REVISION HISTORY

DATE	AMENDMENT	DESCRIPTION OF AMENDMENT

SERVICE DESCRIPTION 1-5: SMS TERMINATING ACCESS SERVICE

1   THE SERVICE

The **SMS Terminating Access Service** is a service for the carriage of SMS Messages from a Point of Interconnection to a mobile device associated with a Mobile Number on the Access Provider's Mobile Network, as further defined by the terms of this Service Description.

Available to: Public telecommunications operator with an individual MNO licence and one or more interconnection links with Batelco.

Traffic: SMS Messages which both originate and terminate in Bahrain only.

Reciprocal Service: A reciprocal service must be offered by any operator with a Mobile

2   DEFINITIONS

Capitalised terms not defined in this Service Description are defined in the Dictionary. Terms defined in this Service Description are specific to it.

Access Provider means the party which operates a Mobile Network directly connecting the Messaged Party.

Access Seeker means a party which operates the Mobile Network directly connecting the Messaging Party.

GSM MAP means the mobile application part as defined in the GSM ETSI 0902 specification.

Messaging Party means an Access Seeker Customer who initiates an SMS Message.

Messaged Party means an Access Provider Customer to whom an SMS Message is sent.

MNO means a mobile telecommunications License granted by the Regulator to a Mobile Network operator.

SMS Interconnect Link means a dedicated link, within minimum capacity of 64kbit/s, established between a Mobile Batelco Network Switch Connection and the Licensed Operator's Mobile Network Switch Connection, as specified more particularly in the Joint Working Manual.

SMS means Short Message Service.

SMS Message means a message of up to 160 alphanumeric characters received and conveyed by the SMS Network as message text.

SMS Message Delivered means a message in respect of which the Access Provider's mobile switching centre has received an acknowledgment from the mobile station currently serving the Messaged Party that the SMS Message has been received.

SMS Network (of a Party) means that Party's system or series of systems that carries, or is capable of carrying SMS Messages by means of guided or unguided electromagnetic or optical energy.

Testing SIMs means 4 SIM cards (two each in respect of pre-paid and post-paid platforms).

3 TERMS

3.1 Prerequisites

A party (the first party) shall not be obliged to supply the SMS Terminating Access Service unless and until the parties:

(a) have established interconnection between their mobile networks as contemplated by the Mobile Terminating Access Service Description;

(b) have established the SMS Interconnect Link. The parties shall equally share the costs of establishing and operating the SMS Interconnect Link. Batelco shall, in accordance with the Joint Working Manual, provision, operate and maintain the SMS Interconnect Link unless otherwise agreed;

(c) successfully completed any pre-commissioning testing requirements set out in the Joint Working Manual; and

(d) the other party can supply the first party with the SMS Terminating Access Service on a reciprocal basis.

3.2 Application

This Service Description applies to the supply of SMS Terminating Access Service for SMS where the Messaging Party is directly connected to the Access Seeker's Network and the SMS Message terminates on the relevant device of:

(a) an Access Provider Customer; or

(b)   an overseas roaming party on the Access Provider's Network, where the Access Seeker has the appropriate agreements with the roaming party's home network.

3.3   SMS Message Handling

SMS Messages shall be handled in accordance with the following summary of steps:

(a)   SMS Messages originating from the mobile handset used by the Messaging Party are received by the Access Seeker's designated SMS controller;

(b)   the Access Seeker's SMS controller queries the Access Provider's home location register (HLR), via CCS7 MAP;

(c)   the Access Seeker's SMS controller forwards the SMS Message, via CCS7 MAP and over the SMS Interconnect Link, to the Access Provider's mobile switching centre visitor location register (VLR); and

(d)   the Access Provider's mobile switching centre VLR delivers the SMS Message to the mobile handset used by the Access Provider's Customer.

3.4   Service Limitations

(a)   The SMS Terminating Access Service is limited to a message length of 160 characters.

(b)   In the case of SMS Messages exchanged between GSM Networks, MAP version 1 protocol must be supported. Higher versions of the MAP protocol will require an update to this Service Description.

(c)   In the case of SMS Messages to be exchanged between:

(i)   a GSM Network and a Mobile Network which is not a GSM Network; and

(ii)   two Mobile Networks both of which are not GSM Networks,

the parties shall agree on the appropriate technical standards, having regard to relevant international standards, which will be set out in the Joint Working Manual.

(d)   The Access Provider may review and amend this Service Description prior to the introduction of mobile number portability.

(e)   SMS Messages must be sent from the Messaging Party's SMS controller to allow A-party billing.

3.5   Numbering

The SMS Terminating Access Service requires that the address of both the Messaging Party and the Messaged Party are within the agreed number ranges.

3.6 Signalling

Where SMS Terminating Access Service is provided, the transfer of signals to support the establishment and maintenance of the SMS Message will be via GSM MAP using CCS7 signalling protocol or other agreed standard.

3.7 Testing SIMs

(a) A party shall supply the other party with Testing SIMs to be used solely for the purpose of ongoing fault diagnosis for a period of time agreed between the parties and each party shall return the Testing SIMs at the end of that term.

(b) SMS Messages to and from Testing SIMs shall be reimbursed by the using party at the supplying party's retail charges.

3.8 Flow Control

(a) Flow control shall not be implemented across the Point of Interconnection.

(b) The parties agree to develop and document an SMS signalling traffic management and control plan to be incorporated in the Joint Working Manual.

3.9 Maximum SMS Traffic Flow

The parties acknowledge that the provisions of clause 19 of the Supply Terms (Forecasting Procedures) shall apply for SMS capacity, subject to the following conditions:

(a) unless otherwise agreed as part of settling a Forecast, the maximum SMS capacity being sent by the Access Seeker using the Terminating Access Service (the **Maximum Capacity**) shall be 125,000 SMS Messages per busy hour.

(b) If the traffic level exceeds the Maximum Capacity, the SMS Terminating Access Service may be managed by the Access Provider at the level of the Maximum Capacity until the source of excess traffic has been reduced or other arrangements are put in place to manage the overload traffic.

3.10 Unsolicited SMS

The parties acknowledge that spamming and other unsolicited SMS Messages sent by Access Seeker Customers may cause disruptions to the services provided to and received by the Access Provider Customers. Each party agrees to liaise with the other party in good faith in order to manage such disruptions where commercially and technically feasible.

3.11 Priority and Retry

(a) The parties shall exchange SMS Messages across the Point of Interconnection at 'priority' rather than 'normal' level.

(b) Each party shall deliver SMS Messages from the other party's SMS controllers with equal priority and urgency as those originating from within its own network.

(c)   Each party shall use the same retry algorithms as are used for SMS Messages which originate and terminate within its own network, provided that retry attempts are at least 50 seconds apart and on average not more than two (2) retries are made for each SMS Message submitted.

3.12   Reply Path

Each party must ensure that replies to SMS Messages are sent via the replying customer's default SMS controller rather than the originating customer's SMS controller. This can be achieved by ensuring the TP-RP bit is cleared in the SMS message sent to the Messaged Party's mobile handset.

3.13   Protocol upgrades

Before a party upgrades to a later version of the GSM MAP CCS7 signalling protocol, the party seeking the upgrade must:

(a)   give not less than 60 Working Days prior written notice (or such other period of time as may be agreed between the parties in writing) of that upgrade to the other party;

(b)   arrange and complete testing of the upgrade with the other party to ensure interconnect compatibility no less than 30 days before the upgrade is implemented; and

(c)   ensure that all software associated with the upgrade is compatible with the existing version of the CCS7 signalling protocol.

3.14   Customer billing

The Access Seeker is responsible for billing the Messaging Party from whom an SMS Message originates, for the end-to-end SMS Message Delivered provided utilising the SMS Terminating Access Service.

3.15   Charges

The Access Seeker shall pay to the Access Provider the relevant Charges determined in accordance with Schedule 3 of this Reference Offer.