Questions are in blue and answers in **bold**

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Paper id 121: Visualizing Software Engineering Learning Sessions Through Provenance  
  
9. Paper Summary :  
This paper proposes a provenance graph and analysis methodology for use in games  
 to help teach software engineering. The proposed approach builds upon the  
 authors' prior provenance-based approach to games.  
  
10. Comments to the authors :  
  
Points for:  
  
 \* The idea of using games to teach software engineering seems very promising,  
 and tools to help students understand how their decisions produced the final  
 result might also be useful.  
  
 Areas for improvement:  
  
 \* The paper contains no validation of the work, and thus, it offers no evidence that the provenance graphs would actually be useful to students. For example, it's unclear whether the graph for a game would do a better job of helping a student understand the factors that influenced the game's outcome than simply reflecting on what happened during the game.

**We are currently in the process of doing some experiments with students to validate the work.**

**Leo: Já sabíamos dessa falha. Próximo paper não terá mais esse problema.**

Moreover, it's easy to imagine a software engineering game being long and with many moves, and it's unclear whether the visualization scales up well or whether students will know which filters to choose in such situations.

**It is possible to collapse vertices and thus compressing the information displayed. For example, instead of displaying all vertices from all 7 days in the week, it is possible to just display one vertex for the week.**

**About filters, it is possible to pre-program rules to pre-filter information instead of showing the raw data to the student. But this varies with each game because each game can have their unique rules about what is relevant or not. Note that this will only omit information. The user can at any moment “expand” the filtered information, just as well as interact with the graph. About which filter to choose from when doing an analysis, it will depend on the type of analysis.**

**Remember that filters are also dependable of the game. For example, in a combat oriented game there might be filters for hit points, which show information related to hp like gaining health, taking damage, current status, etc. Taking SDM as an example, such filter does not exist because there is no hp in SDM.**

**About students knowing which filter to choose, I can’t answer that. If they know the game, then he will be able to intuitively select filters to aid in his analysis. And if he chooses wrong, he can always choose another, since data is never altered, only how it is displayed.**

**LEO: E o que vc pretende fazer no artigo para evitar que esse mesmo comentário surja novamente?**  
 \* The visualization could be better explained. It might help to say more about the game that the visualizations are based on, and/or to provide table that defines what all the different graph elements represent.

**Make a table to explain graph elements, like vertex types and edges? Ok.**

**Explain more about SDM, since the visualizations in the paper were based on its concepts? Ok.**

**Leo: OK.**  
 \* Terminology: The paper says that the work is applicable to "games", which might mean, for example, board or card games. However, it seems that the work is specific to "computer games".

**LEO: E o que vc pretende fazer no artigo para evitar que esse mesmo comentário surja novamente?**  
  
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9. Paper Summary :  
This paper describes a system for recording the major decisions made by students  
 playing a software engineering game, in order to help students analyze the game  
 post-mortem and understand which decisions influenced the game's overall  
 outcome. The basis premise is useful and deserving of study.  
  
10. Comments to the authors :  
  
 The system was previously described in SBGAMES2012. The current paper states that it is about provenance graph analysis methodology.

The methodology in question seems to consist of rendering the provenance graph and leaving it to the **human reader to infer what they can from the graph.**

**It is possible to make a pre-filtering before presenting the raw graph to the human reader. But this filtering may vary with each game. Maybe make it explicit in the paper?**

**Leo: Tem que falar isso de uma forma que reduza críticas a esse ponto. Eles parecem querer algo mais guiado. É o segundo que toca nesse ponto.**

**Filters need to be tailored for each type of game, we only provided some examples. Same goes for inferring something. It is possible to design some inferences to aid the user, but again, they are domain sensitive. Each game will need to have their set of rules for deciding what to infer. We didn’t do any, but that doesn’t mean it can’t be done, because it can. Collapsing vertices is possible with the tool, so it is only needed to make some rules to decide what to collapse, instead of leaving the player to do all the thinking.**

**LEO: E o que vc pretende fazer no artigo para evitar que esse mesmo comentário surja novamente? Acho que precisaríamos, ao menos no nosso domínio, mostrar que isso pode ser feito.**

This technique, which would not work adequately in most visualization contexts due to poor scalability, might work in the context of analyzing student gameplay from a 25-75 minute game session.

**Maybe, but it is possible to collapse entire sections into 1 vertex. For example, imagine a case of an RPG. We can collapse entire sections by: Location (City X, City Y, City Z), combats (Combats are represented as only 1 vertex), Zones (Locations can also be divided into zones: a city has sections: Merchant plaza, docks, etc).**

**Doing this, the player will be able to see every place he went, each represented by a vertex. If he wants to analyze something that happened at that place, he can expand the vertex to the next level (Zones, combats participated, etc).**

**One analogy would be with Google Maps. You can see the entire world at once. But you can also zoom in locations for further details, more and more up to the point you are in the “street view”.**

**LEO: E o que vc pretende fazer no artigo para evitar que esse mesmo comentário surja novamente?**

Still, the paper is vague. The first page is too referential of previous work without summarizing very well or clearly what is going on -- it is not as self-contained as it should be.

**The introduction of the paper was too vague? This paper is a continuation of a previous work, which also had a paper. So we had to summarize the last paper. Maybe we summarized too much?**

**LEO: E o que vc pretende fazer no artigo para evitar que esse mesmo comentário surja novamente? O ponto que ele levanta é relevante: o artigo tem que ser auto-contido. Então precisamos reler com o olhar de quem não leu o primeiro. Pode ser que tenhamos resumido demais sim.**

The later examples did not convince me that students using these tools would learn what they needed to from their post-game analysis.

**Examples are constrained by the paper size. Maybe elaborate other examples in place of those?**

**Leo: Ok. Ou mesmo revisar esses para ver como podem ser mais convincentes.**  
 In the abstract, the claim that software engineering is usually taught via theoretic classes is by now not necessarily a true claim, and should be qualified.

**LEO: É só atenuar a frase para usually ou algo assim.**  
  
 The following are comments on the English:  
  
 "a raising approach" is awkward and should be rephrased  
  
 "influenced in the outcome" should read "influenced the outcome"  
  
 "Artifacts are an immutable entity" has a grammar (number agreement) problem  
  
 "game date" should read "game data"  
  
 "making easier to see" is awkward, the sentence should be rephrased  
  
 "in a daily basis" should read "on a daily basis"  
  
 "also involve other areas" should read "also involves other areas"  
  
 Use of "we" is to be avoided in technical writing  
  
 "As so," is awkward and should be rephrased.  
  
 "accordingly to the product quality" is awkward and should be rephrased.  
  
 "Process nodes, which represents" should read "Process nodes, which represent"  
 ...and later in that sentence "stores" should read "store"  
  
 "credits filter" and "credits income" are awkward and need to be rephrased or  
 clarified  
  
 "looses" should read "loses"  
  
 "focus only in two agents" should read "focus only on two agents"  
  
 "Those agent's roles" should read "Those agents' roles"  
  
 "In node 2 he did" --> "he" is unclear in this reference  
  
 "based on game" should read "based on game play" or some such phrase

**LEO: E o que vc pretende fazer no artigo para evitar que esse mesmo comentário surja novamente? Corrigir tudo?**