

# MYCOM OSI's AIOps Solutions predict capacity and coverage performance of a Tier-1 Asian mobile and fixed operator

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## Executive summary

During the Covid-19 pandemic, the subscribers of a Tier-1 Asian mobile and fixed operator were severely impacted by network capacity and coverage issues as 4G/5G mobile data consumption increased because of online education, work-from-home and the Covid-19 Tracker app, mandatory for the citizens to access public facilities and to communicate their health status.

Further, import and transport restrictions caused severe base-station spares deficit, and the field operations were impacted because of limited manpower. Network dimensioning failed, resulting in imbalanced traffic distribution between vendors of network equipment. Customers were severely impacted by network capacity and coverage issues.

MYCOM OSI offered its AIOps Solutions for predictive capacity and coverage assurance during the COVID-19 period. The improved QoS of the Covid-19 Tracker app helped in improving the lifestyle of the subscribers. The time to identify problems was reduced resulting in 20-30% operations improvements (MTTI, MTTR, manpower costs and field operation costs).

As a result, the operator could take proactive decisions about network resources and costs throughout the Covid-19 period of high congestion. The AIOps Solutions, based on MYCOM OSI's Experience Assurance and Analytics (EAA) portfolio, enhanced the QoS for over 20 million of the operator's subscribers.

## Implementing AIOps Solutions

The Tier-1 Asian mobile and fixed operator and MYCOM OSI partnered to roll out an automated solution with intelligent traffic profiling algorithms to automate prioritization of congested cells and clusters, based on capacity impacting KPIs. A Covid-19 landing dashboard was created for 4G RAN capacity and coverage analysis.


An intelligent root-cause-analysis (RCA), tuned to their specific operational processes, was created for guided diagnostics. The intelligent RCA identified hardware issues, software capacity and coverage issues. For automation, MYCOM OSI used intelligent RCA, traffic profiling and dynamic baselining algorithms, combined with domain expertise to address coverage and capacity bottlenecks.

In the next step, AIOps was used to augment the solution. Prediction of capacity hotspots and anomaly detection was accurately determined with AI/ML resulting in prioritized and accurate operations. AI/ML was applied to

## About the Tier-1 Asian mobile and fixed operator

The Tier-1 Asian mobile and fixed operator is a digital company that offers ICT solutions and digital services for mobile and fixed telecommunications, IT, financial technology, digital media, cybersecurity, and other advanced digital solutions.

The Tier-1 operator has selected a number of MYCOM OSI's pre-integrated Telco Transformation Solutions to enable its NOC/SOC teams to support different stakeholders across the organization who, in turn, support its consumer and enterprise service operations.



their performance management data and exogenous data, such as calendar, marketing promotions and weather. Neural networks/deep learning algorithms were used for advanced forecasting and anomaly detection based on past behaviour data for a range of KPIs. The solution achieved a high accuracy for capacity predictions.

The AIOps solution resulted in proactive actions for increasing capacity for an approaching traffic peak. It could anticipate the QoS degradation (Health Index), as the 4G, 5G RAN and traffic KPIs were regularly monitored. For user throughput and data volume, a forecasting accuracy of 95-97% was achieved.

During this period, the Tier-1 operator observed drop call rate improvements of 20%. Identifying mute calls improved by 25%, identifying sleeping cells improved by 25%, and identifying traffic and capacity bottlenecks improved by 17%. Busy hour MTTx also improved by 25%, and identification of coverage bottlenecks improved by 15%.

### **Benefits to the Tier-1 mobile and fixed operator**

- Over 20 million of the subscribers were provided a high QoS during the period of Covid-19 pandemic in 2020-2021.
- The improved QoS of the Covid-19 Tracker app helped in greatly improving the lifestyle of subscribers.
- The field maintenance and hardware resource issues were reduced by directing field optimization teams to the most affected sites only.
- The automated RCA helped in reducing the mean-time-to-identify problems. Typically, 20-30% operations improvements (e.g., MTTI, MTTR, manpower costs and field operation costs) were observed.
- The Tier-1 operator took informed decisions about the network's resources and costs, throughout the prolonged Covid-19 period of high capacity and congestion, despite low maintenance and hardware resources.

The AIOps model now paves the path for the long term vision of the operator for autonomous networks to further help their customers.

### **About MYCOM OSI**

MYCOM OSI, provides Service Assurance to some of the world's largest Tier 1 telco operators. Its Service Assurance software visualizes, automates and optimizes network and service quality across hybrid telco and IT networks by integrating real time assurance with closed loop automation and analytics driven by AI/ML.



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