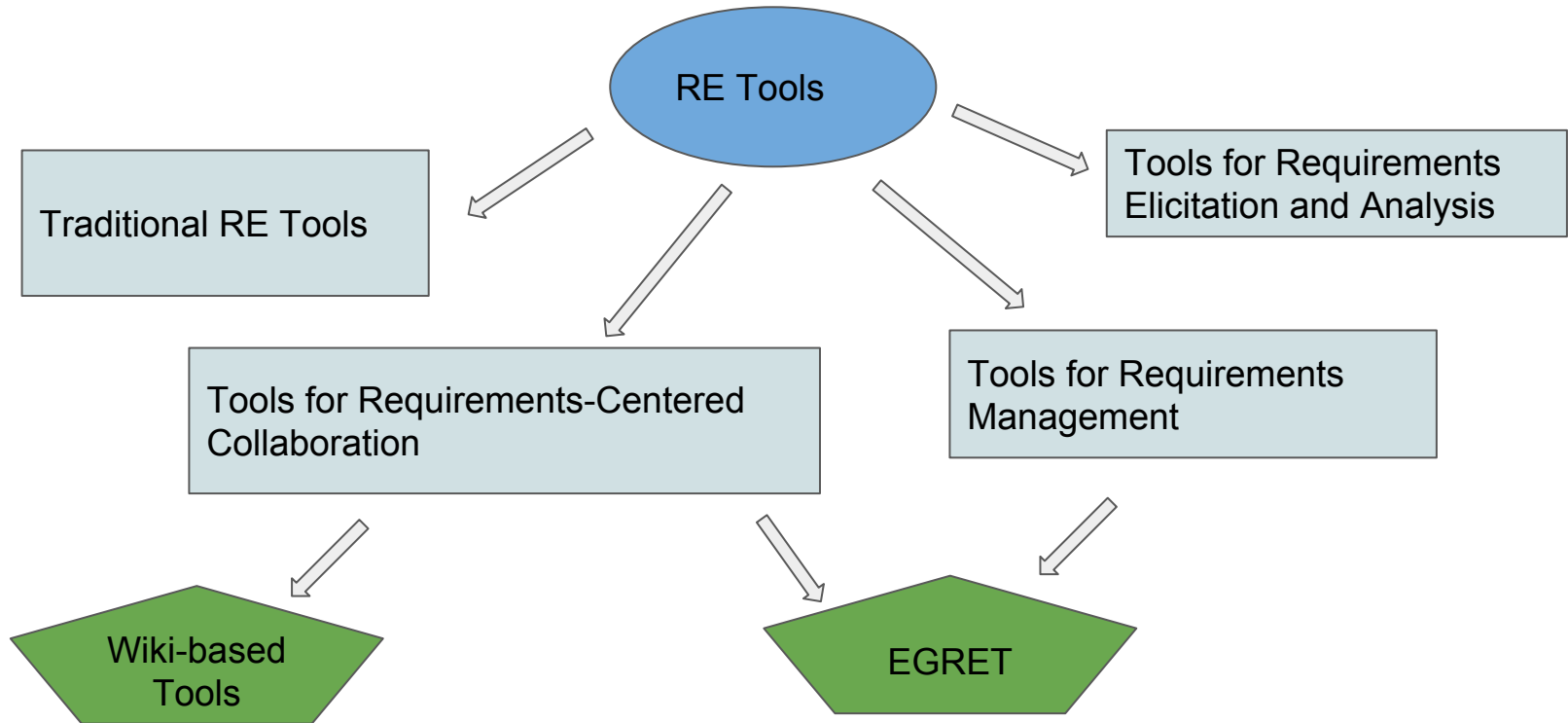


Tools for Requirements-Centered Collaboration

Matthias Felix & Catrin Loch

RE Tools and Tools for Requirements-Centered Collaboration



RE Tools and Tools for Requirements-Centered Collaboration

RE Tools	Tools for Requirements-Centered Collaboration
- quickly evolving - assure service for generations of software - oriented toward distinct environments and niche markets, development processes or utilization settings - typically license required - margin for improvement still exists for modeling and requirements management - gap in tools for sharing, communicating and collaborating across different tools (Carrillo 2011)	- Focus on collaborative requirements management - Integration of communication around requirements in distributed environment - Goal: single source of information for requirements management - Requirements traceability also integrated → EGRET → Wiki-based Tools

How can requirements tools support collaboration in a software project? (Sinha et al. 2006)

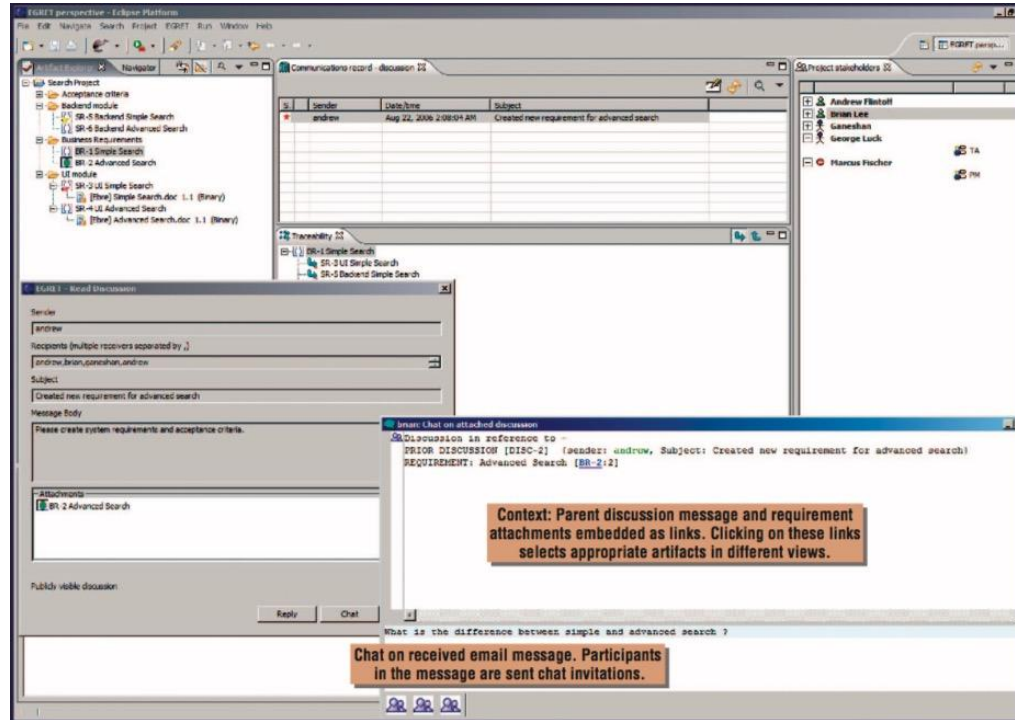
Difficulty in modern software projects:

- **Geographically distributed stakeholders and development teams**
- Establishing shared understanding about requirements and requirement changes is hard!
- Knowledge fragmentation (information is fragmented across different tools)
- Many current tools don't fully support collaboration in distributed environments



How can requirements tools support collaboration in a software project? (Sinha et al. 2006)

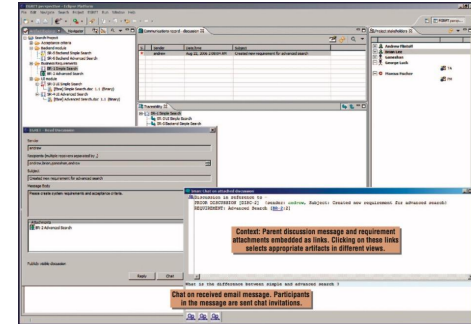
EGRET: Prototype of a collaborative requirements management tool



How can requirements tools support collaboration in a software project? (Sinha et al. 2006)

EGRET: A prototype collaborative requirements management tool

- Eclipse client (MySQL database, CVS integration, IBM collaboration server)
- Functionality:
 - Artifact explorer (e.g. requirements documents) with possibility to subscribe to artifacts/requirements of interest → change notifications
 - Communication with relevant stakeholders synchronously (chat-like) & asynchronously (email-like) → everything is stored, also “informal” discussions around requirements
 - Requirements always have 1 owner → clear assignment of responsibility
 - Awareness information across sites (e.g. ongoing discussions about a requirement, online status of stakeholders)



How can requirements tools support collaboration in a software project? (Sinha et al. 2006)

Evaluation:

- Done with (only) 12 IBM practitioners
- “Knowledge logging” through persistence of ad-hoc discussions was appreciated
- Some practitioners wanted notifications sent to normal email, others disagreed
- Some felt too much informal information was stored (idea: users can edit discussions and only save relevant parts)
- Eclipse client might not be ideal for some stakeholders
- In general very positive feedback

How does Wiki-based support differ from support by traditional requirements management tools? (Decker et al. 2007)

	General collaborative tools (Traditional)	Wiki-based tools
Description	Requirements are stored in collaborative tools	Requirements are stored in RE-specific semantic wikis
Pros	- support for collaboration and grouping requ. into individual documents - support for structuring requ. into sections - applicable in other development phases (e.g. testing)	Additional to pros of General collaborative tools - support for requ. versioning and baselining - low cost (mostly open source software) - no tool licenses required
Cons	- Distribution chaos if requ. are distributed across several documents - no explicit versioning and baselining of requ.	- Increased complexity of wiki syntax to denominate metadata - Missing replication of wiki content
Example	Microsoft Sharepoint server	Software Operations Platform wiki

How does Wiki-based support differ from support by traditional requirements management tools? (Decker et al. 2007)

Problem: need for a platform that can support effective, efficient collaboration among a large number of diverse stakeholders

→ wikis provide a flexible platform for asynchronous collaboration to create content

Why Wikis?

- easy page linking reduces redundancy by making it easier to link content
- page-history capture provides a foundation for requirements traceability on a per-document basis
- new users can easily learn wikis, mistakes can be corrected by retrieving previous document versions and new stakeholders can be involved without putting achieved results at risk

Results: wikis are useful for stakeholder collaboration, grouping and structuring requirements

Problems with Wikis:

- remembering page names → solution; use naming conventions
- Versioning across several pages → solution: link harvester and freeze and version tagging
- exporting the content of wiki pages
- Missing features for restructuring content → solution: semantic wikis feature
- Multiple page (re)classification → solution:

SOP-Wiki: Linking support

SOP

Artikel Diskussion Quelltext betrachten SOP

Bearbeiten von UseCase1

Sie sind Mitglied des aktuellen Projektes

Sie bearbeiten diese Seite ohne angemeldet zu sein. Statt eines Benutzernamens wird die IP-Adresse in der Versionsgeschichte aufgez.

Navigation

- Hauptseite
- Projekte
- Produkte
- Mitarbeiter
- Wissen
- Kunden
- Prozesse

Aktivitäten

- Aktuelle Ereignisse
- Neue Seiten
- Letzte Änderungen
- Meistverlinkte Seiten

Administration

- Zugriff und Nutzer
- Spezialseiten
- Sidebar ändern

Lernumgebung

- Metadaten verwalten
- Lernelemente bearbeiten

Hilfe

- Hilfe
- FAQ

Suche

Artikel Suche

Werkzeuge

IESE-Extensions

Keine Projektabhängigkeiten gefunden, die aktuelle Seite wird zu keinem Projekt gehören.

```
==Level==
==Primary Actor==
==Scope==
==Preconditions==
==Main Success Scenario==
==Extensions==
==Stakeholders and Interests==
[[is_A::Use_Case]]
```

Document templates can be defined. When a template is selected, a new document based on the template is created

Based on the template a document belongs to, links to relevant pages are provided

Links

Actors

- Regulärer Nutzer
- Anforderungsingenieur
- Entwickler
- Projektmanager
- Knowledge-Administrator
- [[has_Author::Knowledge-Admin

Use Cases

- UseCase_Freeze_/Unfreeze
- UseCase_Link_Harvester
- UseCase_Renaming
- UseCase_Version_Tagging

Neue Relationen

- subHierarchy
- Has_topUC

Bitte beachten Sie, dass alle Beiträge zu LokalWiki von anderen Mitwirkenden bearbeitet, geändert oder gelöscht werden können. Reichen Sie hi

Questions for discussion

- When does a tool like this make sense, when not? (e.g. small vs. large teams, agile vs. waterfall development process, etc.) What are potential problems when using such a tool?
- What needs to be done further to make use of the huge amount of information that is produced/stored in tools like EGRET?
- What kind of RE tools have you used before? OLAT? Wikis? ...

References

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