GSM Association Roaming Database, Structure and Updating Procedures

4.0

November 2005

This is a binding permanent reference document of the GSM Association.

.1.1.History of changes

(Maximum length 1 page only)

Date of Change	Effective Date	Changes Made
01/07/2015	01/07/2015	Updated Contact Information
01/07/2015	01/07/2015	GGSN IP address has been added
03/03/2014	03/03/2014	SGSN GT has been added.
12/02/2013	12/02/2013	Updated all IP address ranges used by PLMN for connection to Inter-PLMN IP backbone
26/05/2015	26/05/2015	Updated Contact Information
17/01/2013	17/01/2013	Updated all IP address ranges used by PLMN for connection to Inter-PLMN IP backbone
08/01/2013	08/01/2013	Updated GRX provider DNS names/IP Addresses
08/01/2013	08/01/2013	Updated all IP address ranges used by PLMN for connection to Inter-PLMN IP backbone
21/12/2012	21/12/2012	Updated Contact Information
21/12/2012	21/12/2012	Updated SGSN/GGSN Software/Hardware Versions
29/05/2012	29/05/2012	Added ISPC's for SCCP gateway JUEBC1-STP1 and JUEBC2-STP2
29/05/2012	29/05/2012	SCCP Gateway for **ITU/ANSI** to Syniverse Technologies. .

=1

Operator Name:	**The South Sudanese Mobile Telephone (Zain) Co. Ltd - South Sudan**
Technology:	GSM
Frequency:	GSM 900, GSM 1800 & GSM 900/1800
Country (Abbreviated according to ISO 3166):	SS

ROUTING INFORMATION

CCITT E.164 Number series:	Country Code (CC)	National Destination Code (NDC)
MSISDN number range(s):	211	91
Network nodes Global Title number range(s):	211	91
MSRN number range(s):	211	91 803
E.212 Number series:	Mobile Country Code (MCC)	Mobile Network Code (MNC)
	659	06
E.214 Mobile Global Title: (MGT)	Country Code of MGT (CC)	Network Code of MGT (NC)
	211	91
Does Number Portability apply?	No	

PRIMARY INTERNATIONAL SCCP GATEWAY

Name of SCCP carrier:	Telenor Global Services (TGS)	
Signature:	C4STP1	OGSTP1
Type:	STP-SCCP	STP-SCCP
International DPC:	2-085-0 (4776)	2-085-3 (4779)
Date for the ability to transmit and handle XUDT/XUDTS:		

* Primary and secondary SCCP Gateway assignment will be submitted on a per network basis by Telenor.

SCCP carrier Name: Syniverse Technologies, Inc. - **ANSI-ITU translation**
DPC Info
Signature : Syniverse ITU
Type : SCCP/STP
International DPC : 3-030-5 (6389)
Comments : Syniverse ANSI: SCCP/STP; Domestic DPC 235-250-000

INTERNATIONAL SCCP GATEWAY		
Signature:	JUEBC1-STP1	JUEBC2-STP2
Type:	ISPC	ISPC
International DPC:	0-13682	0-13683
Date for the ability to transmit and handle XUDT/XUDTS:		

INTERNATIONAL SCCP GATEWAY		
Name of SCCP carrier:		
Signature:		
Type:		
International DPC:		
Date for the ability to transmit and handle XUDT/XUDTS:		

DATE FOR THE AVAILABILITY OF WHITE BOOK SCCP IN THE PLMN	
The ability to receive segmented XUDT/XUDTS:	
The ability to send segmented XUDT/XUDTS:	

SCCP Protocol available at PLMN for connection for International SS7 Roaming Signalling	
ETSI (ITU-T)	X
ANSI	X

SIGNALLING SYSTEM NO. 7 ACCESS SOLUTION		
Initial solution:	Initial solution valid until (date):	Subsequent solution:
A,C&D		E

SUBSCRIBER IDENTITY AUTHENTICATION	
Authentication performed for roaming subscribers at the commencement of GSM Service	Yes

Authentication performed for roaming subscribers in case of GPRS	Yes
A5 Cipher Algorithm version in use	

AUTOMATIC ROAMING TESTING		
Entity	Subscriber-Number	Location
Automatic Answering CirCuit (AAC) 1. AAC 2. AAC 3. AAC . . .	(MSISDN)	
Automatic Answering Circuit (Accessible only from the Network-Network Interconnection Interface) 1. AAC 2. AAC 3. AAC		
Data Automatic Answering Circuit (DAAC) 1. Calls for Data 1. DAAC 2. DAAC 3. DAAC . . . 2. Fax Gr.3 1. Fax DAAC 2. Fax DAAC 3. Fax DAAC . . .	(MSISDN/ISDN)	

MOBILE APPLICATION PART (MAP)

Introduction of higher supported MAP version

Please note the following when completing this table:

If a different Application Context version is supported by multiple vendors of the same equipment in your network then the entry in the table shall be the highest, *common* AC version supported (e.g. if equipment from one vendor supports an ACv2 and the same equipment but from a different vendor supports an ACv3, then the entry in the table will be ACv2).

All operations for an Application Context version must be supported, otherwise that version cannot be claimed to be supported.

If an Application Context is not supported, then a single hyphen ("-") shall be entered instead of a number.

All GSM Operators shall ask their Vendors to have the latest Version of Release implemented (e.g. Suppose that Ext-QoS-Subscribed length range is 1 to X in ver x.y.z, but 1 to Y in the latest MAP version of the same release. In this case, all operators shall implement Ext-QoS-Subscribed length range as 1 to Y as written in the latest version).

Interworking Specifically for Roaming				
Application Context Name	Current version in			Comments
	Inbound Roaming		Outbound Roaming	
	MSC/VLR	SGSN		
networkLocUp	V3		V3	
roamingNumberEnquiry	V3		V3	
infoRetrieval	V3		V3	
subscriberDataMngt	V3		V3	
networkFunctionalSs	V3		V3	
mwdMngt	V3		V3	
shortMsgMT-Relay (called shortMsgRelay in v1)	V3		V3	
shortMsgMO-Relay (called shortMsgRelay in v1)				
ss-InvocationNotification				
subscriberInfoEnquiry				
gprsLocationUpdate				
locationCancellation	V3		V3	
msPurging				
reset				
networkUnstructuredSs				
reporting				
callCompletion				
istAlerting				
serviceTermination				
locationSvcGateway				
mm-EventReporting				
authenticationFailureReport				
imsiRetrieval				

gprsNotifyContext				
gprsLocationInfoRetrieval				
failureReport				
secureTransportHandling				
Optimal Routeing of mobile-to-mobile calls				
Application Context Name	Current Version			Comments
	(V)MSC	GMSC	HLR	
CallControlTransfer			N/A	
LocationInfoRetrieval	N/A			
Inter-Operator SMS Enhancement				
Application Context Name	Current Version			Comments
	SMS-IWMSC	SMS-GMSC	HLR	
shortMsgGateway	N/A	V3		
shortMsgAlert	V3	N/A		

Vendor Information	
BSS vendor(s) and SW/HW version:	Huawei BSC6900 V900R012ENGC01SPH516 & Ericsson G10B
HLR vendor(s) and SW/HW version:	Ericsson R13.2
MSC/VLR vendor(s) and SW/HW version:	Ericsson R14.1, R13.2
SMSC vendor(s) and SW/HW version:	Huawei SMSC SMS V300R002.2Db91SP01 (Sigtran-based)/ATAE
SGSN vendor(s) and SW/HW version:	2010B CP03 H/W Ver mkvi
GGSN vendor(s) and SW/HW version:	2010B CP08 H/W Ver m120
MMSC vendor(s) and SW/HW version:	Huawei MMSC V100R002MMSC R002C31L00001/ATAE
IN vendor(s) and SW/HW version:	Ericsson CS5

GPRS Information		
APN Operator Identifier:		mnc006.mcc659.gprs
List of APN's available for testing and troubleshooting:		
WEB	APN	internet
	Username	Not required
	Password	Not required
	ISP DNS IP address (primary)	Dynamic
	ISP DNS IP address (secondary)	Dynamic
GTP version	SGSN	0 & 1 supported
	GGSN	0 & 1 supported
BSS information :(optional field)		
Contact person(s) for GPRS: (optional field)		

IP-Roaming and IP-Interworking Information

All IP address ranges used by PLMN for connection to Inter-PLMN IP backbone:	41.79.120.0/24 91.151.159.48/28

Autonomous System Number (ASN)[1]:	37376

1 The Autonomous System Number (ASN) is a 16 bit integer that every PLMN must assign to their IP

network that is seen as one Autonomous System (AS). The ASN enables the exchange of exterior

routing information between neighbouring Autonomous Systems. This can be either a private ASN =15

(64512 through to 65535) or public ASN.

=16

List of GRX authoritative DNS server IP addresses & names1 :	Primary: 91.151.159.52 eDNS1.mnc006.mcc659.gprs Secondary: 91.151.159.53 eDNS2.mnc006.mcc659.gprs
List of PLMN local caching DNS server IP addresses & names:	
IP address that responds to ping/traceroute:	Primary:91.151.159.52 eDNS1.mnc006.mcc659.gprs Secondary:91. 151.159.53 eDNS2.mnc006.mcc659.gprs
GRX provider(s):	Telenor Global Services (TGS)
Contact person(s) (in PLMN) for GRX connectivity:	
Contact person (in PLMN) to verify authority of a GRX provider to add/modify data in Root DNS:	
Name:	
Tel:	
Fax (optional):	
E-Mail:	
Alternative contact person (in PLMN) to verify authority of a GRX provider to add/modify data in Root DNS:	
Name:	
Tel:	
Alternative Tel:	
E-Mail (optional):	
MMS Interworking Information	
Domain name of MMSC	
IP address range for MMSC	
IP address(es) of incoming MTA	
IP address(es) of outgoing MTA	
Max. size of MMS allowed	
Delivery Report allowed?	
Read Report allowed?	
Contact person(s) for IW MMS: (optional field)	

MMS IW Hub Provider(s) GT addresses:	
MMS IW Hub Provider(s) Name(s):	

WLAN Information	
RADIUS server/ RADIUS proxy IP address(es): IP address range(s) used for WLAN roaming signaling:	
Realm(s):	
Brand name of the WLAN service:	
Contact person(s) for WLAN: (optional field)	

CAMEL Information			
gsmSSF/MSC:			
CAP (CAMEL Application Part) version:	Yes	No	Date of planned support (if any)
CAP version 1	☐	☐	
CAP version 2	✓	☐	
CAP version 3	✓	☐	
CAP version 4	☐	☐	
Partial implementations supported in CAP version 4:	Yes	No	Date of planned support (if any)
CAMEL Phase 4 CSIs:			
O-CSI	☐	☐	
D-CSI	☐	☐	
VT-CSI	☐	☐	
MT-SMS-CSI	☐	☐	
Functionalities:			
Initiate Call Attempt	☐	☐	
Split Leg	☐	☐	
Move Leg	☐	☐	
Disconnect Leg	☐	☐	
Entity Released	☐	☐	
DFC With Argument	☐	☐	
Play Tone	☐	☐	
DTMF Mid Call	☐	☐	
Charging Indicator	☐	☐	
Alerting DP	☐	☐	
Location At Alerting	☐	☐	
Change Of Position DP	☐	☐	
OR Interactions	☐	☐	
Warning Tone Enhancements	☐	☐	
CF Enhancements	☐	☐	
gprsSSF/SGSN:			
CAP (CAMEL Application Part) version:	Yes	No	Date of planned support (if any)
CAP version 3	✓	☐	
CAP version 4	☐	☐	
Partial implementations supported in CAP version 4:	Yes	No	Date of planned support (if any)
CAMEL Phase 4 CSIs:			
MT-SMS-CSI	☐	☐	
MG-CSI	☐	☐	
PSI Enhancements	☐	☐	

SMSC Information	
SMSC GT addresses:	211 91 8020 000

MISCELLANEOUS INFORMATION

Number Information: (if applicable, include additional E.164 Number Ranges due to Number Portability)
MSISDN: Complies with GSM 03.03 and CCITT E.164. The MSISDN has a fixed length of 12 digits and is composed as follows:

CC	NDC	NS
211	91	X1X2….X7

Where X1….X7 =0-9

IMSI: Complies with GSM 03.03 and CCITT E.212. The IMSI has a fixed length of 15 digits and is composed as follows:

MCC	MNC	MSIN
659	06	Y1Y2Y3Y4Y5….Y10

Where Y1….Y10=0-9

MSRN: Complies with GSM 03.03 and CCITT E. 164. The MSRN has a fixed length of 12 digits and is composed as follows:

CC	NDC	NS
211	91	803 Z1Z2Z3Z4

Where Z1..Z4=0-9

Translation from IMSI to MGT:
For a Zain SS PLMN subscriber the translation shall be made as follows:

MCC to CC	MNC to NDC
659 ⇒ 211	06⇒91

MISCELLANEOUS INFORMATION
HLR GT JUEHLR1 211 91 8020100 JUEHLR2 211 91 8020101 VLR / MSC GTs MSC in POOL JUEBC1 211 91 8020103 JUEBC2 211 91 8020104 TSCS GT JUEBC1 211 91 8020103 JUEBC2 211 91 8020104 JUEMSC3 21191 8020105   SMSC GT JUHSMSC 211 91 8020000   SMS Hub Telenor Global Services SGSN GT JubaSGSN1 211 91 8020102 GGSN IP JBGGSN1 41.79.120.241

Contact persons: (specify Time Zone and day light saving zone for contact phone numbers)
Time Zone: GMT +3 Suoth Sudan Time, Daylight Saving Time apply Working Hours: 8:00am – 5:00pm Monday to Friday
Scheduling for Roaming agreements: Mr. Awadi Sebit Roaming Coordinater GSM: +211 912399416 Email: Awadi.Sebit@ss.zain.com
For SCCP inquiries and ordering of SS7 routes: Mr. Awadi Sebit Roaming Coordinater GSM: +211 912399416 Email: Awadi.Sebit@ss.zain.com

Technical Issues, Network updates and faults:

Eng.Wilson Lado
Network Manager
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IREG Tests & TADIG testing and TAP Transfer:

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International Gateway SS7:
Telenor Global Services (TGS)
E-mail: STP-requests@telenor.com
Fax: +47 6789 4307

Postal Address & Delivery Address (Roaming Documents, SIM cards,…..etc)

Mr. Awadi Sebit
Roaming Coordinater
GSM: +211 912399416
Email: Awadi.Sebit@ss.zain.com

The South Sudanese Mobile Telephone Co. (Zain SS)

PLOT NO. 997, BLOCK 9 GUDELE
P.O BOX 518
JUBA – SUOTH SUDAN

General Email for Inquires, Complaints & Updates :

Nabil.Modi@ss.zain.com
Awadi.Sebit@ss.zain.com

Other information

Contact point (address) for distribution of updates of the roaming database:

Mr. Awadi Sebit
Roaming Coordinater
GSM: +211 912399416
Email: Awadi.Sebit@ss.zain.com

Effective date of change:	July 2015