



SELF-ORGANIZING NETWORK

DIGITALLY TRANSFORM YOUR NETWORK WITH SON

Enabling a Smarter Connected World

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Communication Service Providers (CSPs) always strive to provide the best user experience to their customers while trying to keep CAPEX & OPEX expenditures down. Specifically, the fast evolution of wireless networks caused parallel operations in 2G, 3G, 4G, and 5G. On top of that, the number of parameters that must be set in the network elements drastically increased and left no remedies for CSPs but to maintain these manually. The necessity for AI and Automation driven Self Organizing Network (SON) came up right at this point. The Innovile SON Platform, ready to meet this necessity, can empower CSPs with its cutting-edge technology to improve network performance for the best orchestration. The Platform is designed to assist CSPs improve network service and performance rapidly with flexible, automated, and end-to-end network optimization solutions. The Innovile SON fully supports network transformation and helps operators run next-generation networks (5G).

SIMPLIFYING THE COMPLEX HAS NEVER BEEN THIS MUCH EASY BEFORE INNOVILE SON!

The multi-vendor and multi-technology SON Platform automatically and dynamically optimizes the all-network elements until the optimal configuration is achieved for the best performance. CSPs can automatically detect and fix network problems before they affect the customer experience. Thereby, SON Platform increases Quality of Service (QoS) and reduces churn. With real-time visibility into network status, traffic statistics, and parameter changes, CSPs maximize network coverage, boost capacity, and improve network KPIs. All in all, it is quite right to say “simplifying the complex has never been this much easy before Innovile SON.”



AI DRIVEN SON MODULES

Innovile SON platform coordinates 11 AI driven optimization modules to maximize the network performance requirements of CSPs.

Automatic Neighbor Relation (ANR): The Automated ANR module coordinates the operations of adding and removing neighbors. Time and frequency configurable ANR use Configuration Management, Site Plan, Performance Management, Trace and Location Based Geodata for adding neighborhoods to the network.

Configuration Consistency Audit and Correction (CAC): CAC pinpoints the inconsistencies in the network. For each vendor/technology, parameter/MO values that violate the policy are detected and corrected by the module. The main task of the module is to automatically correct errors and turn network configuration into an integral form.

Capacity and Coverage Optimization (CCO): The module is developed to search and indicate Over or Undershoot cells, make congestion analysis, and detect cross feeder cells for their best performance in their planned areas. CCO can be done automatically or manually.

Energy Saving (ES): The module aims to minimize the power consumption of base stations without causing any user experience degradation. Based on historic data of the prediction and capacity analysis, ES turns off cells/carriers.

Special Event Management (SEM): SEM is designed to orchestrate the parameters of local zones during a mass increase in traffic, such as soccer derby, Olympiads, etc.

User Centric Optimization (UCO): UCO can make the necessary analysis as subscriber based or cell based, can visualize the experience of a user or a group of users in terms of accessibility, persistence, and quality of radio network connections.



AI DRIVEN SON MODULES

Dynamic Load Balancing (DLB): Traffic is distributed evenly according to the operator's network strategy, and the module utilizes the PM data based on the values of the cell / carrier utilization percentage, idle values, offset values, DL power changes and inter-RAT selection parameters every half hour.

Code Optimization (CO): CO module calculates interference calculation algorithms and assigns them to on-air cells to change the parameters of BCCH/BSIC, PSC, PCI, and RSI.

Automatic Plug-and-Play Optimization (APO): APO automatically aligns new sites to their new location with best neighbors, codes, and parameter templates.

Self-Healing (SH): The SH module constantly monitors the network to detect performance degradations and fixes them. The Module uses PM and Fault Management (FM) data to detect cell outage and/or sleeping cells and takes necessary actions to revert the network back to its optimal performance by sending reset command automatically.

Mobility Robustness Optimization (MRO): MRO optimizes the Cell-to-Cell handover, Idle mode, and Cell-Reselection parameters to improve the quality of communication and minimizes the Call Drop rate, HO failure rate, standby problems, and influence of interference.

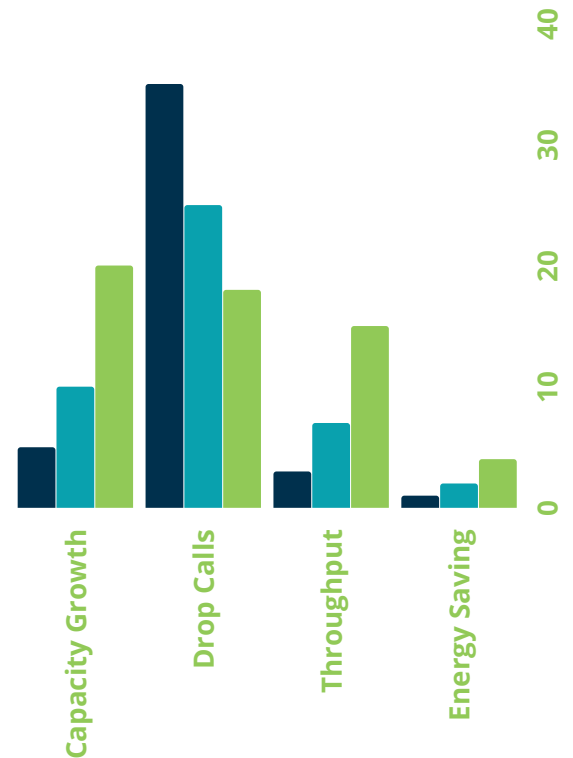


5G

MAXIMIZE PROFIT BOOST EFFICIENCY

KEY BENEFITS

- Performance Improvement
- Scalability & Flexibility
- OPEX & CAPEX Savings
- Continual Monitoring
- Accountability & Premium Support
- Site DB inconsistencies, OSS access issues
- Enables full set rollback scenarios
- User defined module integration
- Multi-vendor
- Multi-technology
- Unified operating environment
- Available for 2G-3G-4G and 5G RAN network optimization
- Improved algorithms with ML and crowdsourcing data
- Reduces CAPEX and OPEX
- Thoughtfully-designed user interface
- Expert knowledge in design
- Client-roadmap integration
- World-class support



- Increases capacity growth by 20%
- Decreases drop calls by 18%
- Increases throughput by 15%
- Increases energy saving by 4%



ABOUT INNOVILE

Innovile provides network excellency with its’
“**Self-Organizing Network, Configuration Management, Performance Management**
and **Fault Management**” solutions to fulfill the potential of the network lifecycle for
communication service providers (CSPs)

The Innovile network management solutions provide multi-vendor, multi-technology, heterogeneous network components, and they surmount complexity for CSPs. To obtain measurable and actionable insights on the network as well as on customer behavior through detailed analytics help CSPs to provide superior mobile experience. Our future-proof, flexible and agile network optimization solutions bring simplicity to networks and make Innovile the first choice for Tier One operators.



**Global
Footprint**



**Extensive
Portfolio**



**Proven
Solutions**



info@innovile.com



www.innovile.com



+90 232 279 0900