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## Homework 2

Annotated Bibliography : Measuring the usability of software

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- [1] D. Tamir, O. V. Komogortsev and C. J. Mueller, "An Effort and Time Based Measure of Usability", in *WoSQ Proceedings of the 6th international workshop on Software quality*, Leipzig, Germany, pp. 47-52, 2008

In this article, firstly writers pointed out the difficulties about measuring software usability in terms of both developers and managers perspective. The authors offered a system which obeys ISO standards for software quality. The system is based on determining some targets and calculating the total act to reach these targets, for example mouse click, keyboard click, eye movement. The method described in this paper can be very useful since it is based on objective numerical analysis.

- [2] N. Bevan, "Measuring usability as quality of use", in *Software Quality Journal*, vol. 4, pp. 115-130, 1995

Bevan initially described usability and quality in software systems, then introduced MUSiC (Metrics for Usability Standards in Computing) tools, which measures usability by analyzing values based on user behaviors, and also supplied measurement about user comfort.

- [3] A. Seffah, M. Donyaee, R. B. Kline and H. K. Padda, "Usability measurement and metrics: A consolidated model", in *Software Quality Journal*, vol. 14, pp. 159-178, 2006

This article recommends a composite model called "Quality in Use Integrated Measurement" for software quality measurement, which is established from existing models and standards. The authors first introduced current models and examined problems about current models in different perspectives, after they clarified the composition of current models for better evaluation.

- [4] J. Moses, "Benchmarking quality measurement", in *Software Quality Journal*, vol. 15, pp. 449-462, 2007

Moses proposed a plain testing technique for software quality instruments in this article. Author projected that this technique helps to determine the sufficiency of a quality measurement tool by using statistical methods like Bayesian statistical interference.

- [5] M. Schmettow, W. Vietze, "Introducing Item Response Theory for Measuring Usability Inspection Processes", in *CHI Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, Florence, Italy, pp. 893-902, 2008

In this article, authors stated that integration of elements about measurement and probabilistic analysis is missing in software quality measurement models. This article presents "Item Response Theory", which is a probabilistic method from "psychometric research". The authors explained the model and illustrated applications.

[6] C. Jinling, G. Huan, "Measuring Website Usability of Chinese Enterprise with a Heuristic Procedure", in *IEEE International Conference on e-Business Engineering*, Hong Kong, pp. 396-399, 2007

Authors initially clarified the necessity of website usability tests for commercial websites, because of the swift advances about internet technologies. In this article usability standards of Microsoft are used to examine five B2B e-commercial websites. The users are simply asked to rate properties about websites and results are examined through some weighted criteria. The method defined in this paper is relatively easy to apply. However, it is limited to subjective judgment of the users.