



RFP NUMBER: CRASA/ECD/PR/17.18/01

REQUEST FOR PROPOSALS TO DEVELOP A  
HARMONISED COST MODEL FOR ROAMING  
SERVICES IN THE SOUTHERN AFRICA DEVELOPMENT  
COMMUNITY (SADC)

FOR THE

COMMUNICATIONS REGULATORS' ASSOCIATION OF  
SOUTHERN AFRICA (CRASA)

Closing Date: Thursday 30th November 2017

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## SECTION 1: INTRODUCTION

## **1.1 Introduction**

The Communication Regulators' Association of Southern Africa (CRASA) is a consultative body of regulators and other stakeholders dealing in telecommunications, broadcasting and postal sectors. CRASA was established under the SADC Protocol on Transport, Communications and Meteorology, which encourages the establishment of industry-based bodies or forums with a view of ensuring participation by industries in telecommunications and postal policy development.

The core reason for the establishment of CRASA is to facilitate harmonisation of ICT and Postal policies and regulatory frameworks in SADC. This was in response to SADC leaderships' common vision, which recognized that individual information, communications and postal markets, in the region, were not big enough to have comparative advantage on the global arena as well as attract adequate investment to build modern infrastructure for provision of universally accessible ICTs and Postal services. Market integration was, therefore, identified as the solution to the challenge.

Currently, thirteen (13) regulatory institutions in the SADC region are active members of CRASA and are based in the following countries: Angola, Botswana, Democratic Republic of Congo (DRC), Lesotho, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe.

CRASA hereby invites proposal from reputable companies with substantial experience to develop a harmonised roaming cost model for Southern Africa Development Community (SADC) as detailed in Section 3 of this Request for Proposals (RFP) document.

The Technical and Financial Proposals shall be sent to the following address not later than **10.00 am on Thursday, 30th November 2017** and should be addressed to:

The Chairman Executive Bid Committee  
CRASA  
Plot 143, Unit 2  
Gaborone International Finance Park  
P.O. Box AD 135 ADD  
Gaborone  
Botswana

## Background

For almost a decade, the SADC ICT Ministers have been pursuing an initiative that would reduce the International Mobile Roaming (IMR) prices. The SADC Roaming project has been considering innovative policies and regulations to reduce the cost of IMR through closer collaboration among SADC Member States. The Project was to provide an enabling environment for provision of affordable and competitive mobile roaming service in the Region thereby contributing towards regional integration. Regional integration could be measured four-fold; trade integration, productivity integration, free movement of people, and financial and macroeconomic integration.

Affordable roaming enables significant regional economic activity by assisting to unlock new opportunities through ease in connecting the travellers to people and business. In addition, the lowering of IMR cost reduces the cost of doing business across the SADC border, allowing for free flow and reduced barriers to regional trading. Further, as trading capital freely flows throughout the region, investment in trade increases and allowing for financial integration. Better financial integration allows for continuous flow continuous flow of information and knowledge sharing resulting in increased innovation, therefore, allowing for rationalised industrialisation. As SADC forms these industrial clusters, productivity is increased allowing for improved macroeconomic conditions of the SADC citizens.

Regardless of the critical role that roaming play in the regional integration, it has been noted that in absence of regulation, the price of IMR inclines to be significantly in excess of the actual underlying costs of supplying the roaming services. These inflated prices lead to market inefficiencies as well as negative consumer experience. It was noted in 2010, that voice roaming customers were paying prices as much as 10 times what they pay for domestic mobile prices. In the case of data roaming, it was noted that customers were paying as high as 100 times the prices of domestic data charges. In the absence of the adequate analysis of what causes these high roaming prices, due to resistance of mobile operators to provide data, it is being assumed that there is a significant premium being arbitrarily applied to roaming prices. This has led to prevalent use of plastic roaming [preference to acquire a local SIM card from a visited country] in the SADC Region.

The SADC Roaming project is being implemented in three (3) phases as follows:

## **Phase I: Transparency to Roaming Tariff, Increase in Roaming Footprint and Liberalisation**

One of the critical challenges noted in the first study of the SADC Roaming market was lack of transparency and consumer awareness on roaming charges. It was then noted that most of the roaming customers lacked better understanding and management of the voice and data usage of roaming services and were usually at risk of experiencing bill shocks. In response, the SADC Ministers directed that the region should promote transparency and consumer awareness on roaming charges. Further, the region adopted the Transparency Guidelines aiming at harmonising the adherence to the Ministerial directive and allow for increase in awareness of the roaming services and its charges.

Roaming requires MNOs to negotiate and enter into roaming agreements. In regards to the prepaid roaming market, it has been noted that fewer agreements have been reached, despite the fact that prepaid customers were more prevalent in SADC than the post-paid roamers. In this regard, the first phase also pursued increasing the SADC roaming footprint through encouraging operators to increase roaming agreements amongst each other.

In addition, it was agreed that SADC Member States do liberalise the international gateways in order to bring down cost of operation to telecommunications services including roaming services.

## **Phase II: Three Route Approach and Wholesale and Retail Price Cap Regulation**

### **Three Route Approach**

Roaming Services are traded at two (2) levels, at wholesale level and again at the retail level. At wholesale level, the MNOs agree to provide roaming service to the customers of the other MNO for a wholesale charge. Almost all the MNOs in SADC do have bilateral relationships amongst each other. It is understood that the greatest cost element in the wholesale roaming market is the IOTs. Amount of traffic that operators drive to another mostly determines the level of bargaining over the IOTs. In order to assist the MNOs with negotiation for lower IOTs, the NRAs were to identify the three outmost routes that attracted the highest IOTs and to approach the other NRA to resolve the bottlenecks.

### **Wholesale and Retail Price Cap Regulation**

As a tentative measure to ensuring that the MNOs were charging cost-based prices, the Region agreed to introduce price regulation at both the wholesale and retail level in a glide path as shown in Table 1 and 2.

Table 1: Retail Voice, Data and SMS Roaming Tariff Reduction Glide Path		Table 2: Wholesale Voice, Data and SMS Roaming Tariff Reduction Glide Path	
2014	ROAM (Existing Roaming prices)	21 October 2014	Existing IOT prices
1 January 2015	$RLAH + (ROAM - RLAH) * 67\%$	1 January 2015	$WTA + (IOT - WTA) * 67\% + 5\%$
1 January 2016	$RLAH + (ROAM - RLAH) * 33\%$	1 January 2016	$WTA + (IOT - WTA) * 33\% + 5\%$
1 January 2017	$RLAH + 5\%$	1 January 2017	$WTA + 5\%$
1 January 2018	$COST + (RLAH - COST) * 67\%$		
1 January 2019	$COST + (RLAH - COST) * 33\%$		
1 January 2020	$COST + 5\%$		

### Phase III: Cost Based Pricing

Phase 3 of the original project proposed in 2012 by CRASA and approved by the Ministers recommended the use of a cost based tariff with a mark-up to take cognisance to the additional roaming costs. However, very few national regulatory authorities (NRAs) in the SADC region know the exact cost of roaming. In this regard, a Model Roaming Cost Model is required to providing guidance to both regulators and MNOs in determining the cost-based prices.

The development of the SADC Roaming Cost Model will be done in a phased approach as follows:

#### PHASE 1

MILESTONE
Compile a Concept framework for Development of the SADC Roaming Cost Model
Start Preparation of Request For Proposal Terms of Reference for Development of the SADC Roaming Cost Model
Float Request for Proposal for Development of the SADC Roaming Cost Model
Engage consultant.
Collection of relevant data from Member State MNOs on the network elements and associated costs of roaming in the region



Review of different cost models utilised and applied by NRAs in the region and internationally. A further review of international cost models for roaming is required. A recommendation on an appropriate cost model to be utilised by CRASA should be submitted with reasons and approved by the CRTT before the project will continue.

## PHASE 2

### MILESTONE

Development of a harmonised cost model for the SADC region to be utilised by the NRAs to calculate the roaming costs of the different services of the MNOs

The training of the relevant staff members of the NRAs in the use of the cost model in a training workshop

A discussion on the outcomes of the cost model with the relevant staff members of the NRAs and the MNOs

Development of the project report and user manual to be utilised by the staff members of the NRAs

Submission of the final model and all relevant documentation to CRASA

**SECTION 2: NOTICE OF REQUEST FOR PROPOSAL**



## NOTICE OF REQUEST FOR PROPOSALS

### COMMUNICATIONS REGULATORS' ASSOCIATION OF SOUTHERN AFRICA (CRASA)

#### RFP NO. CRASA/ECD/PR/17.18/01

The Communications Regulators' Association of Southern Africa (CRASA) wishes to invite proposals from suitable consultants with substantial experience to develop a generic costing model to determine wholesale roaming rates to be used by the visiting MNOs within the Southern Africa Development Community (SADC) Community for purposes of calculating the cost of providing retail roaming services within the SADC Community.

The consultancy services are required in fulfilment of the third phase of the SADC Roaming project. The overall objective of this project is to reduce roaming charges in the region to facilitate socio-economic development. In order to fulfil this objective of the CRASA Roaming Project a harmonised cost model for SADC countries should be developed to be used by all NRAs to determine the roaming costs of their respective MNOs.

The Request for Proposals (RFP) document may be obtained from CRASA offices from **Wednesday 27<sup>th</sup> September 2017**. Bids and all supporting documents should be submitted not later than **10.00 am on Thursday, 30th November 2017** or such other later date as CRASA may advise in writing, to the following address:

The Chairman Executive Bid Committee  
CRASA  
Plot 143, Unit 2  
Gaborone International Finance Park  
P O Box AD 135 ADD  
Gaborone  
Botswana  
Tel: +267 3158468

FAX: 267 3181171

E-Mail: [crasa@it.bw](mailto:crasa@it.bw)

## ENQUIRIES

All questions and clarifications on the terms of reference should be directed to Mrs. Bridget Linzie through telephone: + 267 3158468 or e-mail to [blinzie@it.bw](mailto:blinzie@it.bw).

## SECTION 3: INSTRUCTION TO BIDDERS

## INSTRUCTION TO BIDDERS

### 1) Subject of the Request for Proposal

The Communications Regulators' Association of Southern Africa (CRASA) wishes to invite proposals from suitable consultants with substantial experience to develop a generic costing model to determine wholesale roaming rates to be used by the visiting MNOs within the Southern Africa Development Community (SADC) Community for purposes of calculating the cost of providing retail roaming services within the SADC Community.

### 2) Source of Funds

CRASA shall provide the necessary funding for the project.

### 3) Eligible Bidders

This Request for Proposal is open to all local and international eligible consultants. Eligible consultants shall be registered companies in their respective country of origin.

To demonstrate eligibility, bidders shall:

- a) Provide a brief history of the project team members, their relevant qualifications and the roles that they will play. Including CVs and three references for each key staff member.
- b) Provide a description of the structure of the company or organization's current operations, including an explanation on the depth and breadth of their experience in developing cost models for telecommunications regulators.
- c) Demonstrate capabilities of doing the consultancy services by providing information about similar types of work that has been offered to other telecommunications regulators and operators in the past. List in a table at least three (3) similar projects that demonstrate the corporate capabilities of the consultant, specifying the following variables:
- d) Two (2) telecommunications administrations/regulators references that can attest to the abilities of the bidder's firm or organization. (Include name, address, and current email address and telephone numbers.)
- e) Description of services delivered to regulator/ administration.
- f) Results achieved for the regulator/administration.

#### **4) Cost of Bidding**

The Bidder shall bear all costs associated with the preparation and submission of its Bid. "CRASA" will in no case be responsible or liable for those costs regardless of the conduct or outcome of the bidding process.

#### **5) Bidding Documents**

The services required, bidding procedures and contract terms are prescribed in this Bidding Document which comprises the following:

- i) Introduction
- ii) Request for proposal
- iii) Instructions to bidders
- iv) Conceptual Framework
- v) Terms of Reference for Consultants
- vi) Bid Form
- vii) Statement of Capability Form

The Bidder is expected to examine all instructions, forms, terms and specifications in the Bidding Documents. Submission of a bid that is not substantially responsive to the Bidding Documents will be at the bidder's risk and will result in rejection of the bid.

CRASA reserves the right to verify all information furnished by the Bidder through any sources of CRASA's choice. Any inaccurate information given will automatically lead to rejection of the bid.

#### **6) Clarifications for Bidding Documents**

A prospective Bidder requiring any clarification of the Bidding Documents shall notify CRASA in writing at CRASA's mailing address indicated below:

The Executive Secretary  
CRASA  
Plot 143, Unit 2  
Gaborone International Finance Park  
P O Box AD 135 ADD  
Gaborone

Botswana  
Tel: +267 3158468  
FAX: 267 3181171  
E-Mail: [crasa@it.bw](mailto:crasa@it.bw)

CRASA will respond in writing to any request for clarification of the Bidding documents, which it receives no later than one week prior to the deadline for the submission of bids prescribed by the Purchaser.

Written copies of CRASA's response (including an explanation of the query but without identifying the source of query) will be sent to all prospective bidders who have received the Bidding Documents.

#### **7) Amendment of Bidding Documents**

At any time prior to the deadline for submission of bids, CRASA may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the Bidding Documents by issuing an addendum.

If this modification occurs less than a week before the deadline for the submission of bids, CRASA has the right to arrange for an extension of the deadline in order to give other bidders the necessary time for considering the modifications in the preparation of their bids. The amendment shall be notified in writing to all prospective Bidders, who would have received the Bidding Documents.

#### **8) Language of Bid**

The bid prepared by the Bidder and all correspondences and supporting documents relating to the bid submitted by the Bidder to CRASA shall be written in the English language.

#### **9) Documents Comprising the Bid**

The bid prepared by the Bidder shall comprise the following components:

- a) A completed Bid Form
- b) Completed Statement of Capability
- c) Company registration certificate
- d) Technical Proposal
- e) Financial Proposal



## 10) The Technical Proposal

The following items shall comprise **"the Technical Proposal"**:

- a) One (1) hardcopy marked **"ORIGINAL Technical Proposal"** and **Five (5)** identical copies each marked **"COPY"**. The 'Proposal' shall address in detail, the requirements stipulated in the Invitation to Bid document, Terms of Reference and shall include, inter alia;
- b) **Certified** copy of Trading Licence or applicable licence or exemption from licensing by the relevant Authority or body. If none of these are applicable, the bidder must provide a statement confirming the same;
- c) **Certified** copies of shareholding or directorship documents. Bidders that do not have shareholding shall provide a confirmation letter confirming the same. Where necessary the evaluation committee may, during evaluation stage, verify the authenticity of attached documents with respective offices indicated to have issued the documents. Submitted falsified documents shall result in the rejection of the bid; and
- d) **Certified** copy of Certificate of Incorporation or applicable certificate.

The Technical Proposal shall make no reference to the prices, rates or charges contained in the Financial Proposal.

## 11) The Financial Proposal

The following items shall comprise **"the Financial Proposal"**:

- a) **One (1)** detailed original Financial Proposal marked **ORIGINAL FINANCIAL PROPOSAL** and **five (5)** copies of the original each marked **COPY**. The 'Financial Proposal' shall include **a completed and signed Form of Bid (attached as Annexure A)**;
- b) All prices should be quoted in United States Dollars;
- c) All applicable taxes must be shown distinctively and separately;
- d) No escalation in the service fee will be permitted during the contract period;
- e) The Service Fee should be broken down into components to show clearly the following:
- f) The estimated number of hours and or days for performing this bid;

- g) Charge out rates for all levels of staff engaged; and
- h) Costs for disbursements.

The bid offers shall remain valid for at least **240 days** from the date of bid submission. In the event of the assessment of bids not being within the period of the validity of the bids, an extension of time may be requested from the bidders. In these circumstances, CRASA shall re-negotiate the validity period. Those who are willing to extend the period of validity of their bids should neither be required nor permitted to modify their bids.

## **12) Bid Form**

The Bidder shall complete the Bid Form (**Annex A**) indicating the services to be supplied, a brief description of the services and their prices.

## **13) Bid Currency/Prices/Taxes**

All prices shall be quoted in United States Dollars inclusive of Value Added Tax and any other relevant taxes.

## **14) Documents Establishing Services' Conformity**

The Bidder shall furnish, as part of its bid, documentary evidence establishing the eligibility and conformity to the Bidding Documents for all services which the Bidder proposes to supply under the Contract. The Conformity form is attached as (**Annex B**).

## **15) Period of Validity of Bids**

Bid shall remain valid for **240** days after the date of bid opening prescribed by CRASA. Bidders must state their bid validity period. Failure to do so will lead to automatic disqualification.

## **16) Format and Signing of Bid**

The original and all copies of the bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person (or persons) duly authorized to bind the Bidder to the Contract. All pages of the bid, except for un-amended printed literature, shall be initialled by the person (or persons) signing the bid.

The bid shall contain no inter-lineation, erasures or overwriting except as necessary to correct errors made by the Bidder, in which case such corrections shall be initialled by the person or persons signing the bid.

## **17) Sealing and Marking of Bids**

The bids shall be addressed to the following address:

The Chairman

Executive Bid Committee

CRASA

Plot 143, Unit 2

Gaborone International Finance Park

P O Box AD 135 ADD

Gaborone

Botswana

Tel: +267 3158468

FAX: 267 3181171

E-Mail: [crasa@it.bw](mailto:crasa@it.bw)

## **18) Deadline for Submission of Bids**

Bids must be received by the Chairman of the Executive Bid Committee at the address specified no later than **10.00 am on Thursday, 30th November 2017**. Bids can be handed or sent by registered mail to the above specified address with advice of delivery.

CRASA may, at its discretion, extend this deadline for the submission of bids by amending the Bidding Documents in which case all rights and obligations of Bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

## **19) Late Bids**

Any bid received by CRASA after the deadline for submission of bids prescribed by the same Authority will be rejected and returned to the Bidder. There is no exception to this requirement.

## **20) Modification and Withdrawal of Bids**

The Bidder shall not modify or withdraw its bid after the bid opening, unless written notice of the modification or withdrawal is received by CRASA prior to the deadline prescribed for submission of bids.

The Bidder's modification or withdrawal notice shall be prepared, sealed, marked and dispatched. No Bid may be modified subsequent to the deadline for submission of bids.

No bid may be withdrawn in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Bid Form.

## **21) Opening of Bids**

The bidder shall be informed of the date and place where the opening of bids shall be opened.

## **22) Preliminary Examination**

After opening envelopes and prior to any detailed bid evaluation, CRASA will determine:

### **Technical Envelope**

- a) Whether all documents asked for in the bidding documents have been included.
- b) Whether the Bid security has been furnished,
- c) Whether the proposed services are responsive to eligibility criteria.

### **Financial Envelope**

- a) Whether the bid form is correctly filled and signed;
- b) Whether all documents have been duly initialled and signed;
- c) Whether bid contains computation errors in which case CRASA will proceed to a rectification.

## **23) Evaluation of Bids**

The Evaluation of this tender will be carried out in four stages as shown below. The scores of the tender will be allocated as follows:

- a) The Technical Evaluation takes a total of 70 points; and
- b) Financial Evaluation takes a total of 30 points.

**Stage 1: Compliance Check**

At Stage 1, the bids will be checked for compliance with the stipulated compliance checklist. At this stage, the checklist shown at **Table 1** below will be used for evaluation. Bids that pass this stage will proceed to Stage 2 of the evaluation.

**Table 1: Technical Proposal Compliance Check**

	Description	Yes	No.
1.	Hardcopy Proposal marked ORIGINAL TECHNICAL PROPOSAL (one (1) original)		
2.	Five (5) Copies each marked COPY		
3.	Certified copy of Trading Licence or applicable licence or exemption from licensing by the relevant Authority or body.  If none of these are applicable, the bidder must provide a statement confirming the same.		
4.	Certified Copies of shareholding or directorship documents. Enclosed in the Technical Proposal. Bidders who do not have shareholding or directorship documents shall provide a letter confirming the same		
5.	Certified copy of certificate of Incorporation or applicable certificate		

Table 2: Financial Proposal Compliance Check

	Description	Yes	No
1.	One (1) Hardcopy proposal marked <b>ORIGINAL FINANCIAL PROPOSAL</b>		
2.	Five (5) Copies of the Financial Proposal each marked <b>COPY</b>		
3.	Form of Tender completed and signed ( <b>Annexure A</b> ), enclosed in the Financial Proposal		

Any bidder who does not comply with the above compliance checklist shall be disqualified immediately.

### Stage 2: Technical Evaluation

This stage shall consider the conformity of the Technical Proposal to the Terms of Reference. The criteria for evaluation shall be as shown in **Table 3** below.

Table 3: Scores for the Technical Evaluation

Evaluation Criteria	Maximum Attainable Points
Technical Score	
Specifications <i>[Assess whether proposed bid meets tender specifications]</i>	15
Organisational Capability & Experience <i>[Marks to be awarded on evidence of bidder having undertaken similar projects, market experience, knowledge of cost modelling of termination rates, roaming reputation, references]</i>	15

Team Experience <i>[Assess level of relevant qualification and experience ( in accordance with the Terms of Reference (Section 4))]</i>	10
Approach and Methodology <i>(Marks awarded for detailed steps shown to fulfil the objectives, timeframe)</i>	30
<b>TOTAL</b>	<b>70</b>

Bidders, who score 49 points and above, will be short-listed for Financial Evaluation.

### Stage 3 – Financial Evaluation

The Financial Proposal will only be evaluated after the Technical Evaluation has been completed.

The evaluation of the financial proposal will be based on pro-rating the bid price against the lowest quoted price. This means the company that has the lowest price (amongst those which qualified for financial evaluation) will get the maximum score of 30 points. The weighted Financial Score will be calculated as shown below, and then summed up with the Technical Score to get the total combined score.

Financial score = (Lowest Bid price/ Evaluated Bidder’s price) x 30

### 24) Tender Award

The following conditions will be considered during the awarding of this tender:

- a) The winner of the tender will be determined by adding up the scores for each bidder under the Technical Evaluation and Financial Evaluation stages to obtain an overall score. CRASA is not bound to accept the highest or any tender and the decision of the relevant tender committee will not be contestable.
- b) Following the completion of the evaluation process, bidders will be notified in writing as to whether they have been successful or not. No further correspondence with the unsuccessful bidders will be entered into following such notification.
- c) CRASA reserves the right not to award the tender at all, or to award it in whole or in part, at its total discretion.

- d) The bidders should note that the awarding of the tender is subject to an agreed written contract. This tender document shall form part of the contract.
- e) The bidder whose tender has been accepted shall be required to execute a formal contract with CRASA in order to establish the rights and obligations of the parties. The award of the contract shall be effected by the issue of a Purchase Order and by a formal letter of acceptance signed by the authorised officers, incorporating the Contract/Tender Reference and the value of the award.
- f) All unsuccessful tenderers shall be notified of CRASA' s decision.

## **25) Rejection of Tenders**

Tenders may be rejected when none of the submitted tenders are substantially responsive or if it is apparent that there is no competition. If all tenders are rejected, CRASA will review the causes justifying the rejection and consider revisions of the specifications or modifications in the project or both before inviting new tenders.



## SECTION 4: CONCEPTUAL FRAMEWORK



## Conceptual Framework for the SADC Roaming Cost Model

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4<sup>th</sup> August 2017

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## INTRODUCTION

This document describes the methodology that the SADC region will use to calculate the additional costs incurred by MNOs for the provision of roaming services within the SADC community. The model will be developed by a consultant in consultation with National Regulatory Authorities (NRAs) and Mobile Network Operators (MNOs) within the respective SADC Member States.

The SADC roaming cost model will calculate the specific costs associated with roaming services which will be included in the wholesale tariff chargeable by the visited network and will also include call origination, termination, carrier transit charges.

## SCOPE OF THE ROAMING COST MODEL

The SADC roaming cost model is a generic costing model to determine wholesale roaming rates to be used by the visiting MNOs within the SADC Community for purposes of calculating the cost of providing retail roaming services within the SADC Community. The key assumption to the model is that the MNOs have common set of businesses processes and the fundamental network elements for roaming. The model will basically cover the underlying costs of providing roaming services in the region. The cost factors that may be cited at the extra marginal costs of roaming covers use of visited country's infrastructure and use of the home country infrastructure. The model will include all wholesale roaming costs including specific costs such as network costs, operation and management (O&M) costs; roaming clearing costs as well as roaming contract negotiation and regulatory costs among others. More details on the cost are covered under the cost model specifications.

### ***Use Cases/Services to be Modelled***

The SADC roaming cost model will be designed to calculate the cost of all roaming services provided by the various operators based on the following identified broad use cases:

- i. Originating voice calls, SMS and data using the visited network, terminating within the same network or to any other network in the visited country, the home network and to a third country.
- ii. Receiving voice calls, SMS messages and data messages using the visited networks, from the visited network, other networks within the visited country, home country and third country.

The following services will be modelled:

- i. Voice roaming services
  - a. Calls within visited country
  - b. Calls to home country
  - c. Calls to 3<sup>rd</sup> country (within SADC)
  - d. Receiving a call
- ii. SMS roaming services
  - a. Sending an SMS
- iii. Data roaming services
  - a. Data Rates

## OBJECTIVES OF THE SADC ROAMING COST MODEL

- a) The objective of the cost model is not to prescribe roaming charges across the region, but to provide a standardized tool that allows NRAs to calculate the additional costs incurred by MNOs in providing roaming services based on operator specific costing data and cost drivers such as traffic volumes, routing of roaming services, exchange rate fluctuations and industry Weighted Average Cost of Capital (WACC) for the various operators that come in different sizes. The overall goal is to ensure that MNOs recover the full cost of providing roaming services within the SADC region.
- b) Provide a coordinated regional response to the formulation of roaming regulations;
- c) Facilitate the development of regionally acceptable standards on roaming charges; and
- d) Ensure consumer protection on a regional level with regards to roaming.

Accordingly, the model will be used to determine the following:

- i. Price caps for inter-operator tariffs (IOTs)/wholesale roaming services for voice, SMS and data.
- ii. Price caps for retail charges for voice, SMS and data roaming services.

## CONCEPTUAL METHODOLOGY

The preferred conceptual approach is Top-Down modelling based on historical accounting cost levels and existing networks/equipment for roaming services. This is deemed to be the most appropriate for this exercise in view of the fact that roaming-specific costs such as roaming contract negotiation costs, roaming customer service costs and roaming steering costs are largely determined by the number of roaming partnerships and relationships that support roaming as well as the number of Transferred Account Procedure (TAP) record transactions. There is no engineering rule linking the number of staff with the quantities of traffic.

## THE TYPE OF MOBILE OPERATOR MODELLED

The type of mobile operator to be modelled is the real operator. This means that NRAs will use the generic model to calculate the wholesale costs of providing roaming services for each MNO operating within their respective Member States.

## DEMAND ESTIMATES

The demand used in the model will be based on 01 July 2016 to 30 June 2017 traffic data for voice, SMS and data roaming services. These will be reviewed on an annual basis for purposes of reviewing the models.

## BASE COST

The Top-down approach requires the use of cost information that initially consists of historic, mostly drawn from audited accounts data. The data that is used for the model however, is required to reflect current cost on the basis of modern equivalent assets (MEA). NRAs will be required to use the base costs for the model collected from MNOs. These costs will consist of operating expenditure, direct costs and cost of sales based on a specified template as well as Current Cost Accounting information for fixed assets and balance sheet items.

## COSTING METHODOLOGY

The proposed costing methodology is the Fully Allocated Costs (FAC) methodology. This is a costing methodology where historical costs incurred by an operator are allocated to services in full (i.e. costs are fully allocated or distributed) without efficiency adjustments. This includes the allocation of costs to services that do not vary with the production of those services (i.e. fixed costs like common and joint costs). FAC as a concept, is historically most often associated with top-down models and tends to, but does not have to be based on historic costs.

## **COST ALLOCATION APPROACH**

Cost allocation to the various roaming services will be based on the capacity of the network used by each service category. This requires that all service categories will have to be expressed in the same unit of capacity i.e. Erlang, Mbps etc.

Network element costs will be attributed to services on the basis of service volumes and routing factors. Routing factors for all network elements should be established and justified by MNOs for the use in the model.

Common costs which would otherwise not be included in the service cost will be included by applying an equi-proportionate mark-up (EPMU).

## **COST CATEGORIES TO BE MODELLED**

The following are some of the cost categories to be modelled among other relevant costs:

### **a. Charging**

- Network interface
- Mediation system
- CDR silo

### **b. Billing Management Module**

- Input CDR processing module
- Roaming/interconnect module
- Billing / Rating module
- Billing data preparation
- Customer records
- Supplementary services
- Fraud detection and control

### **c. Customer Care Costs**

- Customer relations management application (CRM)
- Credit control

- Debt treatment
- Customer databases

#### d. Other Costs

- Specific network components for the provision of roaming services;
- Network infrastructure and support equipment including network power equipment and buildings;
- Non-network assets (such as office furniture and billing systems);
- Network activities (including network maintenance);
- Product management i.e. roaming services management;
- Support activities to include human resource and finance department costs;
- Direct costs such as GRX-IPX cost for data roaming;
- Cost of sales, such as interconnection out payments;
- Signalling costs;
- Clearing House costs;
- other operational expenditure including software licences for the following:
  - billing
  - border gateway
  - tariff adviser
  - welcome SMS
  - traffic steering

## CAPITAL COSTS AND DEPRECIATION

The depreciation charges included in the model will be based on Current Cost Accounting and will be based on the information provided by MNOs. Economic depreciation will be used to determine capital costs based on the tilted annuity formula, where the annual depreciation percentage is determined by the economic lifetime of the asset and the price change of the asset. For an asset with a declining replacement value the resulting depreciation pattern becomes more 'front-loaded'



i.e. there is a higher depreciation rate at the beginning of its economic life than at the end. This is a reasonable approximation of the declining economic value of the asset and therefore a defensible approach.

The model should allow for a reasonable rate of return on assets employed, i.e. a maximum profit margin to reward the investors in telecommunications assets for the deployment of capital.

## **WEIGHTED AVERAGE COST OF CAPITAL (WACC)**

The cost of capital to be used will be the industry Weighted Average Cost of Capital (WACC) used in the respective SADC Member States for the telecommunications sector.

## SECTION 5: TERMS OF REFERENCE



## HARMONISED COST MODEL (PHASE III)

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### Terms of Reference

4/08/17

This document contains the Terms of Reference for Request for Proposal to develop a harmonised cost model for Consultancy services for the Phase III of the SADC Roaming project.

## **1.0. BACKGROUND AND CONCEPT**

In November 2008, the Communications Regulators' Association of Southern Africa (CRASA) convened a roundtable discussion on Home and Away Roaming, in Johannesburg, South Africa after the Ministers of Information and Communication decided that roaming charges should be reduced. At the end of the roundtable, a communiqué was adopted, laying foundation for the establishment of the Regional Alliance Task Team (RATT) on SADC Home and Away Roaming.

The main task of the RATT was to investigate mechanisms of reducing the high price of international roaming in the SADC region with a view to submit a report to the Ministers for a final decision. In 2012 the SADC Ministers approved a three-phased approach to the reduction of roaming charges in the region. In November 2014 a principled intervention in this regard was taken with the focus of the decision being a tangible programme of action to be implemented. This decision was a glide path for wholesale and retail roaming charges and the development of a harmonised cost model for all roaming services for Mobile Operators (MNOs) in the region.

In March 2015, the CRASA AGM established the CRASA Roaming Task Team (CRTT) to implement the decision of the SADC ministers on reducing roaming charges with immediate effect. The overall goal is to facilitate the lowering of the roaming prices and allow for the increase in communication across the SADC borders thereby facilitating the social and economic development of the region.

Phase 3 of the original project proposed in 2012 by CRASA and approved by the Ministers recommended the use of a cost based tariff with a mark-up to take cognisance to the additional roaming costs. However, very few national regulatory authorities (NRAs) in the SADC region know the exact cost of roaming.

## **2.0. PROJECT DESCRIPTION AND OBJECTIVES**

The main objective of the CRASA Roaming Cost Model Project is to develop a harmonised cost model for SADC Member States. The Model would be used to calculate the specific costs associated with roaming services to determine the wholesale tariff chargeable by the visited network and will also include call origination, termination, carrier transit charges, amongst others. The model will, therefore, aim to do the following:

- a) Identify the network cost elements related to roaming services;

- b) Identify the operating cost elements related to roaming services;
- c) Recommend the costing principles and methodology; and
- d) Allow for the establishment of cost based roaming charges in SADC.

### **3.0. SCOPE OF WORK**

The following are the tasks expected to be undertaken by the Consultant:

- i. Facilitate a workshop to be attended by the CRTT and MNOs on the SADC Conceptual Framework on Roaming Cost Model;
- ii. To develop a data collection template to be used by NRAs to collect relevant data from the SADC Member States MNOs based on the agreed costing methodology and principles as stipulated in the Conceptual Framework;
- iii. To develop the draft Roaming Cost Model including the User Manual;
- iv. Training of the relevant staff members of the NRAs and MNOs in the use of the cost model in a training workshop; and
- v. Submission of the final model and all relevant documentation to CRASA.

### **5.0. EXPECTED DELIVERABLES**

The expected deliverables are:

- a) A harmonised cost model for roaming in the region;
- b) Project report;
- c) User manual to enable all NRAs in the region to utilise the model; and
- d) Training for all NRAs in the region on the use of the model.

## **6.0. PROJECT GOVERNANCE**

The CRTT will coordinate the project. CRASA Secretariat shall provide needed support in terms of the approval process. In regards to the consultant, he or she will be expected to submit monthly progress reports to CRTT.

## **7.0. QUALIFICATIONS AND EXPERIENCE REQUIREMENTS**

The lead consultant must possess at least a Master's Degree in Finance, Economics, Engineering or other related fields with over 10 years' experience and competence of conducting similar studies.

The consultancy team members must comprise members with minimum qualifications of a Bachelor's degree in Economics, Finance/ Accountancy, Engineering, Business Administration and any other relevant discipline with over seven years' experience in conducting projects of similar nature.

## **8.0. PERIOD OF CONTRACT AND DURATION OF THE ASSIGNMENT**

The whole process for the development of a SADC Roaming Cost Model should be completed in one (1) year, however, the billable time for the consultant shall not exceed six (6) months.

Proposal from interested parties are to be submitted to CRASA by no later than **10:00am, Thursday, 30th November 2017**. Enquiries should be directed to Mrs Bridget Linzie at [crasa@it.bw](mailto:crasa@it.bw).

ANNEXURE A

FORM OF BID

BID NUMBER: CRASA/ECD/PR/17.18/01

(TO BE SUBMITTED IN THE FINANCIAL PROPOSAL)

[Bidder's name and address in the Bidder's letterhead]

To:

The Chairman Executive Bid Committee  
CRASA  
Plot 143, Unit 2  
Gaborone International Finance Park  
P.O. Box AD 135 ADD  
Gaborone  
Botswana  
Tel: +267 3158468  
FAX: 267 3181171  
E-Mail : [crasa@it.bw](mailto:crasa@it.bw)

The undersigned hereby offers to provide contracting services for development of the SADC Roaming Cost Model for the total fee of:

[In figures]: .....

[In words]: .....  
.....

We confirm that if a contract was agreed between CRASA and ourselves with respect to provide contracting services for the development of the SADC Roaming Cost Model, such a contract would include CRASA's Request for Proposal Documents including all Sections and Annexures, Terms and Conditions, as generally applied to the industry and agreed to by CRASA shall form part of the contract.

The undersigned confirms that the provision of contracting for development of the SADC Roaming Cost Model shall run for a period of one (1) year from the date of signing the contract.

The undersigned confirms that the validity of this proposal is for a period of 240 calendar days from the Bid Closing date.

Dated this .....day of .....2017

Signature: .....

Full Name: .....

Title: .....

Duly authorised to sign Proposals for and on behalf of:

Bidder's Name: .....

Bidder's Registered Address:

.....  
.....  
.....

Bidder's Telephone Number: .....

Bidder's Facsimile Number: .....

Bidder's Email Address 1: .....

Bidder's Email Address 2: .....



## ANNEXURE B

### STATEMENT OF CAPABILITY

#### BID NUMBER: CRASA/ECD/PR/17.18/01

With reference to the above Bid, we submit the following particulars of our company:

1)		Name of the company and its physical and postal address	:	
2)		Name of the Directors and Shareholders	:	
3)	a)	Company/Trade Registration No.	:	
	b)	Trading Licence No.	:	
4)		Date of Incorporation/Registration	:	
5)		Present strength of the company (Human Resources and Others)	:	
6)		Recent list of the companies and other institutions at which you have rendered the services (attach list separately)	:	
7)		An overview of the company structure covering subsidiary companies, holding companies, financial backers	:	
8)		The locations of depots, agents and service centres appropriate to the supply of the services outlined in this document shall be included in this overview	:	

END:///...