

**COMMUNICATIONS AND MULTIMEDIA ACT 1998**

**COMMISSION DETERMINATION ON THE MANDATORY STANDARDS FOR**

**QUALITY OF SERVICE**

**(PUBLIC CELLULAR SERVICE)**

**DETERMINATION No. 2 of 2002**

Pursuant to the Ministerial Direction on Quality of Service, Direction No. 1 of 2002, and in exercise of the powers conferred by sections 55 and 104(2) of the Communications and Multimedia Act 1998 [Act 588], the Commission hereby determines as follows:

**Citation and commencement**

1. This Determination may be cited as the **Commission Determination on the Mandatory Standards for Quality of Service (Public Cellular Service), Determination No. 2 of 2002**.
2. This Determination shall come into operation on 1 January 2003

**Interpretation**

3. In this Determination, unless the context otherwise requires:

“ASP” means an applications service provider;

“business day” means a day other than the weekly rest day, the day before the weekly rest day and a public holiday;

“busy hour” means any hour in a busy period;

“busy period” means the period between 9 a.m. to 12 p.m. and 2 p.m. to 5 p.m. on a business day;

“consumer” means a person who receives, requires, acquires, uses or subscribes to communications and multimedia services and includes a customer;

“customer” means a person who, for consideration, acquires or subscribes to the public cellular service;

“customer base” means the total number of subscribers for an ASP’s public cellular service less customers who have been disconnected;

“effective call” means a call connection between two cellular access devices which enables communication to proceed;

“public cellular service” means an applications service involving a network of base stations or cells for the delivery of voice and data communications.

4. Any term used in this Determination shall, unless the context otherwise requires, have the same meaning as in the Act or the regulations made under it.

5. Unless the context otherwise requires, the words in the singular include the plural and vice versa.

#### **Licencees subject to these mandatory standards**

6. All ASPs providing public cellular service shall be subject to these mandatory standards. ASPs are advised to ensure that other service providers who can affect the quality of service provided by the ASPs are bound by service level agreements which enable them to meet the standards.

#### **Standards on billing performance**

7. Billing performance means the integrity and reliability of the billing system as shown in billing accuracy and timeliness in resolving billing disputes, which will be reflected in the number of billing complaints. Billing complaints include payments made and wrongly credited or not credited, double charges, non-refund of deposits, late bills, non-receipt of bills, fraud, wrongly addressed bills and other billing errors.

8. The percentage of billing complaints in any one billing period shall not exceed 2% of the total number of bills issued during that billing period. For this purpose all billing complaints on one bill shall be taken as one complaint.

9. Billing complaints shall be resolved within the following time frames

90% of billing complaints shall be resolved within 15 business days of receipt of the complaint; and

95% of billing complaints shall be resolved within 30 business days of receipt of the complaint.

10. The measurement is described by the ratio:

$$\frac{\text{Total number of billing complaints for a billing period} \times 100}{\text{Total number of bills issued over the billing period}}$$

11. Complete and accurate records of billing complaints shall be maintained. Such reports shall be in the form and format as may be prescribed by the Commission from time to time. Each report shall be accompanied by a declaration signed by an officer of the service provider duly authorised by the board of directors, stating that the report is true and accurate. These reports shall be submitted to the Commission not later than six weeks after 30 June for reporting period January to June, and 31 December for reporting period July to December respectively.

## Standards on endpoint service availability

12. Endpoint service availability (ESA) means the percentage of effective calls whether for an intra network call connection or an inter network call connection that can be established and maintained between two cellular mobile access devices. A cellular mobile access device means a device to access a radio network in one of the cellular bands. Intra network call connection means a call connection within the network service of one provider. Inter network call connection means a call interconnection between the network service of two providers.

13. The ESA shall not be less than 90% for both intra and inter network call connections.

14. The measurement is described by the ratio:

$$\frac{(\text{Number of attempted calls} - \text{number of calls blocked} - \text{number of dropped calls}) \times 100}{\text{Total number of attempted calls}}$$

Blocked call means a call which is not connected because there is no free channel to serve a call attempt.

Dropped call means a call where a connection succeeds (i.e. the network is accessed and set up is successful, whether or not the communication channel is assigned) but is disconnected due to abnormal call release.

15. Not more than 5% of intra network calls should result in dropped calls.

16. The measurement is described by the ratio:

$$\frac{\text{Number of dropped calls} \times 100}{\text{Total number of attempted calls}}$$

17. The ESA testing shall be as follows:

Intra network ESA testing shall be by way of static tests and system drive tests in the ratio 50:50.

(b) Inter network ESA testing shall be by way of static tests.

(c) The test call sequence for both tests shall be as follows:

(i) Call holding time set to last 60 seconds with not more than an interval of 10 seconds between calls;

(ii) If any call is blocked or dropped the test system shall stay idle for the rest of the call duration and interval until the next call attempt is made.

For inter network ESA testing, the terminating end point shall be a test number attached to a mobile switching centre.

18. Static tests shall be conducted as follows:

The test shall be conducted while stationary in areas accessible to the public where the relevant service provider has coverage.  
The measurement shall be based on test call sampling on business days.  
The minimum sample size shall be 30 test calls.

19. System drive tests shall be conducted as follows:

The tests shall be conducted while driving on main roads and high density commercial and residential areas.

Each area where the tests are conducted should cover not less than 200 km or 5 hours driving time.

(c) The dedicated originating and terminating mobile unit's antenna shall be placed at the same height and in the same vehicle.

### **Standard on general customer complaint handling**

20. General customer complaint means any complaint received on service matters including late or no service activation, late or no service activation after a complaint, poor line quality, unprofessional staff and other complaints related to customer services.

21. The number of general customer complaints shall not exceed 50 complaints per 1000 customers in a 12 month period.

22. The measurement is described by the ratio:

$$\frac{\text{Total number of complaints received over a 12 month period} \times 1000}{\text{Customer base at the end of the reporting period}}$$

23. Complete and accurate records of all customer complaints shall be maintained. Such reports shall be in the form and format as may be prescribed by the Commission from time to time. Each report shall be accompanied by a declaration signed by an officer of the service provider duly authorised by the board of directors, stating that the report is true and accurate. These reports shall be submitted to the Commission not later than six weeks after 30 June for reporting period January to June, and 31 December for reporting period July to December respectively.

### **Standard on operator speed of answer**

24. Operator speed of answer means the speed in which a call is answered by the ASP's telephonist for emergency services.

25. The operator speed of answer shall be as follows:

- (a) 90% of all operator assisted calls for emergency services shall be answered in not more than 10 seconds; and
- (b) 100% of all operator assisted calls for emergency services shall be answered in not more than 20 seconds.

26. The measurement is described by the ratio:

$$\frac{\text{Emergency calls answered within the time frame} \times 100}{\text{Total number of emergency calls received by the operator during the test period}}$$

27. In any one busy hour, less than 5 % of calls to the operator should encounter a busy signal.

28. The measurement is described by the ratio:

$$\frac{\text{Calls which encounter a busy signal during a busy hour} \times 100}{\text{Total number of calls during the busy hour}}$$

29. The measurement of the standard may be based on test call sampling or service observation over any two consecutive hours on any day. For the test call sampling method, the minimum sample size shall be 30 test calls. The maximum interval between two test calls shall be two minutes.

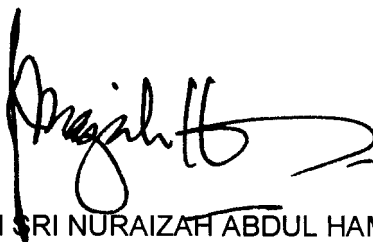
#### **Audit and verification**

30. The Commission may from time to time conduct an audit on the report(s) submitted, perform test call sampling and/or service observation to verify compliance with these mandatory standards.

#### **Revocation**

31. The Telecommunications Regulatory Framework For Service Quality in the Mobile Cellular Telephone Service, REG-Q 001 is revoked.

Made 28 June 2002.



TAN SRI NURAIZAH ABDUL HAMID  
*Chairman*  
*Malaysian Communications and Multimedia*  
*Commission*