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Network Testing and Emulation Solutions

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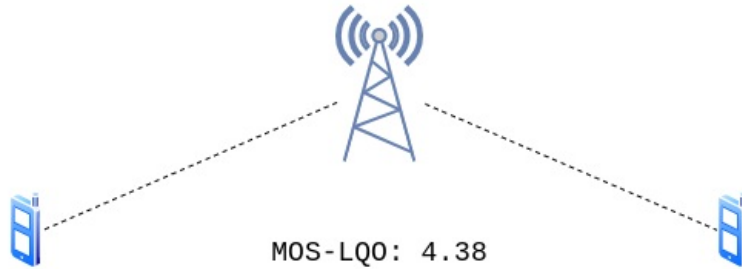support@candelatech.com
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Audio Call Quality Testing Solution

The **Audio Call Quality Testing** in LANforge system measures the voice signal quality for VoIP/SIP and mobile devices using POLQA scoring tool.

- LANforge system initiates VoIP/SIP calls using VoIP gateway and plays/records testing audio file over the call.

- LANforge system manages mobile devices wirelessly and plays/records testing audio over call using Bluetooth or analog cable channel.

- The industry standard for assessing the quality of voice calls, POLQA (Perceptual Objective Listening Quality Analysis), generates a score based on the comparison of a reference and received audio signal.

- Listening conditions such as Narrow Band (NB) and Super Wide band (SWB) are both supported by LANforge system.

- Test supports Android/IOS mobile devices using cellular network types such as VoLTE, VoNR, and others.

- Graphical test reports are generated along with .csv data.

Key Measurements:

- MOS-LQO (Mean Opinion Score - Listening Quality Objective)

- Attenuation

- Average Delay

- SNR (Signal To Noise ratio)

Sample Report Screenshots:

Report for: Audio Quality

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PDF Report

Objective

The LANforge Audio Quality Report (AQR) displays the actual test attributes from POLQA/PESQ server such as MOS (Score), Attenuation (Automatic Gain Control), Average Delay, and SNR (Signal To Noise ratio). AQ test can be performed between VoIP-VoIP, VoIP-Mobile, and Mobile-Mobile.

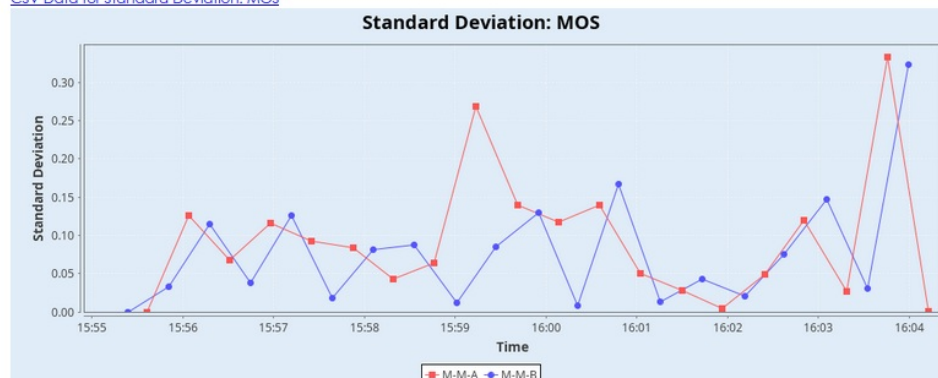Realtime Graph below shows Current Avg MOS Score.
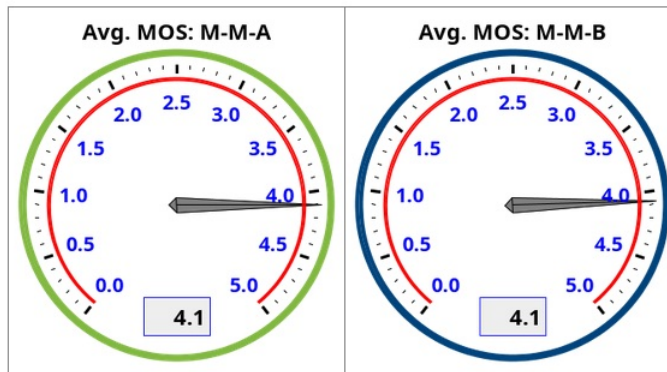
Realtime Graph below shows MOS-LQO score from recording endpoints.

CSV Data for MOS Vs Time
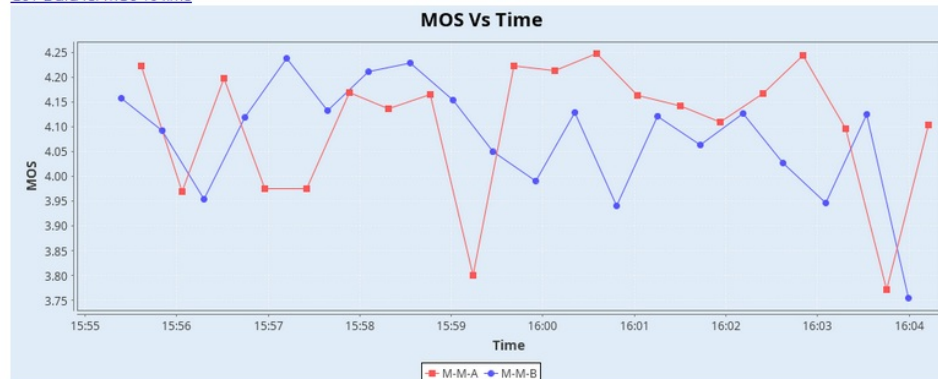
Realtime Graph below shows MOS Standard Deviation.

CSV Data for Standard Deviation: MOS


Sample Reports:

- VoIP to Mobile using Bluetooth / 20 single calls / Uni-directional Scoring/ NB

- VoIP to Mobile using Bluetooth / 203 single calls / Uni-directional Scoring / NB

- Mobile to mobile using Bluetooth / Single call (~5 mins) / Uni-directional Scoring / 20 scores / NB

- Mobile to mobile using Bluetooth / Single call (~4 hrs) / Bi-directional Scoring / 500 scores each / NB

- Mobile to mobile using Bluetooth / Single call (~8 hrs) / Bi-directional Scoring / 1000 scores each / NB

- Mobile to mobile using Bluetooth / Single call (~10 mins) / Bi-directional Scoring / 20 scores / SWB
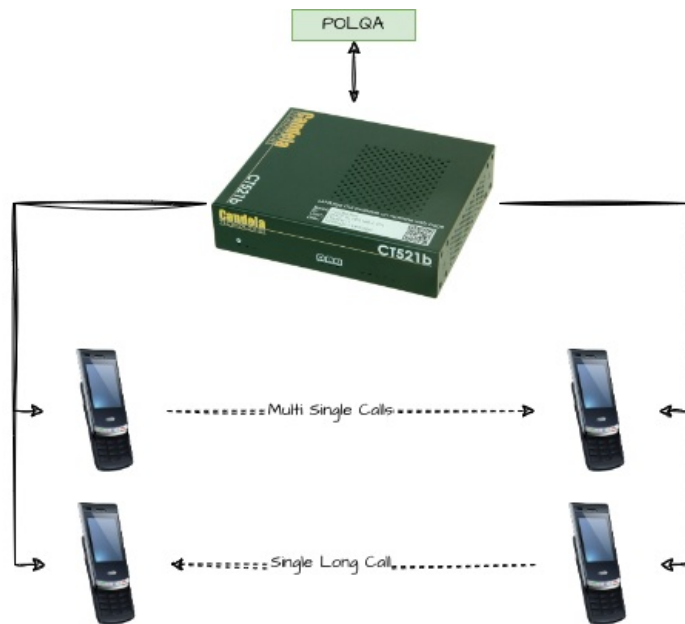
Network Diagrams:

- VoIP/SIP and Mobile calls using POLQA (Basic Setup: Single location)
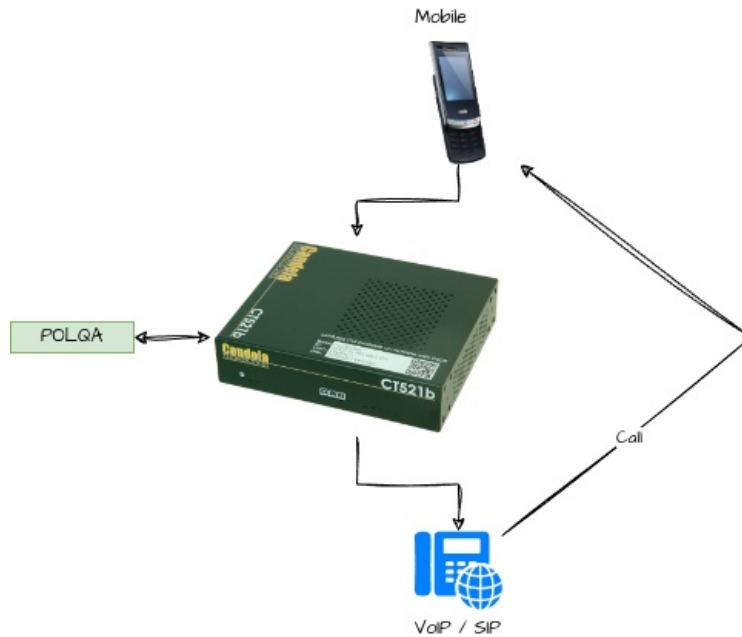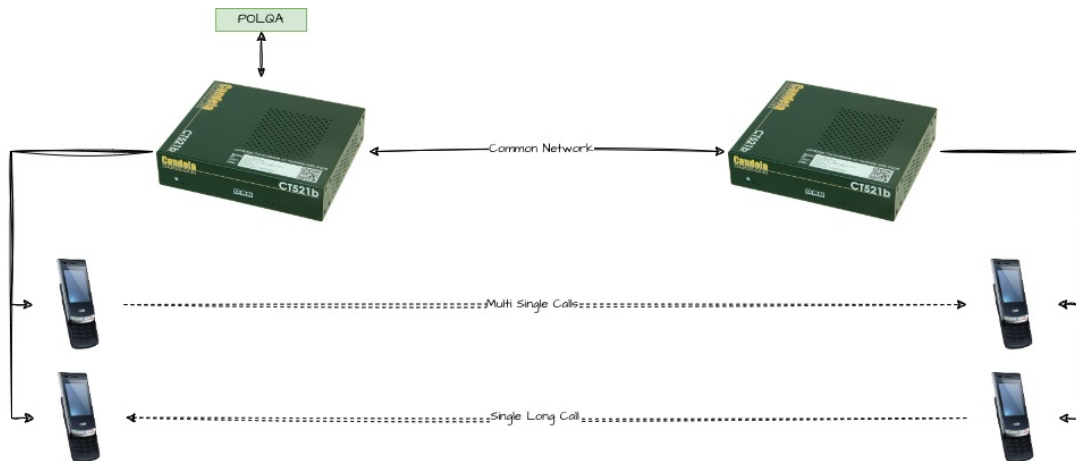

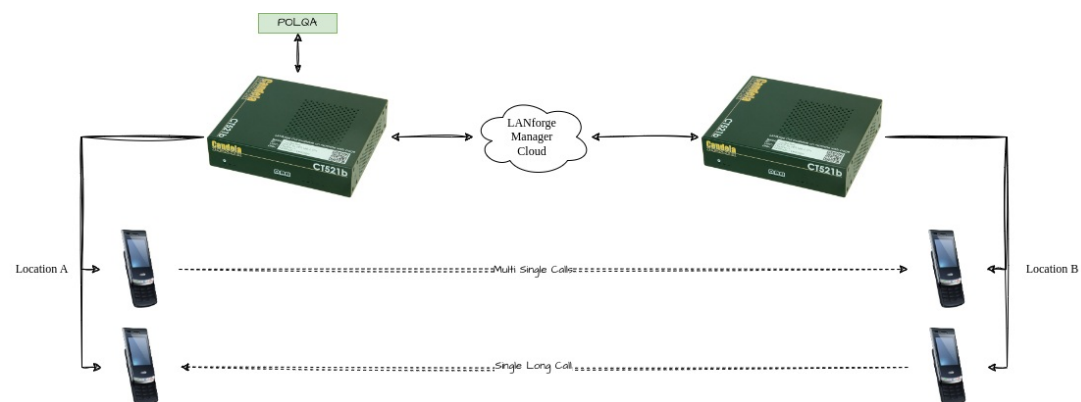- Mobile to Mobile calls using POLQA (Basic Setup: Single location)
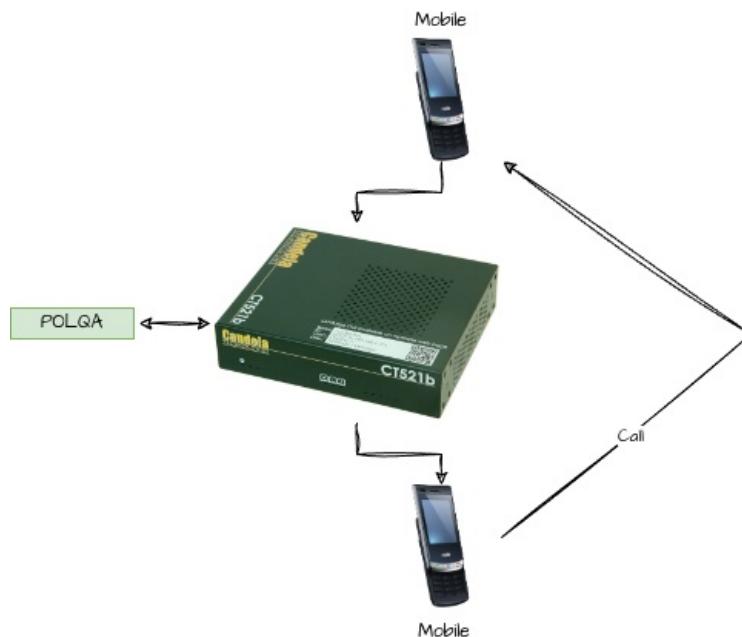
- Mobile to Mobile calls using POLQA (Basic Setup: 4 devices, single location)

- Mobile to Mobile calls using POLQA (Advanced Setup: 4 devices, single location, using same network)

- Mobile to Mobile calls using POLQA (Advanced Setup: 4 devices, multiple locations, using cloud manager)

Cookbooks:

- VoIP/SIP and Mobile calls using POLQA (Basic Setup)
- VoIP/SIP and Mobile calls using POLQA (Advanced Setup)
- Mobile to Mobile calls using POLQA (Basic Setup)
- Mobile to Mobile calls using POLQA (Advanced Setup)

Lead Times and Support:

Lead Times: Two to three weeks.

TaaS/Onsite Support: Customers with only occasional test needs can use our Test as a Service option. Candela engineers can do the testing for you in our fully equipped test lab and provide a detailed test report with recommendations.

For more information, please contact sales@candelatech.com or give us a call at: 1-360-380-1618