VMSx Softswitch Platform

VMSx

The VoIP Market

Opportunities in the VoIP market are expanding rapidly. At the same time competitive pressures and regulatory changes require a quick response to stay in the game. For the small to medium sized Telecom Service Operators (TSO) these challenges are significant. Whether you're an established TSO or just starting in the business there is a need to regularly review and adjust your business plan.

An important aspect of your business is the technology choices that you make to support your business goals. Technology is a two edged sword, it can bring opportunity if the choice matches the market direction or it can hold you back if the market moves in a different direction. Traffic volumes can change unexpectedly in the wholesale business from day to day. The expansion equipment you purchased yester day may become excess capacity tomorrow tying up your capital and creating overhead.

VSC Solutions Your Solution Partner

VSC Solutions is your best choice for a service partner who can help you overcome the challenges and take advantage of the new opportunities in the telecom market. Developed and supported by a team of telecommunications professionals with extensive experience in the TSO environment, VSC Solutions is ready to meet the most demanding requirements to support our customers.

Intelligent Routing

Optimum routing decisions can significantly improve your bottom-line and perceived level of service by your customers. The VSC Solutions routing engine is one of the most advanced available today. Providing routing based on a number of key performance indicators which include, ASR, ACD, and PDD as well as fixed percentage and priority routing, time based routing and business criteria routing such as minimum profit level.

Route metrics are measured in near real-time giving an up to date picture of the performance of your routes. Business Logic Routing (BLR) uses the route metrics to ensure that the least cost route is chosen when the traffic arrives reducing your cost to handle the call. Equally important, your minimum profit requirements can be considered when selecting a route ensuring that you are not unknowingly carrying traffic at a loss.

Business Intelligence

An accurate, up to the minute understanding of your position is essential for a successful business. VSC Solutions provides the information you need to react quickly to situations that may arise as well as to see the trends that may impact your future business.

The Dashboard (Operational Status at a Glance)

Running in your web browser, the Dashboard provides a user configurable graphical view of the operation as well as the dollars for a near real-time understanding of the business. Some key information available on the Dashboard includes:
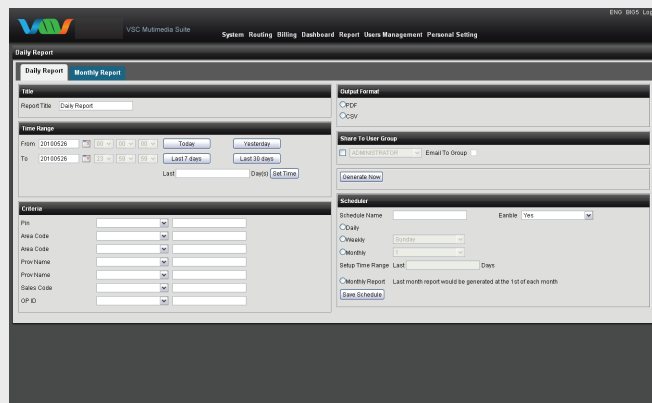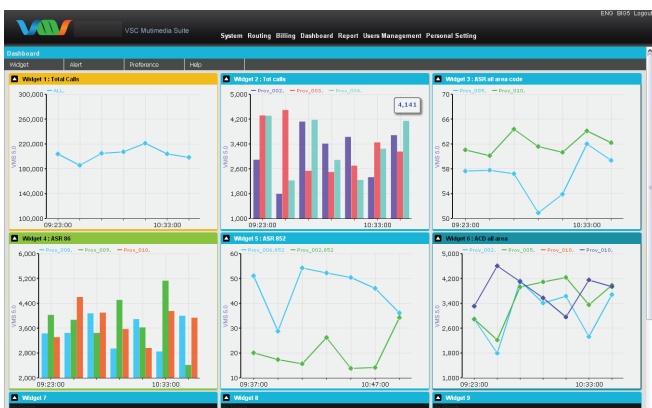
Dashboard

- ◆ Number of Concurrent call per
- ◆ Per provider Concurrent call
- ◆ Per provider/Area Code Concurrent call
- ◆ Per Branding Concurrent call
- ◆ Per Branding /Area Code Concurrent call
- ◆ Revenue
- ◆ Revenue Per Branding
- ◆ Revenue Per Branding/Area Code
- ◆ Revenue Per Account

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Reports

A wider and more detailed understanding of the business can be obtained from the reporting system provided by VMS .
VSC Solutions provides a comprehensive set of information reports to help you review your business. Reports can be generated automatically on a configurable schedule or requested ad-hoc as required. Report templates may be modified by the system administrator to focus on specific issues as required. Reports are available in PDF and CSV formats providing direct use of information in MS Excel.

The reports fall into two (2) broad areas, commercial and facilities management and generally into three (3) timeframes, near-term (daily), intermediate (weekly) and long-term (monthly).

Report
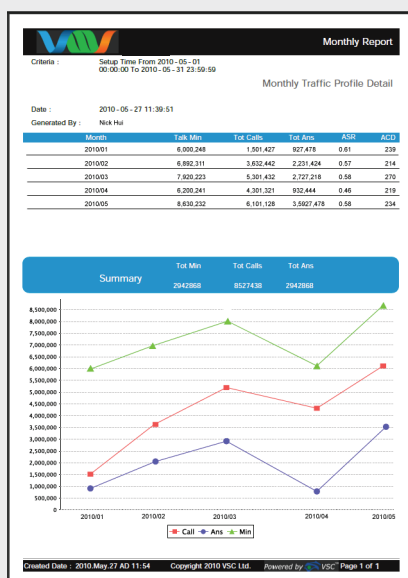
Monthly Report

For commercial the basic reports consist of the traffic carried with rated value and associated cost representing gross profit.

For facilities management the standard key performance indicators (KPI) include Calls Attempted, Calls Connected, Minutes of Talk Time, ASR, ACD over a period of time provide an understanding of the performance and help pinpoint areas that may require investigation.

Of course there are proactive alerts that are generated automatically when there is an unexpected behavior. Also the Dashboard provides a near real-time view at a glance the overall situation showing the KPIs configured by the telecom service operator.

The ability to specify the selection criteria, sorting and date ranges for the standard reports is provided both for ad hoc and periodic reports.

These reports can be run on an ad hoc basis or can be configured to run on a periodic basis with results delivered by various means (email, shared) and in different formats (.csv, .xls, .pdf). By providing delivery to a report server the load on the email storage is lessened as the reports may be accessed via a web browser. This approach also reduces the need to print out reports saving paper.

Traffic Reports

◆ Daily Traffic Summary by Destination

◆ Weekly Traffic Trend Analysis

◆ Monthly Traffic Reports

◆ Traffic to Destination Summary by Customer

◆ Traffic Summary by Customer

◆ Traffic Summary by Suppliers

◆ Traffic Profile by Hour of the Day

◆ Retail Traffic by Source

Billing Reports:

◆ Profit Report

◆ Revenue Report

◆ Cost Report

◆ Payment / Adjustment

◆ Report

◆ Account Summary

◆ Card Lot/Card Brand

QoS Reports:

◆ ASR Report

◆ ACD Report

◆ Date Info

◆ IVR Info

◆ Client Info

Ease of Use
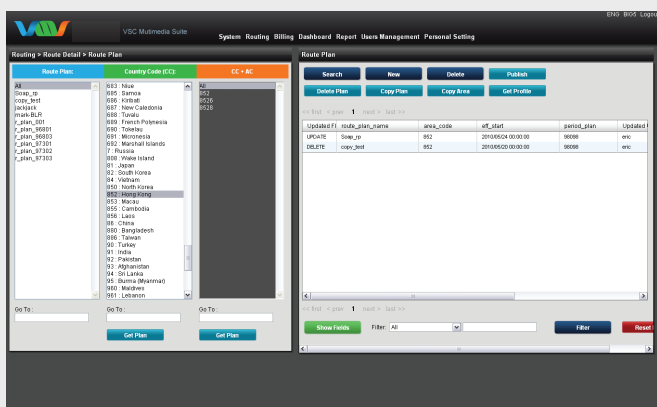### (Advanced Graphical User Interface)

VSC Solutions provides a web browser based user interface that is both comprehensive and easy to use. Wizards are provided for routine operations tasks making the service easy to learn and easy to use. The wizards guide the user, step-by-step through the necessary inputs and provide a final review before the change is committed This reduces the time it takes to become proficient using the service as well as reducing the potential for errors when using the user interface.

Value Added Services

Wholesale Services

Wholesale business is a highly competitive business with thin margins. The right tools are important for your success. VSC Solutions wholesale services provide a number of features designed to improve your bottom line by maximizing profit while reducing costs.

The VSC Solutions intelligent routing engine provides a comprehensive set of standard routing options as well as an innovative Business Logic Routing (BLR) algorithm. The BLR is specifically designed to proactively measure the metrics of your routes and dynamically response to changes in the performance of routes. This permits the BLR to indentify the best route (lowest cost, adequate quality) that meets your business requirement at the time of route selection.

Routing Plan

The Dash Board provides a user configurable view of the information that is important to you and keeps it up to date for an immediate understanding of the business situation.

Proactive fault management and event notifications provide near real-time alerts to help telecom service operators minimize the impact of unexpected events.

Period Allocation

Retail Services
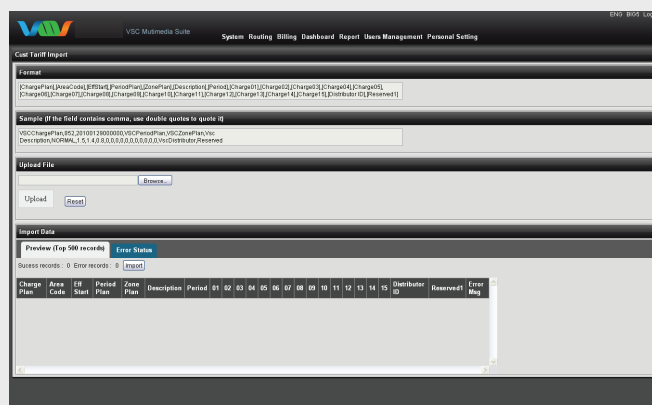### (Prepaid/Postpaid/Calling Card/Softphone/Web-phone)

Retail service has become more and more popular locally and internationally. Telecom service providers have invested significant effort into attracting and retaining customers and expanding their business through the offering of retail service. The VSC Solutions platform is used by providers around the world to develop successful businesses in the rapidly changing market by offering retail services to their customers.

An extensive set of charging options as well as support for calling cards and other valued added services provides not only the standard set of retail services but additional revenue generating services as well.

Value Added Services
(International Call Back /Call Forwarding)

International Call Back (ConnectMe) and Call Forwarding (FollowMe) services allow users to enjoy low-cost international calls with fixed lines or mobile phones outside their home countries. The mechanism behind the services is similar and they can be act as value-added service and marketing promotion features to attract new users and decrease churn.

Import Tariff

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Sales Channel Management
(Call Shop/Softphone/Web Portal/Calling Card)

The VSC Solutions services provide the telecom service operator tools to manage a multi-level distribution / sales channels for their retail services. These sales outlets can include call shops, web portal with softphone and distributors/sales agents handling prepaid calling cards

Agent Portal

Unifying the sales channel management, VSC Solutions provides Agent portals for multiple levels in the distribution channel. These levels include, Distributor, Sales and Agent, each level can assign a range of accounts with credit to be applied from the top level downwards.

Together with reports and management tools, agent portal can provide the complete view of the sales cycle and forecasting for all sales channels at a glance.

Agent Portal

Retail Logistics

VSC Solutions provides a logistics application that provides the telecom service operators tools to manage a complete range of activities related to the, allocation, activation and tracking of pre-paid retail services including calling cards.

Campaign Package

In order to attract new customers, keep the existing ones and effective compete (or respond to competition), it is advantageous to periodically run sales campaigns. The VSC Solutions service provides the tools necessary to easily and effectively implement sales campaigns. Campaign packages could flexibly apply for any period of day and day of week or for specific area codes. The VSC Solutions service can also limit the max concurrent calls to access the area code for budgetary control. Scheduled start and end dates for campaigns are provided and an alert is sent to the administrator when the campaign is expired. Administrator can then make an immediate decision to extend the campaign or provide new campaign package based on the market trends and the result of the current campaigns.

Campaign Package

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System Specification

System

Operation System:	Centos 5.4
OS Architecture:	64bit
System Design:	Open, IMS based
Database Dependency:	Mild
Console:	HTML/AJAX

Recommended Hardware Configuration

Processor:	Quad Core CPU
RAM:	8Gb Memory or above
Hard-disk:	500G SATA HDD x 2 on RAID 0
Network :	Intel or Boardcom Network Card

Performance

Signaling Only (SIP & H323):	**5,000 Concurrent Calls Per Box or up**
With Media Proxy:	**700 Concurrent Calls or up**

Interfaces

VoIP Interface:	Yes
Multi-IP Addresses:	Yes
Multi-Ports:	Yes
Transcoding Engine Integration:	Yes - via SIP Loopback 2 CDR will be generated
H323v4:	Yes
Fast Start:	Yes
H245 Tunnel:	Yes
H245 UUI:	Yes
H323 Video Support:	Yes
SIP:	Yes
SIP-I:	Yes (via VS3000 x MGC)
SIP-T:	Yes (via VS3000 x MGC)
P-Assert Header:	Yes
SIP Video Support:	Yes
SIP Register Function:	Plug-in
SIP-Info DTMF Relay:	Yes
SS7/H323 - SIP CauseCode Mapping:	Yes

RTP Proxy (Media Proxy)

Implementation:	Hardware Based
Multiple RTP Proxy:	Yes
Latency:	< 1 ms

Billing Server

Integrated REALTIME Billing Service	Yes
CDR Insertion	Direct DB
Capability to use third-party billing	Direct DB (via customization)
	Socket (via customization)
	Radius
Billing Server DB	Sybase
Area Code / Dial Plan for Billing Server	Yes

Charge Calculation

Charge Method :	Call based
	Charge Segment
	Time/Schedule Base Charging
	Connection Charge
	Hangup Charge
	Surcharge Charge
	Maintenance Charge
	Charge Plan - By Account
	Charge Plan - By Branding

Campaign & Promotion (For Prepaid / Postpaid Account)

Monthly Package	By Credit Amount
	By Destination
	With Limiting Access

Provider Charge Calculation

Provider Charge:	Charge Segment
	Time/Schedule Base Charging
Monthly Package:	By Credit Amount
	By Destination
	With Limiting Access

Area Code

Master Area Code:	Yes
Per Provider Area Code:	Yes
Per Branding/Customer Area Code:	Yes

Number Manipulation

Ingress:	Yes
Routing:	Yes
Egress:	Yes

System Specification

Routing Algorithm

Route Depth:	**63**
Routing Algorithm:	Priority Routing
	Percentage Routing
	Time Base Routing
	Holiday/Special Routing
	Mix Routing
	Global Routing
	Default Routing
	Overflow Routing
	Trunk Base Routing
	Business Logic Routing :
	(QoS / Lease Cost Routing: ASR,
	ACD, PDD, NER, Provider COST, Profit)

Routing

Independent Route Engine:	Yes
GUI Based Routing Policy Engine:	Yes

Route Diagnostic

Disable Provider when QoS Element below threshold:	Yes
Disable AreaCode/Provider when QoS Element below threshold:	Yes

Management Interface

Console:	HTML/AJAX
Dash Board:	HTML/AJAX
Dash Board - Concurrent Call:	Yes
Dash Board - Per Provider Concurrent Call:	Yes
Dash Board - Per Provider/Area Code Concurrent Call:	Yes
Dash Board - Per Branding Concurrent Call:	Yes (Graph, Matrix, Box View)
Dash Board - Per Branding/Area Code Concurrent Call:	Yes (Graph, Matrix, Box View)
Dash Board - System Status:	Yes (Graph)
Integrated Network Management (SNMP):	Yes (Graph)

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"A Leading Voice in Telecom for Over a Decade"