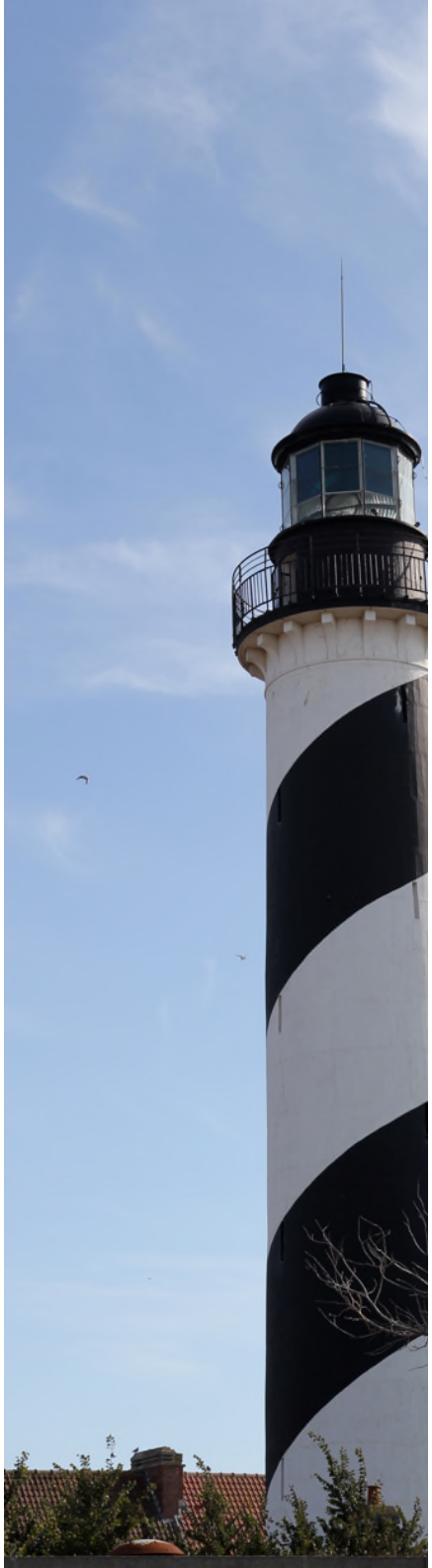
Pharo 12

http://sducasseatwork@mailo.com

http://www.pharo.org



Outline

- Pharo 12 remarkable achievements :)
- Take the time to answer your questions


Pharo
Browse
Debug
Sources
System
Library
Windows
Help
Debug Point Browser
(De)activate all
Search by name
Type
Target
Name
Scope
Breakpoint
TranscriptPresenter>>#defaultLa
Breakpoin
class Tra
Breakpoint
FLDebuggerStackSerializer>>#m
Breakpoin
class FLD
enabled: (de)activates debug point
Condition: Hit when the condition evaluates to true
Test Environment Only: Hits only when executing tests
Chain: Each debug point is hit once in sequential order
Counter: Tracks how many times the debug point was re
Once: Deactivates debug point after one hit
Script: Executes a script at each hit
Inspector on Form(505x729x32)
Form (Form(505x729x32))
Form
Raw
Breakpoints
Meta
Welcome
Welcome to Pharo 12
Welcome to Pharo, an immersive live programming environment.
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).
For more information, please visit here: http://pharo.org
Pharo
by Exan
Originally written by A.P. Black,
S. Ducasse, O. Nierstrasz, D. Pollet
with D. Cassa
M. Denker
Stack
[Graphics-Display Objects] Form>>scaledT
ImageMorph (UndefinedObject)>>DoIt
[Kernel-CodeModel] CompiledMethod>>va
[Spec2-Code-Commands] SpCodeDebugTr
[Kernel-CodeModel] FullBlockClosure (Blo
Proceed
Into
Over
Through
Runto
scaledToSize: newExtent
| scale |
newExtent = self exten
scale := newExtent x /
^self magnifyBy: scale
self scaledToSize: self extent
a Form (Form(979x198x32))
Type
Variable
Value
implicit
self
Form(979x198x32)
arg
newExtent
(979/2)@99
temp. var
scale
nil
inst. var
bits
a Bitmap [193842 items]
inst. var
width
979
inst. var
height
198
inst. var
depth
32
inst. var
offset
nil
implicit
stackTop
Form(979x198x32)
implicit
thisContext
Form>>scaledToSize:
Form
Raw
Breakpoints
Meta
Pharo
with
Style
S. Ducasse
Agile Artificial Intelligence in Pharo
Agile Visualization with Pharo
Testing
Pharo
self asMorph openInWorld
Debug Point Browser
Inspector on Form(505x...
Inspector on an ImageM...
Form>>scaledToSize:
Welcome

Fast-paced dedication

- *Just* in the Pharo repository
- 1895 Pull Requests integrated closed 865 issues
- Around 70 contributors
- More tests

Fluid class syntax is now default

```
TestCase << #AIGraphReducerTest
    slots: { #graphReducer };
    tag: 'Tests';
    package: 'AI-Algorithms-Graph-Tests'
```

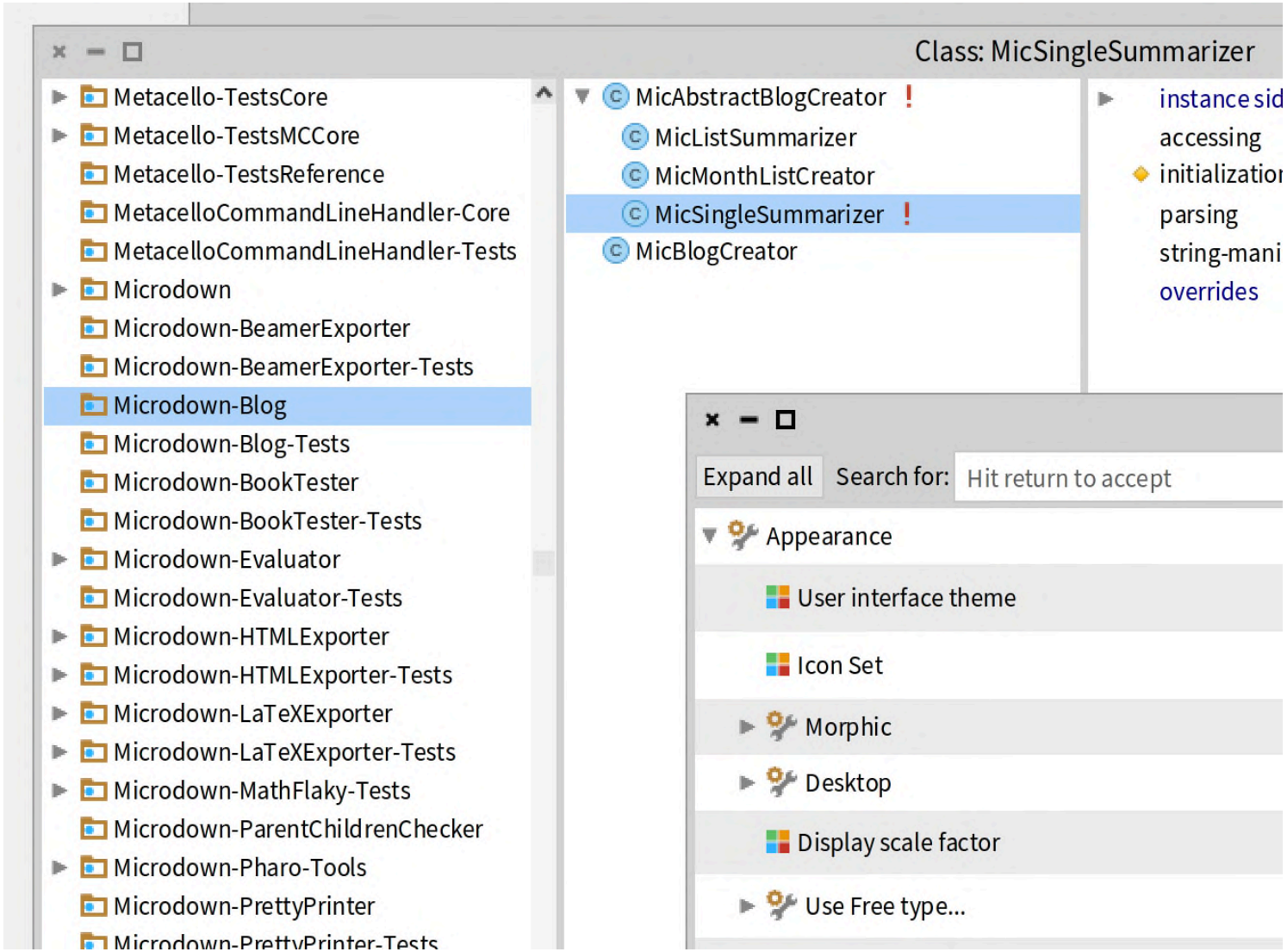
```
TestCase << #AIGraphReducerTest
    layout: FixedLayout;
    traits: {};
    slots: { #graphReducer };
    sharedVariables: {};
    sharedPools: {};
    tag: 'Tests';
    package: 'AI-Algorithms-Graph-Tests'
```

```
Trait << #TSetArithmetic
    traits: {};
    slots: {};
    tag: 'Traits';
    package: 'Collections-Abstract-Tests'
```

Nice looking fonts

On retina

Tx a lot Kris



MASSIVE cleanup

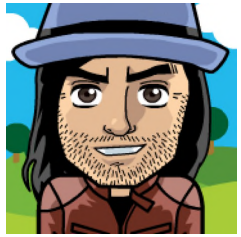
- Class organization is gone
- Use class builder instead of string manipulations :)
- Metacello better architecture

Class organization is gone

- One bullet point in a task list
  - But six months of hard work…
- Fast browsing via fully optimized package tags
- Optimized memory usage for method protocols

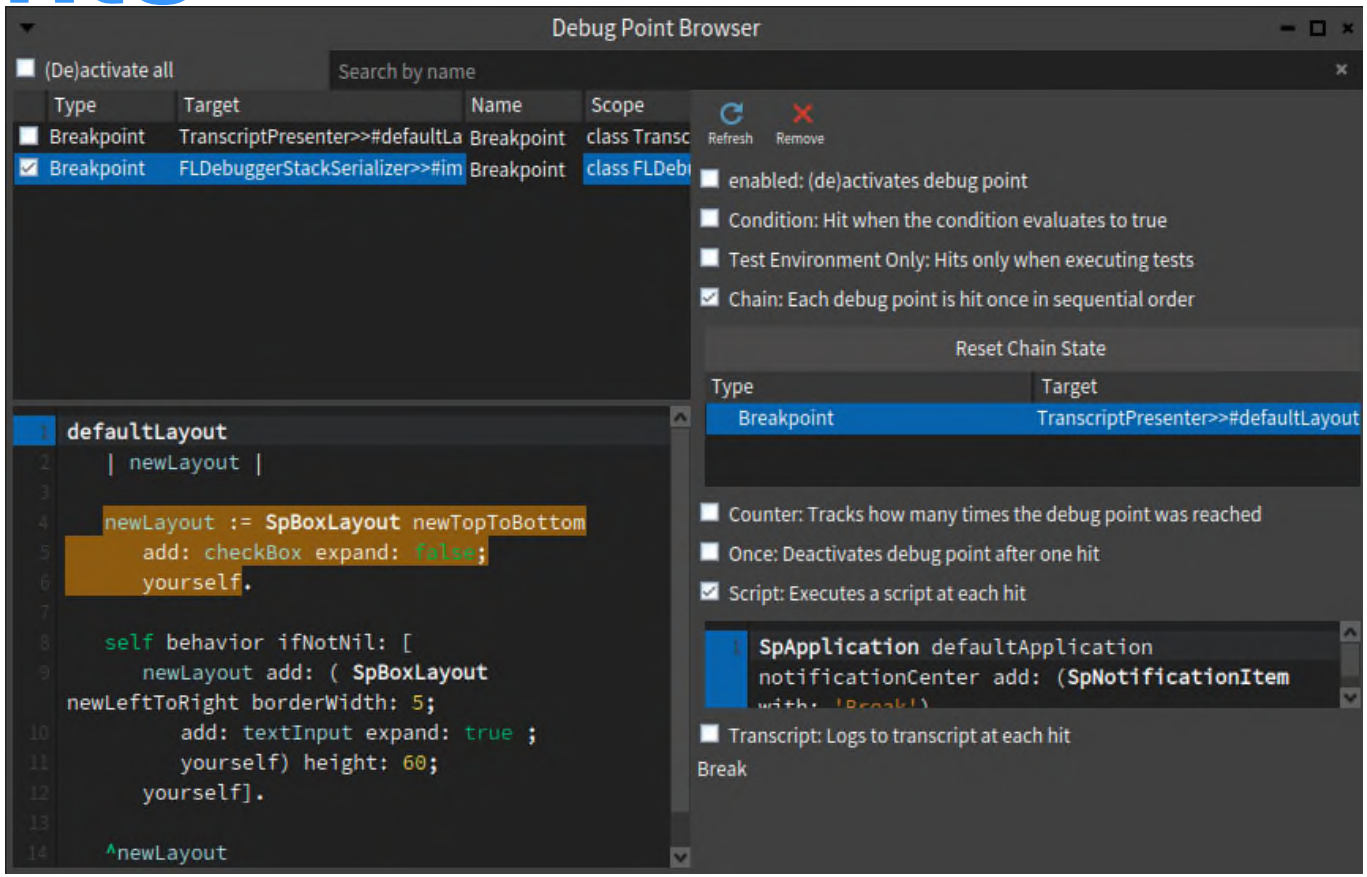
Leaner Metacello

- No more exception resume :)
- No more walking the stack and jumping there
- Nicer architecture
- Better domain
- Ready for new experiences e.g., package validation aka strict mode loading

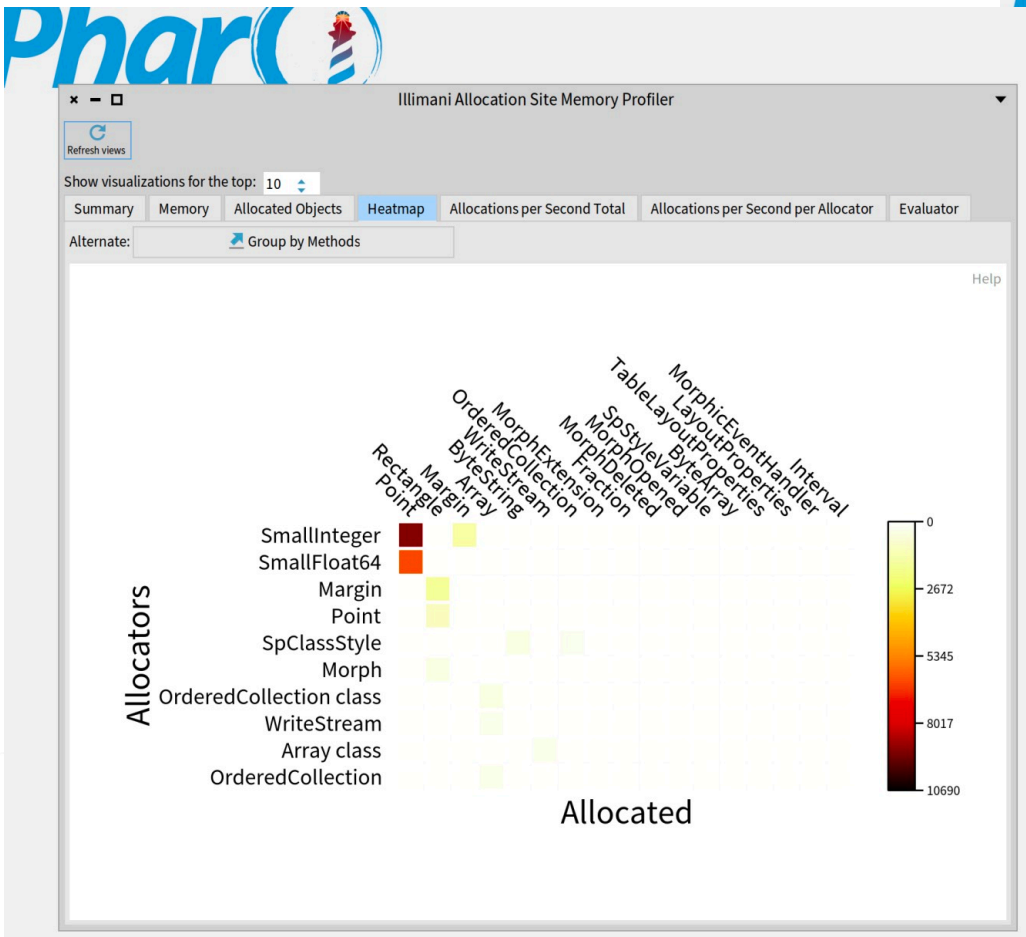


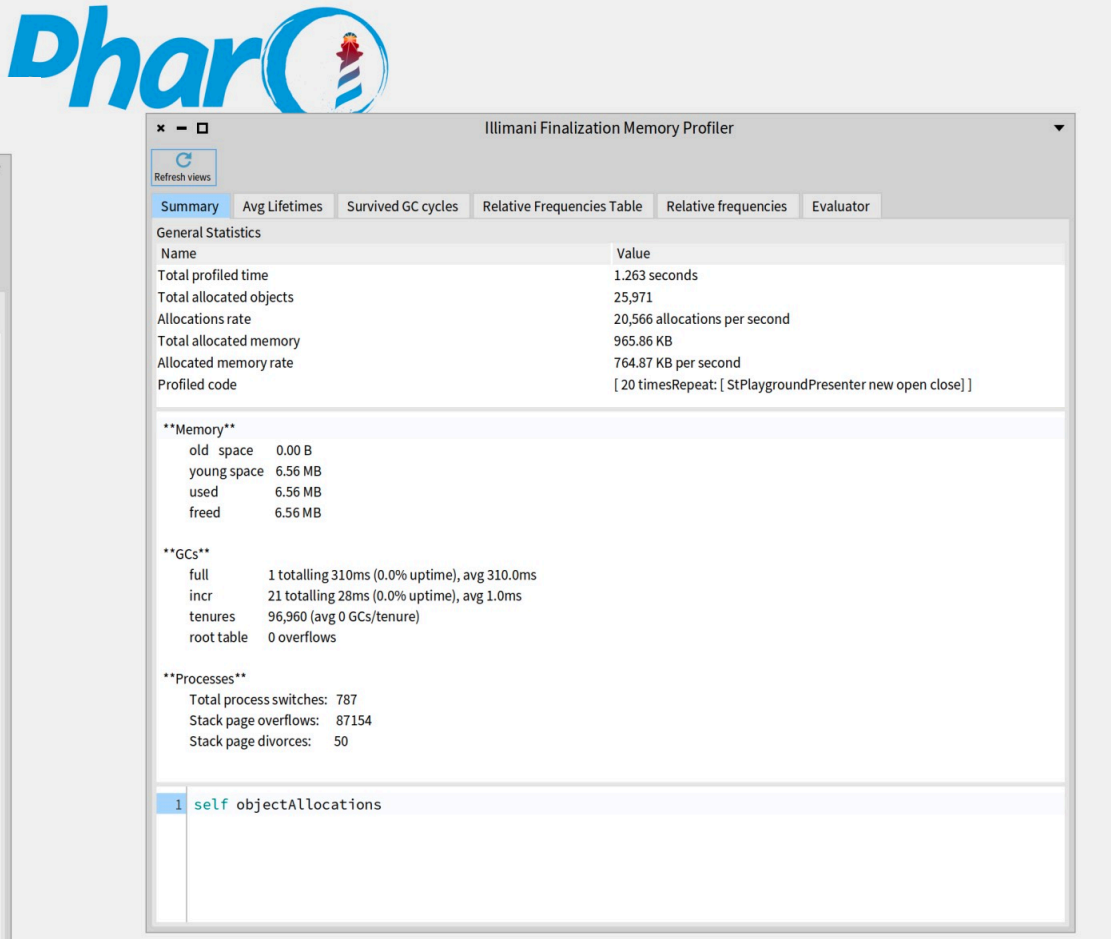
Debug points

Watch Steven's talk



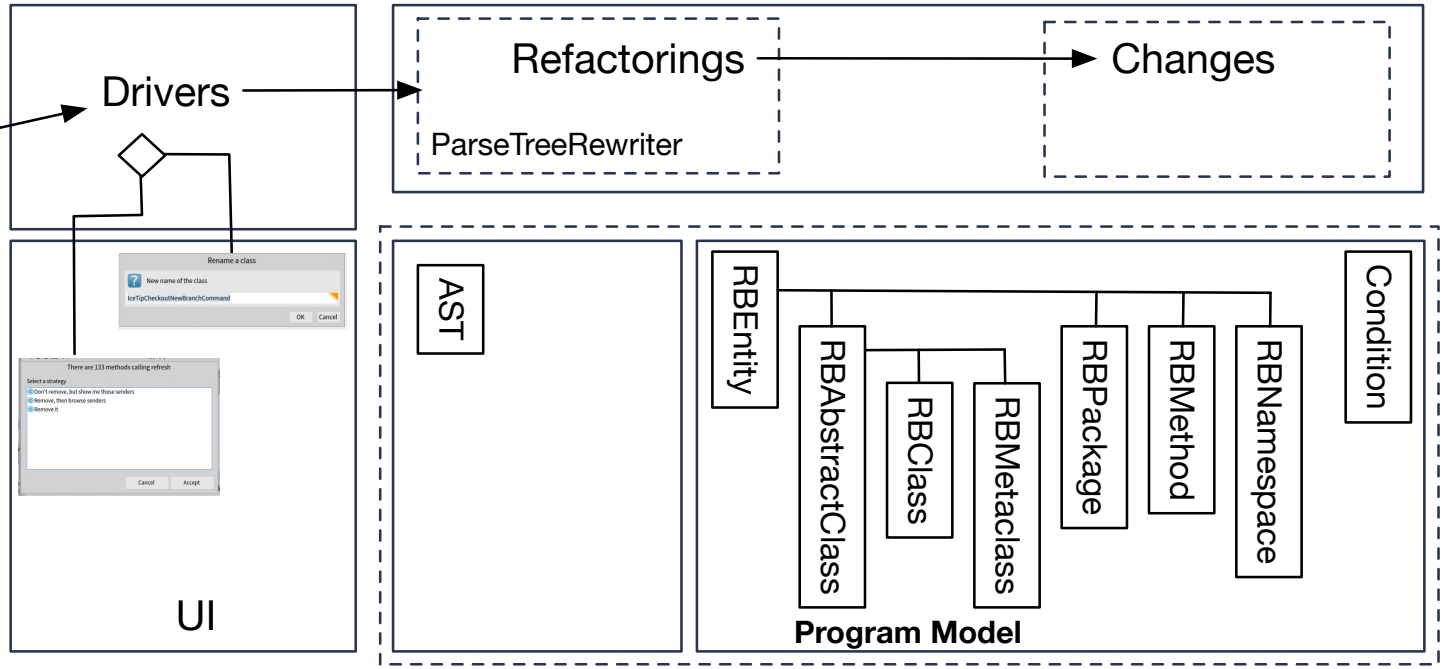
Illimani: Scalable Memory profiler





Refactorings

- Getting advantage of the new architecture
- Migrating refactorings
- Improving UI

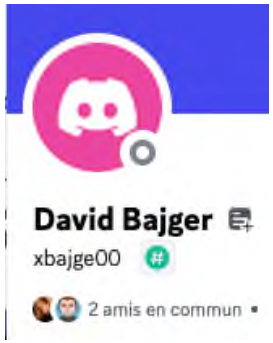


Various

- Code loading speed improvement
- Opal compiler simplifications and improvements
- More robust and strict mode for FFI

Cmd-Line Launcher

- All the launcher and more at your fingers :)
- Watch the talk



VM side

- Faster ByteArray comparison
- EPoll for Idle VM
- Unlimited sockets
- New segmented image format
- Ephemeron performance improvement
- Fixes, cleanup, fixes, stability, …
- Keeping up with external libs

Another pass on packaging

- We can build
  - Mac app
  - Windown app

- We want to automate it
- App builder for everyone

VM side: Preparing the future

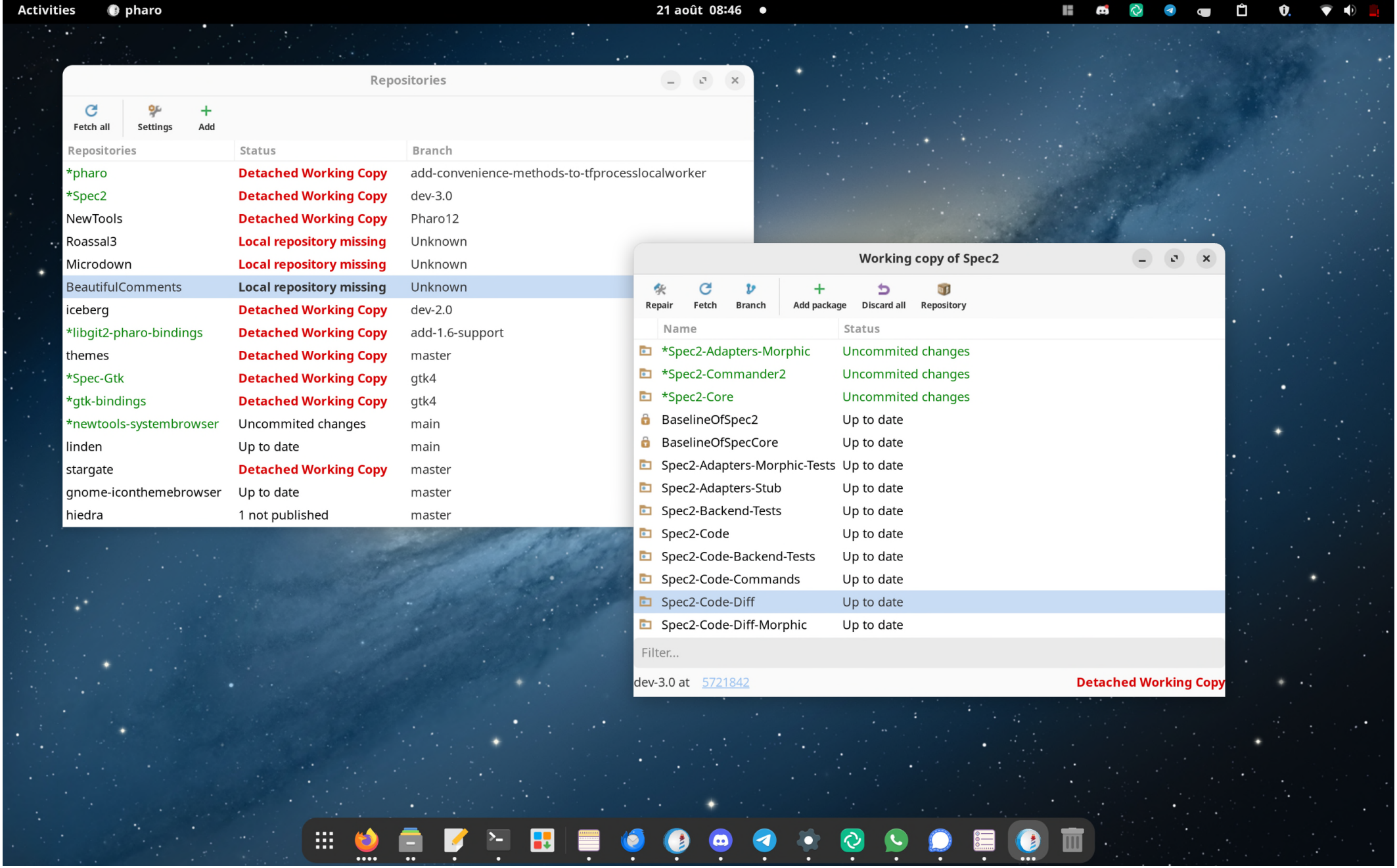
- Profile JITed code
- Druid AoT is now there
- Controlling stack growing
  - how to detect an endless loop
  - alternatives to check each message send

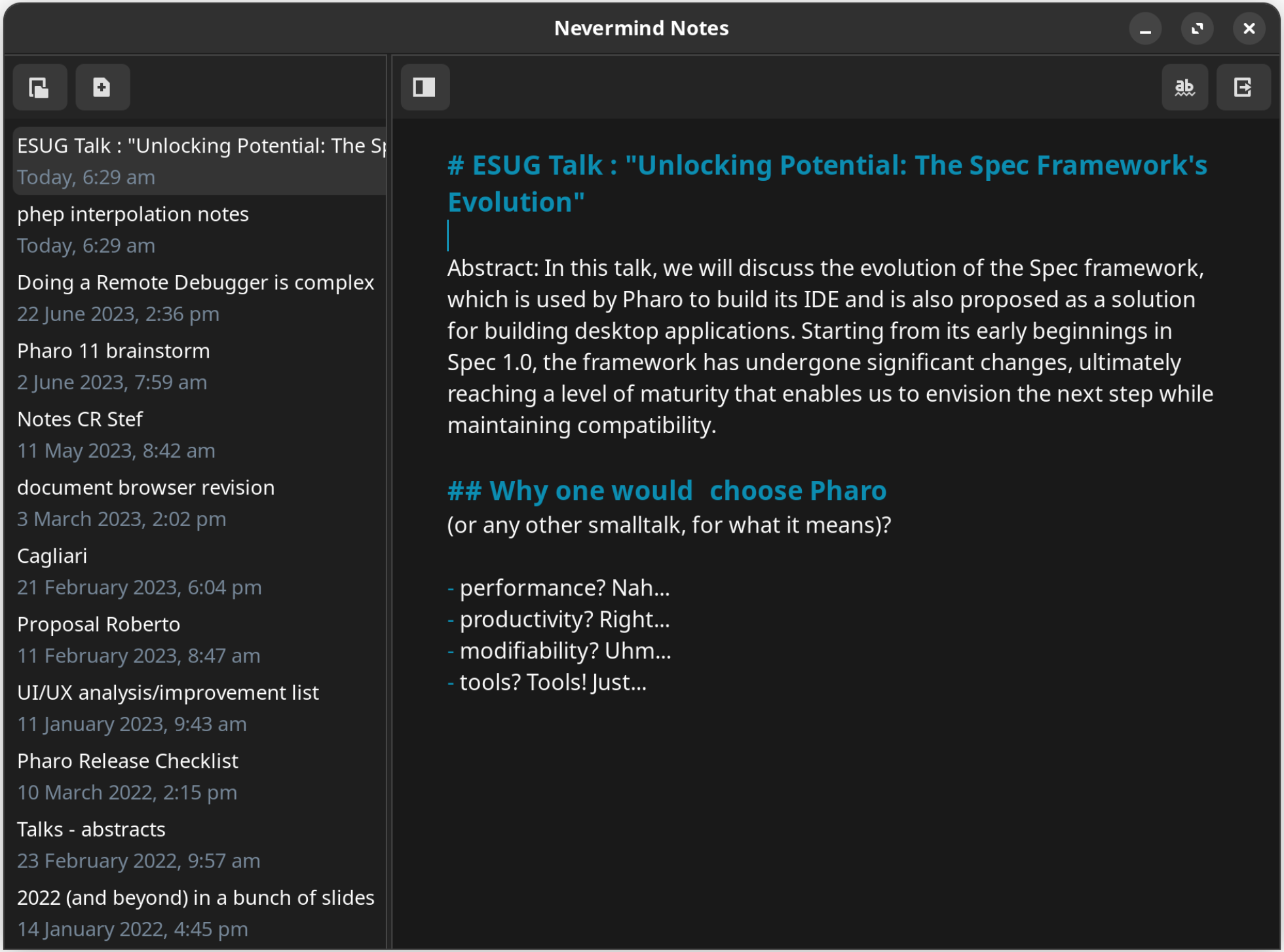
Looking for an engineer

- Two years and more
- Talk to our Guishe guillermo.polito@inria.fr

Spec 2.0: a Cornerstone!

- Book nearly sent to the printer!
- New widgets
- New layouts
- GTK40 (watch Esteban talk)
- Multiple back ends (Morphic, GTK40, *Toplo*)
  - Watch (Toplo talk)

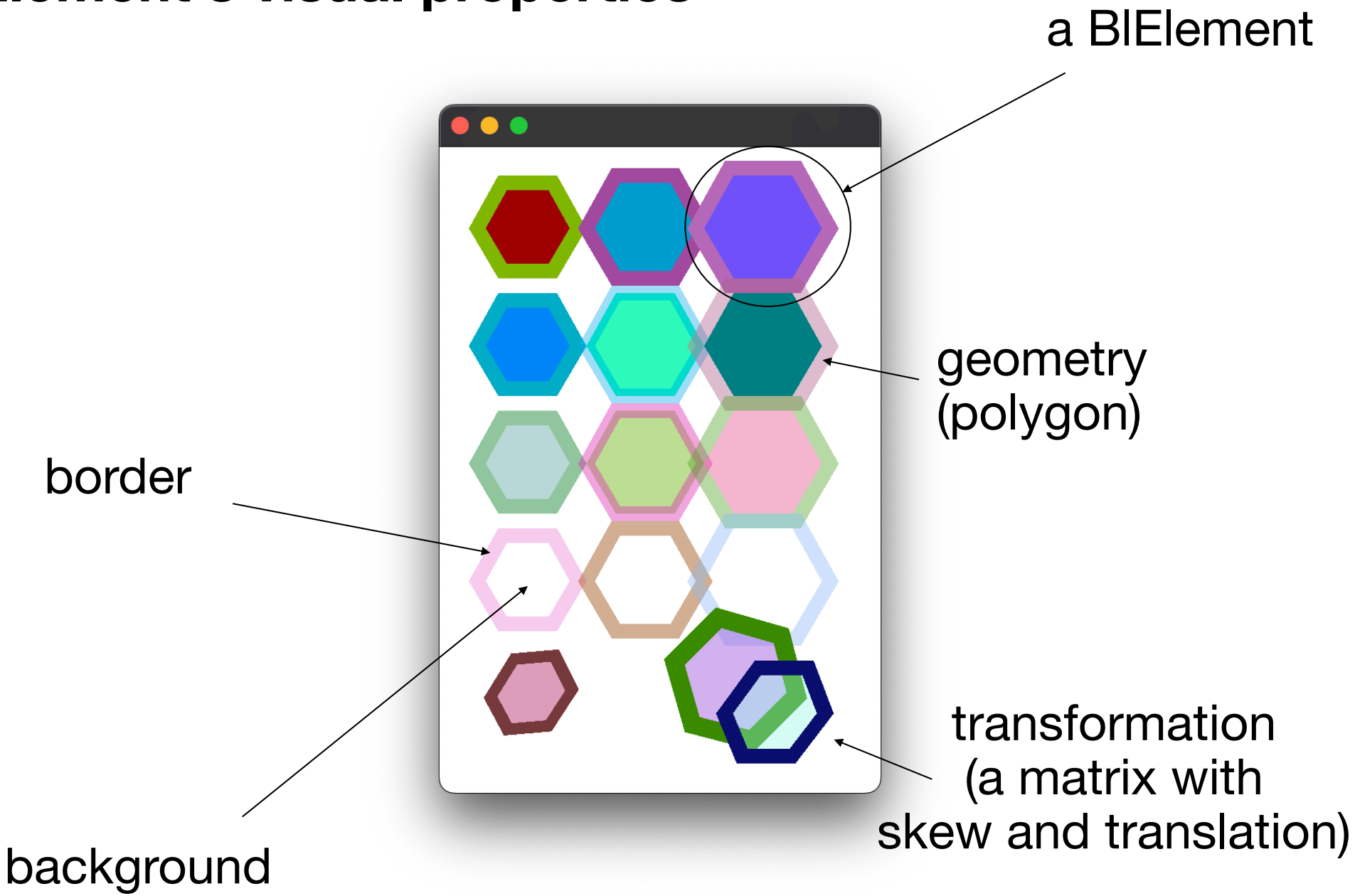

Activities
pharo
21 août 08:46
Repositories
Fetch all
Settings
Add
Repositories
Status
Branch
*pharo
Detached Working Copy
add-convenience-methods-to-tfprocesslocalworker
*Spec2
Detached Working Copy
dev-3.0
NewTools
Detached Working Copy
Pharo12
Roassal3
Local repository missing
Unknown
Microdown
Local repository missing
Unknown
BeautifulComments
Local repository missing
Unknown
iceberg
Detached Working Copy
dev-2.0
*libgit2-pharo-bindings
Detached Working Copy
add-1.6-support
themes
Detached Working Copy
master
*Spec-Gtk
Detached Working Copy
gtk4
*gtk-bindings
Detached Working Copy
gtk4
*newtools-systembrowser
Uncommited changes
main
linden
Up to date
main
stargate
Detached Working Copy
master
gnome-iconthemebrowser
Up to date
master
hiedra
1 not published
master
Working copy of Spec2
Repair
Fetch
Branch
Add package
Discard all
Repository
Name
Status
*Spec2-Adapters-Morphic
Uncommited changes
*Spec2-Commander2
Uncommited changes
*Spec2-Core
Uncommited changes
BaselineOfSpec2
Up to date
BaselineOfSpecCore
Up to date
Spec2-Adapters-Morphic-Tests
Up to date
Spec2-Adapters-Stub
Up to date
Spec2-Backend-Tests
Up to date
Spec2-Code
Up to date
Spec2-Code-Backend-Tests
Up to date
Spec2-Code-Commands
Up to date
Spec2-Code-Diff
Up to date
Spec2-Code-Diff-Morphic
Up to date
Filter...
dev-3.0 at 5721842
Detached Working Copy


Nevermind Notes
ESUG Talk : "Unlocking Potential: The Sp
Today, 6:29 am
phep interpolation notes
Today, 6:29 am
Doing a Remote Debugger is complex
22 June 2023, 2:36 pm
Pharo 11 brainstorm
2 June 2023, 7:59 am
Notes CR Stef
11 May 2023, 8:42 am
document browser revision
3 March 2023, 2:02 pm
Cagliari
21 February 2023, 6:04 pm
Proposal Roberto
11 February 2023, 8:47 am
UI/UX analysis/improvement list
11 January 2023, 9:43 am
Pharo Release Checklist
10 March 2022, 2:15 pm
Talks - abstracts
23 February 2022, 9:57 am
2022 (and beyond) in a bunch of slides
14 January 2022, 4:45 pm
ESUG Talk : "Unlocking Potential: The Spec Framework's Evolution"
Abstract: In this talk, we will discuss the evolution of the Spec framework, which is used by Pharo to build its IDE and is also proposed as a solution for building desktop applications. Starting from its early beginnings in Spec 1.0, the framework has undergone significant changes, ultimately reaching a level of maturity that enables us to envision the next step while maintaining compatibility.
Why one would choose Pharo
(or any other smalltalk, for what it means)?
- performance? Nah...
- productivity? Right...
- modifiability? Uhm...
- tools? Tools! Just...

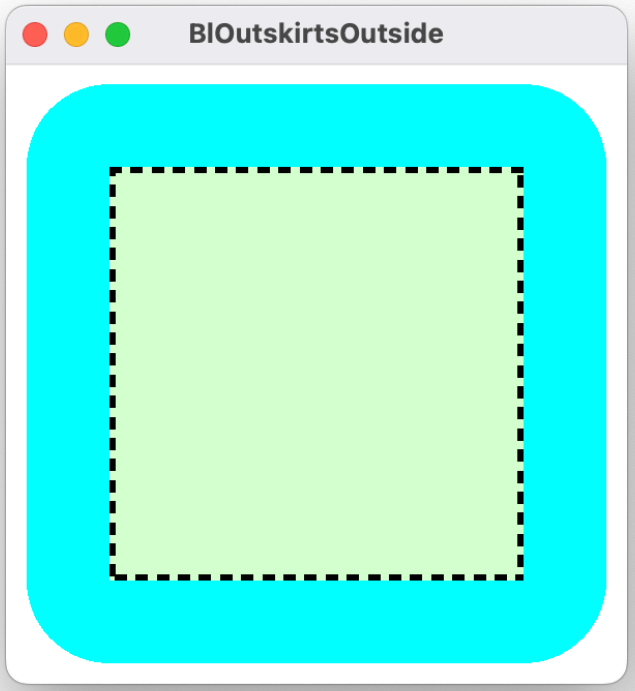
Bloc: New Generation

- Full new implementation of graphics framework
- Basis for Toplo: a new widget library based on http://ant.design design

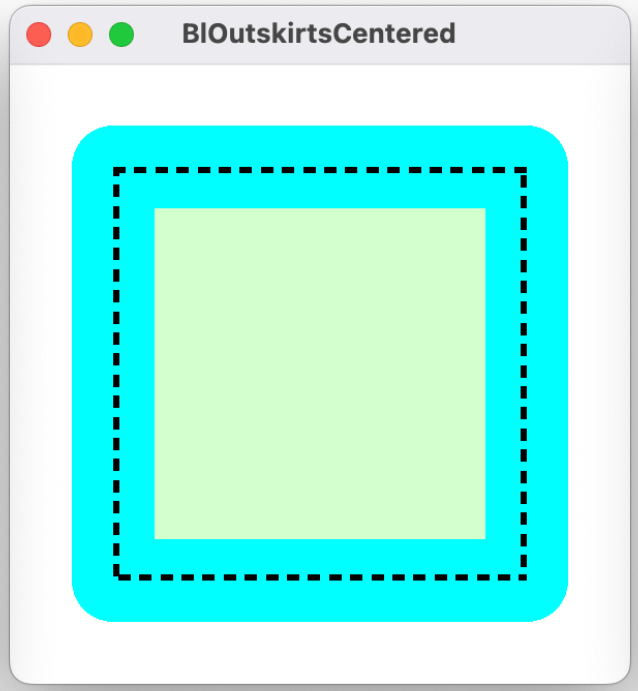
Element's visual properties



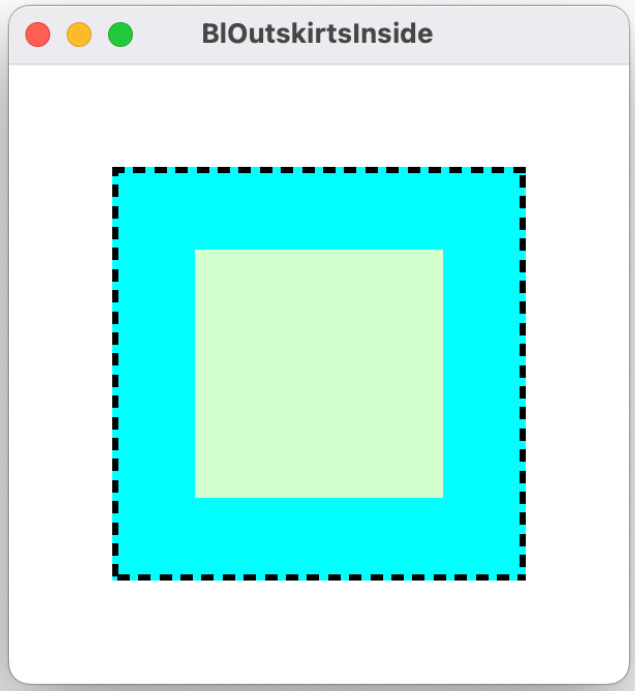
Element's outskirts




```
aBlElement
    outskirts:
        BlOutskirts outside
```

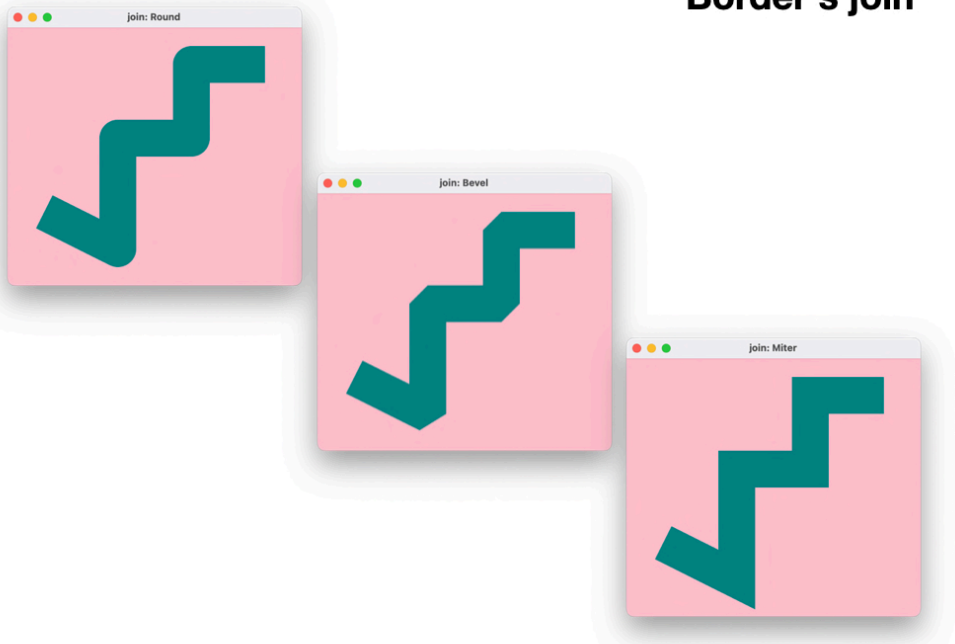



```
aBlElement
    outskirts:
        BlOutskirts centered
```

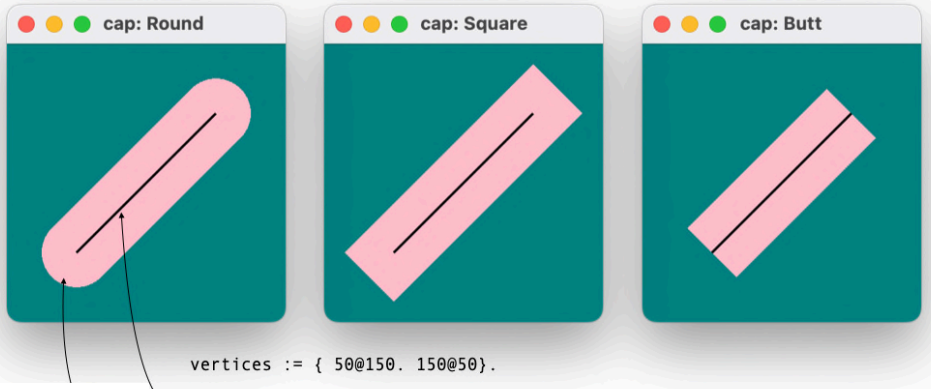



```
aBlElement
    outskirts:
        BlOutskirts inside
```

Border's join



Border's cap

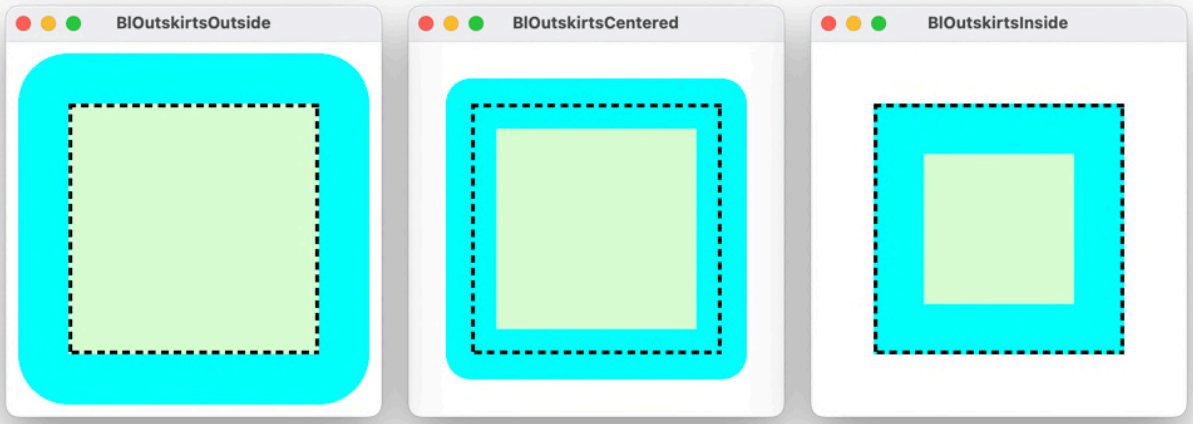



```
vertices := { 50@150. 150@50}.

referenceLine := (BlPolylineGeometry vertices: vertices) asElement.

capLine := (BlPolylineGeometry vertices: vertices) asElement.
capLine border: (BlBorder builder
                    paint: Color pink;
                    width: 50;
                    lineCap: BlStrokeLineCap round;
                    build)
```

Element's outskirts




```
aBlElement
    outskirts:
        BlOutskirts outside
```

```
aBlElement
    outskirts:
        BlOutskirts centered
```

```
aBlElement
    outskirts:
        BlOutskirts inside
```


THALES
Support Wizard
ASSURING MISSION SUCCESS TOGETHER
Feature "O"
Feature "S"
Feature "A"
Feature "E"
100%
0 YEAR
0
5
10
15
20
Reset Configuration
CONTRACT
Contract A
Contract B
Contract C
Contract D
Contract E
Add services

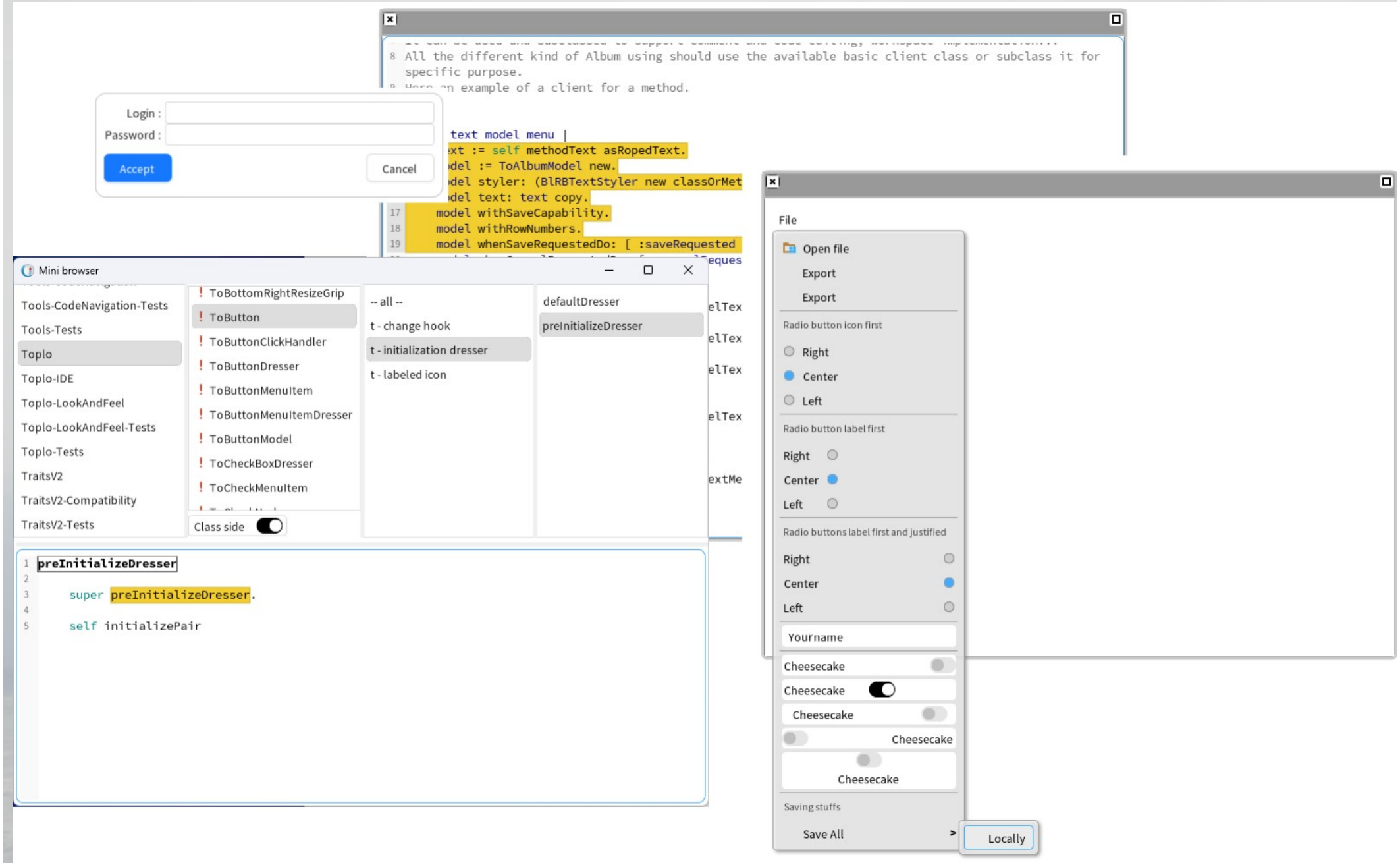
Toplo is coming

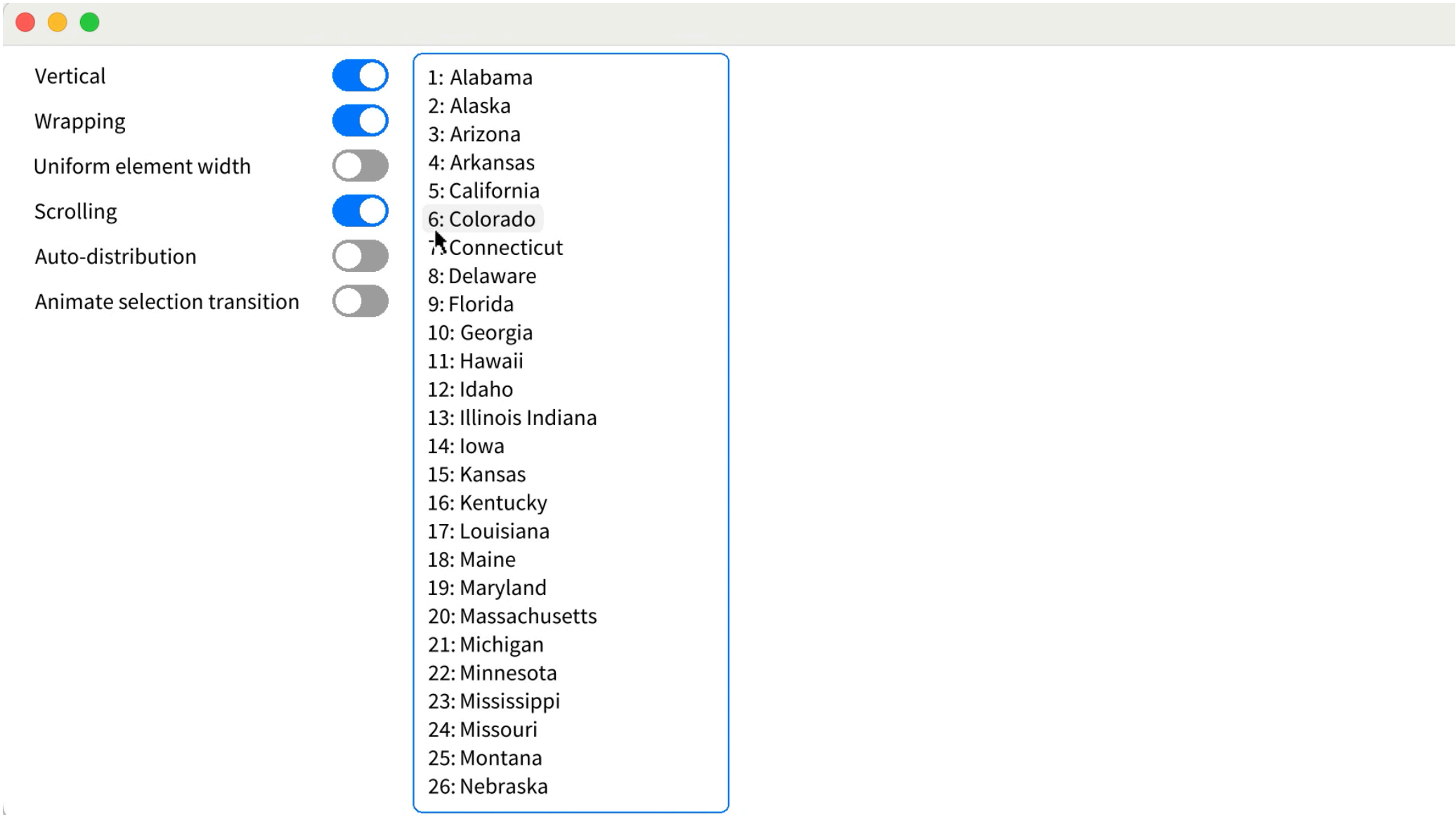
Toplo

- New widget library on TOP of bLOck
- Sponsored by Thales (deployed products in 2023)
- Default skins are based on https://ant.design/
- Started to work on Spec back-end

Currently

- All widgets except Tree/Table
- Skin *second iteration*


Login :
Password :
Accept
Cancel
All the different kind of Album using should use the available basic client class or subclass it for specific purpose.
text model menu |
xt := self methodText asRopedText.
del := ToAlbumModel new.
del styler: (BlRBTextStyler new classOrMet
del text: text copy.
model withSaveCapability.
model withRowNumbers.
model whenSaveRequestedDo: [:saveRequested
Mini browser
Tools-CodeNavigation-Tests
Tools-Tests
Toplo
Toplo-IDE
Toplo-LookAndFeel
Toplo-LookAndFeel-Tests
Toplo-Tests
TraitsV2
TraitsV2-Compatibility
TraitsV2-Tests
ToBottomRightResizeGrip
ToButton
ToButtonClickHandler
ToButtonDresser
ToButtonMenuItem
ToButtonMenuItemDresser
ToButtonModel
ToCheckBoxDresser
ToCheckMenuItem
Class side
-- all --
t - change hook
t - initialization dresser
t - labeled icon
defaultDresser
preInitializeDresser
preInitializeDresser
super preInitializeDresser.
self initializePair
File
Open file
Export
Export
Radio button icon first
Right
Center
Left
Radio button label first
Right
Center
Left
Radio buttons label first and justified
Right
Center
Left
Yourname
Cheesecake
Cheesecake
Cheesecake
Cheesecake
Cheesecake
Saving stuffs
Save All
Locally

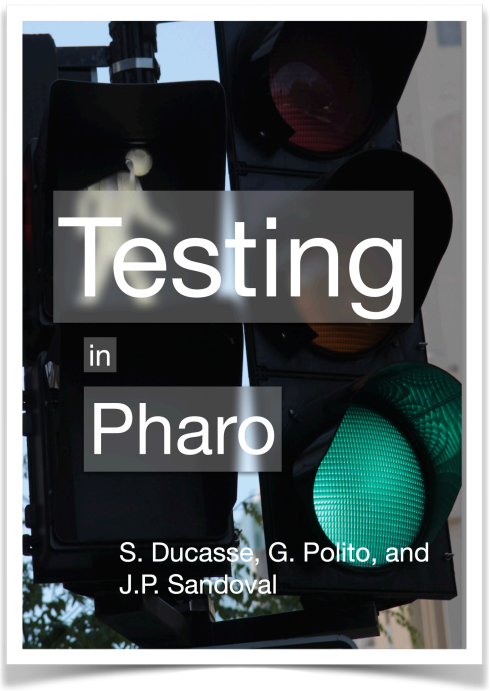

Vertical
Wrapping
Uniform element width
Scrolling
Auto-distribution
Animate selection transition
1: Alabama
2: Alaska
3: Arizona
4: Arkansas
5: California
6: Colorado
7: Connecticut
8: Delaware
9: Florida
10: Georgia
11: Hawaii
12: Idaho
13: Illinois Indiana
14: Iowa
15: Kansas
16: Kentucky
17: Louisiana
18: Maine
19: Maryland
20: Massachusetts
21: Michigan
22: Minnesota
23: Mississippi
24: Missouri
25: Montana
26: Nebraska

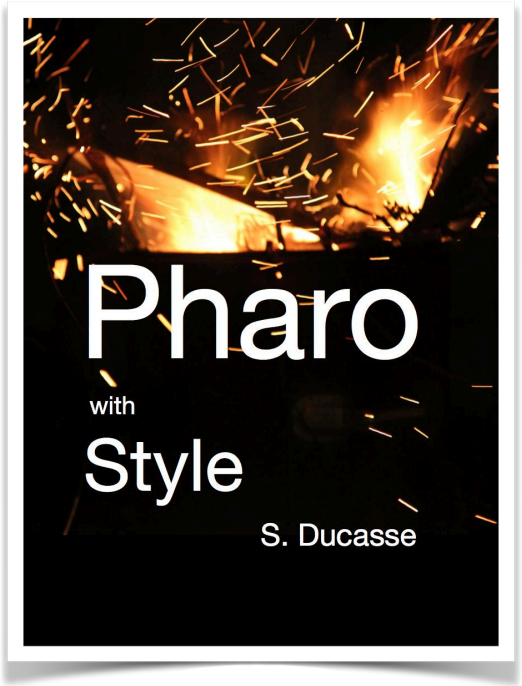
Advanced design mooc

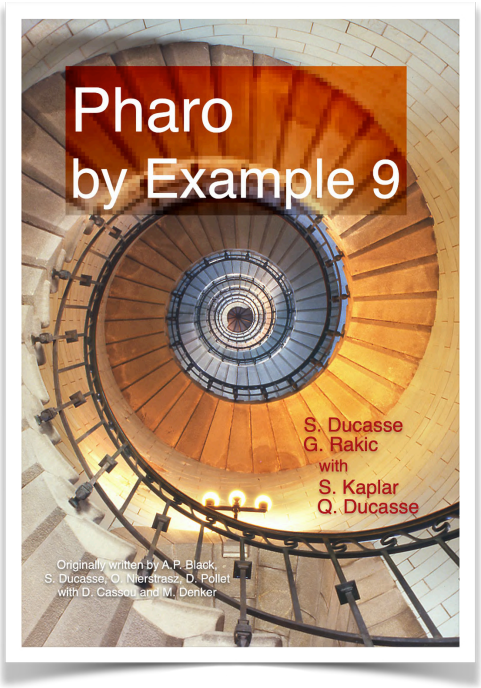
https://advanced-design-mooc.pharo.org/

“What a great course this is. The lectures are solid. I am working through the first exercise, and I have been learning so much and consolidating the information from the lectures along with practicing pharo. I believe this course will be my model whenever I write training in the future”

New books


Testing
in
Pharo
S. Ducasse, G. Polito, and
J.P. Sandoval


Pharo
with
Style
S. Ducasse


Pharo
by Example 9
S. Ducasse
G. Rakic
with
S. Kaplar
Q. Ducasse
Originally written by A.P. Black,
S. Ducasse, O. Nierstrasz, D. Pollet
with D. Cassou and M. Denker

2024 New books

- Spec 2.0 (~ready to be sent to the printer)
- Reflective kernel
- Concurrent programming

Questions

What do you want to know?

How can we help you?