# OF GOOD GUYS AND BAD GUYS

## HVB Group relies on S/Monitor® to monitor financial sanctions

Due to a growing threat of terrorism, legal requirements of international payment transactions increased considerably. Violations of embargo regulations or international financial sanctions, i. e. the suspicion of financing terrorist activities, are to be reported immediately by financial service providers. Noncompliance will lead to economic sanctions and criminal prosecution.

Up to now random samples were carried out manually, obtaining poor results though requiring a considerable effort. The HypoVereinsbank (HVB), with its headquarters in Munich, was quick to recognize the necessity of automating the screening of financial sanctions. It found the suitable solution in the software S/Monitor®, developed by Stuttgart-based Cellent AG.

## Cellent AG

Cellent AG is one of the leading consulting companies in the field of information management and information services. Employing around 570 people, the company focuses on the corporate finance, industrial and public service sectors. With its solutions for identifying money laundering, monitoring embargoes and preventing the financing of terrorist activities, the company is the leading European provider in this field. The product family SMARAGD is being deployed in 25 European and Asian countries with over 150 installations.

## HVB Group

The HVB Group is the second-largest publicly quoted bank in Germany, and with the Bank Austria Creditanstalt it is the market leader in Austria. With over 70,000 employees, 2,062 branches and more than 9.8 million customers, it leads the way in its core markets covering Bavaria, the Hamburg area and Austria, as well as in the striving growth regions of Central and Eastern Europe. The banking group focuses on European private and corporate customer-driven business, complemented by customer-related capital market activities. In line with its positioning as a “bank in the heart of Europe”, international payment transactions play a particularly important role in the HVB’s daily banking activities.

## The project

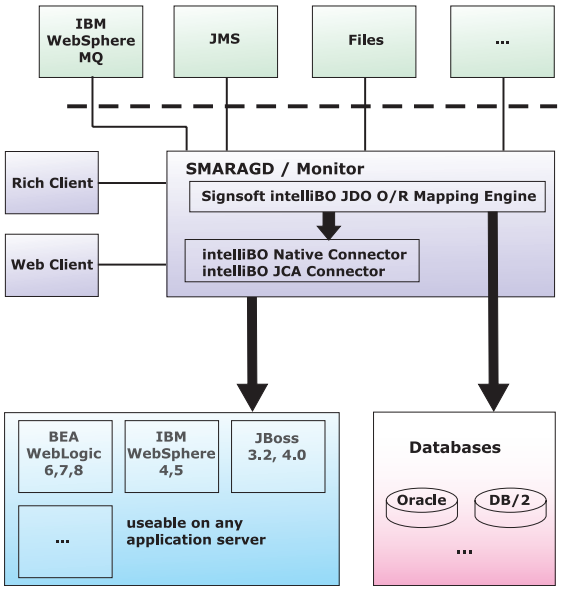
The tightening of legal frameworks with regard to money laundering, terrorism financing and embargo breaches induced the banking group to search for a software solution capable of providing systematic monitoring of finance sanctions. The trading and processing of financial transactions with persons, organizations and companies who are subject to embargo restrictions can have severe legal consequences for employees of the finance institute. Whether a breach is the result of deliberate action or due to negligence is irrelevant. The freezing of payments, economic sanctions, prison sentences for those responsible and last, but not least, considerable damage to the institute‘s image involve risks that have to be taken increasingly more seriously, particularly where foreign payment transactions are concerned.

Regularly conducted random checks did not give the adequate degree of security required to reliably exclude sanction breaches in the flood of payment traffic. An internal project team examined ways of automatically monitoring international transactions. Due to the complexity of the subject matter, it’s final recommendation was to collaborate with an external specialist partner. The HVB therefore hired consultants Mummert Consulting to develop a broad concept, which then served as the basis for an invitation for tenders.

A focal requirement of the invitation for tenders was support for all transactions processed using the international communications service provider for foreign payment transactions, SWIFT (Society for Worldwide Interbank Financial Telecommunications). The S/Monitor® software solution from Cellent AG was the only product among those tested to be designed for compatibility with the 72 message types from the documentary and non-documentary transactions being processed using SWIFT without any need for comprehensive adaptation.

## System architecture

S/Monitor® follows a J2EE architectural model, using standards such as EJB, JNDI, JMS and JDO. To meet expectations regarding performance and scalability, the JDO implementation intelliBO of Signsoft was employed.




Container-managed persistence was not taken into consideration because it would have meant locking to a specific application server vendor. Despite the highly generic

process model, a proprietary persistence tier based on JDBC would have cause unnecessary implementation and maintenance expenses. Signsoft intelliBO operates with any standard compliant application servers either through a JCA adapter or a native adapter where necessary. S/Monitor® can be deployed among others on the following application servers: BEA Weblogic 6, 7 and 8, IBM WebSphere 4 and 5, as well as JBoss 3.2 and 4. As for a database management system ORACLE or DB/2 are commonly utilized.

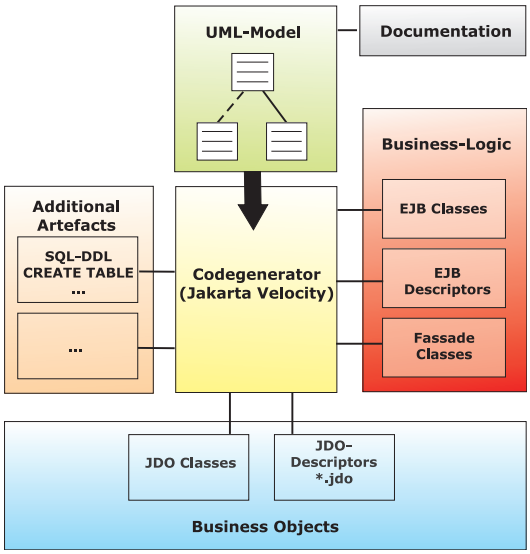
The common way of delivering data is realized by a WebSphere MQ Series messaging bus. Beyond that, a connection through a file system or a databases are feasible as well.

A rich client application based on Swing constitutes the graphical user interface. This user interface communicates to the server by JMS, allowing to present up-to-date status information without polling. Some parts of the server application are accessible through web front-end as well.

## Process model

Development followed an MDA process model. Together was used tho design the application. S/Monitor® required a definition of 15 stereotypes. A code generator based on the Jakarta Velocity engine produced out of these stereotypes all artifacts, such as JDO classes and descriptors, facade classes, EJB classes and descriptors or SQL DDL scripts.

**MDA Process Model**




Therefore, the only thing remained was implementing the business logic, so the development team could entirely concentrate on this task. The application could be build and tested by CruiseControl multiple times per day allowing a continuous integration process.

## Experiences gained from the project

This large-scale project placed the toughest demands on the software's performance, stability and flexibility. The automatic transaction screening of almost eight million HVB customers and cardholders results in a average daily volume of about 60,000 SWIFT messages. A total of 75 different message types are now checked. On-line embargo checks are firmly incorporated into the payment process. It only takes between 50 and maximum 100 milliseconds to scrutinize each message.

EU embargo lists, made available to subscribers over the Internet by the German Federal Official Gazette (Bundesanzeiger Verlag), as well as an institute's own lists for combating criminal fraud, serve as the basis for these checks. Additional embargo and sanction lists from other providers can also be integrated in the solution. Customer data and transactions are continuously analyzed for suspicious behavior patterns with the aid of finely configurable, fuzzy logic search mechanisms. Fuzzy searches ensure that rule violations are reported even if phonetically similar or abbreviated names are identified. A name such as "Usam bin Ladin", for instance, would trigger a report and cause a more in-depth screening process.

## Outlook

With this highly scalable solution, the HVB Group is also able to centrally screen all transactions performed at its subsidiaries abroad in compliance with standards valid throughout the Group. The client-capable software also allows the HVB to define separate screening rules, which thus can be adapted suitably to the legal situation of the respective foreign company. Installations are currently operating in Singapore, Hong Kong, Japan, Great Britain, France, Italy, Greece and in the Baltic countries. The solution is also in operation in Luxemburg, Ukraine and scheduled for implementation in Russia and other Central and Eastern European countries.

## Contact

**Cellent AG**
Finance Solutions
Mr. Werner Guderlei
Solution Manager Fraud Control
Calwer Straße 33
70173 Stuttgart / Germany
Phone: +49 (0)711 222 992-900
Fax: +49 (0)711 222 992-999
E-Mail: werner.guderlei@cellent.de
**www.cellent.de**

**Signsoft GmbH**
Mr. Mirko Hillert
Director Training & Consulting
Leipziger Straße 118
01127 Dresden / Germany
Phone: +49 (0)351/89 45 3-0
Fax: +49 (0)351/89 45 3-29
E-Mail: mirko.hillert@signsoft.com
**www.signsoft.com**