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white paper

ABACUS[®] E-Click

ebanking solution

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CHALLENGES IN THE EXPANSION OF EBANKING SERVICES IN THE MARKETS EX-YUGOSLAVIA

Development of information technology and transfer payment system for commercial banks in the past 10 years, created conditions for the opening of new distribution channels of banking products and services to customers through a computer. IT analysts and former forecaster predicted and banks promised (r)evolution of the banking business in this area and significant revenue growth, while reducing costs.

However, a recent analysis on the markets of ex-Yugoslavia shows that after a satisfactory initial results there was some delay in the growing portfolio of clients that use this distribution channel, and that the offer of services by banks is reduced to the standard payments. The reasons for this condition may be required to last:

- Most banks offer customers traditional payment services;
- Existing solutions for banks are burdened with costs for eBanking vendor solutions that are permanently involved in the division of the "pie", so that banks in tariff policy can't further stimulate customers to use eBanking. On the market there are only 2 independent vendor with a significant presence in the banks. This monopoly position does not affect motivation to spread and improve range of eBanking services;
- Banks do not have room for game in this segment. Existing solutions enable customers to work with several banks over the identical solution. Consequently, all banks have same offer of the ebanking service. Instead of competing with the volume and quality of services, banks, the only thing left to be attractive rates. Rates are below the threshold of profitability, so the maneuvering space for banks significantly limited;
- There are certain infrastructure (and financial) barriers to the introduction of new services to customers, except as legally and orderly payment, other services are generally different from bank to bank;
- A number of clients (especially state institutions and public enterprises) does not match that in the mediation between the bank and they involved a third party, because of the existing operational and reputation risks.

There are a significant number of services that banks can offer clients through this distribution channel, but there are insurmountable limits that are the result of the reasons listed above.

On developed markets, the banks that it can, choose to implement their own eBanking solutions. Recently, the regulation of the field of e-business on the domestic markets (digital certificates) greatly influence the development strategies of existing banks in this field.

ABACUS® E-CLICK – EBANKING SOLUTION

E-Click the eBanking solution for legal and natural persons, the Bank's clients.

E-Click is the newest PREMIUM Software's product based on the latest software and security systems, electronic information protection.

E-Click – key features

Some of the key features:

- Single unified view of the customer's many relationships with the bank
- Scalable and flexible to meet the changing demands of the retail and corporate customers
- Provides banking customers real time access to their relationships with the bank
- Built on industry-standard platforms Java and XML, the solution is platform independent
- Interfaced with any core banking solution directly or through an industry standard middleware. The system can be implemented independently of existing core banking solution
- High flexibility for customization
- Highly secure. It supports different authentication mechanisms and robust security features
- Production of digital certificates and pin-mailer with 1024 bit protection, which are delivered to the client in one arrival at the bank
- The use of digital certificates issued from other service providers or certification authority (CA), according to the procedure specified by the Bank
- It does not require the installation of any module at the end user's workstation. Using the service is enabled on any computer with the presence of digital certificate in one of the media (CD, card, USB memory module, USB tokens)
- Features of the accounting agencies
- Multicurrency transactions

Sets of eBanking services on Client Portal

Palette eBanking service E-Click is made up of 2 sets:

1. Basic Services
2. Additional Services

Basic Services

Basic services provide almost all the eBanking solutions. This set of services is included in the each distribution of E-Click. The set of standard services include:

- Home page

- Insight into the current account balance by currency
- Insight into the all committed transactions
- Query in the daily transactions
- Domestic Payments
 - Payments from transactional and other deposit accounts
 - Import payment orders from the file
 - Patterns account for payments
 - Payments Validation
- Payments in foreign currency
 - Payment in foreign currency (ex 1450)
 - Schedule influx (ex 743)
- Currency Exchange
 - Transfer from account to account
 - Possibility to customize exchange rate for some client
- History of Exchange Rates
- Archive of Committed Transactions
- Download Account Statements
 - PDF
 - Excel
 - XML
- Inbox
 - Digitally signed acknowledgment of client instructions
 - Confirmation of the transaction
 - Other notice from the Bank
- Signing Transactions
 - The signing of transactions with digital certificate 1024
 - The possibility of two authorized signatures of persons
 - Cancellation validated transaction
- The possibility of administering users authorized by the client

Additional Services

The latest software and security infrastructure of e-Click providing to Bank to implement in the shortest terms additional services. These extra services are delivered on special request of the Bank, implemented in cooperation with the Bank:

- Lists of salaries
 - Entering payroll for direct and indirect customers (eg, budget institutions)
 - Import files from the client's system for calculating salaries
- Suspension of salaries
 - Import files from the client's system for suspension of salaries
- Blocked Accounts
 - Information of blocked accounts from general ledger of the Bank
 - Entry requirements for blockade of accounts of other clients on the basis of credible judicial and other solutions, which are also provided in the attachment requirements (direct debit)
- Transfer to term deposit

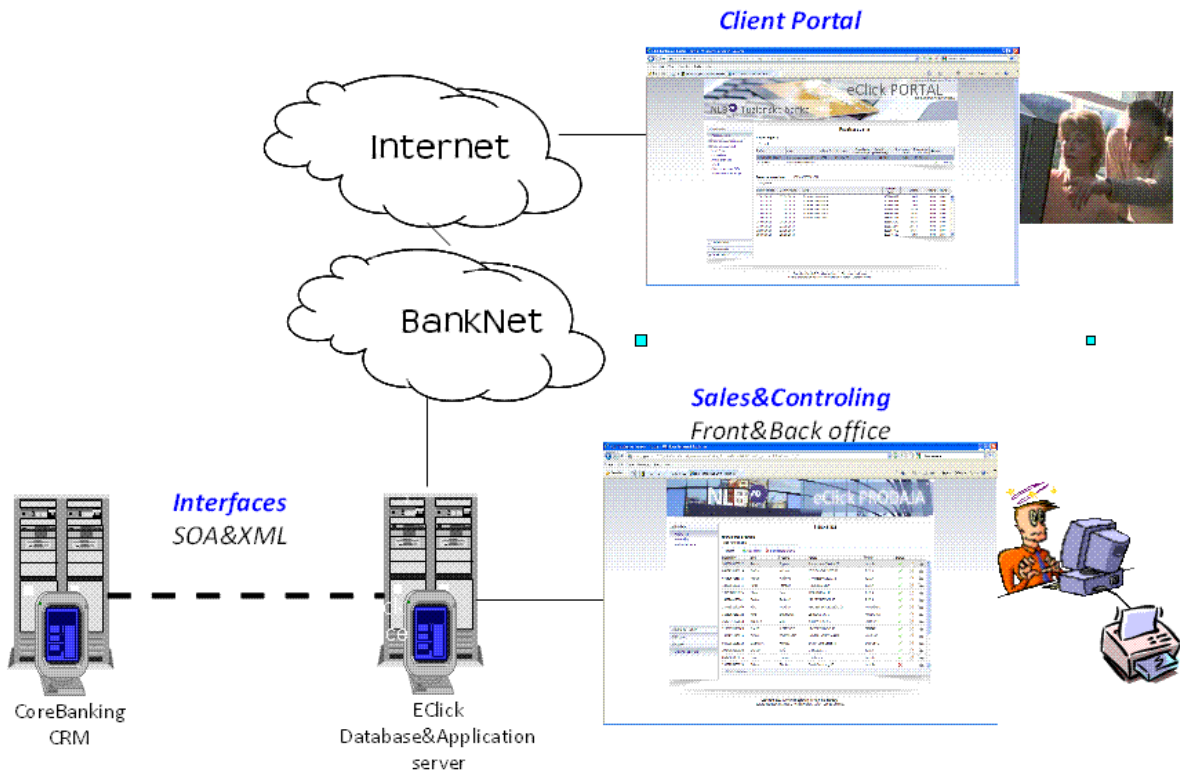
- Transfer from the transaction account to the account of term deposits. The bank may offer certain deposit products through a eBanking
- Transfer to overnight account
 - Transfer funds to accounts overnight after 14.00 (or at other times) and re-disposal from 08.00 the next day
- Loan Application
 - Entry requirements for the loan product (commercial or credit card). The client receives a notice that additional documents required. The same can be submitted electronically. Upon approval of the loan, client automatically receive a notification in which branch to contact and submit any additional documentation and sign the loan agreement.
- Cards
 - Transfer to card account
 - Insight in the committed and pending transactions
- Standing orders and other charges
 - Option 1 - Client create standing order to any account with fixed amount
 - Option 2 - Bank on the basis of contracts with service providers (eg. Telecom company) import orders by clients in eBanking-in, a client is approved on the day when he wants
 - Option 3 – Bank issue charges (interest and fees) with one-click option to pay the client's obligations towards the Bank
- Brokerage
- Custody Operations
- Issuing various requests bank, which are also digitally signed

E-Click Sales&Controlling and Interfaces

These two modules of e-Click intended to employers of the Bank and are included in the basic package. Functionality of the module are:

- Contracting services with customers in branches of the bank
- Management, control and monitoring of service in the back-office
- Interface to the corebanking and CRM systems
- Registration
 - Client
 - Accounts in local currency and foreign currency accounts
 - Other accounts (avista, buy / sell securities, ..)
 - User Account
- Issuing digital certificates and PIN mailers for customers
- Role Management
- Control Registers Management
 - Banks
 - SWIFT (BIC codes)
 - Control transfers to the accounts of public revenues
 - Other Registers
- Email notification and eBanking

- To the end users of the system
- To the bank's back-office
- Supervision of activities
- Audit trail of all actions



E-Click differentiation compared to the other eBanking solution

In this section enumerated the Top 10 E-Click advantages compared to other solutions on the market:

1. PREMIUM Software to bank offer eBanking solution based on „key and steering wheel in your hands“. The costs to bank is a one-time procurement solutions, and an optional maintenance and procurement of new services. There are no additional conditions, nor the subsequent charges.
2. Bank receives program source code. This enables to bank independence from vendor of software.
3. Bank effectively in the shortest time limits shall sell eBanking services to clients. There are no additional technological steps involving PREMIUM Software, or any third parties, except the client and the bank.
4. Bank can perform segmentation and personalization services to groups of customers or to individual customers.
5. Bank is issuer of digital certificates
6. System allows easy transfer of clients with existing eBanking solution to this solution. E-Click can use digital certificates and other issuers.

7. Cost of delivering of digital certificates to customers is only the cost of the media on which the digital certificate is delivered to the client (CD, USB). The Bank has the original transaction digitally signed by the user of the system.
8. Minimum of hardware and communication resources that the bank should provide
9. E-click has a standard set of eBanking services. An additional set of services can be easily adapted to the specific needs of banks. Standard and additional services reduce the engagement of back-office services in the bank (eg, entering payroll orders from customers), which allows further reduction of costs on banks.
10. Implementing of e-Click as the primary eBanking solution avoid additional costs for transactions and for 6 to 8 months of investment is fully paid

E-Click infrastructural base

E-Click based on the use of the following technologies:

- Oracle Database Server 10/11g
- Oracle WebLogic Server
- Oracle jDeveloper (Java ADF)
- XML - interface module
- Internet browser (Microsoft Internet Explorer 7 and 8, Firefox, Mozilla, GoogleChrome, ...)
- Security Systems:
 - https
 - PKI - Public Key Infrastructure (1024 bit)
- Interface module - options that depend on the Bank
 - SOAP/XML
 - Database tables
 - Directories
 - Abacus native interface

Oracle is the world leader in the field of relational databases. PREMIUM Software is Oracle's GOLD partner - an independent software provider.

Web environment based on Java technology allows you to access the system from any computer. Maintenance of the solution is easy and centralized on central server.

E-Click is conceived and designed in a way to satisfy all needs and provide flexible supporting a growing eBanking. His flexibility and scalability enable rapid development and deployment of new products and services. Using the latest programming tools and trends in the design of information systems:

- Downsizing / rightsizing
The shift to cheaper and more technically sophisticated hardware platform appropriate size of the business system as a result of a reduction in maintenance costs of computer equipment
- Open systems
Using *open* technologies that enable the protection of investments in information

resources for a longer period (spread Linux and Windows operating systems, workstation graphics, multiplatform relational databases and TCP / IP communication architecture)

- Three-tier architecture
- Internet technology
- De facto standards development and implementation

BUSSINES BENEFITS TO BANK AND CUSTOMERS

- **Improved Cross-Sell Framework**
 - unified view of the customer and customer-centric architecture
 - single-point access to all the relationships the customer has forged with a bank
 - base and advanced services
 - one-stop financial portal for bank's customers
 - robust framework for cross-sell opportunities
- **Business Agility**
 - industry standard platforms Java and XML
 - provide bank tremendous flexibility to extend its product portfolio
 - customize the service according to requirements
 - add new business rules, modify existing ones or integrate them with other applications seamlessly
 - identify new opportunities and roll out new products
- **Robust Security**
 - extensive application security features
 - robust framework to integrate with specialized security software
 - enables the bank to offer products that are highly secure
 - withstand the onslaught of security threats around Internet transactions
- **Customer Delight**
 - convenience of anywhere anytime banking
 - customers can query on account balances and make fund transfers
 - bank can proactively send timely information to customers in a completely secure environment
 - service capabilities empower customers to manage their banking activities better
 - better monitoring of banking transactions in real time

ABOUT PREMIUM SOFTWARE ...

PREMIUM Software target segments are companies that provide financial services to corporate and retail business.

We offer IT solutions for banks, insurance and SME companies:

- ABACUS® - core banking system
- PREMIUM® - core insurance system
- eClick - ebanking solution
- PREMIUM General Ledger - accounting solution for SME companies

We hire IT professionals and technicians with years of experience in insurance and banking. All solutions are based on the Oracle platform 10/11g.

References from the banking and insurance:

- LHB banka ad Banja Luka
- CBS Bank dd Sarajevo
- NLB Razvojna banka ad Banja Luka
- NLB Tuzlanska banka dd Tuzla
- Triglav osiguranje Banja Luka
- Jugins insurance ad Novi Sad
- Globos osiguranje ad Beograd
- Insurance ad Drina Zvornik (subsystem for damages)
- Emaco-GLOBAL, Novi Sad, London (investment funds)

Our staff have rich experience in project development and implementation of information systems in over 25 projects in the area of Macedonia, Bosnia and Herzegovina, Serbia and Montenegro.

The biggest project in market of ex-YU is group of projects for Nova Ljubljanska Banka (NLB), which is the largest Slovenian international financial group, and thus the largest investor abroad. By



«PREMIUM Software nam je z ABACUS-om omogočil pospešeno združevanje naših bank v BiH in uvedbo rightsourcinga»

Darjan Petrič
Nova Ljubljanska Banka
Slovenia

purchasing shares of four banks (LHB Banka ad Banja Luka, CBS Bank dd Sarajevo, Development Bank ad Banja Luka and Tuzla banka dd Tuzla) NLB in the past taken an important place in the BiH market. These four banks have the balance sheet strength, business network, portfolio of products and services, the number of clients, and in the technology and technical terms belonging to several categories. Business network of banks includes over 100 branches in 80 or so cities and towns in Bosnia. Corebanking systems in these banks were supported by 3 software vendor and a solution was developed in-house.

Revision of one of the implementations have been working the Federal Banking Agency of Bosnia and Herzegovina and the Central Bank of Slovenia.

PREMIUM GOLD Software is Oracle partner

PREMIUM Software in 2008. in the selection of representatives of the Agency for Foreign Investment and Export Promotion Agency (SIEPA), Board member of Banca Intesa Beograd, Serbian Chamber of Commerce, the Agency for Small and Medium Enterprises, Secretary of State for Employment of Serbia, the magazine “The Economist magazine” and “Blic” is selected in the 50 most successful companies in the category of small and medium enterprises in the Republic of Serbia.

We know your bussiness!
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