

Case Reference	R/E/I/093
Title	Service Difficulty – StarHub Mobile’s 2G and 3G Service Incident (“ Service Difficulty Incident ”)
Case Opened	21 October 2011
Case Closed	22 March 2012
Complainant	IDA initiated this proceeding pursuant to the Code of Practice for Telecommunication Service Resiliency (“ Code ”)
Respondent	StarHub Mobile Pte Ltd (“ StarHub Mobile ”)
Case Summary	<p>On 21 October 2011, some StarHub Mobile customers experienced intermittent difficulties in voice, data and SMS services (for 2G customers) and voice services only (for 3G customers). Pursuant to the Code, StarHub Mobile has to submit a detailed investigation report on the Service Difficulty Incident within 30 working days (from the date of the Service Difficulty Incident).</p> <p>Based on IDA’s investigation, IDA noted that the Service Difficulty Incident lasted 3 hours 16 minutes, between 10.24 am and 1.30 pm on 21 October 2011, and affected about 25,000 subscribers distributed at various locations such as Choa Chu Kang, Lim Chu Kang, Ubi, Geylang, Tanjong Rhu, Sentosa, Orchard and Telok Blangah. More than 5% of StarHub Mobile’s base stations were affected.</p> <p>IDA’s investigations revealed that the Service Difficulty Incident was caused by the failure of an integrated circuit chip in a controller card in the power rectifier due to overheating. The failure of the circuit chip resulted in the controller card falsely indicating a mains power failure. The resulting power fluctuation and variation in the voltage to the network equipment consequently caused some network equipment, namely the Media Gateway (“MGW”) ¹ and Serving GPRS Support Node (“SGSN”) ², to perform a non-controlled power reset. The non-controlled power reset caused several other network elements, namely the logical transmission link between the Radio Network Controller (“RNC”) ³ and MGW as well as the logical interfaces of the SGSN’s Packet Processing Unit (“PAPU”) ⁴ to function</p>

¹ The MGW is the system that converts digital media stream.

² The SGSN is a main component of the GPRS network, which handles all packet switched data within the network, such as the mobility management and authentication of the users.

³ The RNC is responsible for controlling the base stations that are connected to it.

⁴ The PAPU processes user data and protocol conversion.

	<p>abnormally after the system recovery, which in turn triggered the Service Difficulty Incident.</p> <p>As the incident did not result in a “clear cut” outage or “out of function” situation for the affected network elements, the redundancy measures that StarHub Mobile had put in place did not kick in. 2G services were fully restored after StarHub Mobile manually restarted the PAPU in a controlled manner, whereas 3G services were fully restored after StarHub Mobile reset the RNC and recreated the logical transmission link between the RNC and MGW. In restoring the 3G services, StarHub Mobile considered several options and decided that resetting the RNC would be the least disruptive (and most effective) solution.</p>
<p>IDA’s Determination</p>	<p>StarHub Mobile would be in breach of the Code for any service difficulty that exceeds a duration of one hour and affects an aggregate of 5% or more of its base stations. It would not be a breach of the Code if StarHub Mobile can establish to the satisfaction of IDA that the occurrence of the Service Difficulty Incident was not within its control and occasioned through no fault on its part.</p> <p>In this case, IDA noted that the Service Difficulty Incident was caused by the failure of an integrated circuit chip due to overheating. IDA noted that the failure was unforeseen, and was not caused by any design problem. It was also not a problem that StarHub Mobile could have taken measures within its control to detect and prevent. Additionally, the Service Difficulty Incident was not attributable to the lack of redundancy and/or adequate contingency measures in StarHub Mobile’s network. IDA was also satisfied with the prompt restorative actions and measures taken by StarHub Mobile to alleviate the effect of the Service Difficulty Incident.</p> <p>In view of the above, IDA was satisfied that the occurrence of the Service Difficulty Incident was not within StarHub Mobile’s control and occasioned through no fault on its part. IDA therefore determined that StarHub Mobile was not in breach of the Service Resiliency Code for this Service Difficulty Incident.</p>