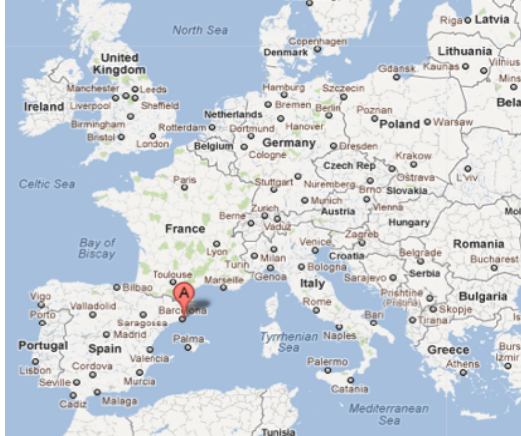# 10T3: MTG-UPF

Xavier Serra

Universitat Pompeu Fabra, Barcelona

Universitat Pompeu Fabra

Music Technology Group - UPF

- part of the Department of Information and Communication Technologies

- Teaching:

  - Master in Sound and Music Computing

  - PhD in Information and Communication Technologies

- Research:

  - Audio Signal Processing

  - Sound and Music Description

  - Musical and Advanced Interaction
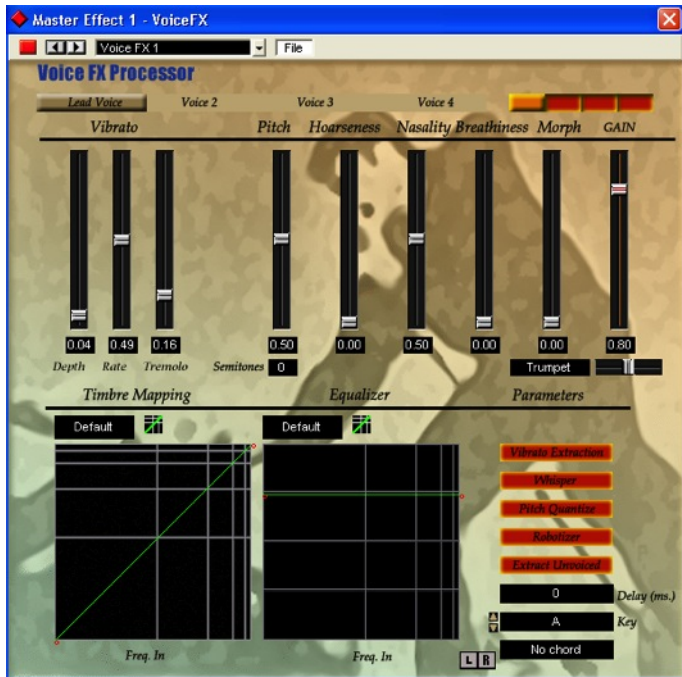
  - Semantic Technologies for Sound and Music

Audio signal processing
Singing voice synthesis
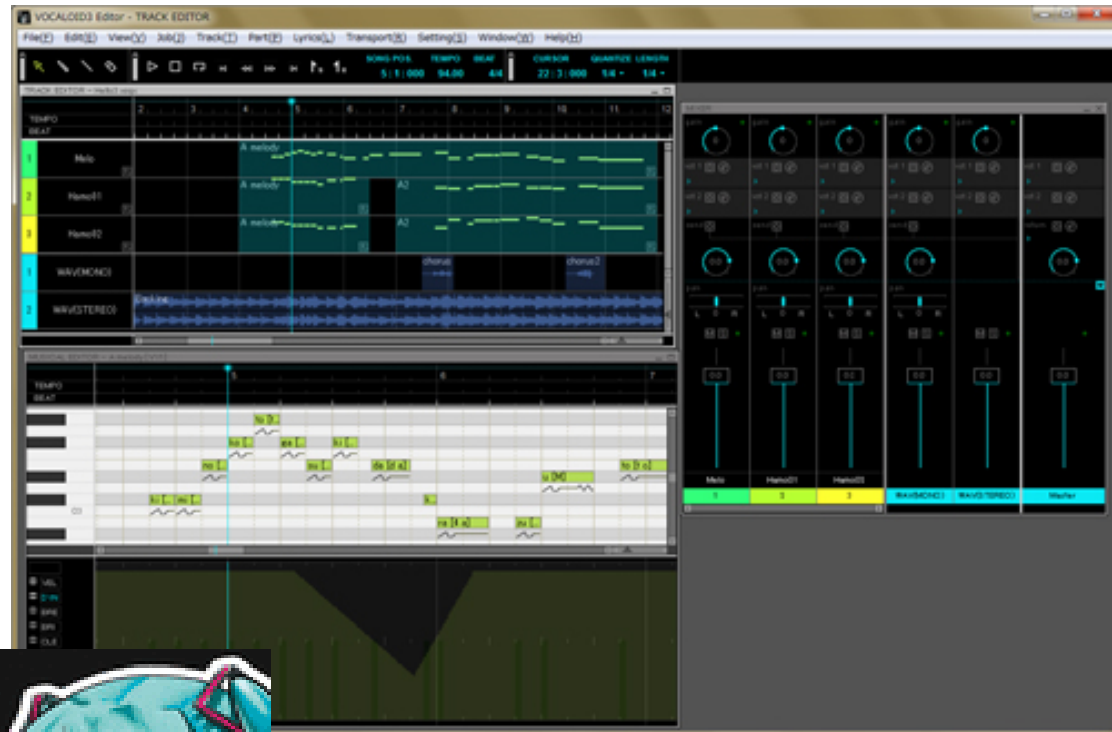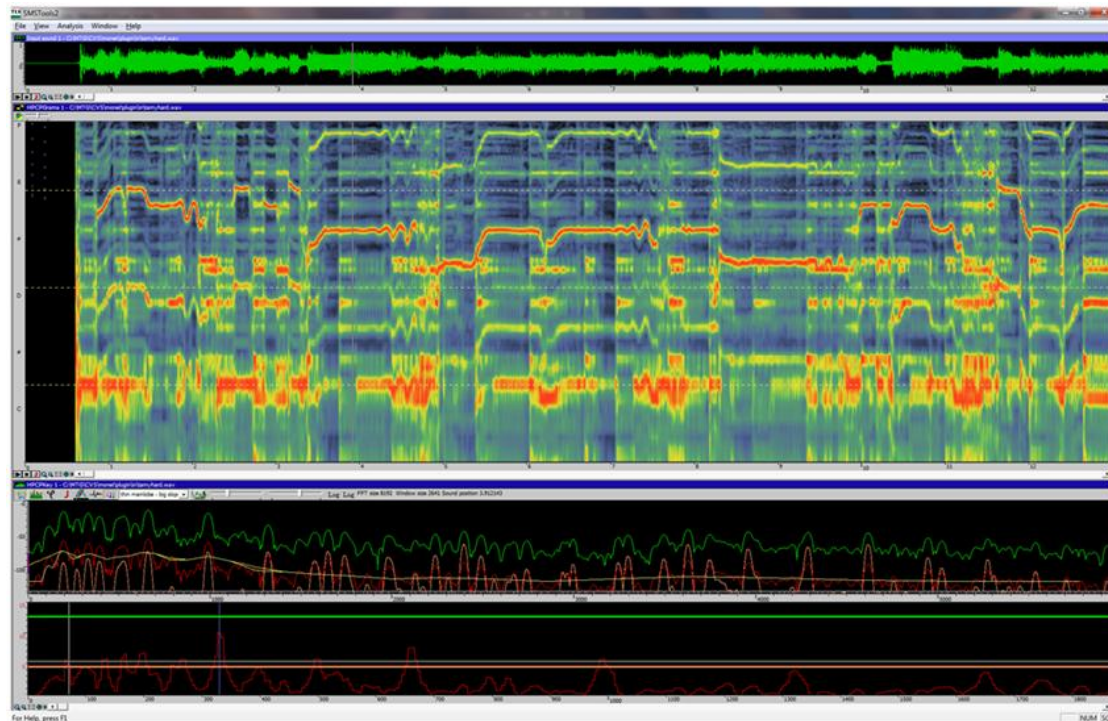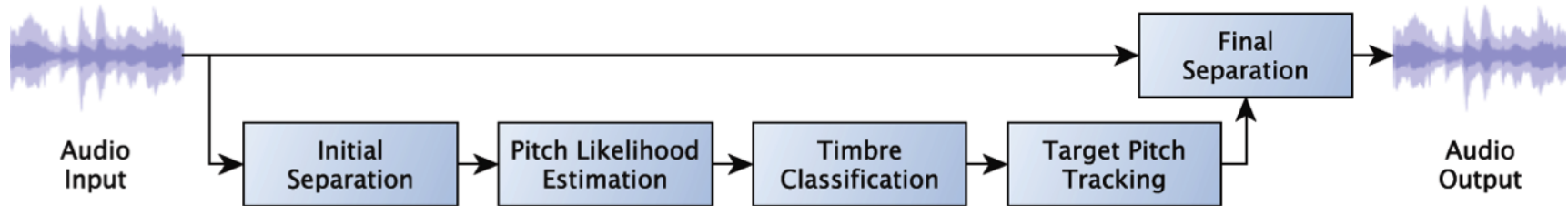
Audio signal processing
Voice transformations

Audio signal processing
Sound source separation

Sound and music description

Audio features


```
metadata:
    version:
        essentia: "1.2.2"

pitch_confidence:
    mean: 0.725613296032
    skew: -1.01243495941

spectral_flatness_db:
    mean: 0.189157426357

spectral_rms:
    mean: 0.0014992490178

spectral_strongpeak:
    mean: 0.628910064697
    var: 0.741435945034

mfcc:
    mean: [143.017318726, -38.4358482361, 7.8873262
    var: [122.917526245, 159.187026978]

onset_rate: [1.70000004768]

tristimulus:
    mean: [0.29845097661, 0.602976679802]
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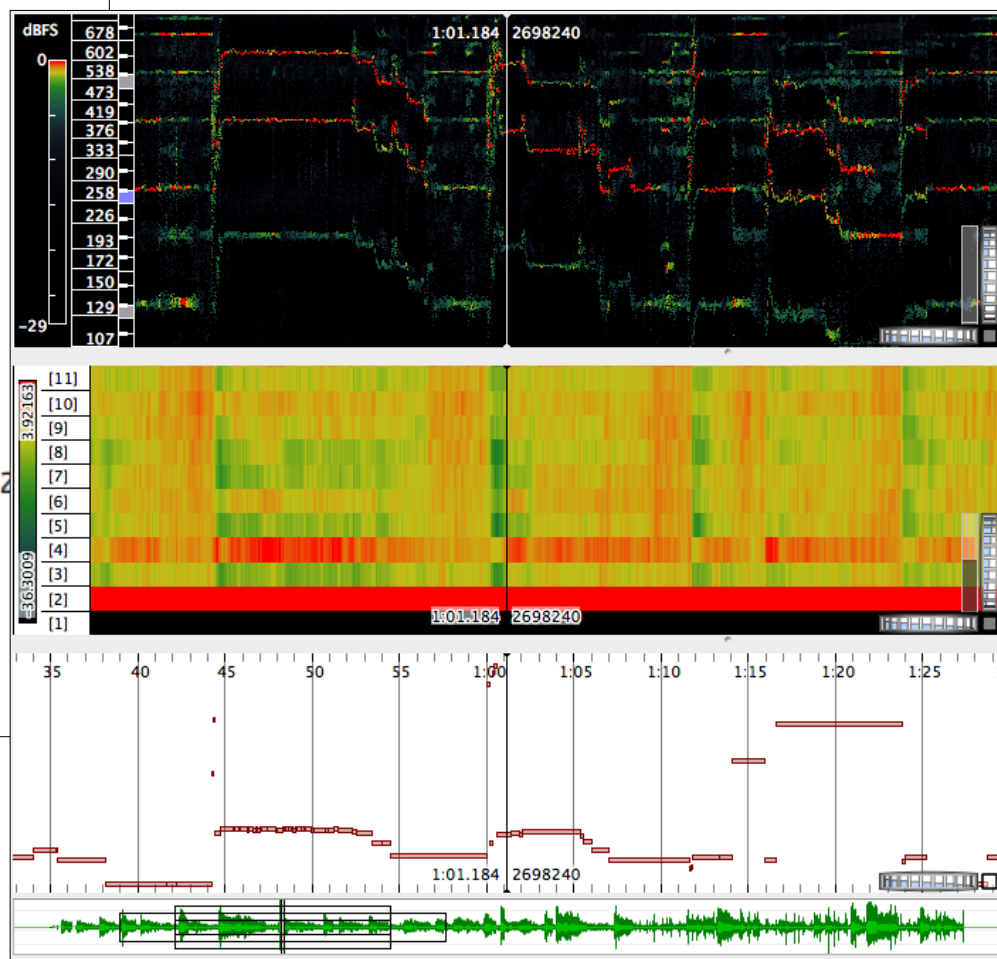
ΞSSENTIA

Sound and music description
Musical features
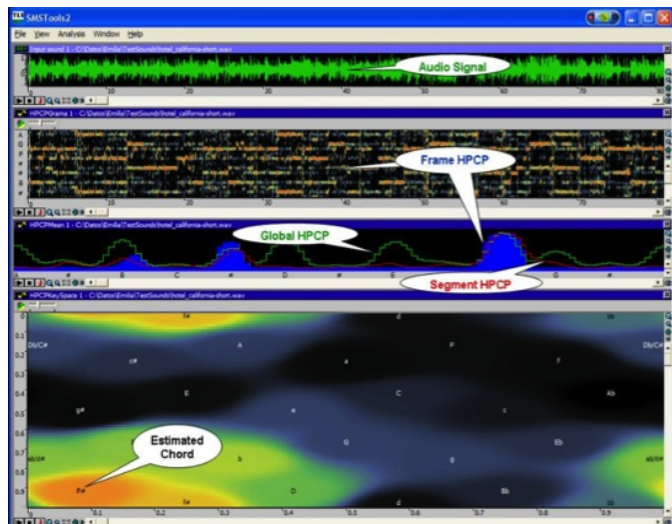
harmony
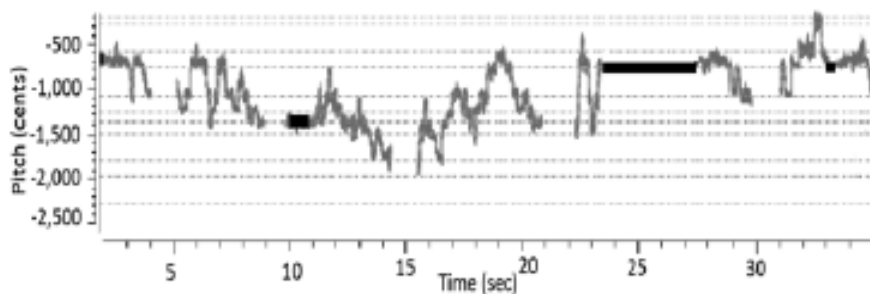
structure

melody
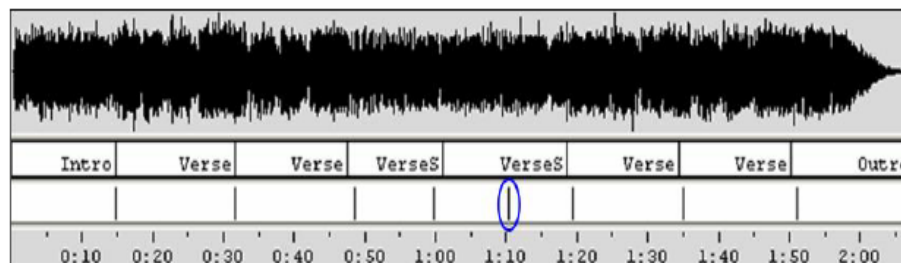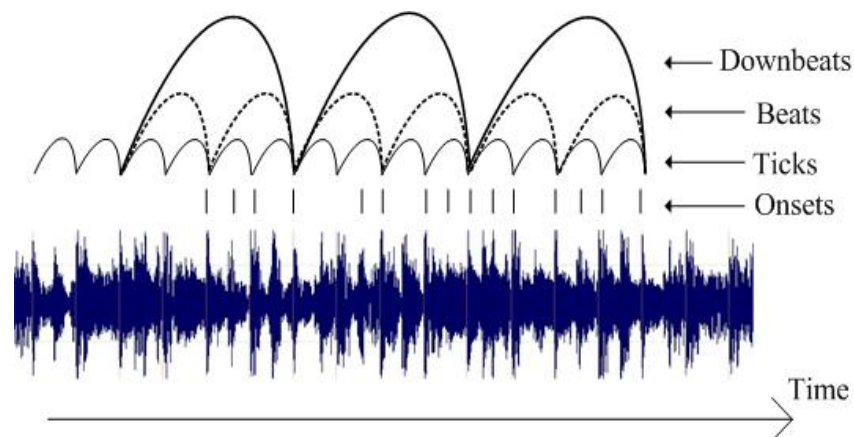
rhythm

Sound and music description
Music collections

Signal processing

Machine learning

Semantic analysis

Melodic patterns

Rhythmic patterns

Semantic relationships

compmusic

Musical and advance interfaces
Reactable
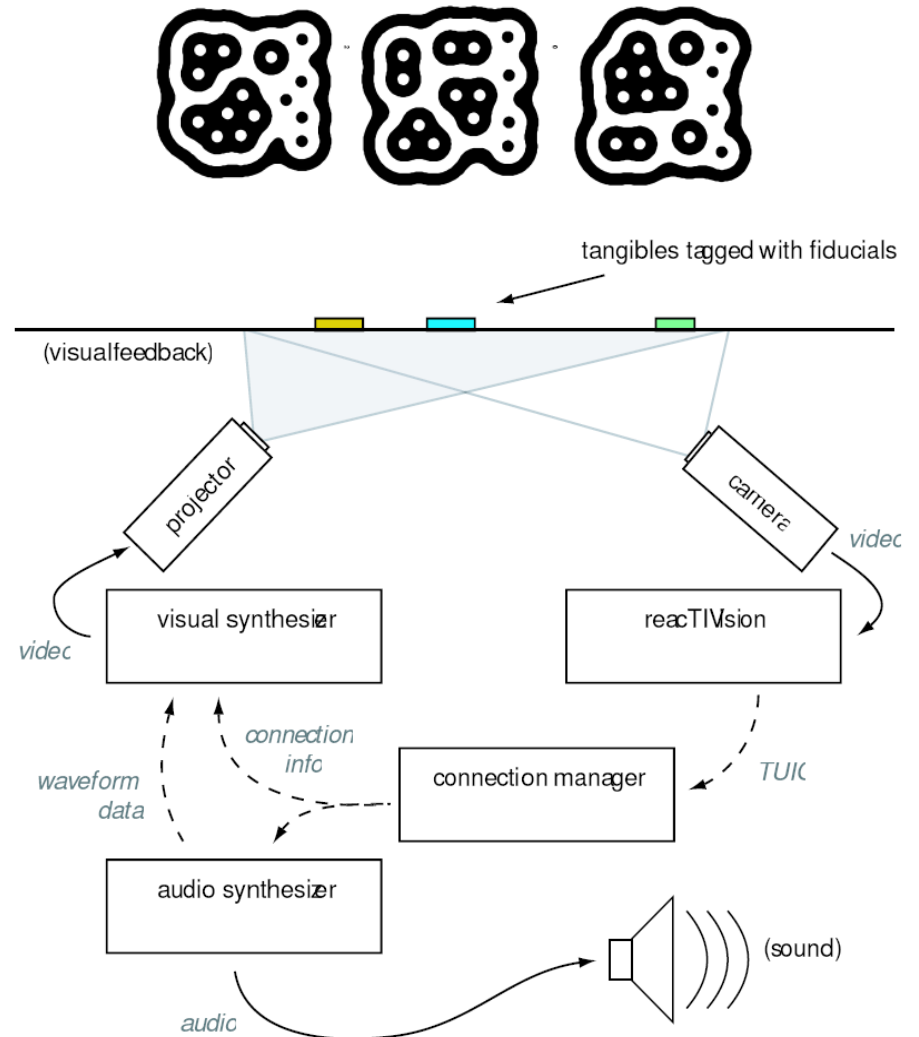
Semantic technologies for sound and music
Freesound

Semantic technologies for sound and music
AcousticBrainz

References and credits

- http://upf.edu, http://www.upf.edu/dtic/, http://mtg.upf.edu

- http://en.wikipedia.org/wiki/Vocaloid

- http://compmusic.upf.edu/

- http://en.wikipedia.org/wiki/Reactable

- http://acousticbrainz.org/

- Slides released under CC Attribution-Noncommercial-Share Alike license and available from https://github.com/MTG/sms-tools

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