The TRIOS dataset

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1 Introduction

The TRIOS dataset is a score-aligned multitrack recordings dataset which can be used for various research problems, such as Score-Informed Source Separation, Automatic Music Transcription, etc. This dataset consists of the separated tracks from five recordings of chamber music trio pieces, with their aligned MIDI scores.

2 Download

This dataset can be downloaded through the C4DM Research Data Repository at `http://c4dm.eecs.qmul.ac.uk/rdr/handle/123456789/27`.

All the data is distributed under the following Creative Commons license: Attribution-NonCommercial-ShareAlike 2.0 UK: England & Wales.

3 How to Cite

If you use the dataset in a work of your own that you wish to publish, please cite the following thesis:

- Joachim Fritsch. High Quality Musical Audio Source Separation. Master's thesis, UPMC / IRCAM / Telecom Paristech, 2012

4 Content

The five recordings are short extracts from the following pieces of music:
- a trio for clarinet, viola and piano by Wolfgang A. Mozart (K.498)
- a trio for violin, cello and piano by Franz Schubert (D.929, op.100)
- a trio for violin, French horn and piano by Johannes Brahms (op.40)
- a trio for trumpet, bassoon and piano by Mathieu Lussier (op.8)
- a trio version of "Take Five" by Paul Desmond, for alto sax, piano and drums

For each musical extract, the recorded `.wav` file and the manually-aligned `.mid` file of each instrument are provided, as well as the `.wav` file of the global mix (which is a simple addition of the separated signals). A synthesized version of the MIDI file of each instrument is also provided as a `_syn.wav` file, and finally each musical extract comes with its corresponding score in a PDF format.

5   Data Generation

The separated tracks and the aligned MIDI scores of this dataset are created and edited as following. First, the original MIDI scores are downloaded from the Kunst der Fuge database[1] or generated from the music edition software Sibelius, and then imported in the sequencer Ableton Live.

The different tracks are then recorded separately, whilst the musicians listen to the other synthesized parts synchronized with a metronome through headphones. The recordings are afterwards edited and mixed in Digital Performer, and the MIDI scores are eventually manually aligned one by one with Sonic Visualizer.

We provide a visual example of a non-aligned version of the MIDI score from a clarinet and an aligned version of the same extract (see Figures 1 and 2).

6   Example of application

This dataset is used to assess a score-informed source separation method, described in the Master's thesis cited above. The resulting data is available at the following address: `http://c4dm.eecs.qmul.ac.uk/rdr/handle/123456789/26`.
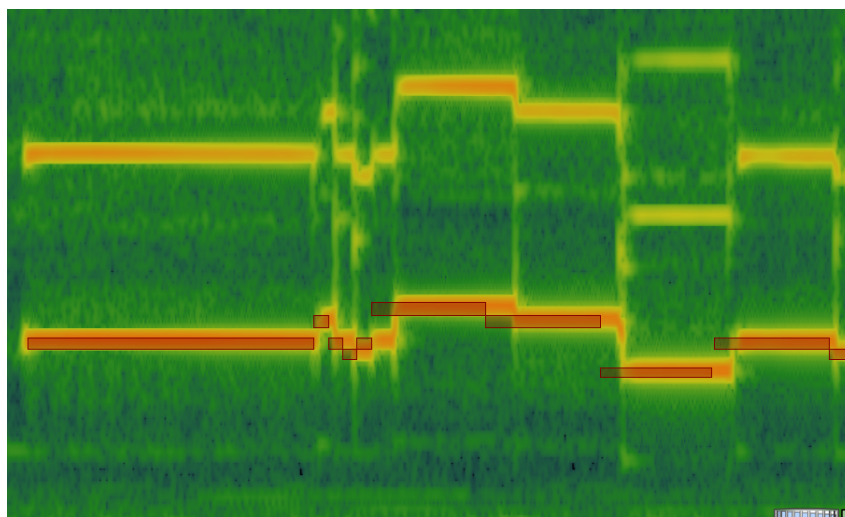

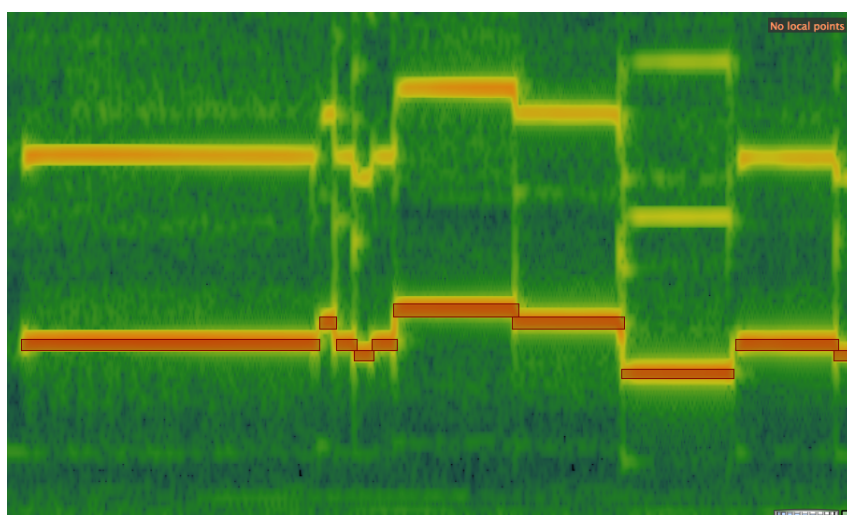Figure 1: Non-aligned MIDI score of a clarinet extract

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[1] `http://www.kunstderfuge.com/`

Figure 2: Aligned MIDI score of a clarinet extract