

Namibia

Communications Act, 2009

Regulations Prescribing Quality of Service Standards Applicable to Service Licencees, 2015

Government Notice 152 of 2015

Legislation as at 15 November 2017

FRBR URI: /akn/na/act/gn/2015/152/eng@2017-11-15

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PDF created on 7 May 2024 at 10:39.

Collection last checked for updates: 15 November 2017.

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Regulations Prescribing Quality of Service Standards Applicable to Service Licencees, 2015

Contents

1. Definitions	1
2. Submission of documents to the Authority	2
3. Applicability	3
4. Minimum quality of service standards	3
5. Reporting requirements	3
6. Condonation	4
7. Failure to submit information	4
8. Penalties	4
APPENDIX A	6
APPENDIX B	18



Republic of Namibia
Annotated Statutes

Communications Act, 2009

Regulations Prescribing Quality of Service Standards Applicable to Service Licencees, 2015

Government Notice 152 of 2015

Published in Government Gazette 5713 on 21 April 2015

Commenced on 21 April 2015

[This is the version of this document at 15 November 2017.]

[Note: The version of this legislation as at 15 November 2017 was revised and consolidated by the Legal Assistance Centre and the Government of the Republic of Namibia. All subsequent amendments have been researched and applied by Laws.Africa for NamibLII.]

These regulations were made by the Board of the Communications Regulatory Authority of Namibia. The General Notice containing the regulations includes a Schedule which set out a motivation for the regulations, based on the proposed regulations which were published in advance of the final regulations:

“PURPOSE OF THE PROPOSED REGULATIONS REGARDING MINIMUM QUALITY OF

SERVICE STANDARDS APPLICABLE TO SERVICE LICENCES: COMMUNICATIONS ACT, 2009

The proposed regulations set out the quality of service standards that are applicable to Individual (Comprehensive telecommunications service licence (ECNS and ECS), Class ECS, ECNS and Class Comprehensive telecommunications (ECNS and ECS).), Class Comprehensive Multiplex and Signal Distribution, Multiplex and Signal Distribution Licenses. Commercial Broadcasting service licence, Community Broadcasting service licence and Public Broadcasting service licence.

The regulations also set out reporting requirements applicable to licensees and mandate a specific reporting format and the consequences for failure to comply with the quality of service standards and reporting requirements.”

[The capitalisation of the regulation headings and text is reproduced here as it appears in the *Government Gazette*.

Errors and inconsistencies in capitalisation are not individually marked. The lay-out has been adjusted to be consistent with that in other regulations, but the numbering and lettering is as it appears in the *Government Gazette*.]

1. Definitions

In these regulations, any word or expression to which a meaning is assigned in the Act, shall have the same meaning and-

“**Act**” means the Communications Act, 2009 (Act [No. 8 of 2009](#));

“Authority” means the Communications Regulatory Authority of Namibia;

“Busy time” means a set of the same three (3) hours in each of the same days in the reporting period, during which the highest average traffic for a service is measured or expected;

“Elapsed day” means a twenty-four (24) hour time period;

“Electronic communications” means any emission, transmission or reception of sound, pictures, text or any other information by wire, radio waves, optical media, electromagnetic systems or any other means of a like nature;

“Fault” means the failure of a service to the extent that the service or some aspects of the service is unavailable;

“Licensees” means licensees issued with licences in terms of regulation 5(1)(a) & (b)(i)(ii)(iii) of the Regulations Setting Out Broadcasting and Telecommunications Service Licence Categories, as published in *Government Gazette* No. 4714, Notice No. 124, dated 18 May 2011, as amended in *Government Gazette* 5148, General Notice No. 74, dated 13 March 2013;

“Log-in” means multi-step process including, both authentication and authorization, as well as other system start-up tasks in order to provide a user with access to services and/or resources

“Packet loss” means the failure of one or more transmitted packets to reach their final destination;

“Reporting period” means the period of one (1) month starting from the 1st day of every applicable calendar month to the last day of the month for measurements to be submitted by the licensee or a specified time period as determined by the Authority to conduct quality of service measurements;

“Reporting area” means the geographical area as determined by the Authority from time to time within which quality of service standards are measured;

“Service coverage” means the state of indoor and outdoor radio access within the network coverage area of the licensee;

“SMS” means Short Message Service;

“Telecommunications services” means services whose provision consists wholly or partly in the transmission or routing of information on telecommunications networks by means of telecommunications processes but does not include broadcast services; and

“Quality of Service data” means all data accumulated by the Authority pertaining to the measurement of quality of service standards.

2. Submission of documents to the Authority

- (1) In these regulations, when persons are permitted or called upon to submit information to the Authority in writing, they may do so either physically or electronically-

[The subregulation number (1) appears to be in error;
there are no other subregulations in this regulation.]

- i) by hand to the head offices of the Authority, namely Communication House, 56 Robert Mugabe Avenue, Windhoek;
- ii) by post to the head offices of the Authority, namely Private Bag 13309, Windhoek 9000;
- iii) by electronic mail to the following address: operations@cran.na

[There should be a semicolon at the end of paragraph (iii).]

- iv) by facsimile to the following facsimile number: +264 61 222790; or
- v) in any other manner or at alternative addresses set out by the Authority from time to time.

3. Applicability

- (1) These regulations are applicable to the following service licence categories set out in the Regulations Setting Out Broadcasting and Telecommunications Service Licence Categories, published as General Notice No. 124 in *Government Gazette* No. 4714 dated 18 May 2011 as amended in General Notice No. 74 in *Government Gazette* No. 5148 dated 13 March 2013-

[The subregulation number (1) appears to be in error;
there are no other subregulations in this regulation.]

- i) Individual (Comprehensive telecommunications service licence ECNS and ECS); and
- ii) Class
 - a. ECS;
 - b. ECNS; and
 - c. Comprehensive telecommunications service licence (ECNS and ECS);
 - d. Class Comprehensive Multiplex and Signal Distribution service licence;
 - e. Commercial Broadcasting service licence;
 - f. Community Broadcasting service licence;
 - g. Multiplex service licence;
 - h. Public Broadcasting service licence; and
 - i. Signal Distribution service licence.

4. Minimum quality of service standards

- (1) Licensees must maintain the minimum quality of service standards in accordance with the requirements contained in Appendix A to these regulations.

[The subregulation number (1) appears to be in error;
there are no other subregulations in this regulation.]

5. Reporting requirements

- (1) Licensees must submit a report to the Authority, in the format set out in Appendix B, on a bi-annual basis. Bi-annual reports are to be submitted on or before 31 July for the period January to June, and on or before 31 January for the period July to December.
- (2) The licensee shall take the measurements according to the standards stipulated in Appendixes A and B to these regulations.
- (3) The Authority may publish quality of service performance indicators in any form or format that it deems reasonably appropriate.
- (4) If the Authority publishes the quality of service performance indicators as indicated in subsection 5(3), the Authority may request comments from licensees on quality of service performance indicators prior to publication.

[The term “subsection” should be “subregulation”.]

- (5) The Authority may conduct surveys or other studies to assess customer satisfaction with the quality of service provided by licensees.
- (6) The Authority may audit some or all of the quality of service data submitted by a licensee.

- (7) The Authority may investigate the quality of service measurement, reporting and record keeping procedures of the licensee.
- (8) Licensees shall submit any additional information requested by the Authority to verify or clarify quality of service measurements including time periods and geographical areas within thirty (30 days) from receiving the request from the Authority.
- (9) Licensees must retain all quality of service data, including all measurements and related records for a minimum period of five (5) years, after the end of the reporting period, or for a time period as may be directed by the Authority.
- (10) The Authority shall determine the geographical area and time period for drive testing conducted on behalf of the Authority to measure quality of service standards.
- (11) The Authority shall measure and ensure compliance to quality of service standards using any or all of the following methods:-
 - (a) Drive testing by the Authority, and/or an independent party appointed by the Authority; and/or
 - (b) Data collection and statistical reports from licensees; and/or
 - (c) Any other reasonable means.

6. Condonation

- (1) In the event a licensee is unable to comply with any time set out in these regulations, it may request from the Authority an extension of time at least seven (7) days prior to the time set out or within such other time period agreed by the Authority upon good cause shown.
- (2) The Authority will respond to the request for condonation as soon as practicable, and may either grant or deny the request, in its sole discretion, based on, among other things, the nature of the information and the reasons for non-compliance with the time set out.

7. Failure to submit information

- (1) If a licensee fails to submit in the manner and format prescribed by the Authority, as set out in these regulations or to submit the reports required to be submitted by these regulations the Authority may:

[The comma after “prescribed by the Authority” is perhaps intended to appear after “as set out in these regulations”, or else an additional comma should appear after the latter phrase. There should also be a comma after the phrase “by these regulations”.]

 - (a) Issue a written request for submission of outstanding information within a prescribed time; and
 - (b) Require the licensee to implement a remedial plan within a time frame agreed with the Authority and again submit the outstanding and/or additional information to the Authority.
- (2) If after the measures set out in (1) above, the licensee still fails submit the information requested, the Authority will deal with the matter in terms of sections [114](#) and [115](#) of the Act.

[The word “to” appears to have been omitted before the word “submit”.]

8. Penalties

- (1) Any licensee who fails to maintain the minimum quality of service standards set out in these regulations or to submit the reports required to be submitted by these regulations, shall be guilty of contravening these regulations.

- (2) Where a licensee contravenes one or more of these regulations or quality of services standard contained herein, the Authority may-
- (a) issue to a licensee a written warning and final date for submitting outstanding reports where the licensee is guilty of not submitting reports as required by these Regulations; or
 - (b) require the licensee to implement a remedial plan within a time frame agreed with the Authority and again submit additional information about the quality of the relevant service to be compared against performance data collected by the Authority; or
 - (c) order the licensee to compensate subscribers or consumers for poor quality of service; or
 - (d) impose a penalty of not more than N\$500,000.00 for-
 - (i) failure by a licensee to perform measurements for reporting purposes as contained in these regulations;
 - (ii) submitting or causing the submission of false or misleading information to the Authority;
 - (iii) each contravention of a quality of service standard as set out in section 2 of Annexure A hereto; or
 - (e) impose a penalty not exceeding N\$1,000,000.00 for-
 - (i) each contravention of a quality of service standard as set out in sections 1 and 3 of Annexure A hereto;
 - (ii) each repeated contravention of a quality of service standard as set out in Annexure A hereto; or
 - (f) impose a penalty not exceeding N\$5,000,000.00 for failure to implement a remedial plan agreed with the Authority for compliance with any quality of service standard within such time frame the Authority may direct; or
 - (g) take any other measure the Authority regards as reasonable in the circumstances.
- (3) Any amount of penalty payable in terms of paragraphs (d), (e) or (f) of subregulation (2) constitutes a debt due to the Authority by the relevant licensee concerned and may be recovered by the Authority by means of proceedings instituted in any competent court.
- (4) Notwithstanding the provisions of subregulations (2) and (3), the Authority may waive the payment of or refund the whole or any part of a fine payable.
- (5) Before imposing any penalty as contemplated by paragraphs (d), (e) or (f) of subregulation (2), the Authority must give an affected licensee the opportunity to be heard, whereafter the Authority may-
- (a) decide not to impose any penalty; or
 - (b) impose such penalty the Authority deems fit.

APPENDIX A

MINIMUM QUALITY OF SERVICE STANDARD

1. Service quality				
Service	Definition	Parameter	Measurement	Applicability
Supply time for fixed line initial connection	The duration (elapsed days) from the instant a valid service request has been received to the instant a working service is made available for use	95% of service requests to be completed within 5 elapsed days and 100% of service requests to be completed within 7 elapsed days	<p>Include the following scenarios-</p> <ul style="list-style-type: none"> • A new connection • An existing connection taken over by another customer • An additional connection provided to a customer who already has an existing service, including any upgrades in service <p>A valid service request may be made in writing.</p> <p>Where a licensee and a customer agree that a service request for multiple connections or at various sites will be completed in stages, each agreed delivery time counts as a separate service request for measurement purposes</p>	<p>Individual licensees</p> <p>Class Comprehensive ECS/ECNS licensees</p> <p>Class ECNS licensees</p>

Supply time for internet access	The duration (elapsed days) from the instant a valid service request has been received to the instant a working service is made available for use	95% of service requests to be completed within 5 elapsed days 100% of service requests to be completed within 7 elapsed days	<p>Include the following scenarios-</p> <ul style="list-style-type: none"> • A new connection • An existing connection taken over by another customer • An additional connection provided to a customer who already has an existing service, including any upgrades in service <p>A valid service request may be made verbally or in writing. Where a licensee and a customer agree that a service request for multiple connections or at various sites will be completed in stages, each agreed delivery time counts as a separate service request for measurement purposes</p>	<p>Individual licensees</p> <p>Class Comprehensive ECS/ECNS licensees</p> <p>Class ECS licensees</p> <p>Class ECNS licensees</p>
Supply time for initial mobile services connection (postpaid/prepaid)	The duration (elapsed days) from the instant a valid service request has been received to the instant a working service is made available for use	95% of service requests to be completed within 5 elapsed days 100% of service requests to be completed within 7 elapsed days	<p>Include the following scenarios-</p> <ul style="list-style-type: none"> • A new connection • An existing connection taken over 	<p>Individual licensees</p> <p>Class Comprehensive ECS/ECNS licensees</p> <p>Class ECS Licensees</p>

			<p>by another customer</p> <ul style="list-style-type: none"> An additional connection provided to a customer who already has an existing service, including any upgrades in service <p>A valid service request may be in writing.</p> <p>Where a licensee and customer agree that an order for multiple connections each agreed delivery time counts as a separate service request for measurement purposes</p>	
Supply time for subscription based television service connection	The duration (elapsed days) from the instant a valid service request has been received to the instant a working service is made available for use	95% of service requests to be completed within 5 elapsed days 100% of service requests to be completed within 7 elapsed days	<p>Include the following scenarios-</p> <ul style="list-style-type: none"> A new connection An existing connection taken over by another customer An additional connection provided to a customer who already has an existing service, including any upgrades in service 	<p>Commercial Broadcasting licensees</p> <p>Public Broadcasting licensees</p>

			<p>A valid service request may be in writing.</p> <p>Where a licensee and customer agree that an order for multiple connections each agreed delivery time counts as a separate service request for measurement purposes</p>	
Fault Repair Time	The time (elapsed hours) by which valid faults on networks are repaired	<p>90% of faults to be repaired within 24 elapsed hours from time reported</p> <p>100% of faults to be repaired within 48 elapsed hours from time reported</p>	The time by which valid faults on networks are repaired and the percentage of faults cleared in the time specified in any service level agreement or contract must be reported separately	<p>Individual licensees</p> <p>Class Comprehensive ECS/ECNS licensees</p> <p>Class ECNS licensees</p> <p>Signal Distribution licensees</p> <p>Class Comprehensive Multiplex and Signal Distribution licensees</p> <p>Commercial Broadcasting licensees</p> <p>Public Broadcasting licensee</p> <p>Community Broadcasting licensee</p>
Proportion of problems with number portability procedures	Number of requests with a deviation from the normal porting procedure divided by the total number of requests for number portability	Number of requests with deviations from the normal porting procedures must be less than 5% of total number of requests	<p>A deviation from the normal porting procedures occurs when-</p> <ul style="list-style-type: none"> All the services from the donor has to be restore 	<p>Individual licensees</p> <p>Class Comprehensive ECS/ECNS licensees</p> <p>Class ECS licensee</p>

		for number portability	<p>temporarily whilst problems are resolved</p> <ul style="list-style-type: none"> • There is a gap of more than 1 hour in either or both incoming or outgoing services • The recipient operator has to open a trouble ticket as a consequence of an event that does not permit to consider number portability completed after the time period agreed between operators 	
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2. Billing and customer service				
Service	Definition	Parameter	Measurement	Applicability
Response time for administration and billing enquiries	Duration from the instant when the address information required for setting up a call is received to the instant the human operator answers the calling user to attend to the enquiry	95% of calls must be answered within 20 seconds	Enquiries attend to by IVR only is excluded from this measurement. Any enquiry transferred from an IVR system to a human operator to attend to the enquiry is included in the measurement. The duration period in the definition includes waiting time because attendants are busy. Time duration handle the enquiry itself is excluded from the measurement. The parameter is applicable to all administration and billing enquiries made to a call centre by a customer via fixed, mobile, direct and/or indirect services	Individual licensees Class Comprehensive ECS/ECNS licensees Class ECS licensees
Customer/Licensee Complaints Resolution Time	The time period taken to resolve a customer complaint from the instant the customer complaint is notified to the published point of contact to the instant the cause for the complaint has been resolved	90% of customer complaints must be resolved within 24 elapsed hours	Statistics should include all customer complaints received in the data collection period. Where more than one complaint is made by the same customer, even on the same subject, each instance	Individual licensees Class Comprehensive ECS/ECNS licensees Class ECS licensee Class ECNS licensees Class Comprehensive Multiplex and Signal Distribution Licencees

			<p>must be counted separately.</p> <p>If a customer complains again before the existing complaint has been resolved, it must be treated as a continuation of the first unclosed complaint.</p> <p>When calculating the resolution time the licensee may subtract an delay introduced by the customer from the measured time</p>	<p>Multiplex Licensee</p> <p>Signal Distribution licensees</p> <p>Commercial Broadcasting licensees</p> <p>Public Broadcasting licensee</p> <p>Community Broadcasting licensee</p>
Billing Correctness	The proportion of bills resulting in a customer complaint relating to the accuracy of a given bill	Less than 2% of bills should result in customer complaints	<p>A bill correctness complaint is an expression of dissatisfaction with the accuracy of the bill received from a customer. Statistics should include all billing complaints received in the reporting period regardless of the validity of the complaint and the dates of calls or any other form of communication that are the subject of the complaint</p>	<p>Individual licensees</p> <p>Class Comprehensive ECS/ECNS licensees</p> <p>Class ECS licensees</p>

3. Network quality				
Service	Definition	Parameter	Measurement	Applicability
Mobile /Wireless Service Coverage	Percentage of test route over which a minimum signal strength of -100 dBm is achieved	A minimum of -100 dBm must be achieved for 95% outdoor and 85% indoor service coverage following a predetermined test route	The test route will be determined by the Authority depending on the network coverage provided by licensees. Measurements will be taken in a reporting area within the network coverage area of the licensee from time to time as determined by the Authority	Individual licensees Class Comprehensive ECS/ECNS licensees Class ECNS Licensees
Unsuccessful Call Ratio	Ratio of unsuccessful calls to a total number of call attempt in a specified time period	Percentage of unsuccessful calls must be less than 2% in busy time	An unsuccessful call is a call attempt to a valid number within the licensees' coverage area where neither called party busy tone, nor ringing tone, nor answer signal is received within 30 seconds from the instant when the last digit of the destination subscriber number is received. Additional measurements will be taken in a reporting area within the network coverage area of the licensee from time to time as determined by the Authority	Individual licensees Class Comprehensive ECS/ECNS licensees Class ECS licensees Class ECNS licensees
International Call Connectivity	The relationship between the number of	The ASR on a country by country	ASR to be measured on a country by country	Individual licensees

	seizures that result in an answer signal and the total number of seizures (ASR) for a specific country	basis should be more than 60%	basis over time as determined by the Authority	Class Comprehensive ECS/ECNS licensees Class ECS licensees Class ECNS licensees
Dropped Call Ratio	The percentage of incoming and outgoing calls which once they have been successfully established are dropped/ interrupted prior to the call being terminated by the user, the cause of the early termination being within the operator's network	Percentage of dropped calls must be less than 3%	Percentage of dropped calls, calculated from all the calls in the time period as determined by the Authority Additional measurements will be taken in a reporting area within the network coverage are of the licensee from time to time as determined by the Authority	Individual licensees Class Comprehensive ECS/ECNS licensees Class ECS licensees Class ECNS licensees
Successful SMS Ratio	Probability that a user can send a SMS successfully to a short message centre from user terminal equipment	95% of SMS messages must be send successfully in busy time	Statistics to be collected by Authority and provided by the licensee within a given time period to consist the total number of originating SMS attempts and number of successfully send SMS's Additional measurements will be taken in a reporting area within the network coverage are of the licensee from time to time as determined by the Authority	Individual licensees Class Comprehensive ECS/ECNS licensees Class ECS licensees Class ECNS licensees
Completion Rate for SMS	The ratio of successfully send and received SMS's between terminal	95% of SMS's must be completed successfully	Sending and receiving from SMS's from and to international destinations are	Individual licensees Class Comprehensive

	equipment of two users during busy time		excluded from this measurement. Statistics to be collected by Authority and provided by the licensee within a given time period to consist the total number of originating SMS attempts and number of successfully send and receive SMS's Additional measurements will be taken in a reporting area within the network coverage are of the licensee from time to time as determined by the Authority	ECS/ECNS licensees Class ECS licensees Class ECNS licensees
Successful Internet Login ratio	The ratio of successful log-ins to access the Internet when both the access network and the licensees' network are available	95% of internet login's by the user of data services must be successful in busy time	Statistics to be collected by Authority and provided by the licensee within a given time period to consist the total number of log-in attempts and number of successful log-ins to access the Internet This measure is applicable to all licensees providing services allowing internet access irrespective of technology. An attempt to log-in is unsuccessful, if it fails for any reason independent whether the fault is caused by the access network or the licensee A log-in is successful if after	Individual licensees Class Comprehensive ECS/ECNS licensees Class ECS licensees Class ECNS licensees

			completion of the log-in process the use is able to use a valid IP-address (dynamic or static) to use services offered via the Internet including DNS resolution allowing to exchange data via the Internet Additional measurements will be taken in a reporting area within the network coverage are of the licensee from time to time as determined by the Authority	
Packet Loss Ratio	Ratio of packets lost to the total packets transmitted between two designated points	Packet Loss Ratio may not be more than 3% for any class of service offered	Statistics to be collected by Authority and provided by the licensee within a given interval per class of service as determined by the Authority Additional measurements will be taken in a reporting area within the network coverage are of the licensee from time to time as determined by the Authority	Individual licensees Class Comprehensive ECS/ECNS licensees Class ECS licensees Class ECNS licensees
Unsuccessful data transmission ratio	The ratio of unsuccessful data transmissions to the total number of data transmission attempts in a specified time period	95% of all data transmissions must be successful within a specified time period	A data transmission is successful if a test file is transmitted completely and with no errors. The statistics should be calculated from test transmissions made according to the measurement	Individual licensees Class Comprehensive ECS/ECNS licensees Class ECS licensees Class ECNS licensees

			set-up stipulated in ETSI EG 202 057-4 Additional measurements will be taken in a reporting area within the network coverage are of the licensee from time to time as determined by the Authority	
Data transmission speed achieved	The data transmission rate is achieved separately for downloading and uploading specified test files between a remote web site and user equipment	Data transmission speed achieved must be at least 80% of that advertised by the licensee during busy time	The test file shall have at least twice the size (in kb) of the theoretically maximum data transmission rate per second as advertised by the licensee for a specific service Additional measurements will be taken in a reporting area within the network coverage are of the licensee from time to time as determined by the Authority	Individual licensees Class Comprehensive ECS/ECNS licensees Class ECS licensees Class ECNS licensees

References

The following references are indispensable for the application of this document. For undated reference, the latest edition of the referenced document (including any amendments) applies. For dated references, only the edition cited applies.

- (i) ETSI EG 202 057-1 Speech Processing, Transmission and Quality Aspects (STQ): User related QoS parameter definitions and measurements; Part 1: General
- (ii) ETSI EG 202 057-2 Speech Processing, Transmission and Quality Aspects (STQ): User related QoS parameter definitions and measurements; Part 2: Voice telephony, Group 3 fax, modem data services and SMS
- (iii) ETSI EG 202 057-3 Speech Processing, Transmission and Quality Aspects (STQ): User related QoS parameter definitions and measurements; Part 3: QoS parameters specific to Public Land Mobile Networks (PLMN)
- (iv) ETSI EG 202 057-4 Speech Processing, Transmission and Quality Aspects (STQ): User related QoS parameter definitions and measurements; Part 4: Internet Access

- (v) ITU-T Rec. Y.1541 Series Y: Global Information Infrastructure, Internet Protocol Aspect and Next Generation Networks, Internet protocol aspects-Quality of service and network performance, Network performance objectives for IP-based services
- (vi) ITU-T Rec. E.425 Series E: Overall network operation, telephone service, service operation and human factors, Network management - Checking the quality of international telephone service, Internal automatic observations
- (vii) ITU-T Rec. E.426 Series E: Overall network operation, telephone service, service operation and human factors, International telephone network management and checking of service quality -Checking the quality of international telephone service, General guide to the percentage of effective attempts which should be observed for international telephone calls
- (viii) ITU-T Rec. E.437 Series E: Overall network operation, telephone service, service operation and human factors, Quality of service, network management and traffic engineering-Network management - Checking the quality of the international telephone service, Comparative metrics for network performance management

APPENDIX B

REPORTING FORMAT

1. Supply time for fixed line initial connection

Parameter:

- (i) 95% of service requests to be completed within 5 elapsed days
- (ii) 100% of service requests to be completed within 7 elapsed days

	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
Percentage of service requests completed within 5 elapsed days						
Remaining percentage of service requests completed within 7 elapsed days						
Total percentage of service requests completed	100%	100%	100%	100%	100%	100%

2. Supply time for internet access

Parameter:

- (i) 95% of service requests to be completed within 5 elapsed days
- (ii) 100% of service requests to be completed within 7 elapsed days

	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
Percentage of service requests completed within 5 elapsed days						
Remaining percentage of service requests completed within 7 elapsed days						
Total percentage of service requests completed	100%	100%	100%	100%	100%	100%

3. Supply time for initial mobile service connection (postpaid)

Parameter:

- (i) 95% of service requests to be completed within 5 elapsed days
- (ii) 100% of service requests to be completed within 7 elapsed days

	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
Percentage of service requests completed within 5 elapsed days						
Remaining percentage of service requests completed within 7 elapsed days						
Total percentage of service requests completed	100%	100%	100%	100%	100%	100%

4. **Fault repair time**

Parameter:

- (i) 90% of faults to be repaired within 24 elapsed hours from time reported
- (ii) 100% of faults to be repaired within 48 elapsed hours from time reported

	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
Percentage of faults repaired within 24 elapsed hours						
Remaining percentage of faults repaired within 48 elapsed hours						
Total percentage of faults repaired	100%	100%	100%	100%	100%	100%

5. **Proportion of problems with number portability procedures**

Parameter: Number of requests with deviations from the normal porting procedures must be less than 5% of the total number of requests for number portability

	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
Total number of number portability requests						
Number of requests with deviations from normal porting procedures						
Percentage of requests with deviations from the normal porting procedures vs total number of number portability requests						

6. Response time for administration and billing enquiries

Parameter: 95% of calls must be answered within 20 seconds

	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
Total number of calls related to administration and billing enquiries						
Total number of calls answered within 20 seconds						
Percentage of calls answered within 20 seconds vs total number of calls received						

7. **Customer complaints resolution time**

Parameter: 90% of customer complaints must be resolved within 24 elapsed hours

	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
Total number of customer complaints received						
Number of customer complaints resolved within 24 elapsed hours						
Percentage of customer complaints resolved vs total number of customer complaints						

8. **Billing correctness**

Parameter: Less than 2% of bills should result in customer complaints

	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
Total number of bills issued to customers						
Number of bills resulting in customer complaints						
Percentage of bills resulting in customer complaints vs total number of bills issued						

9. Service coverage

Parameter: A minimum of -100 dBm must be achieved for 95% outdoor and 85% indoor service coverage following a predetermined test route

Note: Measurement will be done by the Authority after which the Authority may request more information or clarification from the licensee in terms of section 5 of the regulations.

10. Unsuccessful call ratio

Parameter: Percentage of unsuccessful calls must be less than 2% in busy time

Note: Additional measurements will be done by the Authority after which the Authority may request more information or clarification from the licensee in terms of section 5 of the regulations.

	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
Hours defined as busy time for calls						
Percentage of successful calls during busy time						
Percentage of unsuccessful calls during busy time						

11. International Call Connectivity

Parameter: The ASR on a country-by-country basis should be more than 60%

	ASR Rate					
Destination Country	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
List of countries in alphabetical order						

12. Dropped call ratio

Parameter: Percentage of dropped calls must be less than 3% in busy time

Note: Additional measurements will be done by the Authority after which the Authority may request more information or clarification from the licensee in terms of section 5 of the regulations

	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
Hours defined as busy time for calls						
Percentage of dropped calls during busy time						

13. Successful SMS ratio

Parameter: 95% of SMS messages must be send successfully in busy time

Note: Additional measurements will be done by the Authority after which the Authority may request more information or clarification from the licensee in terms of section 5 of the regulations.

	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
Hours defined as busy time for calls						
Number of originating SMS attempts						
Number of successfully send SMS's						
Percentage of successfully send SMS's						

14. Completion rate for SMS

Parameter: 95% of SMS messages must be completed successfully during busy time

Note: Additional measurements will be done by the Authority after which the Authority may request more information or clarification from the licensee in terms of section 5 of the regulations.

	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
Hours defined as busy time for calls						
Number of originating SMS attempts						
Number of successfully send and received SMS's						
Percentage of successfully completed SMS's						

15. Successful internet log-in ratio

Parameter: 95% of internet log-in's by the user of data services must be successful during busy time

Note: Additional measurements will be done by the Authority after which the Authority may request more information or clarification from the licensee in terms of section 5 of the regulations.

	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
Hours defined as busy time for calls						
Number of log-in attempts						
Number of successful log-in's						
Percentage of successful log-in's						

16. Packet loss ratio

Parameter: Packet loss ratio may not be more than 3% for any class of service offered

Note: Additional measurements will be done by the Authority after which the Authority may request more information or clarification from the licensee in terms of section 5 of the regulations.

	Packet loss ratio					
Destination Country	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
List of class of services offered by licensee						

17. Unsuccessful data transmission

Parameter: 95% of all data transmissions must be successful within a specified time period

Note: Additional measurements will be done by the Authority after which the Authority may request more information or clarification from the licensee in terms of section 5 of the regulations.

	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
Number of test data transmissions						
Number of successful data transmissions						
Percentage of successful data transmissions						

18. Data transmission speed achieved

Parameter: Data transmission speed achieved must be at least 80% of that advertised by the Licensee, during busy time

Note: Additional measurements will be done by the Authority after which the Authority may request more information or clarification from the licensee in terms of section 5 of the regulations.

	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
Hours defined as busy time for data						
Data speed advertised to be listed for each product or class of service offered by the licensee						
Data speed achieved to be listed for each product or lass of service offered by licensee						