SCA Tools: new & noteworthy

Vincent Zurczak

(EBM WebSourcing)

A large part of the SCA Tools project was implemented in the scope of the SCOrWare project funded by the French Research National Agency (ANR)

SCA Tools

- Sub-project of the Eclipse STP project

  - http://www.eclipse.org/stp/sca/index.php

- The SCA Tools project focuses on tools covering the SCA specifications

  - SCA meta-model

  - Editors (graphical, XML and form)

  - Project utilities (wizards, builder...)

  - Samples

  - Runtime support

- SCA (Service Component Architecture) is a set of specifications proposed by the Open SOA Consortium and which is about to be standardized by the OASIS consortium
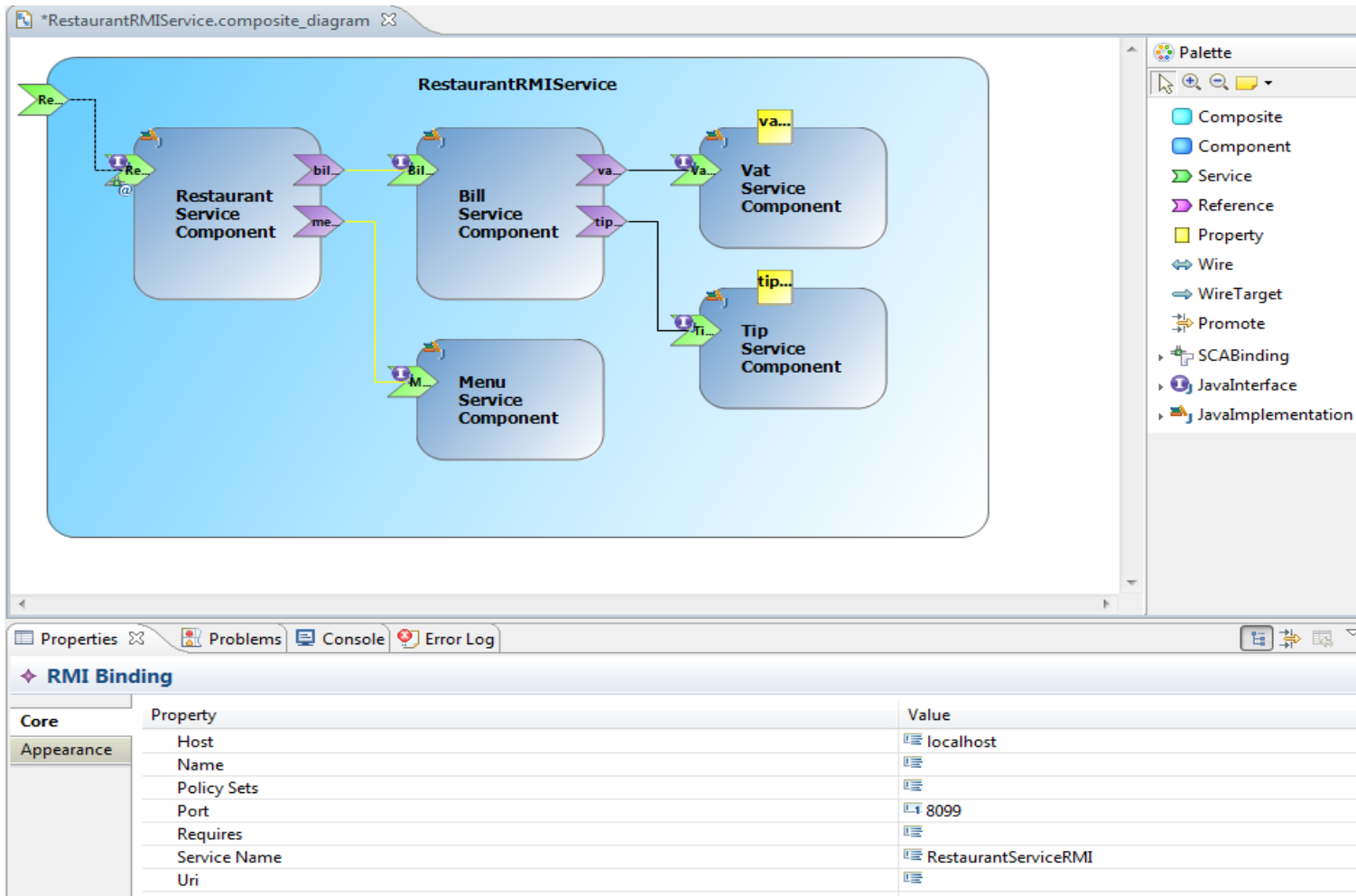
SCA Domain Model

- EMF meta model based on the OSOA specifications of SCA

- Defines additional validation rules

- Extensible model: core + extensions (one per platform)

- Can be used in an Eclipse environment or standalone

- **<u>NEW</u>**
  - ◆ Core model upgrade
  - ◆ Extension upgrades to support
    - ▪ Apache Tuscany 1.4
    - ▪ OW2 FraSCAti 0.5

SCA Composite Designer

- Graphical editor (GMF) to create SCA assembly files
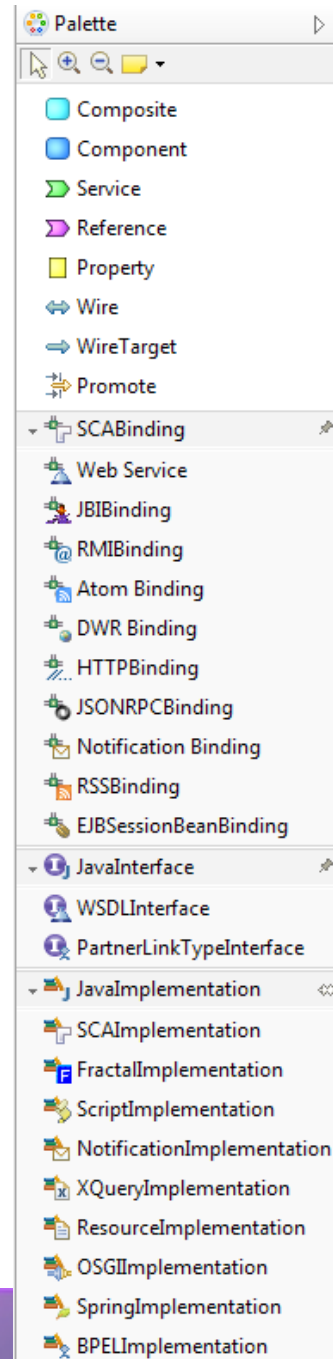- Complies with the version 1.0 of OSOA specifications
- Easily extensible

SCA Composite Designer

- Top-down approach
  - Creation of an SCA graphical representation
  - Generation of model code

- Some features
  - DnD implementations, interfaces, and bindings
  - Extensible: add new bindings, implementations and interfaces
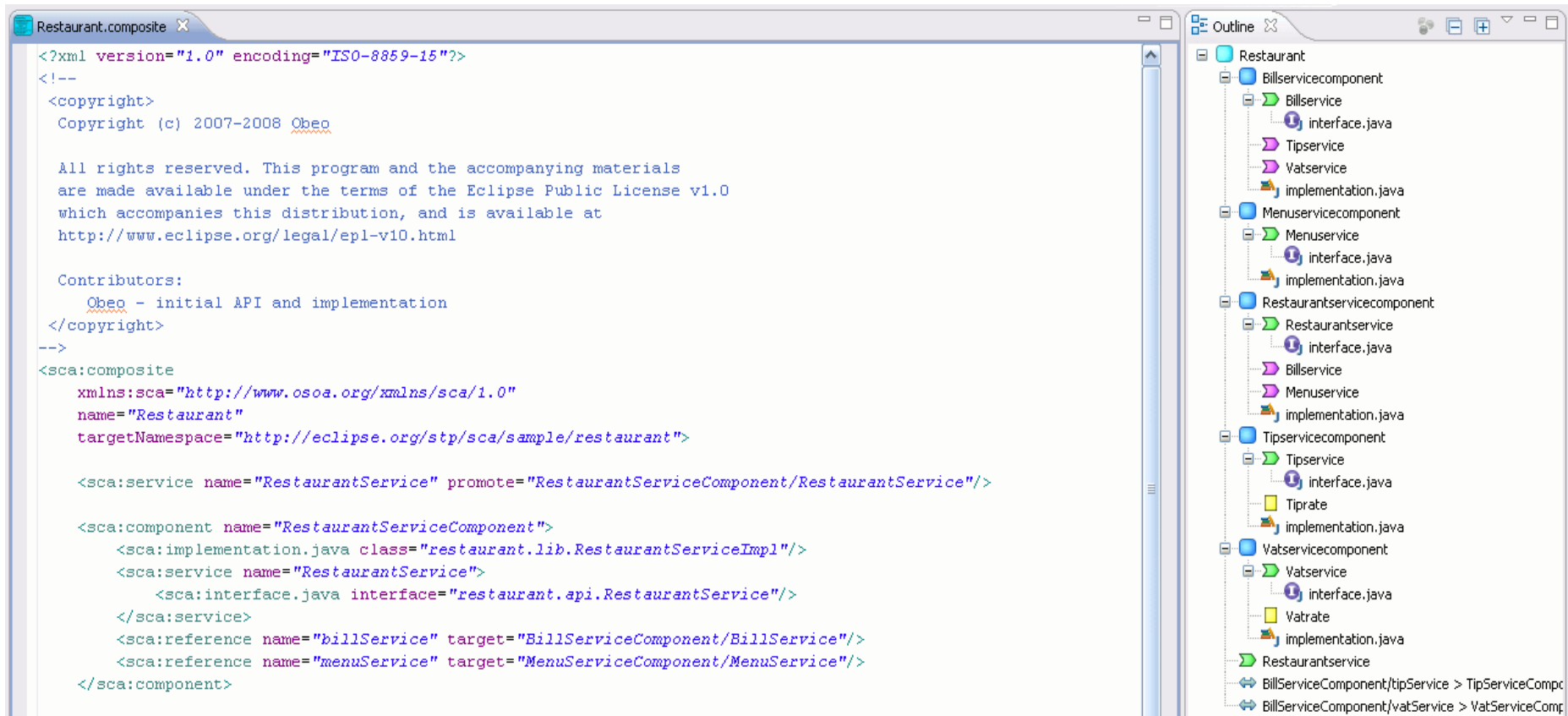 - Navigate to the implementation: link with developer editors
  - Arrange All / Resize

- **NEW**
  - DnD from project and package explorers
  - Create Java interfaces or implementations from the classpath
  - Bottom-up approach
    - Introspection of existing Java code
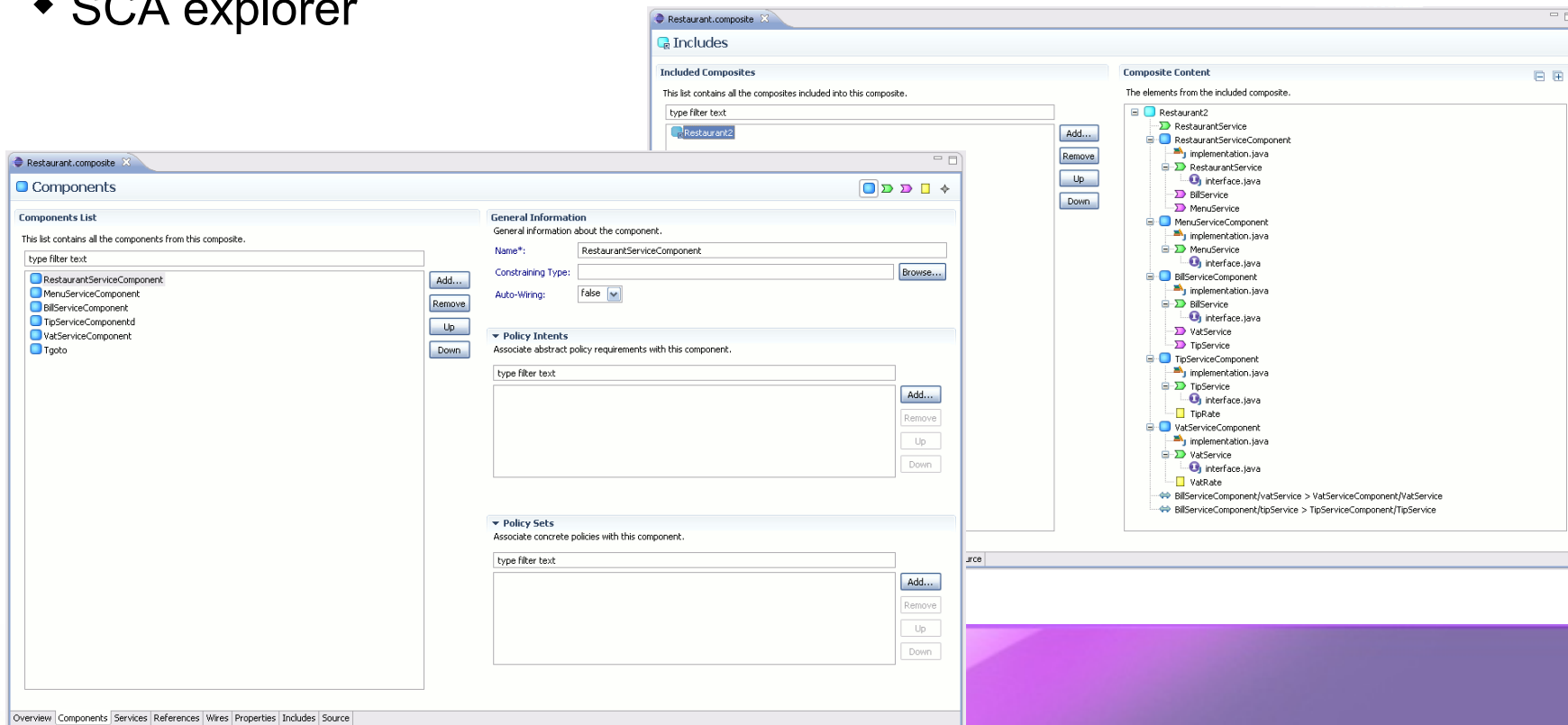   - Generation of an SCA graphical representation

Palette

- Composite
- Component
- Service
- Reference
- Property
- Wire
- WireTarget
- Promote

SCABinding
- Web Service
- JBIBinding
- RMIBinding
- Atom Binding
- DWR Binding
- HTTPBinding
- JSONRPCBinding
- Notification Binding
- RSSBinding
- EJBSessionBeanBinding

JavaInterface
- WSDLInterface
- PartnerLinkTypeInterface

JavaImplementation
- SCAImplementation
- FractalImplementation
- ScriptImplementation
- NotificationImplementation
- XQueryImplementation
- ResourceImplementation
- OSGIImplementation
- SpringImplementation
- BPELImplementation

5

SCA XML editor

- Customization of the WTP XML editor for *SCA XML* files
  - Inherited features: syntax highlighting, formatting, ...
  - Auto-completion for elements and attributes (names and values)
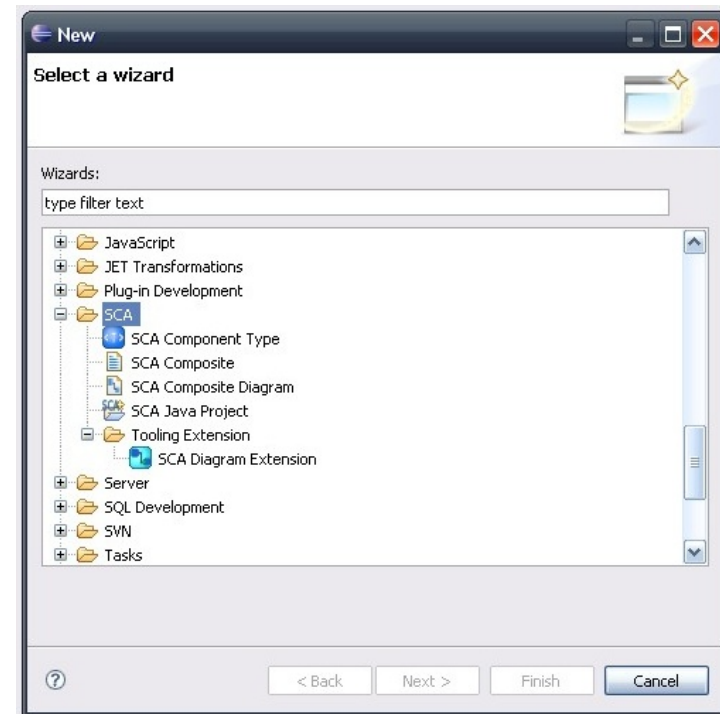 - Preference page to add new bindings, implementations & interfaces

NEW: SCA Form Editor

- Editor with a web-interface for SCA XML artifacts

- Cover all the XML aspects of SCA
  - Manage elements as lists and filter by name
  - Manage complex properties
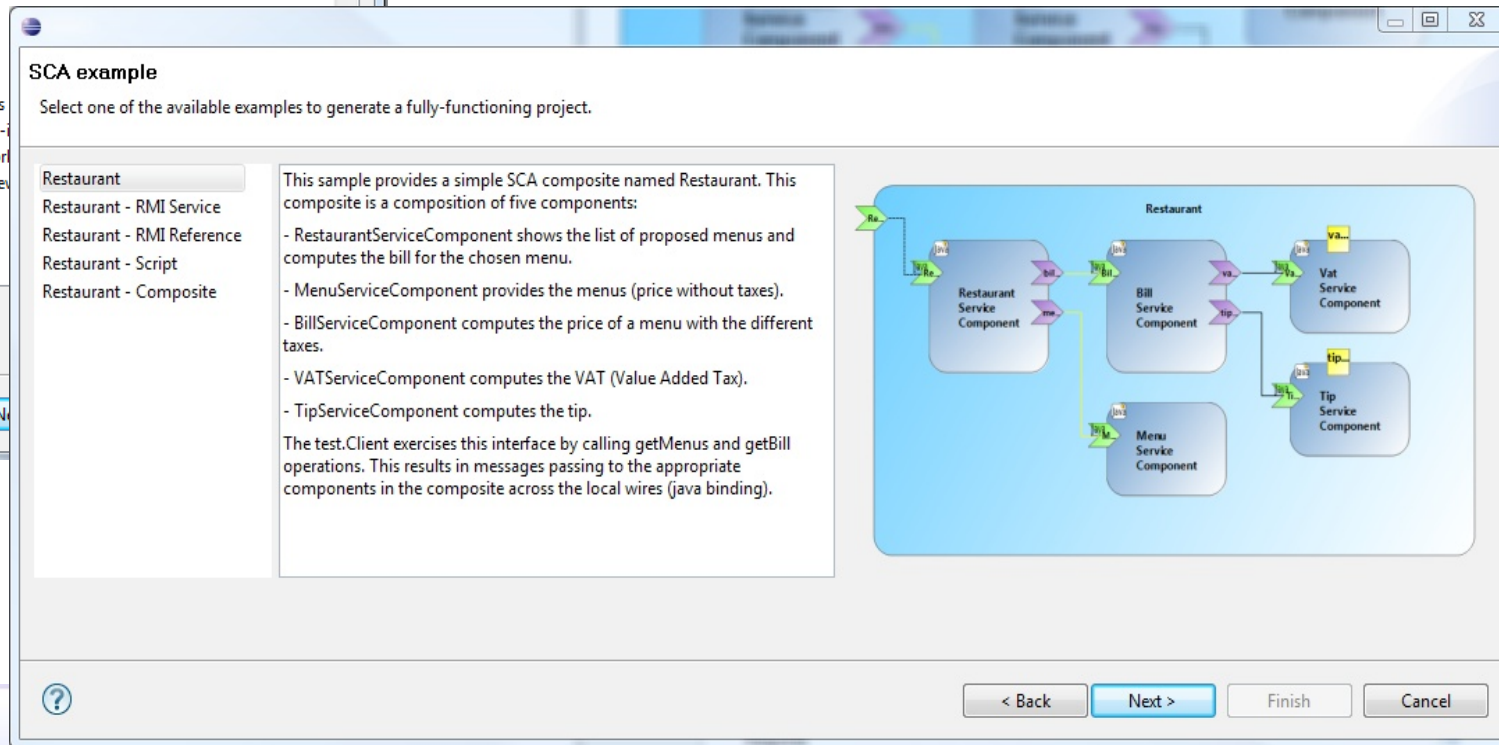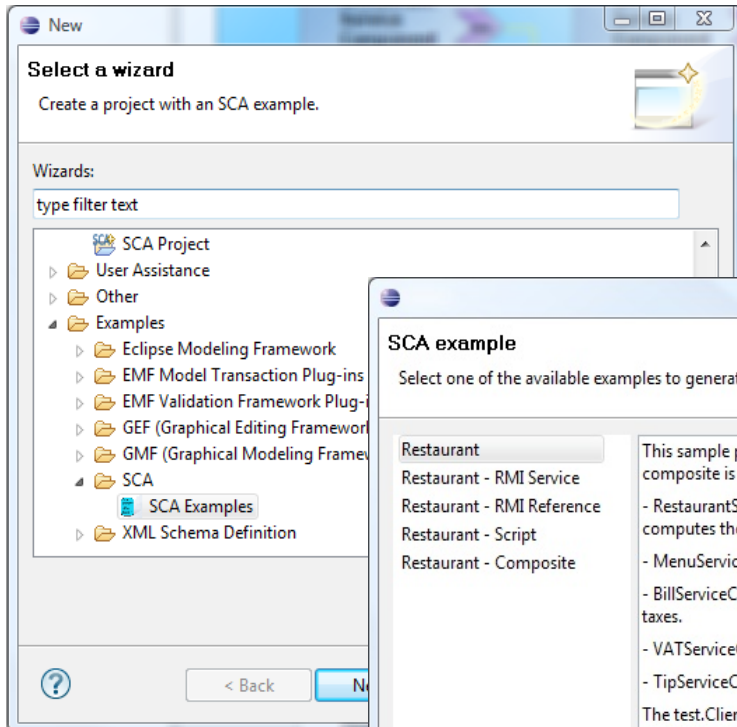 - Handle constraining types, component types
  - SCA explorer

NEW: Project utilities

- Focus on Java implementations

- Creation wizards refactored
  - Create a composite / composite diagram
  - Create SCA Java projects
  - Create a component type

- SCA Java Annotations available

- SCA Builder
  - Validate the SCA assembly
  - Validate Java artifacts
  - Add error markers (partially)

- Links with WSDL tools
  - Referenced web services
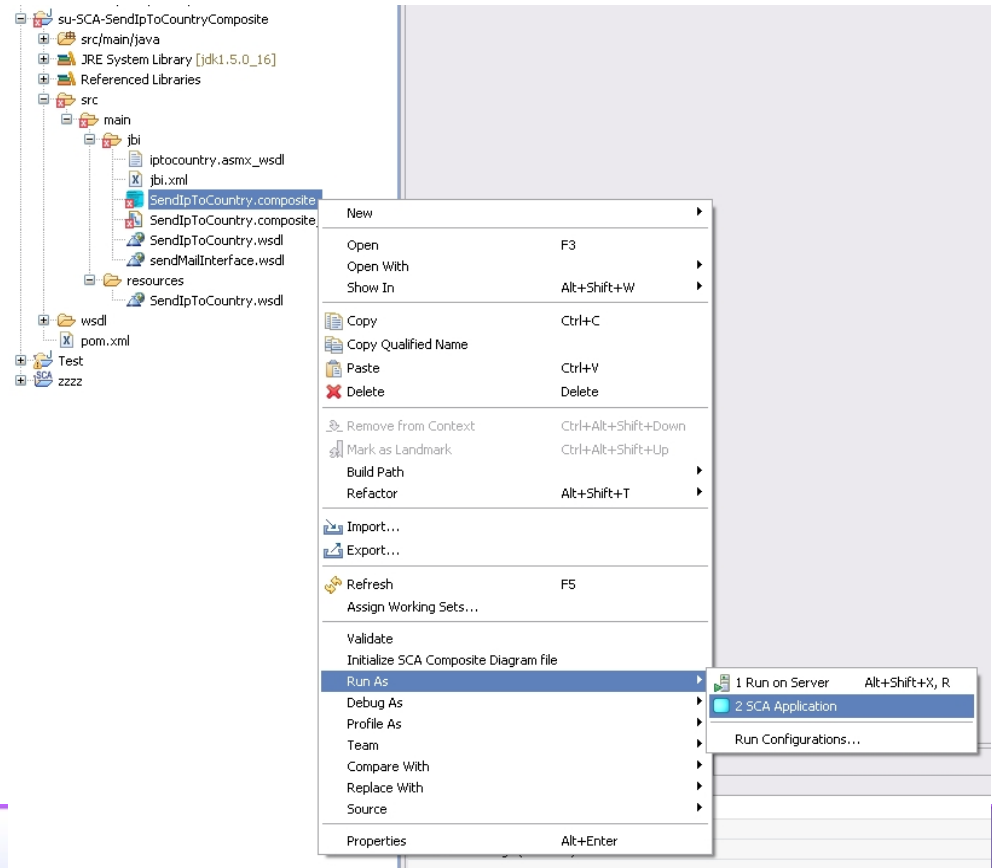
SCA samples

- A set of fully-functioning SCA projects

NEW: runtime support (incubating)

- ## Definition of SCA launch configurations
  - Avoid dependencies between the project and the runtime

- ## Deploy SCA Java projects on platforms from Eclipse

- ## First targets
  - Apache Tuscany 1.4
  - OW2 FraSCAti 1.0

- ## Long-term targets
  - Fabric3
  - Newton
  - OW2 PEtALS
  - Eclipse Swordfish

Roadmap

- June 2008: SCA Tools 1.0.0 (Ganymede)

- April-May 2009
  - Java introspection
  - SCA Form editor completed
  - Runtime support
  - Online tutorials

- June 2009: SCA Tools 2.0.0 (Galileo)

- Summer 2009
  - Reinforce the links between SCA Tools and the platform communities
    - Tuscany, FraSCAti, Fabric3, Newton, SwordFish

  - Model update
  - SCA Form editor extensions
  - SCA Builder: error markers visible in all the editors

More information

- SCA website
  - http://www.eclipse.org/stp/sca/index.php

- SCA wiki
  - http://wiki.eclipse.org/STP/SCA_Component

- SCA newsgroup
  - news://news.eclipse.org/eclipse.stp.sca-tools
  - Starting point for questions

- SCA Bugzilla
  - Review and create Bugzilla entries

- SCA SVN repository
  - http://dev.eclipse.org/svnroot/stp/org.eclipse.stp.sca-tools/org.eclipse.stp.sca/

- Tutorial
  - http://wiki.eclipse.org/STP/SCA_Component/SCA_First_Steps_With_Composite_Designer

Questions?