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Annex A

MEDIA FACTSHEET

4G Quality of Service Standards

The 4G Quality of Service (QoS) standards comprise a series of indicators that the Infocomm Development Authority of Singapore (IDA) imposes on mobile network operators who are providing 4G services.

The current 4G QoS standards formulated by IDA specifically addresses coverage issues, and includes outdoor areas, tunnels and inside buildings.

IDA's 4G QoS framework seeks to ensure that consumers enjoy an acceptable level of service quality for the key telecommunication services by requiring mobile operators to comply with the minimum standards set by IDA. Under the QoS framework, operators may be subject to financial penalties of up to \$50,000 per month for each instance of non-compliance for each indicator. For aggravating cases, for example, for continual or serious breaches, IDA may increase the quantum of the financial penalty to beyond \$50,000.

IDA also intends to impose similar standards on the fourth new MNO, which will be provided with a lead-time to roll out its network to meet the standards.

Please refer to the table on the following page for the 4G QoS standards.



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4G QoS Standards

Performance Indicators (For	Compliance QoS	Effective Date (for incumbent	Effective Date
Compliance)	Standard	operators)	(for new operator)
Data Service Coverage (signal strength -109dBm or better)			
a) Nationwide	>95%	From 1 July 2016	From 1 October 2018
Outdoor Coverage	>99%	From 1 July 2017	From 1 October 2019
b) Tunnel Coverage	>99%	From 1 July 2018	From 1 October 2019 (for road tunnels) From 1 October 2021 (for underground MRT stations/lines)
c) In-building Coverage	>85%	From 1 January 2019 (IDA will however start monitoring from 1 January 2018 and publish results)	From 1 October 2019



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