

# Computation and Visualization of Subjective Artist Similarity for Music Libraries on Android Devices

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**Abstract.** Abstract goes here.

**Keywords:** subjective artist similarity, multi-dimensional scaling, audio analysis

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## 1 Introduction

## **2   Related Work**

### **2.1   Features of Digitally Stored Music**

Audio Features (<http://bit.ly/bY30GO>)   Lyrics (<http://bit.ly/bY30GO>)

### **2.2   Artist Similarity**

Subjective Artist Similarity   Computed Artist Similarity   Feature Extraction  
Psycho-acoustic models   Comparison to Subjective AS

### **2.3   Visualization**

3D   2-Dimensional Visualization   Multidimensional Scaling   Self-Organizing  
Maps   Spring Graph [e.g. <http://www.liveplasma.com/>, <http://radioclouds.com>,  
<http://audiomap.tuneglue.net/>]

### **2.4   Summary of this Section**

### **3 Scenario and Scope of this Thesis**

#### **3.1 Scope Definition**

#### **3.2 Selected Artist Similarity Computation**

Rationale...

#### **3.3 Selected Visualization Computation**

Rationale...

#### **3.4 Summary of this Section**

## **4   Computation of Artist Similarity based on Webservices**

### **4.1   Matching of Data-items from Different Sources**

### **4.2   Basic Artist Similarity**

### **4.3   Optimizations for Better Subjective Similarity**

### **4.4   Summary of this Section**

## **5 Visualization of Artist Similarity**

### **5.1 Summary of this Section**

## **6   Implementation of Artist Similarity Visualization on Android**

### **6.1   Structure of the Application**

### **6.2   Web-Service Workflow**

### **6.3   Android Environment**

### **6.4   Artist Similarity Visualization Variants**

### **6.5   Summary of this Section**



## **7 User Study**

### **7.1 Hypotheses**

### **7.2 Experiment Setup**

#### **Population**

#### **Tasks**

#### **Metrics**

### **7.3 Evaluation and Analysis of Study Results**

### **7.4 Summary of this Section**

## **8 Conclusion**

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## **9    Appendix A**