

# UseMonitor

## A toolkit applying the task oriented analysis to produce usability metrics

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Have you ever asked yourself why usability evaluation based on log data analysis is so unpopular among web site ergonomic experts?

It is strange, because log data are traces of interactions accomplished by real users performing in their natural environment, while completing genuine tasks. There is nobody observing or constraining them while they accomplish their tasks, in their homes or offices. These are ideal conditions to gather interaction data for usability studies.

The current web analysers supply us with technical information (errors, broken links), traffic (how much users, when they visit the site and where they come from) and ROI perspectives. This information is useful for webmasters, software engineers and marketing professionals, but what can a usability specialist do with it? Not much beyond targeting his/her actions, i.e., to focus on what is most important or most frequently accessed by users.

In fact, simple usability metrics such as “productive time in task” or “quantity of errors in task” are not offered by current tools, and without an appropriate tool the log data analysis is quite impossible.

We are starting to test the first version of UseMonitor toolkit, which is being implemented in collaboration with Interfácil. We would like to know of your interest in taking part in these tests.

### **Find out more...**

UseMonitor allows a system to produce usability metrics concerning user efficiency and effectiveness automatically, while users are accomplishing their transactional tasks with the web site. The effectiveness and efficiency metrics are computed according to the model proposed by ISO 9241:11 - Guidance on Usability. This standard proposes specifying usability by means of effectiveness, efficiency and satisfaction that users experiment during the accomplishment of a given task. We could not know of the user satisfaction by means of the log data, but this method does authorize to compute user effectiveness and efficiency during task trials. To do so, we need to look to the log data from a quite different perspective, not as “interaction” vestiges, but as “task” traces. It is the only way we will be able to analyze user productivity by means of the log data.

In order to move from “interaction” to “task” perspective we need to know the users’ objectives. This could be done by combining at least two strategies: analysing the path that users were crossing and knowing the issues they were achieving. For example, when reading log data we verify that a user had access to a register form and some minutes later the system delivered to his/her machine a confirmation message. It is reasonable to infer that this user was willing to register him/herself. The same assumption is valid for other types of transactions, with clearly observable and distinguishable starting and ending points, like buying a product, paying bills, querying for an information service like an account balance, etc.

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Once the user objectives are known, it is possible to identify when he/she began and ended it, as well as the different paths he/she employed during this time. In fact, this approach enables the identification of several user behaviours authorized by the web site user interface structure. In general they are related to the immediate success, the success with deviation, the success with error, the success with help, the quitting, cancelling (quitting after an error) and so on. Computing the incidence and the duration time of different successful behaviours it is possible to determine efficiency metrics. The incidence of failed behaviours, on the other hand, could inform about user effectiveness on tasks, but in these cases, we need to assume that measures will not be precise. In fact, by mere data log analysis there is no way of distinguishing, we will always be in doubt over quitting and cancelling behaviours between users that quit a task due to interface obstacles, from those who were only visiting the site and quitting just before commanding some execution. UseMonitor tools can supply people with a more precise vision about user efficiency on successful tasks. Measures concerning user effectiveness on tasks however will not be so precise, unless the tools are associated with a remote test or induced use studies.

When talking about the “task & usability oriented log file analysis” limitations and applicability we need to highlight that the values supplied by UseMonitor toolkit correspond to average and individual measures. The average values concern all types of users, working in all kinds of environments, with access throughout high and low bandwidth connections, etc. The system also produces usability measures for individual users also, but in these cases nothing can be said about this users' context (except the OS and the browser he/she employs). Even if both kinds of measures are not segmented, they are valid to an ergonomic expert or usability engineer, since this could be obtained quickly, and at low costs. It will be employed with technical and managerial proposes, in particular to specify general test approval conditions and to monitor general usability evolution during user interface revision (something usual among web sites). The fundament for this last practice is quite simple: (i) the components of the context of use, which includes the user interface itself, determine the usability in a task; (ii) With exception to the interface, other elements of the context of use, users, hardware and connection profile change relatively slowly across time; (iii) user interfaces in websites change on a fast and frequent basis. The analysis of these statements enable us to suppose that recent changes in a given user interface are the main suspects in causing recent variation (increasing or reducing) user efficiency in the task.

Briefly, the UseMonitor set of tools aims at supplying usability experts and even webmasters, quickly and at low cost, with values concerning the user efficiency on transactional tasks in web sites supporting B2C, B2B, including ERP, home banking on Web, WAP, TVi, IVR, etc.

This is a vision of a new kind of usability practice truly engineering based while massively founded in quantitative measures obtained quickly and at low costs.

If you are responsible for usability of web sites supporting transactional tasks and are interested in participating in these tests, please contact Interfácil ([info@interfacilbr.com.br](mailto:info@interfacilbr.com.br)) to describe your transactional web task and your usability objectives.