SBVRwiki a Web-based Tool for Authoring of Business Rules

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Abstract

In the paper, a new tool called SBVRwiki is proposed. It is an online collaborative solution that allows for distributed and incremental SBVR rule authoring for business analytics and users. It uses the Dokuwiki back-end for storage and unlimited version control, as well as user authentication. It supports creation of vocabularies, terms and rules in a transparent, user friendly fashion. Furthermore, it provides visualization and evaluation mechanisms for created rules. It is integrated with the Loki knowledge engineering platform that allows for on-the-fly conversion of the SBVR rule base and vocabularies to Prolog.

Motivation

To provide tool that:

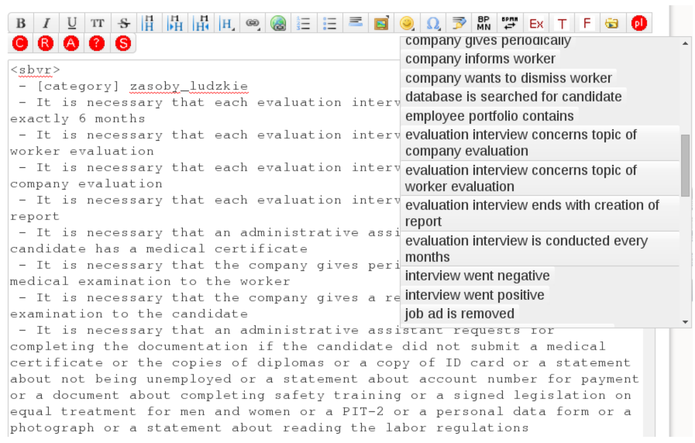
- is **lightweight**,
- allows **easy creation** of the SBVR bases even for inexperienced users,
- supports during the identification of the vocabulary and the rule creation process,
- provides **syntax highlighting**,
- is a web-based solution that would **allow to collaborate** using a familiar browser-based interface.

Related Work

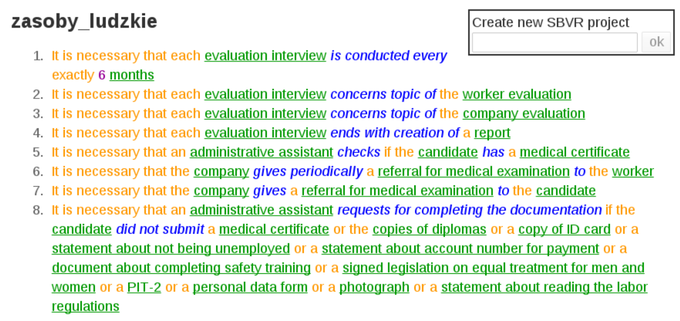
Current SBVR-supporting tools:

- text-based creation of dictionaries and rules providing syntax highlighting and suggestions, e.g. RuleXpress (`http://www.rulearts.com/RuleXpress`),
- models generation based on SBVR compliant documents, e.g. SBeaVeR (`http://sbeaver.sourceforge.net`),
- transform various models into SBVR, e.g. SBVR Lab 2.0 (`http://www.sbvr.co`).

In use: Editor mode



In use: Rendered output



Dokuwiki and Loki as a base

`http://www.dokuwiki.org/`

- Plain text documents,
- Simple wiki markup,
- Access Control Lists,
- Version Control,
- Web interface.

`http://loki.ia.agh.edu.pl/`

- Semantic wiki based on Prolog,
- Dynamic queries,
- Modular architecture,
- BPwiki plugin for Business Processes modeling.

SBVRwiki Prototype

Two plugins in PHP for DokuWiki/Loki:

SBVRwiki Action Plugin:

- Extended editor with hooks for common SBVR constructs,
- User Interface events,
- XMI (XML) format export.

SBVRwiki Syntax Plugin:

- Special wiki markup `<sbvr>`
- Syntax highlighting,
- Translation to UML and visualisation with PlantUML.

Use Cases

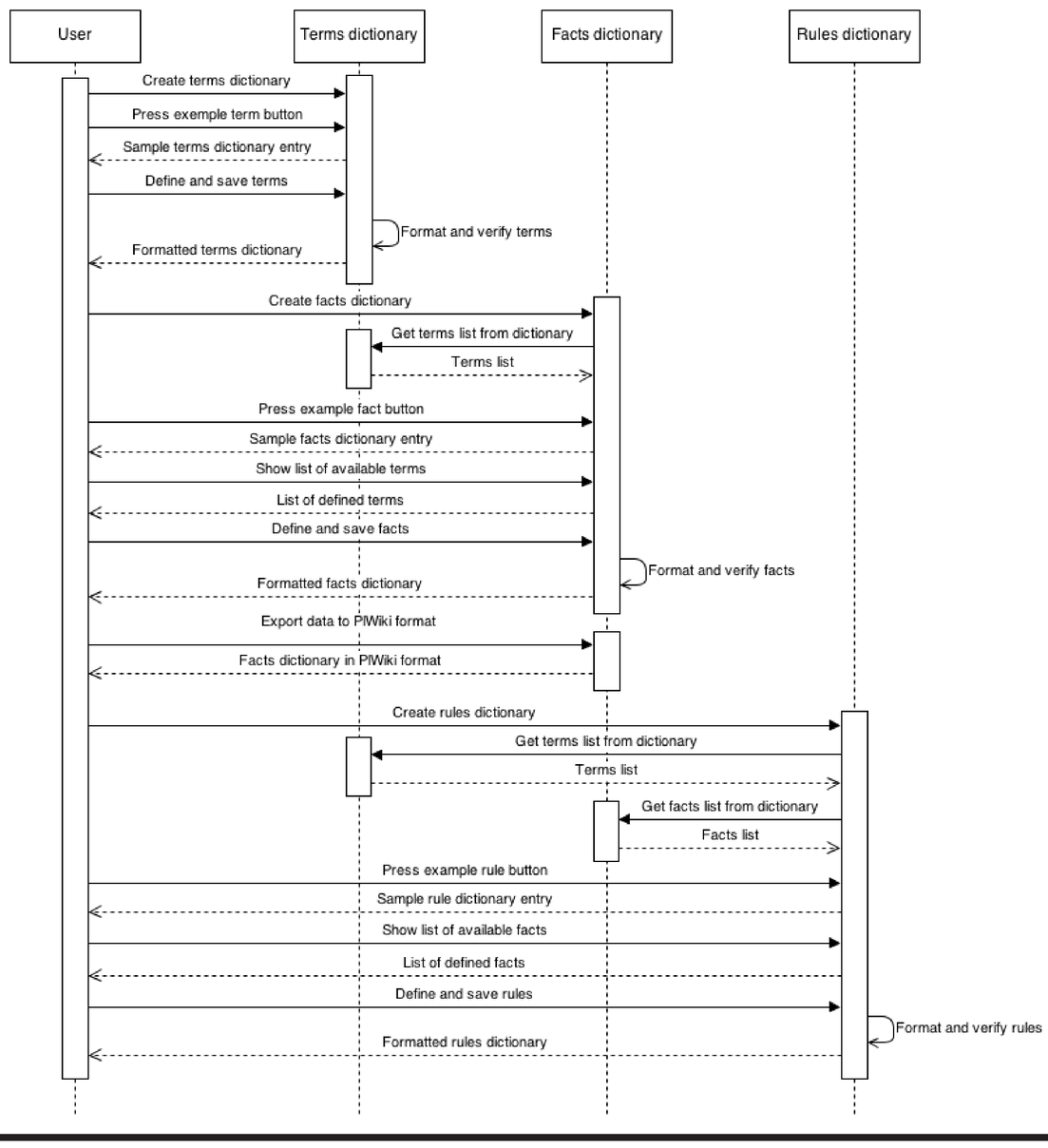
EU-Rent Use Case:

- fictional international car rental business,
- benchmark use case,
- part of SBVR specification.

Prosecco project:

- SMEs management support,
- rules discovered during interviews with employees,
- rules in SBVR for analysis,
- 5 companies, 213 rules divided into 30 categories.

SBVRwiki in use



Summary and Future Work

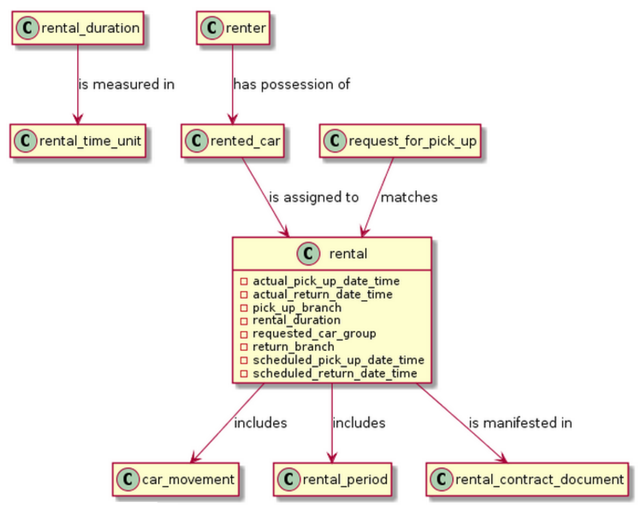
SBVRwiki...

- web-based collaborative tool,
- rule-based knowledge authoring in SBVR,
- evaluated using an EU Rent use case,
- practically applied in the Prosecco project,
- superior to existing alternatives!

Future Work

- Integration with BPwiki plugin for complex systems specification including both business processes and rules,
- Full support of the SBVR standard,
- Usability improvements.

In use: Facts visualisation



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