

# Transforming Association Rules to Business Rules

## EasyMiner meets Drools



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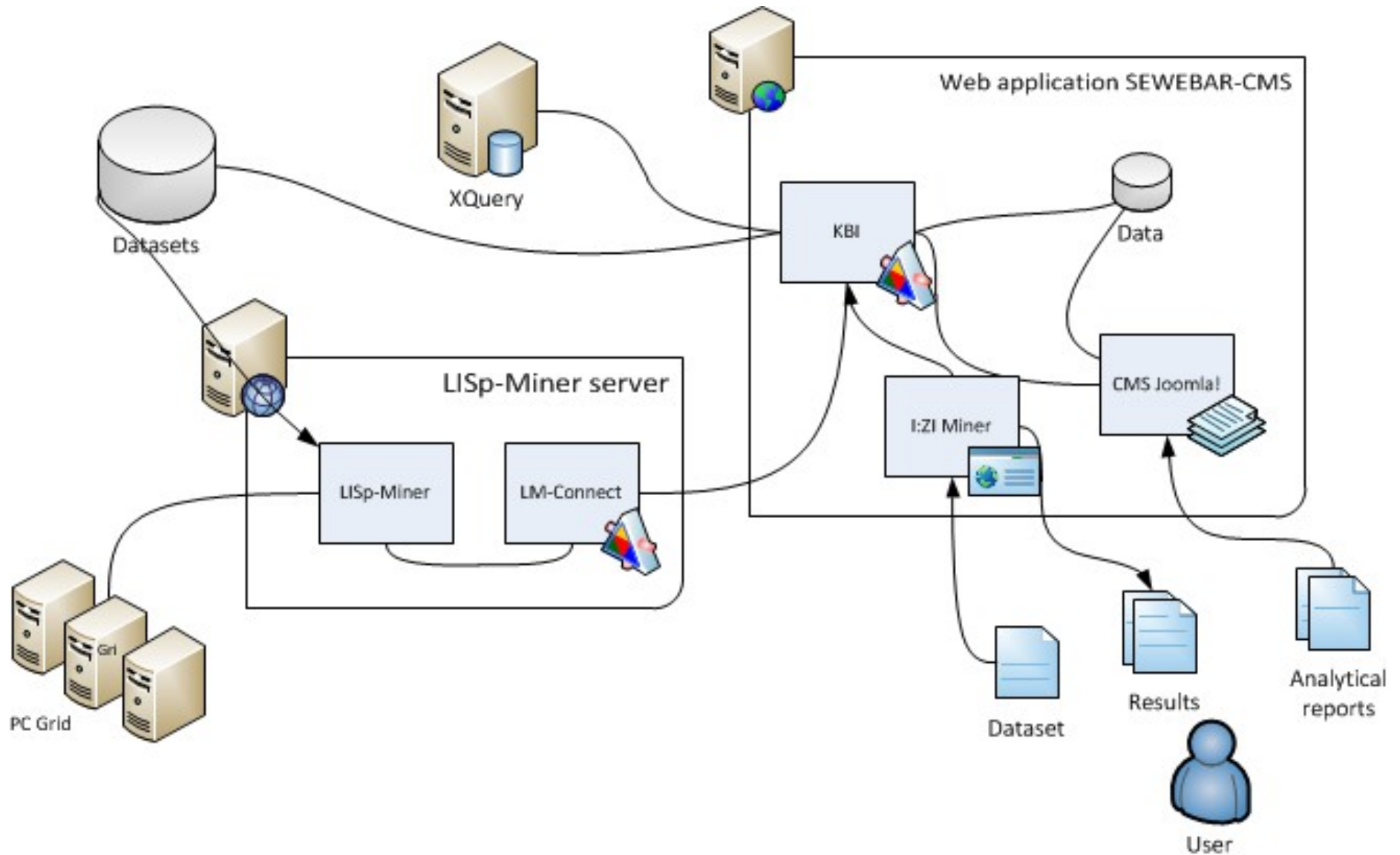
LISp-Miner



# Introduction

- web-based data mining system
- complete cycle
  - Import, preprocessing, mining, user interaction, export
- association rules based
- exports chosen rules to DRL

# Architecture



# Demo

**I:ZI Miner 1.0-beta**  
easy association rule mining

New task Support Settings Anonymous - login **F**

Select single/multi-core/grid mining

### Association rule pattern

**A** Antecedent: salary (\*) and duration (\*Consecutive values 1-2) and ¬district (Praha)

Simple wildcard Binning wildcard

Interest measures: Confidence: 0.30, Support: 0.01, Add M

Consequent: status (C)

Fixed value attribute

Attributes **B**: amount, birth\_year, district, payments, duration, status, salary

Data fields **C**: amount, birth\_year, district, duration, id, payments, salary, status

### Discovered rules

Mining has finished!

**D** 1 2 3 4 >

duration (60) => status (C)  
[Confidence: 0.858124, Support: 0.182000] Negation in discovered rule

duration (13, 24) and ¬district (Praha) => status (C)  
[Confidence: 0.404587, Support: 0.071348]

duration (24) => status (A) [Confidence: 0.020385, Support: 0.020385] Relevance feedback

Two items "merged" during mining

Task setting Task result Clear rules

### Rule clipboard

**E** 10. červen 2013 14:48:58, Task ID: 0b6440dad07624a726d744c2ec27b511

salary ((8110,8553.1)) and duration (12) => status (A)  
[Confidence: 0.769231, Support: 0.029122]

duration (12) => status (A)  
[Confidence: 0.708721, Support: 0.135415]

Show task details PMML export

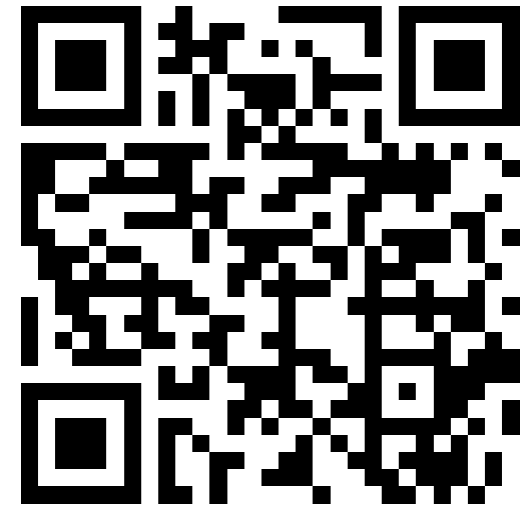
Export Business Rules Export for Drools server

# Try it yourself

<http://sewebar-dev.lmcloud.vse.cz/izi-miner>



... or see it again



<http://easyminer.eu/demo/ruleml2013>

Any Questions?