History of DCR

https://documentation.dcr.design/history-of-dcr/

An introduction to DCR

Dynamic Condition Response (DCR) is a constraint-based graphical process notation for Adaptive Case Management. The notation enables end-users and domain experts to capture and continuously adapt the constraints of their workflows and business processes supported by immediate simulation, enactment and analysis in case management tools. Unlike traditional workflow and business process modelling notations, which are typically based on flows describing transitions between states triggered by events and actions, DCR instead focus on capturing the business and compliance rules constraining the order of activities and events. Thereby DCR captures the logic behind the process instead of just a few possible paths that in practice rarely match reality.

The DCR approach to business process management is sometimes referred to as "the Copenhagen school of Business Process Management", mentioned at the BPM conference in Rome in September 2021 by Claudio Di Ciccio.

Development

DCR has been developed in collaboration between the Process and System Models research group lead by Thomas Hildebrandt at the IT University of Denmark and Exformatics A/S. In 2018 a new company DCR Solutions A/S was founded as a de-merger from Exformatics with the purpose to market, sell and continue the development of the DCR technology. At the same time, Thomas Hildebrandt joined Department of Computer Science, Copenhagen University to found the Software, Data, People and Society research section in which the development of the DCR technology is continued in collaboration with DCR Solutions.

Collaboration with the academic community has been expanded and now covers not only the IT University and Copenhagen University, but also the Danish Technical University and many other universities outside Denmark listed on our academic alliance page.

History

For the last quarter of a century businesses have tried to model their business processes in order to increase productivity and increase quality. Many techniques and notations exists, but the Business Process Management & Notation (BPMN) is today the de-factor industrial standard and at the center of most initiatives. Processes are visualized using BPMN Swim lane diagrams, flow charts etc. However, while the BPMN is good at describing possible routes, it is very poor at capturing the compliance rules and business constraints on which the routes are based. This means that the descriptions are supplemented with textual descriptions typically found in a Word document, with no formal relationship. As a consequence, the notation offer no support for maintaining compliance rules and business constraints and no support for updating the routes when rules and constraints inevitably changes.

Consequently, updating such descriptions is both a tedious, error prone and, because companies and regulations change all the time, costly operation. Another issue with this approach is engaging end-users in the process dialogue. The flow notation often is too rigid, and thus do not support the

variation the end-user knows is needed, and also hard to understand because it describes the process as how a machine would execute it. Many initiatives within the field of process research has been trying to simplify the notation and methods and make it able to express more flexible processes, but with little or no luck. This continues to pose a problem for modern businesses today as lack of end-user engagement often leads to process implementations which doesn't support the real business needs and in the end, productivity suffers.

In order to counter these issues and achieve the overall business goals, increased productivity, higher quality and employee enthusiasm, DCR has been proposed as a new model for collaborative process design, simulation and enactment. To ensure employee engagement DCR enables playing the processes like a game among co-workers. The team of co-workers can define the business constraints and compliance rules using a constraint based process notation and immediately start process simulation to create powerful models that compactly represents the logic of real world workflows.

Video Explanation

The video below explains the difference of BPMN and DCR by example:

Further reading

We strongly recommend that you read this example found in the article Web-based Modelling and Collaborative Simulation of Declarative Processes.

Rewards

DCR has been selected as a finalist for BPM Awards 2016 for its work with Danish Dreyers Fond.

WfMC finalist 2016