

Final Assignment

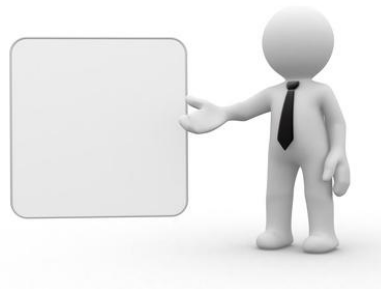
Early Aspects & Aspect-Oriented Requirements Engineering

Eng. Alejandro Rago
PhD. Claudia Marcos



Agenda

- AOSD & early aspects
- Objectives
- Case studies
- Activities & deliverables
- Tool support
 - EAMiner
 - SAET
 - REAssistant





AOSD & early aspects

- Why is AOSD important?
- Why are Early Aspects useful?
- How do we systematically apply EA to legacy documentation?



Objectives

- Learn and apply Aspect-Oriented Requirement Engineering in practice
- Take advantage of (semi-)automated tool support for performing AORE activities
- Understand how EAs help to clarify and better understand software requirements

Case studies

- HWS – Health Watcher System [Greenwood]
 - Distributed web information system
 - Allow citizens to register complaints, read health notices, and make queries regarding health issues
 - Employees can administer the system's data
- CRS – Course Registration System [IBM]
 - Intranet distributed system, replacement of old educational institution system
 - Students can apply to courses and obtain grades, and professors can add new courses and report grades

Case studies

Group	Members	Case studies
1	Baisi, Sabrina; Rucker, Adán; Armella, Juan Marcos; Armentano, Miguel; Arbeo, Guillermo	HWS
3	Cordischi, Martin; Marconato, Andres	CRS
5	Berra, Nicolás; Peleritti, Gonzalo; Fernández, Emanuel	HWS
7	Vega, Florencia; Juarez, Fabián	CRS
9	Herrada, Alicia; Mensi, Rosario; Tommasel, Antonela; Torres, Cristian; Carliski, Santiago	HWS
11	Crisanto, Rodrigo	CRS

Activities and Deliverables

Stage 1
Identify
crosscutting
concerns

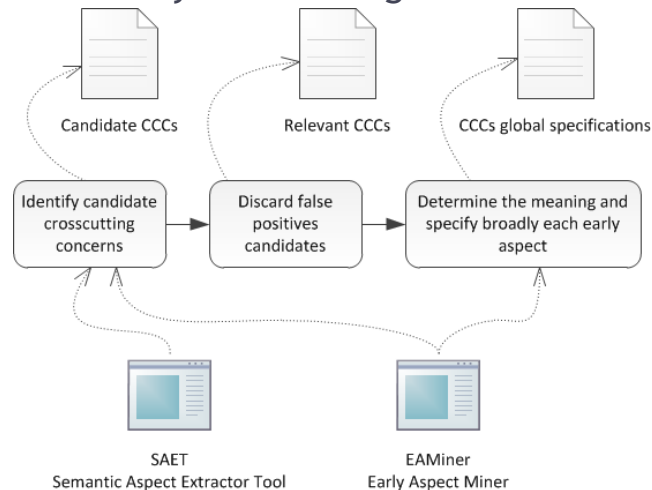
- Candidate CCC
- Relevant CCC
- CCC descriptions

Stage 2
Modularize and
specify
crosscutting
concerns

- RCT
- Join Points
- Composition rules
- Realizations

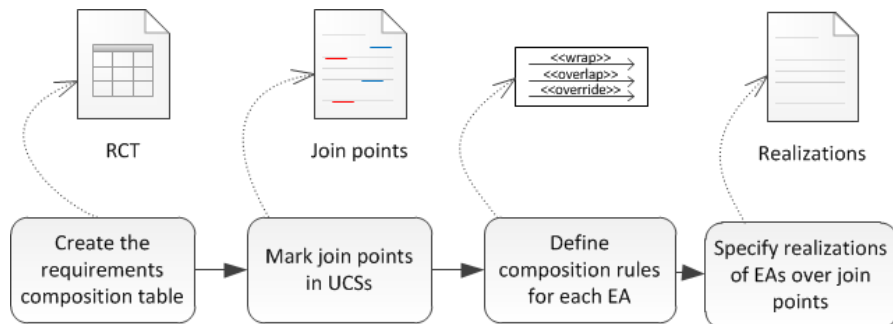
Activities and Deliverables

Stage 1 - Identify crosscutting concerns



Activities and Deliverables

Stage 2 - Identify crosscutting concerns



One more thing...

- Analyze time gains of using tool support in AORE activities
- Discuss influences of early aspects over qualities of the system



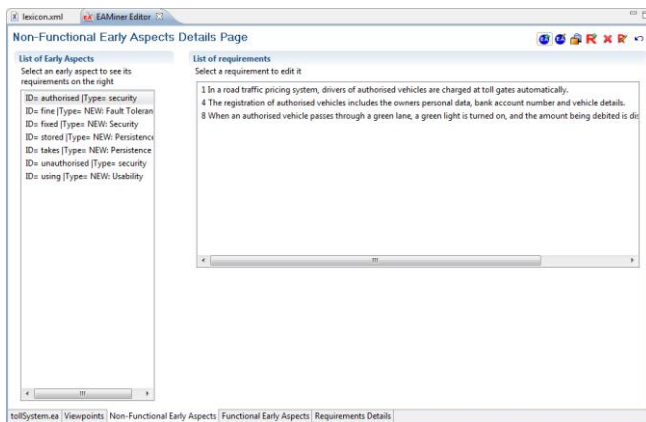
Tool support

EAMiner - Early Aspect Miner

- Performs a lexical and syntactical analysis of textual requirements
- Detects semantic classes and associate them to non-functional requirement catalogs for suggesting early aspects
- In addition, it also detects functional concerns and viewpoints

Tool support

EAMiner - Early Aspect Miner



DEMO
TIME



Tool support

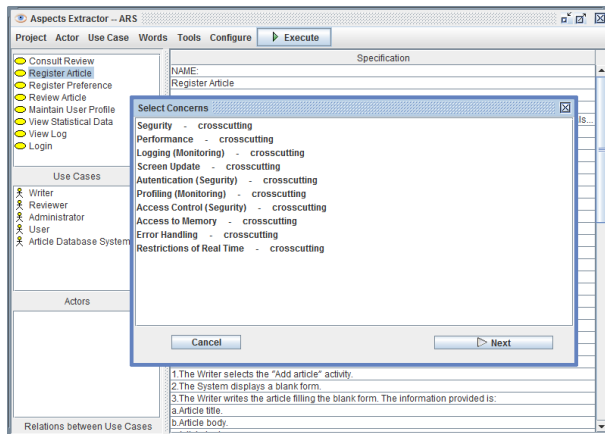
SAET - Semantic Aspect Extractor Tool

- Performs a lexical, syntactical and semantical analysis of textual use cases
- Generates clusters of related concerns, likely to be crosscutting concerns
- Provides information about the location of the concerns and allows to filter them

Tool support

SAET - Semantic Aspect Extractor Tool

DEMO
TIME



Tool support

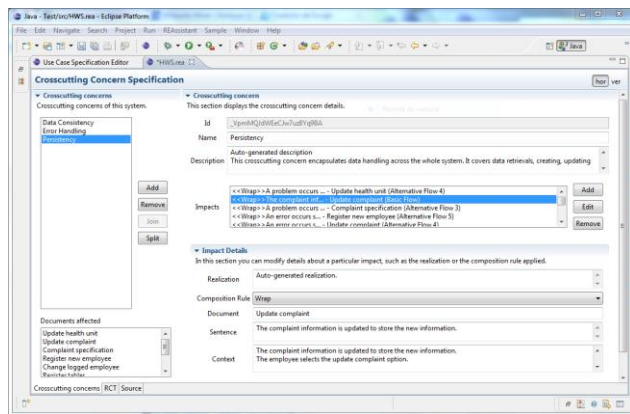
REAssistant - Req. Engineering Assistant

- Performs (for now...) an analysis of textual use cases, much like SAET, generating cluster of related concerns
- Better UI, allowing to see and modify crosscutting concerns and their impacts
- Provides support for more AORE activities, such as composition and realizations...

Tool support

REAssistant - Req. Engineering Assistant

DEMO
TIME





Questions

