

# MultiDSL - Voice & Audio Performance Assessment

The MultiDSL test system for speech quality (MOS) evaluation helps by leading operators, terminal and network equipment manufacturers, chipset vendors and enterprises to understand and enhance user satisfaction.

Voice communications systems delivering poor quality of service can have a significant negative impact on corporate image, and customer satisfaction.

Subjective methods of measuring speech quality, if done poorly, lead to inaccurate and unrepeatable results and if done well are both expensive and time-consuming.

MultiDSL uses objective measurement technology to enable the user to manage Quality of Service, powerfully and effectively.

Trusted Opale measurement know-how is delivered in a versatile system which combines powerful network-wide testing with simple to use management tools.

## At a glance...

### Quality Of Experience

Delivers true and objective Voice quality perceived by end users

### Universal

unparalleled interoperability allows you to test any communication system : analog, satellite, cellular, TDM, Push to talk, and many other

### Test design flexibility

Automation engine enables to create any test you need.

Your imagination is your only limit.

### Smart analytics

Advanced metrics help you determine and visualize root cause for Voice performance degradation

### Seamless Integration

Comprehensive API enables you to automate MultiDSL from anywhere, by any application, at any level.

### Modular and scalable Architecture

Expand as you need



# Making the difference

Whether you need to test a single call between two smartphones, or set up a complex automated test schedule, MultiDSLAs help you make the difference for your customers.

## Network-Wide Testing

call performance between any end points

## Trustful and accurate

measurements are based on latest international standards

## Scalable Architecture

makes it usable from the Lab environment to Enterprise Network Operations

## Management by Exception

report generation allows management by exception

## In-Depth Analysis

drill-down and detailed graphical metrics help resolve problems quickly

## SLA Verification

scheduled tests allow long term analysis

## Ease of Use

simple and intuitive user interface helps you make the job faster

## Flexibility

local and remote operation offers additional flexibility and reduced head-count

## Reduced Engineering Time

automation reduces regression testing time

## Observability

Service/site monitoring in 24/7 with essential metrics/kpis



## LAB

- Interactive test creation
- Fully flexible test design
- Highest accuracy
- Extensive analysis
- Immediate feedback
- Scenario testing
- Test automation



## Enterprise

- Management Reports
- Unattended operation
- Small learning curve
- Alerts on problem
- Standard tests
- Scalable and modular



## Network

- NMS integration
- Central scheduling
- Central maintenance
- Multi-tier user support
- Quick and easy to use
- Web reports



## Field Test

- GPS for location and synchronisation
- Low power requirement
- Interface to cell phones
- Post-process mapping



## Manufacturing

- Repeatable testing
- No training to run a test
- Database of all tests
- End of day reports
- Python, Rest API support for automation



## MultiDSL Controller

The MultiDSL Controller is at the heart of each MultiDSL configuration: it manages the test process and stores settings and results in an SQL database

### Analog Nodes

The Digital Speech Level Analyser (DSL) is available in a two-node desktop package, with four- and six-node rack-mount alternatives. DSLA firmware includes a sophisticated range of signal generation and measurement tools.

Use DSLA to include smartphones, Bluetooth devices, POTS phone lines, sound cards and PTT radio terminals in your tests.

### VoIP Nodes

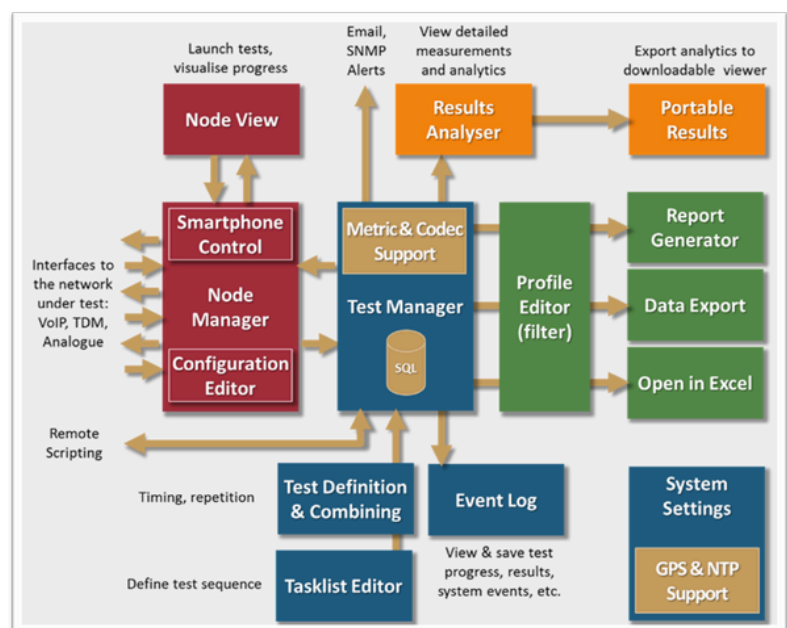
The VoxPort Packet (VPP) family of software nodes includes options for lab-based and network-wide testing of VoIP and VoLTE performance, with or without built-in RTP packet impairment.

Use VPP to generate real voice calls over a VoIP network. Optional built-in packet impairment generation and managed codec rate changes make VoxPort Packet+ a simple and effective way to understand, manage and even reproduce VoIP network behaviour.

### JSON and BSON exports

JSON and BSON exports allow to export MultiDSL metrics to an Elastic or MongoDB datastore for 24/7 observability

Build your own dashboards based on MultiDSL metrics or subscribe to VQMaas - to gain visibility, root cause analysis, extended KPIs from MultiDSL software



MultiDSL Controller provides the tools to optimise testing and verify the validity of POLQA and PESQ scores. As one MultiDSL user said:



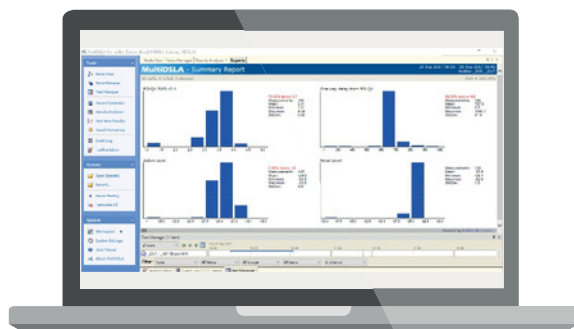
I didn't know much about MOS when I got my first MultiDSL system, so I decided to do some tests. I quickly learned that MOS is not like Volts – you can't just clip on a meter and measure it. The choice of speech material, the speech power level, signal filtering and the performance stability of the system under test are all factors which must be taken into account in setting up the test process. MultiDSL makes it simple to do this, and to document and store those settings to ensure accuracy and repeatability.

**It works.**





## On-screen Report



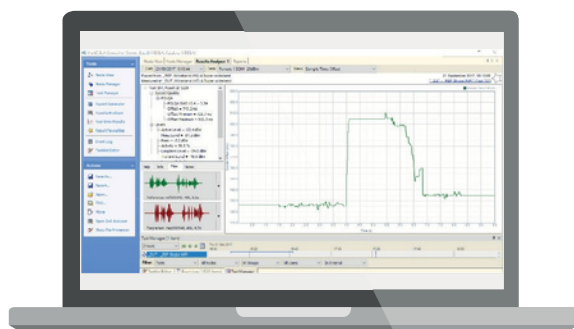
## Error localization



## Visualization with playback



## Detailed analytics



# Tests

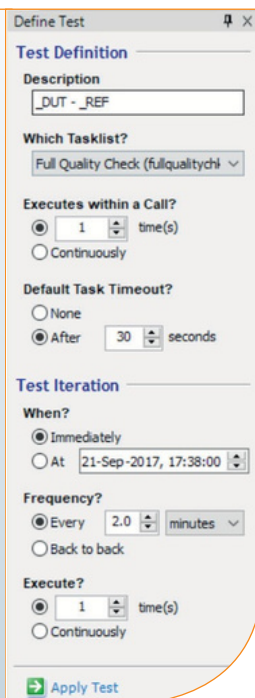
## Managing and Planning Tests

Immediate tests + Regular tests + Scheduled tests+ Automated tests

Tests how and when you need them

## Creating New Tests

If the pre-defined tests do not meet your needs, simply edit to adapt them, using a palette of Measurement, Sound, Timing and Control events.



**Define Test**

**Test Definition**

Description:

Which Tasklist?:

Executes within a Call?

☒ 1 time(s)

☐ Continuously

Default Task Timeout?

☐ None

☒ After 30 seconds

**Test Iteration**

When?

☒ Immediately

☐ At 21-Sep-2017, 17:38:00

Frequency?

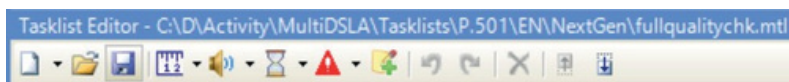
☒ Every 2.0 minutes

☐ Back to back

Execute?

☒ 1 time(s)

☐ Continuously



# Results

- Display Numerical and Analytical data
- Results sharing
- Export
- Statistical analysis
- Report options
- Drill-down to root cause
- Verify thresholds
- Trigger alerts

