

Personal Information Visualization - Music

Hauptseminar "Information Visualization - Wintersemester 2008/2009"

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Outline

I. Introduction

II. Status Quo

III. Research

IV. Visualizations

V. Examples

VI. Conclusion

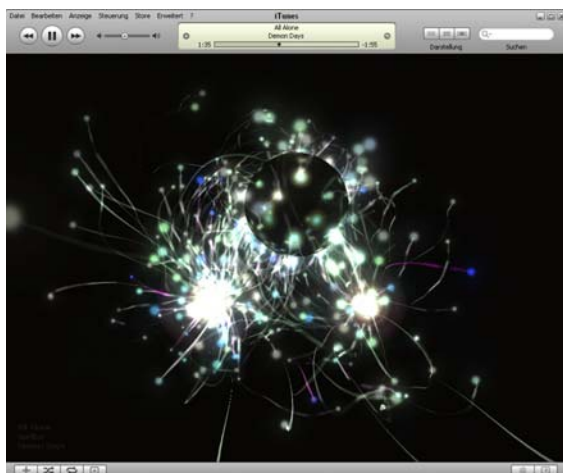


Introduction

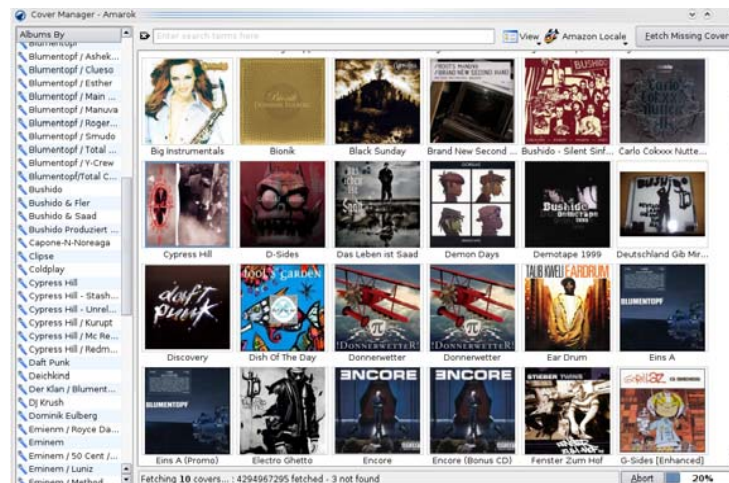
- ≡ Information Visualization in daily life
- ≡ large personal digital music collections
- ≡ general tasks:
 - ≡ overview & browsing
 - ≡ searching

Status Quo

- ≡ complexity grows with size
- ≡ maintenance through playlists & tags
- ≡ disregard of emotional impact on music



iTunes



Amarok

Status Quo

≡ playlist problems:

≡ static, create before use

≡ emotional context?

≡ tagging problems:

≡ user faults

≡ subjective assignment

≡ tag range

≡ how to describe emotions with tags?



Playlists

Research

≡≡≡ Music Interaction:

- ≡≡ Query-By-Humming

- ≡≡ Query-By-Example

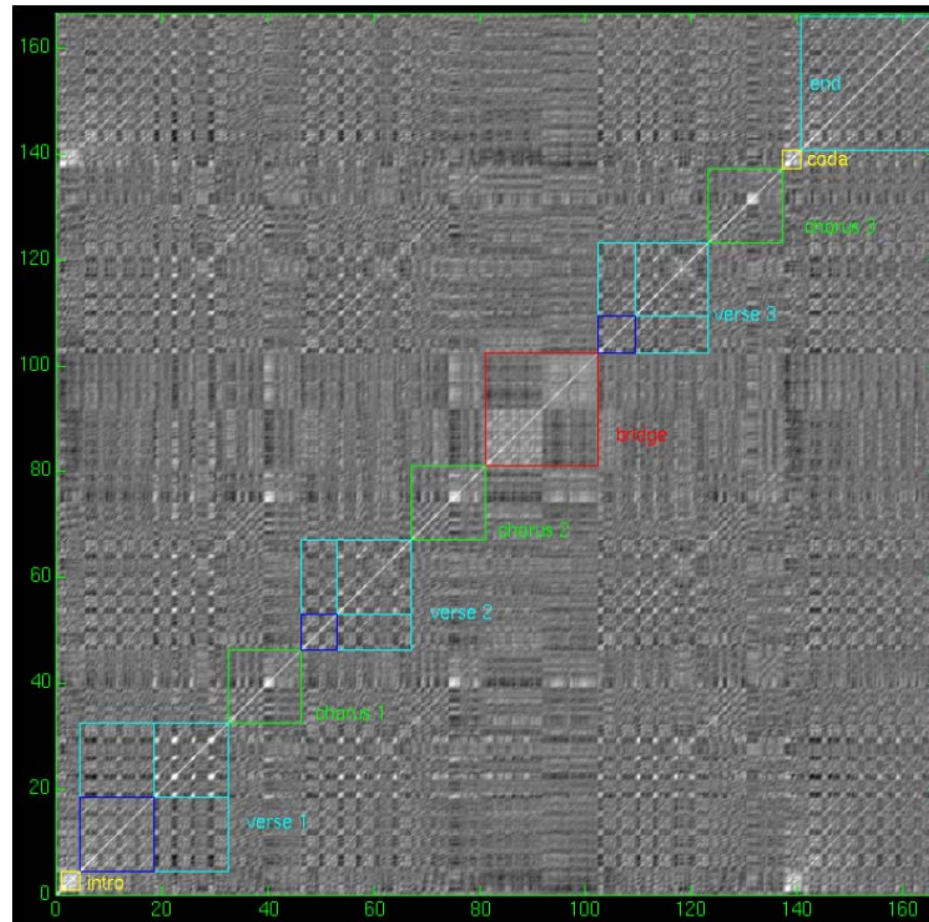
≡≡≡ Music Description: Similarity Measuring

- ≡≡ Symbolic

- ≡≡ Acoustic

- ≡≡ Subjective

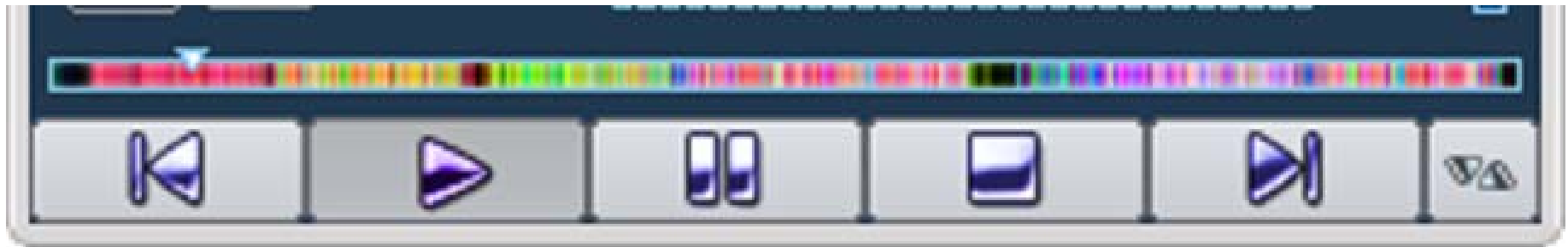
Visualizations



Day Tripper by Lennon/McCartney, performed by the Beatles

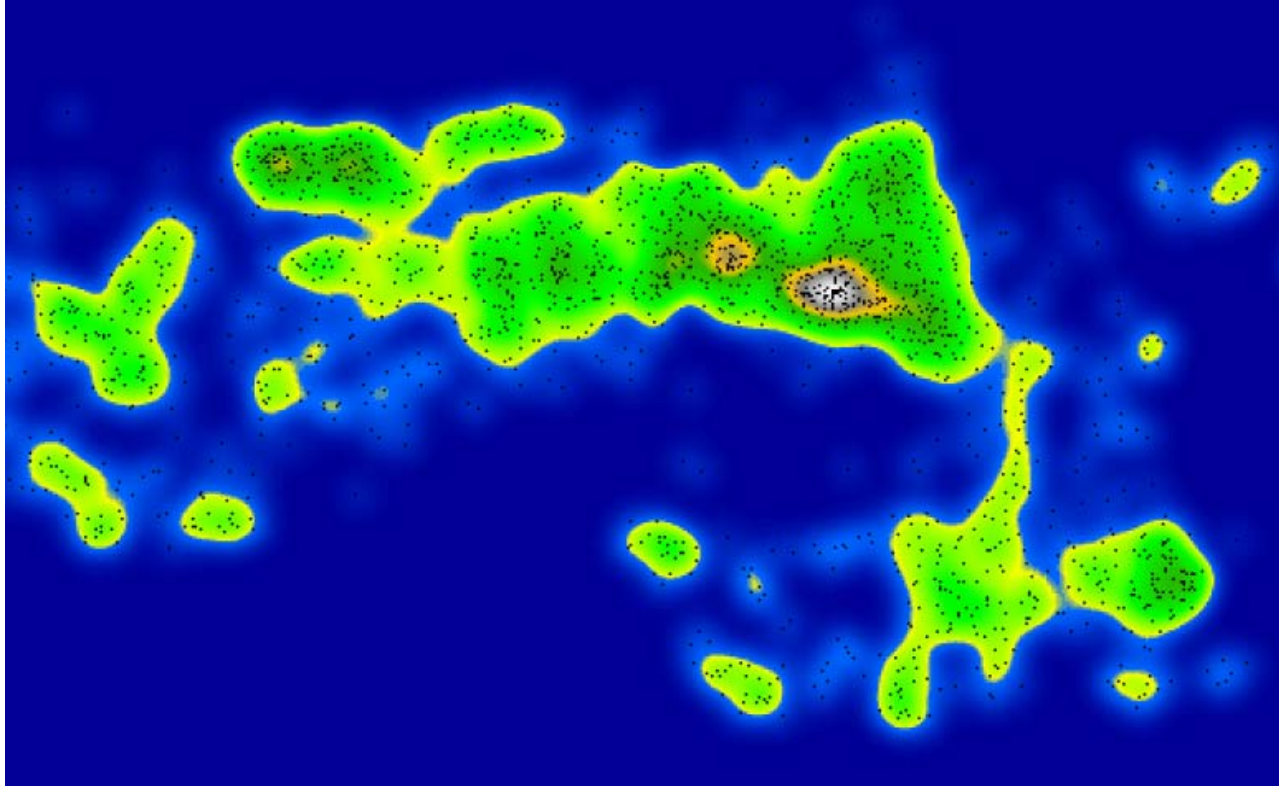
Self-Similarity

Visualizations



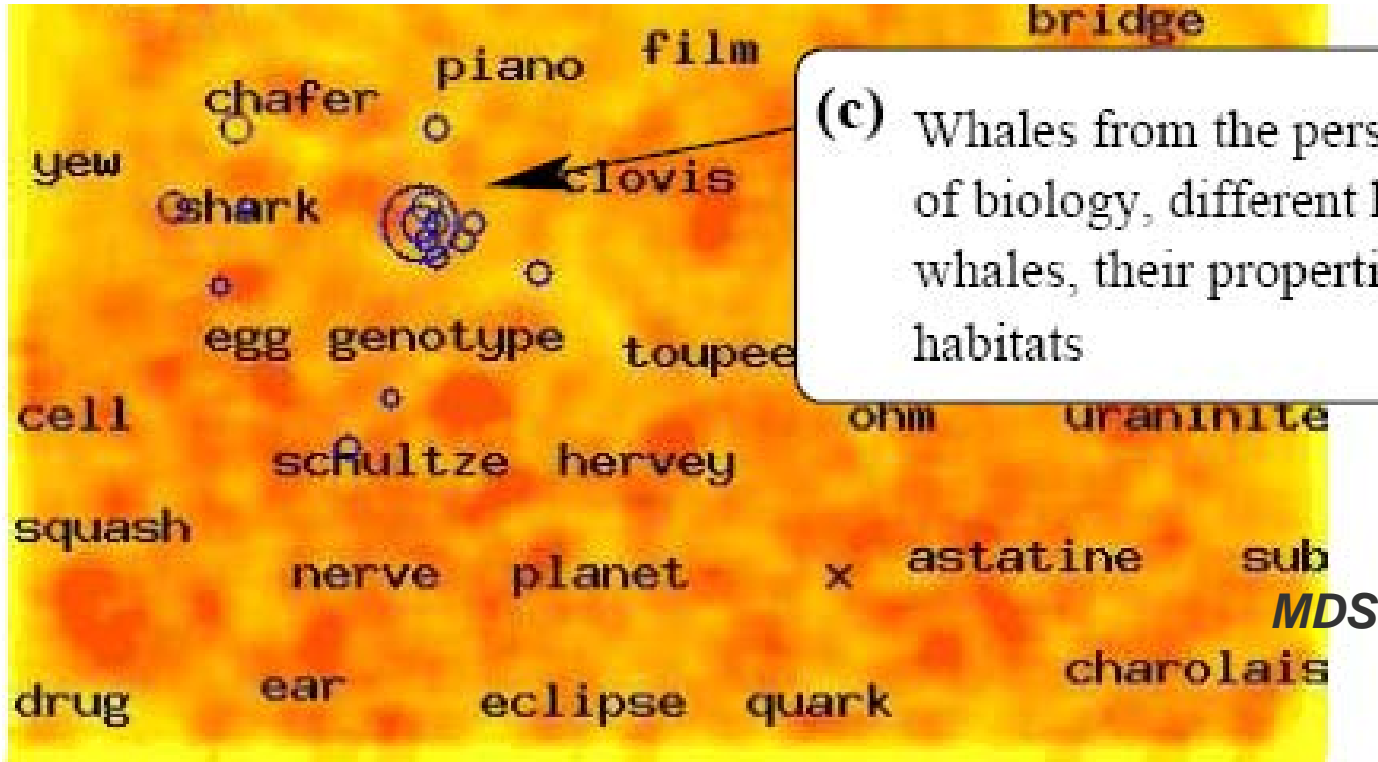
Moodbar

Visualizations



Multi Dimensional Scaling

Visualizations

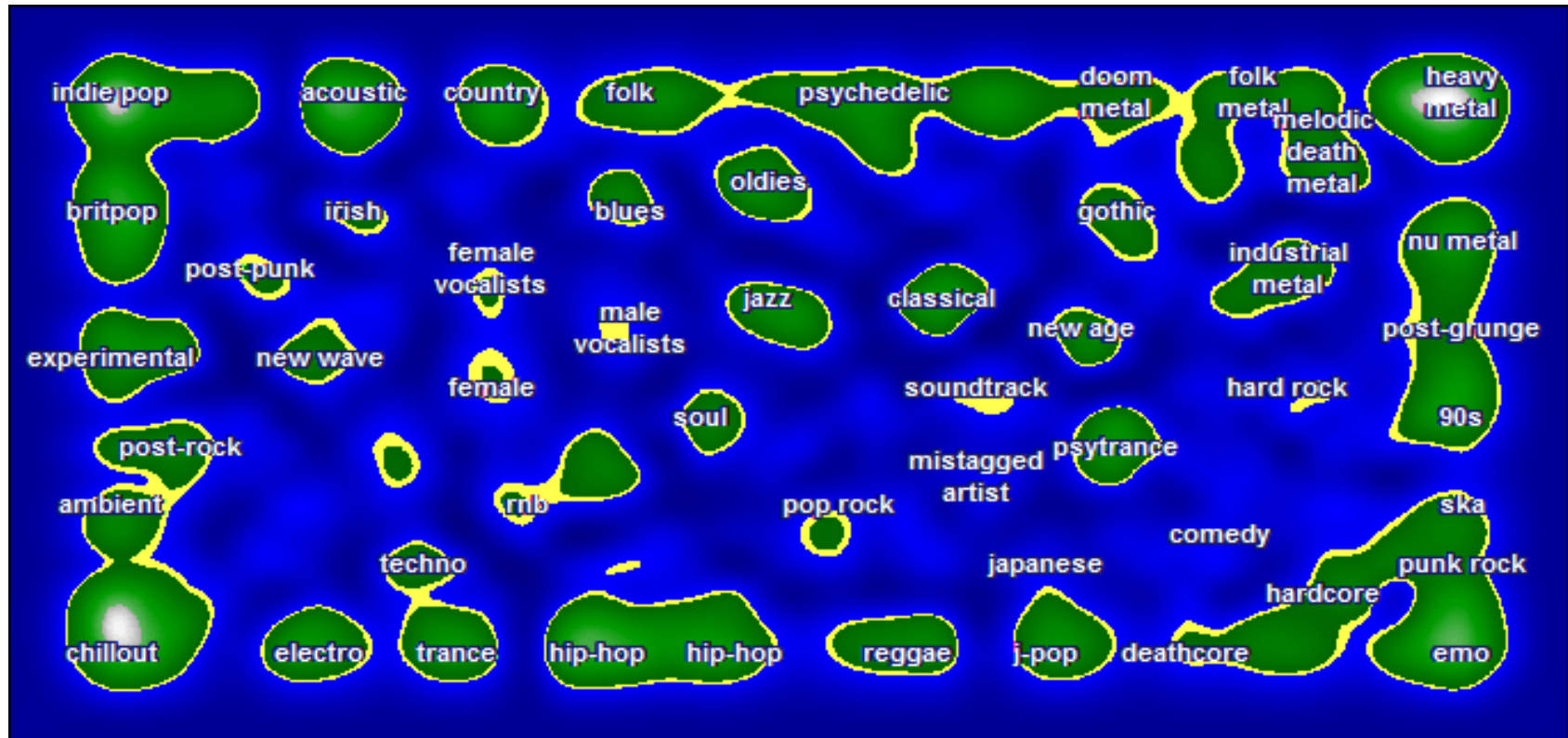


(c) Whales from the perspective of biology, different kinds of whales, their properties, and habitats

Search: "whale"

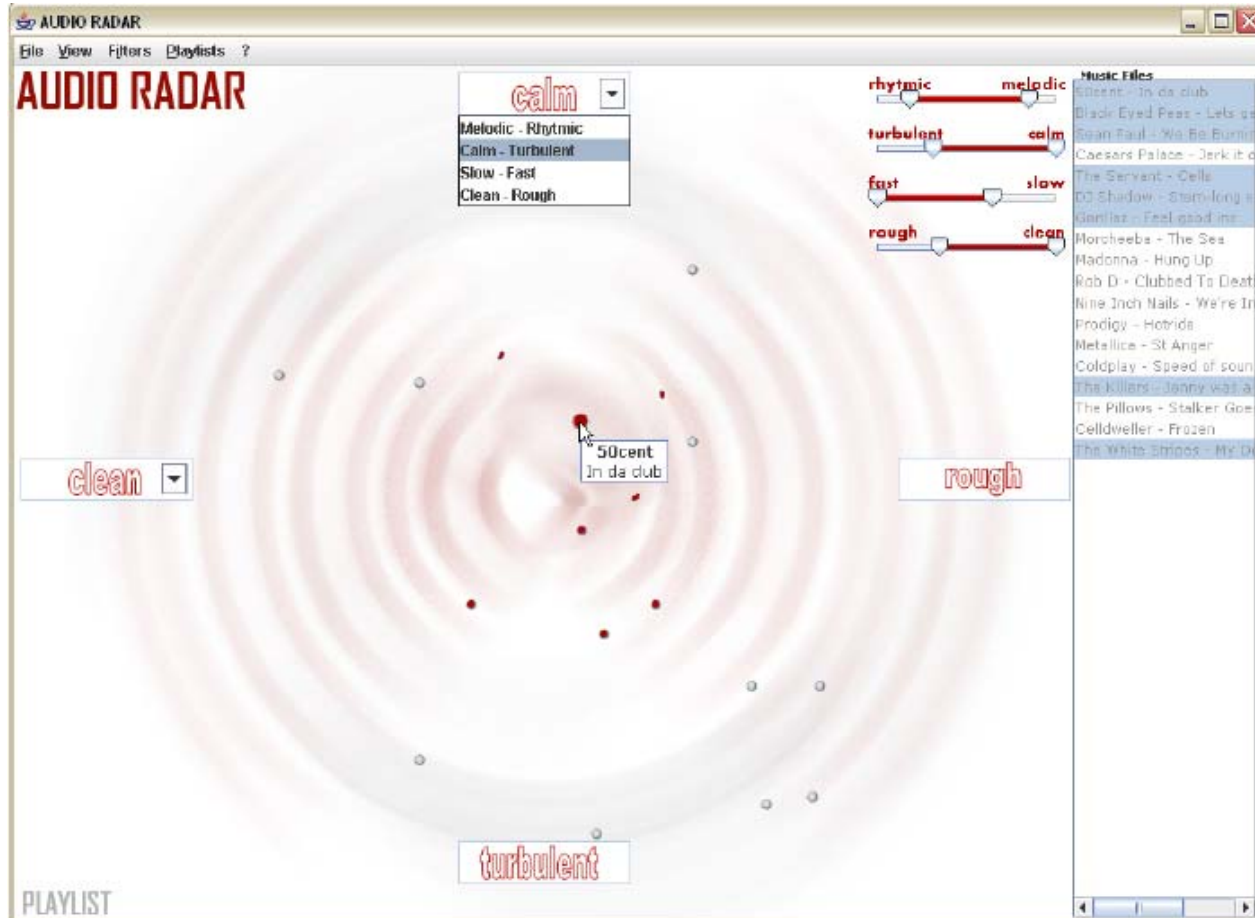
Self-Organizing Map

Examples



Islands of Music

Examples



Audio Radar

Conclusion & Outlook

- ≡ Rather new research field
- ≡ Quite common basic principles
- ≡ Possible orientation towards subjective measuring (last.fm)