eclipsecon Europe 2013

EMFacade your API

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Get an Existing Java API into the Eclipse World

(Third party) Application

Java API

eclipse
EMF is Powerful!

- Notification mechanism
- Serialization in XMI
- Code Generation
- Generating an Editor
- Adapter classes for viewing and editing
- Undo/Redo functionality
Additional Frameworks Make it Even More Powerful
How Do We Get All That Cool Stuff for Existing APIs?
Sources for Ecore Models

- XMI
- UML
- Ecore
- Annotated Java

Java API

Diagram showing relationships between XMI, UML, Ecore, Annotated Java, and Java API.
Creating an EMF Facade
How Does an EMF Facade Look Like?

code snippet:

```java
public class A2E_PersonImpl extends MinimalEObjectImpl.Container implements A2E_Person {

    protected Person originalObject = null;

    public Person getOriginalObject() {
        return originalObject;
    }

    public void setOriginalObject(Person newOriginalObject) {
        originalObject = newOriginalObject;
        /* Notify */
    }

    public int getAge() {
        return originalObject.getAge();
    }

    public void setAge(int newAge) {
        originalObject.setAge(newAge);
        /* Notify */
    }

    public void work(){
        originalObject.work();
    }
}
```
Automatically Generate the Facade

1. Analyzing API via Java Reflection
2. Generate Ecore Model für API
3. Generate Java Code with EMF
Challenges on the Way
Let’s Take a Look at an Example API and its EMF Facade...
Concrete Application Areas

Create a **reporting** mechanism with BIRT

Use Eclipse **code generation** frameworks

**Model to Model** transformations to standardized models like UML2

**Visualization** of APIs by creating graphical editors

... and many more!
Thank you for your attention!

Time for questions, discussions and comments