Brewsing the Web: Delay, Determination and Satisfaction

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Abstract
The major complaint that users appear to have about using the World Wide Web is that they have to wait far too long for information to download. At present it is not possible to provide a sufficiently speedy service and therefore the problem of delay needs to be addressed in a different way. Delay is not a simple matter of how much time has actually passed but how much time the user has perceived as having passed. In order to alleviate the problems of delay, the authors decided to examine the idea that feedback to the users might affect how long they were willing to wait and whether or not they were aware of the length of delay in delivering pages to them. With these ideas in mind the authors developed four browser style interfaces offering various levels of user feedback and used these to evaluate user satisfaction with the systems.

1. Introduction
It can be argued that the responses of users to delays encountered when using the Web are related to the perceived and/or predicted value of the information they are searching for [2]. That is longer delays will be tolerated when the information is thought to be of high value and cannot be got in some other way. However, if the value of the information is discounted then an affective response of the user may be directed to the supplier of the information. That is delays occasioned for any reason may cause the perceived value of information supplier, as opposed to the value of the information itself, to be negatively impacted. Nielsen expresses this rather succinctly: “Users… don’t care why response times are slow. All they know is the site doesn’t offer good services. Slow response times often translate directly into a reduced level of trust, and they always cause a loss of traffic as users take their business elsewhere.” [5]. The GVU’s 10th WWW User Survey of 1998 cites problems of speed as being the first two major gripes that users have about Web performance.

If this were the case then a predictive consequence would be that as a user’s opinion of the value of the information supplier deteriorates then the perceived value of the information that the supplier has to offer would also deteriorate. This in turn would have the result that a viscous circle would ensue, where the time that a user would be prepared to wait for the supply of information would be reduced in tandem with the delays they experience whilst attempting to obtain information from that particular supplier. Ramsay et al have demonstrated that pages with longer delays were rated as less interesting and more difficult for users to find [6]. From the supplier’s perspective this cycle could only be broken by supplying higher quality information, reducing the delay or reducing the user’s perception of the delay encountered. Bickford suggests that user satisfaction with an application is almost entirely tied to speed and he believes this is more acute on the Web where users tend to be more impatient for results. However, he suggests that although ‘speed matters, perceived speed matters even more’ [1]. He goes on to say that the feeling of waiting is more important than the actual wait.

This paper reports on an empirical investigation that attempted to investigate the last of these three factors. The investigation controlled the value of the information retrieved from a supplier and the time taken to deliver the information. It varied the way in which delay was handled by the system by providing different levels of feedback to the users as they waited for the information to be delivered and then attempted to measure the psychological perception of delay.