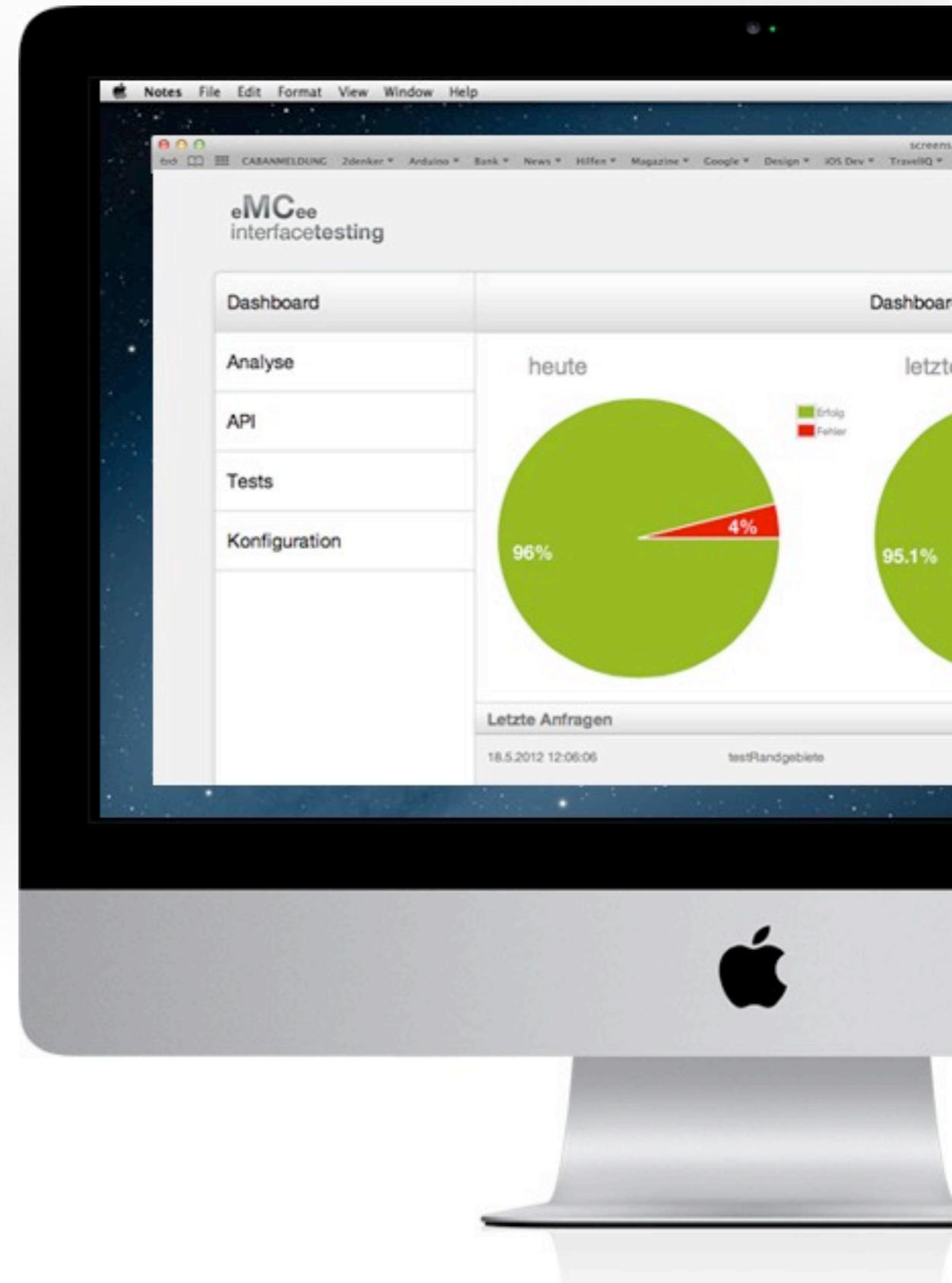
Rock solid application that powers over 500 websites



# Website = Editor

# Continuous API Testing

keep your services under control 24/7

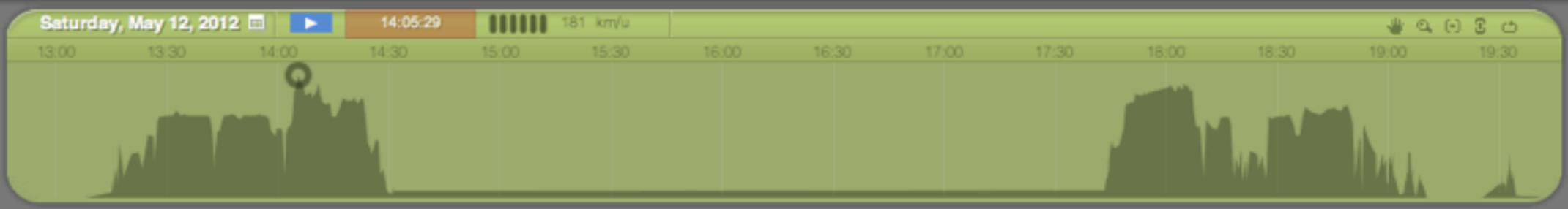
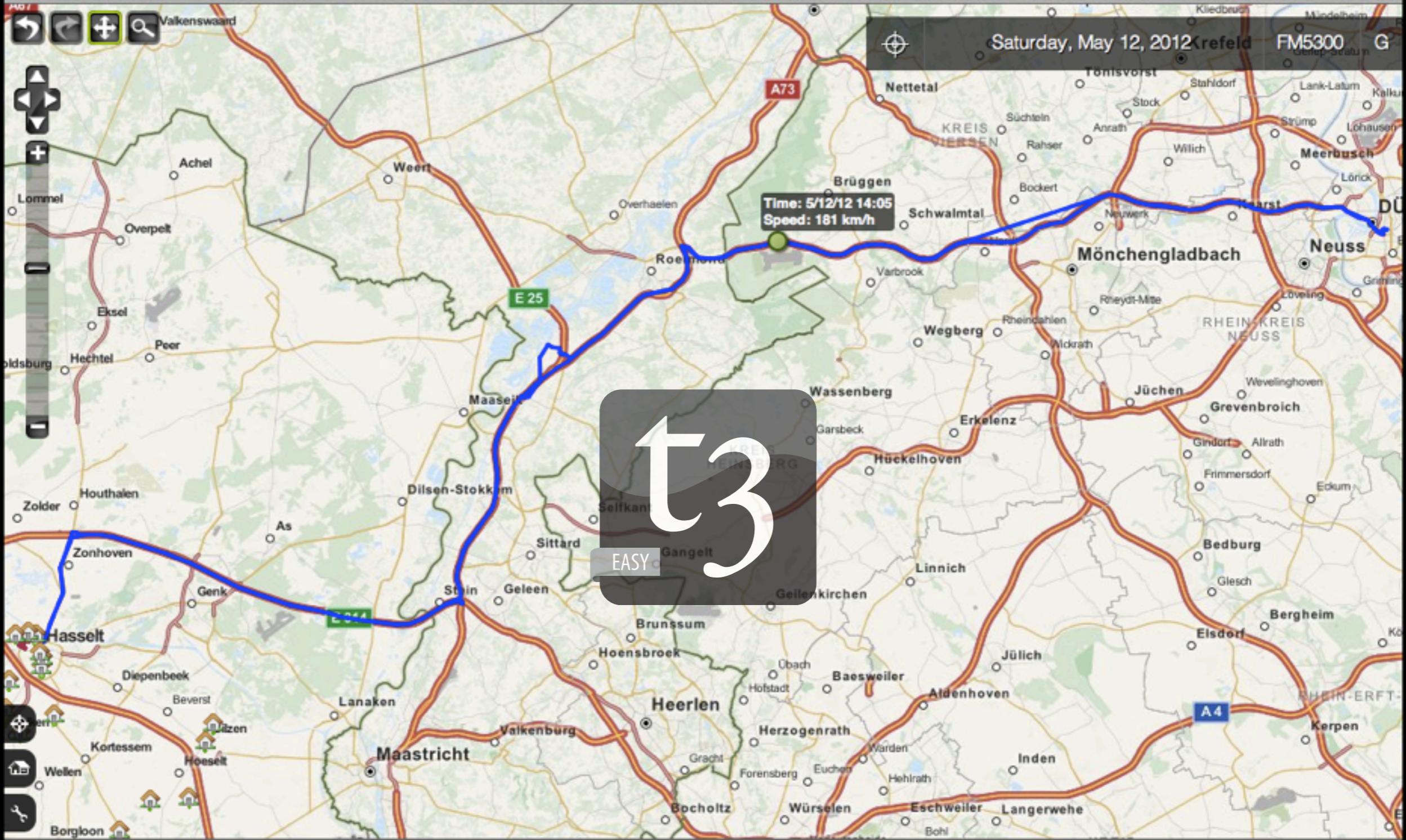


**eMC<sub>ee</sub>** is a monitoring service for backend interfaces

- Web application to define backend interfaces
- Monitors reliability of interface periodically
- Sends warning if status of interface changes
- Provides overview graphs about reliability
- Snapshots requests for debugging purposes

**eMCee** is developed and deployed using pharo

- zinc
- seaside
- jquery
- magritte
- mongotalk
- magritte-mongo
- fuel
- metacello





- Entry Level Track & Trace Product
- Complements T3 Full Product
- One Page Javascript HTML5 / Ajax Client
- REST Back End in Pharo Smalltalk
- Gateways to multiple data providers



- Pharo Smalltalk 1.2 & 1.3
- Zinc HTTP Components
- Load balanced Zinc REST Servers
- Zinc REST Client Gateways
- Seaside, Stdb MySQL



# Since may 2008

- ✦ Pharo 1.0 released October 2009
- ✦ 1.4 is the current stable
- ✦ Pharo 2.0 BETA. Release: end Feb 2013

# 2.0 Statistics

- ✦ Started April 2012
- ✦ 1460 issue tracker entries
  - ✦ since start: 6977
  - ✦ 420 open, all have seen activity in 2012
    - ✦ 60 tagged for 2.0
- ✦ 506 incremental updates

# What has been done?

- ✦ Started to rewrite tools
  - ✦ Nautilus: new code browser
- ✦ Lots of new libraries
  - ✦ Fuel: Fast Serialization
  - ✦ FileSystem
  - ✦ Zodiac: SSL support
- ✦ Core: 1.36 mb so far (minimal: 89 KB) --> 3.0

# 2.0: Tools

- ✦ New Code Browser: Nautilus
- ✦ Refactoring Integrated in main release
- ✦ Critic Browser
- ✦ Started to rewrite Tools (Spec)
- ✦ Andreas Profiler

# 2.0: Cleanups

- ✦ Lots of dead code removed
  - ✦ old Smalltalk MVC related code
  - ✦ Cleanup in Fonts and Graphics
- ✦ Cleanups guided by Code Critics
- ✦ ....

# 2.0: New Libraries

- ✦ FileSystem
- ✦ Fuel
- ✦ Zinc / Zodiac
- ✦ New AST model (from RB)
- ✦ ASMJiT and NativeBoost FFI
- ✦ Libs for Jenkins and Google Issue Tracker

# 2.0: Infrastructure

- ✦ SmalltalkHub: <http://smalltalkhub.com>
- ✦ Continuous Integration: <http://ci.inria.fr>
- ✦ Association
- ✦ Consortium
- ✦ Pharo Conf (Planing for Spring 2013)

# Pharo Consortium

- ✦ How to sustain Pharo?
- ✦ How do we make sure that infrastructure continues to improve?
- ✦ How to structure the community?
- ✦ Should we always rely on people free time?

# Consortium Members

- ✦ Managed by INRIA for now
- ✦ Who: companies, institutions, user groups
- ✦ Privileged access to the **core** development team
- ✦ Influence **priorities** of the next development
- ✦ **Engineering support time**
- ✦ Job posts
- ✦ Training/Conferences special prices

# Fees

- ✦ Gold 4000
  - ✦ 4 days of engineering time + multiple job descriptions for job dashboard + diamond sponsor.
- ✦ Silver 2000
  - ✦ two days of engineering time + one job description + diamond sponsor.
- ✦ Bronze 1000
  - ✦ one day of engineering time + diamond sponsor.

# Pharo User Association

- ✦ Managed by the Pharo Association
- ✦ Individuals
  - ✦ Premium (99 Euros)
  - ✦ Normal (40 Euros)
- ✦ In the mid-term it will merge with the consortium

# 3.0: Preview

- ✦ 3.0 will start end of February
- ✦ 2.0 will see two bugfix releases
  - ✦ Summer: 2.1
  - ✦ Winter: 2.2
- ✦ 3.0: Continue to **radically** improve!

# 3.0: New Compiler

- ✦ Currently using original Smalltalk-80 Compiler
- ✦ Old-style code base pre-dating OO
  - ✦ Scanner is superclass of Parser...
  - ✦ Impossible to understand, hard to modify
- ✦ Opal:
  - ✦ RB AST, Visitors, IR for bytecode

# 3.0: New ClassBuilder

- ✦ ClassBuilder creates new classes and reshapes existing classes
- ✦ Very complex code, no tests
- ✦ Hard to understand
- ✦ Impossible to change

# 3.0: Slots

- ✦ Instance variables are limited
- ✦ Slots
  - ✦ First class instance variables
  - ✦ Active, Property, Boolean, .....

Toon Verwaest, Camillo Bruni, Mircea Lungu, and Oscar Nierstrasz.

**Flexible object layouts: enabling lightweight language extensions by intercepting slot access.**

In Proceedings OOPSLA 2011

# 3.0: New Libraries

- ✦ Ghost Proxies. Proxy **everything**
- ✦ **XStreams**. Current Streams are a mess
- ✦ **Athens**: Modern graphics canvas

# 2.0: ....

- ✦ No .sources/.changes: one file
- ✦ Bootstrap from repository
- ✦ And much more!
- ✦ **Maybe *\*you\** have something to contribute?**

# 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, Bruxelles, London

September 2010 Barcelona, Lille

January 2011 Lille

July 2011 Lille

October 2011 Bruxelles

February 2012 Bern

April 2012 Lille

September 2012 Ghent

November 2012 Lille, Puerto

Madryn

Jan 2013: Santiago de Chile

Feb 2013: Lille 8th (next week)



