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Eclipse Kepler

agenda

- What are the aims of Kepler
- Defining a collaboration model
- Project facet extensions
- Version facet extensions
- How is the model defined?
- Model adaptors
- Next steps

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what are the aims of Eclipse Kepler

what are the aims of Kepler

- To build the concept of a *community* or *collaboration* model
- To service a loosely coupled collaboration approach
- To integrate common collaboration technologies'
  - artifact repositories
  - issue tracking
  - build servers
  - instant message solutions (IRC/IM)
  - mailing lists

what are the aims of Kepler

- To develop in a open, transparent fashion at the Eclipse Software Foundation
- To leverage other Eclipse projects
  - Building/Assembly through Buckminster
  - Issue tracking through Mylyn
  - Source Control Management integration Eclipse SCM
  - On-line collaboration through Corona
  - ECF for communication protocols
- To bring new technologies into Eclipse (Maven)

what are the aims of Kepler

- Kepler should:
  - Gather information for collaboration
  - Adapt to existing sources of meta-data
  - Provide links out to existing tooling to work with collaboration technologies (Issue tracking etc)
  - Provide a format for searching and finding projects
  - Provide collaboration tooling integration where is it missing
    - Mailing lists, Forums etc

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defining a collaboration model

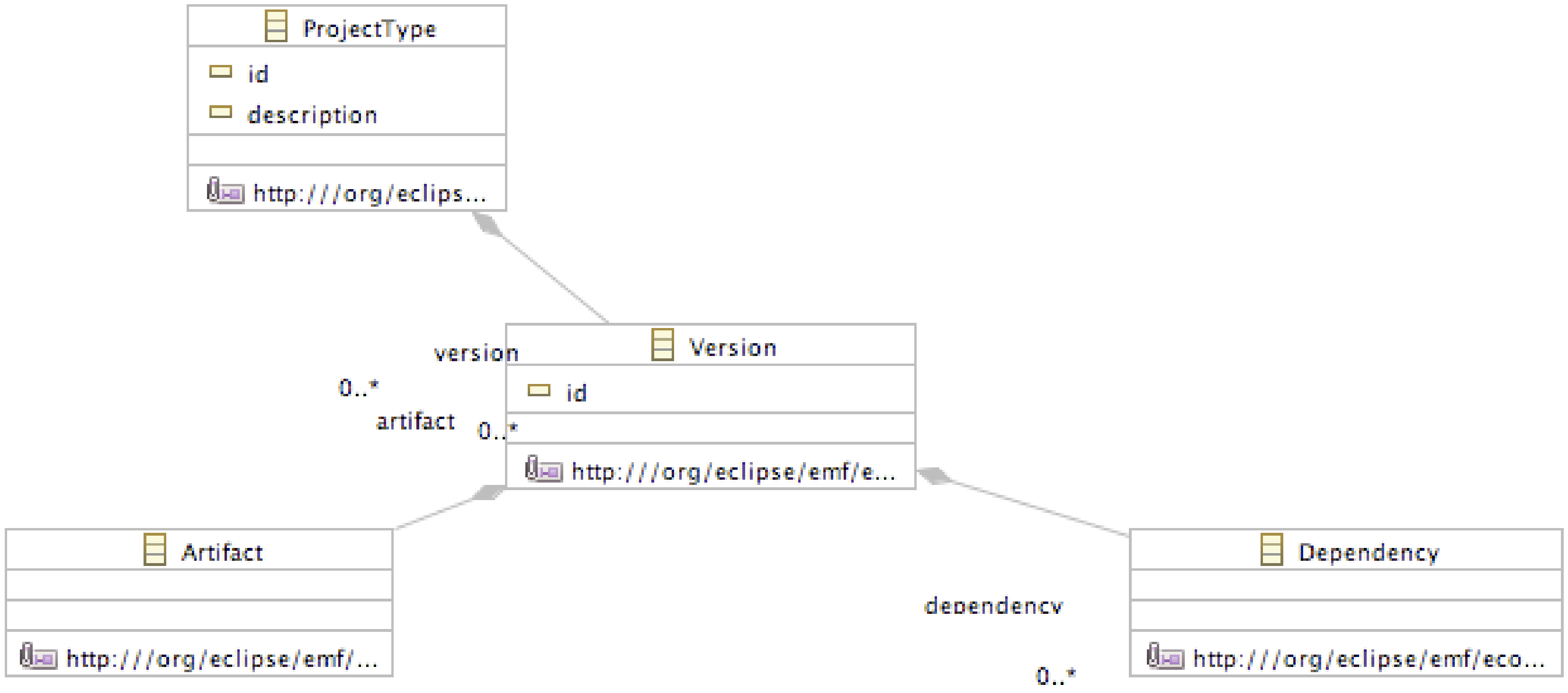
defining a collaboration model

- We need very basic concepts to start collaboration
  - What is a project?
  - What is a version?
  - Does the project have dependencies?
  - What artifact(s) does a project produce that can be used?
- Beyond this core of information projects can vary wildly in there content

defining a collaboration model

- How does this information help?
  - It provides the basis to identify a project
  - It understands the concept of slow moving dimensions on collaboration (time, releases, versions)
  - It accepts that there is a product that can be consumed from the project
  - It can be created from a number of sources
  - It is not specific to any build tool or language

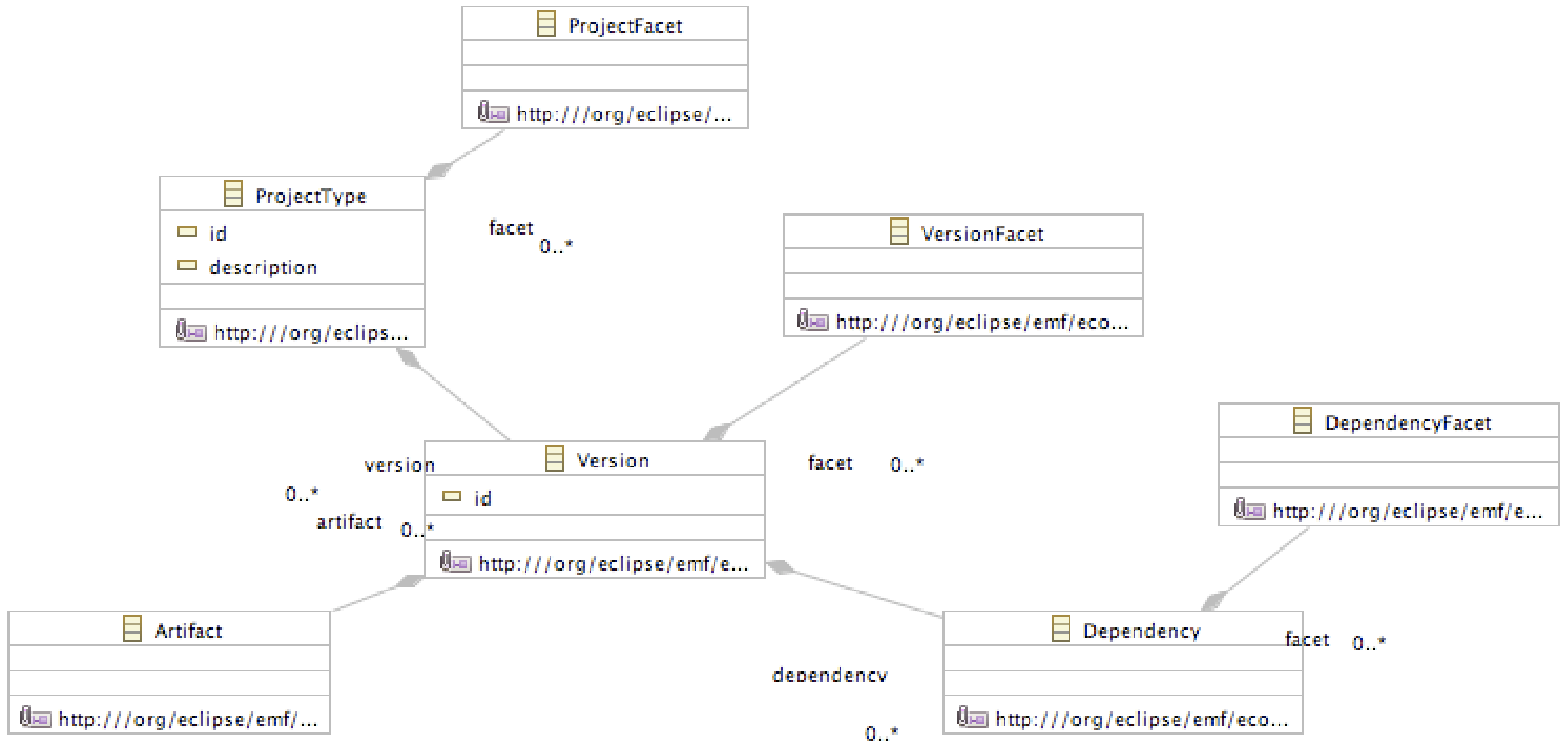
defining a collaboration model



defining a collaboration model

- Extending the collaboration model
  - The *Core* model provides the basis for extension
  - Extensions are provided at three places:
    - ProjectFacet - 0 or more project facets
    - VersionFacet - 0 or more version facets
    - DependencyFacet - 0 or more dependency facets
  - The model defines all facets as *abstract* types
  - Also the dependency and artifact types are *abstract*
    - Dependencies/Artifacts are by their nature not concrete
    - This provides freedom in the core model for supporting the concept of dependency without constraining it

defining a collaboration model



defining a collaboration model

```
public interface ProjectType extends EObject {

        String getId();

        void setId(String value);

        String getDescription();

        void setDescription(String value);

        EList<Version> getVersion();

        EList<ProjectFacet> getFacet();

}
```

defining a collaboration model

```
public interface Version extends EObject {

        void setId(String value);

        EList<VersionFacet> getFacet();

        EList<Dependency> getDependency();

        EList<Artifact> getArtifact();

}
```

defining a collaboration model

- Kepler will work to provide a set of common implementations
  - ProjectFacets
  - VersionFacets
  - Dependency types
  - Artifact types
- Other facets will be able to register themselves
- A few examples of the common implementations are .....

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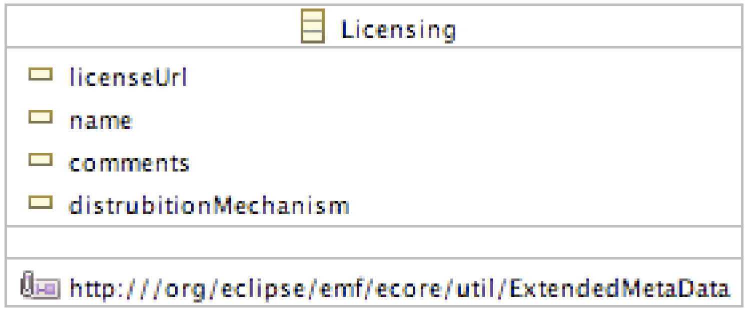
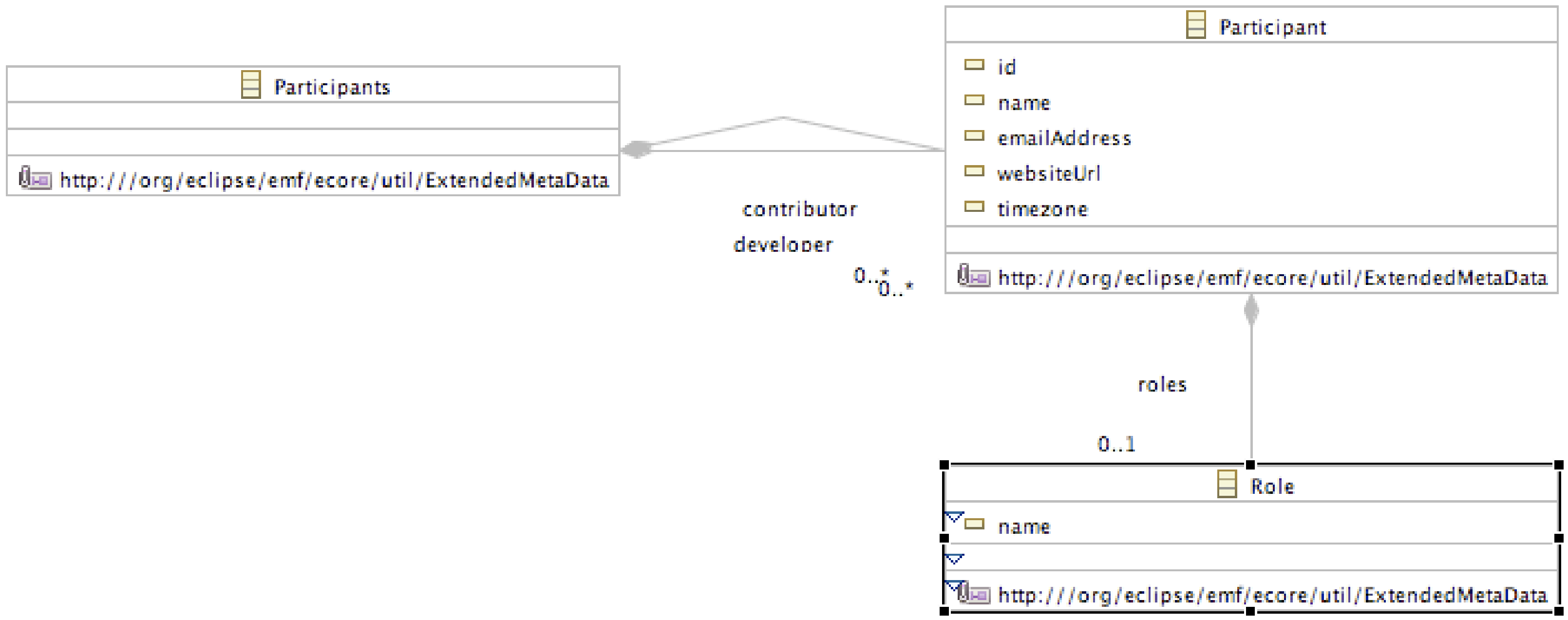
project facet extensions

project facet extensions



project facet extensions


Participants
http:///org/eclipse/emf/ecore/util/ExtendedMetaData
Participant
id
name
emailAddress
websiteUrl
timezone
http:///org/eclipse/emf/ecore/util/ExtendedMetaData
contributor
developer
0..*
0..*
roles
0..1
Role
name
http:///org/eclipse/emf/ecore/util/ExtendedMetaData

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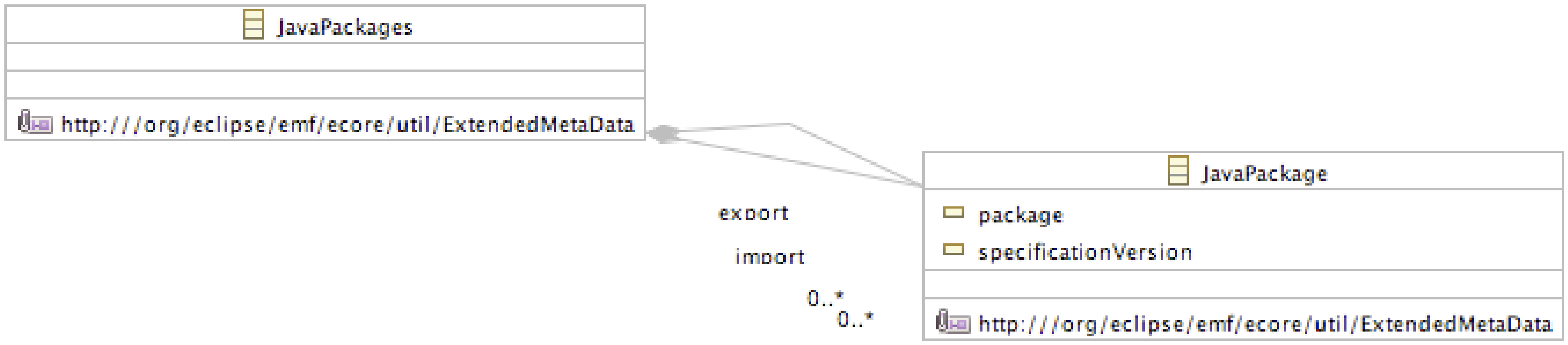
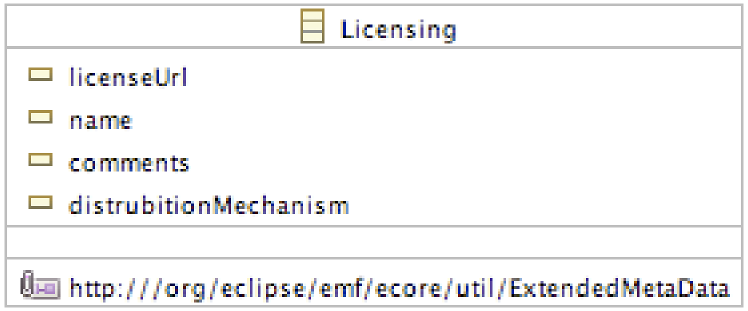
version facet extensions

version facets



JavaPackages
http:///org/eclipse/emf/ecore/util/ExtendedMetaData
export
import
0..*
0..*
JavaPackage
package
specificationVersion
http:///org/eclipse/emf/ecore/util/ExtendedMetaData

version facets



Licensing

licenseUrl

name

comments

distrubitionMechanism

http:///org/eclipse/emf/ecore/util/ExtendedMetaData

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how is the model defined?

how is the model defined

- The collaboration model is defined as XSD’s
- Is is handled and leveraged through the Eclipse EMF tooling
- An EMF model is generated from the XSD’s that define the core schema
  - We also include the common extensions along with the schema
  - We generate standard EMF code to represent the model

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model adaptors

model adaptors

- Kepler will provide Model Adaptors
  - These will provide a way to source meta-data from projects into the collaboration model
  - They would be bi-directional
  - They would provide a list of the facet types that they support
  - This would also allow more than one source to be found in a project

model adaptors

- Consider a PDE model adaptor
  - Would support the base of the core model (project id, version if defined in MANIFEST.MF)
  - Would support a source locations extensions (.classpath)
  - Would support an understanding of dependencies (.classpath)
  - Would support an understanding of OSGi imports/ exports
- Therefore it would support those facet types

model adaptors

- Consider a Maven model adaptor
  - Would support the base of the core model (pom.xml)
  - Would support a source locations extensions (pom.xml)
  - Would support an understanding of dependencies (pom.xml)
  - Would support an understanding of licensing (if in the pom.xml)
  - Would support other facets (based on pom.xml)
- Therefore it would support those facet types

the collaboration model

```
<?xml version="1.0" encoding="UTF-8"?>
<core:projectType xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:community="http://www.eclipse.org/kepler/schema/project/facet/community"
    xmlns:core="http://www.eclipse.org/kepler/schema/project/core" xmlns:licensing="http://
www.eclipse.org/kepler/schema/project/version/facet/licensing"
    xmlns:organization="http://www.eclipse.org/kepler/schema/project/facet/organization"
    xmlns:participants="http://www.eclipse.org/kepler/schema/project/facet/participants"
    xmlns:project="http://www.eclipse.org/kepler/schema/dependency/project">
  <core:id>velocity.velocity</core:id>
  <core:description>Velocity is a Java-based template engine. It permits anyone to use the
    simple yet powerful template language to reference objects defined in Java
    code.</core:description>
  <core:version>
    <core:id>1.4</core:id>
    <core:facet xsi:type="licensing:licensing">
      <licensing:name>The Apache Software License, Version 2.0</licensing:name>
      <licensing:distrubitionMechanism>repo</licensing:distrubitionMechanism>
    </core:facet>
    <core:dependency xsi:type="project:runtimeDependency">
      <project:projectId>velocity.velocity-dep</project:projectId>
      <project:versionId>1.4</project:versionId>
    </core:dependency>
  </core:version>
  <core:facet xsi:type="community:community">
    <community:mailingList>
      <community:name>Maven User List</community:name>
      <community:unsubscribeEmailAddress>velocity-user-unsubscribe@jakarta.apache.org</
community:unsubscribeEmailAddress>
```