

Medany Platform

Industrial usage of EMF, OAW, eRCP
and Eclipse Platforms

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Agenda

- Medany platform
 - ▶ Initial Needs, scope
- Eclipse benefits
 - ▶ Architecture : platforms
 - ▶ EMF, eRCP, OAW, ...
- MDA Approach
 - ▶ Metamodels, Generators, Studio
- Demo : Using the tools
 - ▶ Medany model
 - ▶ Generation

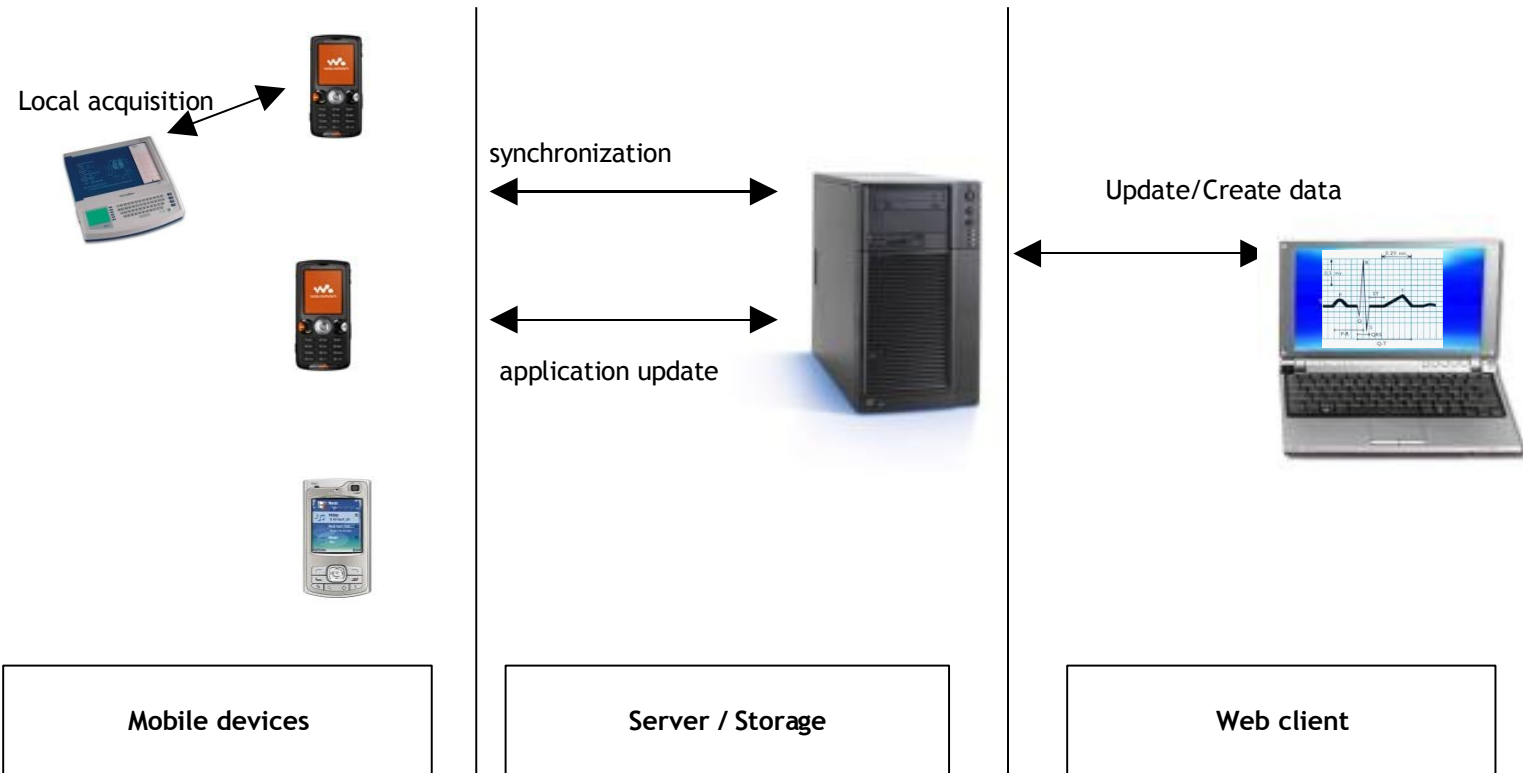
Initial Needs

- Acquiring data on mobile devices :
 - ▶ texts, numerics, multimedia (pictures, sounds...)
 - ▶ external devices (glucometer, sensors...)
- Synchronizing these data on a server
- Notifying actors : SMS, Mail, ...
- Having applications to access to data (web...)

Initial Constraints

- Data security :
 - ▶ Access restrictions (Medical data, global data...)
- Small bandwidth
- Simplicity
 - ▶ usage : for nurses, doctors...
 - ▶ update : interfacing with other devices must be easy.
 - ▶ synchronization : automatic, two ways, disconnection

Medany Applications



Medany Scope

- Runtimes based on eclipse components
 - ▶ implement initial needs
 - pda acquisition, synchronization, notification, eUpdate
- Tools to generate application(s) based on runtimes
 - ▶ model editors for application
 - ▶ projects, wizards, launch configurations
 - ▶ a set of generators based on model

Runtime Platforms

- Eclipse Architecture is used to define business platforms
- Platform define extension points
 - ▶ specific to business needs : device acquisition
- Platform is then extended to build the final application
 - ▶ glucometer device extension to get glucometer data
- Business Platform can extend another platforms :
 - ▶ RCP
 - ▶ eRCP

Runtime platform - Device Side

Medany Device Application

- Entity definition
- Drivers contributions
- Application logic

Medany Device Platform

- Cards management (navigation, edit)
- Binary acquisition
- Synchronization
- Rights management
- Application structure

Eclipse eRCP

- eSWT
- eUpdate
- eWorkbench

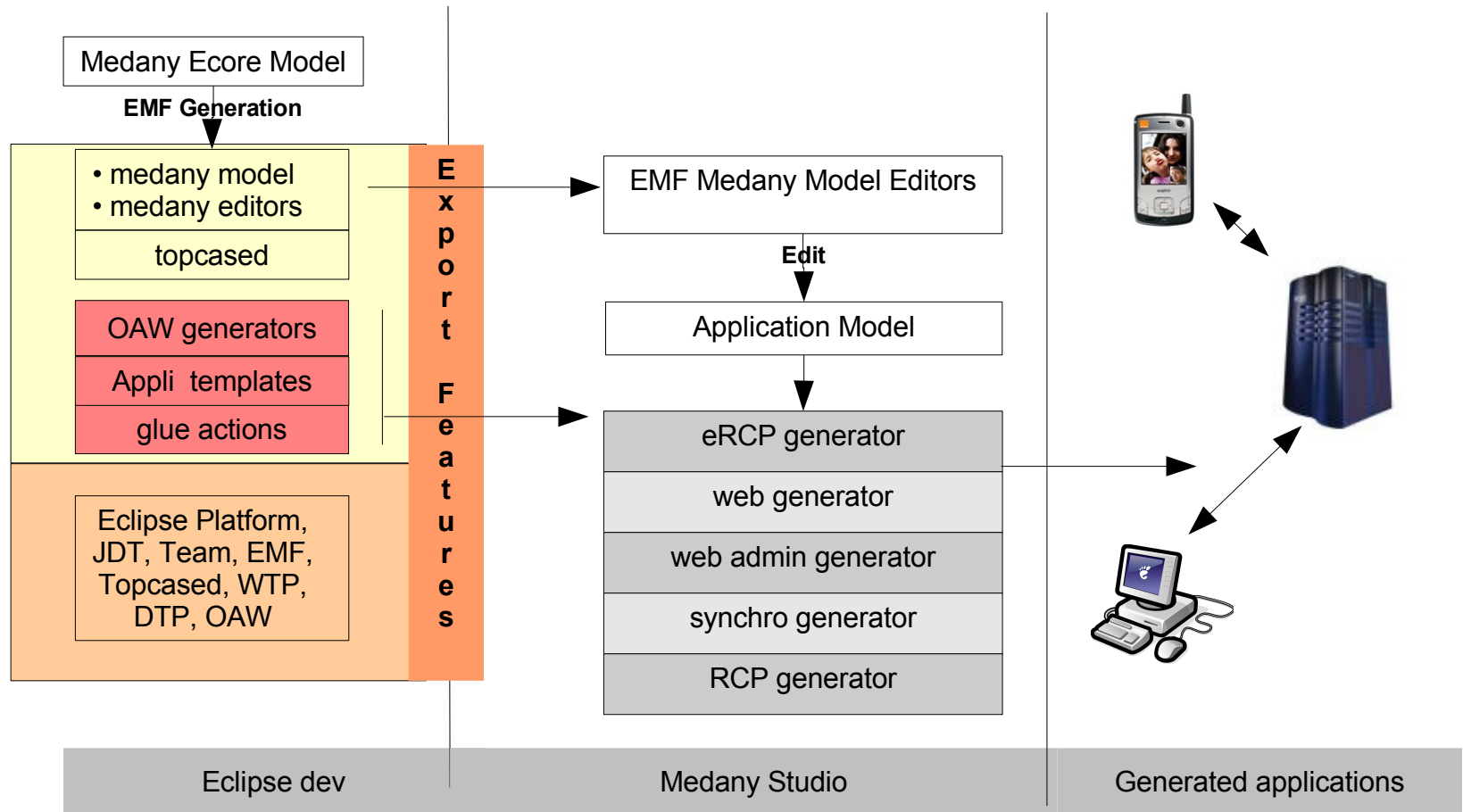
Eclipse OSGi

- Plugins architecture
- Extension points

Medany Tools

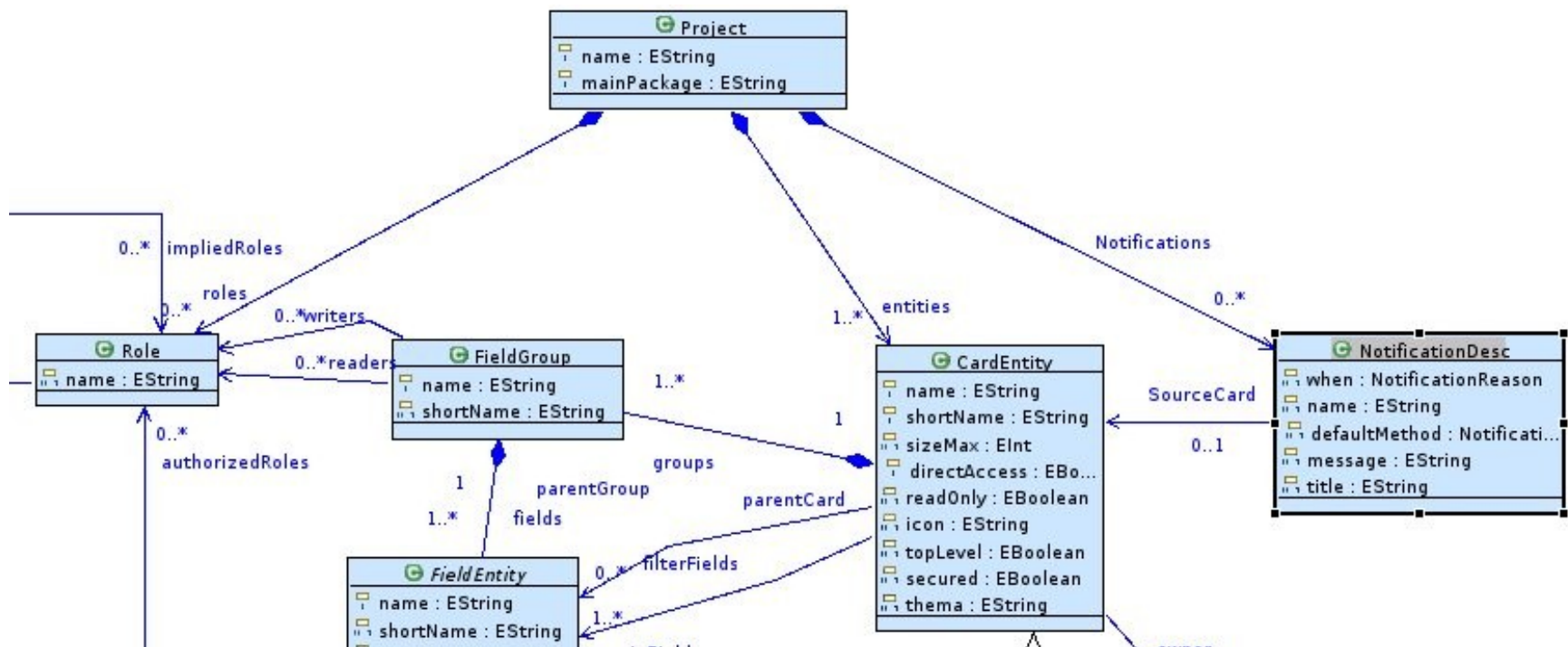
- Based on Eclipse IDE.
- Defined in specific plugins which depends on
 - ▶ EMF
 - ▶ OpenArchitectureWare
- Used with other projects :
 - ▶ DTP for database management
 - ▶ WTP for web server management

Medany Tools Picture



Medany Ecore Model

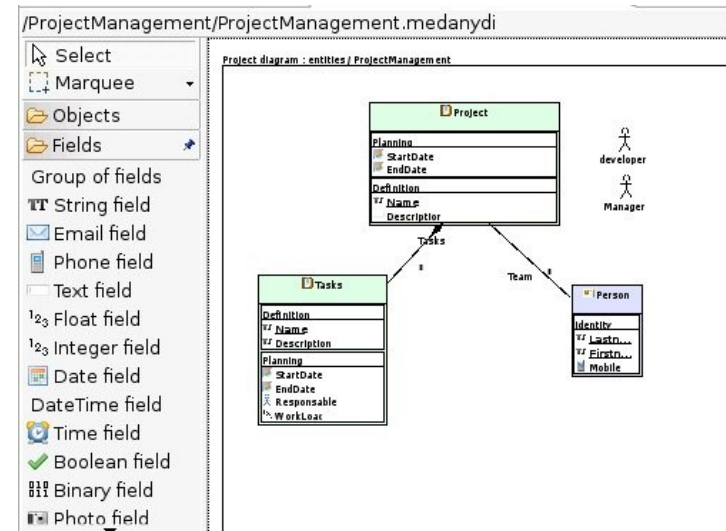
- Medany application is defined in an Ecore Model
- This model designs the initial needs



Medany Application Model Editors

Resource Set

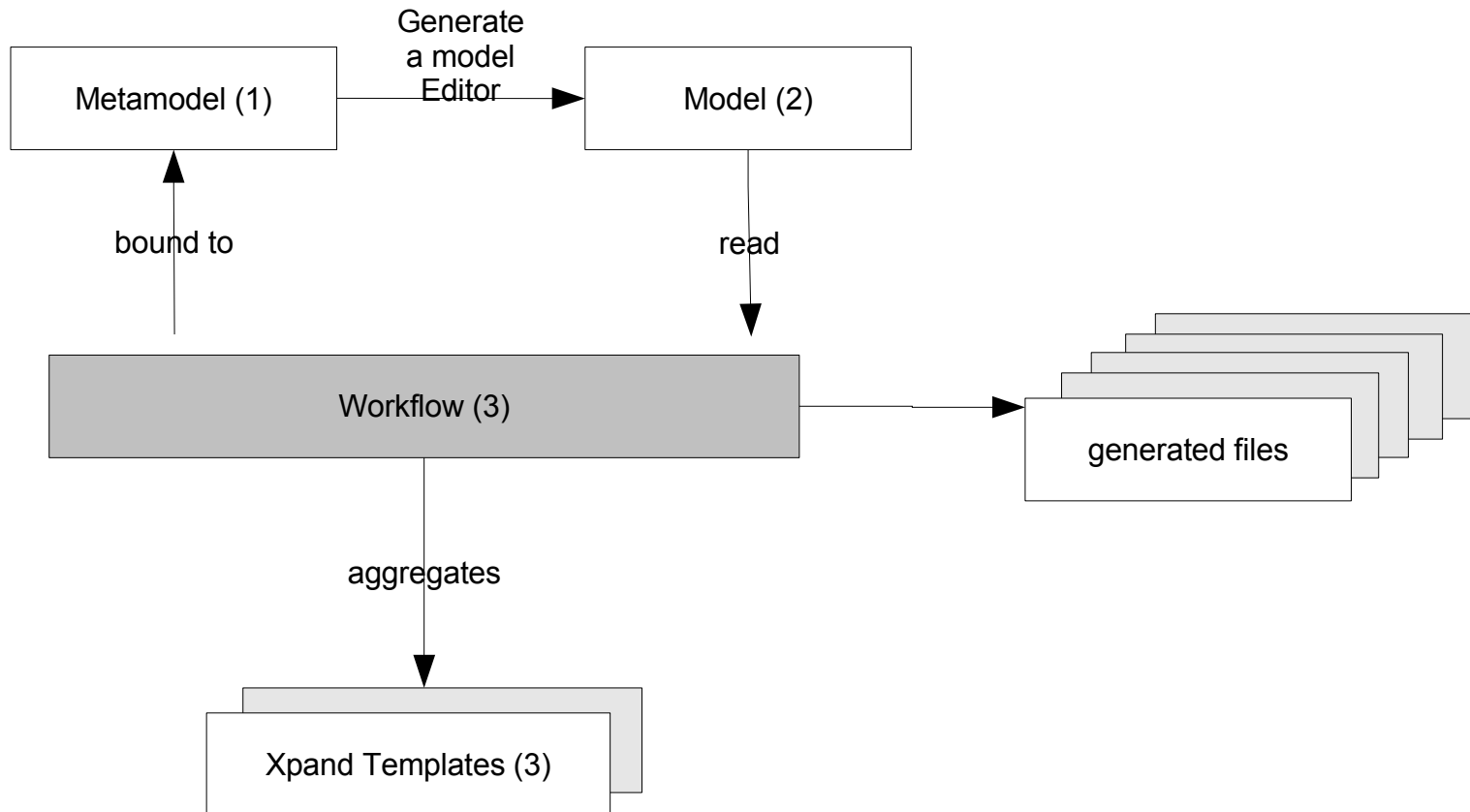
- platform:/resource/ProjectManagement/ProjectManagement.medany
 - Project entities
 - Card Entity Project(PRJ)
 - Card Entity Tasks(TSK)
 - Field Group Definition Access : NOT DEFINED
 - TSK.Name (String Field)
 - TSK.Description (String Field)
 - Field Group Planning Access : NOT DEFINED
 - Actor Person
 - Role Manager
 - Role developer



Eclipse technologies

- Open Architectureware
 - ▶ used to generate applications
 - ▶ strong concepts :
 - Xpand template language
 - polymorphic language bound to model
 - aspect programming
 - ▶ lots of tools :
 - editors
 - debugger

OAW Principle.



Demonstration

- Look at meta model
 - Look at model
 - Generate 4 applications
 - Configure web servers
 - Launch servers and device application
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- Look at generators