



# Celemetrix Consulting Engagements Summary

## 1. Utility – Fibre Characterisation of 1000 km transmission link

- i. Celemetrix was engaged to provide testing services to ensure that a long haul fibre optic transmission link could perform at the desired performance level. Concerns related to link dispersion and optical link stability.

## 2. Defence – Application performance optimisation

- i. Upon deploying a mission critical application, performance issues arose and Celemetrix was asked to identify the most cost effective actions to achieve the desired performance requirements. Celemetrix was able to emulate and identify scalability and deployment challenges and recommend changes to the application that would achieve the desired outcome.

## 3. Government – Telecommunications Technology Overview

- i. Due to the increase in international deployments, this client needed critical infrastructure design and technological overview details to assist in the deployment and optimisation of installed infrastructure.

## 4. Banking Organisation – Routing/Switching product selection

- i. Our client required confirmation of the most suitable hardware for their international core routing requirements. Upon supplying a key list of applications and expected growth over the next five years, Celemetrix was asked to validate performance and scalability of four vendors. The outcome of this validation engagement was the most suited vendor could only facilitate the application requirements for three years; not the goal of five years. This significantly changed the ROI model and CFO recommendation.

## 5. Carrier – Bandwidth Performance Dispute Resolutions, Melbourne and Perth

- i. Celemetrix was asked to assist in identifying reasons for link performance challenges between Melbourne to Perth. Link bandwidth was estimated to 5% of SLA requirements. Using state of the art equipment Celemetrix was able to identify the issue within 24 hours and resolve it. This issue had been challenging both parties for six months.



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## 6. Enterprise Customer – SLA penalty resolution

- i. Upon being dissatisfied with the carrier's performance and reporting capabilities, Celemetrix was asked to validate a signed SLA performance agreement for a national WAN network. The outcome to this engagement was that our client was able to invoke significant penalties for poor application performance (Network application delay)

## 7. Integrator – SLA verification on application and network performance

Upon being asked to assist our client guarantee the successful deployment of a key business application, Celemetrix utilised our lab facilities to emulate and model how the applications would work across the entire network and create a QoS design to ensure WAN SLA guidelines could be guaranteed

## 8. Utility – Validation of fibre optic infrastructure for DWDM suitability

- i. Upon winning another major client, this utility needed to deploy multi channel DWDM at 10 Gb/s. Concerned about SLA penalties, Celemetrix was engaged to validate the capability and performance of the infrastructure so that our client could agree on a suitable SLA contract and appropriate penalty structure.

## 9. Carrier – Submarine fibre characterisation

- i. One of Australia's longest fibre optic submarine unrepeat links was undergoing a transmission system upgrade which needed to achieve long term performance outcomes and stability requirements. Celemetrix was engaged to validate the critical optical characteristics of the link and work with the owner to ensure all business outcomes could be achieved.

## 10. Carrier – 3G mobile infrastructure scalability validation

- i. Upon deploying critical 3G infrastructure, our client was challenged with ensuring the scalability of the infrastructure. Celemetrix was asked to emulate the projected utilisation demands and provide a list of key recommendations to ensure scalability, performance and stability would be achieved.

## 11. Carrier – VOIP performance and scalability for hosting service

- i. Upon deploying centralised VoIP infrastructure and successfully signing many new customers, our client needed to understand the performance and scalability limits it should use to decide infrastructure investment as well as scalability limitations. Celemetrix was able to emulate national VoIP traffic and call establishment requests and validate break points in the current infrastructure and provide recommendations for improvements.



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## 12. Carrier – Singapore submarine infrastructure verification

- i. Upon signing across a new international carrier, our client needed to validate the performance capabilities of their infrastructure to ensure contracted SLA guarantees could be met. Celemetrix was engaged to execute a list of highly technical validation tests that resulted in the identification of critical link issues that would have exposed the carrier to multi million dollar penalties.

## 13. Data Centre – MPLS fail over validation

- i. After completion of a new data centre, our client (banking) needed to ensure that if a critical failure occurred, disaster recovery processes would successfully achieve fail over without customer impact. Deployment of critical test plans resulted in the identification of critical MPLS routing issues that once resolved, achieve the desired outcome. Business interruption would have cost our client many millions of dollars per hour.

## 14. Mining – WAN network performance validation

- i. Network upgrades that included the deployment of new DWDM transmission systems resulted in our client needing to provide their transmission equipment supplier with key infrastructure performance specifications. Celemetrix executed a range of highly technical tests to evaluate the technical suitability of such systems that ensured successful deployment of the desired transmission system.

## 15. Carrier – Network Firewall performance and scalability validation

- i. Operating one of Australia's largest ISPs, firewall performance was critical. Our client asked us to validate the scalability and robustness of their firewall to protect them against malicious intruders. Celemetrix was able to emulate large scale firewall attacks to establish the weak points in their infrastructure design and assist with the reconfiguration to achieve the optimal outcome.

## 16. Carrier – QoS validation

- i. Due to the blending of LAN and WAN demarcation and configuration implications, Celemetrix was asked to assist in validating the correct infrastructure configuration to achieve the desired bandwidth/application performance validation. This included the emulation of key applications and working with the carrier to achieve the optimal network configuration that delivered the desired application performance under different load situations. This was achieved by QoS mapping, optimisation and configuration changes.

To engage Celemetrix's Professional Services division to assist your company call 1800 256 838.



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