Title: **Baseline Results for subset of SpeechDat-Car Finnish Database for ETSI STQ WI008 Advanced Front End Evaluation**

Source: **Nokia**

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1. BACKGROUND

A subset of the SpeechDat-Car Finnish database [1,3] will be provided by Nokia to the Aurora consortium to be used as one of the evaluation databases for the ETSI WI008 Advanced Front End task. This report outlines the baseline results provided by the database for the three different conditions defined in [3].

2. EXPERIMENTAL SETTINGS

The reference configuration is similar to that used for the evaluation of the TI digits database. The differences from the configuration used for the qualification criteria include

- use of 4 additional iterations (3 iterations totally) of training at each stage.
- Word insertion penalty=0.

Several tests were also conducted to optimise the number of states & gaussian mixture count in the digit models and the silence model. However, it was found that the default configuration used for the TI-digits [2] provided the best performance and hence the values were left unchanged.

3. BASELINE RECOGNITION PERFORMANCE

The three conditions [3] for performance evaluation include

- Well matched condition
- Medium mis-match condition
- High mismatch condition.

The table below gives the results for the three conditions using the ETSI WI007 front-end.

Test condition	Word Accuracy
well-matched	93.58
medium mis-match	68.33
high-mismatch	65.90
Average	**75.93**

4. REFERENCES

[1] Preliminary description of a subset of SpeechDat-Car to be used in ETSI STQ WI008 front-end standardisation, STQ Aurora DSR Working Group input document AU/189/99

[2] Experimental framework for the Performance Evaluation of Distributed Speech Recognition Front-ends, Motorola, 30th Sept 1998, Aurora project input document.

[3] Availability of Finnish SpeechDat-Car database for ETSI STQ WI008 front-end standardisation AU/217/99