Reviewer's report

Title: Applying representational state transfer (REST) architecture to archetype-based electronic health record systems

Version: 2 Date: 1 November 2012

Reviewer: Koray Atalag

Reviewer's report:

Authors present a very comprehensive paper on a hot topic in the area of Archetype based model driven architecture and development. REST protocol has become a major interest in many areas of web development given the proven benefits in terms of scalability and being lightweight in implementation. While it is recognised upfront that the development is not intended for production use and rather an exploratory effort trying to outline a reusable framework and validate the approach, some of the methodologies presented here (for example instance building, bookmarking etc.) can directly be applied to professionally vended software. The authors have well recognised track record in this area and the manuscript clearly demonstrates building upon existing research and skills. While acknowledging the breadth of the topics covered the length of the paper can probably be reduced which will also improve readability. It is also recommended to revisit the Results and Discussion sections so as to clearly separate interpretation of findings from further elaboration and minimise overlap. The use of first person should be avoided where possible, especially repeatedly.

- Major Compulsory Revisions

1) Overall organisation of the manuscripts should be looked at as a whole and too many subheadings should be avoided if possible. The flow should bind each and every piece in a coherent manner. Accordingly the authors should also look at reducing the length.

2) Implementation > Contribution Builder: it is recommended to list purpose after describing it.

- Minor Essential Revisions

1) Introduction> para 1: any reference to the Masters thesis mentioned?

2) Implementation> bullet 1: space between futureopenEHR

3) Implementation > Contribution Builder> para 2, ln5: 'fist' > 'first'

4) Results>Client caching...> last line: use UK English (behaviour).

5) Discussion>Need for sharding: too many first-person use.

6) Future work> demographics and access...> missing full stop and end.
7) Future work> Shared contribution...? grammar error in last sentence

- Discretionary Revisions

1) Availability and requirements> bullet 5> many will argue that Internet Explorer should be in the list.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests