Set of Interview Questions regarding Engineering Process Analysis

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Before each interview was started, a general introduction into PPR and the concept was given. Each domain expert was picked up from ground zero, knowledge wise and it was tried to address any existing questions before the interview started. This allowed a) a more fluent interview and b) minimized the amount of questions form the interviewees how certain questions are meant.

General Questions for all Interview Partners

Question 1: What is representative PPR knowledge for your domain, your role?

Question 2: Can you split this knowledge up into its individual product, process and resource parts, providing examples where possible?

Question 3: Is each attribute or property part of a tool, a document on paper or your documentation? Where do you currently receive your information from? Do you need to know for example the paths of a file to access it and receive so your knowledge?

Question 4: What are current problems in regard of expressing and conveying PPR knowledge?

Question 5: How do you circumvent these problems? An example was given that in some tool's attributions are misused to express knowledge for example general child elements are used for process information labeled with a PI and an informal standard established this as process information, how do you deal with things like that?

Question 6: What is your ideal case regarding present knowledge so that you can start your work?

Question 7: What is the normal case you work with? What knowledge is normally present and what is not?

Question 8: How do you express product specific attributions which also have consequences on process and resource design decisions?

Question 9: How important is it for you to express time in regard of PPR knowledge modeling?

Question 10: What files or more general engineering artifacts do you produce in your work/as role?

Question 11: What data, information and knowledge is present in the individual output artifacts?

Question 12: What files or more general engineering artifacts do you consume in your work/as role?

Question 13: What data, information and knowledge is present in the individual input artifacts?

Question 14: Can you briefly describe how you exchange your engineering artifacts? How does the data-logistics process look like?

Question 15: It is often the case that roles in later engineering phases require knowledge from your role but this knowledge is often not present. Do you know that or not? Do you have means to express this knowledge but you don't or is there currently no means to express this knowledge?

Question 16: How do you handle versioning of your engineering artifacts?

Specific questions for the production process planner

Question 17: Can you depict your 90 % use case. What are the process tasks you execute with the minimal set of engineering artifacts?

Question 18: Where do the remaining 10 % fit into the overall execution path?

Question 19: Why do you not always execute all possible engineering tasks?

Specific questions for the production system planner

Question 20: What are possible reworks that you can/must perform?

Question 21: After reworking existing artifacts, which process steps need to be re-executed or which engineering artifacts need also be reworked due to dependencies?

Question 22: How is it possible to depict the currently present knowledge and differentiate between a normal use case, a 90 % execution path and the full set of engineering processes?

Specific questions for the production process optimizer and automation engineer

Question 23: How easy is it for you to receive knowledge, which is not already conveyed through the engineering process?

Question 24: What are representative input artifacts?

Question 25: Where do you get your input artifacts from?

Question 26: What happens when you do not receive all necessary input artifacts?

Question 27: What consequences do missing artifacts have for you and your engineering process execution?