



**Suruhanjaya Komunikasi dan Multimedia Malaysia**  
Malaysian Communications and Multimedia Commission

**A REPORT ON A PUBLIC INQUIRY ON THE REVIEW OF  
COMMISSION DETERMINATION ON THE MANDATORY STANDARDS FOR  
QUALITY OF SERVICE (PUBLIC CELLULAR SERVICE) - DETERMINATION  
NO. 2 OF 2002  
AND  
VARIATION TO COMMISSION DETERMINATION ON THE MANDATORY  
STANDARDS FOR QUALITY OF SERVICE (PUBLIC CELLULAR SERVICE)  
(DETERMINATION NO. 2 OF 2002) - DETERMINATION NO. 1 OF 2013**

**JUNE 2015**

This Public Inquiry Report is prepared in fulfilment of Sections 65 of the  
Communications and Multimedia Act 1998.

## **TABLE OF CONTENTS**

<b>SECTION 1:</b>	<b>SUMMARY OF THE PUBLIC INQUIRY</b>	<b>3</b>
<b>SECTION 2:</b>	<b>SUMMARY OF COMMISSION'S FINAL VIEWS</b>	<b>6</b>
<b>SECTION 3:</b>	<b>PROPOSED REVISION TO THE EXISTING QUALITY OF SERVICE STANDARDS FOR PUBLIC CELLULAR SERVICES</b>	<b>9</b>
<b>SECTION 4:</b>	<b>INPUT FROM THE PUBLIC INQUIRY AND THE COMMISSION'S RESPONSE</b>	<b>20</b>
<b>SECTION 5:</b>	<b>THE WAY FORWARD</b>	<b>38</b>

## **SECTION 1: SUMMARY OF THE PUBLIC INQUIRY**

### **INTRODUCTION**

1. The Determination No. 2 of 2002, Commission Determination on the Mandatory Standards for Quality of Service for Public Cellular Service ("MSQoS") came into force on 1 January 2003. This MSQoS covers the standards for Quality of Service for delivery of voice over the public cellular platform and was based on the network technology in use at that point of time.
2. The variation on standards on 'Endpoint Service Availability' and Dropped Call as outlined in the Variation to Commission Determination on the Mandatory Standards for Quality of Service (Public Cellular Service) (Determination No. 2 of 2002) – Determination No.1 of 2013 ("MSQoS Variation") came into force on 9 July 2013.
3. The Malaysian Communications and Multimedia Commission ("the Commission") is of the view that the MSQoS and the MSQoS Variation need to be updated to cater for advancements in technology, increased demands placed on network usage and changes in consumer expectations towards provisioning of services. Therefore, by the powers conferred by Section 106 (1) of the Communications and Multimedia Act 1998 (CMA), the Commission has decided to review both the MSQoS and MSQoS Variation.

## **PUBLIC INQUIRY**

4. The Commission embarked on a public inquiry on 1 April 2015 and released a Public Inquiry Paper on the Review Of Commission Determination on the Mandatory Standards for Quality Of Service (Public Cellular Service) (Determination No. 2 Of 2002) and Variation to Commission Determination on the Mandatory Standards For Quality Of Service (Public Cellular Service) (Determination No. 2 Of 2002) - Determination No. 1 Of 2013, as part of the inquiry process. The paper contained a preface and the proposed revisions to quality of service mandatory standards for Public Cellular Service.
  
5. The deadline for submissions was 12:00 noon, 18 May 2015 and at the close of inquiry the Commission had received thirteen submissions from the following respondents:
  - i) Persistent Systems Malaysia Sdn. Bhd.;
  - ii) Mr. Kuhan G;
  - iii) Merchantrade Asia Sdn. Bhd.;
  - iv) ITEL Mobile Network Sdn. Bhd.
  - v) YTL Communications Sdn. Bhd.;
  - vi) Maxis Berhad;
  - vii) Celcom Axiata Berhad;
  - viii) DiGi Telecommunications Sdn. Bhd.;
  - ix) TIME dotcom Bhd.;
  - x) Ceres Telecom Sdn. Bhd.;
  - xi) Altel Communications Sdn. Bhd.;
  - xii) U Mobile Sdn. Bhd.; and
  - xiii) Packet One Networks (Malaysia) Sdn. Bhd.
  
6. Two submissions from two licensees were submitted after the deadline and as such were not considered by the Commission.

7. The Commission was obliged to consider thirteen submissions which met the deadline specified. Therefore, any position in this Report emanates from the Commission's deliberation of those submissions and reassessment, if any, will be undertaken of various positions. A summary of comments/suggestions are outlined in Section 4 of this Report.
8. The Commission proposes to issue a Commission Determination that will reflect the Commission's final views expressed in this PI Report in respect of the quality of services standards for public cellular service.

## **STRUCTURE OF THE PI REPORT**

9. The remainder of this PI Report is structured broadly to follow the PI Paper to provide context for the Commission's questions for comments, as follows:-
  - 9.1 Section 2 provides a summary of Commission's final views on the proposed changes;
  - 9.2 Section 3 describes the framework for the proposed mandatory standards for quality of service for public cellular service which represents the Commission's final views on the matter;
  - 9.3 Section 4 provides a summary of inputs received and the Commission's responses thereto; and
  - 9.4 Section 5 highlights the way forward.

## **SECTION 2: SUMMARY OF COMMISSION'S FINAL VIEWS**

10. Based on the submissions received, the Commission proposes the following changes (from the standard previously proposed in the PI Paper) to be made on the MSQoS on Public Cellular Service:

### 10.1 Interpretation part of the standards

- To exclude a request by customer for information or advice or inquiry seeking clarification in the definition of 'complaint'.

### 10.2 Network Performance Quality Service

- To change the Dropped Call Rate for the Designated Routes and Areas to not more than 2% (previously proposed at 1.7%);
- To reduce the notification period on the Advance Notice for Scheduled Downtime to not less than 24 hours in advance to customer (previously proposed 48 hours) and not less than 72 hours in advance to the Commission (previously proposed 14 days); and
- To revise the notification period to the Commission on the Service Disruption to within 60 minutes (previously proposed within 20 minutes).

### 10.3 Customer Service Quality Service

- To streamline the formula used in the calculation of Percentage of billing related complaints with the formula used for non-billing related complaints, as follows:

**Table 1: Formula used in 'Percentage of billing related complaints'**

<b>Previously proposed</b>	<b>Revised formula</b>
$\frac{\text{Total number of billing related complaints received at the end of the reporting period}}{\text{Total number of active customers at the end of the reporting period}} \times 100\%$	$\frac{\text{Total number of billing related complaints received in the reporting period}}{\text{Total number of active customers at the end of the reporting period}} \times 100\%$

- To include the following clause in the standard for 'Promptness in resolving customer complaints', to cater for customers who make repetitive complaints and remain dissatisfied by steps taken by the service provider:

*'The Commission shall determine whether the service provider has taken steps to address the complaint and whether it is reasonable to conclude that such steps have addressed the dissatisfaction of the complainant'.*

- To change the percentage of complaints resolved in 'Promptness in resolving customer complaints' as follows:

**Table 2: Proposed changes 'Promptness in resolving customer complaints'**

<b>Proposed changes</b>	<b>Remarks</b>
Not less than 60.0% must be resolved within 3 business days	No changes

Not less than 90.0% must be resolved within 5 business days	Previously proposed at 95%
Not less than 95.0% must be resolved within 15 business days	Previously proposed at 99%

- To change the percentage and duration in the 'Promptness in answering calls to Customer Hotline' as follows:

**Table 3: Proposed changes the 'Promptness in answering calls to Customer Hotline'**

<b>Proposed changes</b>	<b>Remarks</b>
At least 80.0% of calls answered within 20 seconds	Previously proposed within 15 seconds
At least 90.0% of calls answered within 40 seconds	Previously proposed 100% answered within 30 seconds

#### 10.4 Effective Date

- The Commission has decided that the revised MSQoS will take effect from **1 January 2016**. This will give the service providers ample time to make preparatory measures and changes on their system and network to comply with the standards.



### **SECTION 3: PROPOSED REVISION TO THE EXISTING QUALITY OF SERVICES STANDARDS FOR PUBLIC CELLULAR SERVICES**

#### **INTERPRETATION PART OF THE STANDARDS**

11. The following interpretations shall be used in the revised Mandatory Standards for Quality of Service for Public Cellular Service:

“ASP” means Applications Service Provider;

“business day” means a day in which commercial banks in the respective states in Malaysia are normally open for business, and excludes gazetted public holidays;

“complaint” means any verbal or written expression of dissatisfaction by customer to service provider regarding the service provider’s service and/or product, which requires action by the service provider to address the issues raised. A request by customer for information or advice or an inquiry seeking clarification will not be classified as a complaint. However, if no or inadequate action is taken by the service provider on a request for information or advice or inquiry seeking clarification, the subsequent follow up to the service provider would be classified as a complaint;

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

“designated routes and areas” means those routes and areas as specified by the Commission in the Guidelines;

“end user” means a person who receives, requires, acquires, uses or subscribes to the public cellular service and may include a customer;

“Guidelines” means guidelines issued by the Commission pursuant to paragraph 8 of the Commission Determination on the Mandatory Standards for Quality of Service (Public Cellular Service);

“mobile switching centre” (MSC) means the switching centre that performs all the switching needed for public cellular service located in an associated geographical area;

“reporting period” means the calendar quarters ending 31 March, 30 June, 30 September and 31 December;

“resolved” in relation to a complaint means that the complaint was addressed and the problem was rectified; and

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

## **REQUIREMENT FOR REPORT SUBMISSION**

12. The Commission intends to change the current reporting period to a calendar quarter, as practised in many other jurisdictions. The Commission is of the view that the current reporting period (half yearly) does not provide sufficient granular data for end user information, nor will the Commission be in a position to effectively monitor the relevant Quality of Service (QoS) standards in a timely manner and react to any

significant issue. This approach is also in line with the recommendation from the European Telecommunications Standards Institute (ETSI)<sup>1</sup>.

13. The Commission is proposing for the Quality of Service performance reports to be submitted to the Commission no later than 30 days from the end of the reporting period. The timelines for reporting are as follows:

**Table 4: Reporting Timelines**

<b>No.</b>	<b>Reporting Period</b>	<b>QoS Report Submission Date</b>
1.	1st January to 31st March	By 30th April of the same year
2.	1st April to 30th June	By 31st July of the same year
3.	1st July to 30th September	By 31st October of the same year
4.	1st October to 31st December	By 31st January of the next year

## **QUALITY OF SERVICE INDICATORS, MEASUREMENTS, STANDARDS, NOTIFICATION AND REPORTS**

14. The Mandatory Standards shall be segregated into two (2) parts, namely Network Performance Quality of Service and Customer Service Quality of Service. The applicable indicators, measurements and standards are listed in Tables 5 & 6 of this document.
15. Standards for Network Performance Quality of Service are outlined in Table 5 below:

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<sup>1</sup> ETSI EG 202 057 4.7 Data collection period

**Table 5: Network Performance Quality of Service**

	<b>Quality of Service Indicator</b>	<b>Description / Definition / Formula / Measurement / Reporting Requirement</b>	<b>Quality of Service Standard</b>
i.	Call setup success rate (CSSR)	<p>Call setup success rate measures the percentage of calls successfully established between two cellular mobile devices which enable communication to proceed.</p> <p>Formula:</p> $\frac{\text{Number of successful call attempts}}{\text{Number of call attempts}} \times 100\%$ <p>Intra-network call means a call connection within the network service of the same provider.</p> <p>Inter-network call means a call connection between the network services of two providers.</p>	Call setup success rate must be not less than 95.0%, for intra or inter network calls.
ii.	Dropped call rate (DCR)	A dropped call means a call where a connection succeeds (i.e. the network is accessed and set up is successful) but is disconnected due to abnormal call release. An abnormal call release occurs when the call is terminated other than by the command from the calling party	Dropped call rate for Designated Routes and Areas must be not more than 2.0%, for intra or inter network calls; and  Dropped call rate for areas other than

		<p>or the called party.</p> <p>Formula:</p> $\frac{\text{Number of dropped calls}}{\text{Number of successful call attempts}} \times 100\%$	<p>Designated Routes and Areas must be not more than 3.0%, for intra or inter network calls.</p>
iii.	Advance notice of scheduled downtime	<p>Service provider is required to inform customers and the Commission in advance in respect of any network service downtime planned and scheduled by the service provider to take place for the purpose of maintenance and upgrading of the network.</p>	<p>Every session of scheduled downtime due to occur in a quarterly reporting period must be notified to customers not less than 24 hours in advance; and</p> <p>Every session of scheduled downtime due to occur in a quarterly reporting period must be notified to the Commission in writing not less than 72 hours in advance.</p>
iv.	Service Disruption	<p>Service disruption means the unplanned interruption of the services that a customer subscribes to but does not include disruption of service from scheduled downtime. Service provider shall notify customers as soon as practicable in</p>	<p>Any Mobile Switching Centre (MSC) must not be out of service for 30 minutes or longer.</p> <p>Service provider must notify the Commission</p>

		<p>respect of any service disruption incident.</p> <p>A service provider is considered to have breached the service disruption standard where a Mobile Switching Centre (MSC) is out of service for 30 minutes or longer. A MSC is out of service when it is unable to perform the functions for which it is intended.</p> <p>If more than one Mobile Switching Centre is out of service for 30 minutes or longer in a quarterly reporting period, each and every one of such incidents are regarded as separate breaches of this standard.</p> <p>In the event a Mobile Switching Centre is out of service for 30 minutes or longer, the service provider must submit a comprehensive report to the Commission within 7 business days of the incident.</p>	<p>within 60 minutes of any single service disruption incident that involves a Mobile Switching Centre (MSC) being out of service for any duration.</p> <p>Service provider must submit a comprehensive report to the Commission within 7 business days of the occurrence of any single service disruption incident that involves a Mobile Switching Centre (MSC) being out of service for 30 minutes or longer.</p>
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16. Standards for Customer Service Quality of Service as Table 6 below:

**Table 6: Customer Service Quality of Service**

	<b>Quality of Service Indicator</b>	<b>Description / Definition / Formula / Measurement / Reporting Requirement</b>	<b>Quality of Service Standard</b>
i.	Percentage of billing related complaints	<p>This indicator measures the percentage of billing related complaints to the number of customers per reporting period.</p> <p>Billing related complaint is any complaint related to the service provider’s billing made or charges imposed on customers including, but is not limited to, complaints regarding payments made and wrongly credited or not credited, non-refund of deposits, late billing, non-receipt of bills, fraud, wrongly addressed bills and other billing errors. Bills issued by service provider may include, but are not limited to, bills sent by postal service, email or accessible online by customer. Billings of pre-paid and post-paid services are included for this indicator.</p> <p>Formula:</p> $\frac{\text{Total number of billing related complaints received in the reporting period}}{\text{Total number of active customers at the end of the reporting period}} \times 100\%$	Percentage of billing related complaints must be not more than 1.0% per quarterly reporting period.

ii.	Non-billing related complaints per 1,000 customers	<p>This indicator measures the percentage of non-billing related complaints per 1,000 customers per reporting period.</p> <p>Non-billing related complaint means any complaint other than billing related complaint. It includes, but is not limited to, complaints received on service matters including late or no service activation after a report has been made, unprofessional staff or contractors and other complaints related to customer service.</p> <p>Formula:</p> $\frac{\text{\textit{Total number of non – billing related complaints received in the reporting period}}}{\text{\textit{Total number of active customers at the end of the reporting period}}} \times 1000$	Non-billing related complaints must be not more than 6.0 complaints per 1,000 customers per quarterly reporting period.
iii.	Promptness in resolving customer complaints	This indicator measures the percentage of customer complaints resolved by the service provider within specified timeframes, measured from the day the complaint was received to the time the complaint was resolved.	The standard on promptness in resolving customer complaints, separately measured for billing related complaints and non-billing related complaints, for



		<p>Formula:</p> $\frac{\textit{Total number of complaints resolved within the specific timeframe}}{\textit{Total number of complaints received within the reporting period}} \times 100\%$ <p>This Quality of Service indicator is to be separately measured and reported for billing related complaints and non-billing related complaints, where the same QoS standard is applicable for both categories of complaints.</p> <p>Unresolved complaints due to the following are excluded from the computation:</p> <ul style="list-style-type: none"> <li>(a) Damage to network facility due to force majeure or third parties;</li> <li>(b) Customer premises inaccessible; and</li> <li>(c) Faulty Customer Premise Equipment (CPE), customer infrastructure or internal wiring.</li> </ul> <p>The Commission shall determine whether the service provider has taken steps to address the complaint and whether it is reasonable to conclude that such steps have addressed the dissatisfaction of the complainant.</p>	<p>every quarterly reporting period is:</p> <p>Not less than 60.0% must be resolved within 3 business days;</p> <p>Not less than 90.0% must be resolved within 5 business days; and</p> <p>Not less than 95.0% must be resolved within 15 business days</p>
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		Service provider is required to inform customers of their right to refer any unresolved complaint to the Consumer Forum of Malaysia (CFM).	
iv.	Promptness in answering calls to Customer Hotline	<p>This indicator measures the service provider's promptness in answering customer phone calls to the Customer Hotline, from the time when the customer presses the button opting for a human operator to the time it is answered by a human operator. The duration when the call is attended to by the interactive voice response system (IVRS) before being transferred to a human operator's phone is excluded.</p> <p>Formula:</p> $\frac{\text{Number of calls answered by human operator within the specific timeframe}}{\text{Total number of calls to Customer Hotline opting for human operator assistance in the reporting period}} \times 100\%$	<p>At least 80.0% of calls to Customer Hotline that opted for human operator in a quarterly reporting period must be answered within 20 seconds; and</p> <p>At least 90.0% of calls to Customer Hotline that opted for human operator in a quarterly reporting period must be answered within 40 seconds.</p>

## **APPLICABLE GUIDELINES**

17. The Commission has developed a set of guidelines that sets out the testing procedures, examples of computations, reporting templates, explanatory notes and list of designated routes and areas to the standards proposed in this document. The said guidelines will be issued as the Guidelines to the Commission Determination on the Mandatory Standards for Quality of Service (Public Cellular Service).
  
18. The said guidelines shall replace the 'Guideline on the Testing Procedure for Endpoint Service Availability and Dropped Calls' issued by the Commission in 2013 pursuant to the Variation to Commission Determination on the Mandatory Standards for Quality of Service (Public Cellular Service) (Determination No. 2 of 2002) - Determination No. 1 of 2013.

**SECTION 4: INPUT FROM THE PUBLIC INQUIRY AND THE COMMISSION’S RESPONSE**

19. The following section summarizes the feedback received from the public against the questions raised in the Public Inquiry Paper and the Commission’s response to the same together with the Commission’s final views on the proposed standards.

**QUESTION 1**

The Commission seeks views on the proposed interpretations and the proposed revised Mandatory Standards highlighted in Parts A, B and D above, including comments on the proposed Guidelines stated in Part E, which will be used for the purpose of the revised Determination.

**20. Part A: Interpretation Part of the Standards**

NO.	SUMMARY OF THE COMMENTS	THE COMMISSION’S RESPONSE
1.0	5 respondents provided feedback for the proposed interpretation with comments. The comments are indicated below.	<u>Response for 2.0:</u>
2.0	1 respondent suggests that the definition of “complaint” should state that multiple complaints made by one customer be considered as one complaint.	The Commission is of the view that each complaint is unique and may deal with different issues (although the complaints were reported by the same customer), and therefore each complaint should be treated separately. However, multiple complaints made by the same customer on the same issue may be considered by the Commission as one complaint.
3.0	2 respondents propose that the words “service affecting” should be included within the statement “MSC is out of service”.	<u>Response for 3.0:</u>
4.0	2 respondents propose an amendment to the interpretation of ‘resolved’ to take into consideration cases where a customer is still dissatisfied with the service provider after necessary steps have been taken to resolve the complaint.	Any MSC which is out of service resulting in the disruption of service to the customer must comply with the standards set in the Mandatory Standard. As such, the Commission is of the view that no additional definition/interpretation is needed.

<p>5.0</p> <p>6.0</p> <p>7.0</p>	<p>1 respondent suggests that 'business day' be redefined based on the official registered address of the licensee instead of different designated weekends for different states in Malaysia.</p> <p>1 respondent sought further clarification on definition of "customer" for treatment for corporate customer where a single account may consist of multiple numbers.</p> <p>1 respondent proposed to limit the scoping of 'data communications' in 'public cellular service' definition to SMS and MMS only.</p>	<p><u>Response for 4.0:</u></p> <p>The Commission takes note of the comment and the necessary amendment has been included in the description /definition / formula /measurement/ reporting requirement column of the standards.</p> <p><u>Response for 5.0:</u></p> <p>The proposed interpretation of "business day" clearly states that the business day will follow a day in which the commercial banks in respective states in Malaysia are normally open for business. The proposal will be maintained.</p> <p><u>Response for 6.0:</u></p> <p>For the purpose of calculation of number of complaints in the Mandatory Standard, each individual service or number attached to a particular account will be treated separately regardless of whether the said accounts or numbers belong to the same customer.</p> <p><u>Response for 7.0:</u></p> <p>The interpretation for "public cellular service" is pursuant to the Communications and Multimedia (Licensing) Regulations 2000 to ensure conformity with the law and consistency in definitions used.</p>
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**21. Part B: Requirement for Report Submission**

NO.	SUMMARY OF THE COMMENTS	THE COMMISSION'S RESPONSE
1.0	1 respondent agrees only to the reporting for Customer Service Quality of Service.	The changes in frequency of submissions of reports, including quarterly reports which will compile incidents occurring during a given quarter, will enable the Commission to be more effective in monitoring the relevant QoS standards and to allow the Commission to react to
2.0	4 respondents suggest that the requirement to submit service disruption report on quarterly basis be	

	removed as the report for service disruption is required to be submitted within 7 days of the incident.	any significant issue in a timely manner. The proposed changes are also in line with international best practices and ETSI guidelines. As such, the Commission has decided to maintain the proposed requirement.
3.0	1 respondent recommends that the Commission undertake the assessment for the reports on a half yearly basis, although the reports are submitted on quarterly basis.	
4.0	1 respondent indicated its disagreement to the shorter time frame requirement as it requires more manpower/cost and has a major impact to their business (for reporting on advance notice of scheduled downtime and notification and comprehensive report of service disruption).	
5.0	1 respondent suggested that the current reporting period to be maintained.	

## 22. Part D: Quality of Service Indicators, Measurements, Standards, Notification and Reports

### 22.1 Network Performance Quality of Service

No.	SUMMARY OF THE COMMENTS	THE COMMISSION'S RESPONSE
1.0	<u>Call Setup Success Rate (CSSR)</u>	
1.1	In general, most of the respondents agree with the standard.	The Commission is of the view that one standard should be applied across the period. This is to ensure that good customer experience is achieved at all times and also to improve customer confidence levels towards service delivery.  All ASPs providing public cellular services shall be subjected to these Mandatory Standards. Therefore the relevant provisions in the Mandatory Standards
1.2	2 respondents suggest that this standard should not be applied to the Mobile Virtual Network Operators (MVNO). 1 respondent stated that testing and reporting be undertaken by the Mobile Network Operators (MNO) only as host operators.	
1.3	1 respondent proposes to segregate	

	the indicator measurement during 'busy hour' and 'across the period'.	(where relevant) will also be applied to the MVNO.
2.0	<u>Dropped Call Rate (DCR)</u>	
2.1	4 respondents propose that the DCR standard be decreased to 2% for designated routes and areas, and for this standard to be implemented in stages (i.e. after a 2 year grace period).	<p>The Commission notes the challenge in achieving zero failure for wireless services. To determine a standard that is reasonable and technically feasible, the Commission has taken into consideration the design of cellular network which at its best provides for a 2% Grade of Service. The Commission also takes note of the dynamic nature of mobile traffic at a given location at any time and the need for the service providers to achieve minimum signal strength of -85 dBm to address the dropped call issue, particularly in the Designated routes and Areas, and this is subject to availability of sites and sufficient voice channels.</p> <p>Based on this, the Commission agrees to set the DCR at not more than 2% for the Designated routes and Areas and maintain the proposal of not more than 3% for areas other than Designated routes and Areas.</p> <p>However this standard shall apply to all ASPs as soon as the Mandatory Standards come into effect starting 1 January 2016. The testing will be done based on the available coverage.</p> <p>The Commission's earlier response on CSSR above is also applicable to comments numbered 2.2 and 2.3.</p>
2.2	1 respondent proposes to segregate the indicator measurement during 'busy hour' and across the period.	
2.3	2 respondents suggest that this standard not be applied to MVNOs. 1 respondent suggests that testing and reporting be undertaken by the MNO only as host operator.	
2.4	2 respondents do not agree to the segregating of the routes and suggest that a single standard of no more than 3% be applied for all routes and areas.	
2.5	1 respondent suggested for the new service providers to be excluded for this standard and further stated that the testing for this standard be carried out on service providers that have full coverage in the designated areas.	
3.0	<u>Advance Notice on Scheduled Downtime</u>	
3.1	1 respondent proposes that the notification only be provided for major scheduled downtime that exceeds	Given the different permutations proposed by the respondents and after much consideration, the Commission

	certain period or that affect 50% or more customers.	agrees to reduce the notification period as follows:
3.2	1 respondent suggests that the notification should only be given to the Commission only and not the customers as the scheduled maintenance is usually conducted within a particular timeframe (12am till 6am).	(a) To notify the customer - not less than 24 hours in advance; and  (b) To notify the Commission - not less than 72 hours in advance.
3.3	2 respondents propose that the notification period be 24 hours to the customer and 72 hours to the Commission. Additionally, notification should only be submitted if the MSC is out of service for 60 minutes or longer.	The notification to the Commission is required for any planned downtime to give ample time for the Commission to deal with any possible complaints by customers. Advanced notice to the customer is also required to ensure that the customer is informed about any interruption to services.
3.4	1 respondent proposes that the notification period be 48 hours to the Commission and suggests that the Commission extend the advance notice submitted by MNO to the respective MVNO to avoid redundancy of the submission. Implementation should apply to downtime that impacts services such as voice, SMS and/or data services and when the downtime is more than 30 minutes. This respondent also sought clarification on types of maintenance and upgrades that require advanced notice.	The notice required is not dependent on the period of the scheduled downtime and will include any form of maintenance or upgrading of the network. It is a matter of good practice for such notification to be issued and helps in ensuring transparency in the manner in which the service providers deal with their customers.  The Commission also agrees that the notification to the customer be made via electronic platforms i.e. website, SMS. The advance notice to the Commission shall be maintained in writing.
3.5	5 respondents suggest that the notification be made via electronic means only i.e. website, e-mail, SMS etc. as notification via print media will incur higher cost to the service providers.	All ASPs providing public cellular services shall be subjected to these Mandatory Standards. Therefore the relevant provisions in the Mandatory Standards (where relevant) will also be applied to the MVNO.
3.6	1 respondent indicates that testing and reporting be undertaken by the MNO only as host operator.	
3.7	1 respondent disagreed with the proposal, and suggested that notification should only be submitted	

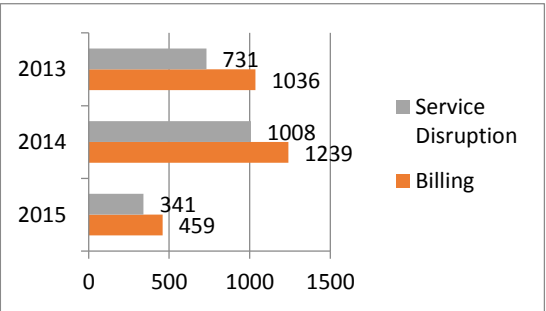


3.8	<p>for major scheduled downtime that exceed certain duration and that giving the Commission a copy of scheduled maintenance should be sufficient. In addition, the respondent is of the view that it would be sufficient to publish the notice on their website, as print media is not pervasive.</p> <p>1 respondent does not agree with the 14 days notification to Commission and instead suggests 3 day notice.</p>	
4.0	<p><u>Service Disruption</u></p> <p>4.1 3 respondents propose that the standard only apply to major disruptions that exceed a certain period of time and that affect certain percentage of customers.</p> <p>4.2 3 respondents suggest that the notification to the Commission be extended to 60 minutes.</p> <p>4.3 1 respondent requests the Commission to reconsider unplanned service disruption on the MSC to be rectified within 4 hours.</p> <p>4.4 1 respondent proposes that the standard that specifies that 'the MSC must not be out of service for 30 minutes or longer' be omitted.</p> <p>4.5 3 respondents agree with the requirement to submit comprehensive report of the service disruption to the Commission within 7 days.</p> <p>4.6 2 respondents propose that the requirement to submit comprehensive report of the service disruption to the Commission be increased to 14 days.</p>	<p>The Commission considers disruption of services to the customer as a very critical matter. Therefore the Commission is of the view that this new standard has to be included in the Mandatory Standards to ensure protection of customers' interest.</p> <p>This standard will also provide the Commission with information to deal with customer complaints more effectively and to also enable the Commission to ensure that the service providers have taken the necessary steps to address the service disruption expeditiously.</p> <p>The report submitted will enable the Commission to monitor the frequency of disruptions and how effectively the service providers deal with the issue. These reports can be used to determine future changes to the standards.</p> <p>The Commission disagrees with the view that it is over regulating the industry and is seeking to encourage service providers to constantly improve their levels of service.</p> <p>However, the Commission takes note of the feedback provided and has decided</p>

4.7	1 respondent is of the view that the General Consumer Code (GCC) should be able to address this issue and imposing this standard to the service provider increases the likelihood of over regulating by the Commission.	to revise one of the proposals made earlier.  The Commission's final view on the matter is as follows:-
4.8	1 respondent suggested that the Commission consider various network element (i.e. Support Node, Serving Gateway, Subscriber Server, etc.) if the standard is to be extended to mobile data/broadband service.	a) The MSC must not be out of service for 30 minutes or longer;
4.9	1 respondent does not agree on the standard and stated that for the MSC not to be out of services for more than 30 minutes without any exclusion is very onerous.	b) Notification to the Commission must be done within 60 minutes of any single service disruption incident; and
4.10	1 respondent further commented that the requirement to notify the Commission within 20 minutes of the incident will add responsibilities to the service provider. Such report can be provided but more time is needed (i.e. on quarterly basis).	c) The comprehensive report must be submitted to the Commission within 7 business days.
4.11	1 respondent indicated that they are not able to guarantee that any MSC must not be out of service for 30 minutes or longer, as there are factors that are not within their direct control.	The review of Commission Determination on the Mandatory Standards for Quality of Service will be done in phases. The standards/guidelines for mobile data and broadband service will be taken into consideration at the next phase of revision.

## 22.2 Customer Service Quality of Service

NO.	SUMMARY OF THE COMMENTS	THE COMMISSION'S RESPONSE
5.0	<u>Percentage of billing related complaints</u>	
5.1	2 respondents agree with proposed requirements.	Based on the Commission's complaints records, the top key consumer issues are billing issues and service disruption.

5.2	2 respondents indicate that the Commission should revise the definition of "complaints" to make a distinction between a "complaint" and a "request".	 <table border="1"> <thead> <tr> <th>Year</th> <th>Service Disruption</th> <th>Billing</th> </tr> </thead> <tbody> <tr> <td>2013</td> <td>731</td> <td>1036</td> </tr> <tr> <td>2014</td> <td>1008</td> <td>1239</td> </tr> <tr> <td>2015</td> <td>341</td> <td>459</td> </tr> </tbody> </table> <p>A more stringent standard (i.e. 1%) is meant to ensure that service providers treat these issues with a significant degree of importance and address the gap between the rate of compliance by the service providers and number of complaints received by the Commission on billing and charging dispute. The Commission seeks to encourage the service provider to improve both their internal processes on dealing with complaints and their billing system to achieve the standard.</p> <p>"Total number of active customers at the end of the reporting period" is being used as the denominator within the formula as it gives a better indication of the number of complaints received vis-a-vis the number of active customers at the end of the reporting period. This formula also enables the Commission to take into account complaints on billings for prepaid services. A minor revision has also been made to the numerator within the formula to streamline it with the formula for non-billing related complaints.</p> <p>The Commission is of the view that the request in 5.2 is reasonable and the necessary amendment has been included in the proposed interpretation.</p>	Year	Service Disruption	Billing	2013	731	1036	2014	1008	1239	2015	341	459
Year	Service Disruption		Billing											
2013	731		1036											
2014	1008		1239											
2015	341		459											
5.3	2 respondents propose that the Commission provide a clearer definition for "customer" i.e. to take into consideration situations where one customer has more than one account.													
5.4	2 respondents do not agree with the proposed standard. 1 respondent requested for the standard to be revised to 1.5% as the implementation of the new billing platform has just been implemented and further changes may be too onerous on the service providers.													
5.5	1 respondent suggests that the Commission reconsider the formula used in this standard as the current standard is based on total number of bills within the period and now this is being changed to total number of active customers for the period.													
5.6	1 respondent suggest that the existing standard and formula to be maintained and requested for a clearer definition of 'billing complaint' (complaints from customers who have been terminated should be excluded) and 'total number of active customer'.													
5.7	1 respondent requests for more time to evaluate this standard.													

<p>6.0</p> <p>6.1</p> <p>6.2</p> <p>6.3</p> <p>6.4</p> <p>6.5</p>	<p><u>Non-billing related complaints per 1000 customers</u></p> <p>1 respondent suggests that the implementation of the revised standard be done in stages.</p> <p>1 respondent proposes that complaints on 'fault network' be excluded from the calculation.</p> <p>1 respondent proposes that the Commission reconsider the formula used, based on their comments in 5.5 above.</p> <p>1 respondent sought clarification on the basis on which the target of 6:1000 is being set.</p> <p>1 respondent suggest that the existing measures and parameters to be maintained, as the revised formula would have major impact on service providers' current operations. This respondent also requested for a clear definition on 'non-billing related complaints' (whether to include technical or limited to non- technical nature of complaints).</p>	<p>In order to promote high level of customer confidence in service delivery from the industry and the need to manage customers' expectation, the Commission is of the view that a more stringent standard will spur the service providers to deal more efficiently with customer complaints. So, this forms the basis on which the new standard is being set. The formula had to be revised to take into account the revised reporting period and reflect more accurately statistics on complaints of this nature.</p> <p>The Commission also finds that there is a gap between compliance to the existing standard and number of complaints that the Commission receives from customers. As such, the Commission has decided that the proposal will be maintained.</p> <p>"Total number of active customers at the end of the reporting period" is being used as the denominator within the formula as it gives a better indication of the number of complaints received vis-a-vis the number of active customers at the end of the reporting period.</p> <p>The Commission is of the view that it is not necessary to define what is meant by non-billing related complaints as some examples are already provided in the Guidelines, in the reporting template. This is also to ensure that all complaints are dealt with properly.</p>
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<p>7.0</p> <p>7.1</p> <p>7.2</p> <p>7.3</p> <p>7.4</p>	<p><u>Promptness in resolving customer complaints</u></p> <p>Some of the respondents suggested a few options on the percentage of promptness in resolving customer complaints and associated timelines.</p> <p>1 respondent sought clarification on the basis on which the KPI is being set.</p> <p>5 respondents propose an amendment be made to the exclusion clause to include 'fault network', electricity termination (TNB), coverage, slow Internet speed, poor network performance and other matters.</p> <p>1 respondent suggest that the existing standard be maintained.</p>	<p>The Commission takes note of all alternatives proposed by the respondents and based on the industry average performance for Q1 2015, the Commission has decided that the following will be the standard:</p> <ul style="list-style-type: none"> <li>• Not less than 60% resolved within 3 business days</li> <li>• Not less than 90% resolved within 5 business days</li> <li>• Not less than 95% resolved within 15 business days</li> </ul> <p>No changes will be made to the exclusion list.</p>
<p>8.0</p> <p>8.1</p> <p>8.2</p> <p>8.3</p>	<p><u>Promptness in answering calls to Customer Hotline</u></p> <p>Some respondents suggested a few options on the relevant percentage and timelines.</p> <p>1 respondent sought clarification on the basis on which the KPI is being set and asked about the industry average.</p> <p>1 respondent does not agree with the proposed standard and requested for the standard to be removed from the Mandatory Standard.</p>	<p>The Commission is of the view that this standard should be put in place for better customer protection as currently there are service providers that charge the customer for use of the hotline number.</p> <p>Having considered the feedback provided, the Commission agrees to accept the following proposal as the standard, bearing in mind that this is the first time this standard is being introduced:-</p> <ul style="list-style-type: none"> <li>• At least 80% answered within 20 seconds</li> <li>• At least 90% answered within 40 seconds</li> </ul>

### 23. Part E: Guidelines

No.	SUMMARY OF THE COMMENTS	THE COMMISSION'S RESPONSE
1.0	<p><u>Route or Location Identification</u></p> <p>1.1 2 respondents propose that the testing (static &amp; drive) be conducted in high density areas or busy highways and be conducted during business days.</p> <p>1.2 2 respondents request for detailed description for static test and drive test.</p> <p>1.3 3 respondents highlighted that the cellular coverage should be ascertained from the service providers' official website.</p> <p>1.4 1 respondent also indicated that they disagreed with using the network display on test phones as location identification. They claim that this can serve only as reference for further analysis.</p>	<p>The Commission takes note of all the feedback given. In order to ensure that the service providers adhere to the standards set in the Mandatory Standard, the Commission, at its sole discretion, will decide on how and when the tests should be conducted. Therefore the proposed types of tests and all other parameters in the Guidelines will be maintained.</p>
2.0	<p><u>Testing parameters</u></p> <p>2.1 4 respondents suggest that the call holding time be reduced to 60 seconds and the sampling size be increased.</p> <p>2.2 4 respondents suggest that the 5 designated routes be combined in a single drive route.</p> <p>2.3 3 respondents suggest that the service providers not be penalized in the event of non-availability of service or dropped call due to the problem of other provider's network during inter network</p>	<p>The Commission is of the view that the proposed testing parameters are reasonable after taking into account the revision in the dropped call rate for designated routes and areas to 2%.</p> <p>The Commission is of the view that the 5 designated routes and areas should be treated separately in order to assess the quality of service within each route and area.</p> <p>When undertaking the testing, the</p>

2.4	<p>testing.</p> <p>2 respondents suggest that the service providers be given opportunity to rectify the non-compliance within 1 year (excluding failure in rectification due to site acquisition issues).</p>	<p>Commission will take into account where the relevant problem is located, i.e. whether it is within the network of the party that is being tested.</p> <p>The service providers should adhere to the relevant standards, and in the event of breach, the Commission will take the necessary action against the service providers. This should be independent of any rectification work that the service providers should undertake to improve their network's performance.</p> <p>The Guidelines will apply to all ASPs as soon as the Mandatory Standards come into effect starting 1 January 2016. The testing will be done based on available coverage.</p>
3.0	<p><u>Service Disruption</u></p> <p>3.1 5 respondents propose that electronic media be used as a channel to inform customer.</p> <p>3.2 1 respondent suggests that "location of the service disruption" be replaced with "area affected by the service disruption"</p> <p>3.3 1 respondent also suggests that the following items be removed from the comprehensive report for service disruption:</p> <p>3.3.1 Exact duration of service disruption</p> <p>3.3.2 Details for "network impact" as details for "service impact" is sufficient.</p> <p>3.3.3 Photographic evidence as failure could be caused by non-object elements.</p> <p>3.3.4 Compensation plan offered to affected</p>	<p>The Commission agrees to allow service providers to use electronic medium to inform customers.</p> <p>The Commission is also agreeable to replace "location of service disruption" with "area affected by the service disruption".</p> <p>On 3.3, the Commission only agrees to remove details for network impact from the comprehensive report template. All other items remain.</p> <p>Photographic evidence can be attached and submitted if it is applicable i.e. proof of vandalism. The words "if applicable" will be added to the template in the Guidelines.</p>

	customers as it takes time to come out with a compensation plan (if any). This comment was also provided by another respondent.	
4.0	<u>Percentage of billing related complaints and Non-billing related complaints per 1000 customers.</u>	
4.1	Most of the respondents suggest that amendments be made to the Guidelines to include additional exclusions and to outline more examples of types of complaints.	The Commission is of the view that the items stated in the exclusion are reasonable to protect customers' interest. The proposed items in the tables and within the Guidelines will be maintained with no new additions. The types of complaints listed out in the Guidelines are not exhaustive.
4.2	1 respondent suggests that the reporting template outline either top 5 or top 10 types of complaints for billing and non-billing issue.	



**QUESTION 2**

The Commission also welcomes comments on related matters that stakeholders or respondents believe are relevant to improve the existing Mandatory Standards for Quality of Service for Public Cellular Service.

**QUESTION 3**

The Commission also seeks views on other possible approaches that may be employed to improve quality of service for the public cellular services in Malaysia.

**24. General comments**

<b>No.</b>	<b>SUMMARY OF THE COMMENTS</b>	<b>THE COMMISSION'S RESPONSE</b>
1.0	<b><u>GENERAL COMMENTS</u></b>	<u>Response to 1.1:</u>
1.1	Quality of service indicator should be extended to cover mobile data and broadband service. (1 respondent)	The review of Commission Determination on the Mandatory Standards for Quality of Service will be done in phases. The standards/guidelines for mobile data and broadband service will be taken into consideration at the next phase of revision.
1.2	Wireless services performance is constrained by many variables and the quality of service is affected by those variables. The consumer should be educated on the nature of cellular network. (2 respondents)	<u>Response to 1.2:</u>
1.3	Revision of the Mandatory Standard would incur additional CAPEX and will subsequently affect OPEX. The concern is that the cost will be borne by the customers. The Commission should look into managing the consequences from this revision. (1 respondent)	The Commission will enhance its advocacy programs and initiate more awareness and education programs for the consumer. The service providers should also do their part in educating their customers and are also welcomed to collaborate with the Commission in carrying out this initiative.

<p>1.4</p> <p>1.5</p>	<p>Service provider should be allowed to offer plans with different quality of service stipulations as some customer are willing to trade-off quality for affordability. (1 respondent)</p> <p>State Governments should facilitate service providers in extending and improving public cellular services and encourage competition amongst players and curb anti-competitive behavior by the State Government and Network Facilities Provider licensees. The Commission should also facilitate in resolving the site acquisition issues. (3 respondents)</p>	<p><u>Response to 1.3 and 1.4:</u></p> <p>The revision to this Mandatory Standard aims to enhance customer protection and also to manage customers' perception towards service delivery in Malaysia. As such the service providers are expected to continuously invest in their infrastructure and improve their services whilst offering products and services at reasonable price.</p> <p><u>Response to 1.5:</u></p> <p>The Commission has engaged with various stakeholders and is striving to find the best approach to address these issues. These issues are also being looked into and will be taken into consideration as part of the review of the CMA.</p>
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## 25. Policy and Legislation related issues

No.	SUMMARY OF THE COMMENTS	THE COMMISSION'S RESPONSE
<p>2.0</p> <p>2.1</p> <p>2.2</p>	<p><b><u>POLICY AND LEGISLATION RELATED ISSUES</u></b></p> <p>The Commission should start an initiative to review relevant Acts to enforce or grant public utility status for cellular/mobile telecommunication services. (3 respondents)</p> <p>The revision of the Mandatory Standard should include requirement for mobile operators, especially new spectrum assignment holders, to comply with certain percentage of Detailed Business Plan (DBP) on a yearly basis. (1 respondent)</p>	<p><u>Response to 2.1, 2.4 and 2.5:</u></p> <p>The issues highlighted are being considered as part of the current review of the CMA.</p> <p><u>Response to 2.2:</u></p> <p>This requirement is managed through a different set of regulatory instruments.</p> <p><u>Response to 2.3:</u></p> <p>This issue will be taken into consideration during the review of the Spectrum Regulations.</p>

2.3	The Commission needs to establish a mandatory standard/guideline to support Regulation 33 of the Spectrum Regulations and review current SOP for “new building development” to mitigate the blocking of radio communications propagation path. (1 respondent)	<p><u>Response to 2.6:</u></p> <p>All ASPs providing public cellular services will be given sufficient time to undertake the relevant changes to comply with the revised standards. The Commission Determination on the Mandatory Standards for Quality of Services will take effect on 1 January 2016.</p> <p><u>Response to 2.7:</u></p> <p>All ASPs providing public cellular services shall be subjected to these Mandatory Standards. Therefore the relevant provisions in the Mandatory Standards (where relevant) will also be applied to the MVNO.</p>
2.4	The Commission needs to initiate the review of relevant Acts i.e. Akta Sekenhend, Penal Code and CMA to mitigate the vandalism / theft issue (1 respondent).	
2.5	Review relevant provisions in CMA and Spectrum Regulation. (1 respondent)	
2.6	Service providers should be given 1 year grace period from the effective date of the revised Mandatory Standard. (1 respondent)	
2.7	Suggestion for the Commission to look at differentiating the standards applied for MVNOs and full MNO services. (1 respondent)	

## 26. Technical issues

No.	SUMMARY OF THE COMMENTS	THE COMMISSION’S RESPONSE
3.0	<b><u>TECHNICAL ISSUES</u></b>	
3.1	The Commission should share its test log files with the service providers and discuss on possible resolution/rectification. (3 respondents)	The Commission agrees with suggestion highlighted in 3.1 and will share its test log files with the service providers.
3.2	The Commission and service providers should apply the same testing methodology. (1 respondent)	The service providers should be guided by the testing methodology employed by the Commission.

27. **Consumer issues**

No.	SUMMARY OF THE COMMENTS	THE COMMISSION'S RESPONSE
4.0	<p><b><u>CONSUMER ISSUES</u></b></p> <p>4.1 Service providers' performance should be published in public domain to provide visibility and transparency to the customer. (1 respondent)</p> <p>4.2 To establish a mechanism for consumer to seek recourse if complaint to service provider is not given proper solutions. (1 respondent)</p> <p>4.3 Consumer should be refunded in full for service not provided within 5 working days. (1 respondent)</p>	<p><u>Response to 4.1:</u></p> <p>The Commission recognizes the need for the consumer to make informed decision before subscribing to any services. As such, the Commission is the midst of studying the best manner in which this approach can be implemented.</p> <p><u>Response to 4.2:</u></p> <p>The Commission has established proper complaint process as indicated below, which provides for a clear escalation process:</p> <div> <p>The diagram illustrates the 'Complaint Process' as a circular flow. At the top, it starts with a 'Consumer Problem / Issue Complaint' icon. The process moves through three steps:         <ul style="list-style-type: none"> <li><b>Step 1:</b> 'Problems with telecommunications, postal, internet &amp; radio services? Contact your service provider for resolution'. This step leads to a 'Not Resolved / No Feedback' outcome, which loops back to Step 1.</li> <li><b>Step 2:</b> This step branches into two entities:                 <ul style="list-style-type: none"> <li><b>CFM (Communication and Multimedia Consumer Forum of Malaysia):</b> 'Complaint On Services'. Contact details: Hotline: 1800 182 222, Complaint Portal: www.complaint.cfm.org.my, Email: aduan@cfm.org.my, Portal: www.cfm.org.my.</li> <li><b>CMCF (Communications and Multimedia Content Forum of Malaysia):</b> 'Complaint Related to Content (e.g. padang electronic)'. Contact details: Hotline: 1800 882 623, Email: secretariat@cmcf.my, Portal: www.cmcf.my.</li> </ul> </li> <li><b>Step 3:</b> 'Aduan SKMM' (MCMC). Contact details: 1800 188 030, Email: aduanskmm@cmc.gov.my, Portal: http://aduan.skmm.gov.my.</li> </ul>         Arrows show a clockwise flow from Step 1 to Step 2, and from Step 2 to Step 3. A 'Not Satisfied' icon points from Step 3 back to Step 1.         </p> </div> <p><u>Response to 4.3:</u></p> <p>The suggestion will be taken into consideration through the General Consumer Code (GCC)'s review exercise.</p>

## 28. Enforcement issues

No.	SUMMARY OF THE COMMENTS	THE COMMISSION'S RESPONSE
5.0	<b><u>ENFORCEMENT ISSUES</u></b>	
5.1	To ensure tight enforcement is in place with appropriate action taken when quality of service standard is not met by the service provider. (1 respondent)	The enhancement of Commission's enforcement powers is one of the issues being considered in the review of the CMA exercise.
5.2	The Commission should have strong enforcement against vandalism. (1 respondent)	The Commission is also considering other approaches that can be implemented to ensure better quality of service including incentive based mechanism where service providers can be rewarded for outperforming the minimum standard imposed in the Mandatory Standard.

## **SECTION 5: THE WAY FORWARD**

29. The Commission is of the view that the proposed revision of the Mandatory Standards for Quality of Service for Public Cellular Service would ensure improvements to existing levels of quality of service by the service providers.
30. The mandated standard reflects the Commission's view in achieving national policy objectives in the CMA, which can only be met if there is sensitivity to an ethos of quality consciousness at a high level. The focus on the quality of service is one of key strategic thrust in the 11th Malaysia Plan that aims to improve the well-being of the *rakyat* in terms of standard of living and quality of life.
31. The Commission is satisfied that the Mandatory Standards are objective measures that reflect the intrinsic measures of quality and, as far as possible, global best practices and standards.
32. In selecting a particular benchmark for the quality of service, the Commission has endeavored to make certain that the benchmark is meaningful to the customer and enables the customer to assess and make informed decisions on the levels of quality they are experiencing. The benchmark will be equally useful for the Commission to gauge the performance of the service providers in fulfilling its role to monitor the industry.
33. The revised Mandatory Standards on the Quality of Service for Public Cellular Service will come into force on 1 January 2016 to facilitate service providers to take preparatory measures and to ensure that they are ready and able to comply with these standards.