

Case Study: TEOCO helps leading operator save over USD \$1 Billion - A Case Study in Holistic Fiscal Management

Overview

Over USD \$1 billion: That's the amount TEOCO has helped one of its customers save over the last ten years. To achieve savings of this magnitude, TEOCO has established a true partnership with the Operator, developing an intimate knowledge of their technology, customers, suppliers, and objectives. TEOCO's unique understanding of both their technology and their business has allowed them to bring the right mix of expertise and solutions to bear to uncover savings that have helped this operator not just survive, but thrive, in the face of growing competition.

Company profile

TEOCO's customer is a Tier 1 mobile operator that provides service to tens of millions of subscribers, along with wireless voice, messaging, and broadband through various MVNO subsidiaries.

History

For the past ten years, TEOCO has forged a strong business relationship with this operator. In the process, the two companies have formed a trusted partnership, based on the common goals of reducing costs and increasing revenues.

"TEOCO's success with this Customer is based on solid financial results. We focus on areas where they spend a lot of money, and then determine how to cut those costs," said Todd Elmer, Vice President Strategic Accounts at TEOCO. "It's the same with all TEOCO customers; we focus on understanding the customer and determining where their pain points are. It's a consultative process; we don't just sell products to our customers and walk away. Instead, TEOCO's strength and intellectual capital lies in determining what our customers' challenges are and how we can use our tools and expertise to help solve their problems."

TEOCO's involvement over the history of our relationship with the Operator can be broadly divided into three stages: cost management, event analytics and network optimization. While each of these areas is addressed with various point solutions, the real value comes from the holistic view that the combined solutions bring. Each step provides more clarity and insight, to the point where this incredible trove of data can now be enriched, accessed and analyzed to bring a new level of business value that goes well beyond the individual problems that were solved along the way.

Cost Management

Invoice Automation

When the relationship started in 2004, the Operator was incurring billions in annual wholesale network access costs each month, and they needed a more efficient and effective way to manage this huge financial liability. At the time, 40 percent of monthly vendor invoices were paper-based and managed manually, which created huge overhead and backlogs and led to costly mistakes.

Based on The Operator's requirements, we provided them with our invoice automation service, which automates the loading of all wholesale invoices at the level of detail required. BillTrak Pro (BTP) – TEOCO's flagship Cost Management application – automated invoice processing, account coding, auditing and payment for the 25,000 invoices and associated costs. BTP also acts as a centralized repository for all network-related cost data, so is also used for financial accruals and to ensure Sarbanes-Oxley requirements are met.

Access Cost Audit

In 2009, the Operator worked with TEOCO to help audit network access costs. Interconnect billing is often inaccurate, usually favoring the biller, and the Operator was looking for specific expertise and the right technology to create "enriched" data with enough detail to effectively identify billing errors and win disputes.

The Operator's own internal team continued to audit invoices, with TEOCO's experts – the largest group of audit professionals in the industry, with both finance and technical backgrounds and an average of at least 8 years of direct experience – acting as a "backstop" audit team to catch anything unseen the first time around. TEOCO performs exclusive backstop auditing or does periodic audits for most Tier 1 carriers, so we are well positioned to be aware of all industry billing issues, which helps ensure the best outcomes for our customers.

The information provided by TEOCO's experts has enabled the Operator to file well over \$100 million in disputes since 2009, which doesn't include run rate savings from prospectively reducing monthly recurring fees.

MSC Circuit Audit

Also in 2009, the Operator asked TEOCO to help them reduce the millions of dollars in unnecessary expenses it accrued each month due to unused leased assets. Due to a number of factors, including historical priorities, turnover, and the evolution of their networks, the Operator was paying for a much larger number of leased circuits for each mobile switching center (MSC) than it actually used. Compounding the problem, data integrity issues limited the Operator's ability to identify unused and redundant leased assets.

TEOCO's Audit Services employed its cutting-edge Network Evolution and Optimization (NEO) technology, which automated the comparison of circuit data from the Operator's network elements, provisioning systems, and vendor invoices to audit facility and usage invoices, and to perform circuit audits to identify unused circuits for ongoing cost savings. Next, TEOCO's team of experts reviewed "opportunity" circuits with the Operator's network team to determine which circuits to disconnect.

As a result, the Operator was able to disconnect unused circuits, eliminating the recurring costs and achieving millions of dollars in annualized savings to-date, with projections for additional significant savings by mid-2015.

Traffic Routing and Fraud Detection

Historically, the Operator employed a strategy of terminating all long-distance traffic on its own Feature Group D network. This approach was not taking advantage of alternate long-distance vendors who could terminate calls at significantly lower costs. However, incorporating these vendors into the network to terminate traffic, and performing detailed analytics to optimize the use of these new vendors, required a

new level of routing sophistication and automation that the Operator didn't have. This also meant they lacked the tools to effectively identify systemic fraud and "traffic pumping", which was a significant risk.

TEOCO proposed Acuite, a solution which acts as a service control point and works with our least cost routing solutions to enable service providers to support an almost endless amount of routes by eliminating dependency on switch translations; reducing costs, and increasing efficiency. The technology automates services across the traditional TDM and next-generation voice networks, optimally leveraging all long-distance vendors as well as the Operator's own network.

The solution now optimizes all call termination for the Operator, including managing vendor rate sheets, determining the optimal routing approach, creating and delivering routing translations to the network, performing traffic analytics at the detail level for translations review, and performing traffic engineering, capacity planning, fraud detection and invoice verification.

The TEOCO Acuite solution has played an integral role in the massive decline in annual switch access expense, reducing costs by more than 73%!

Wholesale Pricing Strategies

In 2010, the Operator approached TEOCO to help improve its wholesale pricing strategies, which up to that time had been relatively inaccurate, untimely, and was performed only at a summary level, resulting in lost revenue. Wholesale customers were able to "cherry pick" lowest-cost packages, increasing unprofitable traffic on the Operator's network and significantly reducing margins.

TEOCO's technology and powerful rate database, AcuPrice, enabled the Operator to dramatically improve their wholesale business by increasing the accuracy of the underlying cost data to enable more accurate pricing, and by delivering information more frequently and at a more granular level, allowing the Operator to adjust to market changes more rapidly and preventing wholesale customers from abusing the Operator's summary level pricing.

By employing TEOCO's technology and expertise to overhaul their wholesale pricing strategy, the Operator was able to significantly improve its wholesale margins.

Network Optimization

Over the years, the relationship has grown as TEOCO has grown. In 2013, TEOCO purchased AIRCOM International, which brought additional OSS capabilities and expertise into the TEOCO family. AIRCOM is the leading provider of network planning, optimization and management software for mobile networks, and the consultative approach that worked so well in previous engagements with the Operator continues in this domain.

TEOCO had fifteen wireless networking experts embedded within the Operator's national RF team to baseline network performance in two key markets. AIRCOM's experts employed a proven, four-step methodology to determine what could be done to improve throughput coverage and quality of their LTE network:

1. Pinpoint – Identifying coverage and capacity hot/cold spots using planning, monitoring and analysis tools.

2. Prioritize – Focus on customer value and roaming costs with geo-analytics and roaming cost analysis solutions.
3. Pick – Site options (macro, small cell), backhaul cost and availability analysis employing ROI and cost based selection.
4. Perform – Monitor, assure and optimize performance with Optimization SON.

The results have been impressive thus far. After baseline measurements were achieved and the plan was implemented, we were able to show significant improvements in their network performance; with 59% fewer dropped calls and an 81% reduction in connection failure rates.

Next steps

As the relationship moves forward and continues to evolve, TEOCO will be there to help the Operator make financially driven business and network optimization decisions. TEOCO has a unique understanding of network costs: how engineers plan, run, and optimize a network and where inefficiencies can be found from a network operations perspective. Traditionally, most network engineers only look at network planning from a coverage perspective – is signal strength available where it is needed? TEOCO is helping drive both tremendous value and savings by helping the Operator combine both business and customer value to streamline and optimize network planning, design, build and operations. With TEOCO's help, they are now able to leverage valuable network, business and customer data to analyze and prioritize where network investments should be made. This is helping them to make wise large capital investment decisions and grow their network capacity in ways that make financial sense - from both network coverage and a business perspective – maximizing return on investment.

Conclusion

With over \$1 billion in savings, TEOCO's relationship with this Operator has more than paid for itself many times over. TEOCO's unique understanding of both the technology and business drivers that maximize savings and return on investment on capital and operational expenditures, combined with industry-leading network planning and optimization solutions, will help push the level of savings even higher over the years to come.