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An **SAP** Company

New Features

Sybase Mobiliser Platform 5.1

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Mobiliser Platform Overview

Sybase® Mobiliser Platform is a complete, powerful operator-grade Payment Processing and Service Delivery Platform that provides a state-of-the-art Service Oriented Architecture (SOA) for true dynamic real-time integration and rapid application development. It offers support for mobile channels including SMS, USSD, mobile browser, downloadable client, STK, and works on any mobile device, on any network, with any language and currency. It is modular, highly scalable, standards based and allows the customization of components and workflows.

This B2C platform enables enterprises, financial institutions, and mobile operators to leverage the mobile channel to:

- Engage customers by expanding relationships, creating loyalty, and acquiring new customers.
- Enable a mobile transaction channel by making it simple and convenient for customers to make purchases, pay bills, and transfer funds.
- Reduce the costs of servicing customers while maintaining direct and effective customer communication and service.

The solution is a fully integrated system that consists of the back-end database, a set of application services as a middle-tier and several front-end Web applications for the configuration, management and utilization of the system. In addition, the Mobiliser solution offers several user interfaces including SMS, USSD, Mobile Web, and IVR.
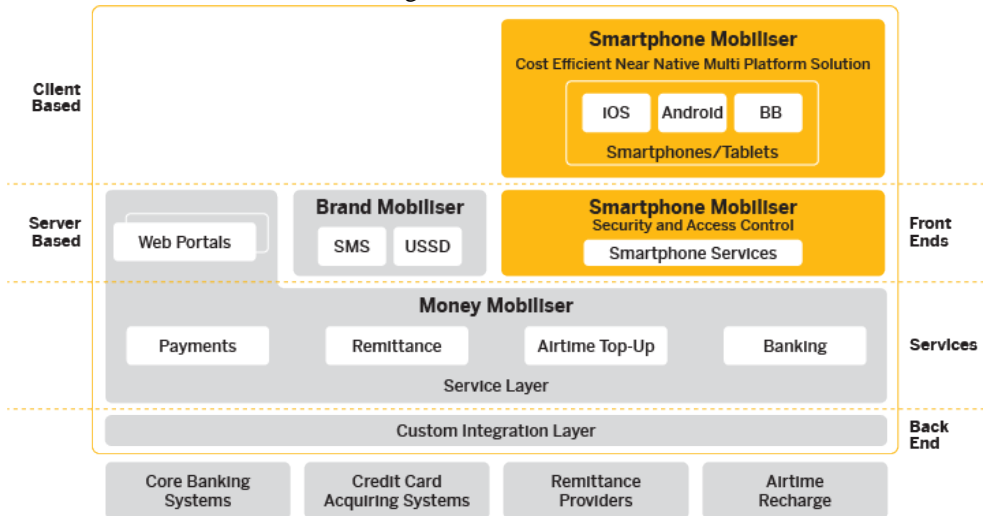
Money Mobiliser Overview

Sybase Money Mobiliser provides a state-of-the-art mCommerce solution to the market that allows anyone with a mobile phone to pay, buy, bank and remit money.

Money Mobiliser provides solutions so that financial institutions can extend their interaction with customers and capitalize on the following mobile business channels:

- **mBanking –** allows end-users to use their mobile phone as a micro bank, performing basic banking tasks where instant information is important, for example, manage accounts, check account balances, and configure notifications to receive account activity or threshold alerts.
- **mPayments –** enables end-users to make domestic person-to-person (P2P) payments to known and unknown beneficiaries; make remote and proximity purchases at various merchant acceptance points, pay bills, and repay loans.
- **mRemittance –** enables end-users to send money across borders to an intended beneficiary, manage friends-and-family lists, buy a remittance voucher online at an agent or in any retail location, and initiate money transfers from an agent location, a wallet, or a bank/credit card account.
- **mTopUp –** empowers end-users to top up airtime on their own or any other mobile phone, share airtime within a network, and transfer airtime across borders, directly from their handset or via automatic rules paying electronically from home, in the street, or from a merchant paying with cash.

Web Server Front Ends
For consumers:

- Consumer Signup Portal – know your customer (KYC) details collection and one-time password (OTP) generation
- Consumer Self-Care Portal – self-care, account management, bill payments.

For partners, agents, and merchants:

- Customer Support Portal (CST)
- Distribution Partner Portal – self-care, customer service, and agent management
- Operations Dashboard – monitor and manage servers in a deployment; manage and administer preferences; visualization for application level trackers; track system level details; and jobs control

Authentication Services and Security
Mobiliser allows the definition of multiple business roles; you can configure almost all roles (customer types). Money Mobiliser comes with a set of pre-defined business roles.

In the standard setup the identification, authentication, and authorization is managed by the Mobiliser but can be delegated to other systems, for example, LDAP. The list of privileges

assigned to the user must include the privileges required for the context and the service and potentially additional privileges check by the business logic of the service.

Event Management

You can create and management events for different scenarios including transaction processing, customer registration, database triggers, and external sources. Some common events include:

- Sending of transaction notifications through e-mail or SMS.
- Transfer of successfully finished transactions in to the Account Management System (AMS).
- Calculation of loyalty points for transactions.
- Sending of welcome e-mail messages after successful customer registration.
- Forwarding transactions to an offline AML system (anti-money laundering)

Job Scheduling

You can schedule cron jobs and periodic tasks.

- Cron jobs can execute at specific times of the day or at specific days in a month. Start times and dates are configured in the database. You can create cron jobs for such tasks as sending reminders to a customer when a credit card is about to expire, or for retrieval of exchange rates from an external data source.
- Periodic tasks can be executed on a more frequent basis or configured by an execution interval. You can create periodic tasks to scan for and clean up stales transactions, or to scan for and cancel expired authorizations.

Reporting

- Based on Java Reporting Component (JRC) and Crystal Reports Viewer SDK
- Several out-of-the-box reports
- Online reports (ad hoc) and asynchronous reports (batch)

Customization Points

Smartphone Mobiliser Overview

Smartphone Mobiliser is an application framework that can be used to develop mobile applications that deliver Mobiliser Platform functionality.

Key Benefits

- Build once, deploy to multiple devices - you can easily build touchscreen smartphone applications for iPhone, Android, and Blackberry.
- Mobile Web support - easily leverage smartphone templates for the MobileWeb.

- Leverages non-proprietary, open source technologies - JavaScript, HTML, CSS for a rich user experience.
- PhoneGap framework - packaged with PhoneGap libraries.
- Sample (reference) application with Mobiliser Platform integration - can be customized and adapted with built-in connectivity to leverage all Mobiliser workflows.

Delivery Options

Using similar source code, Smartphone Mobiliser provides the following options for delivering mobile applications:

- Downloadable mobile applications that are available via mobile application stores (public or enterprise) or hosted on a site for download.
- Mobile Web applications hosted on a (static) Web site.

Smartphone Mobiliser Functions

- Airtime topup
- Bill Pay
- Send and request money
- Manage accounts and transactions
  - Add and register bank accounts
  - Block accounts
  - Change PIN
  - Manage notifications
  - Add credit cards
  - Balance inquiries
  - Pre-authorize, authorize, and cancel transactions
- Load and unload from stored value account (SVA)
- Search, pull, and view coupons

Brand Mobiliser Overview

Sybase Brand Mobiliser is the Sybase Advanced Messaging Server, the market leader in the Interactive and Campaign SMS middleware. It is based on the Sybase 365 messaging technologies, an accumulation of many years of experiences in providing SMS and MMS interoperability to the telecommunication industries, and developing business to consumer (B2C) mobile SMS services on behalf of businesses in various industries.

Brand Mobiliser is designed to meet the needs of enterprises in mobilizing all aspects of business including marketing and brand awareness, financial and banking notifications, payment authorization, commerce, CRM, and much more. The flexibility of the platform enables customers to adjust their applications in real time to meet the changing business needs without disruptions to the mobile subscribers – critical in the mobile world with billions of subscribers globally. Brand Mobiliser is the messaging engine that powers many customer

Mobile Commerce solutions. The high-performance and scalable processing engine enables our customers to scale their services.

The Brand Mobiliser extensible design fits into the entire spectrum of mobile messaging including SMS, USSD, MMS, e-mail, IM, and so on. It is currently available for on-premise deployment at customer data centers, as well as on the customer's choice of cloud providers. The high-performance and scalable Processing Engine is designed to serve the continue growth of mobile traffic demanding instant interactions with the mobile applications.

Build Interactive Applications for SMS and USSD

Brand Mobiliser is based on the OSGi modular architecture or the SAP® cloud architecture of choice, so it can easily be extended with plug-in components enabling richer interactive mobile applications. Its extensible design is based on plug-in components implemented using the provided APIs. Plug-in components are typically developed for integrating with existing enterprise systems, or partner and other third-party systems based on the Service Oriented Architecture (SOA).

Key Features

- Application Composer to quickly design and build new applications.
- Pre-built modifiable templates speed application development.
- Import and export SMS and USSD applications for easy deployment.
- Plug-in component architecture to build a wide array of applications, for example, voting, surveys, and ticketing.
- Built in collaboration capability for multiple users.
- Ability to simulate and test applications.

New Features for Mobiliser Platform

Mobiliser Platform 5.1 includes new features that support mBanking functionality, and enhancements to the Money Mobiliser Web portal applications.

Note: See *Supported Hardware and Software* for the list of database platforms, mobile devices, servers, and mobile development environments that Mobiliser Platform currently supports.

mBanking

Mobiliser Platform includes new mBanking features for consumers and financial institutions.

<u>Consumer Features</u>

Sybase Mobiliser Platform 5.1 includes new consumer features to manage contact points, devices, and alerts.

Contact Points

- **Register more than once device/phone for the same account or across multiple accounts –** joint account owners can customize alerts and other features for their devices.

- **Send a test message to a registered device –** consumers can confirm that their devices are properly configured during the enrollment/configuration process.

- **Mange device information –** consumers can create a custom name for the device, establish a secret authentication word for SMS transactions, and manage device alerts preferences.

- **Delete a mobile device/phone –** consumers can delete a registered contact point.

- **Register alternate contact channels –** consumers can indicate to send alerts by another method, such as e-mail messages or custom IVR.

Account Management

- **Establish a nickname for the account –** this nickname can be used for all SMS text banking transactions.

- **Activate or inactivate an account –** only active accounts are available for transactions.

- **Send account history as a text message –** once a transaction appear in the account history, consumers can send this information to a mobile device as a text message.

Mobile Alerts

- **Manage current alert subscription details –** delete or modify an existing alert.

- **Establish and subscribe to new alerts –** select from a list of pre-built alerts, which are saved to a consumer's profile and tied to a specific contact point.

Other Features

- **Forex (FX) currency lookup from login page –** provides a direct link from the login page to an FX currency lookup for exchange rates. Consumers can go to the Web site without having to log in.

- **Stop payment services –** consumers can indicate a stop payment instruction from within the channel.

- **Location-based services** – based on zip code lookup, consumers can find branch and ATM locations for their bank.

- **Device detection** – the Mobile Web application detects incoming browser resolution and optimizes the user interface based on screen size and device.

SMS Banking Features

Brand Mobiliser supports the following text/SMS banking features:

- Account balance
- Mini account statements
- Fund transfers
- List payees
- Bill payment
- Stop transmission
- Lock account
- Help

iPhone Features

Customer Management Features

Sybase Mobiliser Platform 5.1 includes new features for customer management and maintenance.

Bank Customer Management

- **User profile** – provides banks with a composite view of customers, their status, preferred language, and assigned permissions.

- **Accounts, Contact Points, and Alerts** – allows bank personnel to manage user settings on the consumer's behalf.

Operational Features

Sybase Mobiliser Platform 5.1 includes new pre-built reports with parameters that bank employees can configure and save.

Employee Reports

- **Employee Activity report** – indicates what the bank employees are doing in the channel.

- **Customer reports** – indicate what the customer is doing in the channel, and include Customer Activity, Customer Authentication Summary, and Device Authentication Exception.

- **Operational reports –** include 11 reports to monitor channel activities, including transactions and transaction volumes, current logins and login usage patterns, customer and employee activity statistics, suspicious transactions, and more.

Administration Features

Sybase Mobiliser Platform 5.1 includes new administrative features that allow product managers, system administrators, and IT personnel to manage product offerings, entitlements, and operational settings.

Service Packages

Bank employees can build collections of entitlements (permissions and functionality) that are defined, collected into single collections, and then assigned to users or groups of users. Service package modifications go into effect immediately.

Opt-in Settings

Opt-in settings allows a bank to manage bank terms and conditions as well as operator opt-in requirements. This optional service enables control of bank risk and certification.

Restrictions

Restrictions enable the bank to manage restricted numbers in the system to limit mBanking services. Restricted numbers cannot access any services in the associated channel.

Schedules

Banks can build and deploy custom alerts and operational jobs, such as file transmission.

Bulk Processing

Mobiliser Platform includes bulk processing capabilities for customer registrations and deactivations, and transaction processing (perform and cancel).

The standard bulk processing flow includes uploading a file, approving the file for execution, and retrieving a response file. Customers upload the files through the Distribution Partner Portal for transaction processing, or Customer Support Portal for customer data changes. For implementation in the back end, Mobiliser Platform provides a data model and APIs to easily create new types of bulk-processing files, configure the required privileges to create and approve bulk-processes, implement according file handlers, which execute the file, and dynamically integrate these into the front-end Web applications.

Documented in *Sybase Money Mobiliser Customer Support Tool User Manual > Bulk Processing*.

Coupon Distribution

Mobiliser Platform enables retailers and manufacturers to upload coupons so that consumers can receive them on their smartphones, in most cases, using Smartphone Mobiliser.

Coupon Administrators can upload batches of coupons or create new coupons in the system. Users can search or browse for coupons and add them to their accounts, or coupons can be added automatically by a back-office user. Coupons can be delivered to individual customers or to multiple customers.

Documented in *Sybase Money Mobiliser Customer Support Tool User Manual*:

* *Coupons*
* *Coupon Type*
* *Coupon Description*
* *Coupon Type Keyword*
* *Coupon Category*
* *Generate Coupon*
* *Assign Coupon*
* *Search Coupon*

Workflow Enhancements

Mobiliser Platform supports dual-approval (maker-checker) workflows, which enable the validation of sensitive data.

For each service that supports dual approval, the system defines the required privilege to start the service (make) and the privilege required to complete the service (check). Additionally, there is always an option to allow a user direct execution of a service, bypassing the dual approval process; however, this requires another privilege. Some common scenarios for dual approval include:

* Consumer registration – in cases where regulations dictate additional validation of KYC information.
* Wallet entries additions – for security reasons, consumers and agents might not have permission to directly activate new payment instruments for consumers.
* Transactions – for sensitive transactions where the initiating agent should not be the same as the agent completing the transaction.

Documented in *Sybase Money Mobiliser Customer Support Tool User Manual*:

* *Dual Approval Configuration for Customer Types*
* *Approval Privilege Configuration*

New Features for Brand Mobiliser

Brand Mobiliser 1.3 includes new enhanced Javadoc and a default setup for development mode.

Redesigned State API with Better Javadoc
The state SDK has been completely revised to make it more easy to use. The API documentations have been enhanced to provide more usage details. The previous state SDK no longer works in Brand Mobiliser 1.3. Existing states need to be refactored and recompiled to this new SDK. A new AbstractDynamicMenu provides a simpler base class to write a Send Menu state.

Documented in *Brand Mobiliser API Reference*.

Default Setup for Development Mode
The default setup of Brand Mobiliser refers to the setup after unzipping the software package and starting up using the **bin\run** or **bin/run.sh** start scripts, and without any modifications to the configuration files. The development mode runs using the embedded database with the database objects stored in the derby folder. The production mode is a reconfiguration of the development mode to for production environment needs such as pointing to the production database, reconfiguring the assigned port, SSL setup, encryption, and so on.

Documented in *Brand Mobiliser User Manual > Database Scripts Installation*.