CALL FOR PAPERS

3RD WORKSHOP ON THE ROLE OF REAL-WORLD OBJECTS IN BUSINESS PROCESS MANAGEMENT SYSTEMS (RW-BPMS 2017)

To be held in conjunction with EDOC 2017,
10th of October 2017, Québec City, Canada

Extended submission deadline: **June the 12th 2017**

SCOPE

The increased availability of sensors disseminated in the world has led to the possibility to monitor in detail the evolution of several real-world objects of interest. GPS receivers, RFID chips, transponders, detectors, cameras, satellites, etc. concur in the depiction of the current status of monitored things. Therefore, the opportunity arose to connect physical reality to digital information. The screening of real-world objects lets sensors be the interface towards real-world information, because they are the originators of machine-readable events. The exploitation of such knowledge is leading to successful applications such as Smart Cities, Flight Monitoring, Pollution Control, Internet of Things, and Dynamic Manufacturing Networks.

The amount of information at hand could be leveraged for a fine-grained monitoring, mining, and decision support for business processes, stemming from the joint observation of business-related objects in the real world. However, the main focus of process and data analysis in Business Process Management (BPM) still lies at a high level of abstraction, such as activities' status, and is based on digital-to-digital information, such as information systems' data- and activity-centric logs. Furthermore, a limited investigation from the BPM community has been evinced towards the physical-to-digital bridge so far. Such a bridge would be naturally provided by rethought information systems, where the knowledge extracted from real-world objects would best depict the contingencies and the context in which business processes are carried out. At the same time, awareness of physical reality for undertaken actions would allow for a better control over the interaction that the Business Process Management Systems (BPMSs) have with the real world.

The objective of the RW-BPMS workshop is therefore to attract novel research and industry approaches investigating the connection of business processes with real-world objects monitoring. Conceptual, technical and application-oriented contributions are pursued within the scope of this theme.

TOPICS OF INTEREST

Relevant topics include, but are not limited to:

(1) Real-world objects in decision making, support and process mining
- Execution/deployment challenges for BPs that include sensors
- Using real-world objects monitoring for business process execution and control
- Integration of data from real-world objects in BPM applications
- Process control based on real-world objects
- Mixed physical-digital events correlation and aggregation
- Mining mixed physical-digital events
- Continuous mining of real-world events for running processes
- Case identification from sensor data
- Event log extraction from sensor data

(2) Real-world objects in business process modeling
- Modeling challenges to combine static information of business process execution

and continuously updated information of real-world objects
- Support for decision making based on sensor data for the business process execution
- Requirement analysis for integrating real-world objects monitoring with business process monitoring
- Opportunities of modeling sensor data in business process models
- Inclusion of real-world information for the visualization of current process status
- Novel visual representations for mixed physical-digital evolution of processes
- Modeling flexibility for business process management involving real-world object interactions
- Real-world objects status compliance to the business model
- Compliance of the business model to the status evolution of real-world objects
- Defining constraints on real-world objects in business process modeling

(3) Process adaptivity and prediction based on real-world objects
- Opportunities of mining sensor data to model business processes
- Opportunities of mining sensor data to control the execution of business processes
- Monitoring real-world objects to predict business process execution (e.g. duration of tasks)
- Mixed physical-digital data aggregation in event analysis
- Real-world-event driven process adaptation
- Studies on the effects of process enactments on the real world

(4) General view on real-world objects in BPMS
- Empirical research on the integration of real-world objects in BPMS
- Case studies on the integration of real-world objects in BPMS
- Best practice for the integration of real-world objects in BPMS
- Vision papers on the integration of real-world objects in BPMS

SUBMISSION GUIDELINES

Prospective authors are invited to submit papers on any of the topics of the workshop. Papers must be written in English as full research paper (from 8 to 10 pages) or short papers (position paper, work in progress, software demonstration; max. 5 pages). Papers must contain original contributions that have not been published previously, nor already submitted to other conferences or journals in parallel with this workshop. Each submission is reviewed by at least three experts in this field.

IMPORTANT DATES

Paper submission: ~~May 7, 2017~~ extended to **June 12, 2017**
Paper notification: July 16, 2017
Camera ready: August 1, 2017
Workshop date: October 10, 2017

WORKSHOP CHAIRS

Claudio Di Ciccio (Vienna University of Economics and Business, Austria)
Anne Baumgraß (Capgemini, Germany)
Rik Eshuis (Eindhoven University of Technology, The Netherlands)
Raphaël Khoury (Université du Québec à Chicoutimi, Canada)

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PROGRAM COMMITTEE

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