

CASE STUDY: Huawei uses TEOCO's DIMENSION to deliver capacity planning services

(Note: in early 2016 DIMENSION was re-named to ASSET Capacity, at the time of this case study however, it was still called DIMENSION)

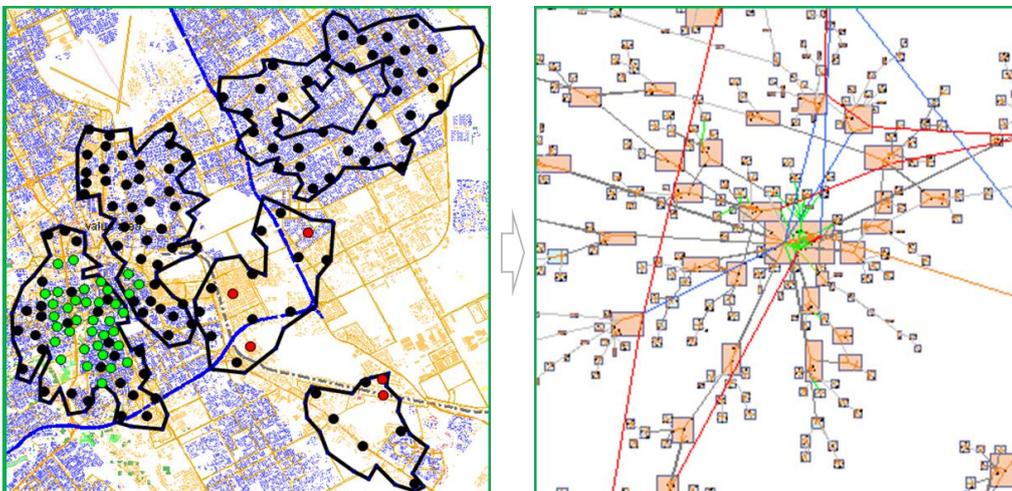
Background

When mobile networks consisted of only GSM sites and services were limited to voice and sms, capacity planning was a fairly simple exercise. When sectors reached capacity another TRX could be added and each site had a single E1 running to it until its limit was reached after which another one was added. Traffic on a site tended to grow in a fairly linear and predictable manner making forecasting quite easy.

Fast forward to the present however and the picture is very different. A modern site often consists of at least 3 technologies (typically GSM, UMTS and LTE) served by a mixture of TDM and IP wireless and wired connections. Most of the carried traffic is generated by high speed data services which are bursty in nature, vary significantly throughout the day and grow in a non-linear way. This often leads to congestion and bottlenecks at both the radio and backhaul, while even at the core network, proper dimensioning of the IP/ETH services is a challenging task. Providing the best customer experience while maximizing the network utilization and ROI in modern multi-technology, multi-vendor networks has become a key requirement for most operators these days.

Challenge

A leading operator group approached Huawei for assistance as they were struggling to effectively plan their capacity requirements and control the cost of the network upgrades required for LTE and high speed data services required by their subscribers. As a result, their customer's quality of service was suffering due to congestion and poor data throughput rates. The network consisted of 3 radio technologies (GSM, UMTS and LTE) and the backhaul and transport networks were a mixture of TDM and IP/ETH over microwave, leased lines and fiber.

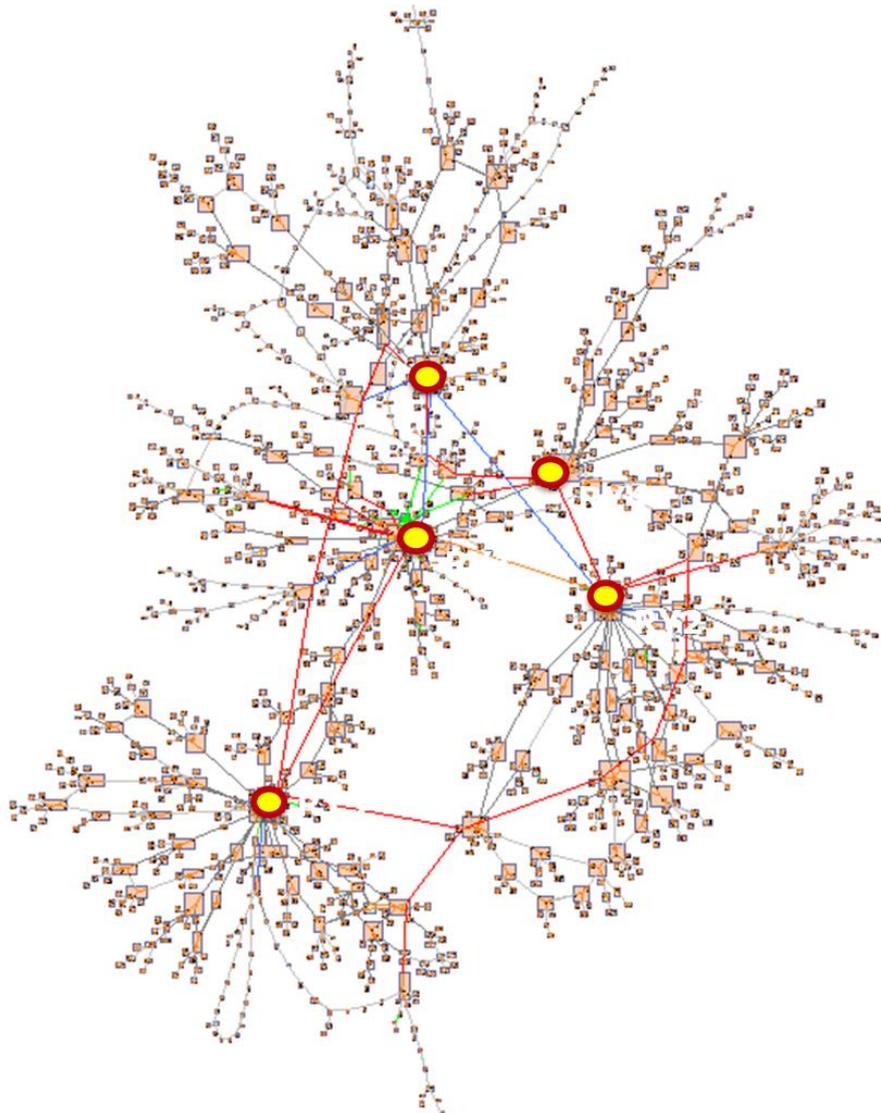


Huawei were delivering significant numbers of planning managed services globally and accurate and consistent end-to-end capacity planning was a key component. However the increase in complexity of network dimensioning was requiring significantly more time effort on their part to deliver good results. A more efficient and unified approach was required. Huawei needed an easy-to-configure and easy-to-use tool which would deliver the optimal end-to-end capacity plan for both the physical and logical layers in one go. The solution needed to consider the whole network and be able to handle all vendors, domains and technologies which Huawei's customers might have in their networks.

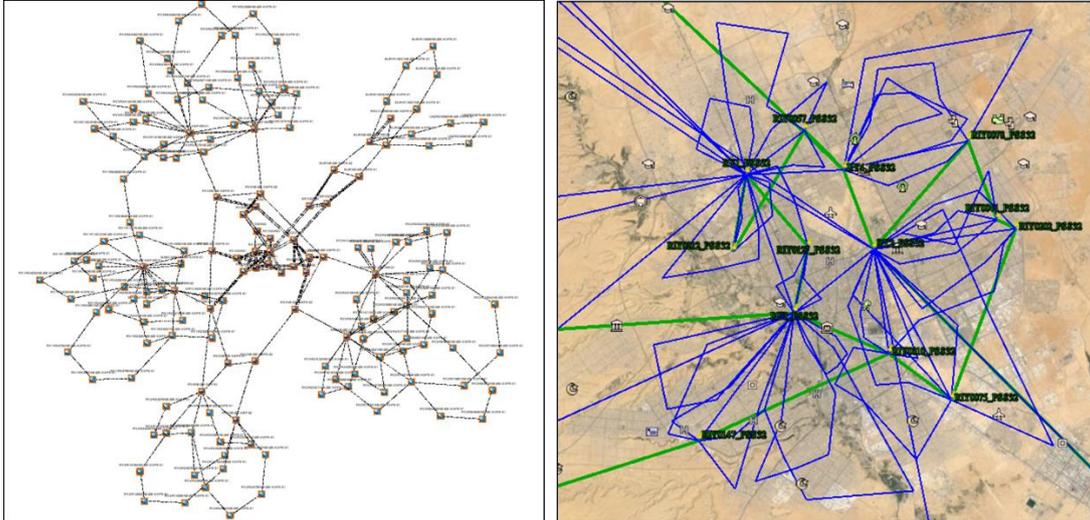
Solution

Huawei conducted a rigorous assessment of all the tools on the market and chose TEOCO's DIMENSION as the clear winner. Some of the contributing factors included:

- Scenario planning capabilities for traffic growth and equipment failure, dimensioning is as much an art as a science
- Visualization of the logical and physical network allowing tracing of traffic flows from source to destination



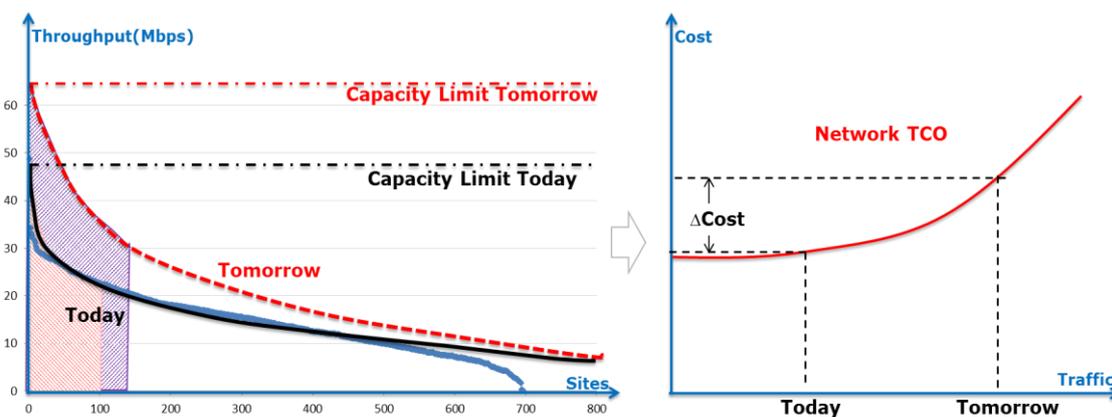
- Feature rich transmission capacity planning and dimensioning from layer 3 to layer 1 (dimension both the IP/Ethernet services and the physical links) as well as automatic multi-layer routing capabilities
- Support for multiple domains and multiple equipment vendors



- Intuitive and easy to use with powerful out-of-the-box reporting
- Flat file import structure to allow easy import of the network with the minimum of information

Results

Using DIMENSION, Huawei is able to deliver a more accurate capacity plan in less time (and therefore more cost effectively) to their customers. A tools approach allows them to present and justify results to the customer in a visual manner and also allows rapid changes should the customer have additional feedback or changes which need incorporating. Finally DIMENSION's powerful scenario planning capabilities allow HUAWEI to offer future capacity plans well advance helping their customers to carefully plan their budget and the required upgrade phases. These factors help them differentiate their offering from the competition and offer real added-value to their managed services.





Huawei's customers also benefit in a number of areas. They receive more accurate dimensioning recommendations which save costs by avoiding over-dimensioning. They are able to bring new offerings such as LTE to market much faster than their competitors. Their network is better dimensioned for LTE and high speed services with fewer bottlenecks and thus better quality of service for their subscribers.