#152191: [redacted]

Authors - [redacted]

Abstract The service-oriented architecture model is a software development alternative very suitable for adding functionality with the benefits of high cohesion and low coupling. However, since this type of architecture must be implemented independently of the service's client, the functionality validation can become an extremely complex task. As a way to get around this problem, this article presents the use of a simulator of the client system in order to validate the correct execution of the OEE system, an example of application of the service-oriented architecture, under conditions very close to the production environment.

Topics Industrial applications of software engineering | Software verification, validation, and testing

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track Technical Research

Category

Status rejected

files

Description	file name	Type	Size	Created
Paper manuscript	152191.pdf (/jems2/index.php?r=paper/download&p=152191&f=0)	pdf	573.18 KB	Jun 20, 2016 - 04:13 AM (BRT)

Paper Options Paper History

Reviews

Review 1 - Marllos Paiva Prado (/jems2/index.php?r=person/view&id=92524)

Relevance for the tpc symposium :	What is your position about this paper? tpc :	Reviewer familiarity with the subject tpc :	Best paper award tpc :
2) Relevant	2) This paper should be rejected, though I will not fight strongly against it (reject, but could accept).	2) Moderatly familiar (knowledgeable in the area, though not an expert)	1) It definitely does not deserve

1: Summary:A brief description of the paper.:

The article presents a client system simulator built for the validation of the OEE system (SOA-based system). The motivation for the construction of the simulator is based on the difficulty of obtaining a real environment that exercises the interconnections in the calls to the web services by the OEE system and enables the requirement and execution tests.

2: Paper strength: What are the positive aspects of this paper, especially with respect to Originality and novelty; Technical soundness and contribution; Readability, organization and presentation; Comparison to previous work; Evaluation.:

The positive aspects of the job are:

*Address a practical and palpable problem;

*Present a solution proposal with potential contribution to reducing the cost of testing an SOA system;

*Comprehensive description of the party that benefits from the proposed solution presented (the OEE system in this case).

3: Paper weakness: What are the negative aspects of this paper, especially with respect to Originality and novelty; Technical soundness and contribution; Readability, organization and presentation; Comparison to previous work; Evaluation.:

*In general, the writing of the work needs improvement in the organization and chaining of ideas. The text fails several times to present concepts and only later explain them, demanding patience and dedication from the reader to continually advance and regress in the text to understand the ideas. An example is the "Global Equipment Efficiency Index", presented in the introduction of the work but explained only in section 2. The idea could have been launched, even if briefly, when the term is introduced, so that the reader has at least a idea. Another example is "theoretical cycle time for production"... This type of writing creates unnecessary expectations in the reader.

*Some ideas are also loose, eg when the author(s) speak(s) of "machine registration" to explain that there should be no sharing of data... The simple statement that there should be no sharing of data seems enough to me.

*The paper makes some confusion of test technique with test levels in session 3: The description of test execution and interconnection are more related to the level of test applied (in this case, system and integration). Although the authors talk about structural testing, none of the three types of test descriptions mentioned allow this to be clearly evidenced (following a software testing perspective)

4: Comments to authors:Comments and suggestions for improving the paper.:

*I believe that the text should better balance the content in order to favor the contributions of the work. For example, although the part that explains the OEE system (session 3) is well described, it can be more condensed so that section 4 can be better explained.

*An interpretation--even if summarized--of Figure 5, in the body of the text, would help the reader in his interpretation. If this is not relevant, I suggest removing it.

*Another part that deserves more detail is the validation: since the aim of the work was to make a simulator that would enable the OEE test, it would be interesting to exemplify how this test will be applied based, for example, on the data illustrated in Figure 7.

*To conclude, I suggest as a guideline to authors who try to put themselves more in the place of the various types of readers. The text should be both interesting for an expert in the subject and easy to read for a beginner who is looking to start studying in the field.

5: Questions for rebuttal phase: Provide direct questions that you want answers during the rebuttal phase. Remember that authors will have only 4000 characters to answer all questions from all reviewers, so add here only the most relevant questions.:

Question 1: What are the limitations of the simulator in terms of functionality for the purpose developed? (For example, what does the simulator not cover the actual execution context it simulates, for testing purposes?)

Question 2: The authors close the article saying that: "As a suggestion for future work, other simulators can be developed to carry out the validation of SOA applications". Can the current simulator be adapted for other SOA applications? If so, what would be the main practical difficulties that the interested party (researcher or industry professional, for example) would have to make this adaptation? What constraints must the SOA application meet so that the adaptation has a better chance of success?

Comments to TPC:Comments for TPC members only.:

Co-reviewers:First and last name of the co-reviewer(s) for this paper (included in the proceedings, one per line, no affiliation):

TPC Discussion

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