Impact of Self Optimizing Networks on U.S. LTE Infrastructure, 2011 - 2016

Market Study

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Abstract

4G technology is being widely adopted on an International scale. In fact, *iG*R estimates that between 2011-2016 4G (LTE) technology implementation, will bring approximately $2.34 billion in CAPEX savings and $4.5 billion in OPEX savings to U.S. operators alone.

However, one of the challenges to adopting this technology is successfully managing changes to the wireless network. For some service providers, 3GPP alternatives to 4G may prove to be better-suited options, but for those able to accommodate 4G technologies, new approaches to operational management are critical to minimize 4G adoption costs and achieve financial gains.

Self-Organizing Network (SON) techniques provide methods for operators to develop 4G networks with minimizing costs. SONs allow for the automated self-management, self-configuration, and self-optimization of 4G networks. In essence, SONs provide a new approach to network management that combines both centralized and de-centralized elements helping a operator better maintain and oversee their 4G network in conjunction with pre-existing network architecture (2G, 3GPP, etc.).

The following report defines SONs in the context of current 3GPP standards and Service Architecture Evolution (SAE), explores 4G alternatives, and illustrates the benefits of SONs in terms of financial metrics such as operator CAPEX and OPEX.

Key Questions Addressed:

- What are the current 3GPP 4G Standards and the release schedule and functionality?
- What is Service Architecture Evolution (SAE)?
- What are the basic features and functions of SAE?
- What is a Self-Organizing Network (SON) and the basic techniques it provides?
- What are the capabilities of SONS?
- How can SONs be used by NGMNs and how do SONs interplay with legacy networks?
- What sort of financial benefits can be realized as a result of SONs?
- What sort of networking management and operational gains can be realized as a result of SONs?

- How important are SONs to a fully actualized 4G network?
- What will LTE infrastructure look like according to CAPEX and OPEX in the U.S. market in 2011-2016?

This report is recommended for:

- Cellular carriers, particularly those in the U.S.
- Wireless infrastructure vendors, particularly those servicing the U.S. market
- Financial and investment analysts.