

# VMD CONVERGENT MEDIATION SOLUTIONS

Reliable mediation solutions have always been essential for generating and realising revenue. There would be no revenue without billing, no billing without usage data and no usage data without customers being activated on a network, so being able to use an operator's services.

Today instant activation of services as well as real time collection and processing of usage data are becoming more important than ever. Real time data collection is crucial for billing of the increasingly important content services. It is also essential for the growth and protection of revenue, feeding the fraud management and revenue assurance functions.

Additionally, services are getting more and more complex, providing access to different network technologies, each providing different kinds of usage information. With the greater variety of services, opportunities for strategic leverage of usage habits abound, giving operators an effective way to stay one step ahead of the competition.

A unified, integrated and network independent view of the customer is therefore required, inclusive of all services being used. At the same time, seamless service provisioning must combine activation on networks with differing technologies and of different generations.

Business is changing rapidly. Innovative technologies and changing customer demands require constant modification of both the business support systems and the networks.

## Contact :

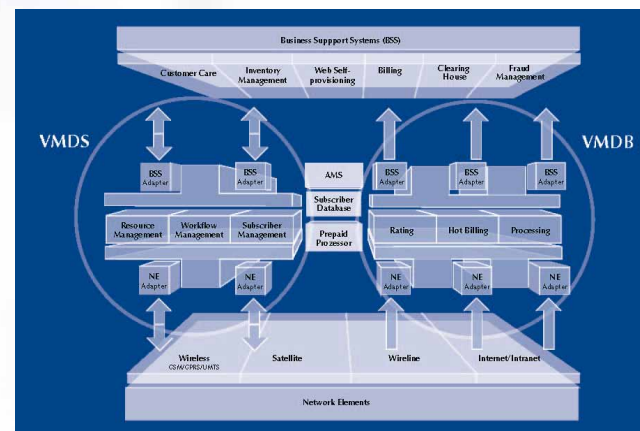
Central Marketing  
 info@devoteam.de +49 (0) 6151 868-0

## Future Enhancement

VMD is under continual development to support market trends that are expected to arise in the near future. While mediation today mainly addresses the telecommunications and IP areas, the future will see mediation playing a central role for Pay-TV and energy suppliers. Mediation will also be pivotal in the growing content and m-commerce markets. Another driving factor is the growing demand for cost transparency regarding network usage.

Devoteam Danet is committed to addressing these demands with a reliable and cost effective solution that ensures operators can take on new products and services in the shortest possible time.

With VMD you can be sure of a proven product that will allow your business to expand with the market.



Devoteam Danet's **VMD** (Vendor specific Mediation Device) range of mediation products provides an open, modular solution that not only meets real-time demands, but also provides convergence and flexibility.

**VMDB** (Vendor specific Mediation Device for Billing) collects event detail records (EDR) from network elements, processes them via a rules based mechanism and delivers them to the appropriate upstream application (e. g. Billing, Fraud Management, Data Warehouse, Clearing House).

**VMDS** (Vendor specific Mediation Device for Subscriber Administration) passes service provisioning requests from upstream applications (e. g. Customer Care) to the correct elements in the network.

**AMS** (Applications Management System) provides complete configuration and control facilities.

VMDB and VMDS have proven their maturity since 1994 in multiple installations world wide.

# BILLING MEDIATION AND SERVICE PROVISIONING FOR MOBILE, SATELLITE, WIRELINE AND IP

## VMD – Comprehensive Solutions

### Vendor Independence

- VMD supports all major technologies, including GSM/GPRS/UMTS, satellite, wireline and IP and equipment of all leading vendors.

### Open Standards

- VMDB and VMDS are based on an open modular architecture, running on standard Unix platforms using an Oracle Database.
- EAI adapters allow easy integration into standard environments.
- Various transfer protocols are supported to ensure complete flexibility of operation.

### Revenue Assurance

- Secure recovery and fallback mechanisms are available in all VMD modules.
- The Prepaid Processor checks if credit limits of prepaid subscribers have been exceeded. If so, VMDS will trigger suspension of the subscriber in the network.

## VMDB - Flexible Billing Mediation

### Real Time Processing

- VMDB supports collection of EDR files as well as single/bulk EDR transfer from network elements (e. g. MSC, Switch, VMS, SMSC, MMSC, SGSN/GGSN, BGW, Router, VoIP Gateway) in real time.
- VMDB supports all common EDR processing steps including conversion, duplicate check, filtering, splitting, enhancement, merging and correlation.

### Reduced Time to Market

- All EDR processing steps are based on flexible Java Rule Classes and Mapping Rule Tables.
- The step sequence can easily be modified/extended based on a flexible State Machine.

### Rule based Rating

- The VMDB Rating part uses Mapping Rule Tables allowing tariff models to be imported online.
- The tariff models support standard time, distance and duration parameters and also parameters for next generation services such as content usage, packet volumes, locality of access and quality of service.

## VMDS - Efficient Service Provisioning

### Online and Batch Provisioning

- VMDS handles receipt of service provisioning commands from Business Support Systems either as single command requests or as batch command files.

### Flexible Workflow Management

- Support of command processing steps (queuing, splitting, routing, handling) for different network elements in parallel (incl. rollback) based on flexible Mapping Rule Tables.

### Intelligent Provisioning

- Subscriber Management (incl. Subscriber Database) and Network Resource Management are VMDS add-ons for intelligent Workflow Management.
- Storage of subscriber provisioning information and network resource data eases ongoing servicing of customers.

### Online Adaptation to Network Changes

- Conversion and enhancement of commands to network elements (e. g. HLR, AuC, EIR, VMS, SOG, Switch) is based on flexible Mapping Rule Tables.

## AMS – Powerful Management

### User friendly Operation

- The Administration GUI provides GUI screens for the major management areas of Security Management, Fault Management, Control, Configuration Management, etc.

### Efficient Error Management

- The CCB Operator GUI of VMDS provides error handling facilities for incorrect provisioning commands.
- The EDR Analyser of VMDB provides EDR error handling facilities allowing EDR analysis, amendment and reprocessing.

### Online Rule Modification

- The Rule Generator GUI provides maintenance facilities for Mapping Rule Tables.

### Remote Management

- The SNMP Trap I/F supports forwarding of VMDB/VMDS application errors via SNMP traps to a remote Network Management System (e. g. HP OpenView).

### Command Scripts

- The Command Line I/F supports management of VMD through simple ASCII commands.