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Hidden Collections of
European Cultural and Linguistic Diversity:
Problems, Actions, Strategies

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Audiovisual records: Documents of *modernity*

- objective records of optical and acoustic phenomena
- media to disseminate music and performing arts – basis for one of the worlds greatest industrial markets
- most prominent sources for the history of the past 100 years



Audiovisual records: indispensable sources for scholarly research

Ethnomusicology, dialectology and ethnolinguistics, anthropology, oral history, folklore.....

Scientific interest promoted sound recording and cinematographic technology well before any entertainment industry

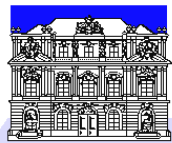
Academic circles founded the first sound archives from 1899 onwards: Vienna, Paris, Berlin, St Petersburg

From 1950 audio collections mushroomed in the realm of research and cultural institutions, followed by video documents from the 1980s onward



Audiovisual records – prominent sources of cultural and linguistic diversity

Without research and cultural collections, representation of Europe's cultural and linguistic diversity would be incomplete



Total holdings world wide estimated to be:

100 million hours audio (?*)

100 million hours video (?*)

Most held by radio, television and big national archives

Latest studies suggest that ~one third of total amount is held outside audiovisual archives proper by fairly small and hidden collections

**)Critical review expected 2007 as a result of project TAPE*



Audiovisual materials - endangered by

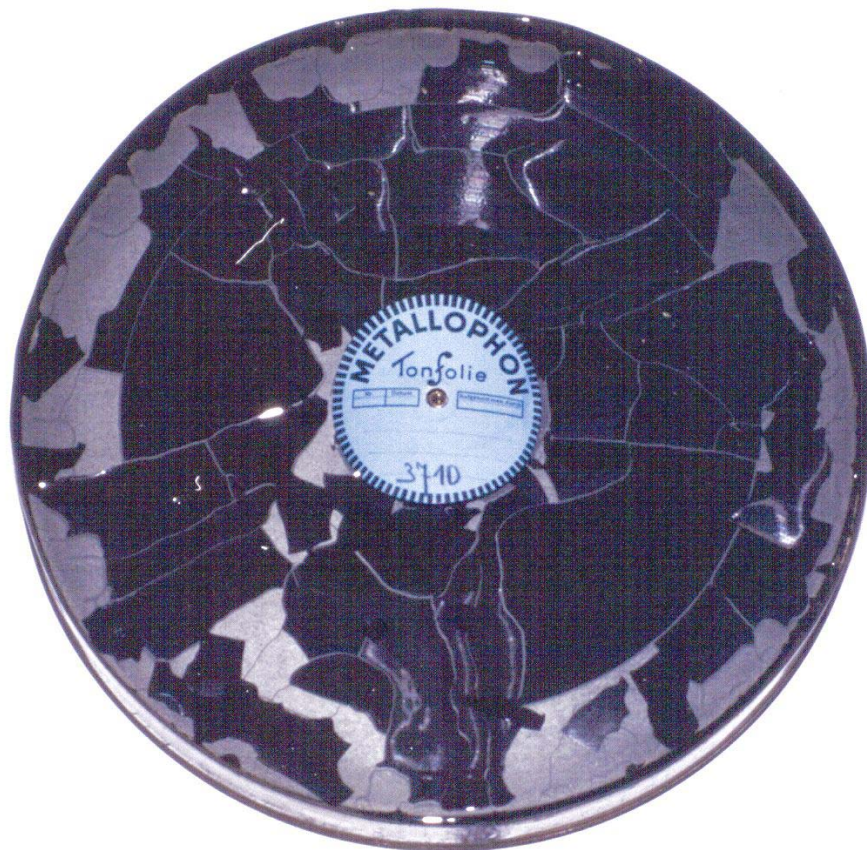
- carrier deterioration
- obsolescence of replay equipment



instantaneous disc 1990



2001





Magnetic tape - audio and video

most endangered:

- acetate tape historical audio
- pigment binder degradation post 1975 audio and video
- MP / ME tape R-Dat, Video/Hi8, DV



Ultimate state of pigment binder degradation





Compact Discs - Digital Versatile Discs

replicated CDs + DVDs fairly stable ?

recordable CDs + DVDs highly endangered

DVDs and blue laser discs: higher data density - lower data security



Format obsolescence and availability of equipment audio

format	obsolete		equipment
	now	soon	
cylinders	x		specialist only
coarse groove discs	x		specialist only
micro groove discs (vinyls)	x		fading out
quarter inch tape	x		fading out
micro cassettes	x		fading out
compact cassette		?	?
R-Dat	x		fading out
MiniDisc		?	?



Format obsolescence and availability of equipment video professional

format	obsolete		equipment
	now	soon	
2" quadruplex	x		specialist only
1"	x		specialist only
Umatic	x		fading out
M II	x		specialist only
Betacam SP	x		?
D 1	x		fading out
D 2	x		fading out
D 3	x		fading out
D 5	x		fading out
DigiBeta		x	?
Professional MPEG formats		?	?



Format obsolescence and availability of equipment video home

format	obsolete		equipment
	now	soon	
VCR	x		specialist only
Video 2000	x		specialist only
Betamax	x		specialist only
VHS		?	?
S-VHS		?	?
Video8	x		?
Video Hi8	x		?
Digital 8		?	?
DV		?	?



**Traditional paradigm of preserving documents:
preserve the **original****

Around 1990 shift of preservation paradigm:

Long term preservation of

- deteriorating original documents
- machines of all formats and their spare parts

is **hopeless!**

Audio (and video) preservation must be based on
subsequent digital (=lossless) copying of **contents**



**For audio and video digitisation has an
indispensable additional dimension:
*PRESERVATION***



Viable solution: Digital Mass Storage Systems (DMSSs) – robotic storage systems

- self-checking
- self-regenerating
- self-migrating

DMSS prerequisite for remote access to audiovisual collections

Radio Archives introduced DMSSs since 1992

National and Research Archives followed

Small scale manual solutions viable since ~2000



Time window for successful transfer of originals into digital repositories estimated to be 15-20 years

- Audiovisual archives proper likely to solve their preservation problems
- Survival of collections outside proper custody highly endangered because...



...lack of awareness:

Shelf storage of tape and discs has worked to some extent over the past 50 years – why bother?



...signal extraction from analogue carriers and digitisation is demanding

- technical expertise
- modern equipment
- time consuming – factory transfer developed for radio and television holdings are hardly applicable to generally in-homogenous small collections
- many transfer projects have suffered from insufficient quality (consumer equipment, low digital resolutions, etc.)



...professional digital preservation in need of ongoing logistical and financial input

- present costs ~5-8€/GB/year
- manual digital storage solutions labour intensive and limited to low TB range
- costs must be reduced in the short term
- ambitious target: 1€/GB/year

Many earlier digitisation projects have meanwhile become endangered themselves as recordable optical discs have been used as sole digital target media without sufficient quality control



Project TAPE – an EU-funded project within Culture 2000

Spotting collections outside archival custody

Awareness raising

Training on national and European level

Cooperative models vs mistrust



Commission has concentrated on funding research to develop access tools

Building digital corpora was left to member states

Discrepancy between access tools and available materials – critical masses still missing

Massive **infrastructural** support from the commission needed, specifically to safeguard material of acceding states, candidates and potential candidates



Europe spends high fraction of its budget for
infrastructure – agriculture

**Why not invest adequately into the infrastructure of
Europe's greatest treasures – cultural heritage**



Epilogue:

Council conclusion 14466/06, 13-14 November 2006

*Digitisation and online accessibility of cultural material,
and digital preservation*

Hopefully a viable instrument to establish necessary measures within the given short time frame of 15-20 years, specifically to establish massive infrastructure support for acceding states, candidates and potential candidates



Thank you!

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