The e(fx)clipse e(f)xperience

Zeb Ford-Reitz
Introducing the hero

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Storyteller
Weird sense of humor
Terrible artist
The quest

- TARCS*
  - Not quite awesome and cool enough
- TARCS 2
  - Rich Client
  - UI
    - Modern (not too modern)
    - A joy to use

* 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
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.
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
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.
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!)

Evaluate the sessions at www.eclipsecon.org

+1  0  -1

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