



The e(fx)clipse e(f)xperience

Zeb Ford-Reitz



Introducing the hero

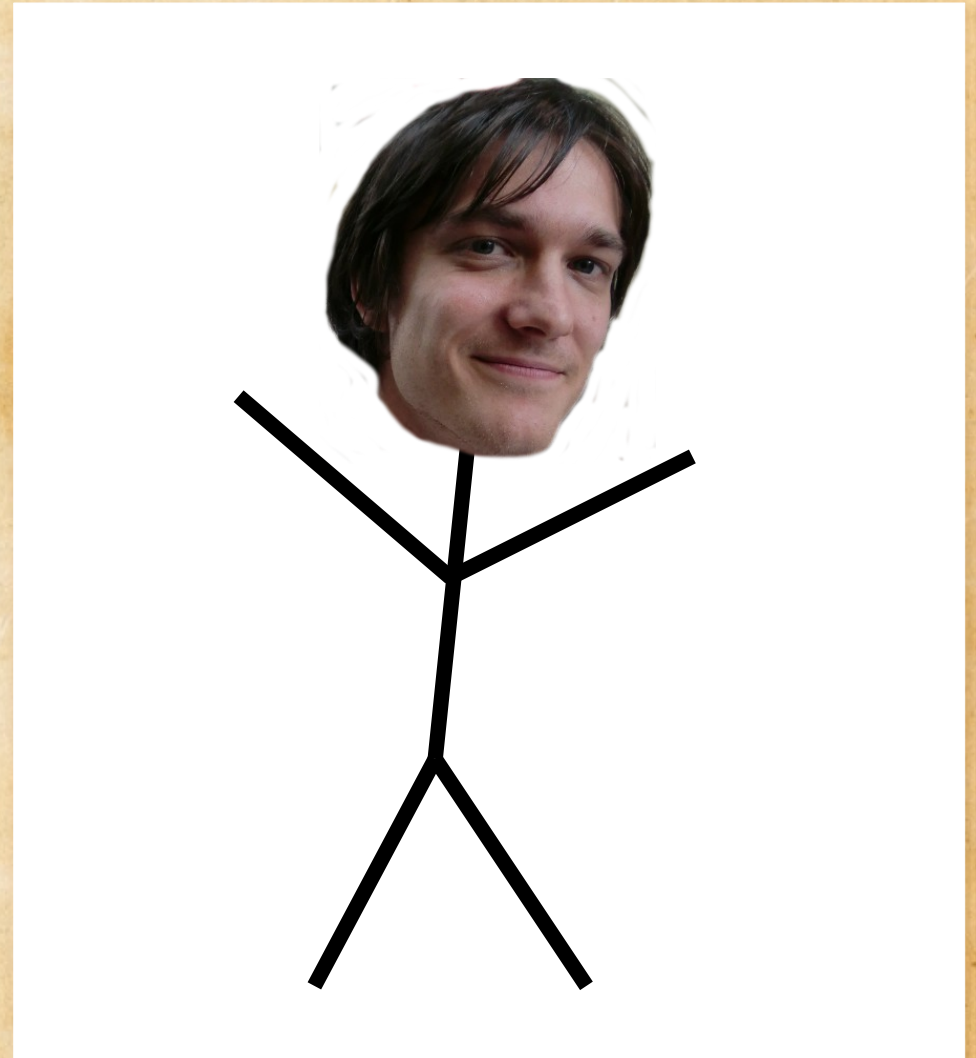
Zeb Ford-Reitz

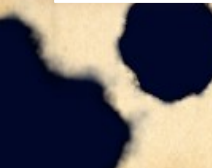
BREDEX GmbH

Storyteller

Weird sense of humor

Terrible artist





- (c) Some Company

* Totally Awesome Really Cool System

We are not unarmed

- Rich Client?
- Eclipse e4!
 - OSGi
 - Dependency Injection
 - And so forth
 - Experienced team



But we *do* need some practice



- Modern UI?
- JavaFX!
 - Easy animations and transitions
 - And so forth
 - Inexperienced team
 - No way to combine with e4?

e(fx)clipse to the rescue!

- *“JavaFX Tooling and Runtime for Eclipse and OSGi”* [1]
- What this means for us:
 - A JavaFX implementation for e4’s Renderer Framework
 - e4 with a JavaFX coating

“Any sufficiently advanced technology is indistinguishable from magic.” [2]



[1] <https://www.eclipse.org/efxclipse>

[2] Arthur C. Clarke

e(fx)clipse to the rescue?



Version 0.9.0*?
But...that's **less**
than 1!

Let's do some
prototyping and see
what's possible.

* In mid-2014, e(fx)clipse was at version 0.9.0. At the time of this talk, it is at 2.1.0.

Rendering

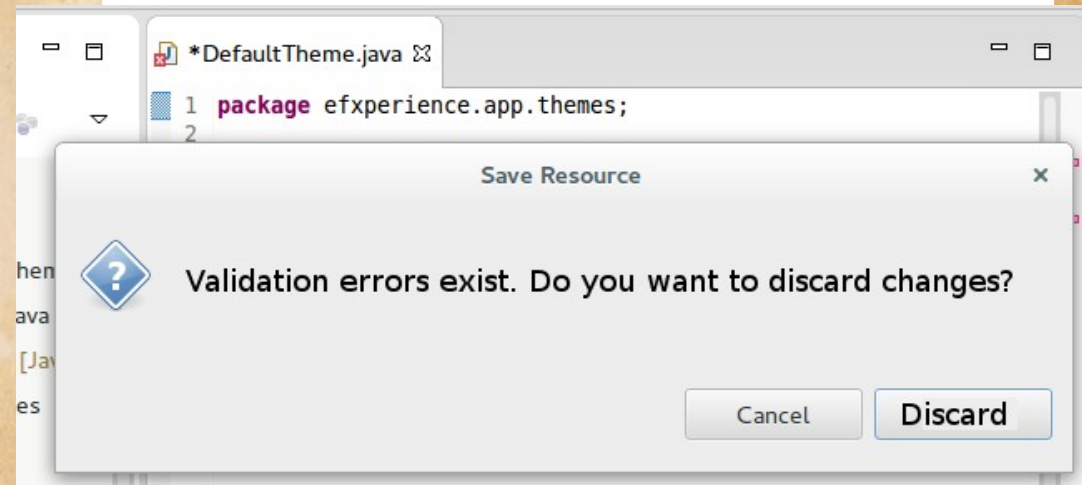
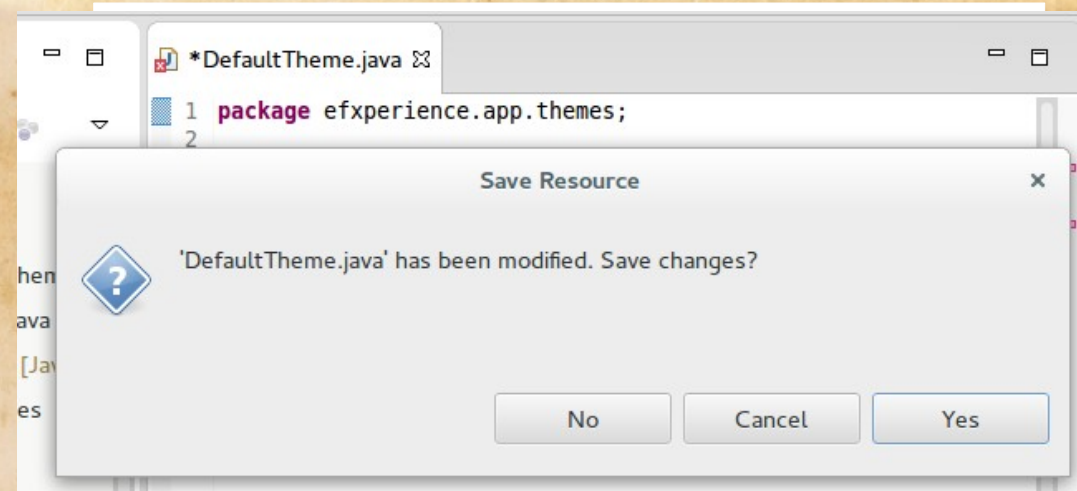
Problem:

Some of the workbench elements don't look / work exactly the way we want them to.

Solution:

Write a custom renderer.*

* This is **way** easier than it sounds!



Custom Renderer

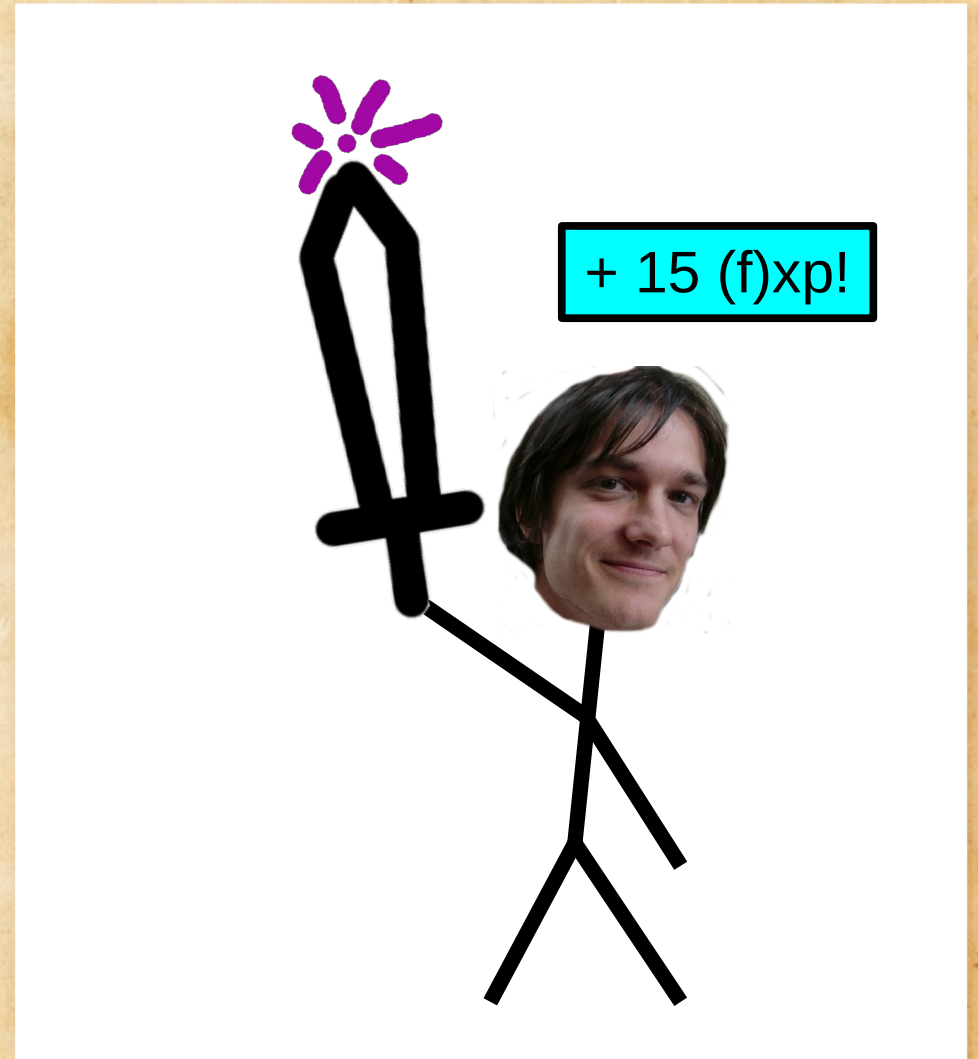
- 1) Custom*Renderer
- 2) CustomRendererFactory
- 3) plugin.xml

e(f)xperience gained

Prototyping
successful

We'll use it!

Now let's get to
work on the UI!



GUI Building

- WindowBuilder?
 - We've used it with SWT, and it worked well
 - No support for JavaFX*
- Scene Builder?
 - Made by Oracle
 - Drag and drop
 - Initial impression: very nice
 - *Slight* issues with OSGi...

* Yes, we **could** implement it ourselves, but we kind of want to get up and running **now**.

Attack of the Broken Layout

5 Confusion Damage



%UserManagementPart.label

☐ %User.withoutAccessRights%User.status

%Filter.prompt %Filter.all 850 %Filter.filtered 75

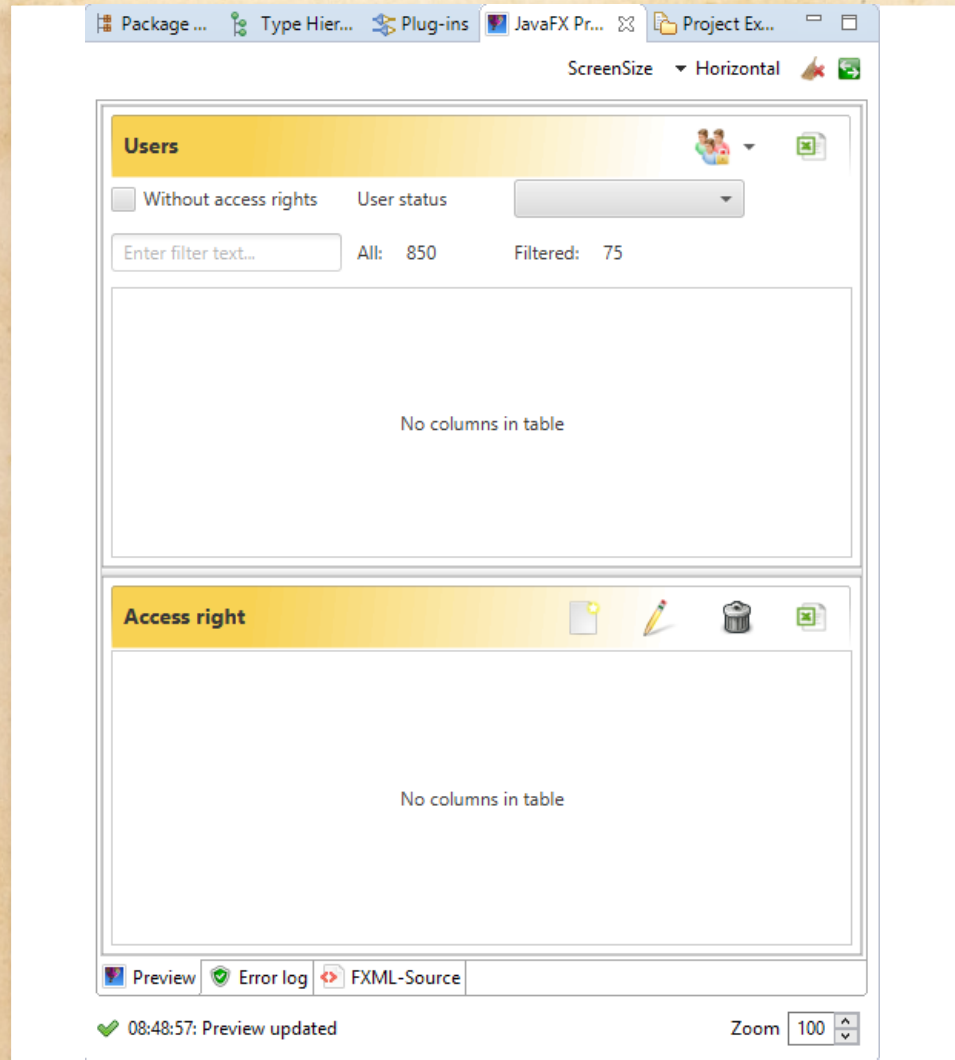
No columns in table

%User.accessRight

No columns in table

The image shows a web application interface with a broken layout. The top navigation bar contains two buttons labeled 'Image Not found'. Below this is a filter section with a checkbox, a text input, and two labels. The main content area contains two tables, both labeled 'No columns in table'. The bottom section contains a row of four buttons, all labeled 'Image Not found'.

FXGraph to the rescue!

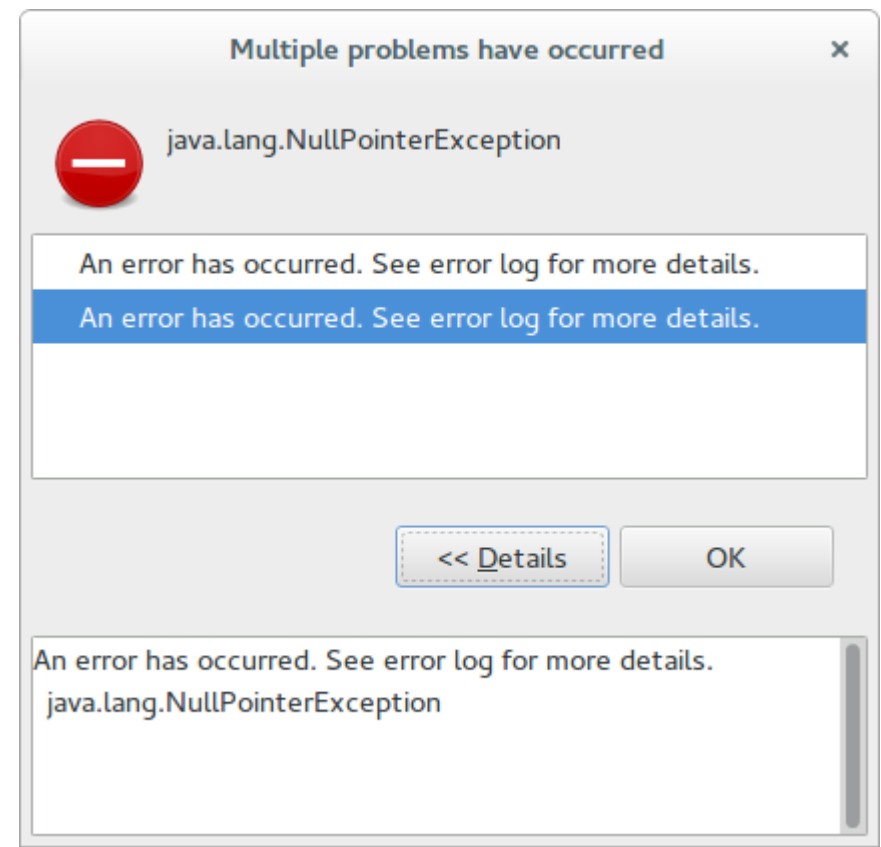


- Part of e(fx)clipse
- JSON-like DSL for specifying JavaFX UIs
- Compiles to FXML
- Preview (plus preview text)
- Understands our OSGi classpath
- Look at our styled UI, complete with images and internationalized text!

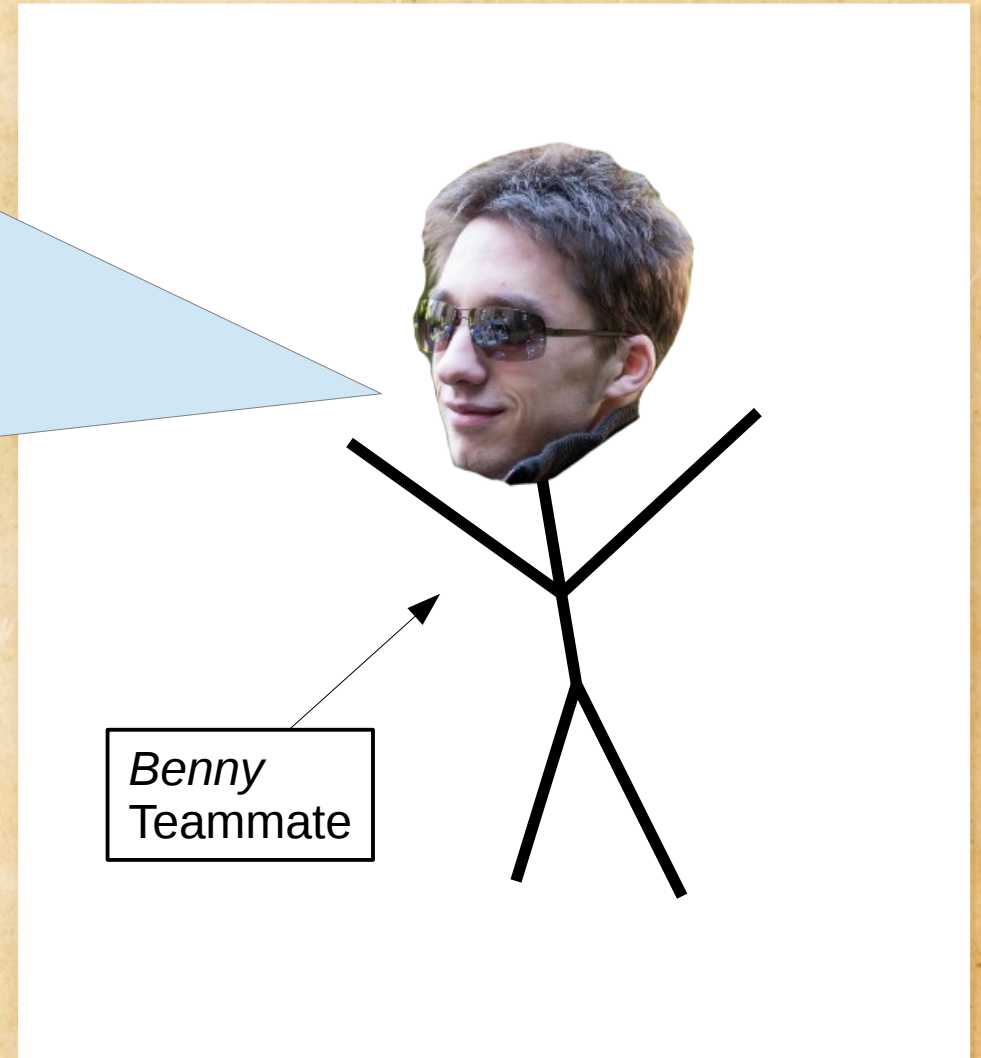
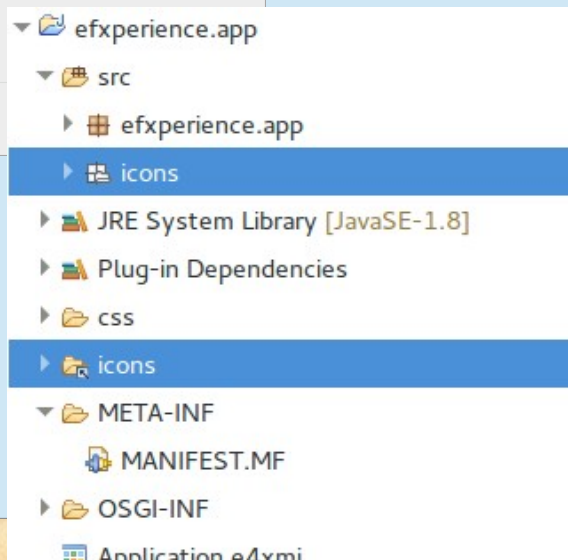
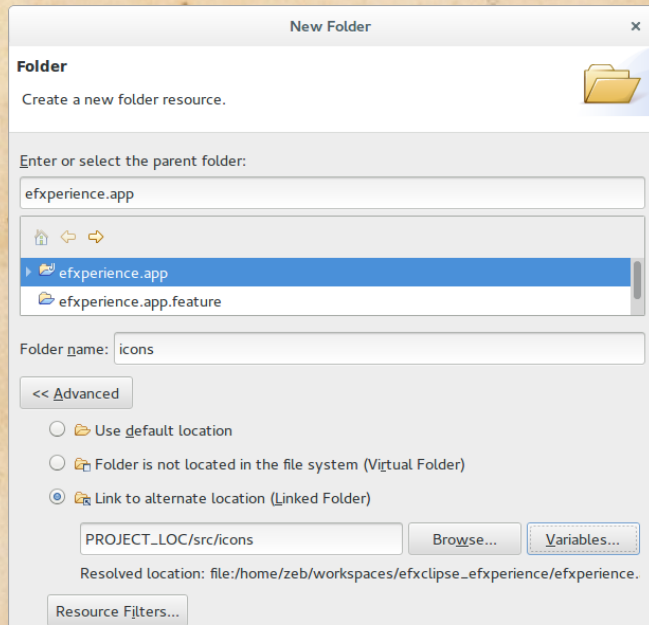
Inner turmoil

- FXGraph wants your icons in src
- e4 Application Model Editor wants your icons in a top-level directory
- Conflict of interest and neither of them is willing to compromise

This is how we deal with missing icons...



Benny has an idea

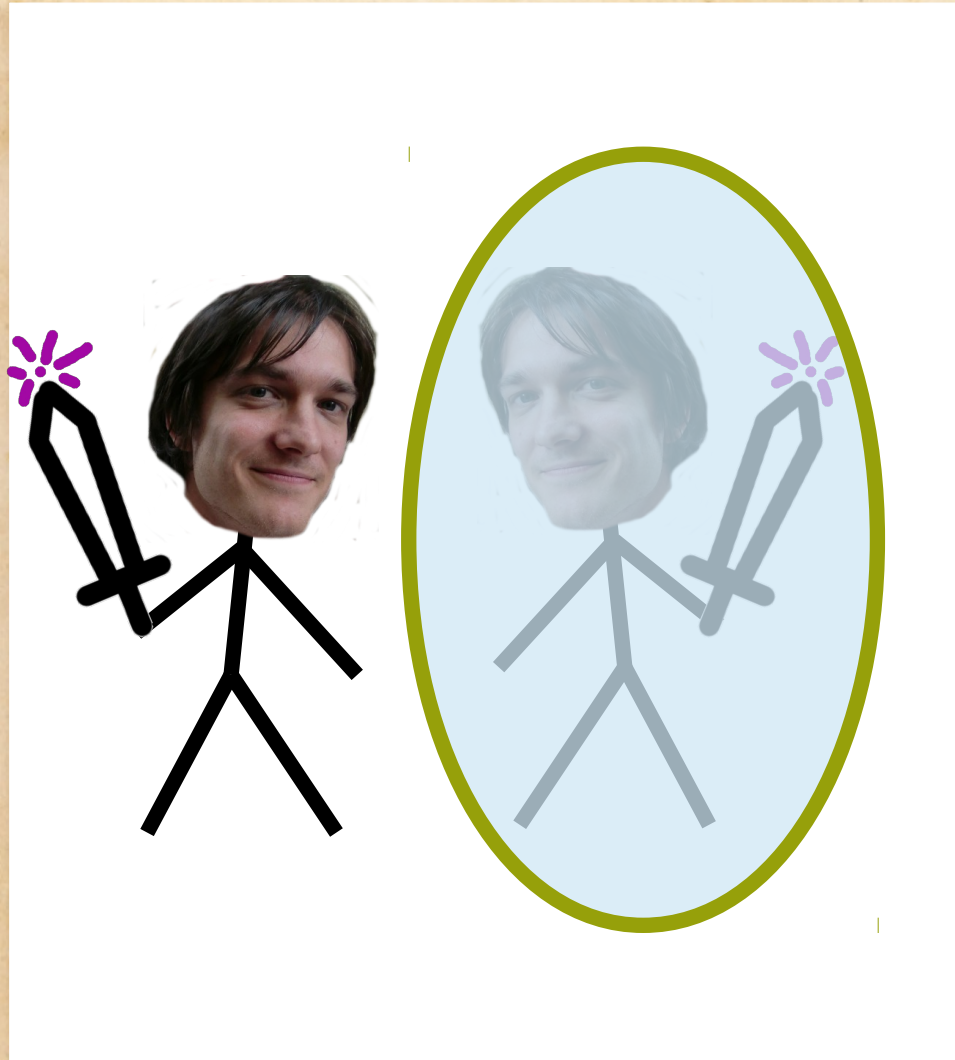


Almost there...

- ~~Prototype to test framework capabilities~~
 - Training
- ~~Implement the application~~
 - Gathering the loot
- Build and deploy the application*
 - Bringing the loot home

* We actually had to tackle this much earlier because we needed to know that nightly builds would be possible.

Through the looking glass



Problem:

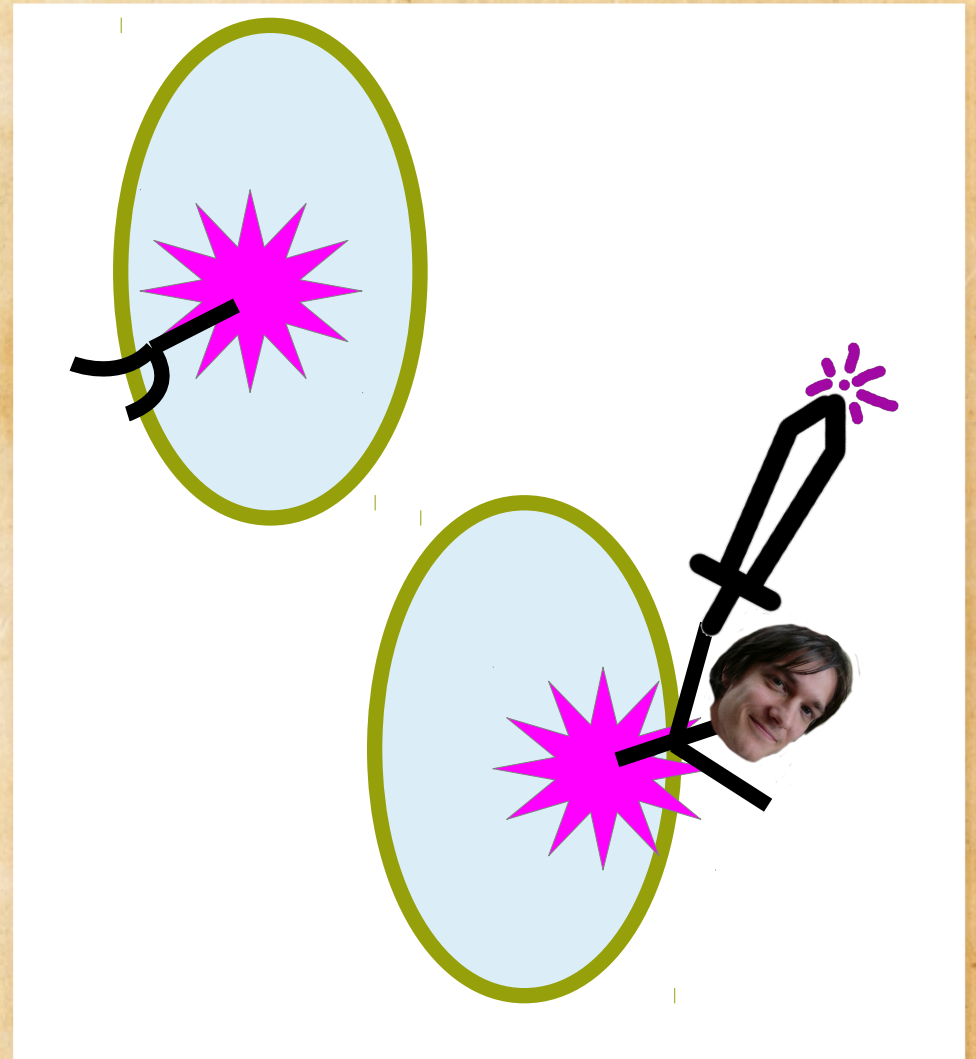
Network instability during
nightly builds makes
fetching the Target
Platform bits a roll of the
dice.

Solution:

Mirroring

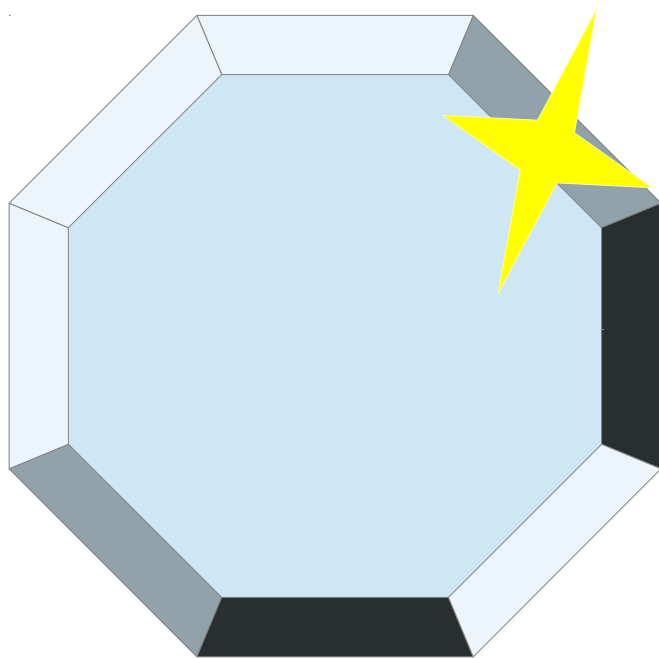
Quest complete!

Sample POM
available upon
request.*



* Sample POM is heavily based on the example provided on the Tycho website.

Demo time



Leveling up

- e(fx)clipse has worked very well for us.
- I'd definitely recommend prototyping if it looks like it might be useful for your projects.



Don't forget to rate (and comment!)



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