Transforming Association Rules to Business Rules

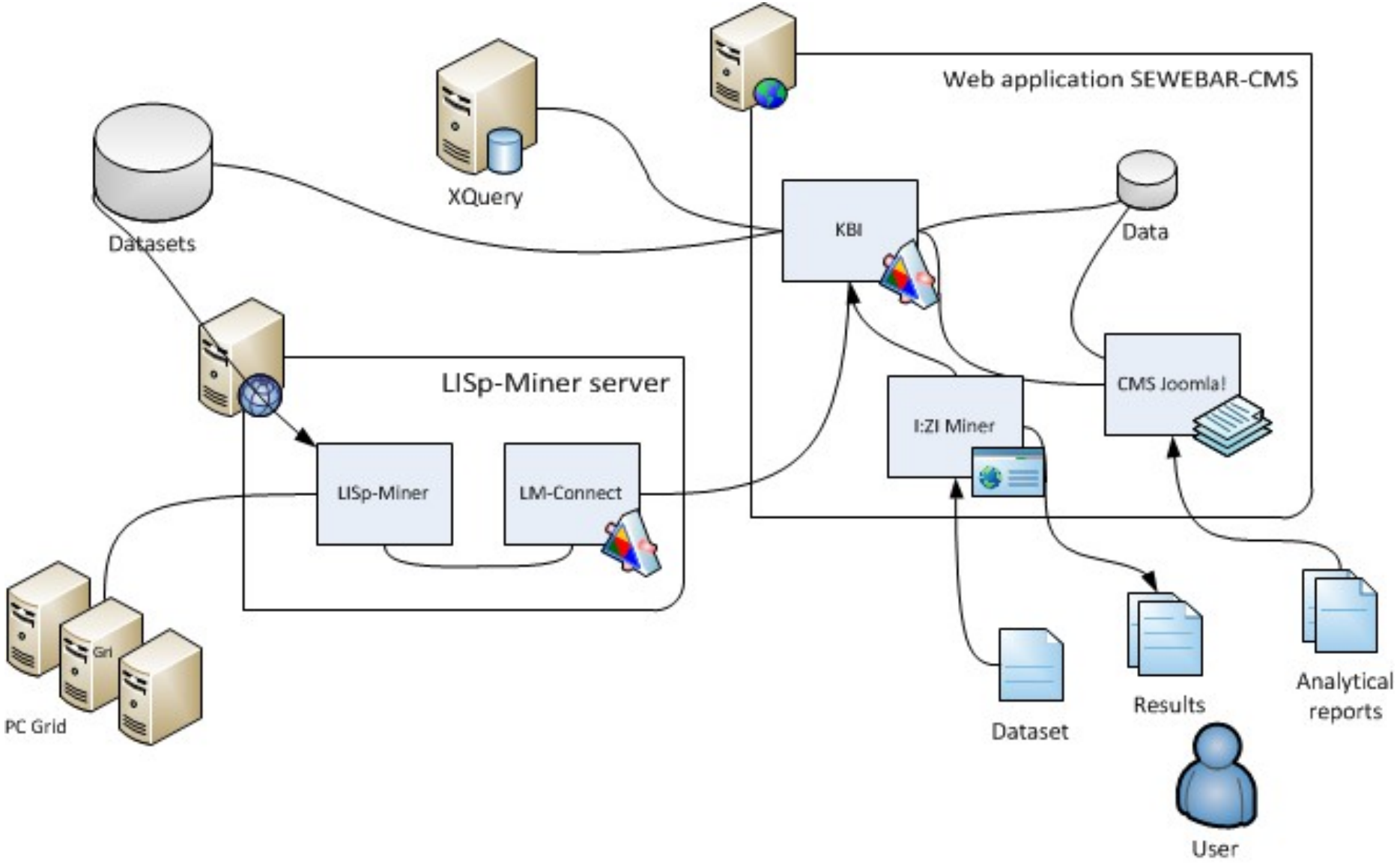
EasyMiner meets Drools

Stanislav Vojíř
Tomáš Kliegr
Andrej Hazucha
Radek Škrabal
Milan Šimůnek

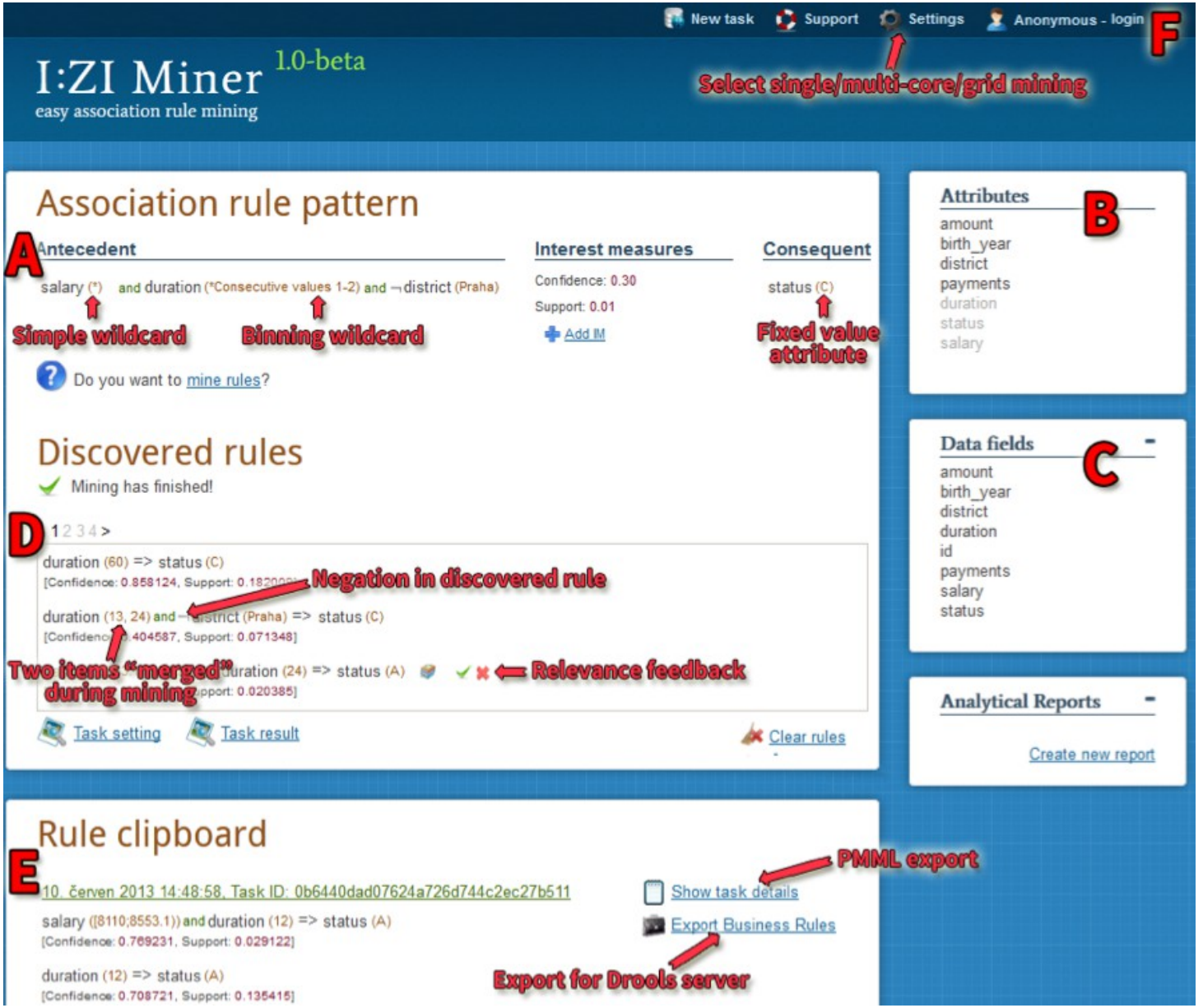
Introduction

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

Architecture



Demo


New task
Support
Settings
Anonymous - login
F
I:ZI Miner 1.0-beta
easy association rule mining
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 IM
Consequent
status (C)
Fixed value attribute
Do you want to mine rules?
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: 0.18209
Negation in discovered rule
duration (13, 24) and ¬district (Praha) => status (C)
[Confidence: 0.404587, Support: 0.071348]
Two items "merged" during mining
duration (24) => status (A)
Relevance feedback
Support: 0.020385]
Task setting
Task result
Clear rules
Analytical Reports
Create new report
Rule clipboard
E
10. červen 2013 14:48:58, Task ID: 0b6440dad07624a726d744c2ec27b511
Show task details
PMML export
salary ([8110;8553.1)) and duration (12) => status (A)
[Confidence: 0.769231, Support: 0.029122]
Export Business Rules
duration (12) => status (A)
[Confidence: 0.708721, Support: 0.135415]
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?