1. MOTIVATION

- Music platforms such as Spotify, Google Play Music or Pandora make millions of songs accessible
- Social Networks and the Semantic Web describe users and items in an unprecedented granularity
  → New opportunities and challenges for Music Recommenders

Challenges for development
- Prototypes programmed from scratch, again and yet again!
- Immediate feedback available
- Manifold sources of information

Challenges for evaluations
- Thorough evalutions are repetitive, yet non-trivial, tasks
- Many aspects are inherently subjective, e.g. serendipity
  → can be only investigated in vivo (with real users)
- Legal issues: (1) user data is highly sensitive
  (2) content-based approaches require data

2. MUSE

MuSe (Music Sensing in a Social Context)
- Music Recommendation Management System (MRMS) for developing and evaluating music recommendation algorithms
- Takes care of all regular tasks required for in vivo evaluations
- Simple API enables support for arbitrary music recommenders
- Connectors to social networks & semantic web sources are added continuously
- Open sourced under Apache License 2.0:
  dbis.informatik.uni-freiburg.de/MuSe

An public instance of MuSe with a small user community is online:
  muse.informatik.uni-freiburg.de

Let’s stop reinventing the wheel and put the fun back in developing great new algorithms!

3. FEATURES

- Users provide profile information or social identities
- Administrative access gives control and insight
- Play and rate recommended songs from Spotify
- Conforms with state-of-the-art privacy standards
- Compose recommendation lists out of diverse algorithms
- Variety of baseline algorithms for comparison included

4. ARCHITECTURE

5. WEB-BASED USER INTERFACE

- Listen & rate recommended songs
- Compose recommendations
- Configure & manage evaluations
- Browse & analyze results

6. RECOMMENDATION TECHNIQUES

- Annual Charts
  Taste in music evolves between the age of 14 and 20 [11]
- Country Charts
  Inter-country view on songs
- City Charts
  Explore upcoming city trends
- Social Tags & Social Neighborhood
  Social Networks and Semantic Web as source of information

7. EMPIRICAL EVALUATION & ANALYSIS

- Case Study
  - 48 participants
  - 1567 rated song recommendations
  - Overall, 73% of all songs positively rated
- Social Tags & Social Neighborhood
  Social Networks and Semantic Web as source of information

8. SUMMARY

A Music Recommendation Management System
- MuSe simplifies development and evaluation of music recommendation algorithms
- Provides many tools for developing recommenders
- Takes care of typical tasks of in vivo evaluations
- Open sourced under Apache License 2.0

Future Work
- Increase flexibility of evaluations
- Further connectors for social networks
- New algorithms for music recommendation