
Middleware Paper Discussion 3

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In the previous paper discussions, we discussed overview papers. They covered a broad spectrum, but did not go into detail. For this paper discussion, we selected a paper that has more focus on a specific state-of-the-art problem. Thus, do not worry if you do not understand every detail - you are always welcome to ask questions during the discussion.

Download (<http://www.dvs.tu-darmstadt.de/publications/pdf/actress.pdf>) and read the paper “ACTrESS – Automatic Context Transformations in Event-Based Software Systems” by Freudenreich et. al. (Proceedings of the 6th ACM International Conference on Distributed Event-Based Systems).

Answer the following questions:

1. What is the problem the paper is trying to solve?
2. Why can database integration techniques not be used to solve that problem?
3. What is “context” as defined in the paper?
4. How is a context defined?
5. Figure 1 shows the building blocks of the Context Handler. What is the purpose of each of those blocks (1 sentence each)?
6. The paper suggests transforming inside the “middleware”. What type of middleware is meant?
7. What alternatives to transforming inside the middleware do you think are possible and why were they not chosen in the paper?
8. What is the difference between the scenarios “none” and “base” in the evaluation?
9. Section 3.6 talks about an “API Extension”. How is this extension realized in the implementation?
10. The paper states that “messages are transformed by the first broker they reach”. In a distributed broker network, can you come up with a case where this leads to unnecessary work?

Note: Question 3 and 4 do not ask for the same thing!

Hand in one to two pages **on paper** at the beginning of the exercise session on **Jan 27, 2015**. Group submissions are not allowed, however we encourage discussing your answers with fellow students. Don't forget to put your name and student ID on your submission.