Summarizing Review

Thanks a lot for your submission. In summary, the paper lacks to fulfill the needed length and there are major issues related to the academic content of your paper. Both reviewers miss the discussion of the provided findings and a contrasting analysis in comparison to other architectures. Furthermore the intention of the paper is not obvious and therefore the academic surplus is hard to identify. For details, please refer to the reviews. Overall, the paper needs extensive revision. The topic can be presented at the conference, but the publication at the Springer proceedings will depend on the quality of the revision.

## Reviewer one:

- main contribution to the conference's theme:

The paper fits very well in the conference's thematic scope by presenting the design and implementation of a platform supporting research in the field of Computer Algebra. The main contribution is to show the value of a linked data approach in the field of e-science.

- thematic relevance:

high (see above)

- originality:

The paper presents an original idea to support the research in the field of Computer Algebra by offering a platform for sharing and testing data samples. The design approach appears to follow well established standards and practices in linked data. A more innovative approach to couple the data platform with social networking functionality as known from platforms such as Facebook is mentioned, but not discussed thoroughly.

- relevance for theory or practice:

The paper advances the work on infrastructures for scientific research by showing how state-of-the-art plattforms for data sharing and experimentation (or, rather, testing) can be designed. To add to the relevance of the paper, the approach taken in the SymbolicData project should be compared to other infrastructures from the same, but also from other fields to show the differences and advantages. Furthermore, a more detailed discussion of the pros and cons of the SymbolicData approach should be presented that focuses on criteria for scientific collaboration as established in the literature.

- quality of research:

The design of the platform follows well established standards of open source development and the provision of linked data. However, it is not clear to what degree needs and requirements by potential users have been taken into consideration in the design of the platform.
Furthermore, a systematic assessment of how the research community experienced the platform and the services would benefit the paper's quality.

- quality of presentation:

The argument is presented straighforwardly and clearly. There are some minor problems with the use of english language. A more important problem is that the presentation assumes quite a bit of background knowledge about the standards and concepts applied - in the context of an

interdsiciplinary conference, less computer science slang and abbreviations and more explanation of why this or that is important would be helpful to ensure broader understanding.

- overall evaluation:

accept (4/5)

- further comments:

In my view, the paper could be further improved by discussing more deeply the broader context of research infrastructures in science, as this is a very important, yet underresearched aspect of e-science.
This would mean to discuss the SymbolicData approach in the context of other alternatives, but also to address the users' perspective by assessing the practical needs and also the experiences made so far with the implementation and real life uptake of the platform.
Furthermore, Social Networking functionality is mentioned prominently at the beginning and in the end of the paper, but the paper does not make clear how the SymbolicData attempts to achieve such functionalities, neither from the technological nor from the socio-technical perspective, although this seems to be the most innovative part.

## Reviewer two

Assesment criteria

Please give a rating for each criterion and hints for authors. The weighting for the overall rating is attached to each criterion.

**Please briefly summarize the paper‘s main contributions to the conference theme:**

The Paper the Symbolic Data Project describes a project being carried out in the fields of Computer Algebra and E-Science. Based on the historic roots und partner projects, the technical realization as well as its perspectives for a future development are explained. The main idea of the project itself is the storage, metadata based description and access of data. The work basically contributes by showing an application of e-Science.

**Thematic relevance for the conference (see Call for Papers) (20%):**

3

The paper fits into the topic of e-Science. The project follows basic ideas of e-Science like the sharing of resources, the publicity availability of data and the reuse of content.

**Originality (20%):**

2

First of all, the main idea of the project itself seems to be innovative and already seeking for a realization among the community. Maybe, the way of realization is innovative as well. Besides, the paper itself is basically a description of how the project is carried out and realized. It entirely lacks a comparison to other projects. Furthermore it lacks completely a prove for it originality among academia.

**Relevance for theory (10%):**

1

**Relevance for practice (10%):**

4

**Quality of research design (10%):**

1

The first question which arised during the lecture of the paper was, which scientific method has been applied. It may be a prototype, but with a prototype as a method to show the basic functionality of a concept at least the requirements have to be identified, a conceptualization of the archtitecture needs to be explained and furthermore, there needs to be an evalution of the realization against the requirements. None of the mentioned aspects is part of the paper. That does not imply, that the project is not based on such a scientific workflow or method, but it is not explicitly mentioned.

**Quality of research execution (10%):**

The provided project is compared or set into relation to a very low amount of existing projects, but that is far away from a state of the art or an scientific assessment. As already explained, the paper lacks of a scientific method and an entire evaluation.

**Quality of presentation (20%):**

3

Among the text, there are some language problems. Overall, the paper lacks a figure comprising all the information given on the architecture of the

**Overall evaluation:**

2

**Review:**

**Reviewer's confidence with the paper's subject:**

5

**Further comments**

*First of all, it needs to be stated that the project itself may be of interest for the research community for computer Algebra. But in order to understand the provided contribution, it is necessary to understand the process of the invention besides all interesting organizational background from an academic perspective. Therefore, competing design possibilities need to be evaluated or otherwise there needs to be at least any kind of explanation for the chosen one due to special requirements of the project being only fulfilled by the presented architecture. As a methodology I recommend strongly to rely on state of the art for the comparison to other projects for example being described by Fettke. Furthermore the process of the invention of the presented artifact may follow design science principles according to Hevner in order to ensure that the contribution is acceptable for a broad scientific community or can be generalized for other field of e-Science. Unfortunately the academic gap which needs to be addressed is not mentioned and herewith the fulfilment of the scientific goal can not be obsessed.*