Author's response to reviews

Title: Technical development of PubMed Interact: an improved interface for MEDLINE/PubMed searches

Authors:

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Author's response to reviews: see over
Dear BMC Editors,

We are resubmitting our manuscript entitled, ‘Technical development of PubMed Interact: an improved interface for MEDLINE/PubMed searches’. Revisions have been made to the paper to address the comments and suggestions of the reviewers.

Below are point-by-point responses to the comments of the reviewers.

We sincerely hope that the revised manuscript meets the standards of the editors and the reviewers.

Thank you.

With great respect,

Michael Muin
Paul Fontelo
Reviewer: Peter Wyer

Reviewer: Does the manuscript clearly describe how the software performs and its advantages/limitations over existing applications? The authors’ response to this issue misses the point. It is not a question of what features of PubMed Clinical Queries have demonstrably been carried forward into PubMed Interact. Rather it is a question of whether the new product actually increases the speed and accuracy of searches performed by target users, e.g. medical practitioners. This would require the equivalent of a controlled study involving such practitioners and comparing objective measures of performance using Interact versus Slim or Clinical Queries. Although such a comparison is clearly beyond the scope of the report at hand, the authors still need to acknowledge the need for such empirical validation and that its absence is a structural limitation of their report.

Response: We apologize for missing the reviewer's earlier points. We appreciate the clarification and have exerted efforts to acknowledge the need for a formal evaluation to generate empirical evidence. We have expanded the 'Results and Discussion' section and added a subheading named 'Limitations'. We believe the first paragraph of the Limitations subheading (page 14) will address the reviewer's comments.
Reviewer: Marcelline Harris

Reviewer: The authors indicate that the paper focuses on the development, implementation, and technical evaluation of PubMed Interact (2nd to last paragraph). This would be a useful statement to bring forward to the front of the paper, and could serve as an outline for the content in the paper.

Response: The statement was added as the last sentence in the first paragraph of the Background section (page 4).

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Reviewer: While development and implementation are discussed in sufficient detail, the article would be strengthened significantly by an expanded or at least focused discussion of the technical evaluation. For example, was any sort of technical evaluation framework or evaluation tools such as the W3C quality assurance tools for web based software employed in evaluating this interface? What about any sort of software evaluation framework? Of note, there are headings in the paper that clearly highlight development and implementation discussions, but there is no heading that indicates the authors have considered in a deliberate manner the technical evaluation against any external criteria. There are certainly indications throughout the paper that metric based technical evaluations were completed, but this could be better organized within the paper, preferably referencing some sort of standard for technical evaluation.

Response: We added a new subheading 'Technical Evaluation' (page 13) in the 'Results and Discussion' section. We acknowledge the limitations of our technical evaluation in the second paragraph of the new subheading 'Limitations' (page 14).

At the time of development (September to October 2005), there were no established frameworks for Ajax methods. It was a novel Web-based technique where formal evaluations rested on the end users. We acknowledge the lack of formal user evaluation as an important limitation in the Limitations subheading (page 14).

Many Ajax applications introduce a product that’s also in constant prototype phase. This explains why GMail of Google, along with their other apps, is in perpetual beta phase because the user requirements change as the nature of novel Web-based technologies change--and vice-versa. The important point we needed to remember was not to sacrifice functionality in the process of adding new features.

We are excited to see the ongoing initiatives in the IT industry. In February 2006, Yahoo! released an Ajax library called YUI (Yahoo! User Interface). The use of the JavaScript library Prototype also increased. Ajax frameworks now exist for PHP. The W3C is now proposing an open standard for Ajax. As standards for the technology are developed, we hope to adopt several of the frameworks in future versions of the application, along with the use of more formal technical evaluation methods. This is in the hope that novel Web techniques also contribute to better medical literature searching.
Reviewer: The figures are not labeled.

Response: The legends and labels for the figure were included in the main text of the manuscript.