Elements Advisor by Neuron Data

Bruno Jouhier (Chief Architect),
Carlos Serrano-Morale (Vice President of Software Architecture), and
Eric Kintzer (Chief Technology Officer)

Neuron Data

1 Business Rules Automation

In today’s changing world, the success of a business depends heavily on its ability to quickly adapt itself to its market and its competition. As more and more business processes are being automated, there is a growing need for Information Technologies that can cope with change.

Most of today’s Information Systems have been developed with procedural programming languages. Over time, the languages have improved: Object Orientation has made programming safer and has promoted the reuse of components, SQL and scripting have made programming and interaction with data more accessible. These innovations have supported the development of more powerful and more sophisticated Information Systems but they have only provided very partial answers to the issues raised by rapid changes to the business practices. The business policies are spread through the system and often expressed in different procedural languages at different levels (SQL, 3GL, VB).

Then, changing a business policy requires several steps:

- Find where the policy is expressed (it may be replicated).
- Analyze the impact of the change that needs to be done.
- Modify the procedure that implements it (you need to know the language).
- Rebuild the system (you need to know the tools).
- Test and Validate.

This process is tedious and rather inefficient, which explains why companies have difficulties adapting their Information Systems to follow the pace of their business.

During the last few years, technology analysts have been advocating for a new approach based on Business Rules Automation. In this vision, the business policies are expressed in the form of rules and managed separately from the rest of the IT infrastructure. This brings several major advantages:

- Finding how a policy is implemented becomes easy because the rules are managed separately.
- Changing rules is easier than changing procedures because policies are naturally expressed in the form of declarative rules, and because rules are more independent from each other than procedures.
- The system can be quickly updated to take the new rules into account.
The rules can be tested and validated with a single of tools. This is much easier than testing and validating logic that is spread through the system and possibly expressed in several languages.

2 Elements Advisor

Neuron Data shares this vision and bring it to reality with Elements Advisor, its new generation of Business Rules engine. Since its creation in 1985, Neuron Data has been a leader in the rules industry, delivering powerful rule engines that have been integrated at the heart of “mission critical” applications in many domains (scoring, configuration, diagnostic). With Elements Advisor, Neuron Data brings to the market a new generation of Rules technology specifically designed to capture, manage and execute Business Rules. Elements Advisor is a complete product line that supports the whole cycle of Business Rules applications, from development to deployment and maintenance:

- Advisor Builder is a sophisticated development tool with visual editors, powerful debugging facilities and wizards to assist you in the integration of your rule based applications with databases, Java objects, CORBA objects, ActiveX objects, etc.
- Advisor Engine is a versatile high performance rule engine that can either be deployed on an application server or executed directly on a client platform.

Elements Advisor benefits from all the experience that Neuron Data has gathered around rule based applications for over 10 years but it also incorporates a number of innovations that make it unique among today’s business rules products. Neuron Data designed a brand new product with special emphasis on the following subjects:

Ease of use. The rules are expressed in a natural language. They are easy to write and easy to understand. A very intuitive visual tool assists the development process.

Integration. Advisor can work with Java objects, CORBA objects, ActiveX (COM) objects, or on objects that have been retrieved from SQL databases. The development tool includes some intuitive wizards that assist you in connecting the rules to your world. Also, the rule engine can be controlled from Java, to be run as part of a desktop application, as an applet, or on an application server of various flavors:
- Web servers
- CORBA servers
- Publish / subscribe messaging servers
- ActiveX containers such as Microsoft Transaction Server
- Custom Java application servers

Performance. The rules are indexed in a very efficient way and the engine can find very quickly which rules apply to which objects, even if it is monitoring a large number of complex rules. In most practical cases, the rules approach compares favorably to conventional means of expression business rules.