Eclipse Modeling Framework and plain OSGi the easy way

Mark Hoffmann
Data In Motion Consulting GmbH

About Us

- Founded in 2010
- Located in Jena/Thuringia - Germany
- OSGi Contributing Associate Member
- OSGi / MDSD related company
- Consulting, Independent R&D, Development, Training,

What are we talking about?

- EMF Registries
- EMF in Eclipse/Equinox environments
- EMF in Java-SE environments
- Gecko EMF - ResourceSet as a service
- Model Isolation
- No more singletons

EMF Registries- What are they for?

- EPackage Registry
- ResourceFactory Registry
- Dynamic model registration
- Static registries for non-OSGi
- Registry based upon Equinox Extension Registry
- ResourceSet needs the registries

EMF in Non-OSGi? No Problem!

- Uses static registry
- Self-registering EPackage
- Manual registration of EPackage and ResourceFactory
- Each new ResourceSet knows all models

EMF's home is Equinox

- Equinox OSGi Framework for Eclipse
- Core-Runtime means Equinox
- Extension registry and plugin.xml
- EMF generates Equinox based projects from GenModel
- OSGi mode for compatibility
- For other Frameworks use Equinox Supplement bundle

Gecko EMF? Whats that?

- OpenSource project
- Idea of a Service-based EMF
- Handling of OSGi dynamics
- API and default implementation
- Genmodel Code Generator extension - Tooling
- Support for bnd projects

Gecko EMF - How it works

- No Equinox dependencies, plain OSGi
- Whiteboard-based OSGi services for model registration
- Additional API for:
  - EPackageRegistry
  - ResourceFactoryRegistry
- ResourceSetFactory to create a ResourceSet
- ResourceSet as a service
- Handling of dynamics when un- / registering models

Gecko EMF Features

- Default registry contains all models
- Isolated registry for a configurable filter
- Configurable dynamic configurator for loading ecore-files
- Create service for ResourceSetFactory
- Create service for ResoureSet
- Additional extensions available

Showtime

Lets see what Gecko EMF can do for you

Thanks for listening!

Resources:

Web:	https://www.datainmotion.de
GeckoEMF:	https://gitlab.com/gecko.io/geckoEMF
OSGi:	https://osgi.org

Questions?