1640

THE NATIONAL LIBRARY OF FINLAND

Visualising sound, annoting files and FRBRzing archive

Name Juha Korvenpää

Date 7.8.2012

Event THE ELECTRONIC RE-EVOLUTION – News Media in the Digital Age

THE NATIONAL LIBRARY OF FINLAND

Content

- Audio digitisation in Mikkeli
- ”Re-evolution”: combining some ideas
  - Visualising sound – more information about sound
  - Users: Crowdsourcing, annotating
  - Sound archives and “FRBRized” file hierarchy
- Libraries and digitised sound collections

Audio digitisation in Mikkeli

- The National Library's audio digitisation:
  - On demand: the records needed immediately for research are digitised in Helsinki.
  - Systematic digitisation: extensive bodies of material under threat, such as the legal deposit tapes.
- Centre for Preservation and Digitisation, Mikkeli
  - C-cassette mass digitisation
  - Automated processes and quality control

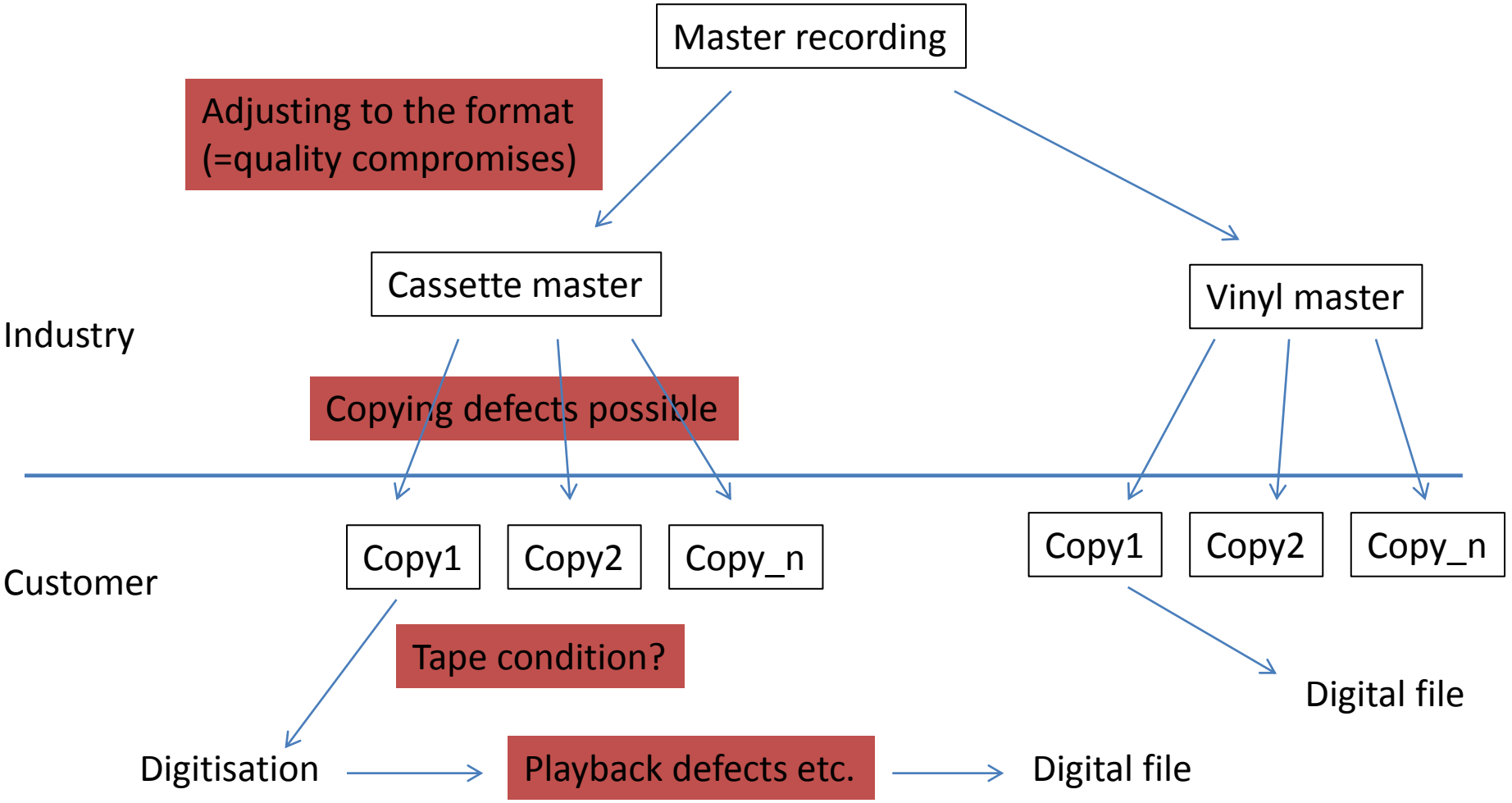
Digital audio files in NLF

Most of audio material are legal deposit copies, but library also owns master recordings and digitisations from master recordings

Audio source	Time	NLF collection
Master recording (usually audio tape)	From 1940's onwards	Master recordings given as donations, sound files from record companies etc.
Analog audio formats	Original publications from the beginning of 1900's onwards	Large part of the collections are these: c-cassettes, vinyl records, tapes…
Digital audio formats	Original publications beginning from 1980's	CD now dominating, but declining in the future
"Born digital"	From 1990's onwards	Future: library will receive digital files

Audio production hierarchy

Master recording and duplicates from it



THE NATIONAL LIBRARY OF FINLAND

Redundancy in sound archives

- Digitising unique vs. commercially released sound carriers
  - Unique: only one sound carrier, recorded in a particular event
  - Commercial: one track or song can appear on several album or release
  - Sound archives may contain multiple version of same performances/publications
  - Digitisations from different audio formats (c-cassette, vinyl record, CD)

Visualising sound

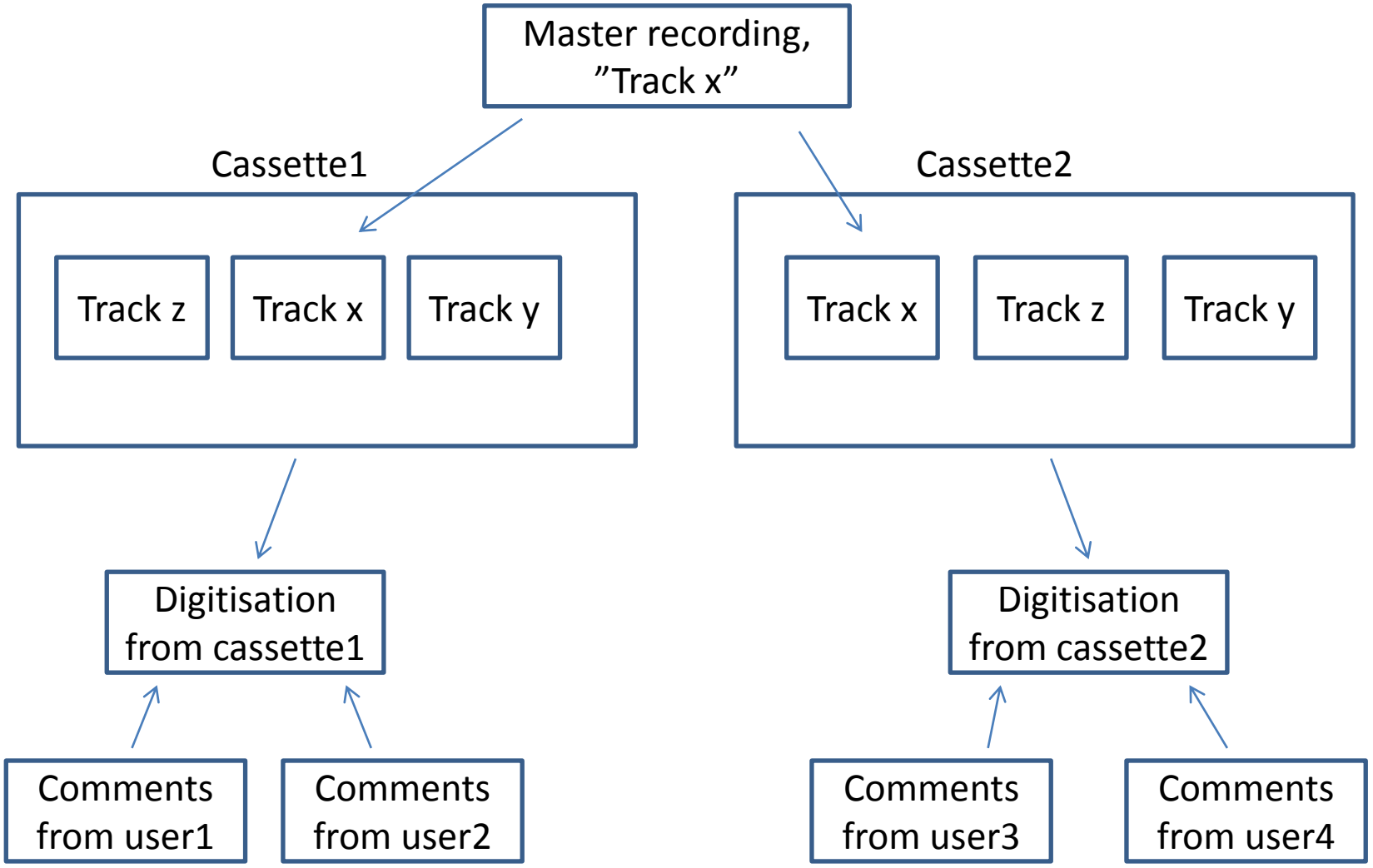
- Representing physical sound: waveform, spectrograms etc.
- Sound waveform representation is commonplace in modern audio editing software
  - One can ”see” sound, makes it more concrete, tangible
- Waveform contains much information about sound

THE NATIONAL LIBRARY OF FINLAND

Case: Soundcloud

- Example of an online audio distribution website
- Allows users to upload sound files to the service
- Good:
  - Free upload and use (basic operations)
  - Visual representation of sound
  - Sound files can be commented by other users
    - Comments attached into a timeline (certain point of sound file)
- To be improved:
  - Only mono representation of sound
    - Most sound files are stereo, both channels needed
  - Comments are attached on one particular file only

What sound file are users commenting?



THE NATIONAL LIBRARY OF FINLAND

FRBR

- How to organise different audio file versions in an archive?
  - Analogous to FRBR Group 1 entities?
- FRBR group 1 entities:
  1. Work (a distinct intellectual or artistic creation)
  2. Expression (the intellectual or artistic realization of a work)
  3. Manifestation (the physical embodiment of an expression of a work)
  4. Item (a single exemplar of a manifestation)

THE NATIONAL LIBRARY OF FINLAND

Utilising FRBR in a sound archive

- Implementing FRBR-model has been studied in Variations 2 and 3 projects:
  - http://www.dlib.indiana.edu/projects/variations3/
  - According to these projects, FRBR is suitable to some extent
  - More relations needed between entities
  - Variations3: FRBR “Item” = a sound file

Combining FRBR and sound archive

FRBR entities	Music	Audio production	Digitisation
1. Work	Composition		
2. Expression	Arrangement/ Performance/ Recording	Master recording/ Different mixes => ”remixes”	Wav-file from the master recording
?		Copies for reproduction: tape duplication, vinyl pressing etc.	
3. Manifestation	Audio publication	Vinyl disc C-cassette CD...	
4. Item	Copy of a recording	One physical sound carrier in a particular sound format	Wav-file originating from different formats

THE NATIONAL LIBRARY OF FINLAND

A wish list for a future (audio) library system

- Users can see sound files as visual representations
- Users can annotate files
  - Helps maintaining sound archive
  - Inform other users
  - Users can more easily find best quality digitisations
- Social metadata refers to correct entities in a database
- Sound files can be organised hierarchically
  - dependency from the master recording