



uSON[®]

An Integrated Platform for
AI Assisted, Automated Mobile
Network Management

PIWORKS



The Award-Winning Portfolio

Mobile Network Planning, Management and Optimization for Operators Worldwide

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

Turkcell and P.I. Works received the “Leading Contribution to SON” award for successfully deploying P.I. Works uSON, the award winning centralized SON platform, to automate the most critical network management activities with significant impact on mobile service quality.

For more information: <https://pi.works/2HI3ld2>

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

At the Global Telecoms Awards hosted in London on the November 2nd, 2017, P.I. Works and Turk Telekom won the “Honorable Mention Award” in the “Managed Services Innovation of the Year” category with the revolutionary “Centralized SON Powered Managed Services” project.

For more information: <https://pi.works/2Mo6whH>

P.I. Works Won the Glotel Global Telecoms Award For “Pushing The Mobile Limits”

At the Global Telecom Awards Ceremony held on November 3rd, 2016, P.I. Works won the award for “Pushing the Mobile Limits” with its Centralized SON (self-organizing networks) powered mobile network planning, management and optimization platform, uSON.

For more information: <https://pi.works/2qT5z7E>

GLOTEL GLOBAL TELECOMS
AWARDS

SON Deployment &
Technical Innovation
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 GO-TO-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 ▶

A Learning-Based Approach for Automated and Real-time Mobile Network Optimization

P.I. Works Centralized SON product is the industry-leading and widely-deployed automated multi-vendor, multi-technology network optimization solution. Automated and adaptive AI-powered optimization algorithms are coordinated centrally to create and maintain improvements in complex heterogeneous and shared networks. cSON delivers the best customer experience and increased data throughput, while significantly minimizing network management efforts and costs.



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, uSON PM (Performance Management) offers cost-effective and highly-scalable network performance monitoring and service assurance capabilities for the leading mobile operators and telecom authorities. With its easy-to-use dashboards and reporting functionalities, uSON PM provides an integrated view of the entire network. Performance 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

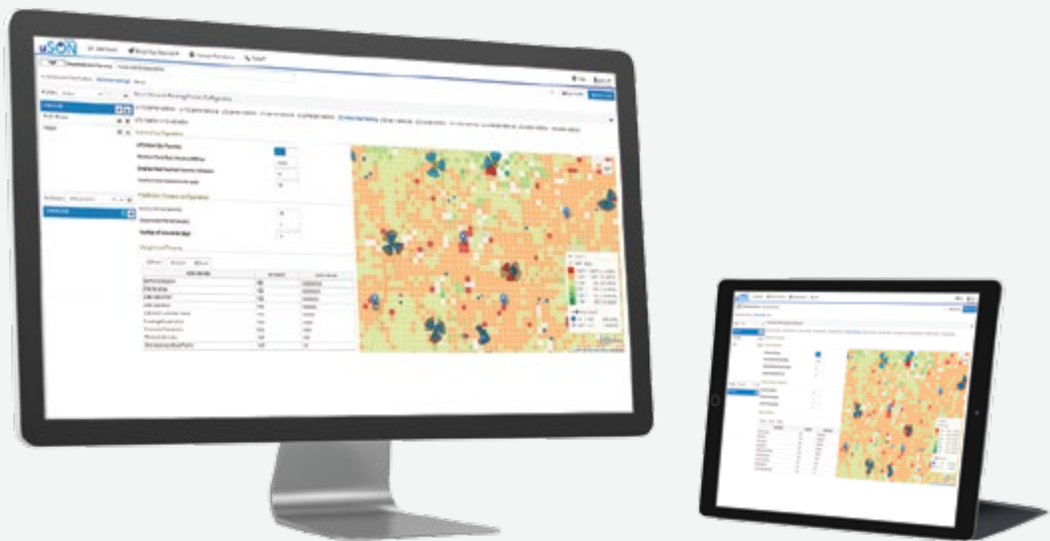


uSON[®]

Smart Network Planning ▶

AI Powered Capacity Planning and Smart Network Design

Our Smart Network Planning (SNP) product 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), radio access network and backhaul network tools. The network traffic prediction capability of the product 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



uSON[®]

Geolocated Customer Data Analytics ▶

Advanced Analytics for Customer Experience Management

Geolocated Customer Data Analytics helps mobile operators' decision-making process by easing the visualization of network quality metrics and customer experience on a map. The product enables the visualization of best serving cells on a heatmap. It also precisely estimates the location of network events through smart locating algorithms. With such capabilities, customer complaints can be analyzed more effectively which can be used for improving the overall NPS.



Centralized SON

Performance Management

Smart Network Planning

Geolocated Customer Data Analytics ▶

RAN Tuning and Troubleshooting

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

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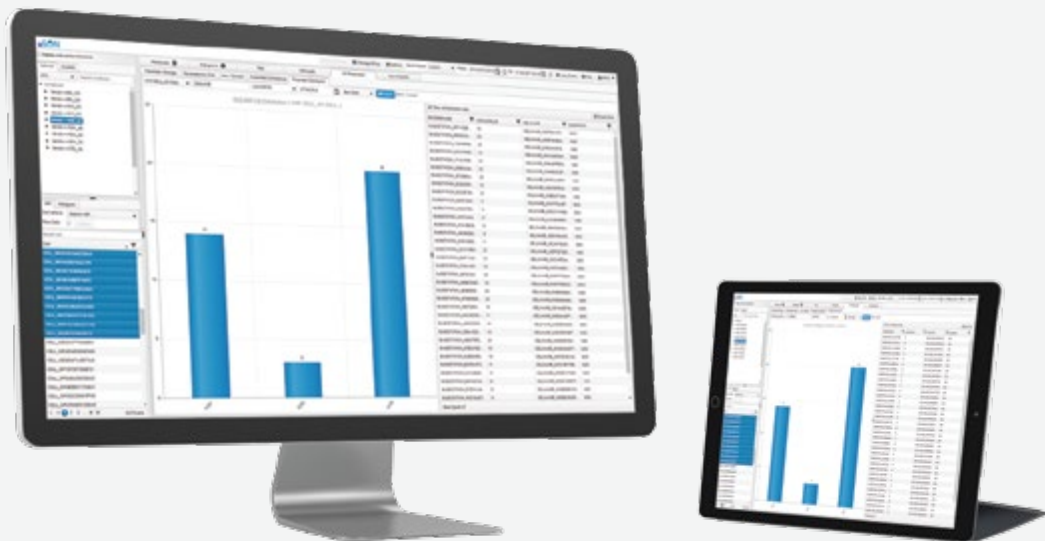


uSON[®]

Configuration Management ▶

Automated Configuration Health Check and Service Quality Assurance

uSON CM (Configuration Management) maintains the integrity of the network parameter settings. It offers cross-technology and cross-vendor configuration parameter analysis functions including 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

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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 40 mobile network operators in 34 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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