

Data Care in Repo and SecLend Market

Eurex / Swiss Exchange (SWX) Rule-based Master Data Care

Bosch Software Innovations



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Invented for life

Success Story – As of May 2008

Project Goal:

- ▶ Quality-assured and agile business rules

Bosch Software Innovations:

As the world's largest derivatives exchange, Eurex has played a pioneering role in electronic trading from the start. Since 2005, you have operated an electronic trading platform for the securities lending market. How does that market work?

Gonzalez:

Eurex is a joint venture of the Swiss and German exchanges and did indeed play a pioneering role right from the start. Initially, attention was focused on utilizing the potential of both geographic markets. In 1999 we took that a step further. We initiated an electronic trading platform for the repo market, for the sale and purchase of securities with what are called repurchase agreements. Since 2005 we have been able to offer customers an electronic platform for securities lending as well, through which securities can be loaned and borrowed. The borrower becomes the owner of

the securities. With electronic lending we are entering new territory. The challenge lies in convincing market participants of the advantages offered by multilateral trading compared to bilateral trades. The lending market today is still largely characterized by bilateral relations between trading partners. The advantages of multilateral trading – primarily objective price determination and transparency – represent huge growth potential for this new electronic market.

Bosch Software Innovations:

You had already started developing SecLend as the electronic trading platform of Eurex back in 2004. Has your rapid growth run up against any limitations?

Gonzalez:

We quickly discovered that our ability to administer our master data presented real limits to our growth. Even at less than 10,000 securities we had reached the limits of manual data care. Four employees were already completely occupied with just entering data on new and existing securities being traded. Expansion, such as adding more baskets, was out of the question. The manual process also posed a huge potential for errors. We were confronted with serious data quality problems.

Visual Rules Rule Tree

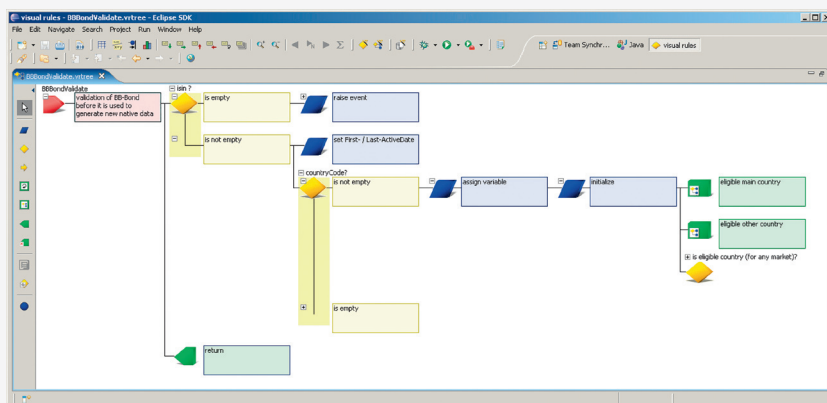


Fig. 1: Validation rule for an obligation before entering master data

In an initial evaluation round, we took a look at rule engines for automating master data care, since rules are the central element in any automation. But we had to take another step back and first create a model of our business. Our goal was to automate data care as completely as possible.

Bosch Software Innovations:

Those are the reasons that led you to implement the Master Data Automation Project with Stabilit, a service provider in this field. How did you set about this project and what were some of the exceptional challenges?

Gonzalez:

With our high level requirements, we could not just implement a standard IT project. We – the business department – had to take action. We built the business case for developing master data services ourselves. Together with our project partner, we created an architecture that enables us to maintain our rules completely independently. Since the business department has the professional expertise and is responsible to our clients for data quality, we assumed internal responsibility for the business rules as well. This separation did not cause any problem to the business or IT department.

As a business analyst, I consider myself as a bridge between business and IT. Visual Rules has supported me in that role – that is the rule engine we implemented in our system. It is close to business and to IT. With fundamental logical thinking and business know-how, our department can modify rules without support from IT and pass them to the productive system. This has meant that we can achieve enormous reaction speeds in response to market dynamics.

Trnka:

Just because of this flexibility and response speed we had to ensure that only completely tested rules made it into production when rules were modified.

Bosch Software Innovations:

How did Stabilit approach defining the rules?

Trnka:

Equipped with Visual Rules, the rules were created in a cooperative effort. In the process, we found that each employee had their own rules for capturing master data. By working with Visual Rules, we were able to create a uniform perspective on rules and consolidate that within the department.

Gonzalez:

Today we know precisely which rules are implemented and what tasks they fulfill. Working together with our employees and with me, Stabilit created the basic inventory of rules and functions. Today we have several thousand rules that we modify an average of every two weeks – without support.

Bosch Software Innovations:

As a project result you are now using Stabilit's Data Care Manager (DCM) that allows you to automate the capture and administration of master data. What role does Visual Rules play with DCM?

Trnka:

The rules – and thus Visual Rules – play a central role in the process of data care (see Figure 2). We were careful not to hard program a single rule. All rules, from merging through validation and release, are implemented in the rule engine.

Gonzalez:

The use of the rule engine in DCM allows us to simulate rule modifications. For instance, if we want to introduce a new category of securities, we can see immediately how many securities the market would have to absorb and whether our system could handle that without problems. This simulation capacity is essential for our estimation of the risks involved in rule modifications.

Bosch Software Innovations:

Your goal was to automate master data administration as completely as possible. To what extent did you succeed?

Gonzalez:

We are now at an automation rate of 98%. Our employees can take care of the exception handling on the side. The quality of master data care has been the best since the rule-based Data Care Manager was implemented.

Bosch Software Innovations:

That kind of result speaks for itself. Can you name any other benefits you have seen since implementing a rule engine?

Gonzalez:

Since the documentation is generated with the push of a button, of course it is as up-to-date as the respective productive rules. We did not have that level of documentation in the past. The simulation function we mentioned is just as important. The Data Care Manager makes it easy for us: we can specifically reset the data and rules after the simulation, for instance back to a specific version or time. Just as soon as we have gone through our internal business modification process, we can put the rules into productive use at runtime – without having to stop the system.

Bosch Software Innovations:

As an independent market provider, the view into the future is decisive for you. Do you see more areas where implementing a rule engine could be advantageous?

Gonzalez:

Implementation of these rule engines certainly represents the future. Rules do not belong in paper documents. Any system that contains a number of rules should be using a rule engine. For example, use in the trading system is conceivable. We see a clear advantage with a standard product

like Visual Rules, which is improved continuously. There is just no alternative to that in the Eurex framework.

With Visual Rules, we have created plenty of room for creative development. We will only come up against the limits of business’ personal responsibility when we need new interfaces, for instance, or a modification in the data model.

Bosch Software Innovations:

Mr. Gonzalez, Mr. Trnka, thank you for this interview.

Visual Rules for Master Data Care at Eurex

- ▶ Consolidation and automation of rules for master data care
- ▶ High reaction speed in a dynamic market
- ▶ Business modifies the rules without support
- ▶ Simulation function minimizes the risk of rule modifications
- ▶ Automozed rule documentation

Business Rules in the Data Care Process

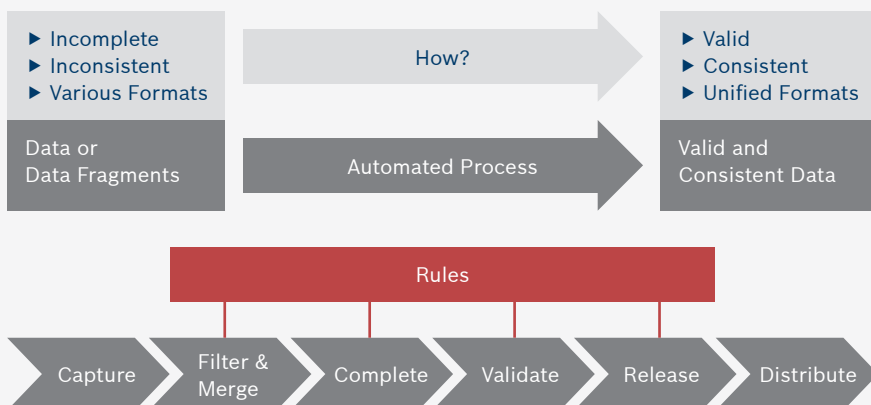


Figure 2

About Eurex

Eurex is a joint venture of Deutsche Börse and SWX Swiss Exchange. Eurex is the world's largest derivative exchange and one of the largest market providers for Repo and Securities Lending & Borrowing (SLB) in Europe.



Europe

Bosch Software Innovations GmbH

Ziegelei 7
88090 Immenstaad
Germany
Tel. +49 7545 202-300
Fax + 49 7545 202-301
info-de@bosch-si.com
www.bosch-si.com

Americas

Bosch Software Innovations Corp.

161 N. Clark Street
Suite 3550
Chicago, Illinois 60601/USA
Tel. +1 312 368-2500
Fax +1 312 368-5898
info@bosch-si.com
www.bosch-si.com

Asia

Bosch Software Innovations c/o Robert Bosch (SEA) Pte Ltd

11 Bishan Street 21
Singapore 573943
Tel. +65 6571 2220
Fax +65 6258 4671
info-sg@bosch-si.com
www.bosch-si.com

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