



## **CONSULTATION PAPER**

### **Revised draft rules on telecommunications quality of service performance monitoring**

*Issued on 3 July 2020*

# Contents

<b>1</b>	<b>INTRODUCTION .....</b>	<b>1</b>
<b>2</b>	<b>PROPOSED QOS FOCUS .....</b>	<b>2</b>
<b>3</b>	<b>PUBLIC CONSULTATION .....</b>	<b>4</b>
	<b>ATTACHMENT A: DRAFT RULE .....</b>	<b>5</b>
	<b>ATTACHMENT B: MOBILE TELEPHONY – INDICATIVE IMPLEMENTATION ARRANGEMENTS.....</b>	<b>13</b>
	<b>ATTACHMENT C: FIXED TELEPHONY – INDICATIVE IMPLEMENTATION ARRANGEMENTS.....</b>	<b>17</b>
	<b>ATTACHMENT D: MOBILE AND FIXED BROADBAND INTERNET – INDICATIVE IMPLEMENTATION ARRANGEMENTS .....</b>	<b>21</b>

# 1 INTRODUCTION

On 19 September 2019 NICTA published a consultation document setting out draft rules for monitoring the quality of service performance of specific services, namely:

- (a) Mobile voice telephony calls;
- (b) Mobile broadband internet access services; and
- (c) Fixed broadband internet access services.

The focus was on these services because of their economic and social impact within Papua New Guinea and the broad effect that service quality for these services has on consumers and business customers across the country. In other words, NICTA sought to focus the available resources in its organisation and service provider organisations on services with the widest social and economic footprint.

The scheme that NICTA proposed in September 2019 was based on a two-stage implementation comprising an initial collection of measurement data from relevant service providers on a six-monthly basis, and, once the data collection regime had become established with refinements as needed, publication of results to enable consumer and business customers to take quality of service performance into account more comprehensively in their telecommunications services purchasing decisions.

The approach then envisaged would, in time, empower consumers and other end-users of telecommunications services. As a result, providers of the relevant services would have strong commercial incentives to maintain and improve the quality of their services.

The initial consultation paper noted that, under the *Standard and Special Conditions of Individual Licences Rule 2011 (the Licence Conditions Rule)*, certain classes of licensees are subject to obligations relating to quality of service. For example, mobile network operators are required to:

- (a) maintain a call drop-out rate of no more than 2%;
- (b) maintain a rate of call failure due to network congestion of no more than 2%;
- (c) maintain a network availability rate of at least 99.99% in specified main centres and mid-sized centres, and 98.00% in specified administrative district centres and other localities;
- (d) repair of 95% of mobile network faults occurring in specified:
  - main centres within 6 hours;
  - mid-sized centres within 24 hours;
  - administrative districts within 2 working days; and
  - small population centres within 3 working days.

In addition, the Licence Conditions Rule also requires Telikom:

- (a) to maintain a rate of network availability in respect of its fixed network of at least 99.9% in specified main centres and mid-sized centres, and 98% in specified administrative district centres and other localities;
- (b) connect 95% of new fixed telephony services in specified main centres and mid-sized centres within:
  - three working days where there is an existing fixed line connection; and
  - five and ten working days, respectively; and
- (c) repair of 95% of fixed network faults occurring in specified:
  - main centres within four working days;
  - mid-sized centres within seven working days.

All of these obligations were carried over from the original licences issued by the Independent Consumer and Competition Commission under the former telecommunications law (the *Telecommunications Act 1996*, since repealed).

The lack of a systematic measurement scheme has so far prevented NICTA from effectively enforcing compliance with these service performance obligations. The 2019 draft rule and the scheme outlined in the current discussion paper will improve NICTA's capacity to do so. However, the emphasis for now and into the foreseeable future must be on data collection, transparency and empowering consumers and business customers to make informed choices on quality issues. The market will reflect the importance that it places on these matters and will reward good quality of service performance; that is more important, and more effective, than any punitive forms of regulatory enforcement or intervention.

## **2 NICTA's RESPONSE TO COMMENTS RECEIVED IN THE FIRST CONSULTATION**

The submissions received as a result of the first consultation in October 2019 suggest that the proposed rule should be revised to include fixed telephony as well as mobile telephony, even though that will dilute the focus and priorities that NICTA wishes to maintain. NICTA has decided to adopt this amendment to its proposal and the Draft Rule enclosed at Attachment 1 has been revised accordingly.

The opportunity has been taken to make refinements to the Rule in relation to the definition of broadband internet service (now defined as a service with a download rate of 1 Mbps or more) and to require that the service in question be offered or sold as having that download rate (thereby addressing the problem as to whether a service is covered by the rule if, because of reduced quality of service, its download rate falls below the definitional threshold).

Other comments received in submissions to the first consultation related to whether publication of quality of service performance measures might be detrimental to the commercial interests of a service provider and whether results might not be used for commercial advantage by competitors.

On the first point, there is no doubt that a service provider will benefit from good and improving quality of service performance results, and equally, that poor performance will eventually be reflected in commercial results. This is to be expected. It also provides an incentive to do better.

NICTA would expect that service providers with improving service quality to consider making that part of their sales and marketing advertising, and also that a competitor's poorer performance might also be pointed out to the market. This is how competition works; competitors tout their advantages in both absolute and comparative terms.

However, NICTA understands the concern expressed in some of the comments in the first consultation that the measurement scheme needs to be carefully implemented and problems ironed out before results are published, otherwise various types of unfairness might result. For example, if the measurement scheme for one service provider differs too much from that used by another service provider, the results might lead to unfair comparisons.

As indicated in the first consultation paper, NICTA does not propose to specify minimum quality of service targets or standards at this time given that the purpose is essentially to inform. However, if in the future NICTA's performance monitoring indicates poor quality of service in particular areas, then NICTA may then consider introducing mandatory performance standards.

### **3 PROPOSED IMPLEMENTATION OF THE MEASUREMENT SCHEME**

It always remains the responsibility of each provider of any of the four relevant services identified in the proposed Rule to comply with the information gathering and reporting obligations set out in the Rule, and bear the cost of compliance.

However, there is much to be gained from adopting an industry-wide approach to the issue and to ensure that the same external contractors using the same measurement systems are deployed across the industry.

With that in mind, NICTA proposes to establish a Quality of Service Performance Measurement Committee (the "QoS Committee") (initially chaired by NICTA) to facilitate fair and reasonable, and expeditious industry implementation. The Committee will have representatives from relevant service providers. The proposed terms of reference of the Committee will include:

- Draw up detailed guidelines for fair and representative measurement of QoS parameters for each of the four services covered by the proposed Rule;
- Recommend guidelines for adoption by NICTA;
- Develop arrangements for retentions of implementation contractors across the industry; and
- Develop other industry coordination arrangements that may be required.

It is envisaged that the Committee will be established in the second half of 2020 and meet frequently in the early stages. As the implementation arrangements become established its role will become less important, but a continuing oversight role of some kind is envisaged.

## 4 PUBLIC CONSULTATION

NICTA invites interested parties to:

- (1) consider and comment on the revised draft rule at Attachment 1;
- (2) consider and comment on the proposed QoS Committee as described in this paper, and especially to comment on terms of reference such a Committee might have;
- (3) comment on matters of timing and the staged approach that NICTA intends to adopt to the measurement scheme and to publishing measures; and
- (4) any other aspect of the scheme and related issues that interested parties consider important.

**Written submissions should be submitted via email to [consultation.submission@nicta.gov.pg](mailto:consultation.submission@nicta.gov.pg) and must be received by Close of Business Friday 31 July 2020.**

Copies of all submissions received will be published on NICTA's Public Register consistent with the requirements on NICTA under subsection 229(3) of the Act. Additional procedural information is set out in the *Guidelines on the submission of written comments to public consultations and public inquiries*, which are available on NICTA's Public Register.

## ATTACHMENT A: REVISED DRAFT RULE

# TELECOMMUNICATIONS (QUALITY OF SERVICE) RULES 2020

# TELECOMMUNICATIONS (QUALITY OF SERVICE) RULES 2020

*National Information and Communications Technology Act 2009*

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The NATIONAL INFORMATION AND COMMUNICATIONS TECHNOLOGY AUTHORITY makes these Rules under section 218 of the *National Information and Communications Technology Act 2009*.

Dated [date] [month] 2020

[THIS VERSION NOT FOR SIGNATURE]

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[Name]  
Chairman

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Charles S. Punaha  
Chief Executive Officer

National Information and Communications Technology Authority

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## PART I – PRELIMINARY

### 1 Name of Rules

These Rules may be cited as *Telecommunications (Quality of Services) Rules 2020*.

### 2 Commencement

These Rules take effect from 1<sup>st</sup> October 2020.

### 3 Definitions

- (1) Subject to subsection (2), unless the context otherwise requires, terms used in these Rules have the same meaning as in the Act.
- (2) In these Rules:
  - (a) “**Act**” means the *National Information and Communications Technology Act 2009*;
  - (b) “**B-party**” is a Retail Customer located in Papua New Guinea to whom a Call is made;
  - (c) “**call**” means a continuous communication;
  - (d) “**cell**” means a geographic area served by a base station;
  - (e) “**fixed network**” means a Network that is not a Mobile Network;
  - (f) “**broadband internet access services**” means an Applications Service whereby a person is able to access internet services and applications via a connection advertised or sold as having a minimum download speed of 1Mbps;
  - (g) “**mobile network**” means a Network that:
    - (i) comprises multiple base stations that transmit and receive Radiocommunications to and from Apparatus of a B-party located in a cell associated with each base station; and
    - (ii) detects the Apparatus within which the cell is located and causes the base station supporting that that cell to transmit and receive Calls to and from that Customer Equipment;
    - (iii) enables Calls to continue without interruption when such Apparatus moves between cells;



- (h) ***“measurement period”*** means the six (6) month period from 1<sup>st</sup> January to 30<sup>th</sup> June, or 1<sup>st</sup> July to 31<sup>st</sup> December.

NOTE: The following terms are defined in the Act:

- apparatus;
- applications licensee;
- applications services;
- communication;
- customer equipment;
- network;
- NICTA;
- Radiocommunications;
- retail customer.

## **PART II – MEASUREMENT OF QUALITY OF SERVICE PARAMETERS**

### **4 Mobile telephony services**

- (1) An Applications Licensee that supplies a voice Call Communications service using a Mobile Network shall:
- (a) measure each of the quality of service parameters specified in column 2 in Schedule 1 in relation to its supply of that voice Call Communications service during a Measurement Period;
  - (b) carry out the measurements required under sub-section (1) (a) in accordance with the methods specified for such measurements in the technical standard or standards listed in corresponding entry in column 4 in Schedule 1;

### **5 Mobile broadband services**

- (1) An Applications Licensee that supplies a Broadband Internet Access Service using a Mobile Network shall:
- (a) measure each of the quality of service parameters specified in column 2 in Schedule 2 in relation to its supply of that Broadband Internet Access Service during a Measurement Period;
  - (b) carry out the measurements required under sub-section (1) (a) in accordance with the methods specified for such measurements in the technical standard or standards listed in corresponding entry in column 4 in Schedule 2; and

### **6 Fixed telephony services**

- (1) An Applications Licensee that supplies a voice Call Communications service using a Fixed Network shall:

- (a) measure each of the quality of service parameters specified in column 2 in Schedule 3 in relation to its supply of that voice Call Communications service during a Measurement Period;
- (b) carry out the measurements required under sub-section 1(a) in accordance with the methods specified for such measurements in the technical standard or standards listed in corresponding entry in column 4 in Schedule 3; and

## **7 Fixed broadband services**

- (1) An Applications Licensee that supplies a Broadband Internet Access Service using a Fixed Network shall:
  - (a) measure each of the quality of service parameters specified in column 2 in Schedule 4 in relation to its supply of that Broadband Internet Access Service during a Measurement Period;
  - (b) carry out the measurements required under sub-section (1)(a) in accordance with the methods specified for such measurements in the technical standard or standards listed in corresponding entry in column 4 in Schedule 4;

# **PART III – REPORTING AND PUBLICATION**

## **8. Quality of Service Report**

- (1) Applications Licensees shall provide NICTA with the results of its measurements within thirty (30) Days of the end of each Measurement Period.
- (2) In the report, Applications Licensees must clearly indicate the areas where the measurements are taken and or provide separate measurement reports for Urban, Semi Urban and Rural areas.
- (3) NICTA may specify the form of the report for measurements of quality of service parameters for various ICT services.
- (4) NICTA reserves the right to verify a service provider's measurements if it is necessary to ensure that the information provided is accurate by any method deemed appropriate by NICTA.

## 9. Publication of Quality of Service Information

For each measurement period, applications licensees shall, no later than thirty (30) Days after the end of each reporting period publish on their website clear and up to date information of the QoS measurements achieved during the previous measurement period.

### SCHEDULE 1: QOS PARAMETERS FOR MOBILE TELEPHONY SERVICES

(section 4)

Column 1	Column 2	Column 3	Column 4
Criterion	Parameter	Definition of parameter	Measurement method
Availability	Telephony service non-accessibility	ITU-T E.804 (02/2014) cl.7.3.6.1	ITU-T E.804 (02/2014)
Speed	Telephony set up time [s]	ITU-T E.804 (02/2014) cl.7.3.6.2	ITU-T E.804 (02/2014)
Reliability	Telephony cut-off call ratio [%]	ITU-T E.804 (02/2014) cl.7.3.6.5	ITU-T E.804 (02/2014)
Accuracy	Bill Correctness complaints (%)	ETSI ES 202 057-1 cl.5.11	ETSI ES 202 057-1
Reliability	Accessibility of the complaint management desk (%)	ETSI EG 202 843 cl.5.6.4	ETSI EG 202 843

## SCHEDULE 2: QOS PARAMETERS FOR MOBILE BROADBAND SERVICES

(section 5)

Column 1	Column 2	Column 3	Column 4
Criterion	Parameter	Definition of parameter	Measurement method
Availability	HTTP Service non-accessibility [%]	ITU-T E.804 (02/2014) cl.7.3.8.1	ITU-T E.804 (02/2014)
Speed	HTTP mean data rate [kbit/s]	ITU-T E.804 (02/2014) cl.7.3.8.7	ITU-T E.804 (02/2014)
	FTP {download   upload} mean data rate [kbit/s]	ITU-T E.804 (02/2014) cl.7.3.1.7	ITU-T E.804 (02/2014)
Latency	Ping round trip time	ITU-T E.804 (02/2014) cl.7.3.3	ITU-T E.804 (02/2014)
Reliability	HTTP IP-service access failure ratio [%]	ITU-T E.804 (02/2014) cl.7.3.8.3	ITU-T E.804 (02/2014)
	FTP {download   upload} data transfer cut-off ratio [%]	ITU-T E.804 (02/2014) cl.7.3.1.8	ITU-T E.804 (02/2014)
Accuracy	Bill Correctness complaints (%)	ETSI ES 202 057-1 cl.5.11	ETSI ES 202 057-1
Reliability	Accessibility of the complaint management desk (%)	ETSI EG 202 843 cl.5.6.4	ETSI EG 202 843

## SCHEDULE 3: QOS PARAMETERS FOR FIXED TELEPHONY SERVICES

(Section 6)

Column 1	Column 2	Column 3	Column 4
Criterion	Parameter	Definition of parameter	Measurement method
Speed	Call set up time (Successful calls only)	ETSI EG 202 057-2 Cl.5.2	ETSI EG 202 057-2
Reliability	Unsuccessful call rate %	ETSI EG 202 057-2 Cl.5.1	ETSI EG 202 057-2
Accuracy	Bill Correctness complaints (%)	ETSI ES 202 057-1 cl.5.11	ETSI ES 202 057-1
Reliability	Accessibility of the complaint management desk (%)	ETSI EG 202 843 cl.5.6.4	ETSI EG 202 843

## SCHEDULE 4: QOS PARAMETERS FOR FIXED BROADBAND SERVICES

(Section 7)

Column 1	Column 2	Column 3	Column 4
Criterion	Parameter	Definition of parameter	Measurement method
Availability	Availability of internet access	ETSI ES 202 765-4 cl.6.1	ETSI ES 202 765-4
Speed	Data transmission speed achieved	<ul style="list-style-type: none"> <li>• ETSI EG 202 057-4 cl.5.2</li> <li>• ETSI ES 202 765-4 cl.6.10</li> </ul>	<ul style="list-style-type: none"> <li>• ETSI EG 202 057-4</li> <li>• ETSI ES 202 765-4</li> </ul>
	Web page download Speed	<ul style="list-style-type: none"> <li>• ETSI EG 202 057-4 cl.5.2</li> <li>• ITU-T Rec.G.1010 (11/2001) Table I.2</li> </ul>	<ul style="list-style-type: none"> <li>• ETSI EG 202 057-4</li> <li>• ITU-T Rec.G.1010 (11/2001)</li> </ul>
Latency	IP packet transfer delay	ITU-T Y.1540 (07/2016) cl.6.2	ITU-T Y.1540 (07/2016)
Reliability	IP packet loss ratio (IPLR)	<ul style="list-style-type: none"> <li>• ITU-T Y.1540 (07/2016) cl.6.4</li> <li>• ITU-T Y.1541 (12/2011), cl.8.2.2</li> <li>• ETSI EG 202 765-3 (2009-12), cl. 4.4</li> </ul>	<ul style="list-style-type: none"> <li>• ITU-T Y.1540 (07/2016)</li> <li>• ITU-T Y.1541 (12/2011)</li> <li>• ETSI EG 202 765-3 (2009-12)</li> </ul>
Accuracy	Bill Correctness complaints (%)	ETSI ES 202 057-1 cl.5.11	ETSI ES 202 057-1
Reliability	Accessibility of the complaint management desk (%)	ETSI EG 202 843 cl.5.6.4	ETSI EG 202 843

## ATTACHMENT B: MOBILE TELEPHONY – INDICATIVE IMPLEMENTATION ARRANGEMENTS

Criterion	Parameter	Definition and measurement	Measurement method	Reporting
Speed	Telephony set up time [s]	ITU-T E.804 (02/2014) cl.7.3.6.2 (GSM & UMTS)	Network internal counters	Times of the fastest 95% and 99%. 1) Record the set-up times; 2) Make a numbered list of the times with the shortest time being #1, the second shortest being #2, etc., ... with the longest being #N; 3) Record and report the time of the entry closest to 95% of #N and of the entry closest to 99% of #N.
Reliability	Unsuccessful call ratio	ETSI EG 202 057-3 cl.6.4.1	Network internal counters	<p>Average availability over the whole reporting period</p> <p>Number of instances where the time between successive successful call attempts that are separated by unsuccessful ones exceeds 1 minute. (Measures outages)</p> <p>The sum of the times between successive successful call attempts that are separated by unsuccessful ones</p> <p>The percentage of unsuccessful calls, calculated from all the call attempts in the measurement period.</p>
Reliability	Dropped Call Ratio	ETSI EG 202 057-3 cl.6.4.2	Network internal counters	<p>&lt;2%*</p> <p>The percentage of dropped calls, calculated from all the calls in the measurement period.</p>
Accuracy	Bill Correctness ratio	ETSI ES 202 057-1 cl 5.11	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	The percentage of bills resulting in a customer complaint should be provided.

			occurrences that are the subject of the complaint.	
Reliability	Dropped call ratio	E.804 cl. 7.3.6.5	Network internal counters	<2%*
Reliability	Accessibility of the complaint management desk (%)	ETSI EG 202 843 cl.5.6.4	ratio of the number of successful attempts to the total number of attempts to reach this support	The indicator is expressed as percentage

\* As per licence condition

Explanatory Note: For unsuccessful call ratio, it is important to measure not only the average over the reporting period but also to assess the occurrence of outages.



## Reporting Form

Licensee:

Report for the 6 month period from/to:

Report prepared by: (Name in capitals and signature)

Report authorised by: (Name in capitals and signature)

Date:

Parameter	Detail	% of maximum possible number of instances on which the result is calculated	Result
1: Telephony set up time	Time of the fastest 95% of successful call setups	(e.g. 100%)	(Time in seconds to one decimal place)
	Time of the fastest 99% of successful call setups		(Time in seconds to one decimal place)
2: Unsuccessful call ratio and outages	Average unavailability over the whole reporting period - Number of unsuccessful call attempts divided by total number of call attempts		(% to one decimal place)
	Number of instances where the time between successive successful call attempts that are separated by unsuccessful ones exceeds 1 minute.		(Integer number of instances)
	Number of instances where the time between successive successful call attempts that are separated by unsuccessful ones exceeds 20 minutes.		(Integer number of instances)
3: Dropped call ratio	The number of successful call attempts ended by a cause other than the intentional		(% to one decimal place)

	termination by A- or B-party, divided by the total number of successful call attempts.		
4: Bill Correctness ratio	The percentage of bills resulting in a customer complaint should be provided.		(% to one decimal place)
5. Accessibility of the complaint management desk (%)	accessibility rate of the customer to the complaint management desk of the SP in a specified time interval.		(% to one decimal place)

Reasons why any results are calculated on less than the maximum possible number of instances:

Actions taken or planned to include 100% of instances in the calculations:

## ATTACHMENT C: FIXED TELEPHONY – INDICATIVE IMPLEMENTATION ARRANGEMENTS

Criterion	Parameter	Definition and measurement	Measurement method	Reporting
Speed	Call set up time (Successful calls only)	ETSI EG 202 057-2 Cl.5.2	measurements on real traffic for outgoing calls	<p>The following statistics should be provided separately:</p> <ul style="list-style-type: none"> <li>a) the mean value in seconds for national calls;</li> <li>b) the time in seconds within which the fastest 95 % of national calls are set-up;</li> <li>c) the mean value in seconds for international calls;</li> <li>d) the time in seconds within which the fastest 95 % of international calls are set-up;</li> <li>e) the number of observations performed for national and international calls.</li> </ul> <p>*Calls that are classified as unsuccessful calls should be excluded.</p>
Accuracy	Unsuccessful call ratio	ETSI EG 202 057-2 Cl.5.1	measurements on all real traffic	<ul style="list-style-type: none"> <li>a) The percentage of unsuccessful calls for national calls, together with the number of observations used and the absolute accuracy limits for 95 % confidence calculated from this number.</li> <li>b) The percentage of unsuccessful calls for international calls, together with the number of observations used and the absolute accuracy limits for 95 % confidence calculated from this number.</li> </ul>
Accuracy	Bill Correctness ratio	ETSI ES 202 057-1 cl 5.11	Statistics should include all billing complaints received in the reporting period,	The percentage of bills resulting in a customer complaint should be provided.

			regardless of the validity of the complaint and the dates of calls or any other occurrences that are the subject of the complaint.	
Reliability	Accessibility of the complaint management desk (%)	ETSI EG 202 843 cl.5.6.4	ratio of the number of successful attempts to the total number of attempts to reach this support	The indicator is expressed as percentage

## Reporting Form

Licensee:

Report for the 6 month period from/to:

Report prepared by: (Name in capitals and signature)

Report authorised by: (Name in capitals and signature)

Date:

Parameter	Detail	% of maximum possible number of instances on which the result is calculated	Result
Call set up time (Successful calls only)	the mean value in seconds for national calls;		Time in seconds to one decimal place
	the time in seconds within which the fastest 95 % of national calls are set-up;		Time in seconds to one decimal place
	the mean value in seconds for international calls;		Time in seconds to one decimal place
	the time in seconds within which the fastest 95 % of international calls are set-up;		Time in seconds to one decimal place
	the number of observations performed for national and international calls.		Integer number of instances

Unsuccessful call ratio	The percentage of unsuccessful calls for national calls, together with the number of observations used and the absolute accuracy limits for 95 % confidence calculated from this number.		% to one decimal place
	The percentage of unsuccessful calls for international calls, together with the number of observations used and the absolute accuracy limits for 95 % confidence calculated from this number.		% to one decimal place
Bill Correctness ratio	The percentage of bills resulting in a customer complaint should be provided.		(% to one decimal place)
Accessibility of the complaint management desk (%)	The accessibility rate of the customer to the complaint management desk of the applications licensee.		(% to one decimal place)

## **ATTACHMENT D: MOBILE AND FIXED BROADBAND INTERNET – INDICATIVE IMPLEMENTATION ARRANGEMENTS**

### **Information required:**

1. List of periods of more than 1 minute duration when the Internet network access system handling the control of access to the Internet and the allocation of dynamic IP addresses was not fully operational to the extent that user access was affected, together with the cause of the problem. Scheduled outages are to be included.
2. Total active international transmission capacity for Internet traffic contracted at the start and end of the reporting period.
3. List of periods of more than 10 minutes duration when the available international transmission capacity for Internet traffic was lower than 80% of the capacity contracted.
4. A description of the caching arrangements and capacity for caching international Internet traffic showing information for HTTP and streaming services separately.
5. The busy hour times for traffic handled by local servers and for international internet traffic, given separately for each month.
6. The percentage of bills resulting in a customer complaint
7. The accessibility rate of the customer to the complaint management desk of the applications licensee.

## Reporting Form

Licensee:

Report for the 6 month period from/to:

Report prepared by: (Name in capitals and signature)

Report authorized by: (Name in capitals and signature)

Date:

**List of periods of more than 1 minute duration when the Internet network access system was not fully operational.**

Date	Time of start	Duration	Extent of network affected	Cause

**Total active international transmission capacity for Internet traffic contracted at the start and end of the reporting period.**

Date	Capacity

Where capacity is contracted on a statistical basis (e.g. a certain amount guaranteed and an additional amount available if not used for other purposes, then the guaranteed amount and the possible maximum should be shown separately.



**List of periods of more than 10 minutes duration when the available international transmission capacity for Internet traffic was lower than 80% of the capacity contracted.**

Date	Time of start	Duration	Approximate % of total capacity still available	Cause

**Description of the caching arrangements and capacity for caching international Internet traffic**

No format is specified, but NICTA may specify a format at a later date.

**Busy hour times**

Month	National traffic - See Note	International traffic

Note: If it is not practicable to distinguish national and international traffic then the busy hour can be specified for combined traffic.

Parameter	Detail	% of maximum possible number of instances on which the result is calculated	Result
Bill Correctness ratio	The percentage of bills resulting in a customer complaint should be provided.		(% to one decimal place)
Accessibility of the complaint management desk (%)	The accessibility rate of the customer to the complaint management desk of the applications licensee.		(% to one decimal place)