

Nemo WindCatcher

Introduction

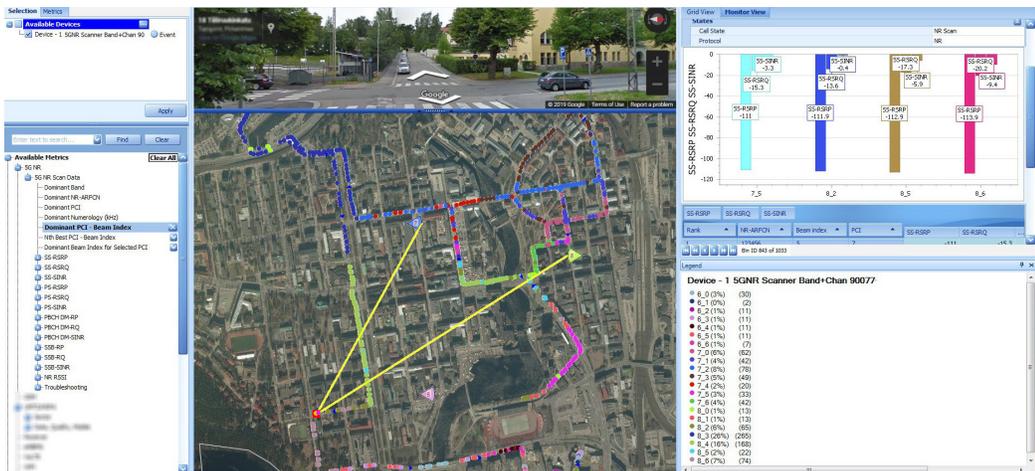
Nemo WindCatcher from Keysight Technologies, Inc. is the industry leading desktop drive test data post-processing tool for radio access network analysis. It is used by design and performance engineering, handset testing and technology development groups. Nemo WindCatcher software is a vendor-agnostic, multidata, multiwireless access technology solution that provides the most comprehensive solution available in the market. It is loaded with robust out-of-the-box features for powerful data aggregation and analytical functionality, one-step analysis and detailed reporting. Quickly identify and solve problems by using in-built analysis functionalities maximizing overall productivity and efficiency. Nemo WindCatcher can be used for analysis of indoor (DAS/Small cells) wireless coverage and performance as well as for outdoor macro sites. Nemo WindCatcher is intuitive and easy-to-use so you will realize improvements and efficiency gains immediately.

Flexible In-Depth Analysis and Automation

Analyze large amounts of drive test data with Nemo WindCatcher to enhance customer experience through effective and efficient network optimization, new technology roll-out, and troubleshooting. Deploy new technologies, such as 5G NR, LTE, LTE-A and VoLTE, using the advanced analytics in Nemo WindCatcher. Device manufacturers can use Nemo WindCatcher to modify the functionality of their devices for use in different network conditions.

Nemo WindCatcher also provides an efficient method for validating and testing multi-floor indoor venues, such as stadiums and airports, using a purpose-built project manager feature. Use Nemo WindCatcher to verify DAS implementation and generate reports for the commissioning of venues.

Nemo WindCatcher offers significant time saving with advanced automated features, including a single-click option to load large amounts of data files and multi-core processing functionality for faster data output and shorter wait times. Processed data sets can be appended and merged when more drive test data is collected eliminating the need for reprocessing data. Nemo WindCatcher Client Server automates key drive test use cases, such as acceptance, benchmarking, optimization, and monitoring, by deploying an automation server to work with multiple clients.



Key use cases

Wireless network operators can use Nemo WindCatcher to analyze large amounts of drive test data to enhance customer experience through efficient network optimization, new technology roll-out and troubleshooting. Operators can deploy new technologies, such as 5G, LTE-A and VoLTE, using the advanced analytics in Nemo WindCatcher.

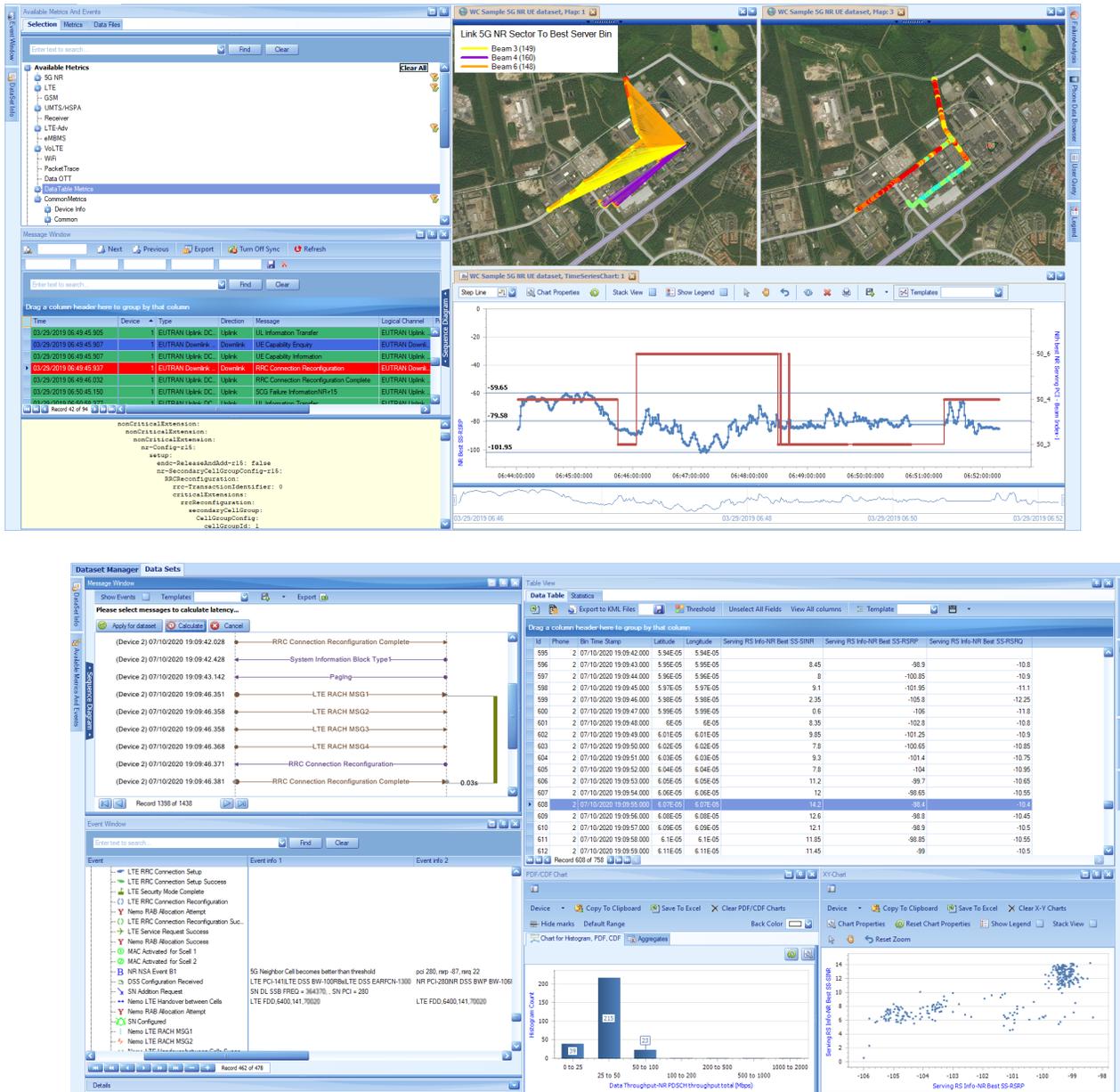


Figure 1. Examples of Nemo WindCatcher data views.

In-building deployment teams can use Nemo WindCatcher to verify distributed antenna system (DAS) implementation and generate reports for commissioning of venues.

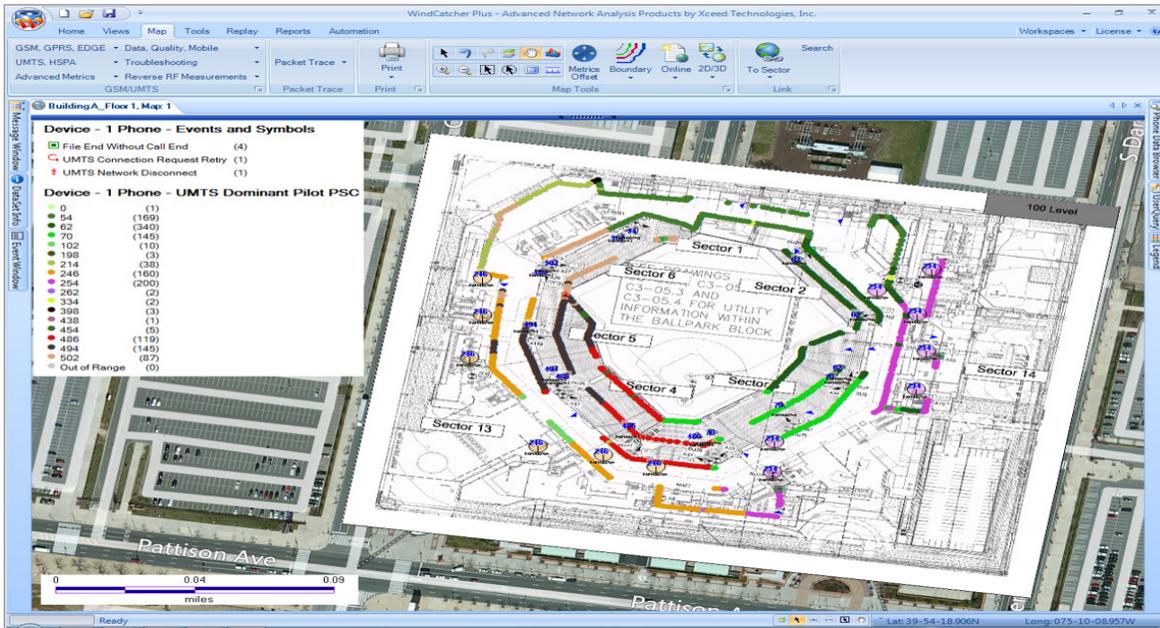


Figure 2. In-building deployment (top) and distributed antenna system (bottom).

Device manufacturers can use Nemo WindCatcher to characterize the functionality of their devices for use in different network conditions.

Infrastructure vendors can use Nemo WindCatcher to evaluate the effectiveness of their solutions.

Key Benefits

Easy-to-use

- Powerful, intuitive interface
- Fully synchronized maps and browsers
- Engineering oriented

Superior speed and accuracy

- Faster processing speed
- Processes large volumes of drive and/or walk test data with ease
- Data set creation for one-time processing

Unmatched performance and efficiency

- Automated device and log file management, pre- and post-merging of data for analysis
- Project Management Console
- Numerous productivity features including batch printing, single-step analysis, and more

Significant time saving with automated features

Data loading

- Loading – Single-click option to load large amounts of data files.
- Processing – Multicore processing functionality for faster data output and lesser wait times.
- Portability – Existing processed data sets can be transferred, no need to reprocess data.
- Scalability – Processed data sets can be appended and merged when more drive test data is collected. Multiple devices and data sets can be merged to create large data sets.
- Data control – Raw data can be processed selectively or as a whole, for example, by selecting specific devices or utilizing the option to import layer 3 data or phone data. This will affect the processing time.
- Flexible platform – Nemo WindCatcher platform supports all major collection tools currently in the market.

Reporting

- Custom reports – Generate multitabled reports for site/cluster/system acceptance testing, pre-post analysis, or detailed troubleshooting reports.
- Report builder – Drag-and-drop based GUI for creating report templates
- Batch printing – Create technology-specific or operator-specific templates that can be run to generate reports or deliverables for executives, vendors, operators, etc.
- Troubleshooting statistics reports – Generate quick statistics reports for on the fly troubleshooting.
- User defined metrics – Customize metrics and threshold values that can be deployed across multiple markets.

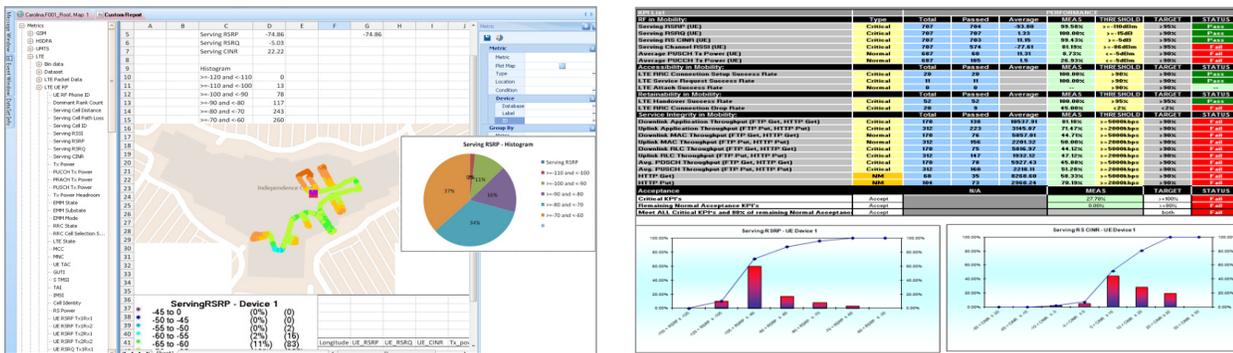


Figure 3. Customized reports.

Analysis and troubleshooting

- Wireless technologies – Supports all major technologies such as 5G NR, LTE, LTE-A, WCDMA/HSPA, CDMA/EVDO, GSM, WiMAX™ and WiFi.
- Dataset manager & dashboards – Central repository view of processed datasets. View files, devices, and drive route of processed data quickly. Includes predefined dashboard views for quick overview of logs processed along with option for user to create their own dashboard views.
- Summary view – The consolidated dashboard view of processed data classified per device selection with metric menus for coverage, accessibility, retainability, mobility, integrity, and availability.
- Synchronization - The map, message windows, event windows / trees and information browsers are all synchronized during user troubleshooting.
- Compare and contrast data - The delta analysis feature helps you do a side-by-side comparison of devices, data sets during pre-post optimization and troubleshooting phases.
- Tooltip - The tooltip feature lets you automatically or selectively populate selected metrics, KPIs, etc.
- Online maps - Rich online maps with satellite views, street views, topographic, and terrain views.
- 2D/3D visualization - Conduct virtual site surveys and flexibility to toggle between 2D and 3D Google Earth views.

Nemo WindCatcher Modules

VoLTE module

- Deploy a robust VoLTE network by optimizing packet delay, jitter, and RTT metrics.
- Support for VoLTE using PCAP data interleaved with drive test data to correlate with layer 3 messages with SIP and TCP/IP messages.
- Accelerate VoLTE deployments by validating performance using the VoLTE acceptance report.

DAS and in-building module

- Advanced in-building support to import and process data from venues with multiple levels.
- Ability to import background images with embedded support for creating IBWAVE nodes.
- Generate multifloor KPI reports for large venues, such as stadiums, hotels, office buildings, and airports.

WiFi module

- Optimize WiFi networks to support TCP/IP info and over the air WiFi metrics for both standalone WiFi networks and WiFi networks that are used for macro-offloads.

Carrier aggregation module (LTE-A)

- Analyze the deployment and performance of carrier aggregation (CA).
- Analyze when CA is active and the active component carriers (PCell and SCell) using the interactive map, chart, and table views.
- The performance of component carriers can be analyzed in terms of RF metrics and throughputs.
- The custom reporting module allows the creation of custom reports to summarize the performance of CA in the network.

Nemo WindCatcher Client Server

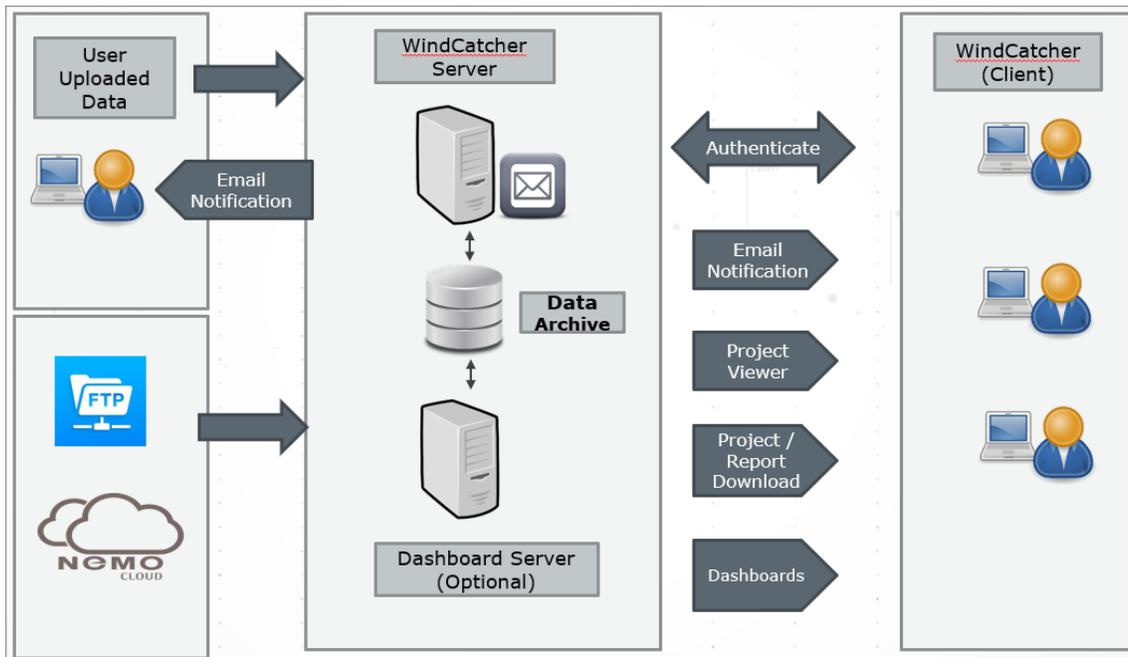


Figure 5. Nemo WindCatcher Client Server Architecture

- Autonomous processing of data and report/export generation
- Qlik dashboard integration in Nemo WindCatcher Client
- Sql query builder to feed dashboards and reports
- Fault tolerant processing (handling of bad data files)
- Central repository of data and processed databases/reports
- Email notifications with report attachment
- Nemo WindCatcher licenses used as client licenses to access processed databases, reports etc. (No separate client license)
- Minimal IT dependency (any powerful machine can be used as a server and can be configured by end users)
- Easy deployment on customer site (physical/virtual server) or hosted solution on commercially available cloud platform like AWS/Azure

Learn more at: www.keysight.com

For more information on Keysight Technologies' products, applications or services, please contact your local Keysight office. The complete list is available at: www.keysight.com/find/contactus