



# Motorola Multi-Vendor Network Optimization Service Helps Prepare Excelcomindo for Dramatic Growth

## **Aggressive growth strategy requires excellent quality, coverage, and capacity**

As one of Indonesia's largest mobile phone operators, PT Excelcomindo Pratama Tbk (Excelcom) works hard to maintain its competitive edge. Since its founding in 1996, the company has expanded throughout Indonesia supplying service mainly to Java, Bali and Lombok as well as many of the principal cities in and around Sumatra, Kalimantan, and Sulawesi. Excelcom's principal activity is providing services including data communication, broadband Internet, mobile communication, and other services for individuals and businesses through its GSM 900 and GSM 1800 XL networks.

Now controlled by Telekom Malaysia Bhd, which has approximately 60 percent interest in the company, Excelcom has aggressively pursued its position as a serious player, growing its subscriber rate from seven million in 2005 to 9.5 million today. Excelcom's goal is to increase its subscriber base even further to 15 million in 2007. With such an aggressive growth strategy, consistent, excellent coverage and high Quality of Service (QoS) is critical to customer acquisition and retention.

The company's ability to extend coverage and increase capacity were becoming challenging with its existing infrastructure vendor and Excelcom began looking at ways to address these issues, while at the same time improving overall network quality. As a result, Excelcom discussed their unique business situation with Motorola and engaged Motorola's experienced technical team to perform a Key Performance Indicator (KPI)-based optimization of its non Motorola multi-vendor network.

## **Motorola proposes unique multi-vendor GSM network optimization**

Excelcom initially awarded the optimization contract of three cities in Sumatera (Medan, Palembang, Batam) to PT Inti, a local telecommunications supplier located in Bandung. PT Inti then engaged Motorola to discuss the optimization of Excelcom's GSM Radio Access Network (RAN) on another vendor's infrastructure. Motorola explained that while traditional optimization summarizes network data down to the cell level, that process does not measure raw data which can compromise optimization accuracy. Motorola's unique approach also collects and analyzes actual subscriber measurement report (MR) data, which in effect would be conducting a very large, real-time 'drive test'.

Excelcom management saw the value of this unique approach and presented Motorola with challenging optimization KPI targets. These targeted improvements included, among others, perceived dropped calls, call minute per drop, call-set up success rate, call handover, and audio quality.

Confident that they would be able to meet and perhaps exceed each of Excelcom's KPI optimization goals, Motorola agreed to Excelcom's risk-and-reward requirement of its optimization services.



"Motorola's experience in the implementation and optimization of wireless data networks is built on a 20-year history of global experience," says Robert Dedy Purwanto, general manager of network optimization, Excelcomindo. "We felt confident that they could help us improve network performance, even before they agreed to take that monetary risk."

*“Increased capability and increased quality lays the foundation for increased traffic, which leads to increased revenue. Motorola’s optimization service was totally aligned to what we needed to prepare for significant subscriber growth.”*

*Mr. Robert Dedy Purwanto, General Manager (GM) of Network Optimization, Excelcomindo*

#### **Improvements achieved even before optimization is complete**

In October of 2006, Motorola pulled together its experienced team of optimization experts including engineers, technical leads, statistical specialists and a dedicated project manager. For the next ten weeks, the team used unique software tools and processes to measure and analyze data such as uplink-downlink coverage, cell overlap, path balance, and timing advance deviation. The optimization team also leveraged Measurement Report data generated by Excelcom network subscribers as they were using their phones to give Excelcom an in-depth representation of network performance and measure parameters such as power control and access level.

Motorola found that the Excelcom network was experiencing inadequate path balance, as well as limited Uplink and Downlink coverage, and cell overlap in some areas. All of those issues were creating a combination of problems such as interference, inadequate signal strength, compromised quality and limited capacity capability. Once the issues were identified, the optimization team recommended changes to cell neighbor lists to ensure appropriate handovers; improved BTS power output and antenna tilts; and frequency planning for fixed, broadcast control channel, and hopping carriers.

Throughout the process, the team implemented fixes as they were discovered, improving cell antenna down-tilt, path balance, site alarm handling, and parameter changes, thus achieving progressive improvement in the network throughout the initiative.

“We were very pleased to see gains in network performance both during and at the conclusion of the optimization process,” comments Robert Dedy Purwanto. “Those quick wins meant that benefits were being delivered to our customers

as soon as possible, rather than waiting until the optimization process was complete.”

In addition, because of Motorola’s seamless optimization methodology and Multi-Vendor Intelligent Optimization System (MV-IOS), the initiative was completely transparent to subscribers, who suffered no downtime and very minimal disruption.

#### **Improved coverage, improved quality, improved subscriber experience**

After the optimization was complete, Motorola presented a performance report proving that the process met or exceeded each of Excelcom’s KPI goals. Each of the areas showed significant improvements in the performance metrics. For example, Batam demonstrated the following improvements:

- Nearly 33% reduction in perceived dropped call rate (met KPI)
- Over 50% improvement in call minute per drop (exceeded KPI)
- Improved handover success rate and SDCCH Dropped Call
- Improved call set-up success rate (met KPI)
- Achieved 5% improvement in Speech quality Index (exceeded KPI)

Today, Excelcom can continue its expansion plans knowing that its network is optimized and cleared for take-off. The optimization has given the service provider additional capacity, increased network availability, enhanced network quality, and ensured that subscribers would receive the highest quality user experience. The initiative also reduces OpEx and CapEx as well as enabling easy introduction of new sites to increase capacity.

“Motorola’s optimization service has enabled us to continue our very aggressive network expansion plans without disrupting quality of service or network availability,” says Mr. Dedy Purwanto. “As promised, Motorola met, and in most cases exceeded, each of our critical key performance indicators and this will have a very positive impact on user satisfaction.”



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