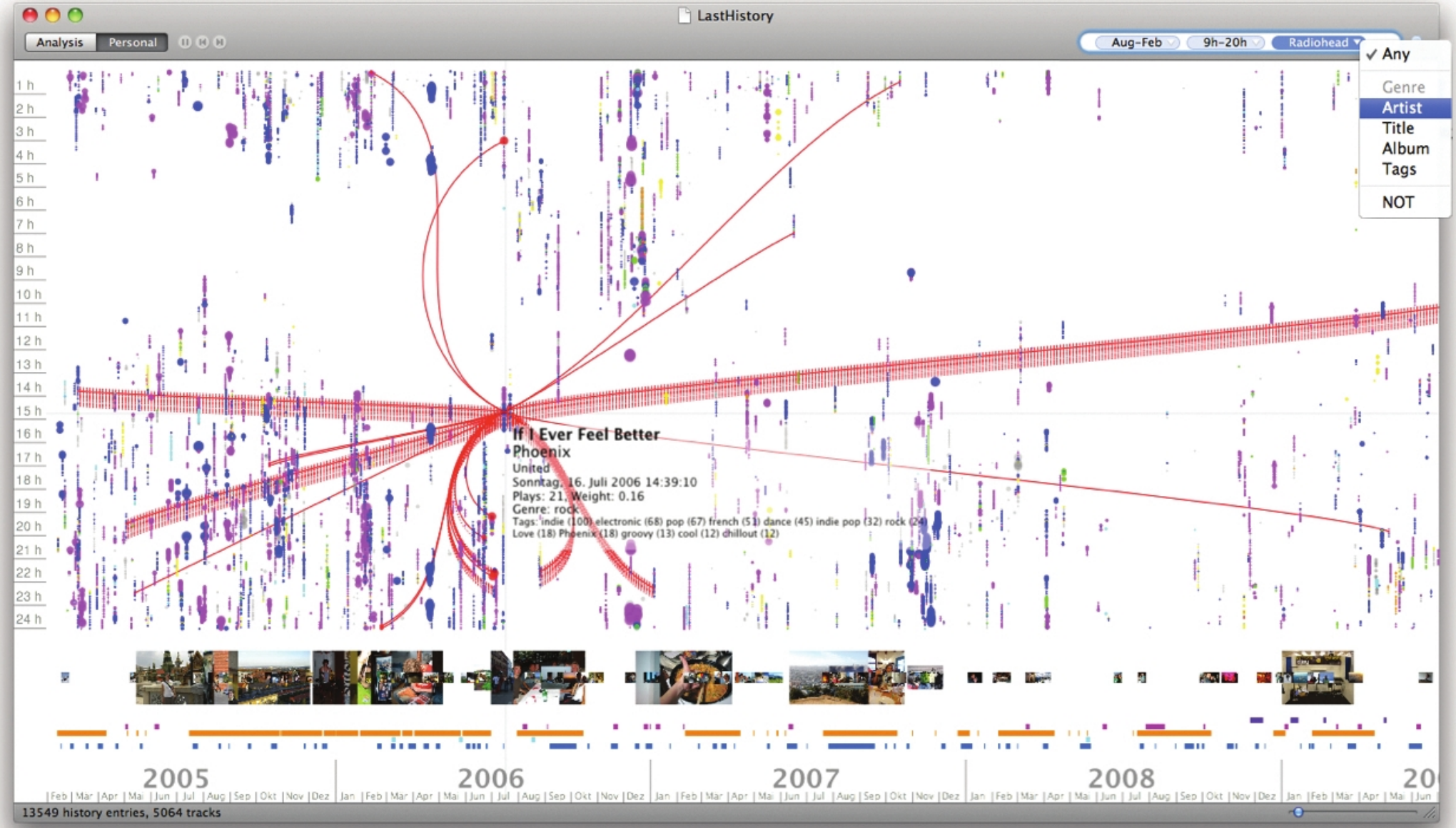
The Streams of Our Lives:
Visualizing Listening Histories in Context



What are music listening histories?

- Describes a chronological collection of consumed musical items by a single person
- A specific type of personal, lifelogging data
- Musical items: have to be identifiable (f.e. title, artist)
- Music does not have to be actively chosen by the user

Music Listening Histories – Characteristic abstractions

- Session:
  - Temporal abstraction
  - timespan when the user is listening to music (album, playlist etc.)
- Genre:
  - Content/Contextual abstraction
  - Hierarchical (sub-genres)
- Tag:
  - Attributes like mood (“calm”), tempo (“slow”) or context (“live”)
  - Non-hierarchical

What tools already exist for analyzing listening histories?

- Scrobbling Timeline (displays number of logged songs)
- Last.fm Explorer (multiple user comparison)
- LastGraph (graph view of listening history)

Last.fm – Main problems

- Gives an overview over a large amount of data, but doesn't represent *detailed* and *personal* information
- Doesn't combine the stored data with *contextual* data in order to do so
- Data gaps (noise and missing data)→ difficult to solve due to the nature of how listening histories are captured

LastHistory – Goals

- Visualization of personal data (*personal* music listening histories)
- Suitable for average people
- Extend webradio services like Last.fm, by including contextual information in form of calendar entries and photos of the user
- Open source → further implementation

LastHistory – User Groups

- Producers of listening histories (average, non-expert users)
- Researchers from psychology/sociology
- Analysts and Marketers

LastHistory – Main user tasks

- Analysis:
  - revealing underlying patterns (f.e. 'listening to music first thing in the morning')
- Reminiscing:
  - 'bringing the user back' to the time, when s/he was listening to certain music
  - Self-presentation

→ Therefore including contextual information

LastHistory – Two Modes

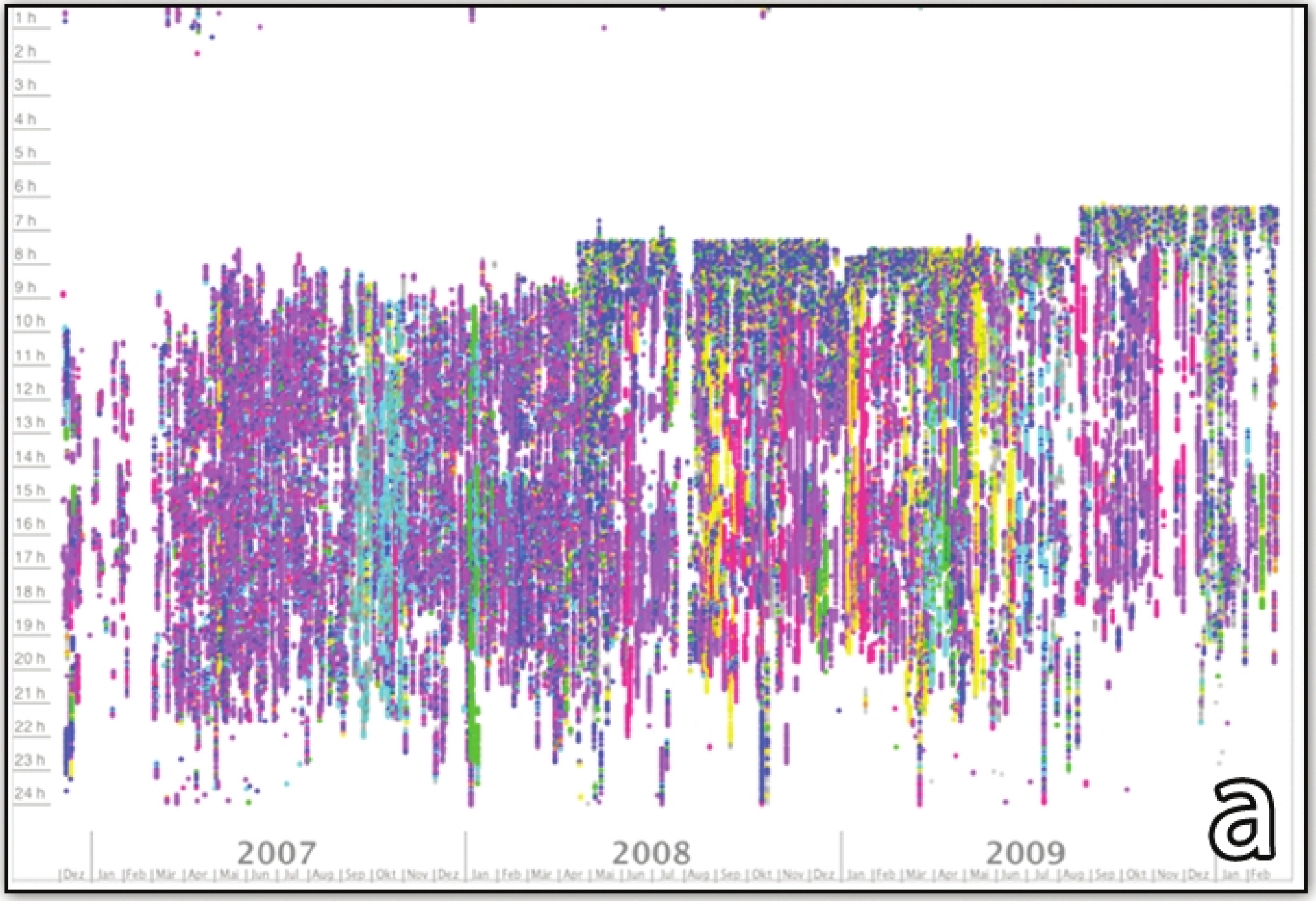
- Use Case 'Analysis' → General Mode
- Use Case 'Reminiscing' → Personal Mode

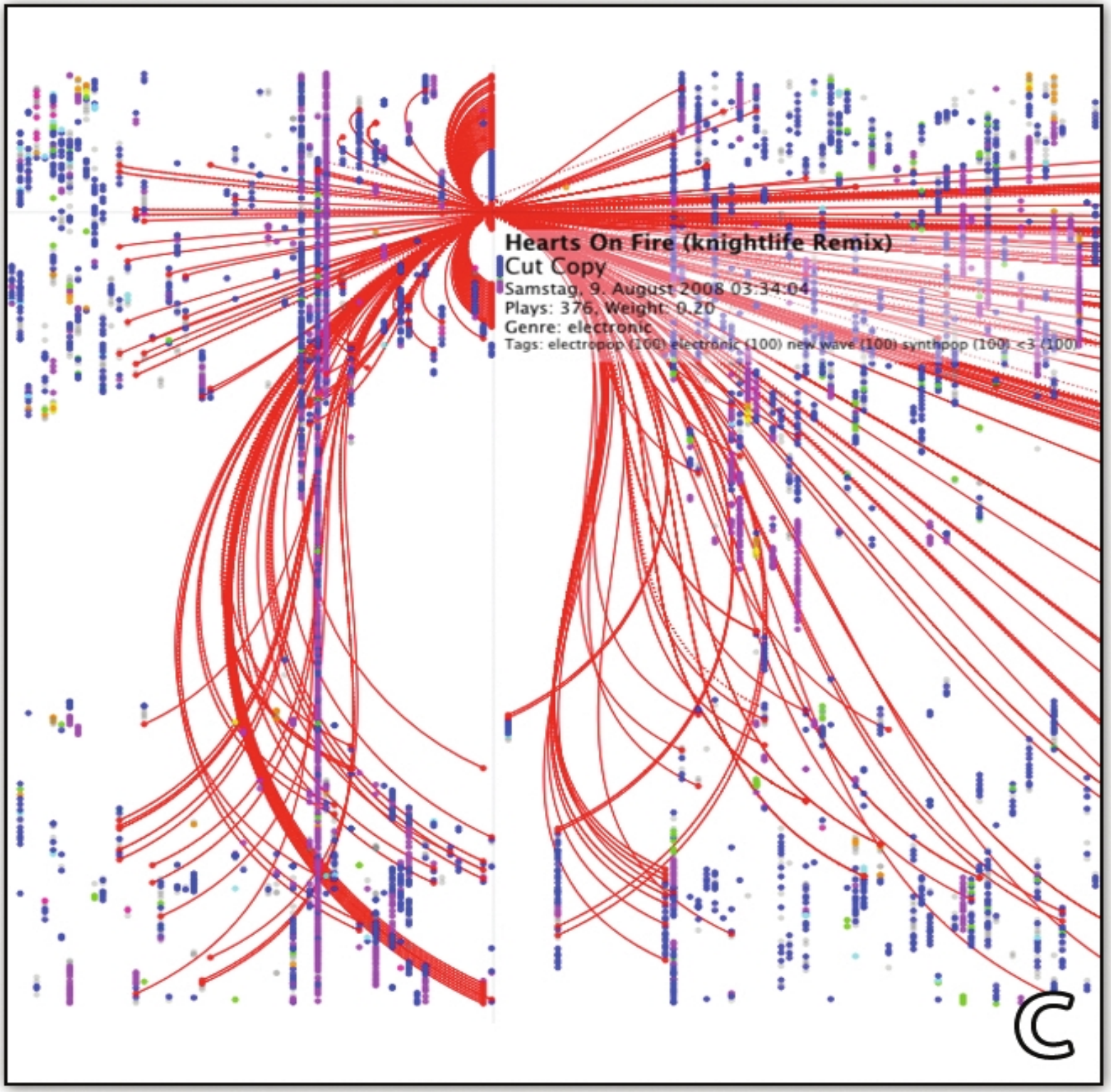
Why personal context?

- Helps to make sense of the pure listening history data
- Helps to trigger a persons episodic memory
- Personal and self-generated information works better than non-personal time stamps or news headlines

Data used and acquired

- Which data is used:
  - General:
    - Listening Histories (Last.fm)
  - Personal:
    - Photos (good memory triggers)
    - Calendar entries (>1day, f.e. holidays)
- Acquisition of personal data:
  - Automatically when logged in (from iPhotos and iCal)


1 h
2 h
3 h
4 h
5 h
6 h
7 h
8 h
9 h
10 h
11 h
12 h
13 h
14 h
15 h
16 h
17 h
18 h
19 h
20 h
21 h
22 h
23 h
24 h
2007
2008
2009
Dez Jan Feb Mär Apr Mai Jun Jul Aug Sep Okt Nov Dez
Jan Feb Mär Apr Mai Jun Jul Aug Sep Okt Nov Dez
Jan Feb Mär Apr Mai Jun Jul Aug Sep Okt Nov Dez Jan Feb
a


Hearts On Fire (knightlife Remix)
Cut Copy
Samstag, 9. August 2008 03:34:04
Plays: 376, Weight: 0.20
Genre: electronic
Tags: electropop (100) electronic (100) new wave (100) synthpop (100) <3 (100)

Trænafestivalen Norway

Dienstag, 7. Juli 2009 – Sonntag, 12. Juli 2009

215 history entries

100 photos

2009

ai | Jun | Jul | Aug | Sep | Okt | Nov

LastHistory beyond music

- Other media consumption histories (f.e. movies, TV shows, books)
- Emails, blog entries, status updates etc.

  → advantage of serving for analysis and as personal context at the same time

Pros and Cons of the paper

+ very detailed explanations
+ easy to read and understand
+ said a lot on a few pages
+ very plausible arguments for design choices
+ made its topic very interesting

- could have said a bit more about the psychological background (memory retrieval)
- could also have been a bit more specific about the critical view on data acquisition and privacy

Compared to the second paper

- Different music vis approach
- Different psychological fields (memory/emotion vs. orientation/motor coordination)
- Similar writing style → easy and understandable

References

- The Streams of Our Lives: Visualizing Listening Histories in Context, Dominikus Baur, Frederik Seiffert, Michael Sedlmair, and Sebastian Boring, IEEE TVCG (Proc. InfoVis 2010) 16(6):1119-1128, 2010.
- Rush: Repeated Recommendations on Mobile Devices, Baur, Boring, and Butz, International Conference on Intelligent User Interfaces (IUI 2010).

Thank you for your attention!

Questions?