Spec 2.0

The next step on desktop UI

Spec 2 is a team work

"How to do a desktop application with Pharo?"

–Most requested feature every ESUG (personal survey)

How can you do an Application today?

- Morphic

- Spec 1.0

- Glamour

- … others

There has to be only one!
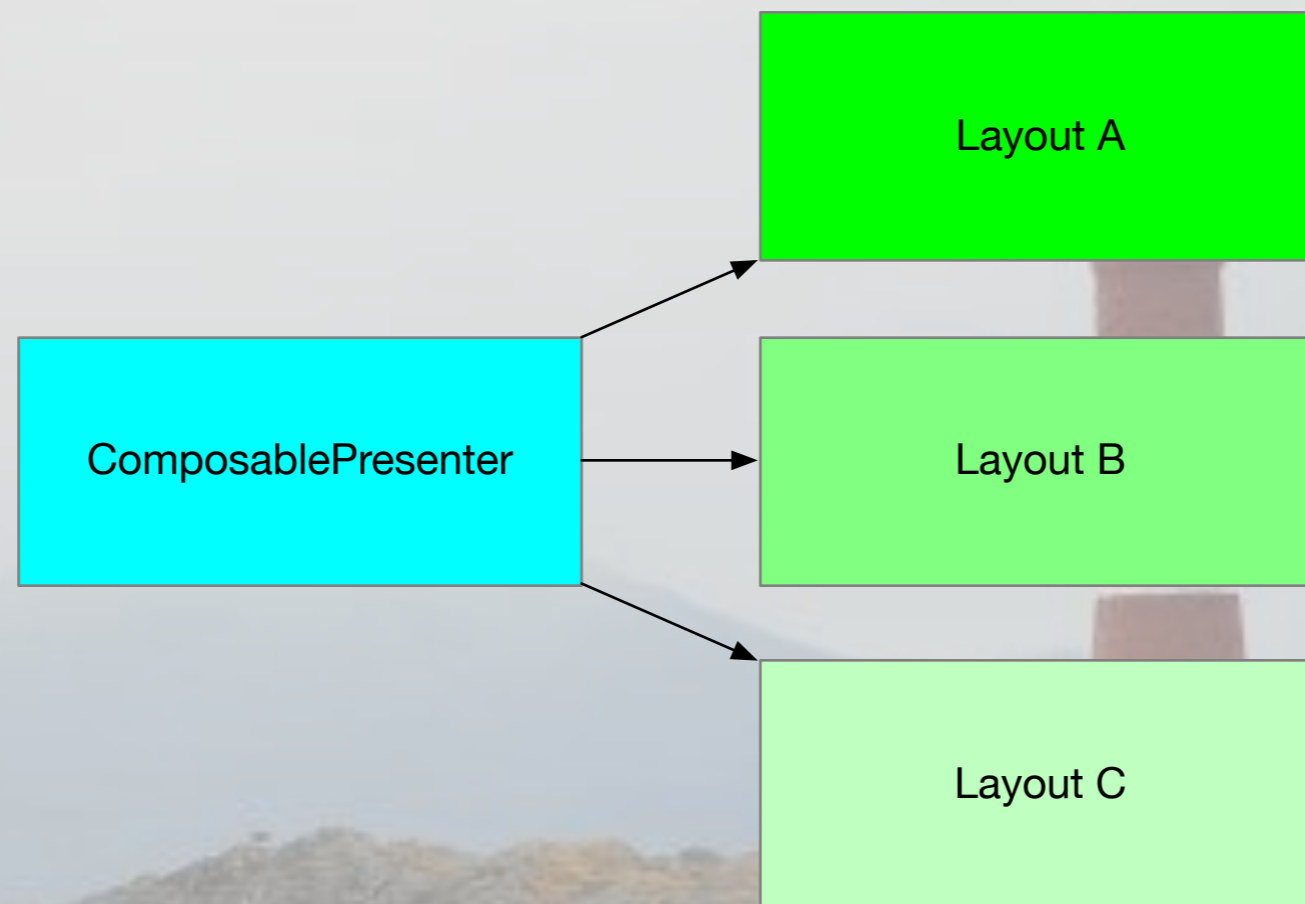
(and it has to be easy to use)
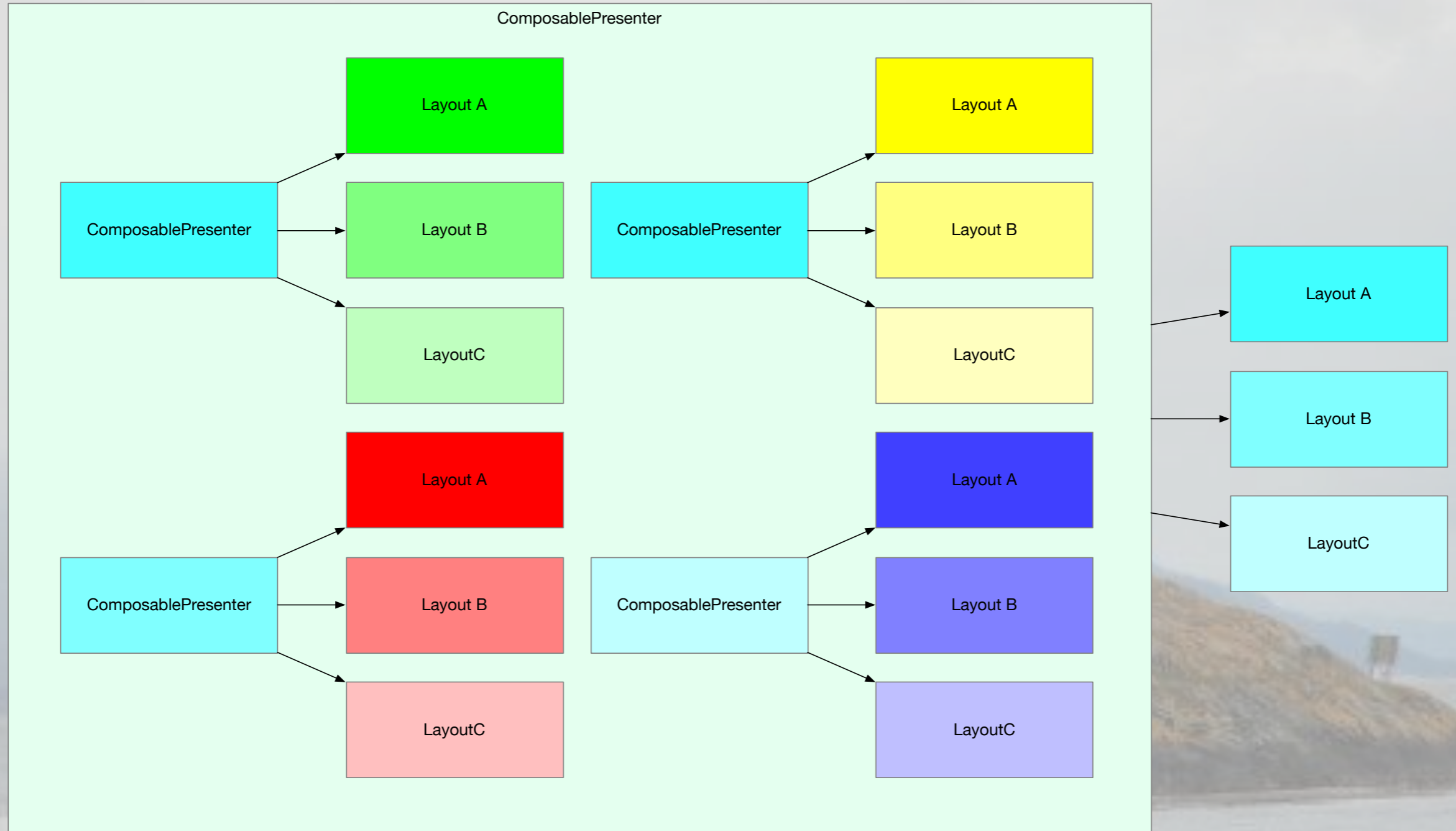
Why Spec?

- Modular design

- Testable

- Morphic is low-level: powerful, but too much when doing a regular application (same applies to bloc, by the way)

- Spec can cover Glamour specifics easier than Glamour covering Spec specifics

A Presenter

A composed Presenter

The original plan
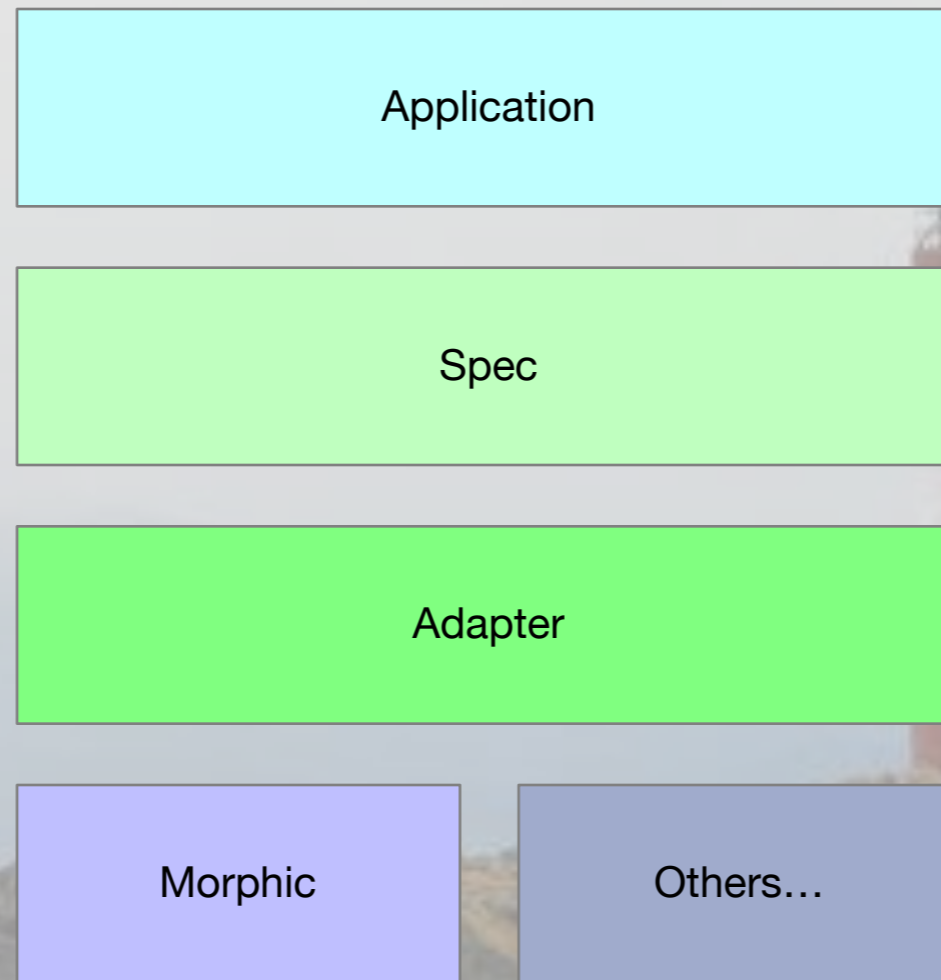
Application

Spec

Morphic

The original plan

Application

Spec

Adapter

Morphic

Others…

The reality

Application

Spec

Adapter

Morphic

The reality

- Specs mixed with morphs/adapters

- Presenters design are too contaminated with morph design

- Applications need to "jump" layers to do what they need
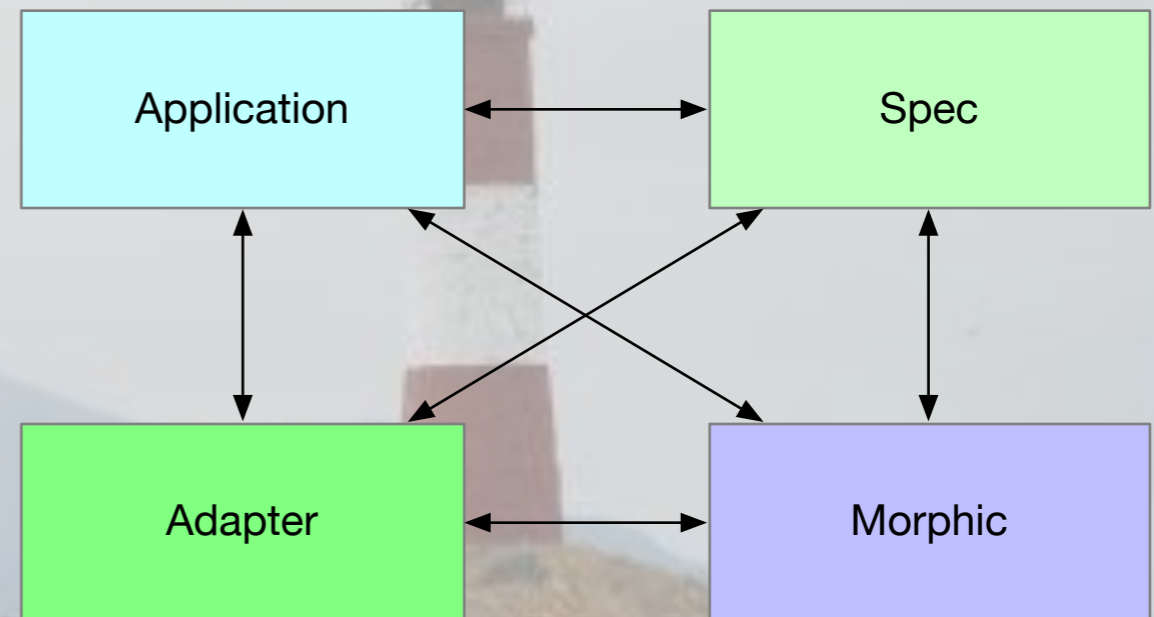
Spec 2.0!

- The design is already there: Spec 2.0 is about making original Spec design to work properly

- Remove interpreter (because is not needed)

- All Pharo tools needs to be developed with Spec 2.0

  - Having a base UI design for everything

  - Allow to change backends without rewriting the full UI

Some new (or/and revisited) concepts…

Presenters

- A Presenter is the base "presenting" UI mechanism.

    - They can be **composed**!

- All existing presenters has been revisited (or they will be)

- Some of them has been deprecated! (Tree, TabManager…)

- Some others has even added (Table, TreeTable, ToolBar, …)

Layouts

- Instead one big *do-it-all* layout, small layouts with well defined function

    - Box (vertical, horizontal)

    - Paned (vertical, horizontal)

    - Grid

    - Scrollable

    - Others to come

- Also layouts can be **composed**!

- Current SpecLayout will be deprecated (and removed)

Application

- Entry point of any application (including Pharo)

- Window flow

- Common resources

  - "UI Manager" for standard dialogs

  - Icons/images

  - Theme

- Backend

Backends

- Morphic Backend

- Gtk3 Backend

- Future: Bloc backend

Demo(s) :)

Browser

Morph
- ▶ BorderedMorph
- HandMorph
- ▶ AbstractResizerMorph
- AnimatedImageMorph
- BracketMorph
- ▶ FTSelectableMorph
- FTTableContainerMorph

halo:
copyToPasteBuffer:
savePatchFrom:
balloonHelp:
generateMouseEvent:
obtainHalo:
sendMouseEvent:
eventListeners:
moveToEvent:

```
obtainHalo: aHalo
    "Used for transfering halos between hands"

    self halo == aHalo
        ifTrue: [ ^ self ].
    "Find former owner"
    self world hands detect: [ :hand | hand halo == aHalo ] ifFound: [ :formerOwner | formerOwner
releaseHalo: aHalo ].
    self halo: aHalo
```

Browser

Morph
  ▶ BorderedMorph
    HandMorph
  ▶ AbstractResizerMorph
    AnimatedImageMorph
    BracketMorph
  ▶ FTSelectableMorph
    FTTableContainerMorph
  ▶ FTTableMorph
    FullscreenMorph

halo:
copyToPasteBuffer:
savePatchFrom:
balloonHelp:
generateMouseEvent:
obtainHalo:
sendMouseEvent:
eventListeners:
moveToEvent:
mouseFocus
sendEvent:focus:

```
obtainHalo: aHalo
        "Used for transfering halos between hands"

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        self world hands detect: [ :hand | hand halo == aHalo ] ifFound:
[ :formerOwner | formerOwner releaseHalo: aHalo ].
        self halo: aHalo
```
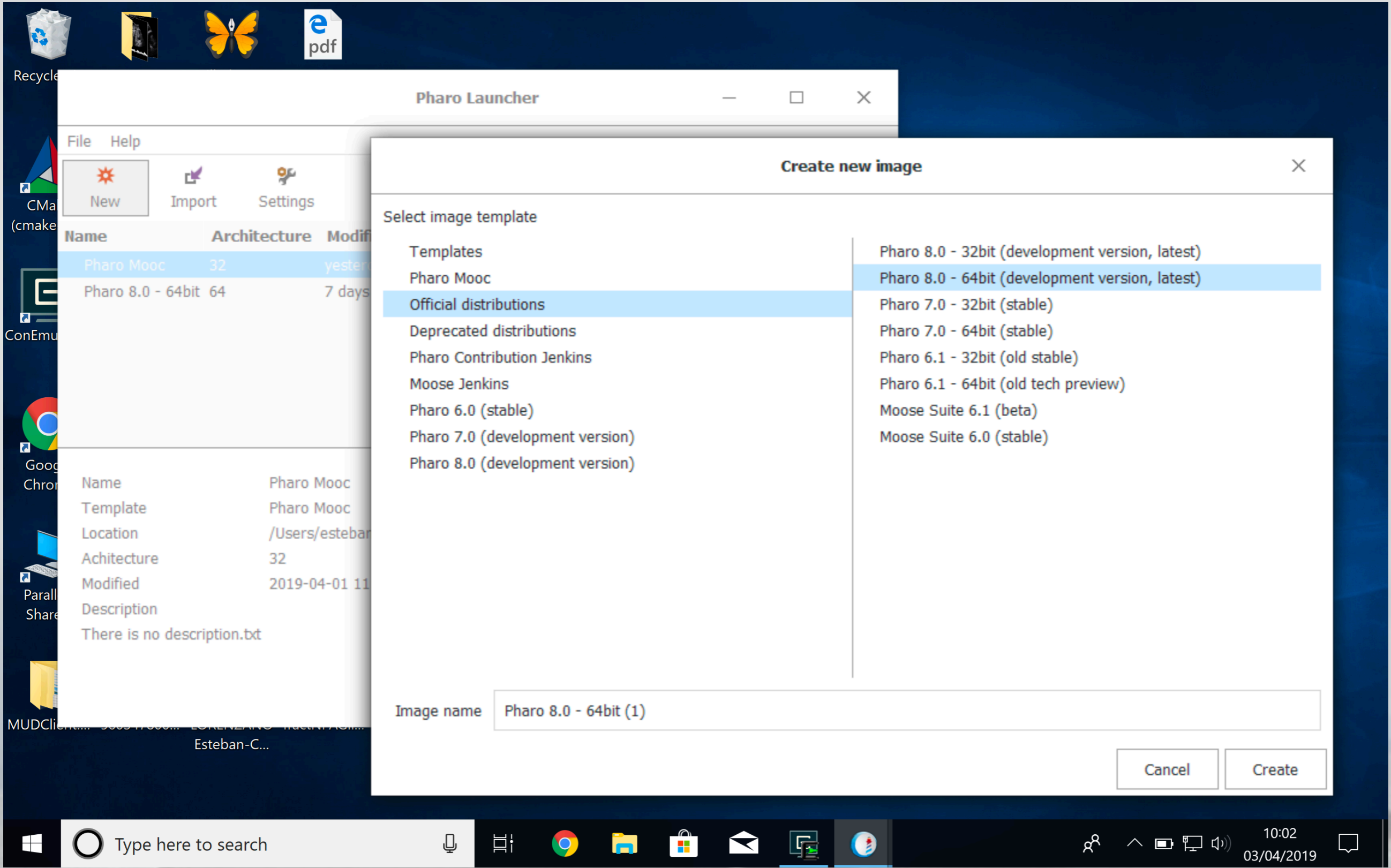
Pharo Launcher

File   Help

New   Import   Settings

Name   Architecture   Modifi
Pharo Mooc   32   yester
Pharo 8.0 - 64bit 64   7 days

Name   Pharo Mooc
Template   Pharo Mooc
Location   /Users/esteban
Achitecture   32
Modified   2019-04-01 11
Description
There is no description.txt

Create new image

Select image template

Templates   Pharo 8.0 - 32bit (development version, latest)
Pharo Mooc   Pharo 8.0 - 64bit (development version, latest)
Official distributions   Pharo 7.0 - 32bit (stable)
Deprecated distributions   Pharo 7.0 - 64bit (stable)
Pharo Contribution Jenkins   Pharo 6.1 - 32bit (old stable)
Moose Jenkins   Pharo 6.1 - 64bit (old tech preview)
Pharo 6.0 (stable)   Moose Suite 6.1 (beta)
Pharo 7.0 (development version)   Moose Suite 6.0 (stable)
Pharo 8.0 (development version)

Image name   Pharo 8.0 - 64bit (1)

Cancel   Create

Type here to search

10:02
03/04/2019

Pharo Launcher

File   Help

New   Import   Settings

Name	Architecture	Modified
Pharo 7.0 - 64bit	64	2 weeks ago
test 1	64	1 months ago

Create new image

Select image template

Templates	Pharo Mooc
Pharo Mooc	
Official distributions	
Deprecated distributions	
Pharo Contribution Jenkins	
Moose Jenkins	
Pharo 6.0 (stable)	
Pharo 7.0 (development version)	
Pharo 8.0 (development version)	

Name	test 1
Template	Pharo 7.0 -
Location	/Users/este
Achitecture	64
Modified	2019-02-25
Description	
There is no description.txt	

Image name   Pharo Mooc

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     | |    (C)ontact us at imms@legendsofthejedi.com    | |
     | |   (B)ased on the SWR 1.0 Codebase by Sean Cooper | |
     | |       (C)reator CYBER_Aeon (Aka Ghost)          | |
     | |     (C)oding by Orion, Rojan, and Miros          | |
     | |       (G)ame Owners: Rojan & Walldo             | |
     | |         ...The Legend Awaits...                 | |
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To login to an account use @<account name>.

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(C)urrently connected from: hel59-4-88-160-126-139.fbx.proxad.net
(P)ress [ENTER]
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opportunity
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when time ;白銀 可以 指 銀 貴金屬 用做 貨幣 可 稱為 白銀 ;w:Standard Chinese w:Traditional Chinese ;白銀 可以
occasionally

it sounds like 時,實,蝕,炻,鰤,蒔,祐,塒,竍,鉐,鼭,遆

Accept	Hint	Give up	Inspect

Spec 2.0 summary

- Easy way to create REAL desktop applications!

- Multiple backends (starting with Morphic and Gtk3, Bloc will be added later)

- For Pharo: Easy migration from one backend to another

- Coming SOON (™)

  - Pharo 8

  - There will be a migration path (most cases are compatible or straightforward)

Extra: Why GTK3?

- Cross platform

- Open source (LGPL)

- Mature

- Popular

- C bindings

Extra: Missing parts

- Finish missing/incomplete presenters

  - Rich text presenter, …

  - Some layouts

- Stabilisation

- Pass on API

- Pass on features

- Headless VM and *image-side* parts

Extra: The place of bloc

- Replacement of Morphic (not Spec)

- Low level: Applications will still need some higher level layer