

## DAGA 2025

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**Place:**

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**Title:**

Third-Party Listening Test as an Alternative to Conversational Tests in a Complex Automotive Hands-free Scenario – A Critical Consideration

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**Abstract:**

A comprehensive conversational test (CT) was carried out in a complex in-vehicle hands-free (HFT) environment, using an HFT development board installed in an interactive driving simulator and configured with typical hands-free impairments. A cordless phone was connected to a VoIP network on the other side of the connection. 18 test subjects, expert and naïve participants, evaluated various aspects of conversational quality, including listening quality, listening effort, double talk impairment, echo interference, interactivity and overall quality (as outlined in DAGA 2024). In the same scenario, two artificial head and torso simulators (HATS) were used to play back and record so-called pre-recorded conversations (PRC). The PRC included single talk sequences in both directions, as well as speech parts where both voices interact and are talking at the same time. The binaural recordings at both ends (HFT user, cordless phone user) were then assessed and rated by 32 naïve test subjects in a third-party listening test (TPLT) using the same quality aspects as in the CT. The great advantage of a TPLT compared to a CT is the much lower effort to set up and control the conditions. The auditory results of both test designs are presented, discussed and compared in terms of each quality dimension.

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