Print vs. Web based Navigation: A Look at Efficiency

I. The Problem
Can data migration from print to web and subsequent reorganization allow for more efficient user navigation?
• Efficiency: measured by shortest time, least number of steps, and fewest mistakes
• Navigation: a user search for specific data

II. Background
A National Science Foundation grant for the comparative study of the Ashio, Japan and Anaconda, Montana copper mines required the presentation of research data and conclusions to be presented in a publically accessible form.

III. Methodology
• Mapped out data relationships into web specific organization
• Presented 10 non-trivial tasks involving searching through data for specific information for both print and web
• Recorded the time to completion, number of steps taken, and number of mistakes
• Compared across domain-familiar and unfamiliar user groups of size fifty.

IV. Results
• Web organization was 3000% more efficient
• Search time was uniform across user groups

V. Conclusion
Navigation of data in a web based organization proved more effective than print navigation
• Broad spectrum of users able to utilize effectively
• Data could be found quicker and in fewer steps than in print media