



Suruhanjaya Komunikasi dan Multimedia Malaysia
Malaysian Communications and Multimedia Commission

**REPORT ON A PUBLIC INQUIRY ON THE REVIEW OF
COMMISSION DETERMINATION ON THE MANDATORY STANDARDS FOR
QUALITY OF SERVICE (BROADBAND ACCESS SERVICE) -
DETERMINATION NO. 1 OF 2007**

January 2016

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

TABLE OF CONTENTS

SECTION 1:SUMMARY OF THE PUBLIC INQUIRY	1
SECTION 2:SUMMARY OF COMMISSION'S FINAL VIEWS	3
SECTION 3:THE COMMISSION'S FINAL VIEWS ON THE FRAMEWORK	7
SECTION 4:INPUT FROM THE PUBLIC INQUIRY AND THE COMMISSION'S RESPONSE	21
SECTION 5:THE WAY FORWARD	57

SECTION 1: SUMMARY OF THE PUBLIC INQUIRY

INTRODUCTION

1. The Commission recognizes the need to review the MSQoS for Broadband Access Service in light of, technological migrations that is currently taking place due to technology advancements, the significant changes in network usage, and changes in customer expectations and perception towards service delivery. Therefore, pursuant to section 104 (2) of the Communications and Multimedia Act 1998 (CMA98), the Commission hereby undertakes a review of Determination No. 1 of 2007. This MSQoS covers the standards for Quality of Service for delivery of data, video, or voice over the internet protocol for wired systems.
2. The reviewed Determination shall later be known as Commission Determination on the Mandatory Standards for Quality of Service (Wired Broadband Access Service).
3. The proposed revision is based on international best practices where applicable, current network scenario and seeks to address current issues in relation to broadband service in Malaysia. This revision also seeks to prepare the nation in meeting quality of Broadband services towards a smart nation by year 2020.

PUBLIC INQUIRY

4. The Commission embarked on a public inquiry on 18 September 2015 and released a Public Inquiry Paper on the Review of Commission Determination on the Mandatory Standards for Quality of Service on Wired Broadband Access Service (Determination No. 1 of 2007). The Public Inquiry paper contained a preface and the proposed revision quality of service mandatory standards for Wired Broadband Access Service.

5. The deadline for submissions was 12:00 noon, 5 November 2015 and the PI period was subsequently extended to 31 December 2015. At the close of inquiry, the Commission had received **ten** (10) submissions from the following respondents:
 - (a) Altel Communications Sdn. Bhd. (Altel);
 - (b) Celcom Axiata Berhad (Celcom);
 - (c) Digi Telecommunications Sdn. Bhd. (Digi);
 - (d) Malaysian Consumer and Family Economics Association (MACFEA);
 - (e) Maxis Berhad (Maxis);
 - (f) Neutral Transmission Malaysia Sdn. Bhd. (Neu Trans);
 - (g) REDtone International Bhd (Redtone)
 - (h) Telekom Malaysia Berhad (TM);
 - (i) TIME dotcom Berhad (Time); and
 - (j) YTL Communications Sdn. Bhd. (YTL).

6. The Commission considered these ten submissions. A summary of comments/suggestions are outlined in Section 4 of this Report.

STRUCTURE OF THE PI REPORT

7. The remainder of this PI Report is structured broadly to align with the PI Paper to provide context for the Commission's questions and comments, as follows: -
 - 7.1 Section 2 provides a summary of Commission's final views on the proposed changes;
 - 7.2 Section 3 describes the Commission's final views on the framework;
 - 7.3 Section 4 provides a summary of inputs received and the Commission's responses thereto; and
 - 7.4 Section 5 highlights the way forward.

SECTION 2: SUMMARY OF COMMISSION'S FINAL VIEWS

8. 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 Wired Broadband Access Service:

8.1. Network Performance Quality of Service

Previously proposed	Revised formula	Reasons
<ul style="list-style-type: none"> Throughput (Broadband Speed) must be not less than <ul style="list-style-type: none"> (a) 70.0% of subscribed level for 90.0 % of time effective 1 January 2016; and (b) 90.0% of subscribed level for 90.0% of time effective 1 January 2018 Network Service Availability of the access network must be not less than 99.90%. $\frac{\text{Total operational minutes in month} - \text{Total minutes of service downtime in a month}}{\text{Total operational minutes in a month}} \times 100\%$	<ul style="list-style-type: none"> Throughput (Broadband Speed) must not be less than <ul style="list-style-type: none"> (a) 70.0% of subscribed level for 90.0 % of the time for DSL effective 1 February 2016; and (b) 90.0% of subscribed level for 90.0% of the time for Fibre effective 1 February 2016 Network Service Availability of the access network must not be less than 95.00% $\frac{\text{Total operational minutes in a month for each of access network equipment} - \text{Total minutes of service downtime in a month for each of access network equipment}}{\text{Total operational minutes in a month for each of access network equipment}} \times 100\%$	<ul style="list-style-type: none"> DSL technology in theory and at lab environment can only meet 75% throughput at best. Best to audit individual access points than average

- The standard on Advance Notice for Scheduled Downtime

Previously proposed	Revised formula
<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>	<p>Every session of scheduled downtime due to occur which affects customers must be notified to customers not less than 24 hours in advance.</p>

- The standard on Service Disruption is as follows:

Previously proposed	Revised formula
<p>Any single incident of service disruption must not affect 500 or more customers and last for 30 minutes or longer.</p> <p>Service provider must notify the Commission within 60 minutes of the occurrence of any single service disruption incident of any duration affecting 500 or more customers.</p>	<p>Any single incident of Service Disruption must not be out of service for 3 hours or longer and affect 500 or more customers.</p> <p>Any single incident of Service Disruption that affects 500 or more customers and lasts for 3 hours or longer which occurs:</p> <p>(a) between 5AM to 12 midnight, must be rectified within 3 hours from</p>

	<p>the occurrence of the Service Disruption; and</p> <p>(b) between 12 midnight to 5AM, must be rectified no later than 6AM.</p> <p>The service provider must notify customers within 90 minutes of the occurrence of any single Service Disruption incident affecting 500 or more customers and lasts for 3 hours or longer.</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 affected 500 or more customers and lasted for 3 hours or longer.</p>
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8.2. Customer Service Quality of Service

- Promptness in Resolving Customer Complaints:
 - i. Not less than 60.0% must be resolved within 3 business days (previously proposed at 30.0%);
 - ii. Not less than 90.0% must be resolved within 5 business days (previously proposed at 95.0%); and
 - iii. Not less than 95.0% must be resolved within 15 business days (previously proposed at 99.0%).

- Promptness in Answering Calls to Customer Hotline:
 - i. 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 (previously proposed at 80.0% within 15 seconds); and
 - ii. 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 (previously proposed at 100.0% within 30 seconds).

8.3. Effective Date

- The Commission has decided that the revised MSQoS will take effect from:
 - i. 1 February 2016 for Standards for Network Performance Quality of Service; and
 - ii. 1 July 2016 for Standards for Customer Service Quality of Service.

SECTION 3: THE COMMISSION'S FINAL VIEWS ON THE FRAMEWORK

INTERPRETATION PART OF THE STANDARDS

9. The following interpretations shall be used in the revised Mandatory Standards for Quality of Service for Wired Broadband Access 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;

"uplink" means connectivity between access layer (not limited to DSLAM, MSAN, OLT) to aggregation layer (not limited to Metro-Ethernet, ATM switch);

"complaint" means any verbal or written expression of dissatisfaction by customer to service provider regarding the service provider's service and 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;

"CPE" means customer premises equipment;

"customer" means a person who, for consideration, acquires or subscribes to the wired broadband service;

“Digital Subscriber Line (DSL)” means a technology for bringing high bandwidth information over copper telephone lines;

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

“fibre” means optical fibre cable used for broadband which is connected directly to customer premises equipment;

“guidelines” means a guidelines issued by the Commission pursuant to the Commission Determination on the Mandatory Standards for Quality of Service (Wired Broadband Service);

“MyIX” means the Malaysia Internet Exchange, a non-profit Internet Exchange where local Internet Service Providers and content providers connect to in order to exchange internet traffic;

“NSP” means Network Service Provider;

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

“resolved” means that the complaint was addressed and the problem was rectified;

“service provider” means an Applications Service Provider or a Network Service Provider who provides wired broadband access service; and

“wired broadband service” means a wired connectivity of communication bandwidth service that has a minimum downstream capacity of 650 kbps, with a minimum subscribed package of 1Mbps.

REQUIREMENT FOR REPORT SUBMISSION

10. The Commission intends to maintain the reporting period to a calendar quarter, as practiced in many other jurisdictions. The Commission is of the view that the reporting period of 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 MSQoS 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)¹.
11. 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 1: Reporting Timelines

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

¹ ETSI EG 202 057 4.7 Data collection period

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

12. The MSQoS 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 2&3 of this document.

13. Standards for Network Performance Quality of Service are outlined in Table 2 below:

Table 2: Network Performance Quality of Service

	Quality of Service Indicator	Description / Definition / Formula / Measurement / Reporting Requirement	Quality of Service Standard
i.	Network Latency (ping time)	<p>This indicator measures the round-trip time taken by a standard packet size of 64 bytes to travel across the network from the end user to MyIX and back to the end user.</p> $\frac{\text{Number of test samples} \leq 85\text{ms}}{\text{Total number of test samples}} \times 100\%$	Network Latency must be not more than 85 ms, 95.0% of the time based on test sample.
ii.	Throughput (Broadband Speed)	This indicator measures the speed of uploading and downloading data measured in units of Megabits per second (Mbps) between the end user and MyIX. This is to be measured and reported separately	<p>(a) 70.0% of subscribed level for 90.0 % of the time for DSL effective 1 February 2016; and</p> <p>(b) 90.0% of subscribed level for 90.0% of the</p>

		for uploading and downloading. $\frac{\text{Number of test samples} \geq \text{QoS Throughput Standard}}{\text{Total number of test samples}} \times 100\%$	time for Fibre effective 1 February 2016.
iii.	Packet Loss	This indicator measures the percentage of data packets transmitted from the source that fails to arrive at their destinations. It is computed based on the average of sample measurements between the end user and MyIX. $\frac{\text{Total Number of Packet Loss}}{\text{Total number of Sent Packet}} \times 100\%$	Packet Loss must be not more than 1.0%, computed based on the average of the test sample.
iv.	Access Network Utilization	This indicator measures the total traffic between access node (not limited to DSLAM,MSAN,OLT etc) to aggregation node e.g Metro-Ethernet	Access network (not limited to DSLAM, MSAN, OLT etc.) uplink traffic utilization must be not more than 70% of the uplink bandwidth provided in every calendar month.
v.	Network Service Availability	Network Service Availability is the measure of the degree to which the broadband access network equipment is operable and not in a state of failure or outage at any point of time for all users.	Network Service Availability of the access network must be not less than 95.00% every calendar month. Service provider must

		<p>Formula:</p> $\frac{\text{Total operational minutes in a month for each of access network equipment} - \text{Total minutes of service downtime in a month for each of access network equipment}}{\text{Total operational minutes in a month for each of access network equipment}} \times 100\%$ <p>The total minutes of service downtime in a month referred to in the formula above measures the network's total downtime in a month for each of access network equipment including, but not limited to the switches, multiplexers, routers, servers, and connectivity to service providers. All CPE are excluded.</p> <p>For the purpose of the formula above, all scheduled downtime (as defined in this MSQoS) for the purposes of maintenance and upgrading of the network are to be excluded from the computation.</p>	<p>measure the Network Service Availability every month for each of access network equipment. These measurements shall be made available to the Commission for audit purposes if required.</p>
vi.	Advance Notice of Scheduled Downtime	Service provider is required to inform customers in advance in respect of any network service downtime planned and scheduled by the service provider for the purposes of maintenance and upgrading of the	Every session of scheduled downtime due to occur which affects customers must be notified to customers not less than 24 hours in advance.

		network.	
vii.	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.</p> <p>A service provider is considered to have breached the Service Disruption standard where a single Service Disruption incident affecting 500 or more customers and lasted for 3hours or longer for an incident occurs from 6AM to 12midnight.</p> <p>If more than one Service Disruption incident occurring in a quarterly reporting period breach this standard, each and every one of such incidents are regarded as separate breaches of this standard.</p> <p>Service provider shall notify customers within 90 minutes in respect of any Service Disruption incident.</p> <p>In the event of a single Service Disruption incident affected 500 or more customers and lasted for 3 hours or longer, the service provider</p>	<p>Any single incident of Service Disruption must not affect 500 or more customers and last for3hours or longer for an incident that occurs from 6AM to 12 midnight.</p> <p>Service provider must notify customers within 90 minutes of the occurrence of any single Service Disruption incident of any duration affecting customer.</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 affected 500 or more customers and lasted for 3 hours or longer.</p>

		must submit a comprehensive report to the Commission within 7 business days of the incident.	
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14. Standards for Customer Service Quality of Service as Table 3 below:

Table 3: Customer Service Quality of Service

	Quality of Service Indicator	Description / Definition / Formula / Measurement / Reporting Requirement	Quality of Service Standard
i.	Service Activation Fulfilment	<p>This indicator measures the duration from the time and date agreed by customer for the service to be activated, to the time when the service is activated, excluding non-business days.</p> <p>Formula:</p> $\frac{\text{Total number of service activations fulfilled within the specific timeframe}}{\text{Total number of service activation scheduled to be activated within the reporting period}} \times 100\%$ <p>For the purpose of this indicator, deferment or cancellation of agreed date and time of service activation shall be upon customer request. Evidence of customer's agreement should be retained.</p> <p>Service activations that fail to meet the</p>	<p>(a) Not less than 95.0% of all Service Activation Fulfilment in a reporting period must be fulfilled within 24 hours from the agreed time and date; and</p> <p>(b) 100.0% of all Service Activation Fulfilment in a reporting period must be fulfilled within 72 hours from the agreed time and date.</p>

		<p>standard due to the following reasons are excluded from the computation:</p> <p>(a) Damage to network facility due to force majeure or third parties;</p> <p>(b) Faulty CPE, customer infrastructure or internal wiring; and</p> <p>(c) Customer premises inaccessible.</p> <p>When service activation cannot be fulfilled due to the above reasons, new service activation time and date must be set and agreed between service provider and customer.</p>	
ii.	Service Restoration Fulfilment	<p>This indicator measures the duration from the time and date a service fault is reported, to the time of service restoration, including non-business days. Where customer has requested for specific time and date of service restoration, restoration time is calculated from the specified time and date including non-business days.</p> <p>Formula:</p> $\frac{\text{Total number of service restorations fulfilled within the specific timeframe}}{\text{Total number of service fault reports received within the reporting period}} \times 100\%$	<p>(a) Not less than 95.0% of all Service Restorations Fulfilment in a reporting period must be fulfilled within 24 hours; and</p> <p>(b) 100.0% of all Service Restorations Fulfilment in a reporting period must be fulfilled within 48 hours.</p>

		<p>For the purpose of this indicator, deferment or cancellation of agreed date and time of service restoration shall be upon customer request. Evidence of customer's agreement should be retained.</p> <p>Service restorations that fail to meet the standard due to the following reasons are excluded from the computation:</p> <p>(a) Damage to network facility due to force majeure or third parties;</p> <p>(b) Faulty Customer Premise Equipment (CPE), customer infrastructure or internal wiring; and</p> <p>(c) Customer premises inaccessible.</p> <p>When service restoration cannot be fulfilled due to the above reasons, new service restoration time and date must be set and agreed between service provider and customer.</p>	
iii.	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</p>	<p>Percentage of billing related complaints must be not more than 1.0% per quarterly reporting period.</p>

		<p>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> $\frac{\text{Total number of billing related complaints received at the end of the reporting period}}{\text{Total number of active customers at the end of the reporting period}} \times 100\%$	
iv.	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</p>	Non-billing related complaints must be not more than 6 complaints per 1,000 customers per quarterly reporting period.

		<p>service.</p> <p>Formula:</p> $\frac{\text{Total number of non – billing related complaints received in the reporting period}}{\text{Total number of active customers at the end of the reporting period}} \times 1000$	
v.	Promptness in Resolving Customer Complaints	<p>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.</p> <p>Formula:</p> $\frac{\text{Total number complaints resolved within the specific timeframe}}{\text{Total number of complaints received within the reporting period}} \times 100\%$ <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 MSQoS is applicable for both categories of complaints.</p> <p>Unresolved complaints due to the following are excluded from the computation:</p> <p>(a) Damage to network facility due to</p>	<p>The standard on promptness in resolving customer complaints, separately measured for billing related complaints and non-billing related complaints, for every quarterly reporting period is:</p> <p>(a) Not less than 60.0% must be resolved within 3 business days;</p> <p>(b) Not less than 90.0% must be resolved within 5 business days; and</p> <p>(c) Not less than 95.0% must be resolved</p>

		<p>force majeure or third parties;</p> <p>(b) Faulty customer premise equipment, customer infrastructure or internal wiring; and</p> <p>(c) Customer premises inaccessible.</p> <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>Service provider is required to inform customers of their right to refer any unresolved complaint to the Consumer Forum of Malaysia (CFM).</p>	<p>within 15 business days.</p>
vi.	<p>Promptness in Answering Calls to Customer Hotline</p>	<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>(a) 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>(b) At least 90.0% of calls to Customer Hotline that opted</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>for human operator in a quarterly reporting period must be answered within 40 seconds.</p>
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APPLICABLE GUIDELINES

15. The Commission has developed a set of guidelines that sets out the testing procedures, examples of computations, reporting templates, explanatory notes, and list of areas to the standards proposed in this document. The said guidelines will be issued as the Guidelines to the Commission Determination on the MSQoS (Wired Broadband Access Service).

SECTION 4: A SUMMARY OF INPUTS RECEIVED AND THE COMMISSION'S RESPONSE

16. 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 MSQoS 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 Determination.

17. Part A: Interpretation Part of the Standards

NO.	SUMMARY OF THE COMMENTS	THE COMMISSION'S RESPONSE
1.0	1 respondent proposed to include in the definition of "complaints" that multiple complaints made by one customer should be considered as one complaint. In this regard, the MS will indicate that the multiple complaints made by the same customer on the same issue may be considered by the Commission as one complaint; and proposed to the	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), 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

	<p>Commission to consider that resolve cases by SPs may not be consistent or satisfy the customer. Therefore it was proposed that the Commission to be able to come out with a proposed guideline of the term resolved</p>	<p>one complaint.</p>
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18. Part B: Requirement for Report Submission

NO.	SUMMARY OF THE COMMENTS	THE COMMISSION'S RESPONSE
1.0	<p>3 respondents recommended that the Commission undertake the assessment for the reports on a half yearly basis.</p>	<p>The 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 MSQoS and to allow the Commission to react to any significant issue in a timely manner. The proposed MSQoS are also in line with international best practices and ETSI guidelines. As such, the Commission has decided to maintain the proposed requirement.</p> <p>The relevant NSPs and ASPs may publish the MSQoS performance report on their official websites to enable consumers to have an</p>
2.0	<p>6 respondents disagreed to publish the results on their websites. 3 respondents suggest that MCMC should publish the results instead.</p>	
3.0	<p>1 respondent did not agree with the proposed report submission dates and did not agree to mandate NSPs and ASPs to publish report on their official websites.</p>	

	informed decision.
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19. Part C: Quality of Service Indicators, Measurements, Standards, Notification and Reports

(a) Network Performance Quality of Service

No.	SUMMARY OF THE COMMENTS	THE COMMISSION'S RESPONSE
1.0	<u>Network Latency(ping time)</u>	
1.1	In general, most of the respondents agreed with the latency not more than 85ms for 95% of the time.	A Monitoring tool shall be placed at the server that is being tested. The Commission acknowledges that if the samples are distorted because of
1.2	2 respondents proposed to ensure that the server at MyIX has sufficient capacity to cater for simultaneous test traffic at the port level.	reasons beyond the service provider's control, the said samples may be reconsidered again.
1.3	1 respondent suggested to have the measurement based on the average of test samples	The methodology of the assessment is included in the guidelines.
		The Commission is of the view that by averaging the latency results, it will not be accurate in terms of end user experience as one extreme fluctuated result could affect the overall calculation. Hence, each number of samples is treated individually and is considered as one occurrence when the end user is connected to the network. This is to ensure that good customer experience is achieved at most if not at all times and also to improve

1.4	1 respondent proposed the exact location of MyIX should be specified	customer confidence level towards service delivery. Currently the assessment will be conducted based on the test server located at MyIX in Menara AIMS Kuala Lumpur
2.0	<p data-bbox="310 625 781 657"><u>Broadband Speed (Throughput)</u></p> <p data-bbox="310 730 849 1024">2.1 Most of the respondents agreed to the throughput not less than 70% of subscribed level for 90% of the time but only 2 of 9 agreed when the speed is increased to 90% of subscribed level after 31 Dec 2017.</p> <p data-bbox="310 1098 849 1392">2.2 1 respondent highlighted that DSL technology having throughput performance approximately 75% of subscribed level and it will be difficult to get throughput 90% of subscribed level and above.</p> <p data-bbox="310 1476 849 1665">2.3 1 respondent suggested 80.0% of the subscribed level for 90.0% of the time effective from 1 January 2018</p> <p data-bbox="310 1738 849 1875">2.4 1 respondent suggested minimum bandwidth should be specified for a customer. As example, customer</p>	<p data-bbox="870 730 1433 972">The Commission acknowledges technology limitations. In view of this, the Commission made changes accordingly based on the technologies provided.</p> <p data-bbox="870 1738 1433 1875">The Commission believes that by setting 70% utilization mark will address this factor for the moment.</p>

	may subscribe to 5Mbps service but minimum of 0.5Mbps must be guaranteed at all time.	
3.0	<u>Packet Loss</u>	
3.1	6 out of nine of the respondents agreed to the packet loss not more than 1% and the rest did not put any comments	The Commission consider this standard to support good quality in audio and video streaming. The total number of samples is at least 100 to ensure the accuracy.
3.2	1 respondent proposed the calculation based on the average of test sample	Average sampling does not reflect fair auditing.
3.3	1 respondent proposed maximum value should be specified	
4.0	<u>Access Network Utilization</u>	
4.1	7 out of nine respondents disagreed to the network utilization (access node e.g. DSLAM, MSAN, OLT etc.) must be not more than 70% of the uplink bandwidth.	The Commission is aware that the users are experiencing slow browsing during peak hours and this method will help crosscheck with the Consumer Complaints Bureau (CCB) database on poor service and for monitoring purposes
4.2	1 respondent opined network utilization is operator's internal matter and regulator should trust and leave the network operation in	The Commission believes that although, best efforts on public networks is practiced, a nominal SLA must be adhered to for consumer

	the operators' hand.	protection.
4.3	3 respondents opined this measurement should not be mandated as the throughput and network availability measurements are sufficient to monitor the network performance.	The Commission believes that mandating the measurements here would tremendously help SPs in avoiding any oversights for such incidences.
4.4	1 respondent opined this measurement duplication to the throughput measurement since both measurements are related to each other	It is definitely not the same as one is for each individual end user while the other is for access node to trigger future planning for SPs
4.5	1 respondent opined that average utilisation (70% or whatever figure) is not sufficient to indicate quality of service. Uplink should never be saturated. Monitoring over 1% of total hours in a month is not sufficient. Tool such as MRTG (Multi Router Traffic Grapher) should be used to monitor the Uplink all the time.	The Commission believes that practicing the 70% utilization is a good start as most jurisdictions have successfully adopted it.
5.0	<u>Network Service Availability</u>	
5.1	2 respondents agreed with the proposed requirements.	Calculation for current MS is based on annual data. The revised formula and standard will enable the Commission to take regulatory action on any service providers which does
5.2	6 respondents did not agree with proposed requirements.	

5.3	2 respondents proposed to retain the standards.	not comply with this requirement after the 30 days period instead of waiting for the annual reporting.
5.4	1 respondent sought for further deliberate on how the "total operational minutes in a month" be calculated.	The Commission agreed to reduce the compliance percentage from 99.90% to 95.00% taking into consideration the measurement applies to each of the access equipment.
5.5	1 respondent claimed it was very stringent and nearly impossible to be met due to restoration of the faulty equipment requires some time as it was very much dependent on safety/ access issue, availability of similar equipment etc.	The service provider is not required to report to the Commission on the standard, however, the service provider must measure the network service availability every month for each of the access network equipment. These measurements shall be made available to the Commission for audit purposes when required.
5.6	1 respondent proposed "Network service availability of the access network must be not less than 99.9% annually."	SPs are expected to provide redundancy system to ensure service continuity.
5.7	1 respondent proposed the proposed standard was calculated on annual basis and reported with a monthly breakdown submitted on 6-month reporting period.	
5.8	1 respondent proposed the standard to be measured for port availability per customer only and	

	<p>not for all access network equipment including, but not limited to the switches, multiplexers, routers, servers, and connectivity to service providers.</p>	
5.9	<p>1 respondent claimed can only commit 99.9% for Core Networks ONLY such as core routers, core switches.</p>	
5.10	<p>1 respondent opined the proposed methodology where the network service availability was based upon the operational status of each access network equipment was flawed since it was not a representation of the end customer's experience.</p>	
5.11	<p>1 respondent opined the measurement of availability of each network element in the access network was time consuming, requires significant resources and has a high impact on the industry regulatory cost.</p>	
5.12	<p>1 respondent opined it was irrelevant to customers' actual experience as they would still enjoy the service although the network</p>	

<p>5.13</p> <p>5.14</p>	<p>element was down due to the provision of redundancy.</p> <p>1 respondent opined 99.9% was too high. Need additional equipment, costs implication. Imposing standards used for digital leased lines for internet access service was very onerous and will result in high cost of providing redundancy capacity.</p> <p>1 respondent proposed SLA of 95% Yearly (excluding scheduled downtime, excluding CPE issues, exclude power supply interruptions from TNB) generally should be more appropriate. However customers can request for high QOS based on requirements.</p>	
<p>6.0</p> <p>6.1</p> <p>6.2</p> <p>6.3</p>	<p><u>Advance Notice of Scheduled Downtime</u></p> <p>2 respondents agreed with proposed requirements.</p> <p>7 respondents did not agree with proposed requirements.</p> <p>4 respondents proposed the requirements to be set out as a</p>	<p>The Commission notes the challenges faced by Service Providers in this regard. However, advanced notice to the customer is required to ensure that the customer is informed about any interruption to services.</p>

	<p>guideline instead of as a mandatory standard.</p>	
6.4	<p>1 respondent claimed has not found any country in the world including advance/ developing countries that regulates advance notice of scheduled downtime under mandatory standard.</p>	
6.5	<p>1 respondent claimed major wired broadband service providers perform frequent planned maintenance/upgrading works for the benefits of the consumers. It is impractical to inform the consumers and MCMC on every maintenance scheduled downtime.</p>	
6.6	<p>1 respondent proposed wired broadband service providers to jointly develop a new guideline for “Advance Notice of Scheduled Downtime” with MCMC to promote self-regulation that covers the following criteria:</p> <ul style="list-style-type: none"> i. Advance notice is required for planned maintenance works that will affect more than 500 customers from 06:00 – 24:00. 	

	<p>ii. Such advance notice is to be sent to MCMC and wired broadband service provider's Customer Service Department as shown below:</p> <table border="1" data-bbox="310 485 846 842"> <thead> <tr> <th data-bbox="310 485 475 548">Target</th> <th data-bbox="475 485 680 548">Notification Period</th> <th data-bbox="680 485 846 548">Method</th> </tr> </thead> <tbody> <tr> <td data-bbox="310 548 475 711">Customer Service</td> <td data-bbox="475 548 680 711">24 hours in advance</td> <td data-bbox="680 548 846 711">Email to Customer Service Department</td> </tr> <tr> <td data-bbox="310 711 475 842">MCMC</td> <td data-bbox="475 711 680 842">72 hours in advance</td> <td data-bbox="680 711 846 842">Email to qos.admin@cmc.gov.my</td> </tr> </tbody> </table>	Target	Notification Period	Method	Customer Service	24 hours in advance	Email to Customer Service Department	MCMC	72 hours in advance	Email to qos.admin@cmc.gov.my	
Target	Notification Period	Method									
Customer Service	24 hours in advance	Email to Customer Service Department									
MCMC	72 hours in advance	Email to qos.admin@cmc.gov.my									
6.7	<p>1 respondent opined notification to consumer on maintenance works via website may attract abuse by certain parties i.e. misuse the information to imply on some negative perception towards certain operator, MCMC or the country.</p>										
6.8	<p>1 respondent opined official writing to MCMC typically takes a longer process as they require authorized officers' approval and signature.</p>										
6.9	<p>2 respondents proposed to notify customers in 24 hours at the Customer Service level only i.e. customers will be informed on the downtime only when they call our</p>										

	hotline.	
6.10	1 respondent proposed to inform MCMC up to 3 days in advance and our customers up to 24 hours in advance on any planned major service affecting.	
6.11	1 respondent proposed to notify MCMC within 72 hours before the planned maintenance takes place.	
6.12	1 respondent opined it is not practical due to large number of Planned Maintenance Work (PMW) which largely dependent on other ISPs readiness and propose to notify MCMC on monthly basis instead of making it a standard parameter.	
7.0	<u>Service Disruption</u>	
7.1	2 respondents agreed with proposed requirements.	The Commission recognizes the challenge for service providers to report on incidences within 60 minutes, which is why the Commission only requires a notification on the service disruption. A detail report is only required within 7 business days after the incident.
7.2	7 respondents did not agree with proposed requirements.	
7.3	2 respondents proposed the requirements to be set out as a guideline instead of as a mandatory	

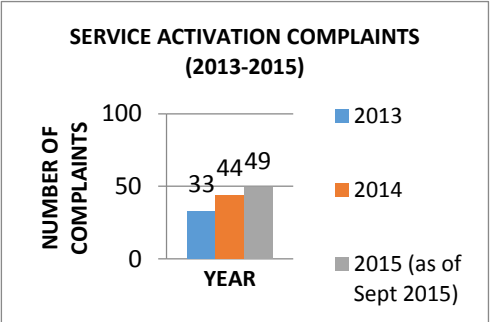
<p>7.4</p>	<p>standard.</p> <p>1 respondent proposed wired broadband service providers to jointly develop a new guideline for “Service disruption” with MCMC to promote self-regulation that covered the following criteria:</p> <ul style="list-style-type: none"> i. Any single incident of service disruption must not affect 500 or more customers from 06:00 – 24:00. ii. Service provider must notify the Commission within 60 minutes of the occurrence of any single service disruption incident of any duration affecting 500 or more customers from 06:00 – 24:00. iii. Service provider must submit a comprehensive report to the Commission within 7 business days upon the restoration of service disruption incident that affected 500 or more customers from 06:00 – 24:00. 	<p>The standards defined here is for notifying and reporting requirements as and when the service disruption occurs. This standard will keep customer informed on network availability and service expectations.</p> <p>All reports submitted will enable the Commission to monitor the frequency of disruptions and how responsive the service provider deals with the issue. The report can be used to determine future changes to the standards.</p> <p>The Malaysian consumers are very dependable on Broadband service in their daily lives and taking into consideration other aspects as well, the Commission feels that it is very important that service disruption be addressed expediently between 5am to midnight.</p>
<p>7.5</p>	<p>1 respondent proposed as a guide</p>	

	<p>for reporting only for any failures that causes total data outage for more than 30 minutes affecting 500 or more subscribers and full report sent to MCMC within 7 days of the incidence.</p>	
7.6	<p>1 respondent claimed their network operations team requires sixty (60) minutes to isolate fault, undertake first level troubleshooting and initiate our Business Continuity Plan, if required.</p>	
7.7	<p>1 respondent opined to mobilize the team to rectify the fault, identify the exact location of the disruption, getting work permits if it involves road works and others will take more than the allowed time.</p>	
7.8	<p>1 respondent opined it was redundant as network performance was also measured under network service availability and therefore should not be mandated by MCMC. They proposed to notify MCMC instead of making it a standard parameter if there was a crisis affecting nationwide broadband customers as and when incidence happens.</p>	

7.9	1 respondent did not support these standards as service disruption may be caused by other factors beyond the control of any service providers.	
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(b) Customer Service Quality of Service

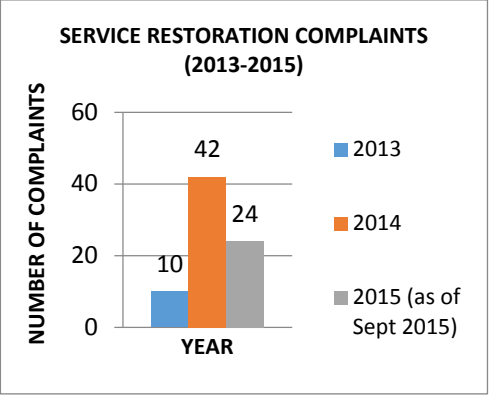
NO.	SUMMARY OF THE COMMENTS	THE COMMISSION'S RESPONSE
8.0	<u>Service Activation Fulfillment</u>	
8.1	3 respondents agreed with proposed requirements.	Based on the CCB report, the number of service activation complaints shows increasing trend.
8.2	1 respondent sought for further clarification with proposed requirements.	
8.3	5 respondents did not agree with proposed requirements.	
8.4	2 respondents proposed to retain the existing standards.	
8.5	1 respondent proposed the requirements to be segregated into 3 Tiers instead of 2 Tiers which is as follows: i. 80% of all installation orders	



A more stringent MSQoS is meant to ensure that service providers treat these issues with a significant degree of importance and address the gap between the level of compliance by the service providers and number of complaints received by the Commission. The Commission seeks

	<p>shall be fulfilled within 24 hours from the agreed the time and date</p> <ul style="list-style-type: none"> ii. 90% of all installation orders shall be fulfilled with 48 hours from the agreed time and date iii. 99% of installation orders shall be fulfilled within 7 business days from the agreed time and date <p>8.6 1 respondent proposed that service activation must be $\geq 99\%$ must be fulfilled within 7 business days from the agreed time and date.</p> <p>8.7 1 respondent proposed:</p> <ul style="list-style-type: none"> i. Not less than 95.0% of all service activations scheduled to be fulfilled in a reporting quarter must be fulfilled within 24 hours from the agreed time and date. ii. 100.0% of all service activations scheduled to be fulfilled in a reporting quarter must be fulfilled within 72 hours from the agreed time and date. 	<p>to encourage the service provider to improve their internal processes in dealing with complaints to achieve the standard.</p> <p>The Commission is of the view that a more stringent MSQoS will spur service providers to deal more efficiently with customer complaints.</p> <p>The exclusion clauses are already covered in the MSQoS.</p>
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8.8	1 respondent proposed to extend time frames as it was too stringent due to infrastructure and customer personal demands.	
8.9	1 respondent disagreed with the new standards due to significant increase in cost and thus translates to higher charges to customer.	
8.10	<p>1 respondent requested to add exclusion clause for:</p> <ul style="list-style-type: none"> i. Wrong address given by the customer; ii. Damage to network facility due to force majeure; iii. Damage to network facility by third parties; iv. Customer premises inaccessible; v. Customer premises internal wiring not ready at the committed or agreed time; vi. Network facility not available; or vii. Delay caused by wired broadband network wholesale provider. 	
8.11	1 respondent requested to add exclusion clause to exclude delays	

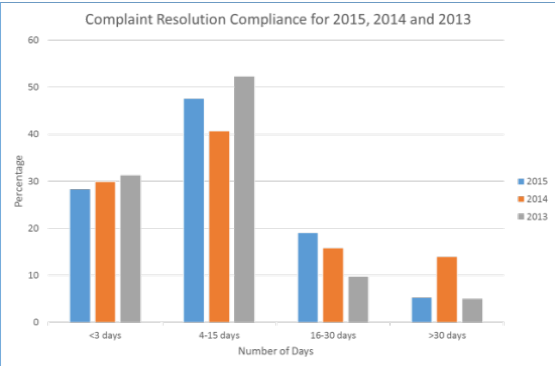
	caused by in accessibility to customer premise or other factors beyond the control of the service provider.									
9.0	<u>Service Restoration Fulfillment</u>									
9.1	3 respondents agreed with proposed requirements.	<p>Based on the CCB report, there are still high number of complaints related to service restoration.</p>  <table border="1"> <caption>SERVICE RESTORATION COMPLAINTS (2013-2015)</caption> <thead> <tr> <th>YEAR</th> <th>NUMBER OF COMPLAINTS</th> </tr> </thead> <tbody> <tr> <td>2013</td> <td>10</td> </tr> <tr> <td>2014</td> <td>42</td> </tr> <tr> <td>2015 (as of Sept 2015)</td> <td>24</td> </tr> </tbody> </table>	YEAR	NUMBER OF COMPLAINTS	2013	10	2014	42	2015 (as of Sept 2015)	24
YEAR	NUMBER OF COMPLAINTS									
2013	10									
2014	42									
2015 (as of Sept 2015)	24									
9.2	1 respondent sought for further clarification with proposed requirements.									
9.3	5 respondents did not agree with proposed requirements.									
9.4	3 respondents proposed to retain the existing standards.									
9.5	1 respondent claimed that it was impossible to be implemented due to rampant cable theft, fibre cut, vandalism, disaster etc. Restoration requires some time as it was very much dependent on safety/ access issue, availability of similar equipment. Thus, the respondent proposed: <ul style="list-style-type: none"> i. 80% of all service restoration requests shall be fulfilled 	<p>A more stringent MSQoS is meant to ensure that service providers treat these issues with a significant degree of importance and address the gap between the level of compliance by the service providers and number of complaints received by the Commission. The Commission seeks to encourage the service provider to improve their internal processes in dealing with complaints to achieve the standard.</p>								

<p>9.6</p>	<p>within 24 hours from the agreed the time and date</p> <ul style="list-style-type: none"> ii. 90% of all service restoration requests shall be fulfilled with 48 hours from the agreed time and date iii. 99% of all service restoration requests shall be fulfilled within 7 business days from the agreed time and date <p>1 respondent proposed to add exclusion clause for:</p> <ul style="list-style-type: none"> i. Faulty customer equipment; ii. Network facility damage due to third parties; iii. Fault due to other service providers; iv. Customer premises inaccessible; v. Damage to network facility due to force majeure; vi. Faulty customer infrastructure or internal wiring; vii. Genuine deferment of service restoration request by customers; or viii. Delay caused by wired broadband network wholesale provider. 	<p>The Commission is of the view that a more stringent MSQoS will spur the service providers to deal more efficiently with customer complaints.</p>
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<p>9.7</p> <p>9.8</p> <p>9.9</p>	<p>1 respondent proposed that 99% must be fulfilled within 7 business days from the agreed time and date.</p> <p>1 respondent proposed that restoration time should not include the non-business days.</p> <p>1 respondent disagreed with the new standards due to significant increase in cost and thus translates to higher charges to customer.</p>									
<p>10.0</p> <p>10.1</p> <p>10.2</p> <p>10.3</p> <p>10.4</p>	<p><u>Percentage of Billing Related Complaints</u></p> <p>4 respondents agreed with proposed requirements.</p> <p>5 respondents did not agree with proposed requirements.</p> <p>3 respondents proposed to retain the existing standards.</p> <p>1 respondent proposed that the percentage of billing related complaints must not more than 2% of active customers for every reporting period.</p>	<p>Based on the CCB report, the top key consumer issues are billing issues and service disruption.</p> <div data-bbox="873 1308 1360 1738" data-label="Figure"> <table border="1"> <caption>Billing Related Complaints of Wired Broadband (2013-2015)</caption> <thead> <tr> <th>Year</th> <th>Number of Complaints</th> </tr> </thead> <tbody> <tr> <td>2013</td> <td>59</td> </tr> <tr> <td>2014</td> <td>69</td> </tr> <tr> <td>2015 (as of Sept 2015)</td> <td>49</td> </tr> </tbody> </table> </div> <p>A more stringent MSQoS (i.e. 1%) is</p>	Year	Number of Complaints	2013	59	2014	69	2015 (as of Sept 2015)	49
Year	Number of Complaints									
2013	59									
2014	69									
2015 (as of Sept 2015)	49									

10.5	1 respondent proposed that the percentage of billing related complaints must not be more than 1.5% of active customers for every quarterly reporting period.	meant to ensure that service providers treat these issues with a significant degree of importance and address the gap between the level 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 in dealing with complaints and their billing system to achieve the standard.
10.6	1 respondent claimed that the new standard of 1% that has been proposed by MCMC was too stringent and it would be difficult to meet this standard especially for the complaints due to the dispute by customer on the additional charges relating to non-standard installation.	The Commission is of the view that a more stringent MSQoS will spur the service providers to deal more efficiently with customer complaints.
10.7	1 respondent disagreed with the new standards due to significant increase in cost and thus translates to higher charges to customer.	MCMC is of the view that service provider is currently evaluating its complaints and reports on frequent basis for improvement action. Hence, this will not require major additional cost and resources to service provider.
11.0	<u>Non-billing related complaints per 1,000 customers</u>	
11.1	5 respondents agreed with proposed requirements.	

11.2	4 respondents did not agree with proposed requirements.	<div data-bbox="873 191 1360 583" data-label="Figure"> <table border="1"> <caption>Non-Billing Related Complaints of Wired Broadband (2013-2015)</caption> <thead> <tr> <th>Year</th> <th>Number of Complaints</th> </tr> </thead> <tbody> <tr> <td>2013</td> <td>430</td> </tr> <tr> <td>2014</td> <td>960</td> </tr> <tr> <td>2015 (as of Sept 2015)</td> <td>797</td> </tr> </tbody> </table> </div> <p data-bbox="873 657 1433 1115">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.</p> <p data-bbox="873 1188 1433 1535">This forms the basis on which the new MSQoS is being set. The formula had to be revised to take into account the revised reporting period and reflect a more accurate set of statistics on complaints of this nature.</p> <p data-bbox="873 1608 1433 1854">The Commission also finds that there is a gap between compliance to the existing MSQoS and number of complaints that the Commission receives from customers. As such,</p>	Year	Number of Complaints	2013	430	2014	960	2015 (as of Sept 2015)	797
Year	Number of Complaints									
2013	430									
2014	960									
2015 (as of Sept 2015)	797									
11.3	2 respondents proposed to retain the existing standards.									
11.4	1 respondent proposed for non-billing related complaints must be not more than 50 complaints per 1,000 customers per 12 months period.									
11.5	<p>1 respondent claimed that the new standard of 6 complaints per 1,000 customers that has been proposed by MCMC was too stringent and it would be extremely difficult to meet this standard especially due to the following cases:</p> <ul style="list-style-type: none"> i. pending due to TM network capacity and readiness ii. pending due to building management iii. poor workmanship that require repairing work 									
11.6	1 respondent sought for clarification since MCMC was referring to public cellular and not related to wired broadband.									

<p>11.7</p> <p>11.8</p>	<p>1 respondent proposed to remove the existing standard and reported only for monitoring purposes as practiced by IDA of Singapore.</p> <p>1 respondent disagreed with the new standards due to significant increase in cost and thus translates to higher charges to customer.</p>	<p>the Commission has decided that the proposal will be maintained.</p>
<p>12.0</p> <p>12.1</p> <p>12.2</p> <p>12.3</p> <p>12.4</p>	<p><u>Promptness in Resolving Customer Complaints</u></p> <p>3 respondents agreed with proposed requirements.</p> <p>6 respondents did not agree with proposed requirements.</p> <p>3 respondents proposed to retain the existing standards.</p> <p>1 respondent proposed that network related, third party dependent and OTT related complaints to be excluded from the non-billing related standards as resolutions timeframe for those complaints may grossly affect their ability to meet the proposed standards. Thus, the respondent</p>	 <p>The Commission takes note of all alternatives proposed by the respondents. After due deliberation based on industry's average performance and the industry's response on MSQoS for PCS performance for Q1 2015, the Commission has decided that the following will be the standard:</p> <p>i. Not less than 60.0% must be</p>

	<p>proposed:</p> <p>Billing related complaints:</p> <table border="1" data-bbox="311 380 846 680"> <thead> <tr> <th>Duration (Business Day)</th> <th>Resolution (%)</th> </tr> </thead> <tbody> <tr> <td>15</td> <td>≥ 90%</td> </tr> <tr> <td>30</td> <td>≥ 95%</td> </tr> </tbody> </table> <p>Non-billing complaints:</p> <table border="1" data-bbox="311 814 846 1037"> <thead> <tr> <th>Duration (Business Day)</th> <th>Resolution (%)</th> </tr> </thead> <tbody> <tr> <td>15</td> <td>≥ 70%</td> </tr> <tr> <td>30</td> <td>≥ 90%</td> </tr> </tbody> </table>	Duration (Business Day)	Resolution (%)	15	≥ 90%	30	≥ 95%	Duration (Business Day)	Resolution (%)	15	≥ 70%	30	≥ 90%	<p>resolved within 3 business days;</p> <p>ii. Not less than 90.0% must be resolved within 5 business days; and</p> <p>iii. Not less than 95.0% must be resolved within 15 business days</p>
Duration (Business Day)	Resolution (%)													
15	≥ 90%													
30	≥ 95%													
Duration (Business Day)	Resolution (%)													
15	≥ 70%													
30	≥ 90%													
12.5	<p>1 respondent proposed more time given because require time for investigation such as coverage issues, vandalism etc. Thus, the respondent proposed:</p> <p>i. 60.0% must be resolved within 5 business days</p> <p>ii. 90.0% must be resolved within 15 business days</p> <p>iii. 95.0% must be resolved within 30 business days</p>													
12.6	<p>1 respondent proposed for coverage issues and third-party</p>													

	influences to be omitted from this requirement together with those already listed in the Public Inquiry document.	
12.7	1 respondent proposed to consider setting the standards based upon recommendations of the ITU-T standards.	
12.8	1 respondent proposed to maintain the current but separately measured and reported for billing related complaint and non-billing related complaint.	
12.9	1 respondent proposed that SPs should be given ample time to resolve complaints from customer as there are always limitations/challenges to be faced while finding a solution to resolve complaints.	
13.0	<u>Promptness in Answering Calls to Customer Hotline</u>	
13.1	3 respondents agreed with proposed requirements.	The Commission is of the view that this MSQoS should be put in place for better customer protection as currently there are service providers that charge the customer for use of
13.2	6 respondents did not agree with proposed requirements.	

		the hotline number.
13.3	<p>1 respondent opined that the proposed SLA will require changes to the existing SLA that has been agreed with their vendor and these will incur additional cost. Thus, the respondent propose:</p> <ul style="list-style-type: none"> i. At least 80% of calls to Customer Hotline that opted for human operator in a reporting period must be answered within 20 seconds. ii. 90% of calls to Customer Hotline that opted for human operator in a reporting period must be answered within 40 seconds. 	
13.4	<p>1 respondent currently provided FREE calls to Customer Service resulting in high volume calls received daily – averaged to 16,000 per day. Thus, the respondent proposed that 75% of calls answered within 60 seconds.</p>	
13.5	<p>1 respondent claimed that from their research, the benchmark with the local and foreign service providers are generally at 75% to 80% (or lower) calls must be</p>	

	<p>answered within 30 seconds. Thus, the respondent proposed for the standard to be set at 75% calls must be answered within 30 seconds.</p>	
13.6	<p>1 respondent proposed to drop the standard for 100% calls must be answered within 30 seconds. From their research, no benchmark could be found on the proposed standard across the other industries as well. The standard, however, may be applicable to the emergency service response time.</p>	
13.7	<p>1 respondent proposed not to mandate for now and MCMC to conduct a study on the existing KPIs set by each service provider on the promptness in answering calls and benchmark the KPI set by the service providers against the standards recommended by ITU.</p>	
13.8	<p>1 respondent claimed the proposed standards would require significant investment in CAPEX and OPEX.</p>	
13.9	<p>1 respondent opined there were many other channels for the customers to reach the Internet</p>	

	Service Providers (ISPs).	
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20. **Part E: Guidelines**

No.	SUMMARY OF THE COMMENTS	THE COMMISSION'S RESPONSE
1.0	<u>Requirement for Report Submission</u>	
1.1	Most of respondent did not agree with the new report submission dates and want to maintain the half yearly report submission	<p>The 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 MSQoS and to allow the Commission to react to any significant issue in a timely manner. The proposed MSQoS are also in line with international best practices and ETSI guidelines. As such, the Commission has decided to maintain the proposed requirement.</p> <p>The relevant NSPs and ASPs may publish the MSQoS performance report on their official websites to enable consumers to have an informed decision.</p>
2.0	<u>Test location</u>	
2.1	1 respondent suggested selection	Test location will mostly be based on

	has to reflect service provider's coverage area and not limited to areas where the complaints are received. This is to prevent the result from being skewed.	user complaints if any including those that have been addressed by SPs and will be divided into 6 regions as per the Commission's regional office. Test locations may also be identified as and when necessary.
3.0	<u>Packet Loss</u>	
3.1	1 respondent suggested ensuring the server at MyIX has sufficient capacity to cater for simultaneous test traffic at the port level.	Traffic Monitoring application will be used to ensure the traffic at server is not congested before test.
4.0	<u>Test Layer 7 (application Layer)</u>	
4.1	1 respondent suggested to notify the service provider 72 hours before the test is carried out and total number of samples for the test must be sufficient to ensure statistically accurate and the distribution of test samples is appropriate.	When possible, the Commission will notify SPs the test schedule and SP's where possible may join the test if they wish to.
5.0	<u>Official website notice</u>	
5.1	We concurred on MCMC's needs for the advance notice of planned maintenance activities but any notification of planned maintenance should only be extended to MCMC and not the customers as it is	This standard will assist the Commission to deal with possible complaints by customers due to disruption of services whilst ensuring that customers are notified about any Service Disruption caused by

	<p>conducted during the earlier mentioned maintenance window. However, we could notify customers in 24 hours at the Customer Service level only i.e. customers will be informed on the downtime only when they call our hotline</p>	<p>maintenance or upgrading of network.</p>
6.0	<p><u>Quality of Service Performance Report</u></p>	
6.1	<p>2 respondents did not agree with the proposed requirements.</p>	<p>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 MSQoS 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).</p> <p>The Commission is of the view that there should not be any significant cost incurred as the WG believe all data should be available and analyze on a frequent basis by SPs for improvement process.</p> <p>Any non-compliance to provisions under the MSQoS is an offence.</p>
6.2	<p>1 respondent agreed but it should carry merit when the Commission conducts the test. The results of self-assessment should at least carry 40% merit.</p>	
6.3	<p>1 respondent proposed MCMC or its appointed consultant to carry out the test in more consistent and uniform approach to all service providers, rather than if it was carried by individual service providers. In addition to this, the result will be more acceptable and well received by the consumers if the tests were carried out by the regulator or independent consultant appointed by the regulator.</p>	

<p>6.4</p> <p>6.5</p> <p>6.6</p>	<p>1 respondent opined in view that MCMC intends to regulate the network performance QoS, reports on network performance QoS was deemed unnecessary.</p> <p>1 respondent proposed that MCMC will conduct the testing to assess the compliance status of the wired broadband service provider in network performance QoS. The quarterly testing/ report by the wired broadband service provider is seemed to be redundant and will not value add to MCMC's assessment on the network performance QoS as the results will not be taken into consideration for the computation of compliance measurements.</p> <p>1 respondent proposed to remove paragraphs 21 and 22 from the Guideline.</p>	<p>Hence, the merit here is not applicable.</p> <p>Once the MSQoS come into force, the service provider has to submit a report on the testing conducted (currently conducted through self-assessment) as per the requirement.</p> <p>For clarity purposes, a service provider may publish the result in its respective website for public consumption.</p>
<p>7.0</p> <p>7.1</p>	<p><u>Advance Notice of Scheduled Downtime</u></p> <p>1 respondent proposed to remove paragraph 24 and 25 from the</p>	<p>The Commission notes the challenges faced by Service</p>

	Guideline.	Providers in this regard. However, advanced notice to the customer is required to ensure that the customer is informed about any interruption to services.
8.0	<u>Service Disruption</u>	
8.1	1 respondent proposed to remove paragraph 26-29 from the Guideline.	<p>The Commission considers disruption of services to the customer as a very critical matter. Therefore the Commission is of the view that this has to be included in the MSQoS to ensure protection of customers' interest.</p> <p>This standard will provide the customers with information on Service Disruption and to also enable the Commission to ensure that the service providers have taken the necessary steps to address the service disruption expeditiously.</p>

QUESTION 2

The Commission also welcomes comments on related matters that stakeholders or respondents believe are relevant to improve the MSQoS (Wired Broadband Access Service).

QUESTION 3

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

21. **General comments**

No.	SUMMARY OF THE COMMENTS	THE COMMISSION'S RESPONSE
1.0	<u>GENERAL COMMENTS</u>	
1.1	To include exclusion clauses to exempt the service providers from being responsible for failure that is beyond its control and to exclude those test results from the compliance rate measurements.	The Commission notes on the exclusion clauses suggested by the respondent, and will at its best to verify the network performance QoS measurement results are not being distorted by failure beyond the service provider's control.
1.2	SP suggested to MCMC to allow the market forces to dictate the improvement of customers' experience. Service providers should, at their own business requirement	The Commission finds that for the moment, it is inevitable that an MS is adopted as SPs has failed to meet public's attention and expectations due to the many complaints that it

	<p>provide a means to offer suitable packages for its subscribers using the QoS as its guidance</p>	<p>received. This scenario is also due to the lack of awareness by SPs to subscribers on rendered services at the selling point.</p>
<p>1.3</p>	<p>SP suggested MCMC to increase the level of competition of the wireless and wired broadband access service so that the quality of broadband access service rendered to the consumers will naturally improve over time instead of having the MCMC to “force” the improvement in quality of service through mandatory standards</p>	<p>The Commission believes that there is ample competition, however, there is no indication of available fair and value for money packages or services that the public may appreciate when compared with other jurisdictions.</p>
<p>1.4</p>	<p>1 respondent suggested by declaring wired broadband services as a Public Utility service – attention is necessary to this area as being a public utility service, allocation of space for the implementation of cellular network infrastructure becomes a requirement at town planning level, housing and commercial developer space allocation, etc.</p>	<p>Efforts are in progress to achieve this.</p>
<p>1.5</p>	<p>1 respondent suggested Government/ MCMC to enforce or grant public utility status for fixed/ cellular/ mobile telecommunication</p>	<p>The Commission will assist to achieve this via the Ministry of Communications and Multimedia.</p>

	<p>service via the review of relevant Acts/ Regulations i.e. CMA98, "Garis Panduan Pembinaan Menaradan Struktur Sistem Pemancar Komunikasi dalam Kawasan Pihak Berkuasa Tempatan", Uniform Building By-Laws (UBBL) etc</p>	
1.6	<p>1 respondent suggested MCMC to curb anti-competitive behaviors by the State Government/ Network Facilities Provider to avoid rollout delay and high rollout cost and to drive the review of <i>Akta Sekenhend 1946</i>, Penal Code and CMA98 to mitigate the vandalism/ theft issue in telecommunications industry.</p>	Noted.

22. Policy and Legislation Related Issues

No.	SUMMARY OF THE COMMENTS	THE COMMISSION'S RESPONSE
2.0	<p><u>POLICY AND LEGISLATION RELATED ISSUES</u></p>	
2.1	<p>3 respondents suggested the Commission should start an initiative to review relevant Acts to enforce or grant public utility status for fixed/ cellular/ mobile telecommunication service.</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 have been taken into consideration as part of the review of the CMA and Spectrum</p>

2.2	3 respondents suggested 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.	Regulations.
2.3	1 respondent suggested to review relevant provisions in CMA and Spectrum Regulation. Strong enforcement action against vandalism on network infrastructure.	

SECTION 5: THE WAY FORWARD

23. The Commission is of the view that the proposed revision of the MSQoS for Wired Broadband Access Service would ensure improvements to existing levels of quality of service by the service providers.
24. The mandated MSQoS 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.
25. The Commission is satisfied that the MSQoS are objective measures that reflect the intrinsic measures of quality and, as far as possible, global best practices and standards.
26. 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 and to monitor the industry.
27. The revised MSQoS for Wired Broadband Access Service will come into force on:
 - (a) 1 February 2016 for Standards for Network Performance Quality of Service; and
 - (b) 1 July 2016 for Standards for Customer Service Quality of Service.