

CHAPTER 7: Conclusion

7.1 Research Summary

A groupware architecture or application should provide an easily accessible, widespread platform for gathering and sharing information and for capturing ideas. Moreover, it should support person-to-person collaboration. Getting products to market as soon as possible has motivated in depth studies on collaboration technology in addition to distributed workforces and information overload faced by many organizations. The technology is used in communicating, cooperating, coordinating, solving problems, competing and negotiating.

Requirements analysis is the most important step in system development. As the most critical task in software engineering, it involves activities such as gathering of requirements, identifying missing requirements, related requirements being categorized or classified and finally requirements examining and evaluating for conflicts or inconsistencies. In other words, software engineers are able to specify the functions and performances of the system being developed. In addition, a more complex requirements analysis helps in recognizing problems, evaluating and synthesizing solution.

As a final product, requirement analysis must be able to develop clear, complete, agreed upon and feasible requirements for a product. The acceptability of the system after it has been delivered very much depends on how well it meets the customer needs.

This research has analyzed, designed and implemented an architecture based on groupware technology that provides as a platform for requirements analysis. Although there are a number of requirements analysis tool in the market, but none is built based on groupware architecture. The review has helped in capturing a feasible requirements analysis methodology and the architecture for the groupware support. Meaning, the

features of the outgrowth of this thesis, GRAT, have been successful in capturing the main features and to reveal the missed ones in other similar tools. The framework of GRAT was documented and presented in Chapter 3. So, based on an in-depth study of groupware, GRAT was conceptualized and implemented.

Based on these understanding from the research of both the domains, groupware and requirements analysis, GRAT's functionality was developed. An extensive analysis and design was executed and the results are presented in Chapter 4. From here, the research moved on to implementation where various tools and developmental environment that were used was discussed. GRAT was developed and discussed in Chapter 5.

To know how GRAT fare, a validation was carried out by a group of post-graduate students. The results, findings and measurements are presented in Chapter 6. The measures revealed some limitations in GRAT although in overall perspective GRAT has managed to prove its usability and achieving its objectives.

7.2 Contribution

GRAT has contributed in two different areas or domain if seen at a wider scope.

- ❖ A web-based application was introduced. It has managed to implement the proposed model of the conceptualized version of GRAT. Running on the web means the space constrains has been eliminated although current bandwidth might slightly degrade the speed or the performance of GRAT.
- ❖ It also helped to understand the importance of groupware support for collaborative activities. The results from questionnaire reveal the exposure

for such a tool is needed. The testers were impressed on how the tool helped to track the requirements and issues.

7.3 Future Work

The research described in this thesis can be extended in several ways. Among them are,

- ❖ At the moment, GRAT could only support requirements analysis process. It would be better is the system could cover the requirements engineering process where the actually requirements documentation could be extracted.
- ❖ In chapter 2, it is said that GRAT was build based on requirements analysis proposed by Ian Sommerville (1996). To make GRAT more beneficial, it should be able to support other requirements analysis methodologies, giving the choice to the users.
- ❖ An extra functionality that was proposed during the evaluation period was to include video conferencing tools to carry out live meetings and decisions. Also a synchronous sort of chat facility to be provided. However, this is rather impossible to do without the use a third party application, as Lotus Notes does not support synchronous activities.
- ❖ The system should also provide a checklist kind of service where participants would be able to keep track of the project.

- ❖ GRAT should also be able to support all project management activities which mean managing of resources, tracking the progress of project, keeping track of the project against its objectives and scheduling, which was incorporated in the system.

- ❖ The evaluation of GRAT. Although the validation and testing provided initial evidence about the effectiveness and the efficiency of the introduced system, it still lacks of any explicit scientific proof. This is due to the reason that the evaluators are only students and not industrial experts who have used some requirements analysis techniques in developing larger scale of projects in their organizations.

Last but not least, groupware and requirements analysis are two domains, which need to be explored to its maximum potential and benefit in order to integrate both the concepts.