

Modern Fraud Prevention from a Bank's Point of View

Extract from an interview between Alexey Golenishev, Payment Schemes
Relationships, Head of Department, Alfa-Bank and PLUS Magazine

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Alfa-Bank, Russia's second largest card issuer, shares its experience in running SmartVista Fraud Prevention & Monitoring System



As is commonly known, the growth in card issuing and purchases results in increasing volumes of fraudulent transactions. Fraud management mechanisms are also constantly developing with the evolution of risk management and security tools. The statistics-based (offline) systems of fraud monitoring, which have been widely used in the financial market for a number of years have now completely lost their position. Simply detecting the fraudulent transactions after they have been completed, such solutions cannot prevent losses. In this situation a modern SmartVista Fraud Prevention & Monitoring solution designed by BPC Banking Technologies deserves our special attention. **Alexey Golenishev, Head of Payment Schemes Relationships Department, Alfa-Bank, shares Alfa-Bank's experience in running SmartVista Fraud Prevention & Monitoring Module** for the online detection and blocking of fraudulent transactions. The module is used by the bank as part of the fully functional processing center based on SmartVista which has been supporting all aspects of the bank's card business for

over 8 years.

Card fraud: focusing on high technologies

During recent years the global card market has demonstrated continuous growth in terms of both card issuing volumes increasing by several times a year and the development of operational activity which was especially noticeable in the largest retail banks. In regard to Alfa-Bank, in the early 2000-s it supported some 100,000 cards of Visa and MasterCard brands, while our acquiring network consisted of about 100 ATMs and a thousand of POS-terminals. These figures drastically changed by the end of 2008, when the number of issued cards **exceeded 5M, with the processing center supporting over 1,500 ATMs and 20,000 POS-terminals spread all over Russia.**

With such dynamic growth it is obvious that the fraud prevention becomes more and more essential for our bank especially with the development of fraudulent techniques based on advanced technologies. Most of such technologies are applied at the ATMs and include the implementation of skimming devices and virus software for stealing card data.

Being one of the largest Russian retail banks, Alfa-Bank pays special attention to fraud prevention. Among other measures we collaborate with the Russian Association of Europay Members and contact payment schemes on the issues of skimming mechanisms or software detection. In the latter case we immediately consolidate a list of all the Alfa-Bank cards used at the ATMs where the fraud was disclosed and inform card holders of the necessity to block and re-issue their card. It is obvious that it is difficult to receive such information in time; that is

where **SmartVista Fraud Prevention & Monitoring Module** effectively helps our **Fraud Monitoring Department to fight fraud.**

From monitoring to online fraud prevention

Looking back to the history of fraud prevention solutions, it is important to note that the initial rules of fraud prevention were created by the international payment schemes as part of their operational rules during the early days of card business development. Nevertheless the first fraud monitoring systems operated in an offline mode and simply gathered the reports on fraud operations after the fraud had already occurred. It is known that having accessed the card data, criminals withdraw money from the card account within 1 or 2 days. That is why it is essential to block the card immediately during the fraudulent transaction. Online fraudulent transaction blocking is the only way allowing the bank not to simply identify fraud but to prevent it.

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Looking back to the history of fraud prevention solutions, it is important to note that the initial rules of fraud prevention were created by the international payment schemes as part of their operational rules during the early days of card business development. Nevertheless the first fraud monitoring systems operated in an offline mode and simply gathered the reports on fraud operations after the fraud had already occurred. It is known that having accessed the card data, criminals withdraw money from the card account within 1 or 2 days. That is why it is essential to block the card immediately during the fraudulent transaction. Online fraudulent transaction blocking is the only way allowing the bank not to simply identify fraud but to prevent it.

It is worth mentioning that the requirements of the banks towards the fraud monitoring solutions have always mainly based on the Visa Inc. and MasterCard Worldwide standards. Nevertheless, recently the security requirements of the banks have gone beyond the international payment schemes standards, as these standards have not changed much from the beginning of the century while fraud techniques have greatly evolved and go on evolving. In these circumstances, successful risk management requires modern flexible tools allowing for the bank’s quick reaction to the new types of fraud through changing the rules used to detect the suspicious transactions.

It is also important to remember that the fraud does not have boundaries: the data copied from a magstripe card in Russia can be used in any other region of the world. The only opposition to this rule is the bank’s own experience received from its fraud prevention history. For example, if a large quantity of cards issued by a bank was used in the same shop whose database was stolen, the data of these cards can be used in any part of the world. In such a case the bank should be able to quickly create a rule to detect transactions from these cards coming from other regions and take appropriate measures to block them if they prove to be fraudulent.

In comparison to offline fraud monitoring systems, SmartVista Fraud Prevention & Monitoring used by Alfa-Bank since 2008 represents a fully fledged solution for card fraud prevention. The system provides our specialists with every tool necessary for efficient and timely detection and online blocking of suspicious transactions. It allows us to quickly adjust to detect new types of fraud, ensures dramatic decrease of financial and image losses, and raises the efficiency of the bank’s total security and risk management system.

The module was designed to support the fraud monitoring rules developed by the international payment schemes. In addition, it allows for quick implementation of new rules as well as flexible configuration and modification when necessary.

The analysis and blocking of fraudulent transactions in SmartVista Fraud Prevention & Monitoring is performed with the use of special templates, business rules, and so called neural networks – special mechanisms working on the base of statistics and behavior models of a card holder.

Business rules: flexibility and versatility

The fraud detection model of SmartVista Fraud Prevention & Monitoring system based upon business rules provides opportunities for the online transaction monitoring in the process of authorization. The rules used to check a transaction can be either simple or complex. The latter are based on the estimation of the transaction parameters modifications in comparison to the preceding transactions whose data are gathered and stored within the system. The bank can set the period of the transactional history itself to ensure optimal results.

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Simply speaking, with SmartVista Fraud Prevention & Monitoring we have a construction set allowing us to flexibly set and modify our own rules for fraudulent transaction detection basing on the history of earlier detected fraud cases and other banks’ experiences. Such configuration does not require an IT specialist and can be easily done by the bank itself. As for now, we have created and implemented several scores of such rules allowing the system to classify a transaction as suspicious.

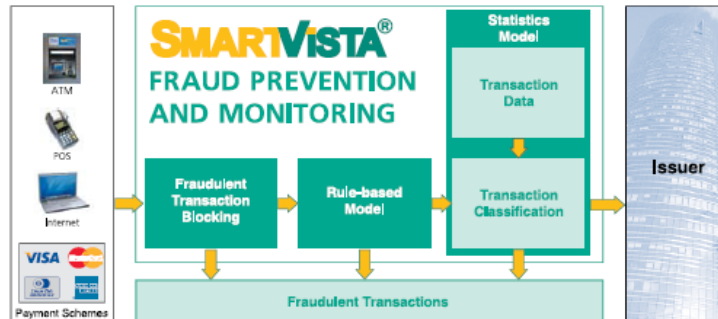
Therefore, **SmartVista Fraud Prevention & Monitoring is a universal and flexible solution analyzing a wide range of events against a set of operational and business rules.** For example, we may receive information that the Russian cards data have been stolen in a given city. We do not know either the time of the theft or the device where it was done. Nevertheless, using only this limited information, we can upload the name of the city or the acquirer to the system after which the history of the transactions from this city or this acquirer will be analyzed during subsequent card usage. When detecting a suspicious transaction made with the card previously used in the registered city, the system will automatically send an alert to the operator which will allow the timely blocking of the card preventing a fraudulent operation.

Besides the model based on business rules, SmartVista Fraud Prevention & Monitoring supports a template based mechanism for the automated checking and blocking of a transaction in accordance with certain conditions (templates) during the authorisation. This model has proven to be especially effective for the prevention of mass fraud attacks.

At present we are completing the second stage of the project for SmartVista Fraud Prevention & Monitoring launch in Alfa-Bank. In the first stage we used the module in a half automated mode to test its capabilities and develop our own rules. During this stage the module analyzed the transactions with the blocking done manually by the operator. The transition to the fully automated mode is a coherent step in the development of our fraud prevention mechanisms: now the module which has already proven its efficiency and performance in detecting risks will be used to block the fraudulent authorisations basing upon a set of rules and settings.

In addition to such advantages as the opportunity to use different filters for different types of transactions, reduction of charge-back operations and efficient prevention of mass fraud attacks, the implementation of this system will allow us to free up our employees’ time. Now they do not have to focus on high risk transactions as the system will take decisions on the required actions by itself, including the decision to block the card in the most risky cases. In the latter case it

notifies the operator of the blocking who will then have the opportunity to analyse the transaction more thoroughly.



Scheme 1: Architecture of SmartVista Fraud Prevention and Monitoring Module

How much can a bank save on fraud prevention?

As a rule, these are only small and middle sized banks which can easily calculate their potential losses due to fraudulent transactions as well as ROI of fraud prevention systems. Nevertheless, judging from my experience, potential losses prevented after the implementation of a fraud detection solution fully justify the investments made in such solutions. Usually, such a solution covers the expenses for its implementation within the first year of operation.

“With 5M cards issued, the estimated amount saved by Alfa-Bank thanks to the SmartVista Fraud Prevention & Monitoring system reaches 1M USD a month”.

With 5M cards issued, in certain months the estimated amount saved by Alfa-Bank thanks to the SmartVista Fraud Prevention & Monitoring system reaches 1M USD. This figure includes the account balances saved due to the timely blocking of our cards in cases of fraud detection as well as the money saved due to the card blocking as a result of analysis of third party issuers and acquirers messages.

It is crucial that even during the peak workloads our processing center based on SmartVista solution does not reach the highest level of its performance. Such performance shows the unlimited capabilities of SmartVista Fraud Prevention & Monitoring solution and its round the clock availability.

Alfa-Bank and BPC: Future development of the collaboration

To conclude, I would like to underline that one of the significant advantages of the use of BPC’s SmartVista Fraud Prevention & Monitoring Module is that the company quickly responds to our needs.

“SmartVista Fraud Prevention & Monitoring is not an “artificially” created product but a solution with perfectly well-thought functionality smoothly integrated to our processing centre”.

Certainly, while selecting a solution for fraud prevention we kept in mind that both front-end and back-office systems of our processing centre are based on SmartVista solutions, which allowed us to avoid various integration difficulties. **At**

the same time the quality and efficiency of BPC's maintenance services deserve special praise. Any additional function or the need for system changes which cannot be realised through the inherent system's rules and settings are provided by BPC rapidly and efficiently. I do not think any vendor providing similar solutions could react to our demands so quickly.

The successful long term collaboration of Alfa-Bank and BPC is to a wide extent a result of the vendor's flexibility and customer oriented policy. Project realisation is performed in a close collaboration: BPC is always ready to meet our requirements and needs; offering various initiatives for future development.

The fact that BPC's fraud prevention and monitoring system has proven to be so highly efficient for solving our tasks is a result of the BPC's approach to its development. SmartVista Fraud Prevention & Monitoring is not an "artificially" created product but a solution with perfectly well-thought functionality smoothly integrated to our processing centre.

Alfa-Bank has extended plans for the future collaboration with BPC. As of today, the bank pays special attention to the development of such promising business as e-commerce. Alfa-Bank's processing centre has been successfully running the BPC's Internet gateway supporting our Internet acquiring network. The fraud monitoring system integrated with this gateway allows us both to ensure secure e-commerce transactions and to prepare online reports for the security departments of the acquired Internet merchants. This allows our customers to estimate the risk level of every payment transaction in a real time mode.

At present BPC's team is enhancing this system by adding extended functionality. For example, we developed a special software module designed to fit the requirement of air carrier companies. This module has been adapted to make the fraud monitoring mechanism even more convenient and flexible in terms of creating new fraud prevention rules. This mechanism will be used as a coherent part of SmartVista Fraud Prevention & Monitoring Module which will serve the whole e-commerce business. This is a unique solution whose e-commerce fraud monitoring module will be integrated into the whole bank's fraud prevention system and will use all the models, databases and business rules of **SmartVista Fraud Prevention & Monitoring solution.**

About Alfa-Bank: *Alfa-Banking Group is one of Russia's largest privately owned banking groups in terms of equity, assets, branches, retail deposits and funds under management.*

Founded in 1990, Alfa-Banking Group offers a wide range of products and operates in all sectors of the financial market, including corporate and retail lending, deposits, payment and account services, foreign exchange operations, cash handling services, custody services, investment banking and other ancillary services to corporate and retail customers.

The corporate and retail client base has grown considerably during the last several years — by March 1, 2009 Alfa-Banking Group served over 56 000 corporate and 3.5 million retail customers, while the branch network comprised 333 offices across Russia and abroad.

In addition to banking, Alfa-Banking Group has FSA, CySEC and FINRA-regulated brokerage subsidiaries, and other companies located in Cyprus, London and New York.

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