



Suruhanjaya Komunikasi dan Multimedia Malaysia
Malaysian Communications and Multimedia Commission

***QUALITY OF SERVICE MANDATORY
STANDARDS REPORT FOR THE
PERIOD ENDING DECEMBER 2004***

1. The Mandatory Standard (MS) on Quality of Service were put in place to ensure that minimum standards of quality are offered to protect the rights of consumers and provide them with a visible and specific criterion through which the quality of services received or used can be gauged.

MS Quality of Service Phase 1

2. The Commission under the Ministerial Direction on Quality of Service, Number 1 of 2002, had on 28 June 2002 issued Determinations Nos. 1 to 4, 2002 on the Mandatory Standard for Quality of Service.
3. The MS Quality of Service covers services such as Public Switched Telephone Network Service (PSTN) , Public Cellular Service (PCS), Dial-Up Internet Access Service and Content Application Services.
4. Four separate Commission Determinations which were made on 28 June 2002, and came into operations on 1st January 2003. The Determinations apply to the licensees as shown in the table below:

	Framework on Quality of Service Phase 1	Licensees
1.	Commission Determination on the Mandatory Standards for Quality of Service (Public Switched Telephone Network Service) <u>Determination No. 1 of 2002</u>	ASP PSTN
2.	Commission Determination on the Mandatory Standards for Quality of Service (Public Cellular Service) <u>Determination No. 2 of 2002</u>	ASP Cellular mobile
3.	Commission Determination on the Mandatory Standards for Quality of Service (Dial Up Internet Access Service) <u>Determination No. 3 of 2002</u>	ASP Dialup Internet access
4.	Commission Determination on the Mandatory Standards for Quality of Service (Content Applications Services) <u>Determination No. 4 of 2002</u>	CASP Radio and TV free-to-air broadcasting

MS Quality of Service Phase 2

5. The Commission then registered another set of Determinations (Phase 2) on 17 November 2003.

6. This MS QoS covers the following:

	Framework on Quality of Service Phase 2	Licensees
1.	Commission Determination on the Mandatory Standards for Quality of Service (Public Payphone Service) <u>Determination No. 3 of 2003</u>	ASP Public Payphone
2.	Commission Determination on the Mandatory Standards for Quality of Service (Digital Leased Line Service) <u>Determination No. 4 of 2003</u>	NSP Digital Leased Line
3.	Commission Determination on the Mandatory Standards for Quality of Service (Broadband Access Service) <u>Determination No. 5 of 2003</u>	NSP Broadband Access

7. Determination No. 3 of 2003 (Public Payphone Service) came into operation on 1 June 2004, as such no mandatory report was required to be submitted for this period ending June 2004.

8. Determinations No. 4 of 2004 (Digital Leased Line Service) and No. 5 of 2004 (Broadband Access Service) were effective from 1 January 2004.

MS Quality of Service - Reporting

9. Non-compliance with the MS Quality of Service is a breach of section 105 (3) CMA where a person subject to a Mandatory Standard shall comply with the mandatory standard.

10. In the event a person omits or neglects to comply with such Mandatory Standard, he shall be liable to a fine not exceeding one hundred thousand ringgit or to imprisonment for a term not exceeding two years or both as provided for by Section 242.

11. From 1st January 2003, Applications Service Providers (ASPs) and Network Service Providers (NSPs) are required to submit reports to the Malaysian Communications and Multimedia Commission every six months detailing various aspects of their performance and with a signed declaration attesting to its accuracy.
12. Under the Determinations, submissions of Quality of Service reports by licensees are at intervals of every 6 months.
13. Complete and accurate records on the mandatory standards shall be maintained by the licensees and reports to be submitted in the form and format as prescribed by the MCMC.
14. Licensees must submit the MS QOS reports to the MCMC not later than 6 weeks after 30 June for the reporting period January to June, and 31 December for reporting period July to December respectively. Non-submission is also a breach of the mandatory standards.
15. Reports submitted by licensees are recorded and analyzed for non-compliance.
16. An audit and certification process was included to ensure that records submitted by licensees are accurate. MSC Technology Centre Sdn Bhd was subsequently, appointed auditor in late 2003 to audit reports submitted by licensees.
17. The audit and certification acts as the underlying process in terms of accuracy verification and are applied randomly. Generally, action on non-compliance will still be undertaken based on their internally audited reports submitted by the licensees.

18. 24 major and randomly selected licensees underwent the audit exercise for reports submitted for the period July 2004 to 2004.
19. The results are shared with the industry and are asked to submit plans for improving their quality of service to meet the standard.
20. It is noted that for the standard on Fulfillment of Installation Order (for PSTN, Digital Leased Line and Broadband Access services), the auditor found that the provision of exclusion clauses for a variety of situations such as customer cancels or defers appointment and customer premise inaccessible, may have contributed to a number of high performance including some achieving 100%.
21. In order to have better understanding of the report, readers are advised to read the report in conjunction with the Determinations.

MS Quality of Service – Technical Testings

22. MCMC has also completed studies to assess the performance of dial up Internet services, PSTN and PCS.
23. The objective of the assessments is to assess the level of service quality through the Key Performance Indicators indicated in the Mandatory Standards for Quality of Service for PSTN, PCS and Dial Up Internet Access Service.
24. Below are the results of the QoS MS report submission for the period July 04 to December 04.

MCMC QUALITY OF SERVICE AUDIT
Summary Report for Period Ending December 2004

DETERMINATION NO 1 - PUBLIC SWITCHED TELEPHONE NETWORK SERVICE

PSTN	% Complaints of bills issued	% Bill complaints resolved within 15 bus days	% Bill complaints resolved within 30 bus days	Number of general customer complaints per 1000 lines p.a.	% Service restoration Fulfilled within 24 hours	% Service restoration Fulfilled within 48 hours
Mandatory Standard	2%	90%	95%	50	80%	90%
Celcom (M) Bhd	0.05	90.48	95.24	27	87.18	96.15
TTdot Com	1.22	97.80	99.45	0.19	97	97.87
DiGi Telecom	0.29	100	100	16	96.42	100
Maxis Broadband	0.26	97.71	99.24	6	90	98.03
Telekom (M) Bhd	0.15	97.95	99.52	2.34	83.18	93.54
Nasioncom Sdn Bhd	0	0	0	0	0	0



MCMC QUALITY OF SERVICE AUDIT
Summary Report for Period Ending December 2004

PSTN	No. of service trouble reports for every 1000 line	% Installation orders Fulfilled within 24 hours	% Installation orders Fulfilled within 48 hours	% Installation Orders Fulfilled within 7 days
Mandatory Standard	500	80%	90%	100%
Celcom (M) Bhd	13	84.62	96.15	100
TTdot Com	31	97.78	98.81	100
DiGi Telecom	33	98.42	99.21	100
Maxis Broadband	125	96.29	99.85	100
Telekom (M) Bhd	221	97.61	98.55	100
Nasioncom	13	N/A	N/A	100



MCMC QUALITY OF SERVICE AUDIT
Summary Report for Period Ending December 2004

PSTN (Technical testing)	% Intra-network call connection loss	% Inter-network call connection loss	% Emergency calls answered within 10 seconds	% Emergency calls answered within 20 seconds	% Busy signal	% Inter-network post dialing delay	% Intra-network post dialing delay
Mandatory Standard	6%	6%	90%	100%	1%	95% in 13 seconds	95% in 10 seconds
Time	1.67	2.92	Not tested			100	100
DiGi Telecom	3.33	0.42				100	100
Maxis Broadband	1.67	2.92				100	100
Telekom (M) Bhd	0.00	3.75				100	100



MCMC QUALITY OF SERVICE AUDIT
Summary Report for Period Ending December 2004

DETERMINATION NO.2 - PUBLIC CELLULAR SERVICE

Public Cellular Service	% Complaints of bills issued	% Bill complaints resolved within 15 bus days	% Bill complaints resolved within 30 bus days	Number of general customer complaints per 1000 lines p.a.
Mandatory Standard	2%	90%	95%	50
Celcom (019, 013)	0.43	83.49	91.87	42
Digi (016)	0.17	99.87	99.87	38
Malaysian Mobile Service (012,017)	0.25	98.75	99.6	13
Mobikom (018)	0.63	100	100	N/A
Telekom (011)	0.72	93.13	99.42	14

Public Cellular Service (Technical testings)	% Intra-network Endpoint service availability	% no. of dropped calls	% Inter-network Endpoint service availability	% Emergency calls answered within 10 seconds	% Emergency calls answered within 20 seconds
Mandatory Standard	90%	5%	90%	90%	100%
Celcom	v	v	v	Not tested	
Digi	v	v	v		
Maxis	v	v	v		

MCMC QUALITY OF SERVICE AUDIT
Summary Report for Period Ending December 2004

DETERMINATION NO. 3 - DIAL UP INTERNET ACCESS SERVICE

Dial up Internet	% Complaints of bills issued	% Bill complaints resolved within 15 bus days	% Bill complaints resolved within 30 bus days	Number of general customer complaints per 1000 lines p.a.
Mandatory Standard	2%	90%	95%	50
Celcom	N/A	N/A	N/A	17
Timedot Net	N/A	N/A	N/A	16
TM Net	0.08	90.31	95.15	28
Jaring	0.01	100	100	0.05
Digi	N/A	N/A	N/A	4
Nasioncom	0.27	100	100	46

N/A – Not available

Dial Up Internet (Technical testings)	No. of attempts before successful connection	Time taken to access IASP node	Average file download for a standard graphic or random text file of approximately 30kb from a local website.
Mandatory Standard	3 with no more than 1 minute intervals (100%)	95% within 40 seconds	80%modem line speed at least 95% of the time.
Celcom	v	v	X
Timedot Net	X	v	v
TM Net	X	X	X
Jaring	v	X	X
Digi	v	v	X
Nasioncom	Not tested	Not tested	Not tested

MCMC QUALITY OF SERVICE AUDIT
Summary Report for Period Ending December 2004

DETERMINATION NO. 4 - CONTENT APPLICATION SERVICES

CASP	% Annual service availability
Mandatory Standard	99%
Natseven TV Sdn Bhd	99.98
Sistem Televisyen Malaysia Bhd (TV3)	99.98
Meastra Broadcast Sdn Bhd (Mix FM, ERA FM, Xfresh)	99.90
Measat Radio Communications Sdn Bhd (Hitz FM, MY FM, Light and Easy FM))	99.90
Synchrosound Studios Sdn Bhd (WowFm)	99.99
Radio Lebuhraya Sdn Bhd (THR)	99.92
Star RFM (Red FM and 98.8)	99.98
Husa Network Sdn Bhd (Manis.fm)	99.78
Institut Kefahaman Islam Malaysia (Radio IKIM)	99.91
Kristal Harta Sdn Bhd (Cats Radio)	99.99
Suara Johor Sdn Bhd (Best 104)	99.90
CH-9 Media Sdn Bhd	99.23
Perfect Excellence Waves (Sinar FM)	99.92
Metropolitan TV (Channel 8)	99.91

DETERMINATION NO. 3 of 2003 – PUBLIC PAYPHONE SERVICE

Public Payphone Service	% of public payphone in proper working conditions	QoS Standard
Telekom Malaysia Berhad	87.27%	90%
Time Reach Sdn Bhd	83.00%	90%
Citifon Sdn Bhd	63.00%	90%

Bold – Audited licensees

MCMC QUALITY OF SERVICE AUDIT
Summary Report for Period Ending December 2004

DETERMINATION NO. 4 of 2003 – DIGITAL LEASED LINE SERVICE

DIGITAL LEASED LINE	Annual Service Availability			Fulfillment of installation orders						Service Restoration Performance	
	Local DLL	National DLL	International DLL	Local DLL		National DLL		International DLL		Fulfilled within 24 hours	Fulfilled within 48 hours
				Fulfilled within 1 week	Fulfilled within 2 weeks	Fulfilled within 2 week	Fulfilled within 3 weeks	Fulfilled within 4 week	Fulfilled within 5 weeks		
Standards	99%	99.9%	99.99%	90%	100%	90%	100%	90%	100%	80%	90%
Telekom Malaysia Berhad	N/A	99.90%	99.93%	N/A	N/A	92.80%	99.10%	98.80%	100%	99.14%	99.64%
Celcom (M) Bhd	99.93%	99.90%	N/App	100%	100%	100%	100%	N/App	N/App	97.90%	99.65%
Maxis Broadband Sdn Bhd	N/A	99.90%	99.95%	N/A	N/A	98.34%	100%	96.15%	100%	93.26	96.85%
DIGI Telecommunications Sdn Bhd	99.97%	99.94%	N/App	100%	100%	100%	100%	N/App	N/App	100%	100%
TT dotCom Sdn Bhd	99.89%	99.90%	99.88%	93.08%	98.22%	97.50%	99.17%	100%	100%	94.71%	95.68%
Fiberail Sdn Bhd	N/A	99.90%	N/App	N/A	N/A	N/App	N/App	N/App	N/App	100%	100%
Equant Services Malaysia Sdn Bhd	100%	N/App	N/App	N/App	N/App	N/App	N/App	N/App	N/App	N/App	N/App

Bold – Audited licensees

N/A – Not Available

N/App – Not Applicable

MCMC QUALITY OF SERVICE AUDIT
Summary Report for Period Ending December 2004

DETERMINATION NO. 5 of 2003 – BROADBAND ACCESS SERVICE

Broadband Access	Fulfillment of installation orders			Service Restoration Performance		Network Performance			
	% Fulfilled within 24 hours	% Fulfilled within 48 hours	% Fulfilled within 7 days	% Fulfilled within 24 hours	% Fulfilled within 48 hours	% of number of sample with Network Latency below 85ms	% of number of sample with bandwidth utilisation more than 70% of subscribed level	% of Packet loss	% of network availability
Standards	80%	90%	100%	80%	90%	95%	95%	1%	99.99%
Telekom Malaysia Berhad	95.23%	96.23%	100%	85.41%	94.77%	100%	100%	0%	99.86%
Maxis Broadband Sdn Bhd	81.90%	96.83%	100%	91.89%	100%	100%	100%	0%	99.99%
Time dotnet Bhd	97.32%	97.59%	99.73%	93.56%	97.78%	95.76%	N/A*	0%	99.94%
DIGI Telecommunications Sdn Bhd	0%	0%	100%	N/App	N/App	100%	N/A	0%	100.00%

Bold – Audited licensees

N/A – Not Available

N/App – Not Applicable

* TIME have inadvertently misreported the figure.