Eclipse 4 RCP training agenda

- Introduction into Eclipse and Eclipse 4
  - Components of the Eclipse platform
  - Eclipse 3.x in comparison with Eclipse 4.x
  - Eclipse license
  - Internet information sources

- Eclipse architecture
  - Software components
  - Configuration files (plugin.xml, MANIFEST.MF)
  - Extensions and extension points
  - Important user interface components

- Deployment of an Eclipse product
  - Product configuration file
  - Feature projects
  - Branding and product export
  - Run configuration
  - Problem analysis during export

- Eclipse 4 application model
  - Application model and model components
  - Model editor
  - Naming schema for ID's

- Dependency injection and annotations
  - Overview dependency injection
  - Dependency injection framework in Eclipse
  - Field, method and constructor dependency injection
  - Behavior annotations
  - Application lifecycle annotations

- Commands, Handlers, Menus and Toolbars
  - Contributing to the menu and the toolbar
  - Handling of popup menus
  - Scope of handlers and core expressions
  - Defining keybindings

- Scope of injection
  - IEclipseContext
  - Injection search strategy
  - Creation of injectable objects

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- Model elements and dependency injection

- Modularity of the Eclipse platform with OSGi
  - Plug-ins and bundles
  - Definition of dependencies between plug-ins
  - Fragment projects
  - OSGi framework start configuration and usage of the OSGi console

- OSGi services
  - Services and the OSGi service registry
  - Publishing services via OSGi declarative services
  - Usage of services in Eclipse 4
  - OSGi declarative service definition with annotations

- User interface development with SWT
  - Overview Standard Widget Toolkit
  - SWT event handling
  - SWT layout manager: FillLayout, RowLayout and GridLayout
  - User interface builder: SWT Designer
  - Custom widgets and Nebula widgets

- Introduction JFace
  - Overview Jface components
  - SWT resource management
  - Control decorations for user feedback
  - Introduction into the Viewer framework (LabelProvider, ContentProvider, ComboViewer)
  - Handling Viewer selection

- Jface TableViewer and TreeViewer
  - ColumnLabelProvider and CellLabelProvider
  - Editable tables
  - Sorting, filtering, layouts and own label provider

- Dialogs and Wizards
  - SWT standard Dialogs
  - JFace Dialogs
  - Jface Wizards

- Declarative styling with CSS
  - Introduction into CSS
  - Definition of styles and themes, colors and gradients
  - Styling specific widgets
  - Dynamic style switching at runtime
  - Using the CSS Spy tooling

- Platform services and interaction of components
  - Service overview
  - Part service
  - Model service
  - Selection service
  - Command and Handler service

- Editor handling in Eclipse 4
  - Comparison Views and Editors
  - Getting parts which behave as editors
  - Using services to interact with parts

- Accessing and extending the Eclipse context
  - Accessing the context
  - Extending the Eclipse context with own objects
  - Using dependency injection to create own objects

- Settings and preferences
  - Configuration area and workspace
  - Persistence of the Eclipse application
  - Part persistence
  - Dependency injection for preference values

- Modularity for Eclipse 4 applications
  - Contributing to the application model
  - Static model contributions with fragments
  - Dynamic model contributions with processors

- Internationalization (i18n)
  - Adding support for multiple languages
  - Usage of fragment projects
  - Outlook: translation services in Eclipse 4

- Concurrent UIs
  - SWT threading
  - Avoiding invalid thread access
  - Asynchronous processing with the Eclipse API

- Jface Data Binding
  - Introduction into databinding
  - Observing properties
  - Conversion, validation and update strategies
  - Databinding for Jface Viewers
  - Master / Detail bindings

- Target Platform
  - Definition of development components
  - Creation of target platform definitions
- Migrating Eclipse 3.x applications
  - Running Eclipse 3.x applications on top of Eclipse 4
  - Mixing Eclipse 3.x and Eclipse 4.x components
  - Discussion: Migration path for existing applications

- Definition of own annotations for dependency injection
  - Definition of new annotations
  - Evaluation of new annotations
  - Use cases

- Creating and evaluating extension points
  - Eclipse extensions and extension points
  - Accessing existing extensions
  - Creating and evaluating a new extension point

- The Renderer framework
  - Purpose of the Renderer framework
  - Define your own renderer
  - Outlook: Using an alternative renderer
  - Outlook: Extending the application model

- Best practices and tips & tricks