Friedrich-Alexander-University Erlangen-Nuremberg

Chair for Multimedia Communication und Signal Processing

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Master Thesis

Source Tracking in Acoustical Sensor Networks

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Declaration of Authorship

I assure that I have produced the present work without the help of others and without using any sources other than those specified and that the work has not been submitted in the same or similar form to any other examination body and has been accepted as part of an examination. All statements, which have been taken literally or meaningfully, are marked as such.

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Location, Date Signature

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Abstract

Kurzfassung

List of Abbreviations

d.i.e.B	dies ist ein Beispiel

List of Symbols

$+$ Addition

Chapter 1

Introduction

Here comes the introduction...

Chapter 2

Theoretical Background

To understand the source tracking algorithm introduced in the subsequent chapters, a firm understanding of the Expectation-Maximization-Algorithm (hereafter called EM-Algorithm), as well as Gaussian Mixture Models (GMM) is required. Lastly, also the basic signal processing concepts are revised, which will be focused on the properties of the system at hand (multiple sources in a reverberant and noisy environment) and the application of the short-time fourier transformation (STFT) as a way to solve the problem at hand in the frequency-domain.

2.1 EM-Algorithmus

The Expectation-Maximization-Algorithm (EM-Algorithm) is an important algorithm in probabilistic theory.

Appendix A

Anhang Kapitel

A.1 Anhang Abschnitt

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