Information Design for Business Process Management

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Abstract. Profound analysis of business processes is a key factor for successful continuous business process improvement and business process (re)engineering. Nowadays, business analysts have to cope with an increasing complexity of these business processes. A process view intends to make complex processes easier to understand by providing a perspective on a process that is personalized for specific needs of a particular analytical or modelling scenario, e.g., for analyzing compliance issues. We understand a process view as the result of applying particular transformations to a process model. For instance, omission of rather technical activities in a process represents such kind of transformation. We discuss the fundamentals of process views and scenarios for their application in business analysis and business process management. The discussion includes (1) "The Information Designer", a novel role in business process management which is concerned with the definition of process views, (2) comprehension of process viewing techniques, and (3) an outlook on how process views are anticipated to change the way of handling complex business processes and related information considering multiple different stakeholders.

Keywords: Process View, Information Design, BPM.

Extended Abstract

Nowadays, companies are facing a rapidly increasing complexity of the processes which drive their business. Increasing complexity refers to a multiplicity of different aspects like the number of tasks contained in a process, cross-cutting concerns like security or compliance, deployment configurations for process automation, data that is available regarding the execution and performance, and organizational aspects. Although this list is far from being complete, it is becoming more and more obvious in Business Process Management (BPM) research that novel concepts and techniques are required to remain able of dealing with such complex circumstances [1,2,3].

So-called *process views* intend to abstract from details and make complex processes easier to understand. A process view can be described as the result of particular transformations applied to a process model, for instance omission and aggregation of activities [4]. As shown in previous work [5], process viewing techniques can be used in the different phases of the BPM life cycle for filtering and summarizing of information contained in a process. Another function of viewing techniques is information linkage – by augmenting a process model with related data,

interrelations can be recognized easier and adapted faster. Another important feature of process views is the change of the graphical appearance of a process in order to translate information regarding the needs and requirements of different stakeholders.

In [6] we exemplified a practical scenario for the design of process views. In that work, process views for compliance were defined, i.e. for the conformance of a business process with requirements derived from laws, regulations and internal policies. We argue that compliance is just one aspect in BPM where a novel role is required: *the information designer*. Equipped with *process viewing patterns* [4], the elementary language constructs process views are made of, and with a set of services which implement such functionality, the information designer defines and creates process views that are tailored to information needs of process stakeholders.

As a consequence, we anticipate that *information design* will emerge as a novel discipline in the different facets of BPM. We envision that a new set of supporting tools and applications will emerge and furthermore established tools and products will be extended with viewing techniques in order to keep up with increasing complexity and customers' demands. In previous works, we discussed the extension of process design tools [6] with viewing functionality, and we presented the capabilities of viewing-enabled tooling for process monitoring and analysis [7]. Both tools have successfully been reviewed by industry partners within the course of the European research project COMPAS[1]. Our work on information design is ongoing in many different areas such as - but not limited to - manufacturing engineering and scientific workflows. So far, process viewing techniques have proven as a very useful instrument to make work with complex processes and related data significantly easier.

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[1]   COMPAS: Compliance-driven Models, Languages, and Architectures for Services, http://www.compas-ict.eu/