

e-Banking



Overview

Rubikon e-Banking is a suite of integrated products that enables financial institutions to expose banking services via electronic channels including ATM/POS, Internet and SMS and offers their customers a secured and around-the-clock access to electronic financial services anywhere and at any time.

The different channels are utilised as an interface with Rubikon core banking solution through a custom built middle-ware. It provides customers of the bank, real-time access to their relationships in the bank such as account inquiries, fund transfers, credit cards, payments and remittances, where one can make payments to individuals or institutions and other general payments on-line.

Rubikon e-Banking is based on n-tier architecture. It offers a high degree of scalability as it can be used in both small application server environments and in multi-server distributed processing environments. The solution is platform independent. It is highly secured and provides support for different authentication mechanisms.



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Channel manager

Rubikon Channel Manager acts as an interface between any retail banking application and its external delivery channels like ATM/POS, SMS and Internet banking. It allows the administrative user to easily manage the e-banking environment, which encapsulates customers, accounts, branches, services, currencies and other required elements. Rubikon's flexible architecture makes it seamless to add new channels. The Channel Manager ensures that customers experience a consistent level of business across all delivery channels.

Administration module

The Administration module utilises the business logic of the core business management system and handles all administrative and back office configurations for the e-Banking solution.

Channel Integrator

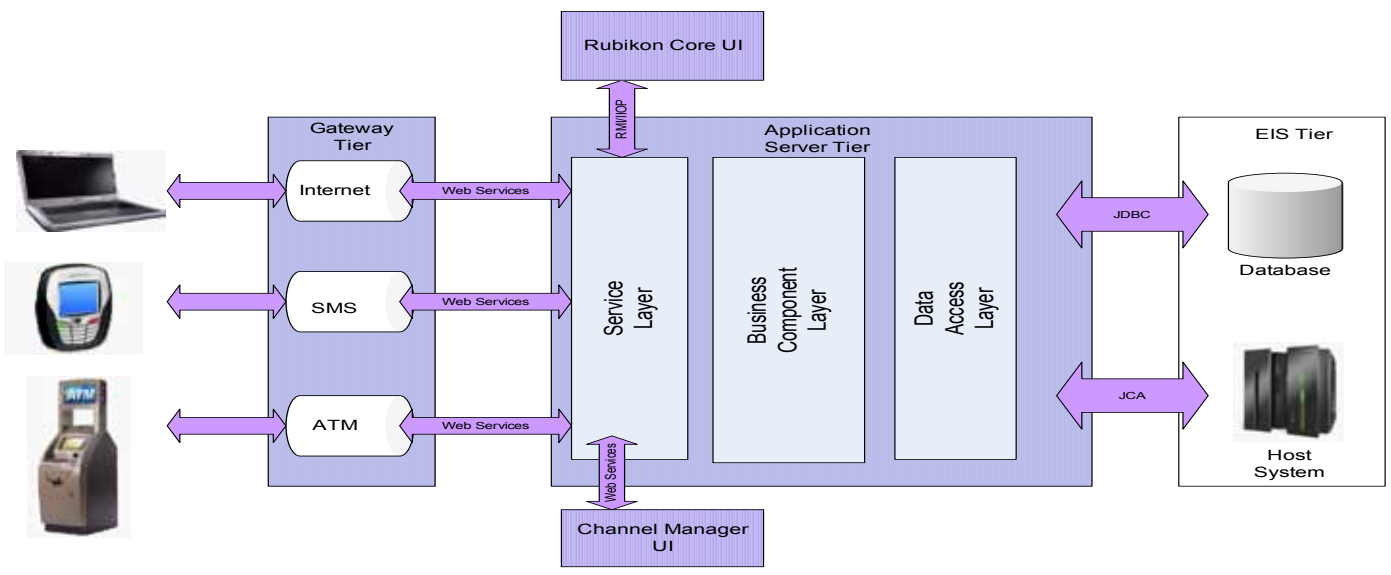
The Integrator Service provides a transparent connection point for the channels and the core application. It also provides a transparent communication between the external channels and the core system. The Integrator Service is packaged into nine major services: Security, Post, Transfer, Correspondence, bill, Cheque, Accounts and Customer.



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Channel manager





Internet banking

Rubikon Internet Banking has been designed to make online banking experience secure, easy and efficient. The bank's customers can perform a range of transactions via the internet such as balance information on savings, checking, and loan accounts, pay bills online, initiate stop payments, change password, perform account transfers and schedule recurring transfers.

The Internet Banking offers security to all customer information and protects the confidentiality of the customer's account(s).

Security

Secure Sockets Layer (SSL) Technology - all online banking transactions sent over the Internet are specially encrypted using Secure Sockets Layer (SSL) technology to maximise internet banking security.

First Level Authentication - Access Code, User Name & Password Protection come up at the first level within Rubikon Internet Banking.

Second Level Authentication - provides a second level of authentication for the online banking customer that is used in conjunction with his Customer Access Code, User Name and Password.

Auto Timeout Screen Blanking - provides a built-in security feature that logs the user out after a given period of inactivity.

Failed Log-on Attempts - denies a user access after a predetermined number of failed log-on attempts.

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Virtual Keyboard - Rubikon provides added security for Internet Banking with the Virtual Keyboard. This protects the user from Trojans set to monitor keystrokes as you type. The user can only enter his/her password using the virtual keyboard by clicking with the mouse on the appropriate combination of keys.

e-Messaging Facility - allows the customer to communicate with the bank. This is provided in a secured environment to protect the customer's information. Thus, the customer does not need to use the standard Internet email when communicating information about his accounts.

Features

Accounts Information - provides up-to-date information on the customer's account and is used to manage the customer account related information such as account summary, detailed account information, account statement information, uncollected funds, online accounts creation.

Cheques - manages the customer's cheque activities and transactions such as order for bank draft, order new cheques online, confirmation of issued cheque, enquiries on the status of cheque(s), place a stop payment - single cheque or range of cheques.

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E-Pay - enables corporate customers to initiate bulk payments of both debits and credits type of transactions either by manual entry of the transaction details into the banking system or by uploading a file containing the transactions details in a specified format to the core banking system. It covers intra and inter-bank payments. The corporate customer can also use this facility for salary disbursements, dealer credits and dealer debits where the debits and credits are intended to several accounts at a time.

E-Trade - offers financial products geared to assist both importers and exporters in reducing the payment risk associated with international trade. This feature allows corporate customers to make a request for the opening & amendment of Letter of Credits and lodgement of foreign outward payment. The e-Trade facility details the status and history of trade finance instruments and treasury deals such as, Import and Export Letter of Credits, Bank Guarantees, Inland and Foreign Bills, Forward Contracts and Treasury Deals.

Reporting - individual or corporate customers can have access to various forms of Internet banking reports. These reports are classified into administration/audit and transaction reports.

Internet Banking Fees/Charges - they are transaction fees associated with Internet banking and this may vary depending on the type of account activity the customer is transacting on.



Bill Payment and Presentment - facilitates online payment of utility bills and payments to merchants. This includes bill payee management, utility payments, single/bulk payments, remittance/acceptance, bill presentation, recurring bill payments, card settlement, bill/payment report.

Transfers

- ✓ Internal fund transfer - fund transfer between accounts of the same customer
- ✓ External fund transfer - fund transfer between accounts of the same bank
- ✓ Wire transfer to an external account
- ✓ Advance request transfer between deposit and loan accounts
- ✓ Recurring transfer used for automatic transfers
- ✓ Bulk transfer/upload
- ✓ Utility transfer used for utility payments
- ✓ Pending transfers
- ✓ Online mobile recharge

E-Analysis - enables the customer to analyse current or hypothetical account scenarios such as; online deposit forecasting, online loan analysis with an attached payment schedule, trend analysis that displays the analysis of a specified account over a given period using different chart types.

Corporate User and Workflow Management -

enables the online review of the customer's profile and information, password change, viewing of the customer's audit trail logs on logins and transactions, configuring an authorised user and assigning them to a corporate workflow.

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Customer Service - Rubikon Internet Banking offers the following services:

- ✦ **E-Loan** - enables the customer to apply for loan online. Once the application is submitted, the system sends a mail containing the loan details to the customer's Relationship Service Manager who can finalise the loan application process using the information supplied by the customer.
- ✦ **E-Statement** - enables the customer to receive all his account statements electronically through Rubikon Internet Banking instead of regular postal mail. It is timely, secure and provides quicker reconciliation of the customer's accounts.
- ✦ **Credit/ Debit Cards** - enables customers to view and change certain information about their credit or debit cards. Not only does the acceptance of cards provide added customer convenience, it also helps improve cash flow and eliminates costly credit and collection efforts through online approval of all transactions. Using this service, customers can request ATM pin information, suspend ATM pin information, make settlement on credit card, and apply for a credit card.
- ✦ **e-Messages** - It provides a centralised environment for message management. The integrated messaging system ensures that sensitive data is not sent through e-mail without encryption.
- ✦ **More Services** - Prepaid/mobile recharge service, debit/credit card service, cheque book request, deposit slip request, stop payment request, view/edit profile, and statement download.



Rubikon ATM/POS

Rubikon ATM/POS provides banks with the ATM-Host Interface and offers online support for ATM and Point of Sale devices. It is designed to operate in a centralised multi-branch database configuration in which each ATM device is connected to an ATM host. The ATM host passes transactions to Rubikon for authorisation and allows for the interfacing of all transactions originating from external system (ATM/POS) to the core banking system for routing or authorisation. The interface can handle all standard ISO 8583 messages, which include: authorisation, financial, reversal and network management messages and provides online and real-time transaction activities from any ATM network into the core banking system.

Protocol of Communication

- ✦ TCP/IP socket connection is used to communicate with any interfacing system (ATM controllers) and can only send/receive Messages in ASCII HEX Characters.
- ✦ EBCDIC is equivalent to the ASCII HEX range of 30-39 for numeric or 20 to 7E for character fields.

Transactions supported

Rubikon ATM supports the following transactions: cash withdrawal, funds transfer, bill payment, balance enquiry, statements, cheque book request, transaction reversals, changing PIN number, recharge voucher sales.



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Rubikon SMS banking

Rubikon SMS banking is based on exchange of SMS messages between the customer and the bank. It saves customers the time and effort of going to the bank branches, as the customer can conduct transactions from their mobile phone, irrespective of the service provider. Rubikon SMS Banking is cost effective, available 24 hours a day and has the following features.

Security

- ✔ Rubikon offers standard features in terms of security provided by the SMS mobile terminal application and security provided by the mobile network provider.

Transfers

- ✔ Fund transfer between deposit accounts
- ✔ Advance request between deposit and loan accounts
- ✔ Utility transfer used for transfer funds to utility accounts
- ✔ Third party transfer with external accounts of the same bank

Utilities

- ✔ Unlimited password/PIN change
- ✔ Encrypted password to prohibit internal access

SMS Flash Pay

- ✔ Flash pay service

Mail

- ✔ Electronic mail correspondence from the customer to the institution



Account Transactions

- ✔ Account details inquiry
- ✔ Generate account mini/full statement
- ✔ Uncleared items (mini/full) enquiry

Cheque Transaction

- ✔ Cheque status enquiry
- ✔ Cheque confirmation
- ✔ Cheque order request
- ✔ Stop cheque payment

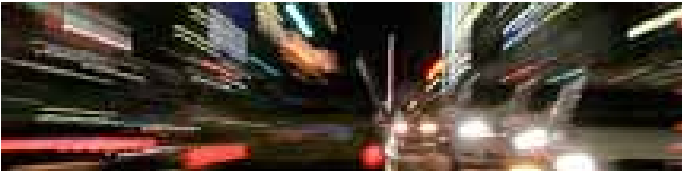




Neptune Software has delivered mission-critical core systems to over 65 financial institutions and has the proven experience needed to meet the requirements of internationally recognised banking practices. In 2008, Neptune achieved a top 5 ranking in the IBS Sales League of international banking systems vendors. Neptune has 6 locations in EMEA, a development centre in Chennai and a growing global partner network.

Since 2005, Neptune has demonstrated continuous process improvement by regularly passing ISO 9001:2000 TickIT audits. Since 2006, Neptune has been awarded the highest available rating, 4 Stars, by CGAP (an organisation housed at the World Bank). This rating is based on functional coverage of the applications and customer feedback in terms of projects being delivered on time and within budget.

Neptune has a solid track record of financial stability and profitability with sustained re-investment into research and development of its products. This has allowed the development of Rubikon, a brand new world-class banking technology platform.



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