REMUS
Information Management

Remus – Creation Review

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Communication Channel: eclipse.remus Newsgroup

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Introduction

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Motivation

- Efficient data management and fast access to information becomes more and more important in today‘s information technology
- It needs many different applications to manage different types of information
- More and more data is stored „in the cloud“, which requires reliable tooling to access information while not connected to any remote system without duplicating information (offline availability)
- Missing “searchability” over multiple information repositories
- Today it is still very difficult to exchange data between applications which store information

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Goals

- Tooling for information management
  - Standalone RCP/Set of bundles which provides a complete tooling environment for information management
  - Tools for project management, document management, multimedia and social services
  - Connectors to various remote repositories (e.g. Amazon EC2, Alfresco, Mediawiki, etc)
- Framework for building information-centric Eclipse based applications
  - Different integration levels for building custom applications
  - Remus provides APIs that can be reused in different contexts
    - Approximately 20 different extension points
    - Widget APIs

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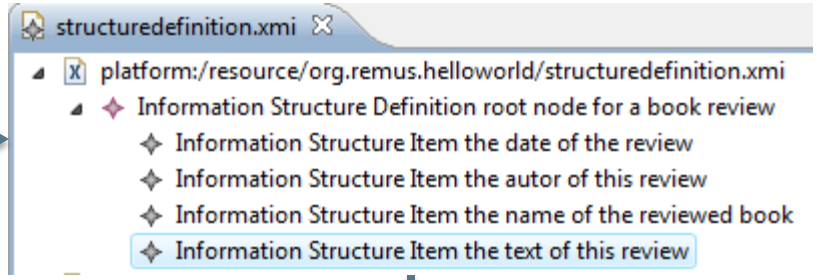
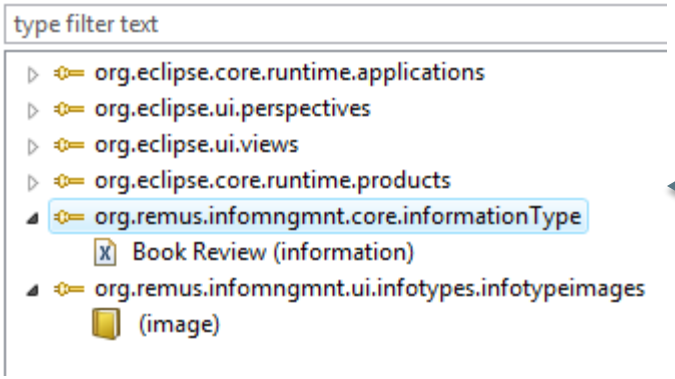
Concepts (1)

- Every information can be described via a structure definition of the data that represents an information
- Example: Informationtype Book

Book
- Author: String
- Year: DateTime
- Title: String
- …





Information type is described declaratively and made consumable via an Extension-Point

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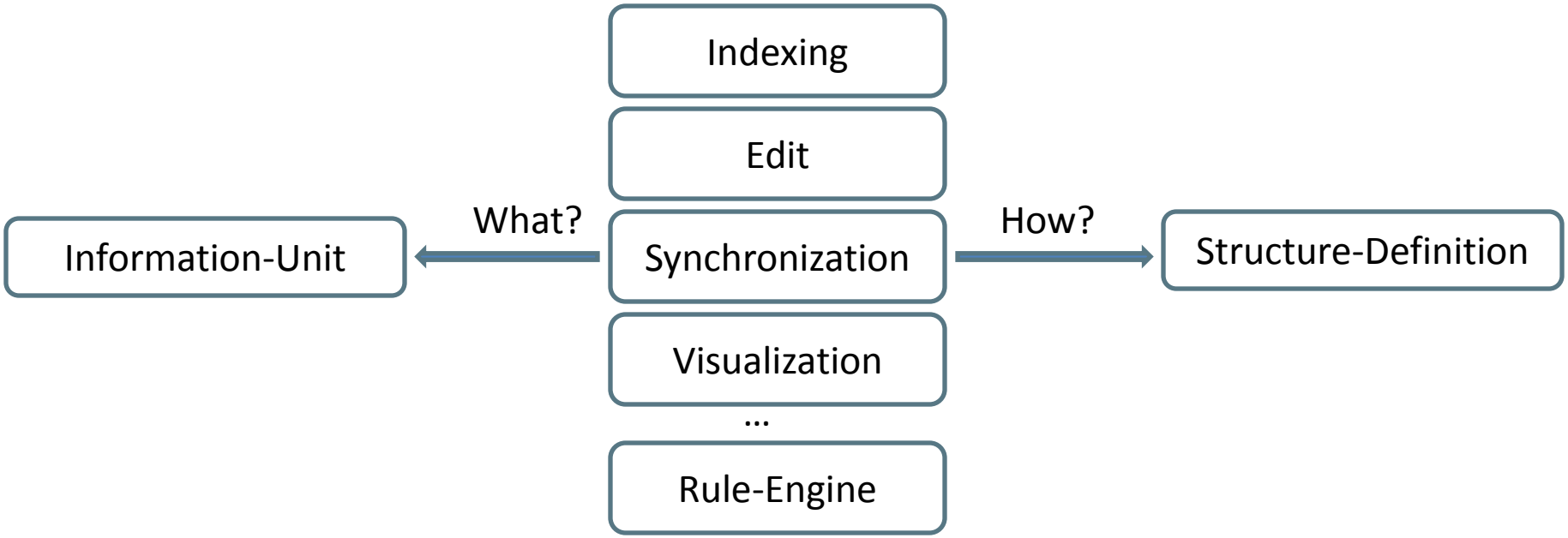
Concepts(2)

- Remus components are working with the information unit as data input and the referenced structure definition
- All components can handle any type of input data as long as the input data can be referenced by a structure definition



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Proposed Components

- Core Components
  - Information Structure Definition
    - Provides a Framework and APIs to define an information structure and manipulating data on a high level API
  - Virtual File system
    - Provides API (based on the Eclipse File System) to create a custom persistence-layer, e.g. for encrypted data
- General UI Components
  - Viewer Component
    - Provides API for visualizing information structures in JFace Viewers including Context-Menus, Drag‘n‘Drop, Decorations, etc
  - Editor Components
    - High Level API for creating User Interfaces based on information structure definition, including a HTML Template Engine for visualizing information structures in an embedded browser

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Proposed Components (2)

- Synchronization Components
  - Framework for synchronizing local data with a remote information repository, including user interfaces for visualizing change sets, updated items, etc.
- Rule Components
  - API for executing custom rules based on user-input (Groovy based). E.g. the user drops a string into the application and can select a rule (predefined or custom) which does something with the input, e.g. creates new data in the application.
- Search Components
  - Bundles to define declaratively which content nodes of an information unit needs to be indexed, API for searching references, etc

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Scope

- Maintain and improve the technology
  - Provide detailed user documentation
    - User scenarios/Screencasts
  - Developer documentation
    - Extension Point Description
    - JavaDoc of Service Interfaces
    - PDE Template Wizards
    - Examples
- Within scope if interest is expressed
  - New information types
    - Especially Information types with attached documents are highly requested
  - New repository connectors
    - Focus on generic connectors
  - RAP compatibility
    - Basic Framework functionalities, no plan to port 100% of all components

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Relationship with other Eclipse Projects

- EMF/EMFT
  - Remus uses a generated EMF Model for manipulating data. All manipulations are executed with the EMF-Edit Framework on an EditingDomain
  - The Synchronization components are using EMF Compare to detect changes between remote and local information structures
  - EMFQuery is used to access the underlying EMF Model
- ECF
  - Remus makes use of the ECF Filetransfer API to download and upload files over several protocols
- BIRT/DTP
  - Remus includes a full BIRT Runtime, a specific ODA Driver to access local data for visualizing them in BIRT Reports and offers an integration of the BIRT Designer.
- Mylyn
  - Remus reuses some UI Components from Mylyn, e.g. the notification window, Date-Widgets and the Screenshot function

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Community Feedback

- Remus already has a growing user community, which is not part of the Eclipse Community
  - We receive consistently positive feedback
  - Users are very interested in document management
  - Surprisingly many downloads for Linux based operating systems.
- Potential Trademark Issues
  - Janet Campbell raised concerns regarding the project name [1]
  - Alternative names are:
    - Rhea Information Management
    - Aenas Information Management

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Committers/Mentors

- Committers
  - Tom Seidel (proposed Project Lead)
    Tom is an independent Software Architect and Developer for Eclipse Technologies with over 6 years experience in building applications based on RCP and OSGi. Prior to this he has worked as technical lead in a developer team which primarily built RCP applications for the medical and pharmacy industry.
  - Andreas Deinlein (proposed committer)
    Andreas serves as Software Architect for Siemens AG, Sector Healthcare where he develops and manages embedded software components for medical devices. He is also an enthusiastic C++ developer and has over 4 years experience in building plugins for the Eclipse Platform.
- Mentors
  - Ed Merks
  - Tom Schindl

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Code Contribution

- Current Project is hosted at sourceforge.net
  - All code is licensed under the Eclipse Public License
  - Initial committers own all copyrights
  - Current bugtracker is JIRA [2]
  - Nightly builds are available via Bamboo Build System [3]
  - Code statistics are available via Ohloh [4]

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Plan

- Releases
  - Current relasese is an unofficial Beta Version
  - 0.1 Release scheduled for Q2 2010
- Plan
  - Milestone release every 3 Month
  - 1.0 scheduled for Q2 2011

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References

- [1] Eclipse Community Forums
  http://www.eclipse.org/forums/index.php?t=msg&th=163766&start=0&
- [2] JIRA System Dashboard
  http://remus-software.org/jira/secure/Dashboard.jspa
- [3] Bamboo Remus Dashboard
  http://remus-software.org/bamboo/
- [4] Remus Information Management – Ohloh
  http://www.ohloh.net/p/remus/analyses/latest