ABSTRACT

The idea of an e-learning Telkom University is organized by BPP (Bagian Pengembangan Pembelajaran) Telkom University and Direktorat Sistem Informasi (SISFO) as the developer of the system. Built to support the implementation of the course, the idea continues to be developed and evaluated by SISFO to improve the quality of the system. The quality of the system is expected to have an impact on increasing use as a means of supporting the activities of the lecture.

In increasing the potential use of the system in support of the idea of the lecture at Telkom University can be done both in terms of policy and also from the standpoint of the idea of the system itself. In supporting the implementation of the increased use of the idea, especially the improvement of the quality system of the ideas, is carried out this study to design and evaluate on idea software architecture, begins with a user study and found several problems that can lead to a decrease in the quality of a system, which may have an impact on the use of idea by the user. Those problems include issues of usability, performance efficiency, functional suitability and compatibility. Where the problems come from the process of identifying the needs of stakeholders (students) to the idea, which followed on stakeholder mapping process requirements on ISO 25010 quality attribute standard.

Design and evaluation of a software architecture are very important in the process of overhauling a system because it makes possible for us to predict the quality of a system and creates documentation of a system architecture to improve communication between stakeholders. The design model of the system architecture using UML (Unified Modeling Language) is based on the quality attributes obtained from the respondents mapping needs into quality attributes in ISO 25010. Further evaluation architectures using ATAM (Architecture Tradeoff Analysis Method), that is by doing some scenario testing on design architectural design that has been created. Furthermore, making the implementation of research findings in the form of prototype

Keywords: idea, Software, *e-learning, UML, ISO 25010,* ATAM.