OPERATIONAL USABILITY ASSESSMENT USING WEB STATISTICS

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This paper presents a method for usability diagnosis of web pages, based on time analysis of clickstream data. The resulting diagnostic reports enable website managers to learn about possible sources of usability barriers. Different types of website design deficiencies are associated with different patterns of exceptional navigation. We introduce a method based on the integration of Stochastic, Bayesian and Markov models with models for estimating and analyzing the visitors' mental activities during their interaction with a website. Based on this approach, a seven-layer model for data analysis is proposed and an example of a log analyzer that implements this model is presented. We review the state of the art of techniques and tools implementing these methods, and maps areas for future research. We begin with some definitions and an introduction to key concepts in eCommerce usability. The web analytics models are presented later followed by a case study.

Reference
Harel A., Kenett R. and Ruggeri, F., **Modeling Web Usability Diagnostics on the basis of Usage Statistics** in *Statistical Methods in eCommerce Research*, W. Jank and G. Shmueli editors, Wiley, 2008.