

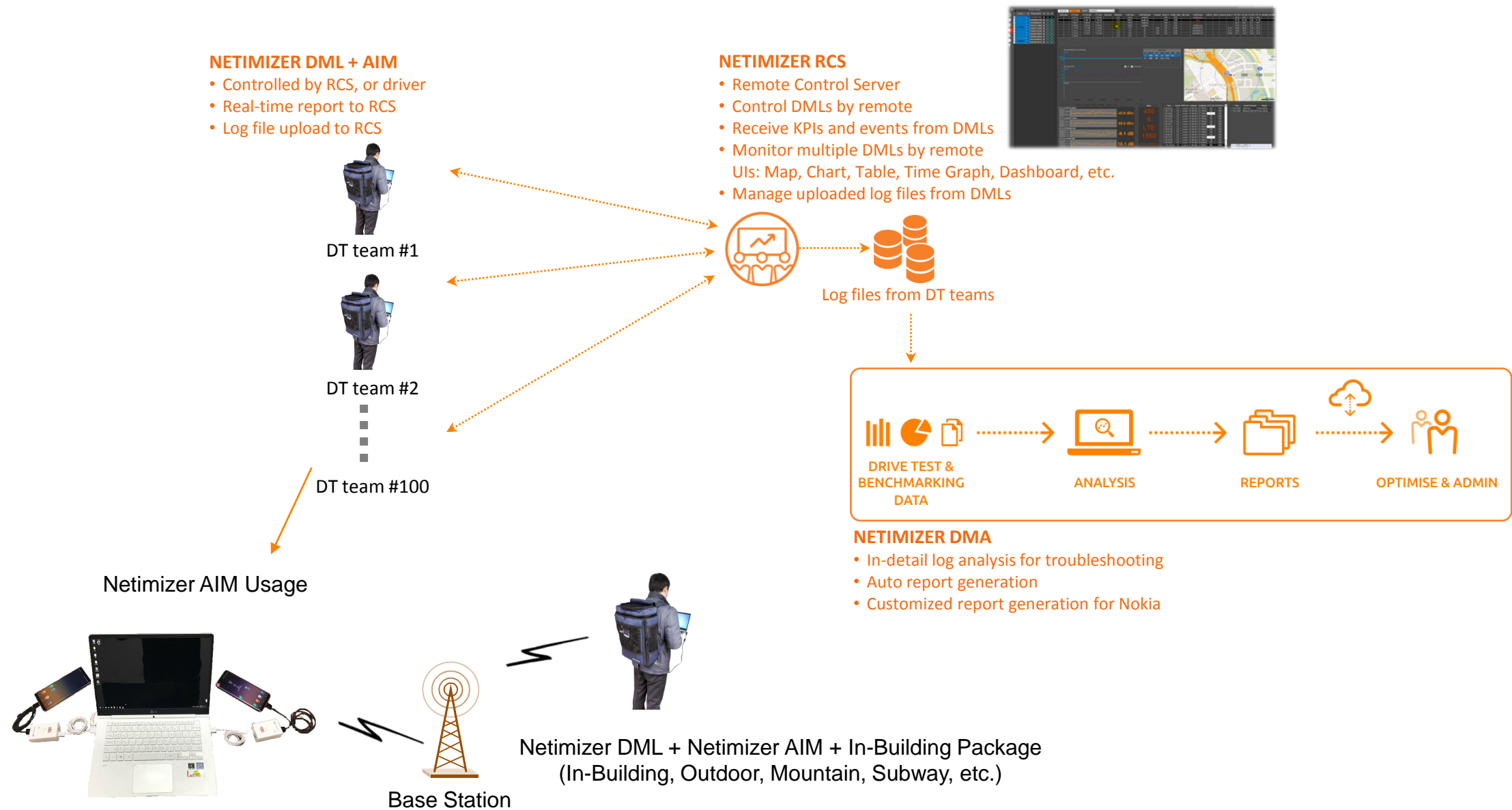


# NETIMIZER-AIM

Dec. 2018

# System Configuration

Proposed system configuration

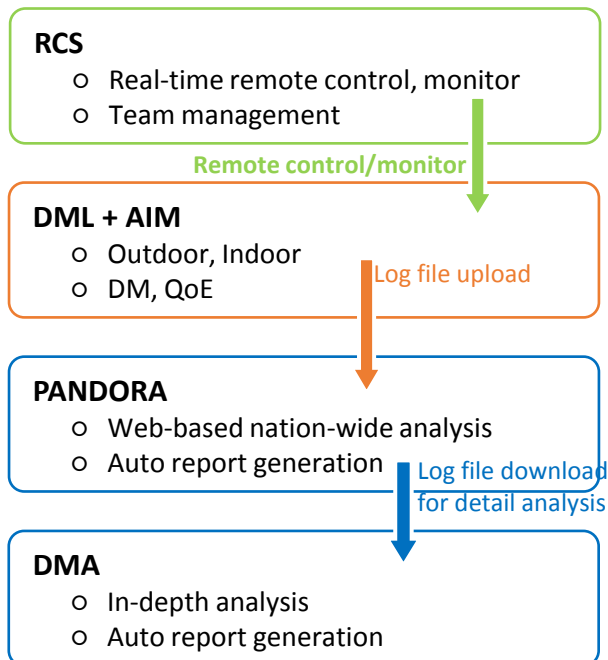




## Proposed Products and Features

	<b>NETIMIZER DML</b>	Drive Test Tool (max 12 UEs) Use commercial phones as it is	Outdoor, Indoor(with indoor backpack) No rooted device required MOS test (1 POLQA license for multiple mobiles), Data test
	<b>NETIMIZER AIM</b>	Voice call QoE test device for mobile Easy multiple device management Drive-test and indoor test	For benchmark test For simultaneous test with multiple service types Any mobiles in the market
	<b>NETIMIZER RCS</b>	Remote Control & Monitoring Server Works with DML Automatic report generation	For remote control/monitor
	<b>NETIMIZER DMA</b>	Analysis tool In-depth analysis One-click report generation	For detail analysis
	<b>PANDORA</b>	Web-based nation-wide analysis server Pandora-Enterprise - Overview Pandora-DV – Detail view	Automatic 1 <sup>st</sup> level parsing, KPI calculation Automatic report generation Detail analysis with Netimizer DMA

## Workflow



# Netimizer DML + Netimizer AIM

The world's smallest benchmark tool



## Key Features

- 1 mobile support
- Comprehensive drive-test and in-building features
- Real-time UE measurement, logging and display
- Simple measurement plan (Data, Voice, MOS)
- Compatible with all technologies, from 2G to LTE and LTE-A
- In-depth diagnostic user-interface for experienced users
- Straightforward and stable device connection
- Full Log Mask
- Layer 1/2/3 message logging / display / parsing / analysis
- ITU-certified voice quality analysis ITU P.862, P.862.1 and P.863 (POLQA)

## NETIMIZER AIM specification

Item	Specifications
AIM	74.39(W) x 43 (D) x 20.80(H) mm, 52 g
Cable	USB 2.0 or USB 3.0
Input power	PC power
Port	x1 port for mobile (USB 3.0), x1 extra USB 3.0 port
PC interface	x1 USB 2.0, x1 USB 3.0
Laptop spec.	Intel Core i7-4720HQ @ 2.60GHz or higher, 8GB RAM or more, SSD, Windows 7/8/10

## Benefits

- Battery pack operates for five hours, fully loaded
- A scalable platform that supports test mobile simultaneously
- When AIM is combined with PANDORA QoS, it can assess and audit network performance
- This results in:
  - Seamless network application testing
  - Reduced costs, with a single, scalable platform
  - Improved test detail and precision
  - Easy management of significant live services
  - Enhanced time-to-market for new services
  - Smartphone-friendly
  - Upload KPIs and test results in real time
  - Conduct standards-based Voice MOS tests
- Supports HSPA+, EVDO Rev.A, Rev.B, CDMA2000, GSM, EDGE, GPRS, WCDMA, HSDPA, HSPA+, DC-HSDPA, WiMax, LTE (TDD and FDD) and LTE-A
- Bluetooth/MOS cable-friendly
- Compatible with a variety of handsets

# Netimzer DML + AIM

AIM – most efficient benchmarking device



## NETIMIZER AIM Hardware Specification

Item	Specifications
PM12	74.39(W) x 43 (D) x 20.80(H) mm, 52 g
Cable	USB 2.0 or USB 3.0
Input power	PC power
Port	x1 port for mobile (USB 3.0), x1 extra USB 3.0 port
PC interface	x1 USB 2.0, x1 USB 3.0
Laptop spec.	Intel Core i7-4720HQ @ 2.60GHz or higher, 8GB RAM or more, SSD, Windows 7/8/10



## NETIMIZER DML System Requirements

Item	Minimum Requirements	Recommended Requirements
CPU	Intel Core i7-4710MQ @ 2.50GHz or higher	Intel Core i7-4720HQ @ 2.60GHz or higher
RAM	8GB or more	8GB or more
Storage	7,200 RPM HDD or faster (write speed 80MB/s or faster)	SSD (write speed 300MB/s or faster)
LCD	1920 x 1080	1920 x 1080 or higher
Operating System	Windows 7, 8, or 10	Windows 7, 8, or 10
Interface	x1 USB 2.0, x1 USB 3.0	x1 USB 2.0, x1 USB 3.0
PM12 receives DM and TCP/IP data from 12 mobiles, thus high speed storage (SSD) is recommended		



# Netimizer DMA – In-detail Analysis Tool for Engineer

In-detail Analysis Tool for Engineer



## Key features

- Per-TTI analysis
- VoLTE analysis (RRC, NAS, SIP, RTP, POLQA, Durations, etc.)
- Missing neighbor, PCI pollution, etc.
- LTE, LTE-CA, CSFB, SRVCC, ... — all features you need
- Auto report generation

## Key Features

- Offers user-configurable reports with one-click
- Ensures the post-processing of shorts and overs and compares data between scanner and handset
- If numerous windows are open and an area of data is allocated in a single window, other windows display the same time zone. This enables multidimensional post-processing of data
- Replays data in the same manner as it was logged – in tables, message windows, maps and graphs
- Abstracts data that meets specific conditions
- Imports data via CSV file for post-processing. Exports data to Google Maps, CSV, MIF, Excel or text formats
- Pilot Pollution post-processing: Abstracts polluted areas
- TTI level in-detail analysis for optimization engineers

## Benefits

- Make swift decisions thanks to automated reports
- Technology-agnostic
- Easily manage and extract huge amounts of drive-test data via a robust data-management system
- Compatible with all established wireless technology: GSM, EDGE, EVDO Rev.0, Rev.A, Rev.B, GPRS, WiMAX, CDMA2000, TD-SCDMA, WCDMA, HSDPA, HSUPA, HSPA+, DC-HSDPA, LTE and LTE-A
- Rely on a platform that's both stable and scalable
- Modifications are welcomed and realized via yearly maintenance
- Intuitive and economical
- Flexible and robust

## Use Cases

- Get a view of service and network performance geospatially
- Create and provide KPI reports enterprise-wide
- Analyze trends and complex statistics
- Assess huge amounts of drive-test data to get to the heart of issues affecting service performance
- Gauge radio / application-level metrics
- Deliver in-depth reports
- Basically, Devices are controlled by ADB App which is phone based.
- If device user using does not support “ADB” app, user can use one of “Bluetooth” instead of “ADB”.

## Innovations


- Multi-dimensional KPI visibility – key statistics for accessibility, retainability, mobility, quality and packet-switched data performance
- Swift, thorough and configurable one-click reporting
- Analyze ESP packet messages, which is essential for optimization of VoLTE
- Google Earth is supported along with numerous other map formats
- Share in-depth reports on service-specific and general network performance
- Measure radio / application-level metrics
- Create and present KPI reports enterprise-wide
- Scrutinize trends and conduct statistical analysis
- Easily manage and extract huge volumes of data

# WARNING & SAFETY INFORMATION

Netimizer DML + Netimizer AIM



## Safety Symbols

-  **Warning**
- When encountering this symbol in the manual, you must follow these recommendations to avoid irreparable damage to your car, system or connected devices or to avoid accidents with injuries or death.

## IC Information

This device complies with industry Canada licence-exempt RSS standard(s).

Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference

Le present appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence.

L'exploitation est autorisee aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioelectrique subi, meme si le brouillage est susceptible d'en compromettre le fonctionnement.

The antenna(s) used for this device must be installed to provide a separation distance of at least 20cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

## FCC Information

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

## FCC notification to users

This equipment has been tested and found to comply with the limits for a CLASS B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the Instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference, the user is encouraged to try to correct the interference by consulting with a dealer or an experienced technician for technical assistance.

Any changes or modifications to the equipment not expressly approved by the party responsible for compliance could void user's authority to operate the equipment.





# Thank You

## Head Office

7F, 3Dong,  
Pangyo-Seven-Venture-Valley 1  
SamPyeong-Dong  
625, Bundang-Gu  
SeongNam-Si  
Gyeonggi-Do  
Korea, 463-400

**E-mail:** [sales@spiretech.co.kr](mailto:sales@spiretech.co.kr)

## Japan Office

4-9 Michinoku Bld.  
2kai  
Kandasakumacho  
Chiyodaku  
Tokyo  
101-0025  
Japan

**E-mail:** [lee@spiretech.co.jp](mailto:lee@spiretech.co.jp)

## EMEA Office

Stanmore Business & Innovation Centre  
Stanmore Place  
HoneyPot Lane  
London  
HA7 1BT  
UK

**E-mail:** [spire@spire-technology.com](mailto:spire@spire-technology.com)

## USA Office

VOIDAS LLC 7928 East Drive  
Eloquence Building  
Suite 501  
North Bay Village  
FL 33142  
USA

**E-mail:** [mike.ishikawa@voidas.com](mailto:mike.ishikawa@voidas.com)



Applied intelligence.  
[www.spire-technology.com](http://www.spire-technology.com)