

FMG

New Integrated Signaling Gateway

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Solutions and examples are provided for illustration only. Actual implementation of these solutions may vary based on individual needs and circumstances.

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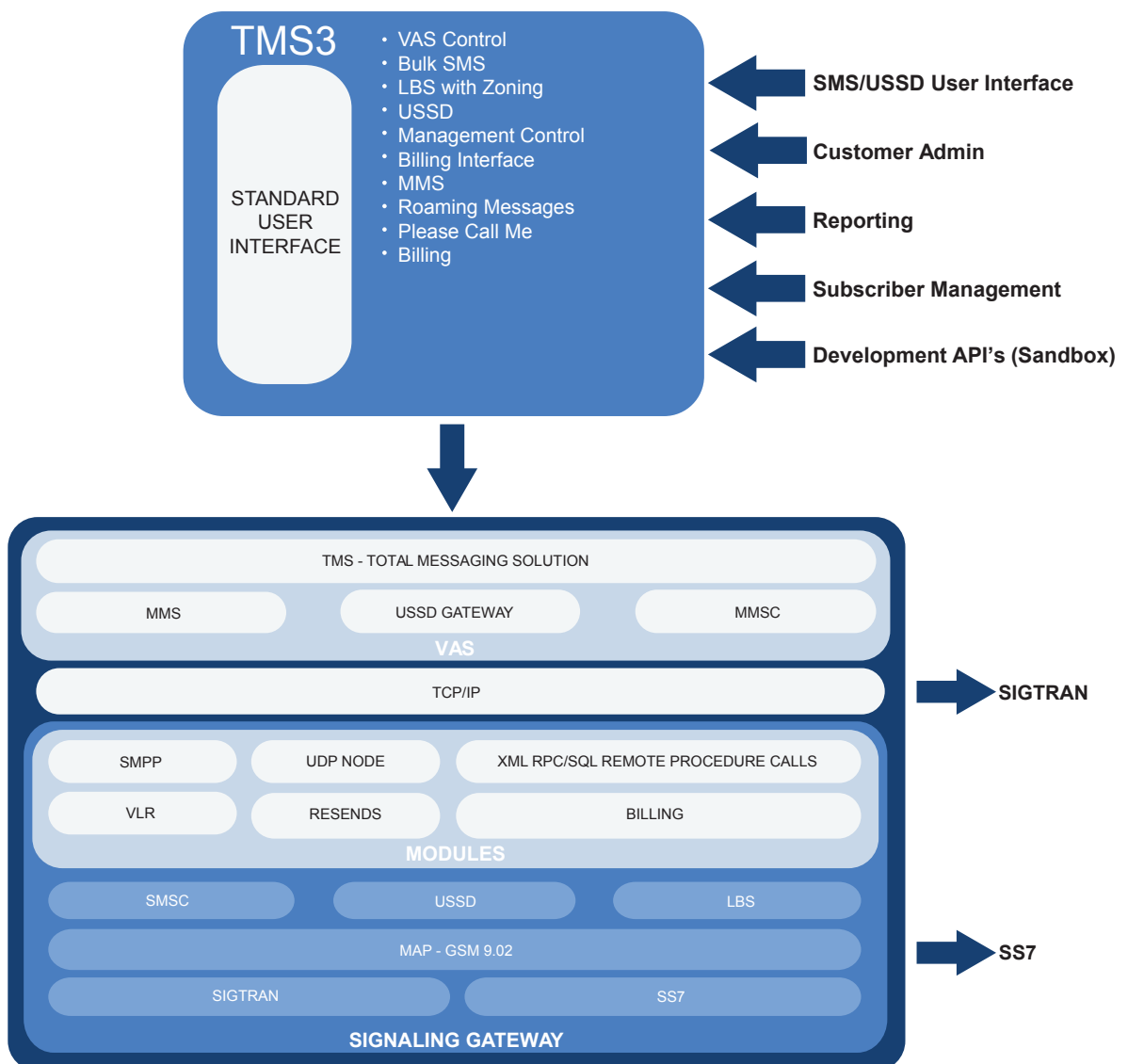
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INTRODUCTION

Integrated Signaling Gateway (ISGW)

With the mobile technology landscape ever changing Flash Media Group (Pty) Ltd (FMG) is introducing a totally new messaging platform, Integrated Signaling Gateway (ISGW). ISGW is an enterprise level system that is flexible, has a very high Signaling capacity and is economical to implement. ISGW comes complete with TMS3 our industry leading Value-Added Service (VAS) management console.



ISGW does away with the need for individual signaling systems, e.g., SMSC, MMSC, Bulk SMS, USSD Gateway and other messaging facilities but rather provided for a fully integrated signaling platform dealing with any modern messaging need the operator may have now and in the future.

Where in the past operators would rate the capacity of an SMSC in ten's of units per second. Our fully ISGW has a very high throughput with an entry level capacity of 50 messages per second.

The initial product offering is designed for small mobile network operators with up to +/- 2 million subscribers, but can be up-scaled to be compatible with networks of any size and handle up to 5000 sessions per second.

ISGW

ISGW provides the following features and adheres to the following Global System for Mobile (GSM) specifications:

- Mobile Application Part (MAP): GSM 09.02
- Technical realization of the Short Message Service (SMS): GSM 03.40
- ISGW provides a SS7 protocol stack, control and implementation domain. In the SS7 domain the following standards are complied with:
 - TDM-based Signaling*
 - a. MTP levels 2 and 3: ITU Q.702 – Q.707
 - b. SS7 routing, flow control and error correction
 - c. SCCP: ITU Q.711 – Q.714
 - d. SS7 dialogue multiplexing
 - g. TCAP: ITU Q.771 – Q.775
- SS7 or SIGTRAN implementation, available at the same price.
- SIGTRAN implementation fully bandwidth optimised, no individual timeslots required.

- Ultra stable system implementation developed over many years.
- One supplier dealing with all your Signaling/messaging needs.
- Latest ISGW system software implementation will be updated automatically without any further licence fees.
- Hardware traffic loading as recommended by the ITU 30/30/30% will be fully observed.
- Fully redundant system optional without any additional licence cost, only dual hardware needs to be provided by the network operator.
- Reference sites in many countries.
- Hardware not included, to be specified.
- 24/7 support included.

SYSTEM AS SPECIFIED ABOVE WILL CATER FOR THE

FOLLOWING:

- SMS gateway with an entry level capacity of 50 SMS's/sec.
- USSD gateway with an entry level capacity of 50 USSD sessions/sec
- Please Call Me system, including a (PCM) Campaign Manager.
- MMS Gateway.
- TMS3 Wasp environment. (See TMS below)
- Bulk SMS facility integrated with TMS3 Management System
- SMS M to M and USSD M to M.
- Trigger based LBS, with zoning.
- Roaming messages.
- New Products: Newly developed products will be added to the feature line up from time to time.
- System training.

Pricing/Business Model

- ISGW licensing is available on a “Capex” basis.
- ISGW combined with TMS3 as specified above is available as a “Hosted” solution.
- Managed infrastructure and VAS services are available to GSM Network operators on a “Revenue Share” basis.

TMS3

TMS3 provides a scalable Value-Added Service (VAS) management console offering a wide variety of messaging solutions and integration options across your mobile network.

Using any of our simple and clear integration methods, your existing business information systems can be easily expanded to leverage:

- Bulk SMS messaging - with immediate reply channel. Connect with thousands of your customers in an instant and enable them to provide valuable feedback directly to you with a built-in reply-to channel.
- High-volume USSD. Engage in real-time interactive communication with any mobile handset and deliver a rich mobile experience to your customers without the need for any installation or configuration on the phone.
- Premium-rated SMS, online mobile billing, Outlook Mobile Service and Thunderbird SMS integration, and more.

What is TMS?

TMS3 is a mobile communications aggregation platform that is fully integrated with ISGW. It allows application and web-site developers to easily integrate mobile technologies such as SMS and USSD into existing or new projects. End-users can also leverage the power of TMS via our easy-to-use pre-built SMS solutions.

TMS3 serves as middleware to make your network services available

to third parties using standards-based, easy-to-use protocols and abstracting away all connectivity issues.

In addition to the various mobile communication services provided by TMS3, it gives its users access to a full-featured web-based administrative interface, allowing you to manage your mobile services as you see fit. Real-time reporting for all mobile services are also available via your administrative dashboard or as Microsoft Excel™ compatible downloadable files.

The TMS platform provides the perfect base for content providers to supply content to any cell-phone owner in your network.

Services available

TMS3 provides access to a wide variety of mobile services across the major mobile networks, including:



SMS: Connect with thousands of your customers in an instant and enable them to provide valuable feedback directly to you. Use Outlook to send SMS messages to your contacts. Build keyword-based SMS applications or run SMS competitions.



USSD: Engage in real-time interactive communication with any mobile handset and deliver a rich mobile experience to your customers without the need for any installation or configuration on the phone.



OBS: Provide your users with premium-rated content or value-added services charged directly to their mobile account via our Online Billing System.



LBS: Location-based Services allows you to provide mobile users with information or products relevant to their current location, in real-time.

Glossary of Terms & Abbreviations

Terms:

ISGW	Integrated Signaling Gateway
SIGTRAN	Reliable datagram service and user layer adaptations for
TMS3	A scalable mobile communication platform
VAS	Value-added service management console

Abbreviations:

GSM	Global System for Mobile
ITU	International Telecommunication Union
LBS	Location-based Services
MAP	Mobile Application Part: GSM 09.20
MMS	Multi Medis Service
MMSC	Multimedia Messaging Service Centre
MTP2	Message Transfer Part Layer 2: ITU-T Q.701 to Q.705
MTP3	Message Transfer Part Layer 3: ITU-T Q.701 to Q.705
OBS	Online Billing System
PCM	Portrait Campaign Manager
ROI	Return of Investment
SCCP	Signaling Connection Control Part: ITU-T Q.711 to Q.714 SS7 and ISDN: IETF RFC 2719
SMS	Short Message Service
SMSC	Short Message Service Centre
SS7	Signaling System #7
TCAP	Transaction Capabilities Application Part: ITU-T Q.771 to Q.775
TDM	Time-division Multiplexing
TMS	Total Messaging Solution
USSD	Unstructured Supplementary Service Data
VAS	Value Added Service