



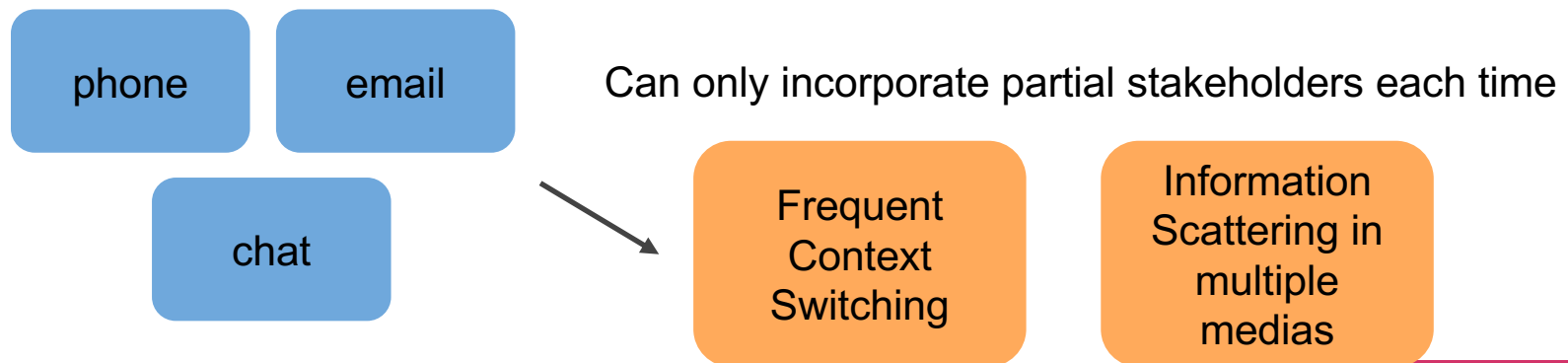
Tools for Requirements-Centered Collaboration

Donn Edward Anin, Dingguang Jin

In Distributed Environment:

With geographic separation, much more difficult in

1. Communication and discussions

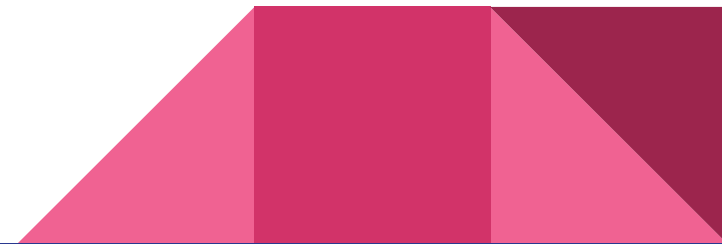


So tools should provide deep integration between the
requirements and **communication**

1. Communication and discussions

Thus Tools must provide functionalities in:

- documenting requirements
- holding rich contextual discussions around these requirements
- Developers should be able to easily initiate a conversation on a requirement
- enabling remote team members to participate



In Distributed Environment:

With geographic separation, much more difficult in

2. Manage Changes

- Changed information often doesn't reach the right people at the right time
- One may ask have all concerned stakeholders take necessary procedures for a change



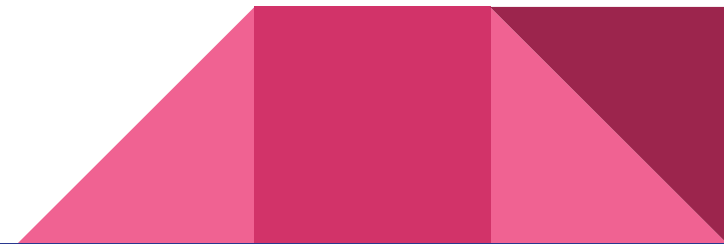
In Distributed Environment:

With geographic separation, much more difficult in

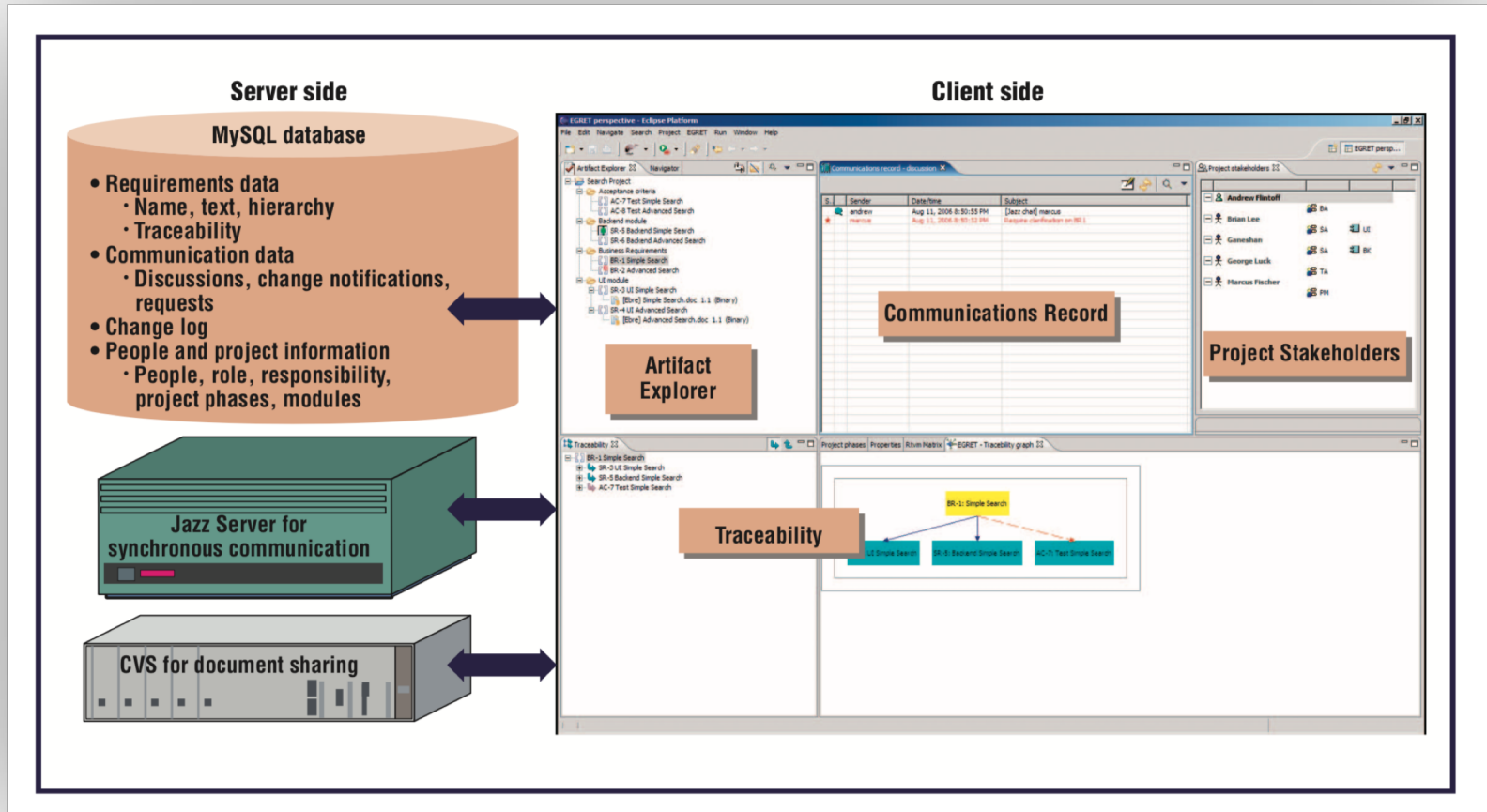
3. Manage Project Knowledge

- Team members change over time, newcomers don't have all the knowledge

Traceability

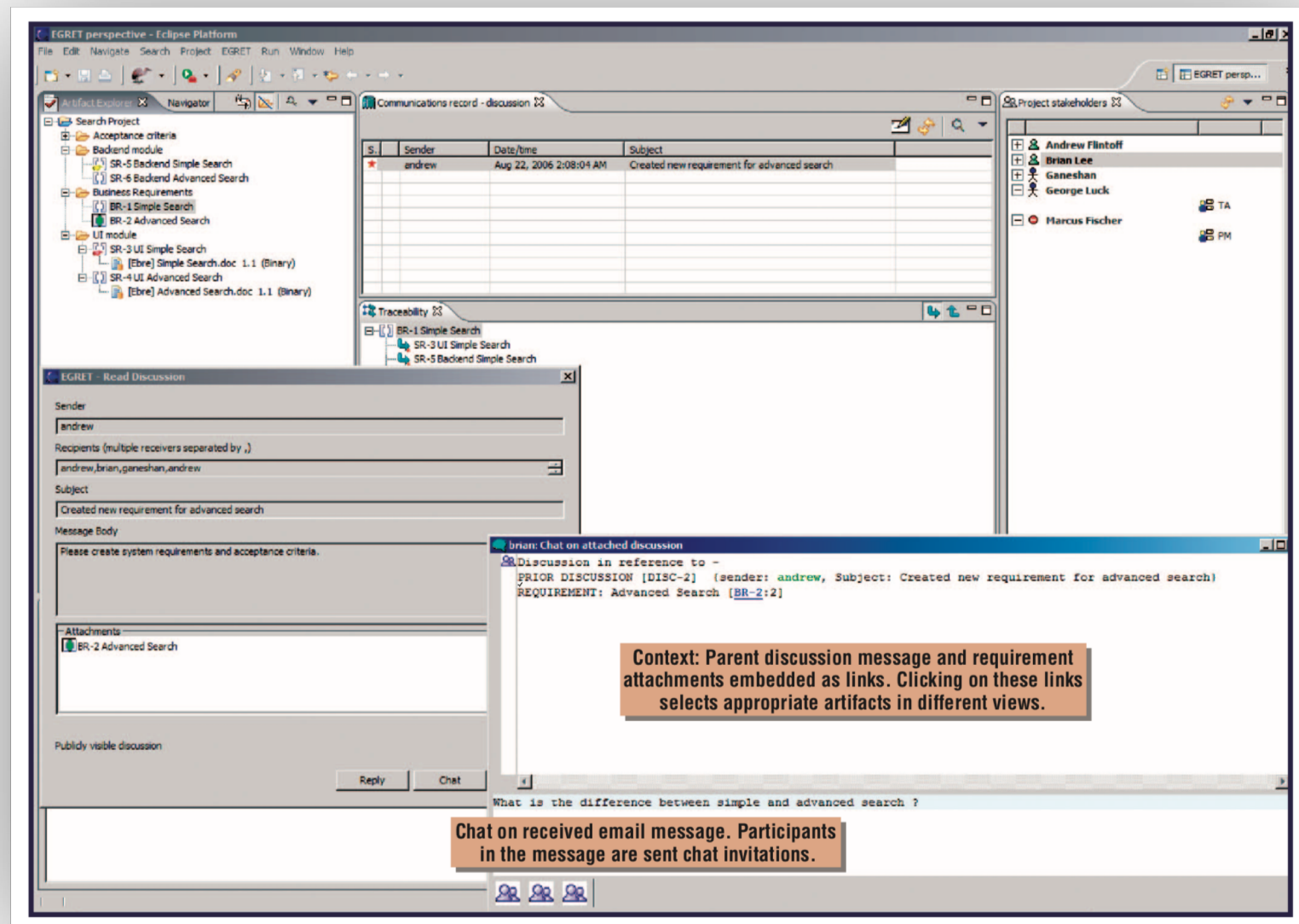


Finally:



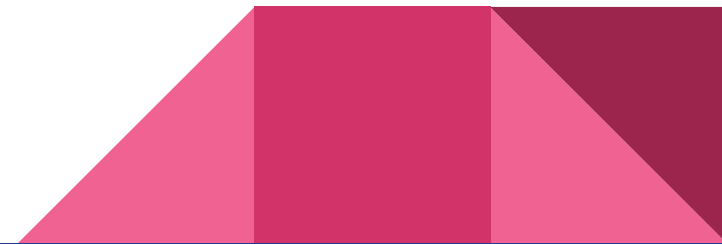
Finally:

Icons for ongoing process
Help stakeholders be aware of activities of other sites

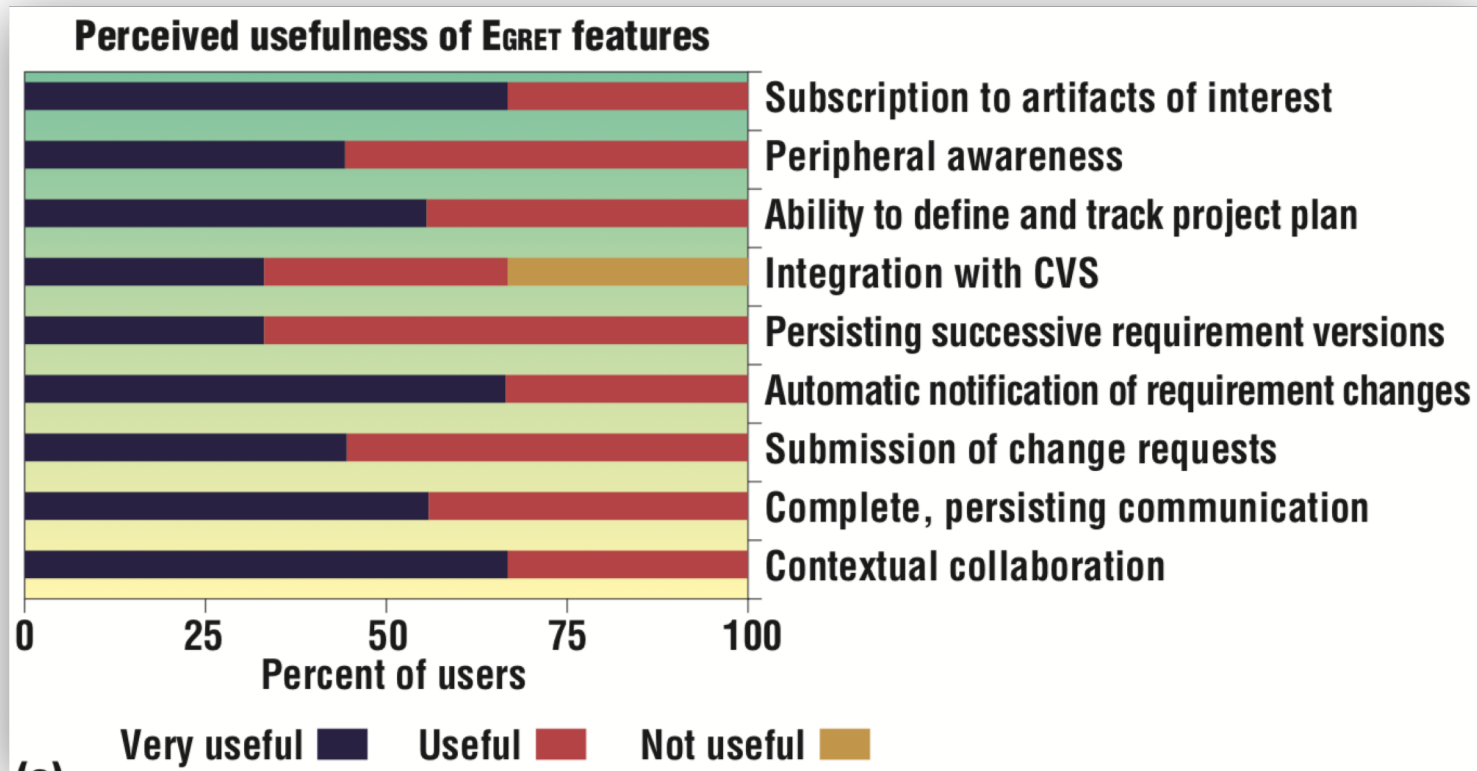


Some Limitations

1. Text based. No support for video and audio.
2. For Analysis, still need to turn to other tools.
3. Only for requirements, isolated from design and implementation.
4. Don't have Release Management.



But overall, very useful



Wiki

- As asynchronous platform

Technical advantages:

1. Easy page linking
2. Page-history capture

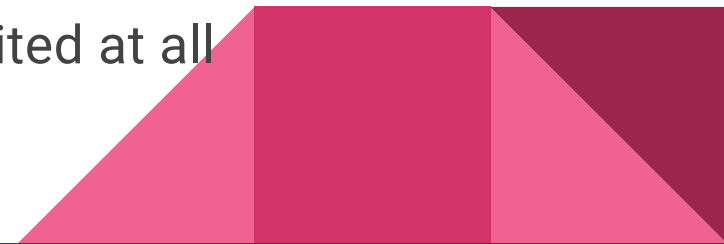


Content Management

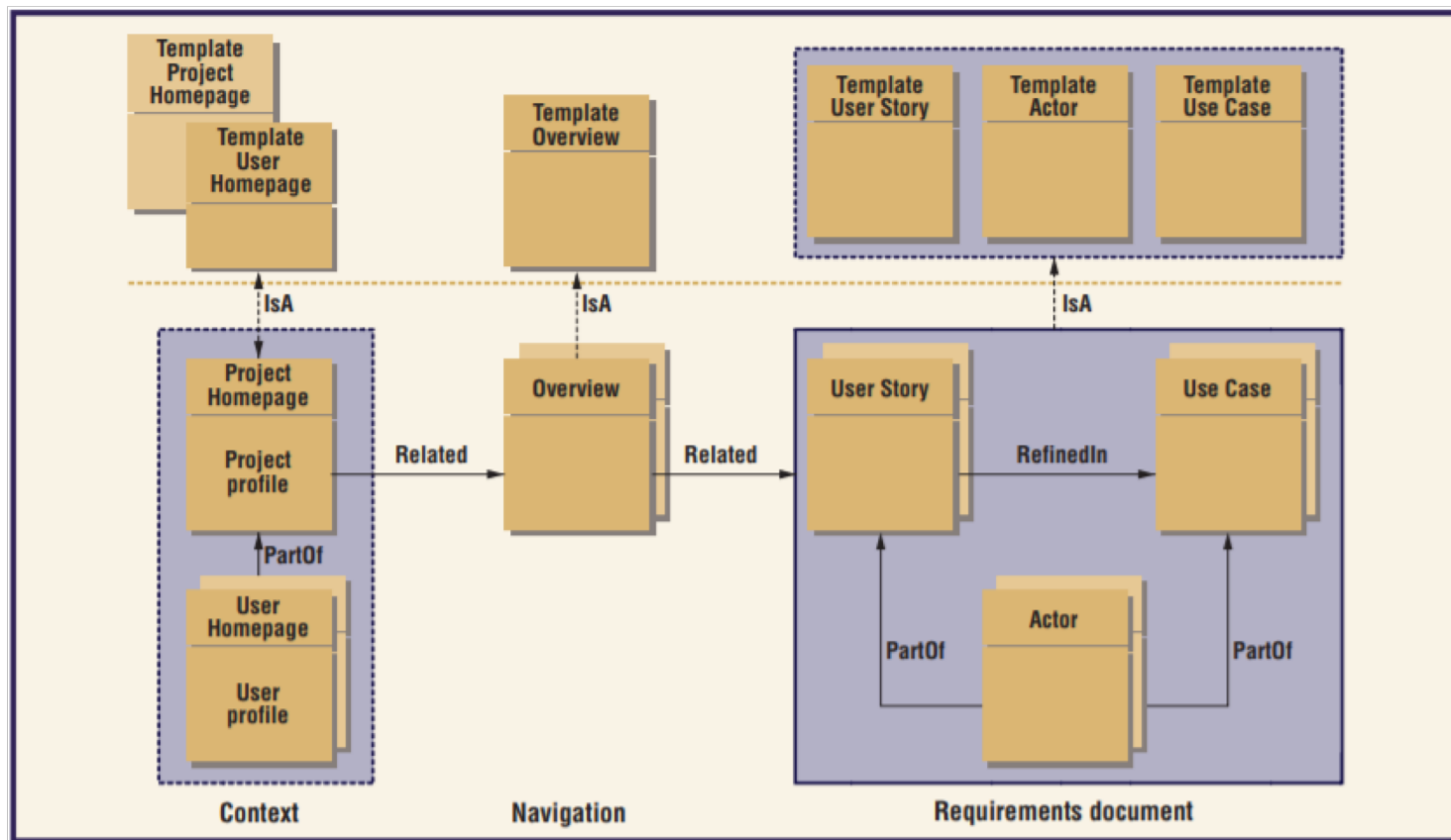
- Project manager as moderator
 - Provides general structure
 - Templates
 - Overviews
- Rules on using wiki

Conflicts

- Tagging of contradicting requirements
- Edit history - frequent editing of document or not edited at all

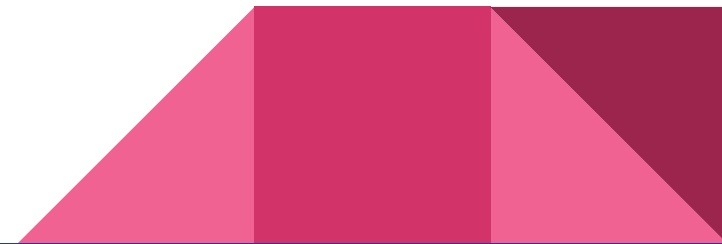


Wiki Document Structure



Wiki Problems

- Remembering page names
- Versioning across several pages
- Exporting the content of wiki pages
- Missing features for restructuring content
- Multiple page (re)classification
- Missing replication of wiki content



Pros and cons of wiki-based systems

Pros and cons of wikis used in requirements engineering		
	General wikis	RE-specific wiki (for example, Software Operations Platform wiki)
Description	■ Requirements are stored in general-purpose wiki systems	■ Requirements are stored in RE-specific semantic wikis such as SOP
Pros	■ Support for collaboration ■ Support for grouping requirements into individual documents (for example, for specific releases) ■ Support for requirements versioning ■ Low cost (mostly open source software) ■ No tool licenses required ■ Also applicable in other development phases, such as testing	■ Support for collaboration ■ Support for grouping requirements into individual documents ■ Support for requirements versioning and baselining ■ Low cost (mostly open source software) ■ No tool licenses required ■ Also applicable in other development phases, such as testing
Cons	■ Untyped links (because regular wikis can't capture the nature of a link between documents) ■ No explicit baselining of requirements; versioning content across several pages is difficult ■ Users must remember page names to be linked ■ Difficult to export page content ■ Missing features for restructuring content, particularly for classifying and reclassifying pages ■ Missing replication of wiki content	■ Increased complexity of wiki syntax to denominate metadata ■ Missing replication of wiki content

Thank you!

