INTEGRATION OF TRACEABILITY AND CHANGE MANAGEMENT TO SUPPORT MIGRATION ISSUE IN CBD

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ABSTRACT: *In this modern age, Component base development is a very vigorous research area in software engineering. The CBD gives more reusability, flexibility and maintainability than others. Component based development is the achievement of component based software engineering (CBSE). The main problem to migrate the code component from one place to another would discuss in this paper. In the existing research, the migration issue did not solve, due to this problem many problems occur. In this paper, the migration issue will solve with the integration of traceability and change management. Traceability and change management both are very helpful in solving the migration issues. Traceability and change management both are type of requirement gathering techniques. The assimilation of traceability and change management gets proper requirements from the customer. The proposed solution provides time saving, cost saving, flexible, secure and most of all accurate system.*

Keywords: Migration, Traceability, component based development, integration

1. INTRODUCTION

Software engineering is an application that maintains the Software. It is systematic, disciplined, quantifiable approach that develops, operate and maintain the Software. The Software Engineering process is the bond that integrates the layers of technology in such a way that enables development of Computer Software normal, standard and appropriate. Component Based Development is a reuse based approach; in this the component of the program does not build from scratch. The component of previous program could be reuse [3].

Component Based Development is an active area of research. In this when code component reuse, then here occurs a problem in shifting and migrating the components. These problems cause so many issues in component base development. In march 2013, the analysis of component base development with object oriented and other traditional techniques was done but here also point out the migration issues and requirement gathering issues [1].

Traceability and change management are two techniques of requirement gathering. In this research we will use these two techniques and integrate them to resolve all issues that occur during the migration of CBD [3]. Traceability is the process in which requirements are properly traced as the customer describe or want to describe. If this work is properly done than half issues resolve. [5].

The purpose to integrate the traceability and change management is that it gives more reliable, accurate, secure, flexible, in time and low cost software. It minimizes the migration issues. In December 2013, the analysis of configuration management in component based development was discussed. But here also defined is a challenge to find out an effective way of configuration management [2].

In this research, the traceability and change management gives a more reliable solution. The work will done by mixing both techniques by developing a model in which firstly trace the proper requirements and then make it so flexible that it could be change at any phase in low cost and deliver on time. This model will give more reliable output than existing [4].

Software validation and verification of the requirements phase is primarily concerned with document requirements specified by thoughts about the customers. Manage the planning phase, which provide the integration of tractability and change management [17]. Software engineers can build software and industrial might in the world, practically everyone uses it, either directly or indirectly. It is about our life and our business, our culture affects every aspect and has become embedded in our daily activities, because it is very important [6].

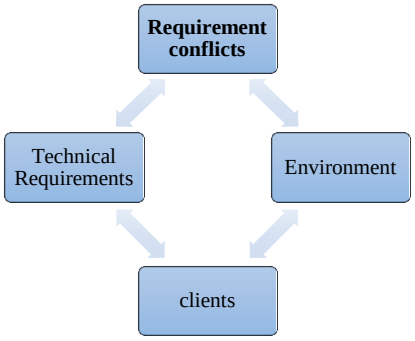

Fig.1.1: Requirement gathering conflicts

2. Literature Review

Impact analysis methods to quantify the performance of a large number of requirements management tools are available. Most of these methods of analysis, impact change yourself rather than performance measurement performance procedures. Show us the impact analysis methods can be seen as classifies binary and accompanying matrix can be used to determine their performance. This is a result of our research method using the change scenario with two of four devices. Then, with no clear winner. The difference between the impact analysis methods used by both tools sometimes an advantage and a disadvantage [7].

Requirements management tools based on change impact analysis traceability with support for this assessment show the results of the impact analysis model, different types of link information for the basics, custom link types, link attributes, the graphic there for some representations, etc. through existing tools. A lot of this information, however poor results during the analysis itself does not use leading. Therefore, the present analysis and requirements management

tools have only a very limited impact on more effective methods are needed [8].

For some of the properties tested information model used in life support, software, and import and model options for the integration with other devices, bicycles, model and their relationship to represent graphical coverage analysis, and impact analysis. The effect analysis of a case study was used to determine the selected four support tool tools. These criteria came out a clear winner on any of the devices. Most of the poor effect analysis tools all features work still to do something by hand, which means. The difference between the process of analysis devices for supporting real effects features [10].

Tractability widely discussed in the area of research. Is this a topic of interest to software engineering research? Tractability software is one of the hot issues in the documentation to be more research. They will depend on whether he is or not, the flow of documents this software with each other or in all documents to track the process. Software engineering documentation in your thesis for a Tractability method. The purpose of this research is to facilitate the search for documents software [9].

The necessary tracking system tractability maintenance flows for the purpose of mass tractability problems in software engineering are discussed by researchers. Many researchers, framework, methods, method or device designed by software such as the tractability -related problems in software engineering tips for resolution and testing. So this software system those who are included in the tractability software engineering documents, such as some of the most important documentation for purposes of care can track [10].

3. METHODOLOGY

A survey is conducted for the validation of proposed model. A Questionnaire is prepared for the survey conducted. Questions related to model queries in the questionnaire. Questions in the questionnaire are related to the action performed phases and its sub phases. In the questionnaire, questions are asked from the different people about the quality and usage of the model. Integrated model for CBSD is designed. This segment displays the outcomes of all research queries by the records revealed by tables and graphs.

When traceability is used in an organization or group is not yet traceability this project basically related to the product is used. Generalization and abstraction together are common in the traceability model. When they get more experienced with the process of leading traceability model is more important [16]. Depending on other products other products according to a specific form in the sample rather than go to jail. For more advanced users to use more symbols related to the process of traceability. A general top level traces in a set of relationships with the results of the type that is in use in all but the smallest projects creating will become harder to work on [11].

To address this problem in several papers describes different types of method but not as described as described in this paper. Requirements gather with traceability and change management.

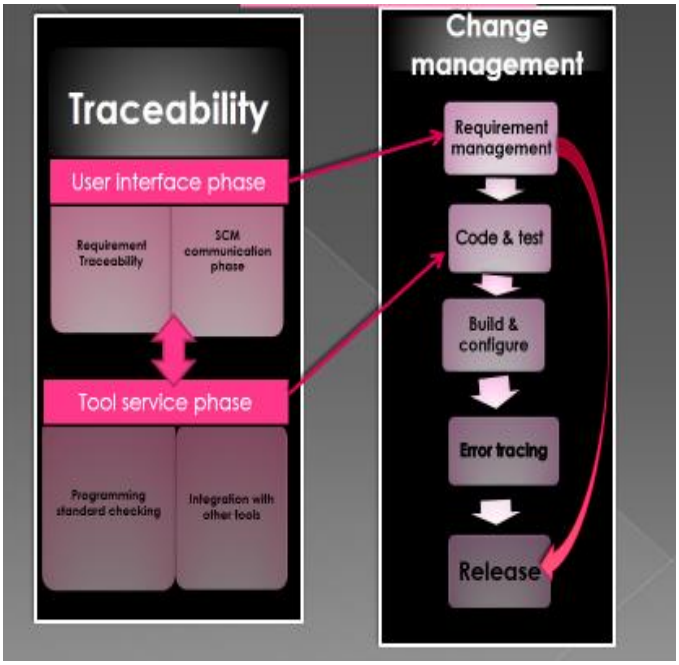

Fig. 1.2: Proposed Model for migration Issue

when the requirements of this article, it is spoken in traceability as a directly or indirectly required the need for each other or other artifacts, design or source code items such as a product is considered. In this way, a very simple Web site is called traceability technology [12].

A traceability matrix, graph or any requirements management system by using a traceability tool included in the two to establish a link between artefacts and simple easy-to- traceability links to traceability form [18]. A direct and indirect impact on the need for all the artifacts, as well as the use of a simple query returns the set affected artifacts is traced. The strength of this approach is its simplicity and the fact that it is well used and understood in the industry, and are supported by many of the requirements management tools [11].

The main function is to identify system requirements and change them according to the customer's desire, even at this stage, these issues had a lot of problems due to the advancement in the component base, any confusion or contradiction and documentary requirements are collected, the relevant parties have to authenticate with. System requirements are decomposed in sub-structure needs to start looking for a component to implement required. System requirements software requirements analyst to study by a team of application for a client or stakeholders to develop first and foremost [13]. CBSD there any documents required to renovate, this review is done by an interview with stakeholders. Once collected, the analysis needed to fully process the needs of system and software components to possible recognition for the purpose of identifying common needs to find. The main results of this step are: to identify the components that can be system requirements detail [14].

4. RESULT AND DISCUSSION

The outcome of the research is presented in pie chart as follows:

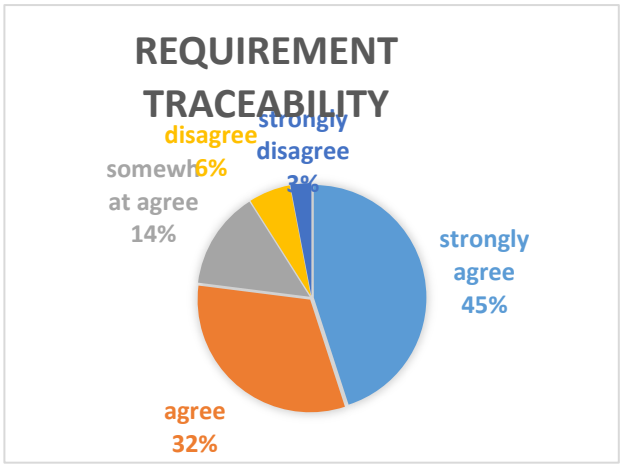

Fig.1.3: Requirement Traceability study

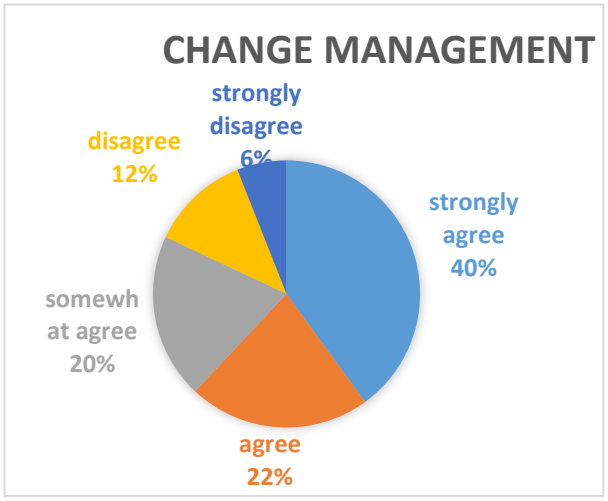

Fig.1.4: Change Management study

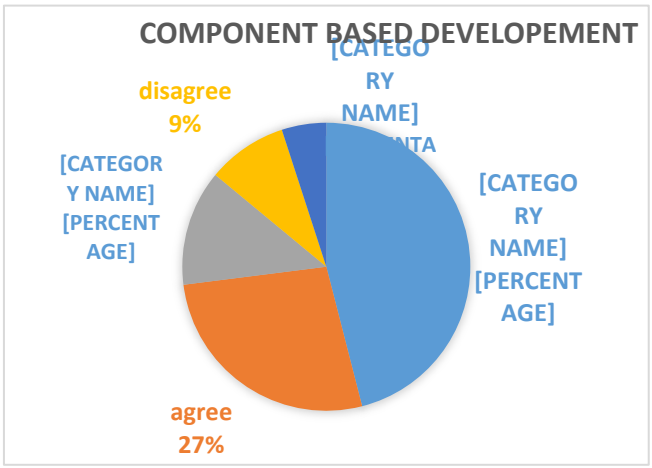

Fig.1.5: component based developement study

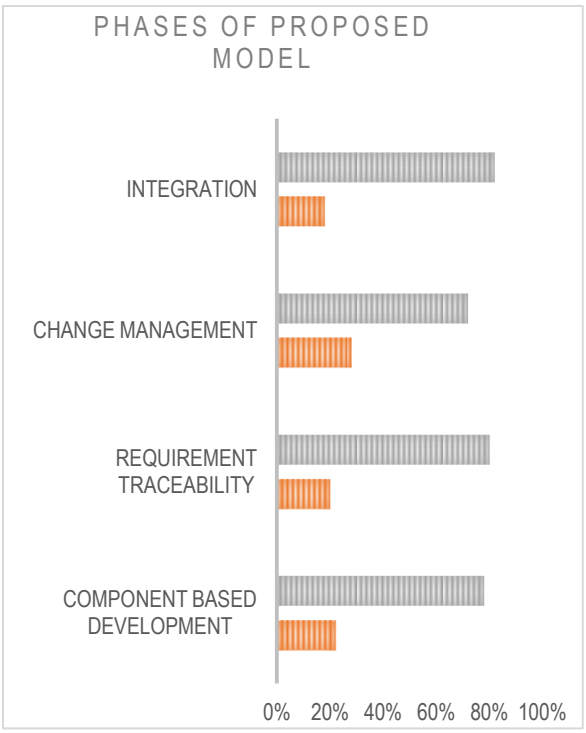

Fig. 1.6: Final computed Results of Proposed Model

When we discuss any Software development scenario, requirement gathering and management is the area which ever bleeds and cause the most of projects to fail. A lot of work has been done in this regard to elicit, prioritize and document the requirement but still we come across a lot of situations where project fails due to this problematic area [15]. While working on the Component based Development, the components are reuse and when we reuse these components the migration of components occur where the migration issue occurs so in this paper combine the traceability and change management to resolve this issue. This problem is resolved by trace the proper requirement and change occur in this. Many other models are developed but for migration issue there is no such work.

5. CONCLUSION

As discussed above that some projects are used to evaluate the INTEGRATION MODEL, we can analyze the results and we can analyze the results in such a way that could lead us toward the weakness of the model, which ultimately help us to improve the model and increase its acceptability.

With the analysis of the results, we can come to a fact that like any other model, this model is necessarily to be sued for requirement management. Rather before the selection of this model one should analyze the situation and need of the requirement traceability and change management and model should be only chosen if the required resources are available and other situation to use this model. There are certain aspect in this model which still needs to be refined and future work can be done on this. First of all it is difficult to build the environment which is fully component based. Due to insufficient literature and not proper tool support, some

important activities are still overlooked. There is no specific rule to choose this Model and no certification of component.

6. REFERENCES

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Questionnaire for Integrated model

1. What is your name?

2. What is your age?

- 18 to 24
- 25 to 34
- 35 to 44
- 45 to 54
- 55 to 64
- 65 to 74
- 75 or older

3. What is your gender?

- Female
- Male

4. what is your occupation ?

6. give rank these model according to best for CBSD:

- integration model
- y model
- w model
- v model

7. which model fulfills all the requirements of CBSD?

- integration model (proposed model)
- y model
- v model
- w model

8. which model fulfill which requirement:

	traceability	change requirement	component reusability	testability	all these
y model					
v model					
w model					
integration model					

9. do you think that integration model is best for CBSD?

10. How likely is it that you would recommend this model to a friend or colleague?

Not at all likely — Extremely likely

0	1	2	3	4	5	6	7	8	9	10

11. give some suggestion about this model:

12. do you know about migration issue in CBSD?