1. Research outline
- Analysis of mixes to further understanding of the process of mixing engineering
- Learn how semantic terms, used to describe sound or audio processing, correspond with objective features or parameters
- Can we aid a sound engineer to produce better results by mining data from poor examples?
- To what extent do variation in source content, engineers and listeners affect our findings?

2. Data collection
- Meta-study of prior work
  - Previous research on music production processes, usually studying one type of processing in isolation
- Open Multitrack Testbed
  - Platform for sharing and searching multitrack audio including mixes, production data and metadata
  - multitrack.eecs.qmul.ac.uk
- Semantic audio effects
  - Digital audio workstation plugins collecting audio features, parameter settings and user’s description of the achieved effect
  - Controlling of processor by typing desired effect, which sets parameters based on information in database and features extracted from the audio
- Mixing experiments: different mixes of the same songs

3. Perceptual evaluation
- Subjective evaluation of mixes allows to
  - distinguish good mixes from poor ones
  - determine which properties make a particular mix good or bad
- Development of MATLAB toolbox for perceptual evaluation of audio, with one comment box and one draggable marker per mix
  - Development of browser-based perceptual evaluation tool for easy deployment

4. Analysis
- Feature extraction from mixes and processed tracks
- Analysis of perceptual evaluation data (in isolation and against analysis of features)
- Analysis of free-form comments

5. Future work
- Further analysis of larger set of mixes, with more mixing engineers and subjects, from more diverse background
- Defining semantic terms and acceptable parameter and feature ranges, through analysis of mixes and free-form perceptual evaluation

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