Context based Listening Activity Recognition for Hearing Aid Users using Mobile Phones

Syed Shabih Hasan, Octav Chipara
Department of Computer Science
The University of Iowa
Iowa City, Iowa 52242
{*syedshabih-hasan, octav-chipara*}@uiowa.edu

Abstract—0.5 page

I. INTRODUCTION

II. AUDIOSENSE DESIGN

A. Field Study

In this [1]

B. Software Implementation

C. Calibration

1) Frequency Response: Frequency response tests help us in understanding the underlying characteristics of the mobile phone's microphone. We ran a series of response tests within the frequency band of 1000Hz – 6000Hz, covering frequencies in which human speech lies. The input signal was varied from 50dB in steps of 5dB until the amplitude reached 80dB. As it can be seen in Figure 1, the response is fairly linear, thus highlighting the response of the microphones to a linear showing the fact that the phone's microphone has a linear response to linear increase in amplitude at a particular frequency.
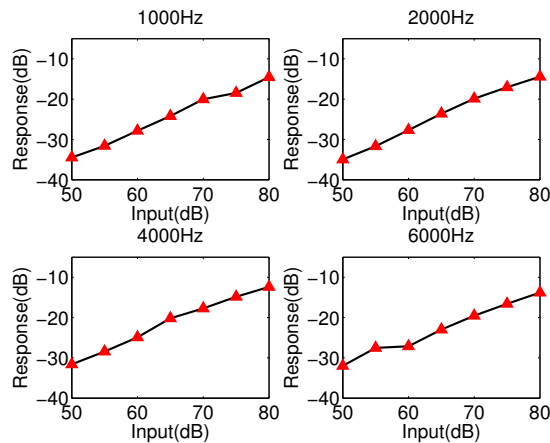

Fig. 1: Frequency Response for Phone 1

2) Directionality:

III. CONTEXT RECOGNITION

A. Context Prevalence

B. Feature Selection

C. Classification and Results

IV. RELATED WORK

V. CONCLUSION

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REFERENCES

[1] S. S. Hasan, O. Chipara, Y.-H. Wu, and N. Aksan, "Evaluating auditory contexts and their impacts on hearing aid outcomes with mobile phones," in *Proc. of The 8th International Conference on Pervasive Computing Technologies for Healthcare*, Oldenburg, Germany, May 2014.