

## Real-Time Signalling Mediation Gateway (SMG)

Provisioning and Billing Systems have become more complex in modern times due to many business processes and OAM/Networking requirements in order to support the provision, delivery, billing, and customer care functionality for many services including wireless services of course, but often for other services such as cable TV, Landline telephone, and Internet, among others. At the same time, these same integrated OSS & BSS platforms continue to have the requirement to offer real-time charging services.

Many operators are also looking to leverage their existing investment in their CRM /Billing system to provide additional feature functionality and flexibility, thereby further improving the postpaid subscriber experience. Furthermore, since the requirement to support credit challenged subscribers prevails, operators also would like the ability to address other market segments by supporting Advance Pay / Prepaid services or applying real-time credit thresholds on usage, for example.

While many billing systems are based on commercial software, many may not include the required real-time state machines, network signalling stacks, USSD/SMS management, or integrated voice response platforms (IVRs) required to provide a complementary user-friendly, voice call experience with real-time call control based upon subscriptions and account balances.

Primal Technologies Real-Time Signalling Mediation Gateway (Primal SMG) supports this commercial and market requirement to assist wireless operators to leverage their existing CRM/OSS/Billing infrastructure to support Advance Pay / Prepaid users, while also providing postpaid subscribers with a much improved real-time experience (i.e. including knowledge of their current account balance, bucket balances, expiration dates, etc. at any time).

Whether the network interface for voice call signalling is CAMEL, WIN, ISUP-based, CS1-R/ETSI INAP or SIP-based, the Primal SMG abstracts this network interface to the Wireless Operator's Billing / Online Charging Service via 3GPP DIAMETER messages.

Please contact your Primal Technologies Account prime for further enquiries.

## SMG Feature Set

- CDMA, GSM/UMTS/HSPA/LTE, VoIP Networks
- CAMEL, WIN, ISUP, ETSI INAP, ISC/ SIP Network Interface Abstraction
- CAMEL Phase 3 SMS, Data Session Network Interface Abstraction
- Real-Time Charging Interface to any Billing System (BSS) that supports a 3GPP DIAMETER Interface
- Either centralized or decentralized charging models supported
- Interactive Voice Response system to play low balance announcements, or recharge menus
- Unstructured Supplementary Service Data (USSD) Support for Subscriber Account Management
- Onboard and SNMP alarms
- Call Control viewer (i.e. Graphically view call state on each signaling channel in real-time)

