

P...IWORKS



uSON[®]

An Integrated Platform for
AI Based, Automated Mobile
Network Management

The Award-Winning Portfolio



Frost & Sullivan Recognizes P.I. Works' leadership in Automated Network Management and Capacity Planning



P.I. Works Listed in Gartner's "Hype Cycle for Communications Service Provider Operations, 2020"



Turkcell and P.I. Works Won the "Leading Contribution to SON" Award at 2017 Self Organizing Networks World



Turk Telekom and P.I. Works Recognized for Excellence at Global Telecom Awards



Unlocking the Full Potential of Your Mobile Network

uSON is the integrated platform for mobile network planning, management and optimization. The capabilities of the platform span the radio access, transmission and core network domains. The platform uses an in-house ETL framework to process big data. uSON uses AI algorithms to drive network quality and efficiency across 2G, 3G, 4G and 5G.

With AI-powered algorithms, uSON correlates Crowdsourced, Geolocated Call Trace, RF Propagation and Customer Experience Management (CEM) data as well as Network KPIs and KQIs. By using the correlated data, uSON determines the best set of improvement actions, giving the operators the power to improve and maintain mobile user experience while driving operational efficiency.



uSON[®]

Unified

6 products with 50+ modules running on the uSON platform are all integrated. uSON delivers a complete user experience and supports a shared technology vision.

Intelligent

uSON leverages machine learning algorithms and real time automation capabilities, centrally coordinated to manage complex heterogeneous networks.

Impactful

uSON delivers the best possible customer experience and improves usage of network resources autonomously, leading up to 50% reduction in network management costs.



Values Spanning the Entire Network

Multi-Vendor & Technology Support



- Vendor-independent off-the-shelf features
- Full functionality across 2G, 3G, 4G, 5G and WiFi
- End-to-end network management including RAN, Core, Transport, IT, IN, VAS

Intelligent, Automated Platform



- Real-time, 24/7 actions with field proven modules
- Adaptive algorithms built on Machine Learning techniques
- Proactive alarms for anomaly and worst element detection

Agile, Faster Implementation



- Less than 1-month integration time
- Agile development (3 months release cycle)
- Out of the box modules, reports, alarms, dashboards
- Highly scalable platform with micro-service architecture

Het-Net & Shared Network Compliant



- Zero-Touch site categorization and policy implementation
- Unified modules with multi-policy support for HetNet management
- Secure data segregation for shared network management

Flexible & Fully Customizable



- Fully customizable action parameters and policies
- Open-loop and closed-loop mode of operations
- Open API
- Centralized elastic role management

Integration with Third Party Data Sources



- Planning tools
- Fault management systems
- CEM and CRM systems
- Geolocation systems
- Crowdsourced data
- Fixed network data resources
- Operator's in-house systems

Preparing Your Network for 5G, Delivering Premium Customer Experience

Unlike conventional network management solutions, the uSON platform moves beyond the radio access network. It provides fully-automated centralized SON functionality as a single, integrated solution that combines advanced network optimization, tuning and troubleshooting, Het-Net planning, geolocation and real-time network status monitoring functions.

uSON®, The Next Generation Network Management Platform

Centralized SON



Real time, closed loop automation

Performance Management



Self-service analytics for the entire network

Smart Network Planning



Smart design and capacity planning

Geolocated Customer Data Analytics



Customer data correlation and analysis

RAN Tuning & Troubleshooting



In-depth analysis and problem resolution

Configuration Management



Parameter audit and revision





uSON®

Centralized SON ▶

Machine Intelligence for Automated and Real-time Mobile Network Optimization

P.I. Works Centralized SON is the industry-leading and widely-deployed automated multi-vendor, multi-technology network optimization solution. cSON ensures the best customer experience and service quality, while significantly minimizing the network management costs. cSON delivers these benefits with its integrated and AI based automation engine that correlates network performance data with the 3rd party data sources like CEM, CRM and Crowdsourced systems.



Centralized SON ▶	Performance Management	Smart Network Planning
Geolocated Customer Data Analytics	RAN Tuning and Troubleshooting	Configuration Management



uSON®

Performance Management ▶

Real-time Network Performance Analytics and Service Quality Assurance

Our next generation and best-in-class network performance monitoring product, Performance Management offers cost-effective and highly-scalable network and service quality monitoring capabilities for the leading mobile operators and telecom authorities. With its easy-to-use interactive dashboards, AI based data forecasting, reporting and alarm functionalities, PM provides an integrated view of the entire network. Business intelligence reports can be created even by the non-technical users as the process doesn't require any SQL or coding skills.



Centralized SON	Performance Management ▶	Smart Network Planning
Geolocated Customer Data Analytics	RAN Tuning and Troubleshooting	Configuration Management



uSON®

Smart Network Planning ▶

AI Powered Capacity Planning and Smart Network Design

P.I. Works Smart Network Planning (SNP) is instrumental in driving your network expansion strategy. SNP gives you the ability to develop the most accurate capacity expansion plan and helps you find the optimum number of required sites. SNP uses machine learning algorithms and combines multiple data feeds from Customer Experience Management (CEM), geolocation systems, crowdsourced data, radio access network and backhaul network. The network traffic prediction capability of the SNP increases the accuracy of the solution and helps operators make well-informed investment decisions.



Centralized SON	Performance Management	Smart Network Planning ▶
Geolocated Customer Data Analytics	RAN Tuning and Troubleshooting	Configuration Management



Geolocated Customer Data Analytics ►

Advanced Analytics for Customer Experience Management

Geolocated Customer Data Analytics helps mobile operators to increase overall NPS with its visualization capabilities for network quality metrics and customer experience on a map. Geolocated data can be visualized as a heatmap with existing network equipment or the product can also precisely estimate the location of network events through smart locating algorithms. Pinpointed improvement areas can be sent to P.I. Works Centralized SON to take customer centric optimization actions.



Centralized SON

Geolocated Customer Data Analytics ►

Performance Management

RAN Tuning and Troubleshooting

Smart Network Planning

Configuration Management



uSON[®]

RAN Tuning and Troubleshooting ►

In-depth Examination and Optimization of the Radio Access Network

RAN Tuning and Troubleshooting product is an advanced, easy to use tool for in-depth examination of the radio network with root-cause analysis functions and open-loop optimization, letting you visualize and manage the network effectively. The product leverages the performance management metrics and checks the configuration conflicts for managing the handover actions of the troubleshooting module. Advanced Map features provides faster root cause analysis with thematic coloring, filtering, neighbor visualization, timing advance visualization, kml import, street view and site survey data browsing capabilities.



Centralized SON	Performance Management	Smart Network Planning
Geolocated Customer Data Analytics	RAN Tuning and Troubleshooting ►	Configuration Management

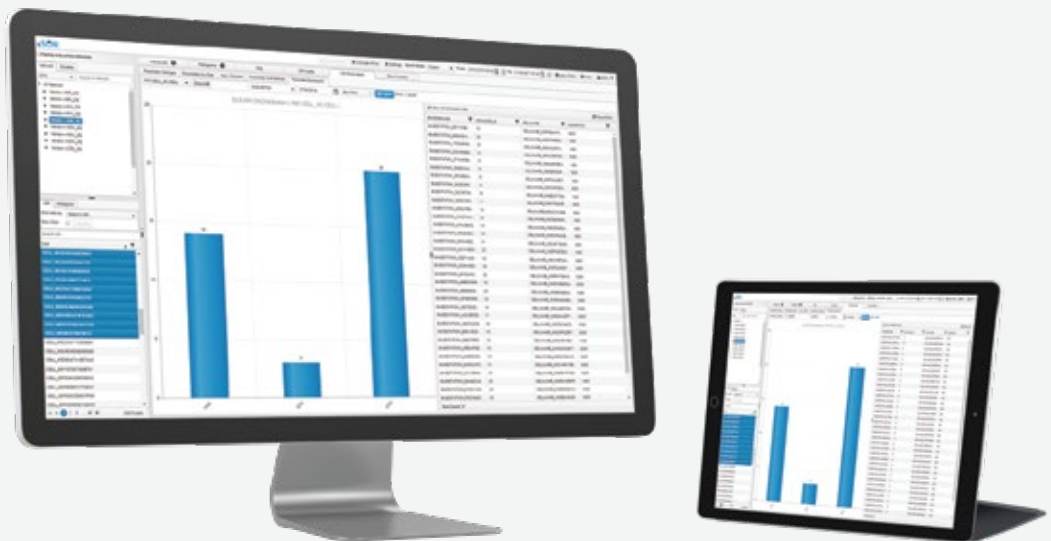


uSON[®]

Configuration Management ►

Automated Configuration Health Check and Service Quality Assurance

Configuration Management (CM) maintains the integrity of the network parameter settings. CM automatically checks all network parameter inconsistencies and fix them automatically based on the operators' policies and golden settings. It also offers cross-technology and cross-vendor configuration parameter analysis functions including interactive dashboards, report scheduling, historical change detection, configuration audits, golden parameter compliancy checks. uSON CM reduces OpEx by eliminating the need for resource intensive troubleshooting activities such as drive testing and cell base optimization.



Centralized SON

Performance Management

Smart Network Planning

Geolocated Customer Data Analytics

RAN Tuning and Troubleshooting

Configuration Management ►

About P.I. Works

P.I. Works is a leading provider of AI-driven mobile network planning, management and optimization solutions.

P.I. Works combines field-proven expertise with a commercially available product portfolio and services. These solutions enable Mobile Network Operators to accelerate 5G transformation and improve network quality. P.I. Works has deployed its solutions at more than 50 mobile network operators in 37 countries.

For more information, please visit

<http://www.piworks.net/products>

or send e-mail to sales@piworks.net

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*... unlocking the full potential of mobile and
redefining the mobile experience worldwide*



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