

QoS STANDARDS FOR SINGAPORE ONE LOCAL ACCESS NETWORKS

A.	PRIMARY INDICATORS	QOS STANDARDS
(1)	<p>NETWORK AVAILABILITY¹</p> <p>(Includes ATM switches, multiplexers, routers, login server, e-mail facilities (if provided) & connection to 1-Net and Internet backbone)</p>	> 99%
(2)	<p>NETWORK ACCESSIBILITY²</p> <p>(a) SCV Cable Modem</p> <p>Connection Speed :</p> <ul style="list-style-type: none"> - % of accessibility better than 500 kbps (Upstream) - % of accessibility better than 500 kbps (Downstream) <p>(b) SingTel Magix</p> <p><u>Connection Speed</u> For Release 2.3 ADSL Modems :</p> <ul style="list-style-type: none"> - % of accessibility better than 300 kbps (Upstream) - % of accessibility better than 2.5 Mbps (Downstream) <p>For Release 3.0 ADSL Modems :</p> <ul style="list-style-type: none"> - % of accessibility better than 500 kbps (Upstream) - % of accessibility better than 2.5 Mbps (Downstream) <p>(c) Connection between SingTel/SCV access network and 1-NET</p> <ul style="list-style-type: none"> - Speed of connection - Peak occupancy level of connection (%) - Periods when occupancy is > 95% <p>(d) Connection between SingTel/SCV access network and Internet Service Provider</p> <ul style="list-style-type: none"> - Speed of connection - Peak occupancy level of connection (%) - Periods when occupancy is > 95% 	<p>> 95%</p> <p>> 95%</p> <p>> 95%</p> <p>> 95%</p> <p>> 95%</p> <p>> 95%</p> <p>}</p> <p>} for monitoring purposes</p> <p>}</p> <p>}</p> <p>} for monitoring purposes</p> <p>}</p>

B.	SECONDARY INDICATORS	QOS STANDARDS
(3)	<p>SERVICE ACTIVATION TIME³</p> <p>(a) SingTel Magix</p> <ul style="list-style-type: none"> - Percentage of service accounts activated within 5 working days or on date agreed/specified by customers - Total no. of applications received for the period <p>(b) Cable Modem</p> <ul style="list-style-type: none"> - Percentage of service accounts activated within 5 working days or on date agreed/specified by customers in enabled hub areas - Total no. of applications received for the period 	<p style="text-align: center;">100%</p> <p style="text-align: center;">} for monitoring purposes</p> <p style="text-align: center;">100%</p> <p style="text-align: center;">} for monitoring purposes</p>
C.	FOR MONITORING PURPOSES	
(4)	<p>Customer Service Support</p> <p>(a) Telephone Enquiries</p> <ul style="list-style-type: none"> - Operating hours - No. of answering lines - No. of operators/service enquiry positions - Total no. of calls handled during peak hours - Average call duration <p>(b) Enquiries via Internet e-mail</p> <ul style="list-style-type: none"> - Total no. of enquiries received - Average response time <p>(c) No. of customer complaints⁴ received per 1000 subscribers</p>	

Note :

- 1 Network availability is the measure of the degree to which the access network is operable and not in a state of failure or outage at any point of time. That is, it measures the total downtime of the network, including the ATM switches, multiplexers, routers, e-mail facilities (if provided) and connection to I-NET and Internet backbone over a month. All scheduled downtime for the purposes of maintenance and upgrading of the network system will be excluded from the calculation. However, all access network operators must keep their users informed of such maintenance times.

$$\text{Network availability} = \frac{(\text{Total operational minutes} - \text{Total minutes of service downtime}) \times 100\%}{\text{Total operational minutes}}$$

- 2 Network accessibility is the measure of the service provider's capability of supporting, in both the provider-to-consumer (downstream) and the consumer-to-provider (upstream) directions, a defined speed in the last mile.
- 3 Service activation time will be computed from the date of application to service activation.
- 4 The term "complaints" is defined as any expression of dissatisfaction with the service providers' service, product, advertisement or policy via oral or written communication that requires some action by the service provider beyond the initial contact.