

Cellular Audio and Voice Quality Testing

Agilent Technologies
and Hermon Laboratories TI



Comprehensive audio and VQT analysis of your cellular handsets



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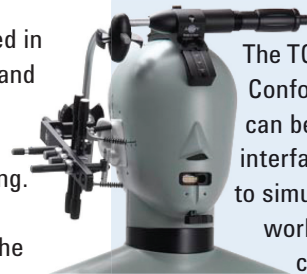
Audio and Voice Quality Testing (VQT) of a telephone is undertaken to assess its electro-acoustic performance and to verify its compatibility with other phones and communications networks. The explosion in communications technologies means that these tests have to be applied to all variations of telephone equipment: analog, digital, VoIP, Bluetooth, DECT and to all cellular standards.

Audio testing requires the characteristics of the phone to be verified over its entire electro-acoustic path comprising the interface, microphone, speaker, and wired or wireless connection path. Voice Quality Testing utilizes the ITU defined PESQ (Perceptual Evaluation of Speech Quality) algorithm to assess the voice quality of telecommunications equipment and networks.

Many different tests are required in order to characterize the audio and voice quality performance of a hand-set. Selecting and setting up these tests can be challenging. Hermon Laboratories TI has addressed this challenge with the TCA4100 Telephony Conformance Analyzer. The analyzer is a fully inte-

HATS

When acoustically testing handset telephones standard reference positions need to be established for the ear and mouth simulators. This can either be achieved using a standard test head or by using a Head and Torso Simulator (HATS).



The TCA4100 Telephony Conformance Analyzer can be optionally interfaced to a HATS to simulate the real world operating conditions of the handset under test.



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grated and automated solution that meets all major worldwide standards. The system includes thousands of user-selectable built-in tests while also allowing users to create new tests by specifying the parameters, ranges, limits, results formats and test execution sequence required.

When used with cellular phones the TCA4100 is interfaced to an Agilent 8960 Series 10 Wireless Communications Test Set. The 8960 test set is configured to act as a base station simulator and is connected to the audio interface of the

TCA 4100 in order to provide a radio link to the cellular phone under test. All current cellular technologies can be supported including GSM, CDMA, WCDMA and CDMA2000. The 8960 is configured and controlled by the TCA4100 software allowing automated test routines to be executed. Built-in test suites including 3GPP, ETSI and ITU-T are included.

With the TCA4100 and 8960 you can now perform all of the tests you need to fully characterize the audio and voice quality parameters of your cellular handsets.

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For more information on Agilent Technologies' products, applications or services, please contact your local Agilent office. The complete list is available at:

www.agilent.com/find/contactus.



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Hermon Laboratories TI is a leading provider of automatic telecom testing instruments conforming to world-wide regulatory & industry standards for analog FXS & FXO, Acoustic, Cellular, VoIP, xDSL, T1/E1, and ISDN PRI equipment.

www.hermonlabs.com

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Ordering Information

Agilent Technologies

E5515C 8960 Series 10 Wireless Communications Test Set

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TCA4100 Telephony Conformance Analyzer



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