

Network Resilience Review



Client Profile



The Infocomm Development Authority of Singapore (IDA), a statutory board of the Singapore Government, was formed on December 1st, 1999 when the Singaporean government merged the National Computer Board (NCB) and the Telecommunication Authority of Singapore (TAS) as a result of the growing convergence of information technology and telecommunications. IDA intends to grow Singapore into a dynamic global infocomm hub and to leverage infocomm for Singapore's economic and social development.

Client Situation

IDA aims to ensure that the telecommunications infrastructure in Singapore is highly resilient and supporting services of a very high quality.

The mobile operators in Singapore are therefore required by IDA to comply with the Telecommunications Service Resilience Code which serves to ensure that the operators' services are resilient to service outages. By complying with the regulatory requirements, the operators ensure that the design of their networks and services provides adequate network and system redundancy, and that there are disaster recovery and contingency plans in place for service outages.

Over the past few years, IDA has observed a number of service disruptions in key telecommunications networks. One major incident was observed in the beginning of 2013, when a widespread 70 hour service disruption of the mobile services provided by one of Singapore's major operators occurred.

IDA intended to understand the reasons for this occurrence and has been undertaking a review of the network resilience design and business continuity management of Singapore's mobile operators in general, and of the service disruption of the operator concerned in particular.

Our Response

IDA requested Detecon for assistance in conducting the review. This

Detecon Asia-Pacific Ltd. is a subsidiary of Detecon International, one of the world's leading consultancies in the field of ICT and management consultancy. Today, Detecon International, which is headquartered in Germany, has a workforce of more than 1,000 staff in 15 locations worldwide. Detecon Asia-Pacific Ltd. has been operating in the Asian market since 1985 and has established itself as an inherent part of the Asian ICT industry by delivering projects to companies representing all areas of ICT.

Why Detecon?

IDA has chosen Detecon thanks to its extensive technical expertise and know-how in the design of resilient and redundant telecommunications infrastructure following international best practice standards. Detecon has been able to demonstrate a successful track record having worked for a large number of regulatory authorities, both in South-East Asia as well as worldwide.

included the investigation of the incident, identifying any shortcomings of the mobile network operator involved in the incident, and providing recommendations on how to prevent similar service disruptions from occurring in the future.

This was accompanied by an assessment of the network resilience and redundancy design of all three mobile operators in Singapore. Detecon provided support to IDA in the development of an audit framework for regular future verification of network resilience design, thereby providing an opportunity for IDA to take a regulatory lead worldwide.

The main focus of Detecon’s work was on the mobile network topology, covering all technology layers including radio access, core network, and applications and services. Detecon also assessed the business continuity and disaster recovery capabilities of the operators, and performed a survey of the infrastructure and facilities housing the network equipment.

Client Benefits

Thanks to Detecon’s extensive expertise and know-how in resilient telecommunications network design, IDA managed to perform a detailed technical review of the operators' network infrastructure. IDA was in a position to assess operator statements and to compare findings with international common and best practice standards.

At the same time, Detecon provided an independent third-party opinion on the root causes that led to the service outage.

As Detecon has recommended to IDA, Business continuity management certification was made a mandatory requirement for all telecommunications providers in Singapore.

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