Reviewer’s report

Title: The Cancer Translational Research Informatics Platform

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Reviewer: Victor M. Maojo

Reviewer’s report:

The paper by McConnell et al addresses an important issue within the area of Biomedical Informatics. The proposed Cancer Translational Research Informatics Platform is part of an on-going research associated to the CaBIG. In such context, the paper reports an important project with significant expected results. Nevertheless, the paper presents various and serious drawbacks, stated below.

1. The paper is too long. A reduced version should improve its quality and should make it easier to read as well.

2. The paper is full of details outside the scientific interest of the research (methods, results, experiments) that should be the focus of the paper.

3. The paper looks more like a report to be delivered to a funding agency rather than a scientific report. In the latter, focus should be made on methods and results, emphasizing the importance and originality of the approach.

4. The organization of the paper is not adequate for a scientific journal. The introduction of a “case study” section at the beginning with an “ideal” situation does not add anything concrete to the paper. It shows a hypothetical context that is not supported later with the actual achievements.

5. The design objectives of the paper are not concrete. Other similar objectives could be added to the paper. These kinds of objectives are adequate for a report or research proposal but not for a scientific paper. The classical structure Introduction-Background-Methods-Results-Discussion-Conclusions fits much better here. There is no need to change such common approach that provides a clear focus on research and actual achievements.

6. The technical requirements section include a bullet (“scientific requirements”), which does not seem the best choice. In addition, there are standard methodologies and approaches for this section (e.g., from IEEE) that are more clear and focused. Furthermore, the section is full of acronyms. Some of them are not familiar outside the caBIG project and should be explained in more detail to the readers. Anyway, such long number of acronyms should be avoided.

7. The same can be applied to “Software architecture” and the different “Interface” subsections that have only a limited interest for researchers. All projects are full of these details but only the necessary details are needed,
particularly if they introduce some original approach.

8. Similarly the “Distributed Query Engine” presents 7 different acronyms in just one paragraph, which makes difficult to follow its meaning. A better description of the actual rationale behind should be made. This is not a trivial issue, since there are many different approaches in the literature that should be analyzed, showing the reasons for adopting such approach.

9. The different subheadings of the paper, in general, present a predominance of technical details at a low level, missing the important issues. For instance, to include a section about installation requirements do not appear interesting from a scientific perspective. A lot of such information could be easily reduced leading to a more focused and coherent paper.

10. The reference section is too short and not relevant for this paper. There are many research papers published in the last decade addressing relevant issues that should be analyzed and discussed. As regards, a discussion section, where the authors compare in depth their approach with others in the literature is needed.

11. Finally, the authors should emphasize where is the originality of the approach. There are many related approaches in the literature and it is not clear what is actually new and improved here from a research perspective.

In summary, the paper presents a quite interesting application but, for this reviewer, the paper should be fully rewritten. In such new version, many details (and acronyms) should be avoided and some more elaborated sections (particularly, regarding Methods and Discussion) should be introduced.