Context, Retrospection, and Prospection in Healthcare Process Definitions

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Abstract. Carefully defined processes can be effective tools for guiding and coordinating the actions of healthcare professionals. In past work our group has focused on defining such processes precisely and completely in order to support largely static analyses that demonstrate the absence from the processes of defects and vulnerabilities. Now increasingly our group's focus has been turning to the execution of these processes, using them to provide run-time information to guide process participants. This new focus has made it clear that more thought must be given to how to communicate with participants in order to assure more effective guidance. Our work is suggesting that participants, especially human participants, will require that process-provided guidance be accompanied by context, history, and prospective information if the guidance is to be credible, acceptable, and ultimately useful. A process definition that merely provides needed inputs and resources, and informs a participant that it is time to perform a specified activity is likely to be received with skepticism and to be the target of searching follow-up questioning. Process participants are likely to require answers to questions such as, "why am I being asked to do this?", "who else is doing what at this point?", "what past events have gotten us to the point where we need to do this?", "why am I being asked to do this again when I have already done it before?", and "if I do this, what other activities and resources are going to be required next?". The need for a process definition to be able to support the provision of answers to such questions relies upon the process definition's access to the process execution's current state, its past history, and its future execution possibilities. Providing such access poses difficult and important problems for the developers of process definition languages and formalisms. This talk identifies some of these problems, suggests possible approaches to them, and underlying challenges in solving them.

F. Daniel et al. (Eds.): BPM 2011 Workshops, Part II, LNBIP 100, p. 187, 2012.