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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



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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.



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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



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READING SOUND RECORDINGS

DIGITAL AUDIO (1982-)

- DIGITAL PLAYER

- CD
- DVD
- MD
- DAD



+ HI-FI STEREO



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DIGITAL REVOLUTION (2000-)

- SOUND EXTRACTION : TOWARDS AUDIO FILES



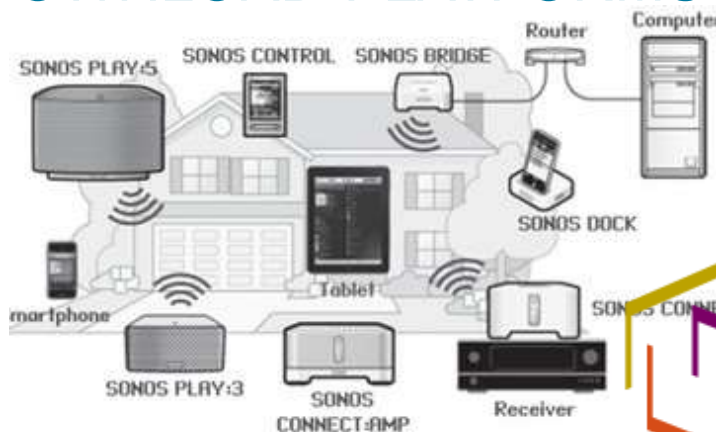
- PLAYING WITH LAPTOPS & MOBILE DEVICES



- ONLINE MUSIC & DOWNLOAD PLATFORMS



- WIRELESS SOUND SYSTEMS



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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

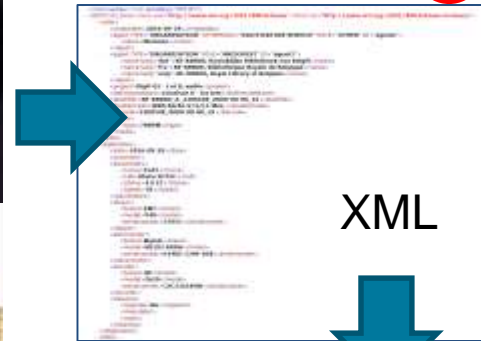
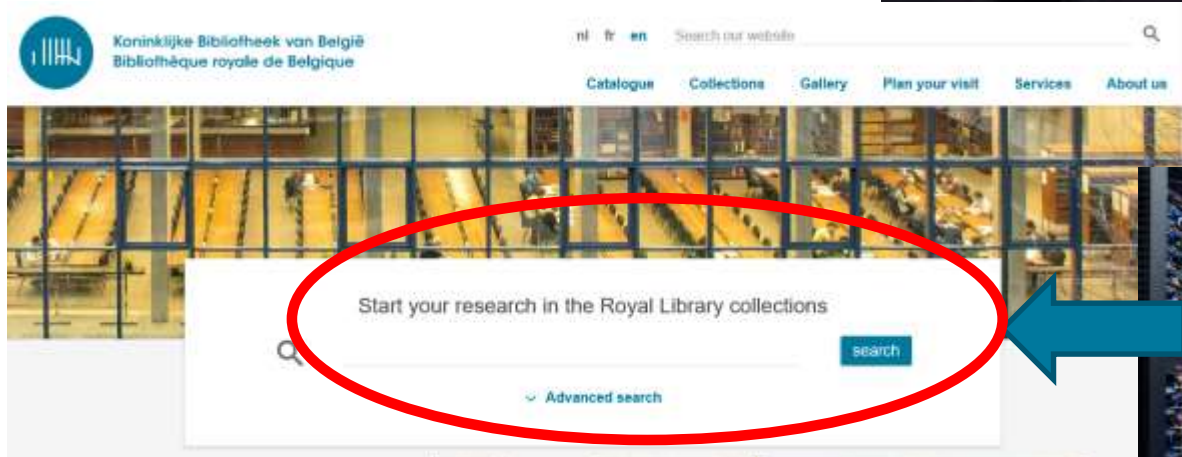
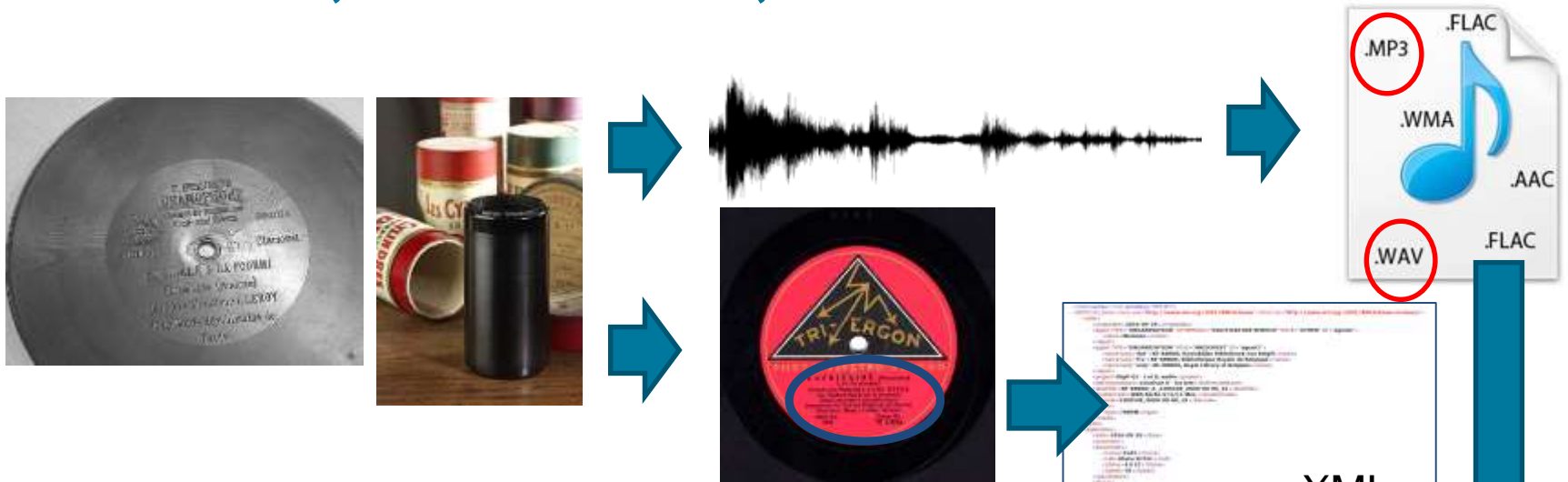


SCAN, STORE, DISSEMINATE

- 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



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THANK YOU FOR YOUR ATTENTION

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