GlobalBank

Internet & Wireless banking solution for tommorow

GlobalBank^{SM}
O v e r v i e w

**GlobalBank is a premium quality online banking and customer care solution.
With GlobalBank, you can offer both Web and mobile phone banking to your customers.
GlobalBank integrates seamlessly into your existing network , and is a highly secure and
scaleable solution.**

GlobalBank turns your customers' home computers into "home branches".
Users can see account balances , make inter-account transfers, third-party
transfers, and even manage their offline account information. Offering these
services not only reduces your operational costs, and also dramatically improves
your customer service .

GlobalBank utilizes the latest industry security technology to ensure that customer
transactions and confidential information are protected from unauthorized users.
It incorporates advanced cryptography protocols that ensure the confidentiality
of communications between servers, including 128-bit Secure Socket Layer
(SSL), Transport Layer Security (TLS), and 1,024-bit RSA data encryption.
GlobalBank is written in pure Java and Enterprise Java Beans (EJBs), the most
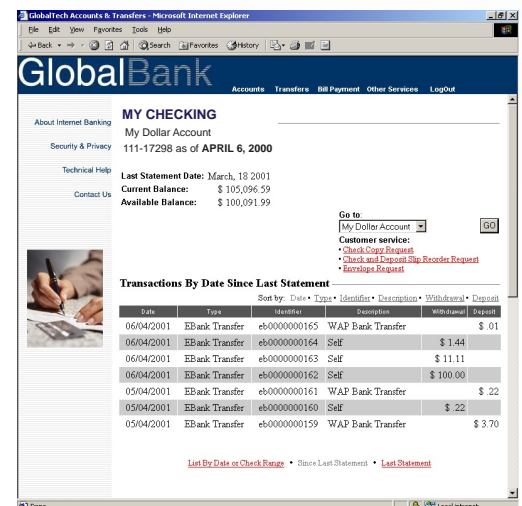secure Internet programming language in the world.

GlobalBank can host on UNIX servers, As/400,Linux and almost any other
platform available.

GlobalBank
P r o d u c t   F e a t u r e s

GlobalBank customers have online access to their checking, savings, credit card, and loan accounts 24 hours a day, seven days a week. Customer accounts are integrated, providing users with a consolidated view of their financial data. A user-friendly interface guides customers through their online accounts, enabling you to offer any number of features, such as:
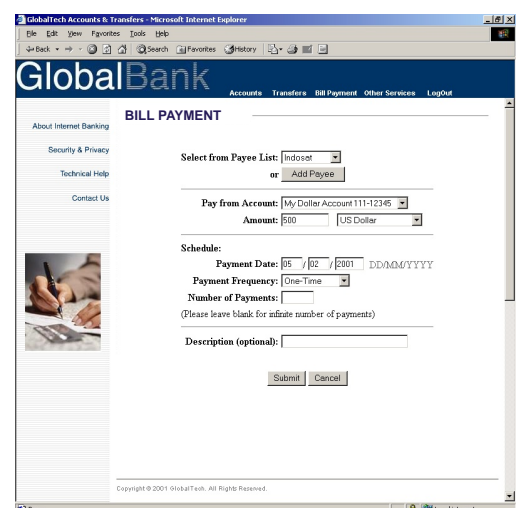
- **Online account registration**
- **Review account statements and activity**
- **Electronic bill payment**
- **Access multiple accounts**
  (savings, current, loan, credit card)
- **Transfer funds between accounts**
- **Monitor and track credit card spending**
- **View pre-defined reports**
- **Download data to popular personal financial management software such as**
  Microsoft Money^tm **and** Quicken^tm
- **Perform multi-currency transactions**

Account History Details

To use GlobalBank, **customers simply require Internet access, and a browser that supports 128-bit SSL encryption**. Customers can sign up for account access online, and create a password.

A unique username are generated automatically by GlobalBank and mailed to the customer's address. Customers must then change their password upon logging into the system for the first time.

GlobalBank supports multiple accounts, multiple currencies, credit card accounts, and more. The system can be further customized to include any other information required.

Bill Payment

A detailed list of GlobalBank features includes:

Online Account Creation	Customers can sign up via the Web, for online banking access via. Customers choose a unique user ID. Eight digit alpha-numeric passwords are then mailed to the customer, and they must change their password upon using the system for the first
Account overview	Customers can see an overview of all account balances on a single homepage screen
Account history details	Customers have the ability to view all transactions for a given account, over any period of time supported by the institution's bank-end system
Download account history	GlobalBank can download account histories to Quicken, Microsoft Money, and Microsoft Excel files
Multiple accounts	GlobalBank supports multiple accounts
Multi-currency	GlobalBank supports multiple currencies, and even can even convert funds between currencies
Credit card usage account overview	GlobalBank has the ability to provide customers access to credit card accounts
Account Transfers	GlobalBank allows users to transfer funds between accounts they own, and to 3rd party accounts within the same institution
Bill Payment/TTs	GlobalBank has an advanced bill payment module. Customers establish a list of payees from an administration menu. Name, address, and bank account information is all recorded for the payees. Users can then specify the amount of the bill payment, the payee for the transfer, the account to draw funds from, and currency of the payment
Recurring payments	Customers can establish recurring payments, which repeat automatically for a specified number of cycles
International transfers	GlobalTech can also support international SWIFT payments
Currency rate information	GlobalBank displays real-time currency rates online
User personalization	Many aspects of GlobalBank can be personalized by the user
Full customer care system	GlobalBank features a full, online customer care solution.
Change username/ password	Customers can change their username and password online
Online help/assistance	GlobalBank provide online help and assistance for the user throughout the browsing experience
Secure email	Users can communication back and forth with customer support via a secure internal email system

GlobalBank
System Architecture

## GlobalBank's architecture consists of three primary components:

1. The network and device gateway

provides access to a variety of Internet-enabled devices and networks, isolating the complexities associated with protocol, security and form factor issues ensure a consistent consumer experience.

2. The services infrastructure

enables consumer applications such as retail and commercial banking, investment services, mobile commerce, aggregation and alerts; and personalization The services infrastructure also enables session management, which ensures the continuity of a transaction over the network. The architecture is supported by an overall administrative function designed for easy and efficient management.
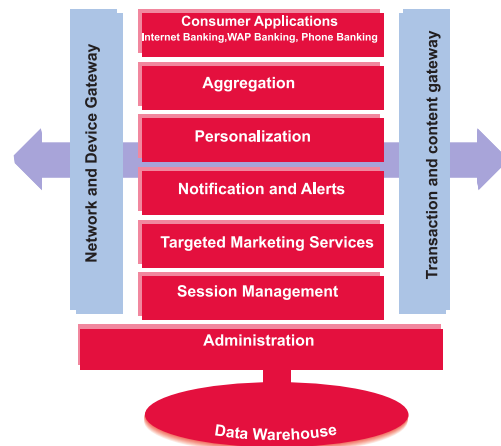
3. The transaction gateway

provides rapid linkage to your existing bank-end banking system. GlobalBank uses standard ISO-8583 protocol to communicate with back-end banking system. Typically, GlobalBank connects to a switch, if the bank has a 3-tier structure established. Thus, GlobalBank acts the similar to the ATM networks most banks already have in place.
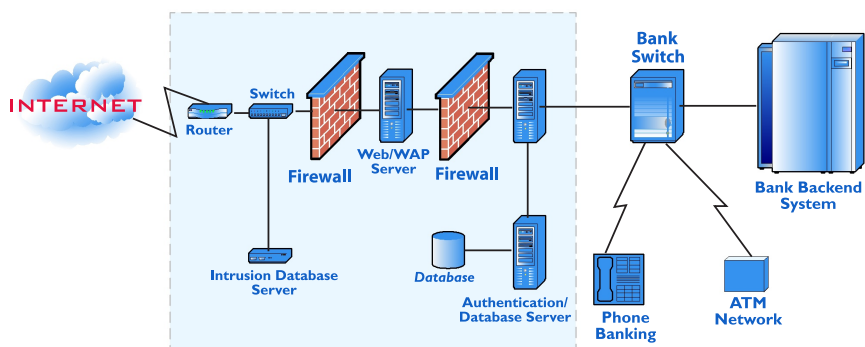
For banks which do not use ISO-8583, GlobalBank can also support Open Financial Exchange (OFX) or Extensible Markup Language (XML) - two communication standards that permit the electronic exchange of data - to provide a stable, scalable platform interface.
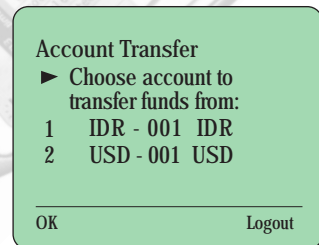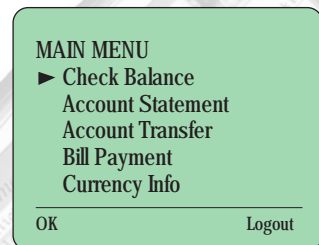
GlobalBank
Mobile Banking

In addition to Internet banking, GlobalBank also supports mobile phone banking (m-banking) for WAP enabled Internet phones.

Mobile phones are expected to soon become the primary Internet access device.
Mobile banking allows consumers to control their account wherever they go, whenever they want.

Examples of m-banking features include account summary, last ten transactions, account transfers, and third-party payments to established payees.

```
GlobalBank
   WELCOME!

OK                    Logout
```

```
MAIN MENU
► Check Balance
   Account Statement
   Account Transfer
   Bill Payment
   Currency Info

OK                    Logout
```

```
Account Transfer
► Choose account to
   transfer funds from:
1   IDR - 001  IDR
2   USD - 001  USD


OK                    Logout
```

Mobile Banking Features	Description
Account Overview	Users can see an overview of all account balances on a their mobile phones
Account History Details	Customers have the ability to look at the last five transactions for each account
Account Transfers	Users can transfer funds between accounts
Bill Payment/TTS	Customers can use their WAP phone to pay bills to payees which have already been established via the Internet payee maintenance service
Currency Information	Customers can see real-time currency information from the mobile phone
Contact Customer Support	Customers can send messages to customer support via their WAP phones

GlobalBank
S e c u r i t y

GlobalBank incorporates advanced cryptography protocols that ensure the confidentiality of communications between servers, including Secure Socket Layer (128 Bit SSL) and Transport Layer Security (TLS). Additionally, all data on the GlobalBank system is encrypted by 1024-Bit RSA security.

GlobalBank is developed in Java and Enterprise Java Beans (EJB). One of the world's most secure Internet programming languages.

GlobalBank has a Five-Tiered Approach to Security:

> **Tier 1:** **Secure User Connection**
>
> **Tier 2:** **User Authentication**
>
> **Tier 3:** **Server Access**
>
> **Tier 4:** **System Architecture**
>
> **Tier 5:** **Application Architecture**

Online financial services require high availability, performance, and scalability. GlobalBank is designed to meet these demands. The technology behind GlobalBank is based on a market-proven, scalable, fault-tolerant Internet platform currently running in production systems supporting millions of users. GlobalBank is component-based and multi-platform, supporting linear scaling and high availability. GlobalBank will be able to expand to meet any of your foreseeable online banking needs.

GlobalBank
Security Tiers

1. Secure User Connection

- Secure Sockets Layer (SSL) 128-bit encryption

- Digital Certificates Issued by VeriSign, the expert in digital identification certificates. Digital IDs act as electronic credentials that establish an entity's identity. A server secured with a Digital ID ensures visitors of the site's authenticity and allows the session with the client to be encrypted

- Establishes credible Internet "identities"

- Public Key Cryptography-Server has private "key"
    - Browser has public "key"
    - Server specifies to browser which key to use

2. User Authentication

- User ID and Passwords must be alpha-numeric

- Unique User ID established by consumer

- Unique 8 digit alpha-numeric initial password established by application-mailed to physical address of account holder

- Mandatory password change during initial sign-on

- Incorrect password counter – disables account after three incorrect attempts

- Automated sign-off after 10 minutes of inactive use
    - configurable time setting

3. Server Access

- Recommend dedicated ISP connection for Internet Backbone
    - No transient traffic in the "pipe"
    - Internet Routers
    - Basic screening on IP Addresses

- Internet Firewall(s)

    - Specific filtering of all unauthorized requests
    - Internet Backbone Server is only accessible resource

- Intrusion Detection System (IDS)
    -Logs all intrusion attempts
    -Proactive actions to cancel suspect sessions

4. System Architecture

- Application built in pure Java language and Enterprise Java Beans, allowing GlobalBank to host on secure servers

- Dedicated HTML/Web Server-accepts direct Internet "hits"

- Separate authentication server, database server, and component servers not accessible from the Internet. Each server has restrictive Access Control Lists (ACL)

- Customer data resides only on core banking system

- All communication with back end hosts is encrypted
    - All trafic generated from web site to backend hosts must be encrypted
    - Triple DES, RSA, and OFX Rijndael encryption on ISO-8583, and XML communications

- Operating system security hardening

5. Application Architecture

- All user and administrative actions logged to database

- Critical information is stored on the database in encrypted form
    - 1,024-bit RSA based encryption and MD5 on critical information
    - Salting of clear text

- Can be set so that all transactions must be approved by live staff

- Advanced protection against buffer overflow attack

- GlobalBank has the ability to reverse transaction requests if the response is received late from the core banking system

- Can be set to require password change every 30 days

- Can be set to limit amount of daily transfers

- Optional smart card feature possible

- Administrative user permissioning systems

GlobalBank
Implementation Services

GlobalBank can be implemented by GlobalTech's dedicated team of specialists. Implementation is estimated to require only three to four months, due to the fact that GlobalBank follows established ISO communication standards. GlobalTech has the capability to provide a total solution, including all software, hardware, and installation required. After sales service programs are also available.

GlobalBank can be fully customized to meet all of your requirements. Its presentation layer will be designed around your institution's identity, and it features customized to your needs.