



## Independent Communications Authority of South Africa

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### **ANNEXURE B – TARIFF TRACKER**

#### **1. Purpose of ANNEXURE B**

The purpose of Annexure B is to highlight the technical and functional requirements and specifications of the Tariff Tracker Module that will be provided to Independent Communications Authority of South Africa (hereinafter referred to as “the Authority”) as per the terms and conditions outlined herein.

The End-user and Subscriber Service Charter Regulations, 2016 as amended require that licensees be transparent in their dealings with consumers – particularly as regards billing practices; out of bundle billing for voice and SMS services; out of bundle billing for data services as well as treatment of unused data for purposes of roll-over and transfer<sup>1</sup>.

Notwithstanding these protections, South African consumers have continued to express concerns about disappearing airtime / data as well as highly expedited data consumption rate<sup>2</sup>. In addition, consumers have continued to battle with instances of fraudulent subscriptions to premium rated services<sup>3</sup>. The latter instances fall foul of regulation 21 of the Numbering Plan Regulations, 2016. They further fall foul of the Regulations on Code of Conduct for Premium Rated Services, 2016 which *inter*

<sup>1</sup> See regulations 8, 8A, 8B(2) and 8B(3).

<sup>2</sup> <https://myofficemagazine.co.za/evidence-of-mass-airtime-theft-from-vodacom-subscribers/>  
<https://whichvoip.co.za/news/disappearing-data-are-vodacom-and-mtn-cheating-you/>  
<https://www.youtube.com/watch?v=Cu2XkHsHBfw>  
<https://mybroadband.co.za/news/cellular/365418-damning-evidence-about-mass-airtime-theft-from-vodacom-subscribers.html>

<sup>3</sup> <https://www.itweb.co.za/content/rW1xLv59YN3vRk6m>

*alia* requires that prior to provision of premium rated services to any end-user, the end-user shall be advised of the costs, as well as terms and conditions of the service.

The lack of appropriate technical systems on the regulator's side has made it difficult for the Regulator to:

- monitor whether the prices charged by licensees under various packages are in fact those published / advertised to consumers
- monitor compliance by licensees (and their third-party providers) with the Regulations on Code of Conduct for Premium Rated Services

## 2. Functional Specifications

The Authority is seeking to acquire a Tariff Tracking system that enables performing automated digital experiments on the following categories of traffic, for each bundle/package offered by every Mobile Network Operator in South Africa:

- Voice: ON-NET, OFF-NET;
- SMS: ON-NET, OFF-NET;
- Data: Download files.

The tool should record the prices of each communication or Short Messaging Service (SMS) and the differences between the prices actually charged with those published by the operators. The results can be viewed in numerical and graphical form, with the ability to generate reports.

***Bidders must submit proof (e.g. datasheets, product manuals, catalogues, etc.) to confirm/verify that the proposed system conforms to the Architecture, Requirements, Technical Parameters, Special Reporting Requirements listed below:***

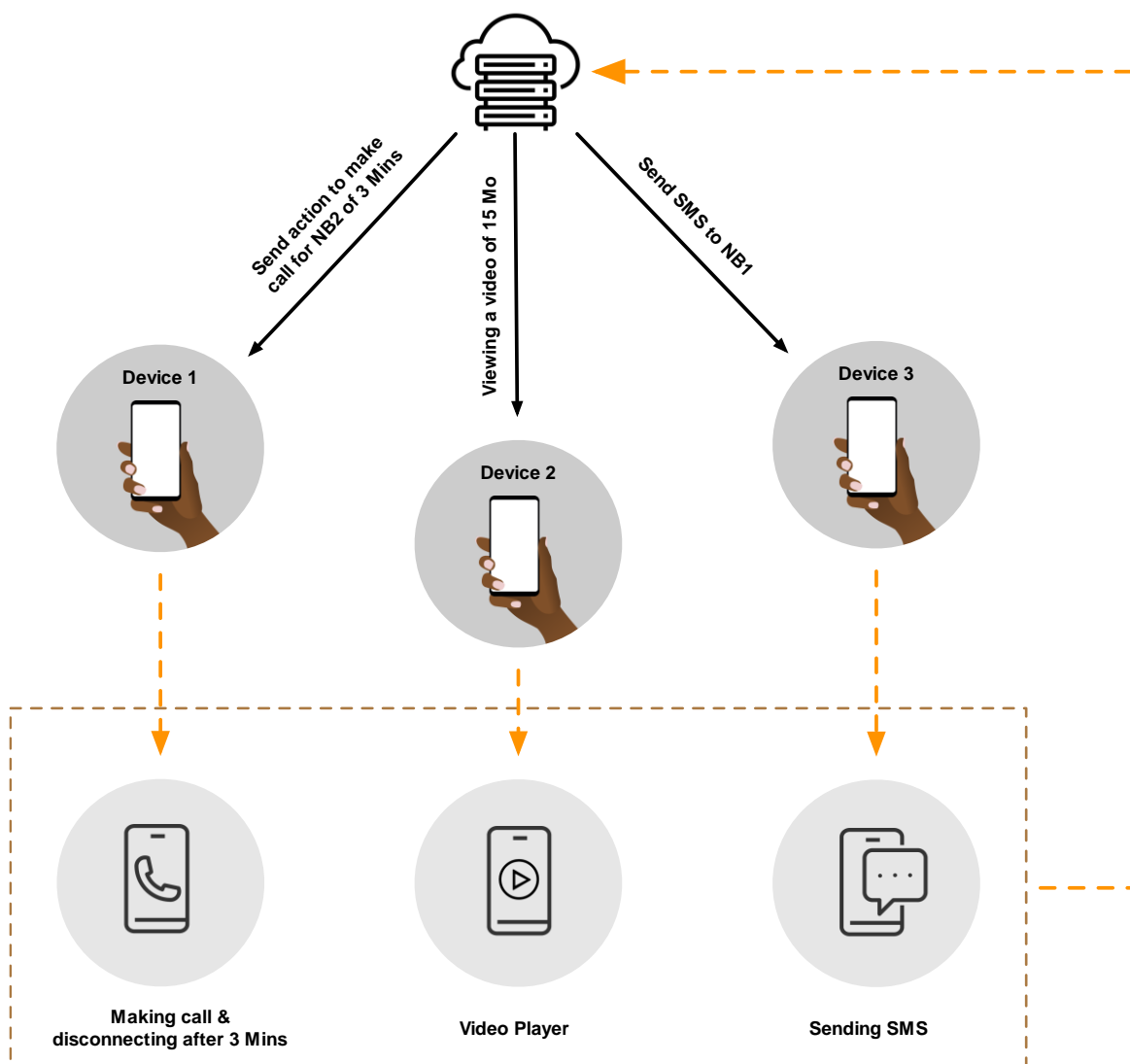
## 2.1. The scope of work entails the following deliverables:

Designation	Detailed description of the item	Quantity
2.1.1. Add-ons for Tariff Tracker	<b>Hardware architecture:</b> <ul style="list-style-type: none"> <li>The system functionality must run on a virtual server hosted on the premises of the Authority.</li> <li>The successful service provider will have to provide all the necessary elements (software and valid licenses, etc.) for the effective virtualization of the server in a VMware vSphere 6.7 (ESXi, vCenter) or higher version infrastructure.</li> </ul>	Service

	<p><b>Rate control features:</b></p> <ul style="list-style-type: none"> <li>The test functions proposed by the service provider must meet the following requirements across two environments:</li> </ul> <p><b>A. Platform accessible from the server:</b></p> <ul style="list-style-type: none"> <li>Voice services test <ul style="list-style-type: none"> <li>ON-NET,</li> <li>OFF-NET,</li> <li>International,</li> <li>Emergency numbers.</li> <li>Testing of SMS services ON-NET, OFF-NET,</li> <li>International.</li> </ul> </li> <li>Data services test: Download files.</li> <li>Testing of packaged offers: the solution must make it possible to test the packaged offers or bundled offers offered by operators, which consist of voice minutes, SMSs and data.</li> <li>Possibility of simultaneous execution of tests: For the optimization of test time, the platform must allow simultaneous tests on the different SIM cards included in the multi-SIM modem.</li> <li>Generation of test reports.</li> </ul> <p><b>B. Mobile platform on Smartphones:</b></p> <ul style="list-style-type: none"> <li>Provides a mobile application for performing tests to compare the difference between actual use and operator-declared licensed revenue. The types of tests from the mobile platform are as follows: <ul style="list-style-type: none"> <li>Data test: different types of data tests to imitate as closely as possible the experience of mobile network subscribers such as: <ul style="list-style-type: none"> <li>FTP file transfer: downloading "Download" data and transferring "Upload" data,</li> <li>Video streaming test,</li> <li>HTTP internet browsing test: loading web pages,</li> <li>Global test which gives users the opportunity to test overall data consumption by the mobile during a given period.</li> </ul> </li> </ul> </li> <li>Voice test: unit or repetitive voice-type tests through configurable calls (number, duration, etc.). The calls can be received via the multi-SIM box</li> </ul>	
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<b>Designation</b>	<b>Detailed description of the item</b>	<b>Quantity</b>
	<p>or at an external number.</p> <ul style="list-style-type: none"> <li>▪ SMS test: unit or repetitive tests of configurable SMS sending (number, duration, etc.). Test scenario: execution of several types of tests in series. Forwarding of all test results to the centralised server at ICASA.</li> </ul>	
2.1.2. Training of ICASA staff	<p>The training of the Authority should focus on the following points:</p> <ul style="list-style-type: none"> <li>• The various applications of the tool including its use and operation</li> <li>• The implementation of price controls in a multi-operator environment</li> <li>• Maintenance (change of parameters, deployment of updates, etc.).</li> </ul>	12 people
2.1.3. Start-up assistance	The start-up assistance should include the commissioning, in operational mode, of the new features of the tool. This service must be carried out in the premises of the Authority in collaboration with their competent services	Service
2.1.4. Documentation	The service provider must deliver all the documentation (in English) as well as the licenses and software necessary to operate and maintain the platform.	Unit
2.1.5. Guarantee and after-sales service	A 5 years warranty is required taking into account regular security updates as well as major feature updates.	Service

## 2.2. Solution Architecture:



**Figure 1: Setup and Functions of the Tariff Tracking Service**

2.2.1. The proposed Tariff Tracker shall:

- 2.2.1.1. Test every mobile plan and bundle (Prepaid/Postpaid/Hybrid) provided by each mobile operator
- 2.2.1.2. Load the processed experimental data into a central database
- 2.2.1.3. Visualise the reported data
- 2.2.1.4. Send alerts whenever a discrepancy is detected

2.2.2. The Authority and the service provider will conduct Provisional Acceptance Testing (PAT) of the system. PAT is conducted to determine if the requirements specified by the contract are fulfilled after each implementation milestone.

**2.3. Special Reporting requirements:**

- 2.3.1. The system should allow building of new reports and changes to **the ready-made and regular reports** with ease.
- 2.3.2. Display customization
- 2.3.3. Dashboard Customization
- 2.3.4. Automated reporting
- 2.3.5. Support of multiple output for reports, such as PDF and Excel reports

#### 2.4. **WASP subscription fraud and airtime theft:**

- 2.4.1. Bidders must propose a submodule to detect Wireless Application Service Providers (WASPs) Fraud and Airtime Theft whenever South Africans are being fraudulently subscribed to content subscription services without their knowledge or consent.
- 2.4.2. The submodule shall:
  - 2.4.2.1. Identify and track the fraudulent subscription events
  - 2.4.2.2. Add a consumer protection layer
  - 2.4.2.3. Block fraudulent subscriptions
  - 2.4.2.4. Support efforts for regulation of the WASPs market
  - 2.4.2.5. Send alerts whenever a fraudulent event is detected
  - 2.4.2.6. Store data and generate reports

### 3.1. **Product Support and Licensing**

- 3.1.1. The supplier must have capacity to maintain, repair and replace all components of the system in a timely manner.
- 3.1.2. Local presence in South Africa is critical, as the Authority requires service with short lead times.
- 3.1.3. The supplier must have an online portal for logging failures and complaints and may supplement this portal with other reporting platforms.
- 3.1.4. The bidder must state the manufacturer's end of support for this solution, which shall not be less than 5 years from final acceptance of the system.
- 3.1.5. The bidder shall provide the licenses to be used, remote upgrades of software and any installation of software patches. Licenses must be valid for at least 5 years from installation of the system.
- 3.1.6. The bidders must state any third party or supplier they are involved with in supplying the solution.

3.1.7. The bidder shall provide the product roadmap for the proposed solution.

### **3. Period of assignment**

All work is to be carried out in accordance with the timeline as agreed with the Authority. The Authority will not be responsible for any cost incurred due to an extension of the project resulting from delays by the Supplier.