



Koninklijke Bibliotheek van België
Bibliothèque royale de Belgique



DIGITIZING SOUND ARCHIVES AT ROYAL LIBRARY OF BELGIUM

*CHALLENGES AND DIFFICULTIES ENCOUNTERED WITHIN A
HUGE DIGITIZATION PROJECT*

IAML ANNUAL CONFERENCE, RIGA, 19.06.2017

FRÉDÉRIC LEMMERS,
HEAD OF DIGITIZATION, KBR



Koninklijke Bibliotheek van België
Bibliothèque royale de Belgique



International Association
of Music Libraries, Archives
and Documentation Centres

A HERITAGE IN ITS OWN

- **WAX CYLINDERS** (1893-1912 ; 1929)
 - Material: wax or celluloid
 - Format : L : 9.5-11cm ; Ø : 5.5cm
 - Recording technique : acoustic by vertical etching
 - Speed: 160rpm
 - Duration: 2-3 minutes
- **BLACK SHELLAC DISCS** (1890-1950)
 - Material: shellac
 - Format : Ø : 17-25-30-35cm
 - Recording technique :
 - Acoustic by vertical or lateral etching (<1925)
 - Electric by lateral etching (>1925)
 - Speed: 78rpm (60-120rpm)
 - Duration: 3-5 min by side



- **LONG PLAYING MICROGROOVE** (1948-)
 - Material : vinyl
 - Format : Ø : 17-25-30cm
 - Recording technique: electric by lateral etching
 - Speed: 33rpm or 45rpm
 - Duration: 20-30 min par face
- **MAGNETIC TAPE** (1950-), **MINI TAPE** (1963-)
- **COMPACT DISC** (1982-), **MINI-DISC** (1992-2011), ETC.



Koninklijke Bibliotheek van België
Bibliothèque royale de Belgique



International Association
of Music Libraries, Archives
and Documentation Centres

READING SOUND RECORDINGS

ACOUSTIC (<1925)

- PHONOGRAPH

Phonographe

- Cone d'amplification
- Tete de lecture
- Cylindre
- Dispositif de rotation du cylindre(moteur par la suite)



ANALOGUE (1950-1982)

- RECORD PLAYER
- TAPE RECORDER / PLAYER
- HIFI STEREO



Koninklijke Bibliotheek van België
Bibliothèque royale de Belgique



International Association
of Music Libraries, Archives
and Documentation Centres

READING SOUND RECORDINGS

DIGITAL AUDIO (1982-)

- DIGITAL PLAYER

- CD
- DVD
- MD
- DAD



+ HI-FI STEREO



Koninklijke Bibliotheek van België
Bibliothèque royale de Belgique



International Association
of Music Libraries, Archives
and Documentation Centres

DIGITAL REVOLUTION (2000-)

- SOUND EXTRACTION : TOWARDS AUDIO FILES



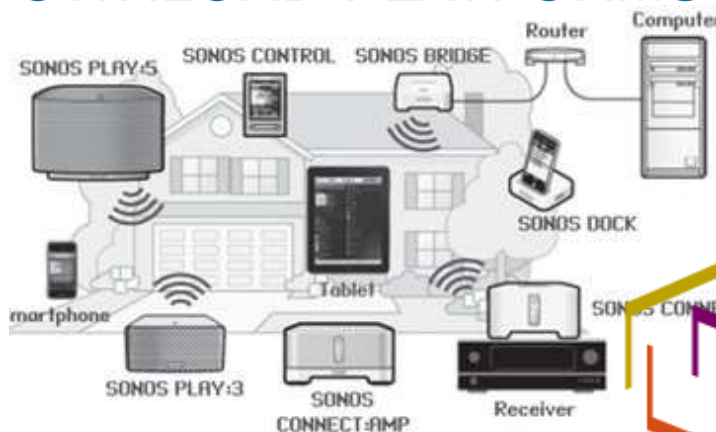
- PLAYING WITH LAPTOPS & MOBILE DEVICES



- ONLINE MUSIC & DOWNLOAD PLATFORMS



- WIRELESS SOUND SYSTEMS



Koninklijke Bibliotheek van België
Bibliothèque royale de Belgique



International Association
of Music Libraries, Archives
and Documentation Centres

100.000 RECORDINGS AT KBR

- COLLECTIONS FROM PRIVATE COLLECTORS (BECKO, DANVAL, DAILLY...)
 - The product of a collector's life
 - A mirror of its author's musical interests and tastes
 - Dedicated to a special musical genre nor a specific period of the sound recording history
- SOUND RECORDINGS SUBCOLLECTIONS AS PART OF PRIVATE ARCHIVES (COMPOSERS, ARTISTS)
 - Related to other kinds of musical sources : autographs, correspondence, etc.
- SOUND RECORDINGS, AS PART OF A PUBLICATION (PRINTED BOOKS, PERIODICALS)
 - Audio-tapes, CD, DVD...



100.000 RECORDINGS AT KBR

- Official collection (20.000 – 33rpm ; CD)
 - Belgian Legal Deposit excludes phonograms
 - Purchasing policy of the Belgian phonographic production and recordings of Belgian music and artists around the world (1965-)
- 20 special music collections (80.000 sound recordings)
 - Donations, legacies & deposits (King Baudouin Foundation)
 - 65 cylinders et 30.000 78rpm discs
 - 60.000 discs 33 & 45rpm
 - +1.000 magnetic tapes
 - CD...



WHICH TARGET AUDIENCES ?

- SCIENTIFIC RESEARCH IN THE HUMANITIES

- Ethnomusicology
- Study of the musical life since the end of the 19th century (genres, repertoires, artistic influence, evolution of musical practices...
 - Need to access to a wide range of sources
 - Need for scientific credibility of online digitized sources >< risk of false artistic / historical

→ Focus on the oldest and rarest sources (before 1950)

- DISCOVERY LISTENING IN A LEISURE SETTING

- Importance of listening comfort (sound signal quality)
- Easy access to sources (online download platforms)
- Reuse of these sources, shares, social networks, etc.

→ Focus on the post-1950 repertoire



CRITERIA FOR SELECTION / JUSTIFICATION

- FRAGILITY OF ORIGINAL SUPPORTS (PRESERVATION) → NO LISTENING TO ORIGINALS
- MAKE AVAILABLE INACCESSIBLE SOURCES
- FOCUS ON HERITAGE IN RELATION TO THE HISTORY OF OUR REGIONS → MISSIONS OF THE INSTITUTION
- COPYRIGHT AND NEIGHBORING RIGHTS PRIORITY TO OUT-OF-COPYRIGHT MATERIAL (PUBLIC DOMAIN) → NO AVAILABLE BUDGET FOR DISSEMINATION RIGHTS CLEARANCE
→ TO BE PROVISIONED FOR THE DIGITIZATION OF 33 & 45RPM
- POSSIBILITY OF GENERATING BASIC METADATA DURING THE PROJECT → PHONOGRAPHIC EDITION
→ complexity of sources fixed on magnetic tapes



THE « DIGIT-03 » PROGRAMME LOT 8 (2016-2020)

- 2 collections of 78rpm
 - Collections **BECKO** (opera) et **DANVAL** (jazz)
 - Perhaps : all sub-collections of 78rpm
- Duration: 54 months (→2020)
- Quantity : 4.000 hours ; 60.000 sides (30.000 discs 30cm)
- Staff:
 - 4 FTE at DIGIT department + support from Music department
 - Preparation of the lots, scan of discs centers
 - Coordination of monthly deliveries to the subcontractor
 - Metadata creation
 - Quality Control, Storage & Online publication
- Subcontractor for technical operations :
 - MEMNON Archiving Systems

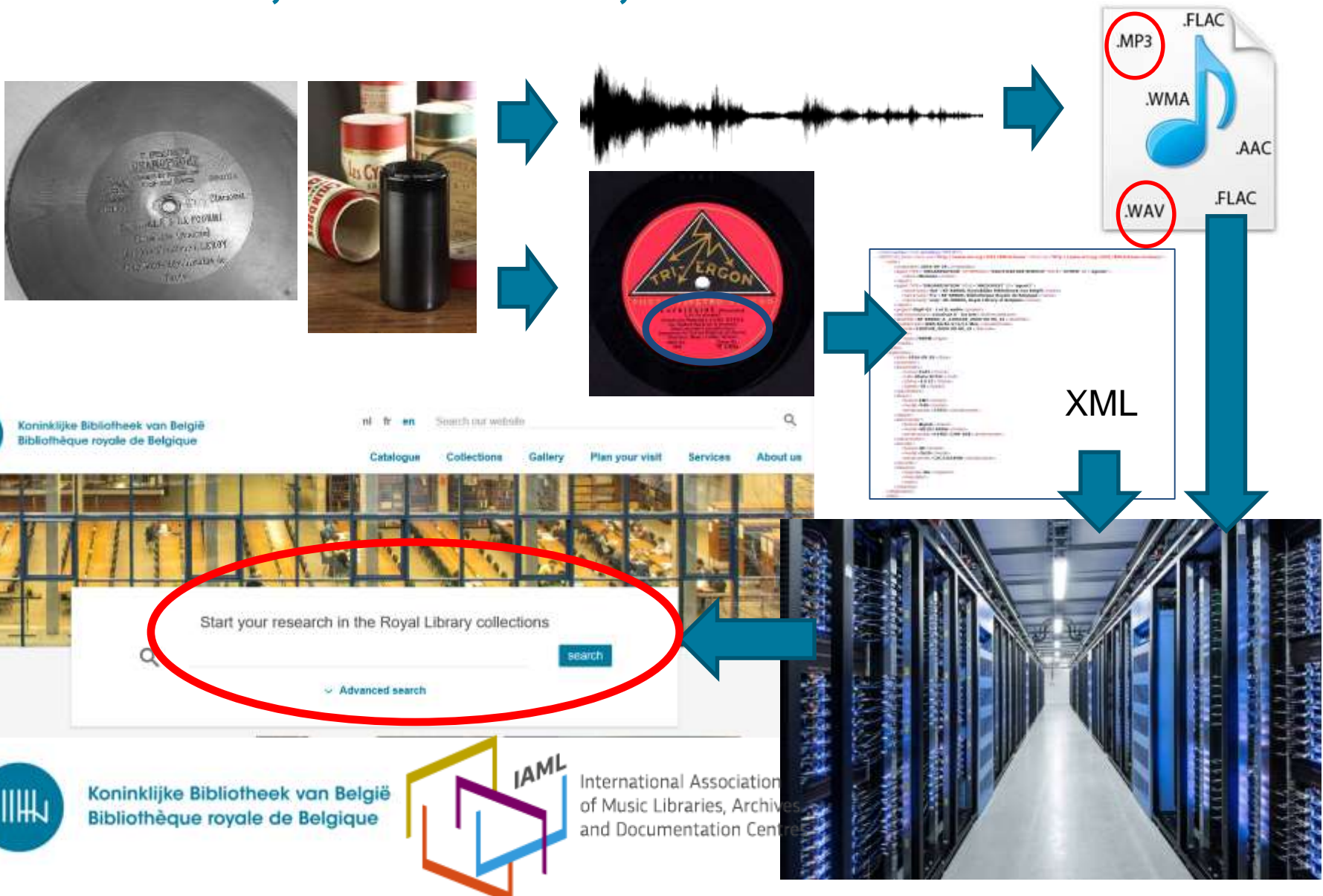


SCAN, STORE, DISSEMINATE

- DEMATERIALIZATION OF THE MUSICAL RECORDING
- STORAGE & LONG TERM PRESERVATION OF FILES & METADATA
- VALORIZATION OF THE DIGITIZED COLLECTIONS
- ULTIMATE READING OF THE ORIGINAL
- ENTERING METADATA (DC)
- CREATING A MASTER FILE (WAVE) AND BROADCAST FILES (MP3)
- SOUND RESTORATION (?)
- IT MANAGEMENT
- ONLINE PUBLICATION : IN SITU/EX SITU
- ONLINE COMMERCIAL OFFER ?
- PUBLICATION OF ANTHOLOGIES (CD's)
- RE-USING THE COLLECTIONS



SCAN, STORE, DISSEMINATE



PROBLEMATICS

- IMPORTANCE OF ULTIMATE READING OF PHYSICAL MEDIA

- 3 options :

- Recording of the sound of a phonogram played on a phonograph
 - **Analogue reading**
 - Optical reading

- Choice of the most appropriate reading needle
 - Issue of reading speeds
 - Impact of amplification curves

→ Implications on the length of the tracks, the timbre of instruments and voices, the color of the interpretation ...

→ DIFFICULTIES IN PROPERLY DOCUMENTING THE HISTORICAL CONDITIONS OF SOUND RECORDING



PROBLEMATICS

- TOTAL OR PARTIAL SUPPRESSION OF PARASITIC NOISE
 - Types of noise
 - < Recording conditions on the time
 - < Degree of wear of the digitized phonogram
 - < Technical conditions of the digitization
 - Sound Restoration Required
 - Respect of the material history of the recorded work and that of the medium used
- PRODUCTION OF QUALITATIVE METADATA
 - Catalog sheet: composer, librettist, performers, record label, commercial reference, matrix number, date



EXAMPLES ONLINE

WWW.KBR.BE



Koninklijke Bibliotheek van België
Bibliothèque royale de Belgique



International Association
of Music Libraries, Archives
and Documentation Centres

THANK YOU FOR YOUR ATTENTION

FREDERIC.LEMMERS@KBR.BE



Koninklijke Bibliotheek van België
Bibliothèque royale de Belgique



International Association
of Music Libraries, Archives
and Documentation Centres