

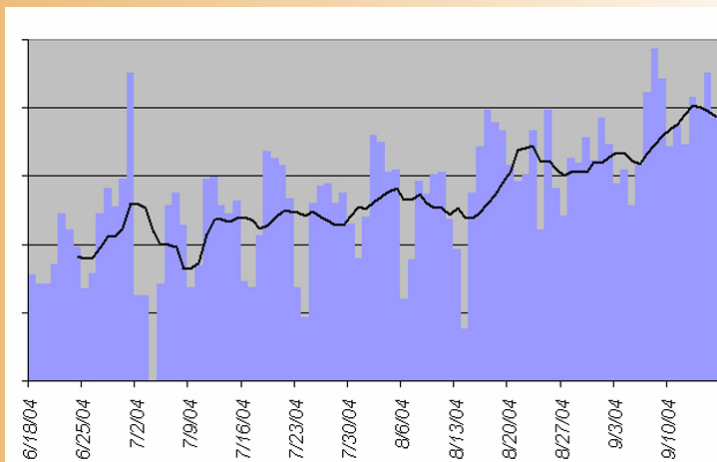
# SCOPES

The SCOPES mission is to provide a complete solution to the wireless industry. With SCOPES, executives can implement strategic initiatives quickly and effectively. Our ability to implement a systematic and integrated approach to address short-term and long-term goals has allowed many markets nationwide dramatically improve their ranking, key performance indicators and troubled areas.

## Path for immediate gains and improvements

The subscriber experience is enhanced when optimization occurs. However, a systematic approach to optimization has been a challenge due to the complexity of the network, different skill levels of engineers, and changing market requirements from the business. As a result, part of the SCOPES project is to implement a process for optimization so metrics can be implemented and monitored as KPIs towards the overall performance of the network.

- ◇ Utilizes OptPCST<sup>TM</sup> to optimize pilot pollution and SHO for CDMA and UMTS networks
- ◇ Optimize neighbor relationships across multiple-band and technology scenarios.
- ◇ Utilize iCE for detailed footprint analysis and cell simulation/configurations.
- ◇ Utilize SARA (network alarm/performance monitoring tool) to track improvements and degradation at cell and area level.

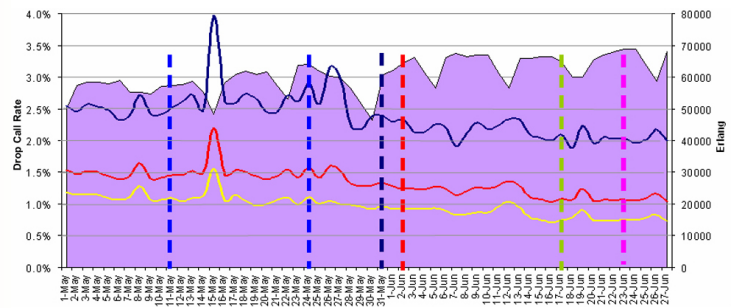


*Market moved from rank #5 to rank #1 nationwide*

## Planning an Efficient Network for the Future

Network optimization has always been the key to enhancing network efficiency and capacity of the network with limited bandwidth. The effectiveness of any 2G/3G (GSM, CDMA1x, UMTS, etc.) wireless network can be measured by its spectrum efficiency. Higher spectrum efficiency results in higher ROI and network quality. TTS SCOPES is a systematic approach to address spectrum efficiency issues directly related to ROI and performance improvements.

- ◇ Provide a spectral efficiency assessment
- ◇ Provide seasonality changes at cell and area level
- ◇ Provide network planning and deployment strategies



*Overall market drop rate reduced by 0.5%*

## Increasing Competitive Edge

SCOPES addresses a market's relative competitive strength. By utilizing the data collected across all market carriers, executives can build strategic and tactical plans in site planning, optimization, frequency re-use to increase or maintain their leadership role in the market utilizing tools like OptPCST and iCE.

- ◇ Provide competitive positions at the cell and area level
- ◇ Provide plans for future competition entering marketplace
- ◇ Target marketing and sales campaigns based on identified-competitive strengths

## Building a foundation for new growth

Traditionally, engineers relied on prediction tools to plan network coverage due to no live networks at the time to measure real site coverage. However, operators moving into UMTS design are already operating mature 2G networks. TTS believes in utilizing measured data from the existing network to aid in UMTS RF planning in addition to prediction data.

- ◇ Utilize iCE 2G benchmarking for 3G site planning
- ◇ Utilize iCE to simulate multiple network scenarios for different technologies (GSM, CDMA1x, UMTS)

## Implementing Engineering Best-Practices

SCOPES utilizes industry standard measurement tools and TTS in-house expert engineers to develop a plan to improve spectrum efficiency while meeting key performance indicator goals. SCOPES is a proven process can be easily embedded in your existing operations and improve the operational work efficiency of the engineering team.

- ◇ Build teams incorporating in-house engineers
- ◇ Knowledge transfer and training of engineers of process and tools.
- ◇ Provide customer support and forums with TTS experts.

### Telecom Technology Services, Inc.

6140 Stoneridge Mall Road, Suite 365

Pleasanton, CA 94588

United States

Tel: + 1 925 224 7812

Fax: + 1 925 224 7816

Email: [info@ttswireless.com](mailto:info@ttswireless.com)

Web: <http://www.ttswireless.com/>

Reference: SCOPES Product Sheet Rev. 01 07/2008

