

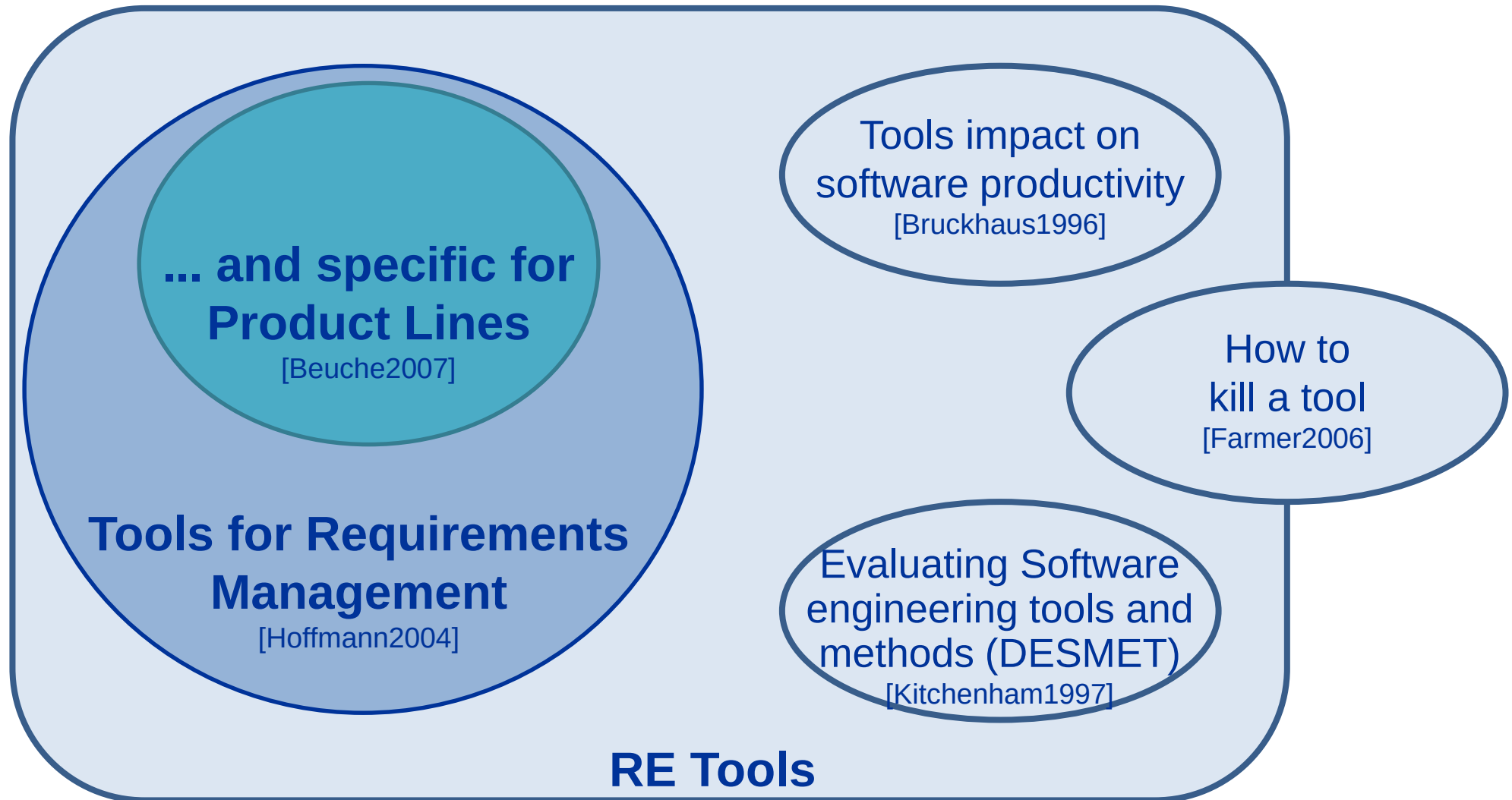
Tools for Requirements Management

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Assignment Questions:

- ??? What are requirements for requirements management tools?
- ??? (How does Focal Point satisfy these requirements?)
- ??? What are tool requirements specific for product line requirements management?

Relate to Session Topic



Requirements for Requirements Management Tools

- Developed in automotive electronics development projects
- Requirements Management for Projects that are:
 - Complex
 - Highly modularized
 - (Organized in product families)
- Paper is a catalog of Requirements
 - Categorized by stakeholders
 - 2nd level: Criteria
 - 3rd level: Requirements that satisfy criteria
 - Rationale

2. Requirements Management Tools

Requirements management tools help to achieve the goals of systematic RM:

- supporting acquisition, specification, grouping and attribution of the raw captured requirements
- supporting their derivation to more detailed levels, keeping and adjusting attributes
- enabling test cases and test environments to be defined and linked
- enabling relationships between requirements, design, realization and test to be tracked and traced
- enable distributed development within the organization

Requirements for Requirements Management Tools

Requirements from the developers

- Information model (++)
- Views (++)
- Formatting, multimedia and external files (++)
- Change management and comments (++)
- Documentation of the history (++)
- Baselining (++)
- Traceability (++)
- Analysis Functions (+)
- Tool Integration (++)
- Import (+)
- ...

Requirements for Requirements Management Tools

Requirements from the project administrators

- Central Installation and administration of projects (++)
- Users, roles and rights (++)
- Size restrictions (++)
- Workflow Management (-)
- Extensibility (++)

Requirements from the tool administrators

- Database (++)
- Encryption (++)

Using RM-Tools in SW Product Line Engineering

- Requirements management for product lines is hard
- Handling with existing tools often needs workarounds
 - Copying objects from projects (but link is broken)
 - Organizational rules
 - Extensions
- Written by a working group consisting of
 - Practitioners using the tools
 - Researchers
- Requirements from the paper presented before were reevaluated, revised and reprioritized
- New requirements regarding PL were added
- Tool evaluation

Using RM-Tools in SW Product Line Engineering

- New categories:
 - Configuration Management
 - Discussion Support
 - Priorities
- Reprioritized Requirements
 - Information Model
 - Views
 - Analysis
- 20 new Requirements
 - Support for multi project/multiproduct (including variability)
 - Support for tool based communication
 - Definition of arbitrary named subsets of requirements
 - ...

Using RM-Tools in SW Product Line Engineering

- Tool Evaluation
 - Support for product line engineering is not fully implemented
 - Existing tools have different strength and weaknesses
 - Most tools are usable with workarounds

Any...

Questions?

Comments?

Question 1

We claim:

Communication between stakeholders based on
Requirements/Feature Management
is most important and crucial.

Do you agree?

Any objections?

Any own experiences?

Question 2

Should we allow for single products to define and implement specific features?

Or should all be planned and controlled centrally from product line management?