


ER2017 Submission 179

Submission information updates are disabled.

For all questions related to processing your submission you should contact the conference organizers. [Click here to see information about this conference.](#)

This submission is included in proceedings. Click on "Proceedings version" in the vertical menu to access the proceedings.

All **reviews sent to you** can be found at the bottom of this page.

Submission 179	
Title	Goal Orchestrations: Modelling and Mining Flexible Business Processes
Paper:	 (Apr 28, 09:32 GMT)
Track	ER2017
Author keywords	Goal-oriented process modeling Flexible business processes Context-sensitive process enactment
EasyChair keyphrases	goal orchestration (603), goal orchestration model (253), event log (240), goal model (220), process model (196), goal sequence (190), business process (136), state update operator (126), goal assertion (110), auto close (90), mining goal orchestration (79), state set sequence (79), requirement engineering (70), task post condition (63), goal precedence constraint (63), ticket handling process (63), enterprise capability library (63), event sequence (60), post condition (50), task sequence (50), semantic business process (47), real life dataset (47), clinical process model (47), flexible process execution (47), semantic web service (47), state sequence (40), date attribute (40), end effect (40), treatment plan (40), alternative flow (40)
Topics	- Business Process Modeling, - Methodologies and Tools for Conceptual Design, - Requirements Engineering
Abstract	In many application domains, it is more natural to think of a process as a coordination model of goals to be achieved rather than tasks or activities to be performed. Replacing tasks or activities with goals in process models allows us to enact processes in flexible, context-sensitive ways. We show how a goal orchestrations and a goal model constrain each other, and how these enable flexible process management. We also offer a simple means of mining goal orchestrations from readily available event logs.
Submitted	Apr 24, 16:42 GMT
Last update	Apr 24, 16:42 GMT
Address	University of Wollongong NSW 2522 Wollongong, NSW 2522 Australia

Authors						
first name	last name	email	country	affiliation	Web page	corresponding?
Metta	Santiputri	ms804@uowmail.edu.au	Australia	University of Wollongong		
Aditya	Ghose	aditya.ghose@gmail.com	Australia	University of Wollongong		✓
Hoa	Dam	hoa@uow.edu.au	Australia	University of Wollongong		
Suman	Roy	suman_roy@infosys.com	India	Infosys Technologies Ltd.		

Reviews

Review 1	
<i>Overall evaluation</i>	<p>2: (accept; must be accepted, and I will argue for it)</p> <p>The paper presents an approach that aims to alternatively formalize a process modeling via goal orchestrations. The authors claim that goal orchestration could be adequate for modeling processes in many settings than traditional task flows, goal orchestrations provide an easy means of achieving flexibility in process execution, and orchestrations provide strategy-level views on processes.</p> <p>The topic is relevant and the paper is well-written.</p> <p>The approach was evaluated with 2 logs using metrics defined in the literature. The results showed that in both cases the approach was able to achieve its goals. Concerning the real-life log used in the evaluation, the authors might consider validating the results (the models) with business people from the company.</p> <p>Besides, the authors should discuss the limitations of the proposal. For example: "For a goal orchestration approach to enable flexible process execution, we require tasks/activities or enterprise capabilities to be annotated with post-conditions (specified in the same ontology as the goals)". How difficult is that? How can you guarantee that this could be done (and by whom)?</p> <p>This approach seems to apply to the category of processes called knowledge-intensive processes in which diverse alternatives could be performed, for example, according to the actors' experience. The motivational scenario provided by the authors is a good example of such process. So, it would be interesting to see the results in terms of the different process steps that could be followed (or were really followed in the case of a real setting) to achieve the goals. The analysis of goal model X process models (task flow) might illustrate nicely the contribution of the proposal.</p> <p>The conclusions are too short; the authors could improve the discussions and provide insights about the implications of the results in practical and research perspectives.</p>
<i>Technical Quality</i>	5: (excellent)
<i>Novelty</i>	4: (good)
<i>Relevance to ER</i>	4: (good)
<i>English Language Quality</i>	-
<i>Positive Aspects</i>	The topic is relevant and the paper is well-written. The contribution is clear and there are results from 2 experiments.
<i>Negative Aspects</i>	The limitations are not discussed. The conclusions are poor.

Review 2	
<i>Overall evaluation</i>	<p>2: (accept; must be accepted, and I will argue for it)</p> <p>Goal Orchestrations: Modelling and Mining Flexible Business Process proposed a method to create business processes from business goals that are retrieved subsequently from a task sequence and an event log. The proposed method demonstrated well how to derive a business process from an interrelated set of coordinated goals. The presentation of ideas is well articulated.</p> <p>I therefore accept this paper to be included in the conference proceedings.</p>
<i>Technical Quality</i>	4: (good)
<i>Novelty</i>	3: (fair)
<i>Relevance to ER</i>	4: (good)
<i>English Language Quality</i>	-
<i>Positive Aspects</i>	1. The proposed method is properly tested with both synthetic data and the real world dataset on ticketing problem handling. 2. The possibility on using any state update operators tools provides a convenient way to adopt this model in broader manner. 3. The AND-Or goal graph form of the input goal model can assist in identifying alternative of a given goal that can open up an opportunity of re-design in the run-time.
<i>Negative Aspects</i>	1. The section on Related Work is presented at an usual order (come almost at the end of paper) and the discussion is mixed up with the proposed method and is not quite consistent. The demonstration of concepts and the evaluation using different domain example obstruct the flow of thought.

Review 3	
<i>Overall evaluation</i>	<p>2: (accept; must be accepted, and I will argue for it)</p> <p>The paper presents an approach to model process based on goal orchestration. For this purpose, authors formalize this approach by using abstractions covering three different levels, which are the goal level, the task level, and the event level. The approach has been evaluated with two cases, a real one from an IT company and an artificial one.</p> <p>The topic addressed in the paper is very interesting, fitting also perfectly well to the topics covered at ER. The paper is also nicely written and structured.</p> <p>The idea of managing goal orchestrations fits perfectly well to many domains/industries where modelling the process based on tasks would be simply impossible. In this sense, the health sector domain is a good example for it. However, I also think that mining data in this context is really challenging. Annotating tasks will not be always possible. For example, what happens with manual tasks? How are these logged? Could authors elaborate a bit on this issue?</p> <p>Does the proposed approach provide support to domain experts to create the mapping between goal assertions and the goal model? Are these provided with a specific ontology?</p> <p>In section 5 authors state that one of the purposes of the evaluation carried out in their work is to identify different alternatives to achieve a goal. Is then the approach also building process models based on tasks from the mined data? Are these identified alternatives used later on in the goal model for example to improve it?</p> <p>I suggest authors start Section 4 with the current second paragraph.</p> <p>Minor typos: - Section 3, 4th paragraph: "to deliver (MANIFESTED via events/effects)" - Section 3, 5th paragraph: "...of the 2 models reveals that THE goal of ..." - Improve the quality of figures so these can be read when printed - Section 4, 3rd paragraph: missing closing parenthesis "(in the empirical evaluation..."</p>
<i>Technical Quality</i>	5: (excellent)
<i>Novelty</i>	4: (good)
<i>Relevance to ER</i>	5: (excellent)
<i>English Language Quality</i>	-
<i>Positive Aspects</i>	- Novel approach to model processes based on goals. - Approach validated with real data sets - Good quality
<i>Negative Aspects</i>	- Manual tasks which are common in many processes, specially in the health sector, are not considered by the proposed approach.