



MPass Message Router

The MPass Message Router is a flexible SMS handling platform, which provides 2-way SMS messaging between SMS Services / Applications and Mobile Networks as well as SMS Gateway Services. The main target of this platform is to reduce costs and efforts to operate an SMS based Messaging Service and to provide an Application Layer on SMS for SMS based Applications and Services.

Key Benefits:

- **Products and Services for**
 - Small Network Operator
 - VMNOs
 - Branded Reseller
- **Easy phone configuration for mobile phone users**
- **Supports various users needs**
- **Fully managed service or installation in own premises**

Due to the very tight margins in the SMS Value Added Services market, it is crucial to reduce time and efforts for provisioning of new services, to generate reliable billing records for each service and each message passing the system and to have graphical frontends in order to enable also non technical persons, to manage such a platform.

On the application side, the main focus is on providing an reliable Application Layer for SMS Messaging, which takes care of the delivery of the Message to the end user and bring the user response back to the application.

MPass Client

The MPass Client is the Client Side API for Applications and Services connecting to the MPass System for sending and receiving mobile messages. The MPass System will come as well with some sample

Client Applications which shows how to use the service. The Interfaces can be easily integrated into WEB Sites or any Client Application for Mobile Messaging. Sample Source Code and Java Classes are available for that matter.

MPass Message Router

The MPass Message Router is the core system, pro-

The MPass System consists of the following main components:

- MPass Client
- MPass Message Router
- MPass Network Connectors

viding the flexible 2-Way Message Routing, Billing, Administration interfaces and a Plug-In Interface for Network Connectors.

The MPass Billing

The MPass Billing concept is tightly integrated into the Services & Provider concept. The major target for the Billing Service is to handle Services Billing and Provider Billing integrated for various types of Services across network borders.

One major problem for Billing of Services which are using different Networks, is the the Message Costs on each Network is different in most cases.

In order to charge a Service Provider for its data traffic into the various networks, the Message fee has to be calculated from the Service Charge + the individual Network Costs.

In case of a Premium Service, where the Services Provider shares the revenue on each message with the Mobile Operator, this can be handled by applying costs to the Service and Charges to the Premium Channel within a Provider.

The MPass Billing Service provides all Billing Data pre-calculated as real time Statistics and calculates all Charges and Costs separately per Service and per Provider. The calculated Billing Data can be presented as WEB Statistics for an instant WEB Access to the system, as well as "Ready to Print" Invoice for MPass Service Customers, simply by applying a new Stylesheet to the XML Based Billing Data.

Naturally the Billing Data can be converted into specific formats for other Billing Systems as well in the same way.

MPass Administration

The whole System works internally on XML based datastructures. Therefore the MPass Configuration Data is held in XML-Files on the Server. The main advantage of XML is, that it allows hierarchical and complex data structures, it can be easily distributed through the network and can be presented in any format by simply applying a new Stylesheet.

The initial release of MPass provides a graphical presentation of the Configuration Data via WEB Interface. Further releases will also provide a full WEB based Administration Client.

MPass Network Connectors

The underlying architecture for the MPass Network Connectors is a WEB Services architecture, where the connector provides a standard WEB Services interface for sending and receiving of Mobile Messages

on the one hand and an implementation of the Network Interface on the other hand.

Key features

- **Low level Message Routing for Gateway Service**
- **High level Application Routing for Value Added Services**
- **2-Way SMS for Application and Gateway Services**
- **Extended Billing Capabilities**
- **Flexible Connector Plug-In for SMSC access**
- **HTTP Based Application API**
- **Different delivery methods for reply messages**
- **Graphical Management and Statistics Interface**
- **Zero Administration Concept**
- **Support for different Message Formats**
- **Support for Delivery Notifications**
- **Support for MMS**
- **Content Server Application for Ringtone / Picture Portals**
- **FTP / E-mail Interface for various Content Services**
- **SMPP Server for Connections to external SMPP Clients**
- **Least Cost Message Routing**