EclipseCon 2014

June 11, 2014
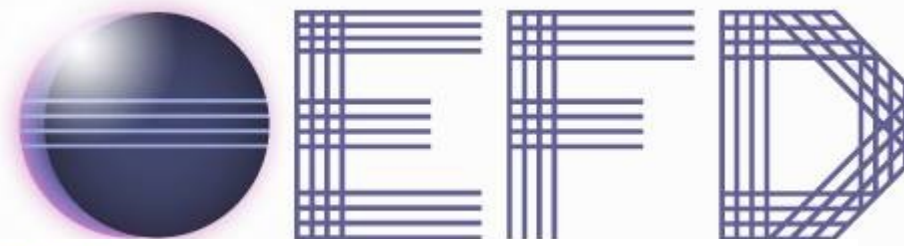
Summary:

EclipseCon 2014 (North America) was a 4 day conference on Eclipse technologies located in San Francisco. The general format is:

Breakfast – on your own
Morning Keynote
Morning Sessions (x2)
Lunch (organized and ad-hoc)
Afternoon Sessions (x5)
Social Hour
Dinner – on your own
Meetups
Bar

Session List:
https://www.eclipsecon.org/na2014/eclipsecon/schedule/session/2014-03-20

## Innovative Solutions For Mission Critical Systems
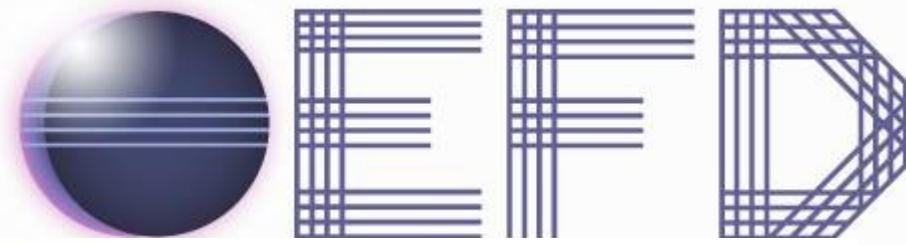
Integration Testing with SWTBot and Tycho

Use the Application Folder as the target platform – this ensures that you are running with only the plugins in your application.

Demonstrated the SWTBot recorder that records user interaction to generate a test case for SWTBot.
- Have to copy the text from the recorder into the test case
- I could not get this to work

Run the test with Tycho & Surefire (integrates GUI testing into an automated build)
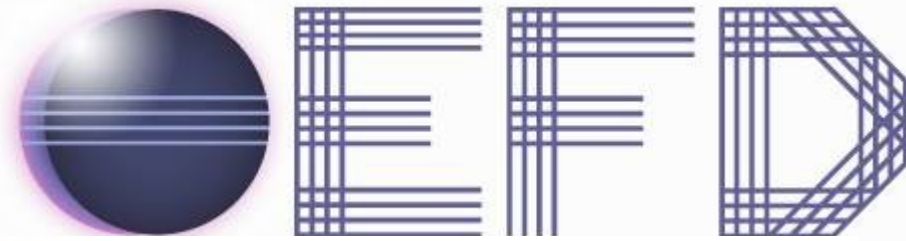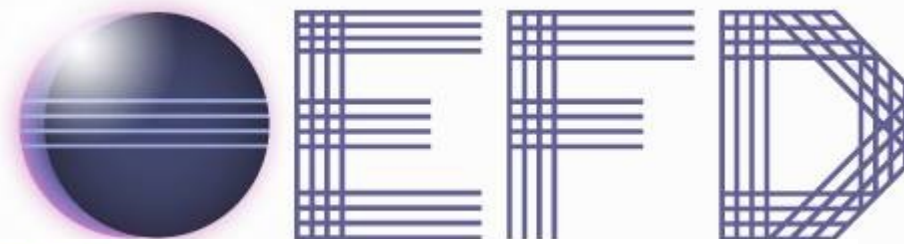
Eclipse Presentation Frameworks

Very good trade study of existing presentation frameworks.

Sapphire – Uses annotated Java code to generate Sapphire graphical hosts. Sapphire chooses the widgets, layouts, etc. Looked like a steep learning curve that would be difficult to debug.

EEF – Models upon models. Uses an Ecore model for business logic, a "View Model" for graphical parts, and a "Binding Model" to map it all together. The generated code can be extended for customization.

Eclipse Presentation Frameworks continued

Eclipse Client Platform (ECP) – EMF Forms provides editing GUI for EMF Models. Uses a View Description Model (similar to EEF). Can render to a composite that can be used with E4. Good integration with EMF.edit generated code.

Scout – Application Development Framework. Uses the Scout SDK to build the GUI. Can single-source SWT, Swing, and RAP. Tied to the Scout framework.
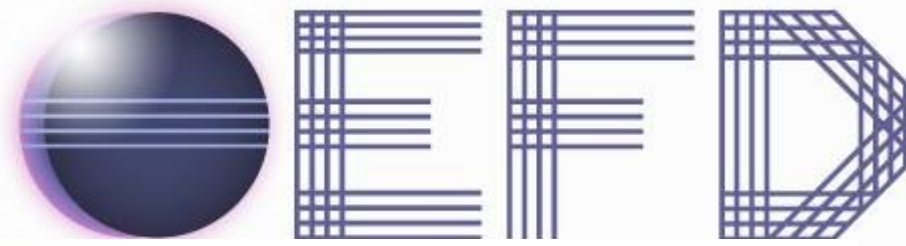
Pimped Papyrus

Presentation by someone working Homeland Security grants for "National Information Exchange Model" or NIEM.
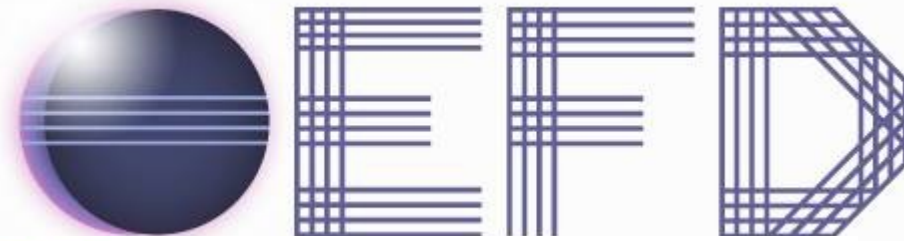
Created a Domain Specific Language (DSL) to allow users to define NIEM instances.

Uses Papyrus for users to create concrete items based on the DSL.

Created Papyrus extensions to provide the UI.

Project on Github:
https://github.com/info-sharing-environment/NIEM-Modeling-Tool

Advanced Use of DI

Demonstrated how DI provides increased cohesion and decreased coupling.

Had to do a good bit of explaining what Dependency Injection is and why you should care. Best example was a surgeon asking for a scalpel and getting a scalpel

Demonstrated how to add a custom annotation and handler for the annotation in the DI engine used by Eclipse.

Asked about an annotation to pass the E4 EclipseContext to child composites.
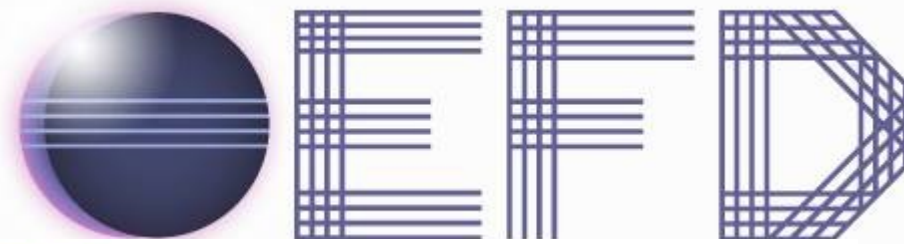
EMF Compare

Demonstration of the latest version of EMF Compare.

Did a bit of explaining about what EMF is - "Think of it as JavaBeans on Steriods"

Very nice interface for comparing EMF instance files. For graph based items, provides a before/after view with a slider to go between the two.

Bound heavily to Eclipse 3.x

Cloned the git repo for EMF Compare to analyze the possibility of moving to E4, but there is a TON of source code here.

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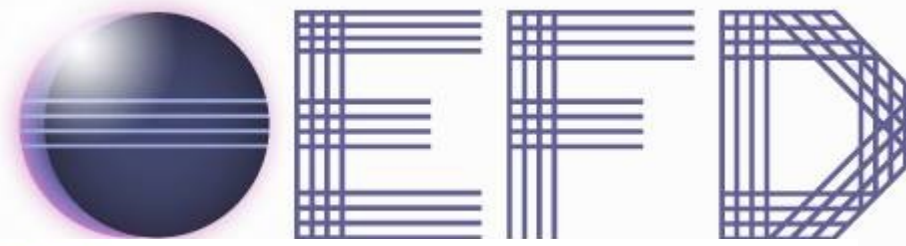
Preventing 3-eyed Fish

Jay Jay Billings from Oak Ridge National Laboratory – check out his YouTube videos

Presentation of NiCE – Eclipse based computational framework

Uses GEF to provide views of computational results of nuclear core modeling.

Analyses the output of simulations run on Titan (299,008 Opteron cores, 18,688 NVideo Tesla GPUs, and 710 TB of system memory)

Providing NiCE as an Eclipse proposal for incorporation.

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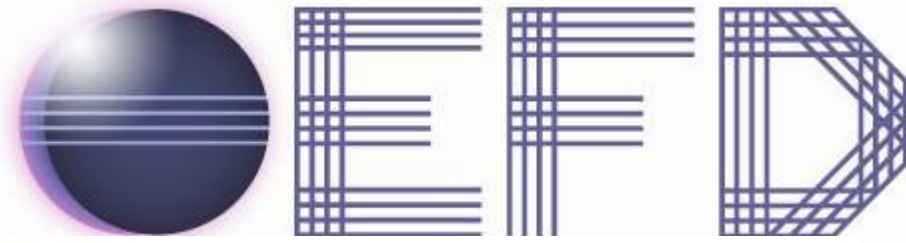
Modeling Symposium

Annual collection of mini-talks about current developments in the modeling community.

First speaker was French – I have no idea what he was talking about, but he was very excited about it.

Second topic was EMF + ECP + RAP to show ECP running on a web host.

Third topic was XPect – a testing framework for XText DSLs

Fourth topic was a Norwegian Oil & Gas simulation – binding EMF to a 3D View.
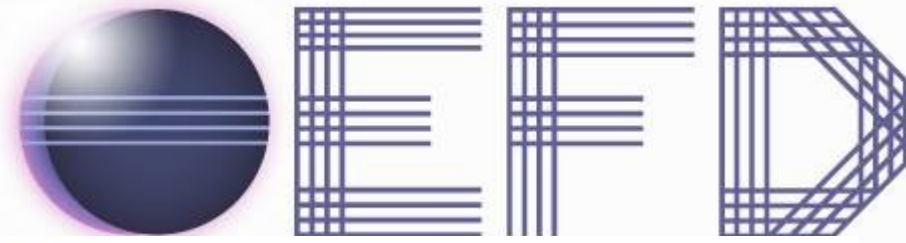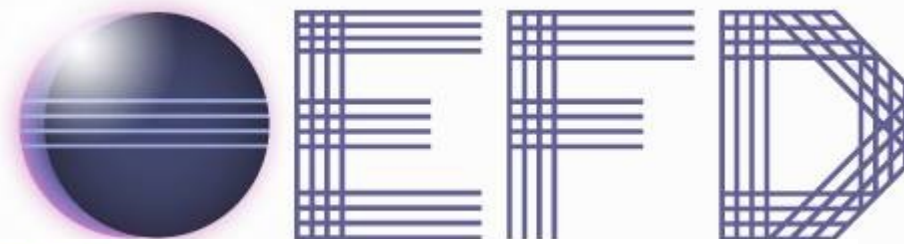
RAP Highlights

First speaker was a boring German guy.

Tom Schindl discussed the process of closing "The RAP / E4 Bug".

He has the solution posted on git-hub. I pulled the source and was able to run RAP on an E4 platform.

JDT Profiling

Talk from the Java 8 software lead.

Oracle released Java8 to correspond with EclipseCon

Several interesting plugins available with the Oracle Java8 SDK for profiling Java applications.

Includes an event logging framework for analyzing large applications with minimal performance impacts.

The project is called Java Mission Control

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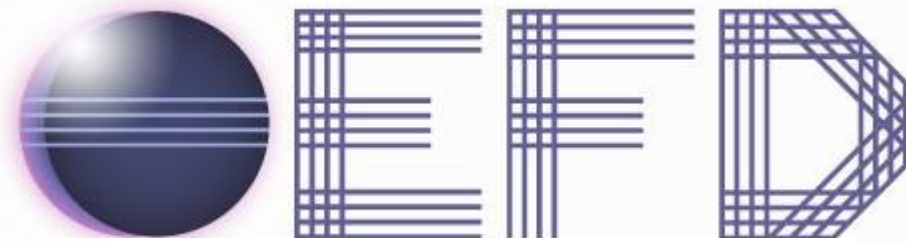
Eclipse Hackathon

Eclipse Commiters put on a clinic for submitting contributions to Eclipse.

Each Project handles contributions in their own way.

Eclipse as a whole seems to be moving toward using Gerritt to make contributions.

Other projects allow patch uploading to Bugzilla and pull requests from Git-Hub or other publicly hosted git repositories.

Conclusion

EclipseCon was a lot of fun.

You should go next year.