



**Malaysian Communications and Multimedia
Commission**

**PROPOSAL FOR THE DETERMINATION
OF MANDATORY STANDARDS FOR
QUALITY OF SERVICE**

This Public Inquiry Paper was prepared in fulfilment of Section 104(2) of the
Communications and Multimedia Act 1998

8 April, 2002

PREFACE

In this public inquiry paper, the Commission seeks to invite submission from members of the public and participants of the industry on the questions raised in this paper. Written submissions, in both **hard copy** and **electronic form**, should be provided to the Commission in full by **12 noon, 23 May 2002**. Submissions should be addressed to:

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In the interest of fostering an informed and robust consultative process, the Commission may publish the comments received. Any commercially sensitive information should be provided under a separate cover clearly marked '**Confidential**'.

The Commission thanks interested parties for their participation in this consultative process and for providing their written submissions.

**PROPOSAL FOR THE DETERMINATION OF MANDATORY STANDARDS FOR
QUALITY OF SERVICE**
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CHAPTER 1: INTRODUCTION

1 In exercise of the powers conferred by sections 7 and 104(3) of the Communications and Multimedia Act 1998 [Act 588], the Minister has issued a Ministerial Direction on Quality of Service, Direction No.1 of 2002 to the MCMC to determine mandatory standards on the quality of service for the following services:

- (a) public cellular services;
- (b) Public Switched Telephone Network (PSTN);
- (c) Internet access service using a dial-up connection;
- (d) satellite broadcasting;
- (e) terrestrial free to air TV; and
- (f) terrestrial radio broadcasting.

2 The existing quality of service frameworks REG Q001 and REG Q002 cover the Mobile Cellular and Fixed Telephone Services respectively and has been in existence since 1997.

3 Since the inception of these frameworks in 1997, the respective service providers have been required to submit reports on key service performance indicators such as public cellular endpoints service availability, service complaints, on-street and in-building coverage, which have specific benchmarks or standards that need to be met by each service provider.

Consumer Satisfaction Index

4 The MCMC regularly conducts independent assessments on its own to gauge consumers' perception of service quality based on their experience through the Consumer Satisfaction Surveys. Such surveys has produced report on consumer satisfaction.

5 Based on the activities mentioned, it is very evident that the customers' experience in using a service will determine their level of satisfaction and confidence with the service that has been or is being delivered.

- 6 Further, having a network that has met all the technical standards is no guarantee that customer satisfaction can be achieved. The customers must also be able to access, be billed accurately and use the services most of the time, if not always. The services must also be delivered in a way that is acceptable to the customers i.e. at the very least, on par with accepted service standards.
- 7 Although some may argue that the customers' perception also plays an important role in this, the customers' experience will be the more vital ingredient. The notion that advertising and pricing will influence the perception and behaviour of customers is perhaps true to a certain point but at the end of the day, as the initial euphoria over cheap pricing and perceived good service dwindles, customer satisfaction will determine whether the customer stays loyal or not.

Quality of Service Benchmark

- 8 Where as consumer satisfaction index captures the mood and perception of customers at any particular time on the service quality offered, quality of service benchmarks on the other hand are the objective measures of service quality. In this respect, quality of service includes customer service, billing practices, and network performance. MCMC has from time to time conducts tests and audits specific areas of quality of service to ascertain the level of service that is maintained or offered to the customers.
- 9 In view of changes in the industry since the CMA 1998 came into force there is now a need to review the framework. The review should streamline the quality of service frameworks to the new regulatory environment as well as to consider new inputs from the service providers since the implementation of the two REG-Qs. The review also aims to reduce or eliminate unnecessary requirements.
- 10 Ensuring the minimum quality of service is maintained all the time is very important in ensuring customer satisfaction and protection. In selecting a particular benchmark to gauge the Quality of Service (QOS), the benchmark should be meaningful to the customer for them to assess and make informed decisions on the level of quality that they are getting. It is useful also for MCMC to gauge the performance of service operators in fulfilling its role to monitor and report on industry performance under s123 of the CMA.

- 11 Measures that are objective, measureable, and auditable are important to ascertain whether the minimum quality of service has been maintained. In this respect, the approach have been to rely on test sampling, observed measurements and to fall on provisions in s268 of the CMA in records keeping and auditing where appropriate.
- 12 In achieving a particular level of QOS, a combination of various elements must be achieved and they are:
- (a) Network design to standards
 - (b) Reliability of network elements
 - (c) Service level management
- 13 There is also the need to establish QOS benchmarks for other application services such as Internet access services and content applications services in view of the absence of benchmarks or standards for those services. Other service areas may be introduced at a later stage.

Competition Drives Quality

- 14 As the communications and multimedia market grow more competitive, the need for service providers to provide good service to attract and keep customers should serve as an incentive to maintain high quality service. However in the relatively early stage of the development of competition, mandating quality of service requirements and reporting them may allow consumers to make informed choices about their service providers. Also for the effective functioning of competitive markets as well as the promotion of consumer awareness and protection, consumers having access to accurate, meaningful information, about service quality, can and does have an effect on consumer purchasing decisions.
- 15 This consultation paper will discuss the minimum quality of service requirements for Applications services such as PSTN and Public Cellular Services, Content Applications Services, namely satellite broadcasting, terrestrial free-to-air TV and terrestrial radio broadcasting and Internet Access Service using a dial-up connection.
- 16 For minimum QOS standards to be achieved in the CMA licensing framework, CASP/ASP are advised to look into or arrange for Service Level Agreements (SLAs) with their NSP, and NFP providers.

Non Compliance with a mandatory standard

- 17 It is to be noted that non compliance with a mandatory standard is a breach of section 105(3) of the CMA. Section 242 of the CMA makes this breach an offence for which the offender shall be liable to a fine not exceeding one hundred thousand ringgit or to imprisonment for a term not exceeding two years or both.

CHAPTER 2 : PROPOSED QUALITY OF SERVICE FRAMEWORK

A. PUBLIC SWITCHED TELEPHONE NETWORK (PSTN) SERVICE

18 This section applies to all Applications Service Providers (ASP) providing PSTN services. The proposed quality of service framework is as follows:

PERFORMANCE OF INSTALLATION ORDERS

Definition

19 Installation Time is the time taken from signing of agreement on-line or at the business outlet or the mutually committed start time to the time when the basic telephone service is provided. Relocation with no number change is to be included. Public holidays and weekends are excluded from the above consideration. This applies to both residential and business installation orders.

20 The above time duration is made with the assumption that Internal Telecommunication Wiring and network infrastructure are available.

Standard

21 70% of applicants should receive service within 24 hours.

22 80% of applicants should receive service within 48 hours.

23 All applicants should receive service not later than 7 days or within the mutually agreed or committed deadlines.

Measurement

24 The measurement of the standard shall be based on the data collected and submitted by the ASP. The data is to be checked and reported by the ASP for the period ending 30/6 and 31/12. Installation orders not met due to the following may be excluded from the count :

- (a) Wrong address given by customer;
- (b) Network infrastructure damaged due to natural disaster or by third party;
- (c) Customer premises closed or inaccessible;
- (d) Customer internal wiring not ready at the committed or agreed time;

- (e) Installation order withheld due to payment (deposit and any upfront payments) trouble;
- (f) Customer cancels or defers agreed appointment time

Reporting

- 25 The data is to be reported to the Commission not later than six weeks after the end of each half yearly reporting period. The report shall include Total Installations for the Period with further breakdown as Total Installations Within 24 Hours and Total Installations Within 48 Hours.

SERVICE TROUBLE REPORT RATE

Definition

- 26 This relates to the number of reported troubles on PSTN application service by the customer to the reporting center per 1000 lines per year. It is described by the following ratio:

$$\frac{\text{Total number of cumulative troubles reported over a 12 months rolling period} \times 1000}{\text{Total number of exchange lines at the end of the each reporting period}}$$

Standard

- 27 Less than 500 faults reported per 1000 lines per year .

Measurement

- 28 Trouble reports are classified as all types of troubles on PSTN service which are reported to the reporting center by the end-user and which are confirmed by the PSTN application service provider. Trouble report which may be excluded from the count are:

- (a) Trouble with Customer Premise Equipment ;
- (b) Cable cuts not due to service provider ;
- (c) Faults due to other service provider;
- (d) Customer not knowing how to use the service
- (e) Modem speed trouble report if the line has been checked and found to meet the standard

- 29 The measurement of the standard shall be based on the data collected and submitted by the ASP. The data is to be checked and reported by the ASP for the period ending 30/6 and 31/12. Calculation is based on a 12 months rolling basis.

Report

- 30 The report should be submitted to the Commission not later than six weeks after the end of each half yearly reporting period. The data is to be reported as Total Number of Trouble Reported for the Period with a further breakdown of Trouble Reported by region for the Period.

SERVICE RESTORATION PERFORMANCE

Definition

- 31 This relates to the action taken to restore a fault from the time it was reported by the customer to the time of restoration. The restoration time is calculated from the time of report to the time of restoration, including Weekends and public holidays.

Standard

- 32 80% within 24 hours.
- 33 90% within 48 hours.

Measurement

- 34 The measurement of the standard shall be based on the data collected and submitted by the ASP. The data is to be checked and reported by the ASP for the period ending 30/6 and 31/12.

Reporting

- 35 The report should be submitted to the Commission not later than six weeks after the end of each half yearly reporting period. The data is to be reported as Total Number of Services Restored for the Period with further breakdown as Total Number of Services Restored Within 24 Hours and Total Number of Services Restored Within 48 Hours.

BILLING PERFORMANCE

Definition

- 36 This relates to the handling of billing to customers and is reflected in the number of complaints received from customers due to billing errors and the timeliness in resolving billing disputes.

Standard

- 37 Accuracy in billing – Less than 2% of billing complaints are due to wrongly billing.
- 38 Timeliness in resolving billing dispute
- (a) 70% of complaints resolved within 14 working days
 - (b) 90% of complaints resolved within 30 working days.

Measurement

- 39 All complaints on each bill are taken as one complaint. Fraud complaints and wrong address on the bill are not taken into consideration. However, these types of complaints are to be reflected in the breakdown of Types and Number of Billing Complaints Received. The types of billing complaints could include but is not limited to:
- (a) payment made & wrongly / not credited;
 - (b) double charges;
 - (c) deposit not refunded;
 - (d) deposit refund delay;
 - (e) bill received late;
 - (f) bill not received;
 - (g) fraud complaints;
 - (h) wrong address on the bill, and
 - (i) other billing errors.
- 40 The measurement of the standard shall be based on the data collected and submitted by the ASP. The data is to be checked and reported by the ASP for the period ending 30/6 and 31/12.

Reporting

- 41 The report on billing accuracy, timeliness in resolving billing disputes and the breakdown of Types and Number of Billing Complaints Received should be submitted to the Commission not later than six weeks after the end of each half yearly reporting period.

GENERAL CUSTOMER COMPLAINTS

Definition

- 42 This relates to any general complaint received on service matters including, but are not limited to, late or no installation, late or no restoration after a fault complaint, poor line quality, staff or contractor conduct, and customer services. It is described by the ratio:

$$\frac{\text{Total number of cumulative complaints received over a 12 months rolling period} \times 1000}{\text{Total number of exchange lines at the end of each reporting period}}$$

- 43 Fault reports and billing complaints are excluded as they are reported separately.

Standard

- 44 Less than 50 per 1000 lines per year

Measurement

- 45 The types of General Customer Complaints to include could be but is not limited to:

- (a) wrong information given;
- (b) waivers not given;
- (c) unprofessional conduct of staff / agents;
- (d) unavailability of service;
- (e) late service installation and provision;
- (f) late service restoration;
- (g) unsatisfactory installation / restoration / repair;

- 46 The measurement of the standard shall be based on the data collected and submitted by the ASP. The data is to be checked and reported by the ASP for the period ending 30/6 and 31/12. Calculation is based on a 12 month rolling basis.

Reporting

- 47 The report should be submitted to the Commission not later than six weeks after the end of each half yearly reporting period. The data is to be reported as Total Number of General Customer Complaints for the Period with further breakdown by Types and Number of Complaints Received.

OPERATOR SPEED OF ANSWER

- 48 Applies to all operator assisted services including but not limited to Directory Service, Emergency Service, Service Enquiry, Help Desk, Fault and Repair Service, Operator assisted international and national calls, etc.

Definition

- 49 This relates to calls answered by telephone operators (live persons) excluding machine answered calls. If an automatic answer machine is included in as an integral part of the service, the waiting time before the live operator comes in shall be included in the answering time.

Standard

- 50 90% of calls to be answered within 10 seconds for emergency calls and within 20 seconds for others. Less than 1% of calls shall encounter a busy signal.

Measurement

- 51 The measurement of the standard shall be based on test call sampling or service observation done during a normal busy hour of a Busy Period at least once a year. The data to be collected are on the total number of busy, number of calls received and the total numbers answered within 10 seconds for emergency calls and 20 seconds for others. Calculation shall be based on these test calls or service observation.

- 52 For test call sampling method, the minimum sampling size will be 30 test calls.

Reporting

- 53 No reporting is required. The data collected through test calls or service observation will be done by the service providers or appointed third parties and observed by MCMC.

TRUNK CALL CONNECTION LOSS (INTRA NETWORK SERVICE)

Definition

- 54 This relates to subscriber trunk calls that are lost while trying to get through the network from an originating or trunk switch to a terminating switch with a different trunk code of the same network service. It may be due to network congestion and technical fault (total network breakdown excluded). It is described by the ratio:

$$\frac{\text{Number of call failure} \times 100}{\text{Total number of calls sampled/observed in the busy hour period}}$$

Standard

- 55 Less than 6%

Measurement

- 56 The measurement of the standard shall be based on test call sampling or service observation done during a normal busy hour of a Busy Period at least once a year. Calculation shall be based on these test calls or service observation.
- 57 All calls that cannot be established due to technical faults (such as poor network quality, incorrect signaling, etc, excluding total network breakdown) and network congestion are included in the count.
- 58 For test call sampling method, the minimum sampling size will be 30 test calls per trunk code area.

Reporting

- 59 No reporting is required. The data collected through test calls or service observation will be done by the service providers or appointed third parties and observed by MCMC.

TRUNK CALL CONNECTION LOSS (INTER NETWORK SERVICE)

Definition

- 60 This relates to subscriber trunk calls that are lost while trying to get through the network from an originating or trunk switch at Point-of-Interconnect (POI) to a terminating switch with a different trunk code of a different network service. It may be due to network congestion and technical faults (total network breakdown excluded). It is described by the ratio:

$$\frac{\text{Number of call failure} \times 100}{\text{Total number of calls sampled/observed in the busy hour period}}$$

Standard

61 Less than 6%

Measurement

62 The measurement of the standard shall be based on test calls or service observation done during a normal busy hour of a Busy Period at least once a year.

63 Test calls or service observation done during a busy hour of the Busy Period as viewed from Point-of-Interconnection (POI) (i.e. viewed from one network to another operator's network) is used to derive the measurement. All POIs shall be included for the measurement.

64 All calls that cannot be established due to technical faults (such as poor network quality, incorrect signaling, etc, excluding total network breakdown) and end-to-end network congestion are included in the count.

65 For test call method, the minimum sample size is 30 per POI.

66 Calculation shall be based on test calls measurements or service observation.

Reporting

67 No reporting is required. The data collected through test calls or service observation will be done by the service providers or appointed third parties and observed by MCMC.

B. PUBLIC CELLULAR TELEPHONE APPLICATIONS SERVICE

68 This section applies to Applications Service Providers (ASP) providing Public Cellular Telephone Applications Service. The proposed service quality framework is as follows:

BILLING PERFORMANCE

Definition

69 This relates to the handling of billing to customers and is reflected in the number of complaints received from customers due to billing errors and the timeliness in resolving billing disputes.

Standard

70 Accuracy – Less than 2% of billing complaints found to be wrongly billed.

71 Timeliness in resolving billing dispute

(a) 70% up to a maximum duration of 14 working days

(b) 90% up to a maximum duration of 30 working days.

Measurement

72 All complaints on each bill are taken as one complaint. Fraud complaints and wrong address on the bill are not taken into consideration. However, these types of complaints are to be reflected in the breakdown of Types and Number of Billing Complaints Received.

73 The types of billing complaints to include could be but is not limited to:

(a) payment made & wrongly / not credited;

(b) double charges;

(c) deposit not refunded;

(d) deposit refund delay;

(e) bill received late;

(f) bill not received;

(g) fraud complaints;

(h) wrong address on the bill, and

(i) other billing errors.

74 The measurement of the standard shall be based on the data collected and submitted by the ASP. The data is to be checked and reported by the ASP for the period ending 30/6 and 31/12.

Report

75 The report on billing accuracy, timeliness in resolving billing disputes and the breakdown of Types and Number of Billing Complaints Received should be submitted to the Commission not later than six weeks after the end of each half yearly reporting period.

GENERAL CUSTOMER COMPLAINTS

Definition

76 This relates to any general complaint received on service matters including, but are not limited to, late or no service activation, late or no service restoration after a service coverage outage complaint, poor line quality, inefficient value added services, staff or contractor conduct, and customer services. It is described by the ratio:

$$\frac{\text{Total number of cumulative complaints received on a 12 months rolling period} \times 1000}{\text{Total number of customers at the end of each reporting period}}$$

77 Fault reports and billing complaints are excluded.

Standard

78 Less than 20 service complaints per 1000 customers per year.

Measurement

79 The types of General Customer Complaints to include could be but are not limited to:

- (a) wrong information given;
- (b) waivers not given;
- (c) unprofessional conduct of staff / agents;
- (d) unavailability of service;
- (e) late service provision;

- (f) late service restoration;
- (g) disruption of service;
- (h) erroneous service disconnection or suspension; and
- (i) pre-paid reload amount not credited.

80 The measurement of the standard shall be based on the data collected and submitted by the ASP. The data is to be checked and reported by the ASP for the period ending 30/6 and 31/12. Calculation is based on a 12 month rolling basis.

Reporting

81 The report should be submitted to the Commission not later than six weeks after the end of each half yearly reporting period. The data is to be reported as Total Number of General Customer Complaints for the Period with further breakdown by Types and Number of Complaints Received.

ENDPOINTS SERVICE PERFORMANCE

Definition

82 Endpoints are defined as the interface between the customer and the equipment providing access to the service.

83 Endpoints Service Availability (ESA) is defined as the percentage of time a usable call can be established and maintained between two endpoints. It is described by the ratio:

$$\frac{[\text{No. of calls attempts} - \text{No. of calls blocked} - \text{No. of calls dropped}] \times 100}{\text{Total number of calls attempt}}$$

84 Number of blocked calls are those times where there is no free channel to serve a call attempt. Number of calls dropped are those where a connection has been successful (network accessed, set-up successful, communication channel assigned) but was disconnected due to abnormal call release.

85 This assessment is done from the view of what the customer gets from their ends.

Standard

- 86 ESA better than 90% of intra network calls.
- 87 ESA better than 80% of inter network calls.
- 88 Less than 5% of dropped calls for intra network calls.

Measurement

- 89 Measurement is done through test measurements at least once a year. The derived data from testing shall be for intra and inter network endpoints service availability and will be based on a system drive test and static test. The drive and static test data shall contribute in a 70:30 ratio respectively to the composite ESA. The drive tests shall be on main routes whereas static tests shall be mainly in public access, business and commercial locations. For inter network tests, the terminating endpoint shall be a test number attached to the mobile switching center.
- 90 Call holding time is set to last 60 seconds with another 5 seconds interval time. If any call is blocked or dropped, it stays at idle for the rest of the call duration until the next attempt is made.

System Drive Test

- 91 This test will be done in areas to be identified by the MCMC based on the areas with service coverage as provided by the service providers to their customers. Each area would require 200km or about 5 hours driving time, on average, and would pass, as many as possible, main roads, public access and hot spot areas within each area.
- 92 The maximum speed of the drive shall be not exceed the speed limits in the city and highways. A minimum sample of 30 calls for each network will be required for each area. This test is done on intra network only. The dedicated originating and terminating mobile unit's antenna shall be placed at the same height and in the same vehicle. This test is to be done on business days only.

Static Test

- 93 This test will be done in areas to be identified by the MCMC based on areas with service coverage as provided by the service providers to their customers. A minimum sample of 30 calls each for inter and intra network calls per network will

be required for each area. The tests are done on the same spot. This test is to be done on business days only.

Reporting

- 94 No reporting is required. The data collected through test calls or service observation will be done by the service providers or appointed third parties and observed by MCMC.

C. INTERNET ACCESS SERVICES

95 This section applies to Applications Service Providers providing Dial-Up Internet Access Service. The proposed service quality framework is as follows:

DIAL UP PERFORMANCE

Definition

96 This relates to the number of attempts and time to access the IASP node and it includes the time from the dial command until the “log-in” is completed as well as the average file download time for a standard graphic or random text file of approximately 30Kbytes from a local web site.

Standard

- 97 Time to access – 95% of attempts are connected within 30 seconds
- 98 Probability of access to IASP node – 90% within three attempts
- 99 Average File download time – 80% modem line speed at least 95% of the time.

Measurement

- 100 Measurement is made based on a standard ITU v.90 modem accessing the nearest IASP node and downloading a standard file.
- 101 The standard user end computer configuration is a minimum of Pentium III/Equivalent and 128Mbyte memory running only a standard browser application.
- 102 The measurement of the standards shall be based on test calls or service observation for each IASP node at least once a year.
- 103 For test calls, the minimum sample size is 30 per IASP node.

Reporting

- 104 No reporting is required. The data collected through test calls or service observation will be done by the service providers or appointed third parties and observed by MCMC.

GENERAL CUSTOMER COMPLAINTS

Definition

- 105 This relates to any general customer complaints received on service matters including but are not limited to, matters such as unavailability, inaccessibility or instability of service, transmission speed is not as promised and other customer service complaints. It is described by the ratio:

$$\frac{\text{Total number of cumulative complaints received on a 12 months rolling period} \times 1000}{\text{Total number of customers at the end of each reporting period}}$$

Standard

- 106 Less than 50 complaints per 1000 customers per year.

Measurement

- 107 The types of General Customer Complaints could include but is not limited to:

- (a) inaccurate information given;
- (b) unprofessional conduct of staff / agents;
- (c) unavailability of service;
- (d) service disruption;
- (e) late service provision;
- (f) late service restoration;

- 108 The measurement of the standard shall be based on the data collected and submitted by the ASP. The data is to be checked and reported by the ASP for the period ending 30/6 and 31/12. Calculation is based on a 12 month rolling basis.

Report

- 109 The report should be submitted to the Commission not later than six weeks after the end of each half yearly reporting period. The data is to be reported as Total Number of Complaints for the Period with further breakdown by Types and Number of Complaints Received.

BILLING PERFORMANCE

Definition

- 110 This relates to the handling of billing to customers and is reflected in the number of complaints received from customers due to billing errors and the timeliness in resolving billing disputes.

Standard

- 111 Accuracy in billing – Less than 2% of billing complaints are due to wrongly billing.
- 112 Timeliness in resolving billing dispute
- (a) 70% of complaints resolved within 14 working days
 - (b) 90% of complaints resolved within 30 working days.

Measurement

- 113 All complaints on each bill are taken as one complaint. Fraud complaints and wrong address on the bill are not taken into consideration. However, these types of complaints are to be reflected in the breakdown of Types and Number of Billing Complaints Received. The types of billing complaints could include but are not limited to:
- (a) payment made & wrongly / not credited;
 - (b) double charges;
 - (c) deposit not refunded;
 - (d) deposit refund delay;
 - (e) bill received late;
 - (f) bill not received;
 - (g) fraud complaints;
 - (h) wrong address on the bill, and
 - (i) other billing errors.
- 114 The measurement of the standard shall be based on the data collected and submitted by the ASP. The data is to be checked and reported by the ASP for the period ending 30/6 and 31/12.

Reporting

- 115 The report on billing accuracy, timeliness in resolving billing disputes and the breakdown of Types and Number of Billing Complaints Received should be submitted to the Commission not later than six weeks after the end of each half yearly reporting period.

D. CONTENT APPLICATIONS SERVICE

- 116 This section applies to all Content Applications Service Providers (CASPs) i.e. Satellite, Terrestrial, Video and Audio broadcasting providing TV and Radio FM broadcasting service (excluding broadcasting done over the web).

ANNUAL SERVICE AVAILABILITY

Definition

- 117 This relates to the availability of the service to the customers. It captures the total transmission downtime or disruption to the service due to service failure including but are not limited to, failure in the feed and or transmission over the period of one year. It is described by the ratio:

$$\frac{[\text{Total Time of Transmission per year} - \text{Total downtime per year}] \times 100}{\text{Total Time of Transmission per year}}$$

Standard

- 118 99% per year.

Measurement

- 119 The measurement of the standard shall be based on the data collected for each transmitter service area and submitted by the ASP. The standard is calculated for each transmitter service area and averaged for the overall service. The data is to be checked and reported by the ASP for the period ending 30/6 and 31/12. Calculation is based on a 12 month rolling basis.

Reporting

- 120 The report should be submitted to the Commission not later than six weeks after the end of each half yearly reporting period. The data to be reported here is the number of hours downtime per year per transmitter service area.

BILLING PERFORMANCE

- 121 Applies only to CASPs providing subscription services.

Definition

- 122 This relates to the handling of billing to customers and is reflected in the number of complaints received from customers due to billing errors and the timeliness in resolving billing disputes.

Standard

- 123 Accuracy – Less than 2% of billing complaints found to be wrongly billed.
- 124 Timeliness in resolving billing dispute
- (a) 70% up to a maximum duration of 14 working days
 - (b) 90% up to a maximum duration of 30 working days.

Measurement

- 125 All complaints on each bill are taken as one complaint. The types of billing complaints include but are not limited to:
- (a) payment made & wrongly / not credited;
 - (b) double charges;
 - (c) deposit not refunded;
 - (d) deposit refund delay;
 - (e) bill received late;
 - (f) bill not received;
 - (g) fraud complaints;
 - (h) wrong address on the bill, and
 - (i) other billing errors.
- 126 Fraud complaints and wrong address on the bill are not taken into consideration. However, these types of complaints are to be reflected in the breakdown of Types and Number of Billing Complaints Received.
- 127 The measurement of the standard shall be based on the data collected and submitted by the CASP. The data is to be checked and reported by the CASP for the period ending 30/6 and 31/12.

Reporting

- 128 The report on billing accuracy, timeliness in resolving billing disputes and the breakdown of Types and Number of Billing Complaints Received should be submitted to the Commission not later than six weeks after the end of each half reporting period.

CHAPTER 3: QUESTIONS FOR COMMENTS

Questions

- a. The Commission solicits comments on the appropriateness of the items listed in Chapter 2 above. Notwithstanding, we welcome suggestions on any additional type of services and/or items that would require the QOS standards to be determined.
- b. The Commission seeks comments in mandating service providers to abide by the QOS standards listed.