TAPE
Training for Audiovisual Preservation in Europe

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Audiovisual research collections and their preservation

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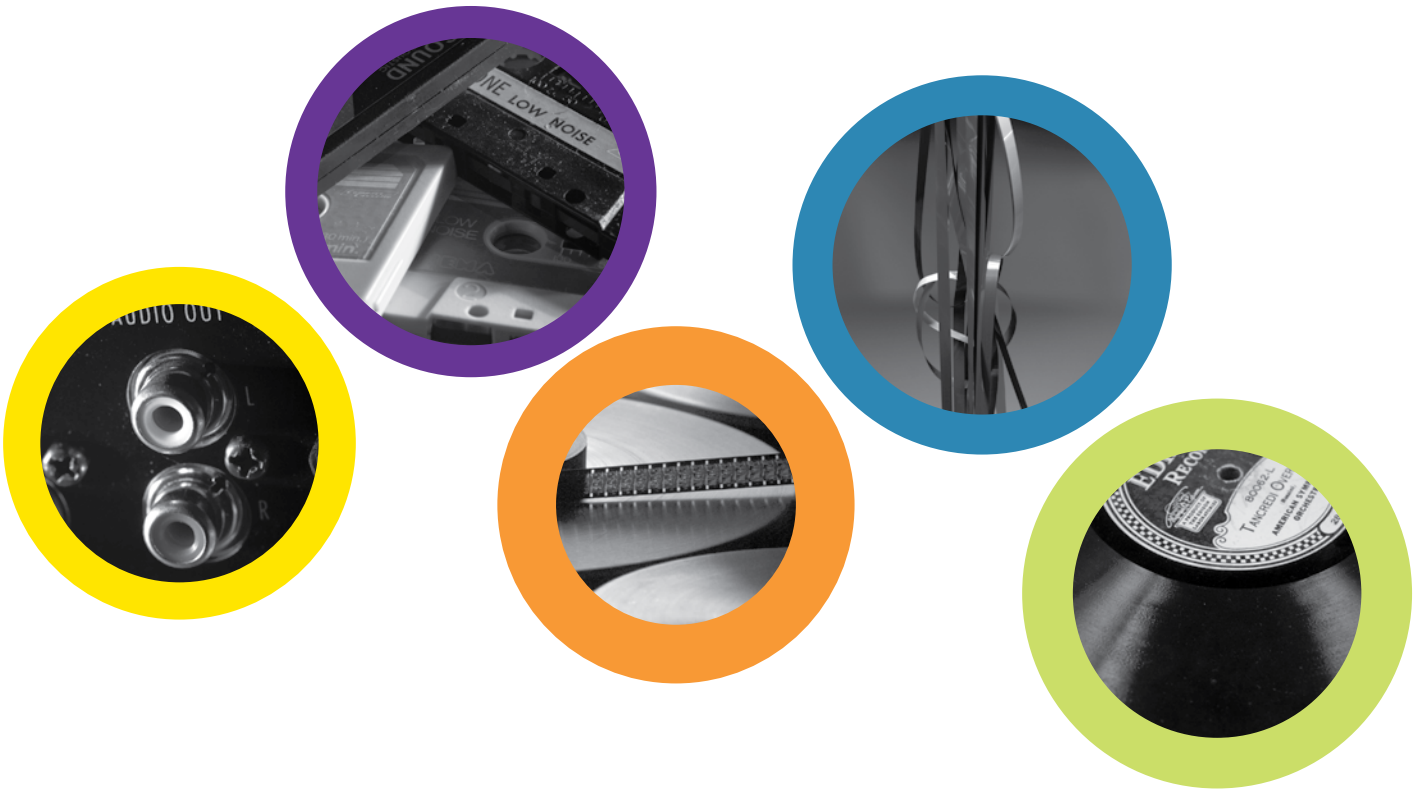

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Audiovisual research collections and their preservation

Introduction

Today, the by far greatest part of the audiovisual heritage is comprised of products of the entertainment industry and of the so-called electronic mass media, radio and television. But those who invented sound recording and cinematography had neither the music nor the film industry in mind when they developed methods to capture sound and moving images. It was the scientific interest in the nature of acoustical phenomena, specifically in the physics of the human speech, that triggered sound recording, whereas the interest in understanding movement to a level of detail that could not be analysed with the blank eye stimulated the development of film. Only a few years after their development, however, these new technologies became the backbone of commercially highly successful entertainment industries.

As they made it possible to investigate acoustic and visual phenomena objectively, these new technologies became the basis for several disciplines: Dialectology and ethnolinguistics, ethnomusicology, and greater parts of anthropology, notably rituals and dance, but also the documentation of traditional technologies and working skills are in the centre of scholarly interest. Consequently it was the academic world that started audiovisual archiving by systematically establishing sound archives. The foundation of the phonogram archives in Vienna (1899), Berlin (1900), St Petersburg (1908) and Zürich (1909) was accompanied by many other sound collections set up as part of research institutions and museums. They all dealt more or less systematically with the production, preservation and evaluation of sound recordings as primary source materials for the disciplines concerned.

Sound recording and sound archiving was demanding and expensive. In those early days there was a natural tendency to accumulate recordings in dedicated collections, some of which also supported the production of audio recordings, mainly in the field, through the loan of equipment. Cinematography was even more expensive, which explains why dedicated research film archives were not founded in those early days.

The situation completely changed for audio from the mid 1950s onward, when transistorised and easily portable tape recorders became available that were able to produce sound recordings of good to excellent quality everywhere in the world, independently from mains current supply. From these years onward researchers equipped themselves with portable tape recorders, later with inexpensive cassette recorders. Over the past 5 decades they produced the stock of primary acoustical sources that are the basis of current dialectology, ethnolinguistics, ethnomusicology and parts of cultural anthropology and folklore. Documents on film were expensive to produce and hence rare until the late 1970s, when portable video home equipment opened new horizons for studies relying on moving image documents. Musicology, dance research, or the documentation of traditional handicrafts and pre-industrial technology, greatly profited from video recordings. It should be emphasised that present day knowledge of the linguistic and cultural diversity is mainly based on audiovisual documents, in their greatest part accumulated over past 50 years. In a world of accelerated globalisation, the significance of these documents reaches far beyond the mere academic world.

If the easy and likewise inexpensive availability of audiovisual recording equipment supported the production of audio visual research documents, it also created part of the problems we are

facing today: Only a smaller part of audiovisual research documents found its way to professional repositories, while the greater part is held by research institutions under sub-optimal preservation conditions, or still rests in the drawers of the researchers that have produced these sources and used them for their publications.[1]

This system of relative disorganisation has worked reasonably well for the analogue formats, because to date, due to their relative physical and chemical robustness, the original carriers have more or less survived. Replay equipment is still around and works somehow, which makes originals accessible, if necessary.

However, over the past 10 years, the situation has changed dramatically. Digital technology has conquered audiovisual production, post-processing, and archiving. Audio has totally become part of the IT world, and video is about to follow the same way. All dedicated audio formats are dead, and soon the same will be the case for video formats. The pace by which dedicated audio and video formats are becoming obsolete is breathtaking. The problem is not so much the survival of the original documents, but the availability of highly specialised replay equipment which disappears from the market soon after a format has been abandoned commercially. Today audiovisual archives associations estimate the time window still open for the transfer of dedicated analogue and digital carriers into digital repositories to be not more than just 20 years.

One of the notorious gaps in the field of audiovisual preservation is an estimation of the total amount of materials stored in collections worldwide based on counts or at least serious estimations. Over the past years, the number of 100 million hours audio and 100 million hours video was frequently quoted from various sides, a rough and unofficial estimate based on a first calculation made in the course of EU project Presto.[2] These numbers were often questioned, but never seriously challenged. How much of this concerns research collections has never been investigated. A study made in Austria parallel to the TAPE survey (cf. Annex 4), however, unveils that beyond materials held in audiovisual collections (in a narrower sense), an additional 50% is held in collections which may generally be subsumed under research or cultural collection. However, many of these holdings are products of the audiovisual recording industry and copies of radio and televisions broadcasts, hence duplicates, the preservation of which would not be the responsibility of their holders. The amount of unique research materials, representing primary source materials of the linguistic and cultural heritage of mankind, remains unclear on the basis of the figures available. The Research Archives Section of the International Association of Sound and Audiovisual Archives (IASA) would possibly be able to retrieve sufficient data to extrapolate with some degree of probability from there.

This situation is the background of Workpackage 6 of TAPE. Its aim is to analyse the situation of audiovisual research collections, to summarise their specific problems, and to point to possible solutions. The following fields of problems will be discussed:

- The technical challenges of audiovisual preservation
- The awareness of these challenges on the side of collection holders
- Typical organisational structures of audiovisual research collections
- Possible strategic measures to solve the preservation problems
- Specific obstacles to organise and finance preservation
- Measures to ensure preservation by enhancing attractiveness of collections
- International, European, and national cooperation

1 When TAPE started, the author estimated the percentage of sub-optimally stored research collections to be 80%. This estimation is based on a fairly good personal overview of audiovisual collections world wide. Although studies made in the course of TAPE resulted in quantitative figures that permit some detailed encouraging insight in some sectors, the 80% figure of the global situation may still be a fairly realistic estimate (cf. Annex 1).

2 http://presto.joanneum.ac.at/projects.asp#d2. *Archive Preservation Survey D2* estimated European broadcast holdings to be 10 million hours film, 20 million hours, and 20 million hours video. These figures have been confirmed in 2005 by a synopsis of results from Presto and TAPE surveys: http://prestospace.org/project/deliverables/D22-6.pdf

The sources used for this report are manifold, generated inside and outside TAPE. They include the TAPE Survey[3], the TAPE Survey on hidden collections (Annex 1), the presentation of case studies (Annex 2), the outcome of TAPE WP 6 and other meetings, informal discussions at the fringe of TAPE workshops, visits to audiovisual archives made before and during TAPE, and the study on Austrian audiovisual collections (abstracted in Annex 4).

The technical challenge of audiovisual preservation

Long-term preservation of audiovisual materials is, in its principles, well understood. Audio and video recordings can only be preserved by adopting a new paradigm of preservation: Any attempts to preserve the original -the classical paradigm of archives and museums- would be in vain, as carriers are sooner or later bound to deteriorate so much that their contents cannot be retrieved. Additionally, the rapid pace of technological development makes recording systems and formats obsolete in ever shorter cycles, leaving even carriers in excellent condition without dedicated replay equipment and consequently useless. This has led to a change of paradigm around 1990: Audio and meanwhile also video preservation must concentrate on content, by digital (= lossless) migration from one preservation platform to the next. Contents from analogue carriers have to be digitised first. The ethical and strategic principles for audio have meanwhile been laid down in *IASA-TC 03*, a standard document issued by the International Association of Sound and Audiovisual Archives (IASA), which in its principles can also be applied for video archiving. The practical guidelines for audio preservation have been published in *IASA-TC 04*.

Audio and video preservation is demanding in many respects. Signal extraction from originals needs to meet highest standards, as – differently to digitisation of text and images – originals ultimately will be lost and the digital archival master has to serve as a faithful replica of the original. It is imperative to have modern replay equipment ready for all original formats, to be kept in good working condition by experienced specialists against a fading background of industrial support for spare parts and service. There is general agreement that format obsolescence and the lack of replay equipment is a greater threat than carrier decay. The time window left to transfer contents from analogue and single digital carriers to digital repositories successfully is estimated to be not more than 20 years.

The other demanding part of audio and video preservation is the safeguarding of the digital archival master files, which includes data integrity checking, refreshing of data if needed, and migration of data to new preservation platforms in time to avoid loss of information through obsolescence. While the principles of subsequent data migration for preservation have been carried out successfully for decades, the specific challenge related to digital audio and video files is their mere volume: one hour of audio requires 1-2 GB, one hour of video, depending from the source format, 11-35 GB. This makes audio and video data the most voluminous family of documents, superseded only by data from satellite surveillance and high energy physics experiments. The challenge of digital preservation as compared to the analogue world is that the maintenance of digital files over generations of storage platforms requires ongoing logistic and financial input in dimensions which exceeds classical carrier-based document preservation by far. Awareness of these challenges, and consequently the readiness to promote and fund digital long-term preservation, has only recently developed, considerably lagging behind the widespread projects for content conversion from analogue to digital.[4] The mainstream of recent projects, however, aims to optimise access with a focus on traditional text documents. As preservation of audiovisual materials is in demand of storage capacities considerably exceeding those for text documents, there is an inherent danger that in such general contexts audiovisual archival preservation standards may not fully be adhered

3 Klijn, Edwin, and Yola de Lusenet: *Tracking the reel world. A survey of audiovisual collections in Europe*. European Commission on Preservation and Access, Amsterdam 2008. web version: http://www.tape-online.net/docs/tracking_the_reel_world.pdf

4 The European Digital Library Project EDL http://www.edlproject.eu/, and Digital Preservation Europe, DPE http://www.digitalpreservationeurope.eu/ are two examples of EU-funded projects which directly or indirectly address digital long-term preservation.

to, specifically for video documents, in order to save on costs for storage space.

Film preservation is another matter: If properly stored, film is a fairly stable format. Obsolescence and maintenance of replay equipment is not a of matter of concern, while digitisation for preservation is presently unviable, because of the high resolution that film documents offer, which would create enormous storage requirements. The TAPE survey has unveiled that outside film archives proper, many institutions hold 8 and 16 mm film documentary materials, part of which may be unique source material. The quantitative dimension of research film footage in relation to audio and video material, however, makes this issue a minor matter in the realm of research archives.

The awareness of these challenges on the side of collection holders

There is no uniform picture of the awareness of research collection holders of the situation they are facing. While more or less all of them would express their concern[5], the degree of a realistic estimation of the situation varies widely. Still some general observations can be made of the experiences made over the past few years.

The greater part of holders of audio and video material is aware that digitisation is necessary for the future safeguarding of audiovisual materials. They have, however, little knowledge of *how* digitisation should be organised to comply with archival standards. The most frequently found deviations from recommended practice are that transfer to optical recordable disks as the only preservation media is considered a reliable and responsible strategy, and that transfer of video and even films to DVD is considered a preservation measure.[6] In this respect, TAPE has contributed significantly to raise awareness of archival standards, but still more has to be done. A frequently found stereotype is that audiovisual departments of professional organisations like libraries and museums have to struggle against the leading structures of the institutions for adequate funding (cf. *organisational structures,* below). Encouraging is a comparatively high level of awareness amongst the holders of *Hidden collections* (Annex 1), but strategies for concrete solutions remain unclear.

Typical organisational structures of audiovisual research collections

Audiovisual collections can be grouped as follows:

- (Partly) autonomous audiovisual research archives (e.g. the Vienna Phonogrammarchiv)
- Departments of memory institutions, such as libraries, archives and museums.
- Departments or rather parts of research or cultural institutions, typically within universities or academies of sciences.
- Small collections of institutions without specific preservation programs (typically local museums, oral history societies, etc.).
- Materials privately owned by the researchers that created audio and video documents for their research purposes.

Autonomous audiovisual research archives are very rare. Generally they have a high awareness of preservation problems and their solutions. The success, however, depends on the individual situation, specifically funding from whatever parent organisations.

The group of *audiovisual departments in memory institutions (libraries, archives and museums)*, holding published materials as well as unpublished, is fairly widespread and, in principle, a reasonably solid basis for the long term survival of their holdings, as preservation of documents or artefacts is the raison d'être of their parent organisations. A general problem, however, are costs and logistic prerequisites for the organisation of audiovisual preservation, which are more demanding than those for books and other print documents. Additionally, requirements for the

5 TAPE Survey, chapter 4, and Appendix A.

6 TAPE Survey, p. 102. This choice appears to result from mix of unawareness and/or inability to finance initial funding for reliable small scale resolutions (cf. IASA-TC 04, 6.5)

storage of digital audio and video data are perceived to be excessive in proportion to the size of other digital files, including even image files, which makes the effectiveness of such departments in terms of cost-per-item less attractive than conventional parts of the collection. This principal problem, which dates back to pre-digital times, was the reason why national audiovisual archives were sometimes founded separately from existing libraries, (or paper archives), e.g. the Swiss National Sound Archives. Some even left such mother institutions, like the Australian Film and Sound Archive did when it separated from the National Library in the 1980s. Some autonomous national audiovisual archives are not mere passive recipients of published records or unpublished sources of the third parties, they are also actively involved in the creation of their collections. Such activities are unusual in archives and libraries, rendering the continuation of such traditions difficult when audiovisual archives are taken over by national libraries of archives.[7] With digitisation conquering the entire world of memory institutions, however, support for audiovisual collections, and therewith also research documents contained therein, is visibly improving, as specifically big mother institutions are forced to invest considerably in their IT departments, which is a substantial prerequisite for a healthy development of audiovisual collections.

A more pessimistic view must be given on *audiovisual research collections as part of research institutions*. The primary aim of such institutions is to *produce* audiovisual documents and to *use them as sources* for the further advancement of their respective disciplines, not to *preserve* them. Generally the holdings of such institutions amount to considerable numbers. Practically all these documents are primary sources of knowledge of and publications on the linguistic and cultural diversity of mankind. As explained, the survival of those sources was not a major problem so far, as even under sub-optimal storage and handling conditions the material proved more or less playable to date. For the reasons described, however, action to preserve these documents must be taken within the next two decades, otherwise they will be lost irretrievably. A widely made observation is the fact that institutions reluctantly embark on long-term preservation projects of their holdings, because the costs involved diminish the potential of their scientific output, which is the predominant yardstick for their success. An incentive for digitisation, however, is the access offered in the digital domain. But it occurs frequently that archival standards in digitisation are not fully adhered to, simply to save money. This is most deplorable, since such savings are negligible in relation to the possible inherent devaluation of the digital masters.

In summarising, it can be stated that the natural urge to advance the disciplines concerned by new research insights is, unfortunately, not a good partner when it comes to safeguarding the materials produced for future re-consultation. This often leads to dramatic situations of audiovisual collections within the realm of universities in the Western world: Their democratic and autonomous organisation is an endangering factor for the adequate or further support of audiovisual research collections, as researchers, specifically under the prevailing neo-liberal climate of our times, have an increasing tendency to optimise their short-term success at the expense of long-term strategies in the interest of the scientific community at large, including further generations to come. Additionally, such a policy implicitly takes into account that the results of present publications cannot be evaluated by researchers in the future. This would not be in line with basic scientific principles. There are several cases of audiovisual collections under the umbrella of universities whose existence is threatened.

The typical scenario in Eastern Europe was the organisation of research institutes within academies of sciences with individual audiovisual collections for each research unit. This created an enormous amount of documents. Mainly due to the consequences of the political changes around 1990, further adequate support for the traditional research institutions declined, sometimes dramatically so, which left these audiovisual collections without adequate storage conditions, and without modern replay equipment, let alone strategic measures and financial means to safeguard these primary sources generated over the past 50 years. Today many of those collections are still without any specific care, and often collections have even been 'privatised', as field workers who

7 Ethnomusicological field work of curators faded out when the British Institute of Recorded Sound was taken over as a Department of the British Library

created them, took them to their homes for protection against the turmoil of crashing infrastructures in the early 1990s. In re-organising their research infrastructure, post-communist countries have a tendency to follow Western examples by allocating research to universities. Under the prevailing general situation as outlined above, there is a serious risk that the situation of audiovisual collections thus will go from bad to worse.[8]

Small collections of institutions without specific preservation programs are, in principle, also amongst the most endangered group of collections. Here we also find a lack of appropriate awareness and, very typically, the lack of financial means to preserve the materials properly.

The situation amongst private owners of research materials is much better, as they have generally also been the creators of the materials. Over the past few years there has been a notable increase of awareness of the need of proper preservation measures generally discussed in conferences and journals of the respective disciplines. The International Council of Traditional Music (ICTM) for example has organised panels and workshops on proper audiovisual archiving at most of its global conferences over the past 15 years. This has led to a high level of concern from the side of the researchers which they almost unanimously express in the study on *Hidden collections (Annex1*). This awareness, however, is generally accompanied by the lack of means to actively preserve these materials. It is encouraging to learn that the vast majority would be willing to enter cooperative projects for the safeguarding of their materials – provided that their rights are adequately maintained. There also seems to be a tendency to embark on a sort of *'do it yourself'*-archiving which does not follow archival standards. This may work to some extent for small collections up to a few hundred hours, however, at the expense of fully analysable digital masters, as DVD copies for video prevail, or audio transfers are made from analogue field tapes with outdated and ill-maintained replay equipment. For linguists several international programmes exist which organise further availability of their primary materials in access-oriented databases.[9]

Possible strategic measures to solve the preservation problems

Autonomous preservation can only successfully and economically be arranged with considerable logistic and financial input, which becomes viable if collections exceed a critical mass, i.e. several thousand items of each of the audio and video formats. It is therefore evident that only cooperative models of organising the transition of contents from analogue and digital single carrier documents into reliable digital repositories, to ensure long term digital preservation, will succeed. The establishment of *competence centres* is the most attractive model which in its details could take many forms.

Outsourcing does not necessarily mean handing over all archival responsibilities to such competence centres. While greater parts of the collection (e.g. analogue magnetic audio tape) can well be organised in house, smaller parts of the collections, like coarse grooved discs, may be handed over to specialists. In fact, such policy is already a standard when it comes to the transfer of cylinder collections which only rarely amount to numbers justifying autonomous transfer.

Long term preservation of digital audio and video objects should be considered separately from transfer. Normally, governing bodies, such as universities, libraries, museums, have already established powerful computer centres which can carry this responsibility much better than the small departments themselves. Also, outsourcing to larger sister institutions should be considered.

In view of the general situation, holders of small collections are even encouraged to totally rethink their preservation policy by questioning the need to keep audiovisual materials in their possession. It may be sufficient to hand over responsibility for their preservation to audiovisual archives proper, ensuring, however, access for the original holder, including restrictions of access for third parties, as appropriate.

8 Cf. the Albanian case in Annex 2.

9 Cf. below under p 11(international, European and national cooperation, 2nd para, footnote 9ff)

Specific obstacles to organise and finance preservation

An obstacle specifically observed in post-communist countries after the political changes was significant distrust of any cooperative solution. Although researchers produced field recordings under the aegis of their employing institutions, generally under the roof of academies of sciences, they considered these recordings 'their' property. This attitude, combined with a widespread habit in anthropological disciplines to claim sort of exclusive rights for certain research topics, regions, or ethnic groups, has even led to the foundation of parallel institutes under one parent institution's roof. A standard comment on the recommendation of cooperative models was often the assumption that such cooperation would only end up in the theft of one's field documents by rivals from the same discipline. Fortunately, there are clear signs that with further societal development this attitude is fading out. Encouraging examples can be found in the *Hidden collections* questionnaire where researchers from Eastern European Countries express their readiness to participate in co-operative preservation models. The most successful example of this favourable shift of principal attitudes comes from St. Petersburg, where central archiving of scattered collections of endangered language recordings was welcomed by many researchers who had preserved such collections at their homes. Additionally, the St. Petersburg Phonogrammarchiv was successful in inviting institutional collections, mainly from Moscow, to be digitized and then further safeguarded under its roof (Annex 2).

Measures to ensure preservation by enhancing attractiveness of collections

A widely discussed measure to improve preservation of audiovisual research materials is to enhance their attractiveness by re-use. Such re-use, however, can only flourish if the holdings of collections are made known. Only few research collections have ever had conventional catalogues published which enabled the scientific community to browse these holdings. Research collections that are part of libraries were the first to publish their holdings on the internet, as at least a brief title entry of their recorded items was published along with the books and other documents of the respective mother institutions. Only recently have audiovisual research archives started to develop their own online data bases which enable a more detailed research into their holdings. Experience shows that the frequency of consultation of collections has increased enormously by such measures which, naturally, make these archives attractive to the general public and hence to their parent organisations. On the basis of this experience internet access to the holdings, not necessarily to audiovisual contents per se but to their metadata, is a strong indirect measure for supporting preservation. In this context it must be noted that publication of the audiovisual documents themselves generally poses a delicate problem for anthropological archives. Not only Western copyright restrictions are a hindrance to free access to sound and video recordings. Anthropological collections must also observe moral rights which may even be stronger than legal rights. Sacred rituals, but also many documents of a private character, cannot be made uncritically accessible to the general public by the internet.

Another obstacle to the attractiveness of archives is a reluctance of using materials created by others than the researcher him/herself. Several schools of anthropology and ethnomusicology have overemphasised the importance of creating primary sources by the researchers themselves, which has led to a negative attitude to consulting and studying field recordings made by others. There is even a significant discrepancy between the consultation of published literature as opposed to the consultation of already existing primary sources, specifically when researchers prepared themselves for fieldwork. Recently, however, a more positive attitude to consultation and re-use of already existing audiovisual materials can be observed. An advocate of this movement is Ronda L. Sewald with her thesis *Back to the Armchair: Sound Recordings as Information Resources in Ethnomusicological Research*. The topic has also been taken up at several meetings, most prominently in a round table specifically on Sewald's thesis, organised on the World Conference of

ICTM in Vienna in 2007. It can be assumed that the near future will see enhanced re-use of audiovisual materials, e.g. for diachronic studies in the field of anthropology, ethnomusicology and linguistics.

International, European and national cooperation

International cooperation between audiovisual archives is primarily organised by the Fédération Internationale des Archives du Film (FIAF), the International Association of Sound and Audiovisual Archives (IASA), and the International Federation of Television Archives (FIAT / IFTA). These three international NGOs , together with several regional and specialised NGOs, form the CCAAA (Coordinating Council of the Audiovisual Archives Associations), which has no legal status, but is a de-facto partner for UNESCO to consult on matters concerning audiovisual archives. IASA , having formed a Research Archives Section, is the only NGO that deals with the issues specific for this group. Of major importance, not only for research archives, is the work of the Technical Committee of IASA, which issued two basic standards in the field of audio preservation. IASA-TC 03 defines the ethical and strategic aspects of sound archiving. This standard is now in its 3rd version and available in several languages. Although dealing with the audio heritage only, it can also be applied – mutatis mutandis – to video archiving. IASA-TC 04 is a handbook on practical issues on audio preservation.

Outside archival organisations, international cooperation (partly) concerning archival matters is also organised according to discipline. While considerable amounts of digital data are gathered and preserved in natural sciences like high energy physics, meteorology or space surveillance, an internationally well organised discipline in the field of humanities is cultural linguistics. There are several programmes like DoBeS (Dokumentation bedrohter Sprachen)[10], Delaman[11], or the Endangered Language Programme[12], that have installed preservation programmes and created central repositories for linguistic collections originally held privately by researchers. The predominant aim of these programmes, however, is to accumulate annotated research corpora for access, whereby the input into these corpora is generally left to the responsibility of the researchers. This works sufficiently well for digitally recorded originals. The quality of the signal extraction from analogue and obsolete digital originals, however, is left to the available infrastructure of the researchers, which generally is sub-optimal due to the enormous challenge to professionally maintain replay equipment, specifically of outdated formats. In this retrospective activity, these programmes do not necessarily meet archival standards. Another noteworthy project is in the field of ethnomusicology: EVIA (Ethnomusicological Video for Instruction and Analysis)[13], based in the United States, but international in scope, invites researchers to archive a selection of 10 hours of their video material for educational and research purposes. The character of this project is in its essence that of an electronic publication; the archival standards, however, are uncompromisingly high.

European cooperation between continental NGOs is not very significant, at least not in the field of audiovisual preservation. Other than libraries and conventional archives, which founded European legal entities to become partners in European research projects and lobbyists vis-à-vis the European Commission, audiovisual archives have not undertaken such efforts. However, the European Commission for Preservation and Access (ECPA), which covers the entire field of documentary heritage, has taken audiovisual preservation on board by acting as the coordinator of TAPE.

In the European context it must be mentioned that document preservation per se was originally hardly supported directly, as the European Union emphasised the promotion of research projects concentrating on issues related to access. From the 6th Framework Programme onward, research

10 http://www.mpi.nl/DOBES
11 http://www.delaman.org/
12 http://www.hrelp.org/
13 http://www.indiana.edu/~eviada/

was also devoted to long-term preservation of digital information. Building up digital repositories by digitisation was left to member states, which arranged their respective policies at different levels of support and efficiency.[14] Only late 2006, as the different levels of available digital contents became more obvious, the European Council, in its conclusion 14466/06[15], signalled support to assist member states in digitisation projects and endeavours to feed digital repositories. As already mentioned, EU-projects EDL and PDE[16] also support digital preservation, emphasising, however, harmonising the ingest and the development of further search and access tools, rather than by furthering the ingest itself.

Another upcoming European initiative is the support of research infrastructures which also includes the support of archives and other memory institutions. First steps have been successfully been taken by linguistic research collections, which, under the umbrella of ESFRI[17], have established CLARIN (Common Language Resources and Technology Infrastructure[18]), which will to some extent also contribute to solving the preservation problems of linguistic audio and video documents. Audiovisual research archives are expressly encouraged to follow the example of linguistic collections and establish similar initiatives in their respective fields, which could follow a disciplinary approach, like CLARIN, but also other approaches yet to be explored.

National cooperation takes many forms. Generally, there are Audiovisual Archives Associations which further cooperation amongst national institutions. Exchange of experiences between archives, organising conferences and seminars, and lobbying vis-à-vis national financing bodies are the main activities. Several European states have established programmes for audiovisual preservation, but these are generally organised between the financing agency and the individual supported institution. A unique exception is *Memoriav,* a privately organised foundation that receives funding from the public as well as from the private sector to safeguard the Swiss audiovisual heritage (Annex 3). Projects supported by *Memoriav* also include the safeguarding of research and private audiovisual collections.

In this context, the project *Sound Directions: Digital Preservation and Access for Global Audio Heritage*[19], must be mentioned, initiated by the Indiana University Archives of Traditional Music[20] and the Archive of World Music[21] at Harvard University, supported by the National Endowment for the Humanities. One major aim is to further develop international standards of audio preservation. Another deals with cooperative models to solve the preservation problems of distributed collections in the Unites States.

Summary

The basic problem of primary audio and video research materials is clearly shown by the survey: A great and important part of the entire heritage is still outside archival custody in the narrower sense, scattered over many institutions in fairy small collections, and even in private hands. Preservation following generally accepted standards can only be carried out effectively if collections represent critical mass. Specialised audiovisual archives will solve their problems, as they will sooner or later succeed in getting appropriate funding to achieve their aims. A very encouraging

14 An extraordinary example is the support given to audiovisual archiving by the Netherlands: 154 million Euros have been granted to the project Beelden voor de toekomst ('Images for the future') to support the safeguarding of the national audiovisual heritage. Preservation will mainly concentrate on the holdings of the National Institute for Sound and Vision, the Filmmuseum, and the National Archive (for photographic collections). Research materials may be included in the project in so far as they have been deposited with these institutions.

15 Council conclusion 14466/06: *Digitisation and online accessibility of cultural material, and digital preservation (November 2006)*

16 Cf. p 6 (footnote 4)

17 http://cordis.europa.eu/esfri/

18 http://www.clarin.eu/

19 http://www.dlib.indiana.edu/projects/sounddirections/

20 http://www.indiana.edu/~libarchm/

21 http://hcl.harvard.edu/loebmusic/

example is the case of the Netherlands. The larger audiovisual research archives will also manage, more or less autonomously, the transfer of contents in time. For a considerable part of the research collections, however, the concept of cooperative models and competence centres is the only viable model to successfullly safeguard their holdings. Their organisation and funding is a considerable challenge for the scientific community.

TAPE has significantly raised awareness of the fact that, unless action is swiftly taken, the loss of audiovisual materials is inevitable. TAPE's international and regional workshops were generally overbooked. While TAPE was already underway, several other projects for the promotion of archives have received grants from organisations other than the European Commission, inter alia support for the St. Petersburg Phonogram Archive, and the Folklore Archive in Tirana, obviously as a result of a better understanding of the need for audiovisual preservation. When the TAPE project started its partners assumed that cooperative projects would fail because of the notorious distrust of researchers, specifically in the post-communist countries. One of the most encouraging surprises was to learn that, at least in the most recent survey, it became apparent that this social obstacle is fading out. TAPE may have contributed to this important development.

Annex 1. Survey of hidden audiovisual collections in Europe

Sabine Pinterits and Burkhard Stangl

Preamble

This survey was started in spring 2007 as a supplement to the TAPE survey.[22]. Whereas the general survey covered all kinds of audiovisual collections and included questions for very detailed data, this survey was addressed at research collections only, with a focus on private collections accumulated by researchers as a result of their field work in several disciplines. This extension was made against the background of the technological challenges as laid out in main text of this publication, which explains why specifically small collections are threatened of getting lost irretrievably unless strategic action of considerable dimension is taken for their safeguarding. This study specifically targeted collections holding primary sources for disciplines like linguistics, ethnography/ folklore, and ethnomusicology, the originals proper of the present day knowledge of linguistic and cultural diversity of Europe and worldwide. The aim was to get an overview of the awareness of the overall problems, any measures already taken towards preservation, and the willingness to support cooperative preservation solutions. As answering questionnaires normally triggers idiosyncratic resistance on the side of the interrogated, no further details were asked, in order to achieve a high response rate.

Introduction

The research was commissioned by the Phonogrammarchiv of the Austrian Academy of Sciences, partner in the TAPE project and leader of Workpackage 6, Research Archives, to Sabine Pinterits and Burkhard Stangl. The overall goal was to achieve a general overview of audio and video collections that are (still) privately held by researchers who work in fields such as social and cultural anthropology, European ethnology, ethnomusicology, linguistics, oral history, European folk music and other related cultural studies. In addition, an effort has been made to pay attention to 'neglected institutions' such as small NGO's, museums or cultural initiatives.

It is important to note that any inquiry about audiovisual 'hidden collections', which are more or less private property, requires a careful approach. This is not about 'one institution helping another', to put it casually (as this 'help' and the associated time and effort can usually be done within official, institutional office hours). Rather, this is about the goodwill of the persons contacted, their disposition to spend time going through their collections, to sort and document them and then to fill out the questionnaire and return it. Furthermore, this direct inquiry can be seen as invading one's privacy – it was therefore necessary to clarify the goals of TAPE Workpackage 6 and to communicate that this is a data collection which will ultimately remain anonymous.

Apart from establishing contacts with small archives and researchers all over Europe to ensure area-wide coverage, the questionnaire was published in some communications and professional journals of renowned (umbrella) organizations in order to obtain a wider distribution[23]. The latter, however, did not achieve any noteworthy results. It seems that personal direct contact is indispensable in persuading researchers to reply. Nevertheless, we have reached numerous researchers and several small institutions. The reply rate of 12%, although we have hoped for more, was within the average of reply rates of similar activities. As we were never expecting to extrapolate to absolute holdings, however, but to explore general attitudes and trends, the responses we received were very

22 http://www.tape-online.net/docs/tracking_the_reel_world.pdf

23 EASA (European Association of Social Anthropologists), newsletter July 2007, and several smaller NGOs

useful. We are also convinced that we have indirectly supported the case of audiovisual preservation by raising the awareness of those who did not respond.

The questionnaire (cf. appendix) was deliberately kept very short and sent out by email to European members of scholarly and cultural NGOs all over Europe.

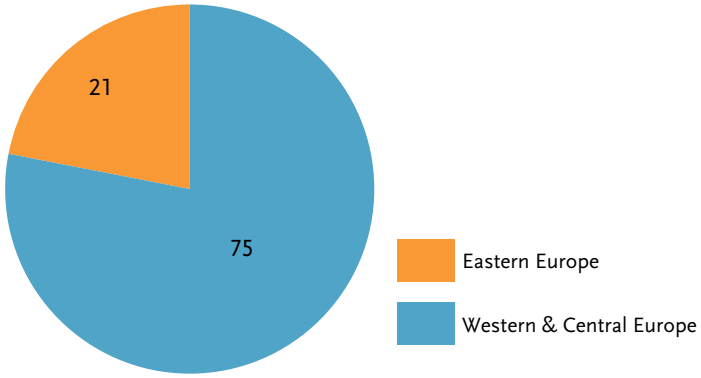
Evaluation of results

Response rate

	No. of questionnaires sent	No. of responses	Response rate
Western and Central Europe (710 to be regarded as 100%)	710	83	11%
Eastern Europe (180 to be regarded as 100%)	180	24	13%
All (890 to be regarded as 100%)	890	107	12%

Comment: Of the respondents, 96 reported positively, whereas 11 researchers reported they had no (or insignificant) collections

107 replies, of which 96 with collections



Reported AV carriers in hours

Audio	
Cylinders	7
Audio-Cassettes	3110
Open Reel	1368
Records	1000
DAT	601
Mini Disc	341
CD-R	2160
Total Audio	8587

Video	
Video 8 & Hi 8	648
VHS	1293
DV	320
DVD	190
Betamax	30
Total Video	2481

Total audio and video: 11,068 hours = 115.3 hrs average per researcher

Relation audio to video: 3.5 : 1

Comment: This list of collected formats conforms, in general, to what one would expect in private collections of researchers accumulated over the past 50 years. Interestingly, as this format was not very popular in Europe, Betamax video cassettes were reported

by several owners: 30 hours, or 1.2 % of the total number of video cassettes amounting to 2481, however, does not constitute a major problem. The cylinders are part of an institutional collection The total number of reported carriers in this survey is too small for extrapolation to European holdings. A response rate of 12% may be average in answering questionnaires, but linear extrapolation from this figure would be daring, because the overall addressed community is incomplete. The result of the average size of a private research collection, namely 115 hours, is interesting and a first reference to hold on. The proportion between audio and video stocks is at the rate of 3,5 :1, which may also be noted as a possible reference for ethnographic/folklore materials. For an estimation of the total amount of privately held primary source materials a clearer view of the number of researchers active in audiovisual fieldwork would be required. IASA Research Archives Section may feel challenged to carry on research in that direction.

Main focus of collections

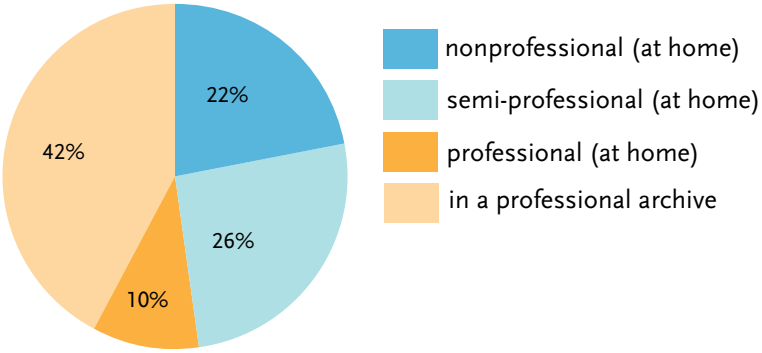
- Video and audio material of rituals from Sri Lanka, Sarawak (Malaysia) and Burma/Myanmar
- Field research in East Africa, Singapore, Urumqi/China (music, oral histories, stories, interviews)
- Bolivian Andes (music, oral histories, stories, interviews)
- Central America (music, oral histories, stories, interviews)
- Archaeological fieldwork in West Africa
- Videos of traditional dance performances in Romania and Bulgaria
- Videos Iran and Afghanistan (music, oral histories, stories, interviews)
- Audio and Video from Turkey (music, oral histories, stories, interviews)
- Folklore music group dancing and singing from southern Morocco
- Audio tapes of Welsh dialects of south east Wales and dialect-recordings from the Welsh community in Patagonia, Argentina
- Field work (audio/video) from Vojvodina (healer woman, charm-teller)
- Field research in Portugal, Baltic States, South East Europe, Italy (recordings of traditional feasts in Tuscany)
- Concerts and theatre Scheveningen, NL
- Recordings of Leiden Folk Festival, NL

Comment: A significant number of responding researchers work in the field of traditional and/or non-western music (60 % are members of ICTM). It is important to understand that, although one would justifiably call these collections European, their content to significant degree is non-European. Thus, while generally talking of the European cultural heritage, we are confronted with a considerable proportion of the world's cultural heritage, a phenomenon which also applies for the holdings of several museums. This outcome of the colonial and postcolonial situation and the privileged economical capacity of Europe should oblige its official representatives and institutions to be aware of this issue. Several emphases of collections may, inter alia, illustrate this situation. Because of the random nature of this survey, this list is neither representative nor exhaustive for the entire European situation.

How and where are the collections stored?

(96 replies/collections to be regarded as 100%)

at home			deposited in archive
nonprof.	semi-prof.	professional	
21	25	9	41
22%	26%	10%	42%



Comment: A surprise was the relative high percentage of collections already deposited in professional archives. 42% is significantly higher than the 20% which has been the estimation so far. The outcome may be influenced by the high percentage of replies from ethnomusicologists that, through the activities during ICTM World conferences over the past 15 years, generally have a high degree of preservation awareness. These results should perhaps also reviewed critically, because there may be a correlation between preservation awareness and willingness to respond the questionnaire. This would justify some caution when quantifying awareness-related data.

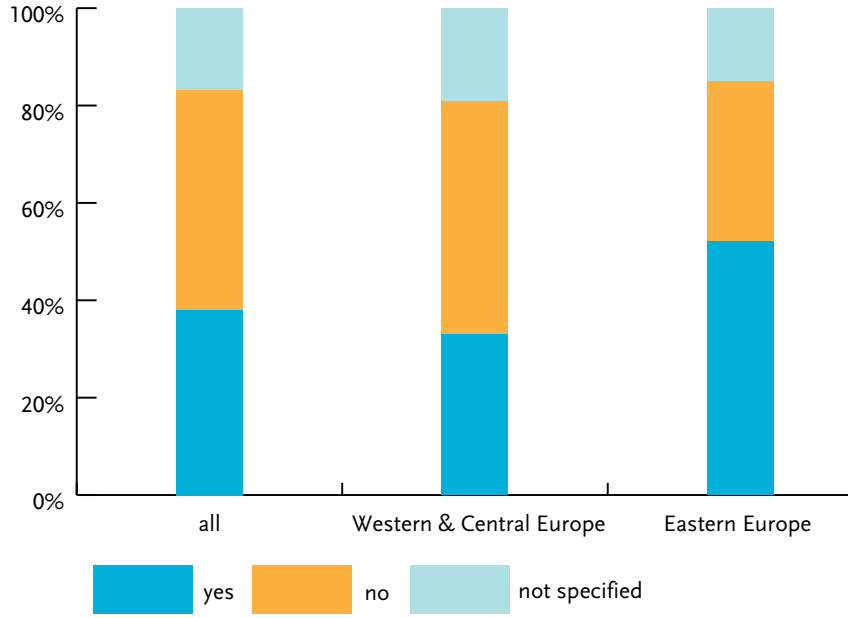
Institutes where collections of research projects (from Europe) are deposited:

- British Library, UK National Sound Archive in the British Library
- Korean Culture and Arts Foundation
- Ethnomusicological Archive, University of California
- Swiss National Archive in Lugano
- Institut für Archäologische Wissenschaften
- Institute of Ethnology and Folklore Research, Zagreb
- FLOG, Florence
- Department of ethnology and cultural anthropology, Faculty of Arts, University of Ljubljana
- Oslo Municipal School of Music and Culture
- Museum für Völkerkunde Berlin
- DASTUM, Bretagne
- National History Museum of Wales
- Library archives at Cardiff University.
- Archives of the Institute of Ethnography and Folklore, Stockholm
- Swedish Centre of folklore music research
- Sheffield University
- Leeds University
- British Library
- EFDSS, London
- Danish Folklore Archives in Copenhagen
- Bibliothèque nationale de France
- Laboratory for Folk Music, Belarus

Comment: Although this list is not exhaustive, and not even representative, it indicates that at least some European researchers deposited their field materials in their respective countries of origin. A comparison of this list with the list of extra-European content unveils what is not (yet) deposited /repatriated to the places of origin.

Is there a preservation program already in place, or under preparation?

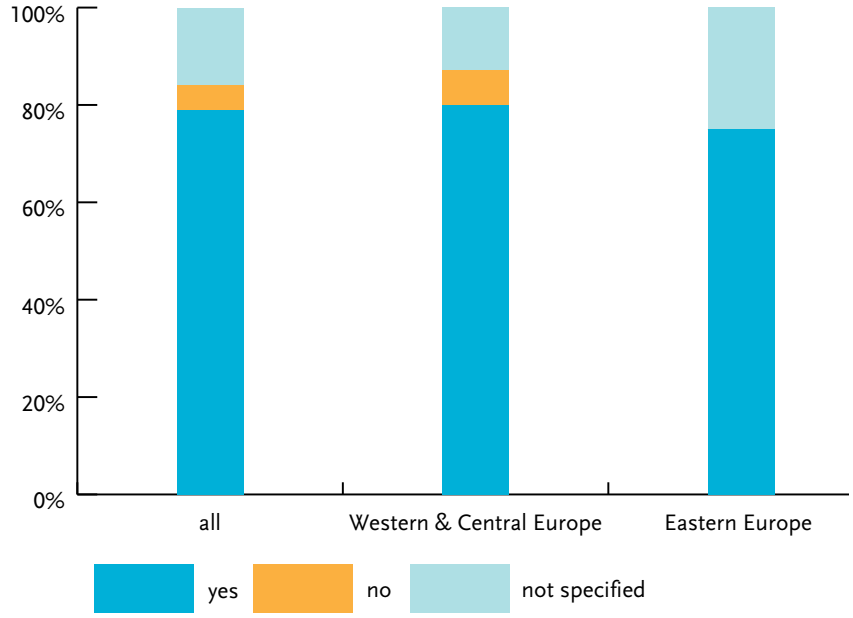
	All (96 replies =100%)		Western & Central Europe (75 replies = 100%)		Eastern Europe (21 replies = 100%)	
yes	36	38%	25	33%	11	52%
no	43	45%	36	48%	7	33%
not specified	17	17%	14	19%	3	15%



Comment: There is a high correlation between awareness and the presence of a preservation programme (or plans to establish one) This is encouraging, as it demonstrates the willingness of researchers to respond to the best of their abilities to the situation they are facing. Astonishing is the high amount of 'Do-it-yourself' initiatives to digitise materials and to store them in the best possible manner that individual circumstances allow. Several researchers have reached a (semi-)professional level; in many cases, however, archival standards are met to sufficient degree (cf. chapter Selected Quotations below). Because of the fairly small sample, the higher percentage of Eastern Europe should not be over interpreted.

Would you be ready to cooperate with a trustful institution to safeguard your material in the long-term?

	All (107 replies =100%)		Western & Central Europe (83 replies = 100%)		Eastern Europe (24 replies = 100%)	
yes	84	79%	66	80%	18	75%
no	6	5%	6	7%	0	0%
not specified	17	16%	11	13%	6	25%



Comment: The high rate of willingness to take part in cooperative projects is again a clear demonstration that awareness and readiness to take appropriate action are strongly correlated. The great surprise comes from the responses of researchers from Eastern European countries, which are similar to those of their colleagues in the West. After the political change, there was, as a stereotype, a remarkable distrust in any cooperative model, the interpretation of which is not part of this study. One of the positive developments of the recent years, however, is that the upcoming generation has obviously overcome the scepticism of the older generations,and this creates a solid basis for a successful organisational structure for future measures. This finding fits in very well with experiences of the Endangered Archives Project at the St. Petersburg Phonogram Archive (cf Annex 2), which successfully digitises scattered linguistic materials from all over Russia and is on its way to become a competence centre for the long-term preservation of audio research materials.

Selected quotations from correspondence and interviews

During our research we heard a lot of impressive stories from researchers about their collections. Frequently, respondents referred to the same stumbling blocks: the unclear legal right situation, the unwillingness of some archives to cooperate(!), the enormous expenditure in time and finances to safeguard their materials themselves, and the shortage of space in their private environment. Here we present a selection of quotes from respondents which illustrate situations that merit wider interest:

- One researcher holds a collection of sound carriers from a former alternative scene in […], partly rarities. They are unprofessionally stored in her house. At this time it is impossible for her to gather all tapes, but after her retirement she is willing to give this rare collection to an institute or archive.
- Another researcher does not routinely deposit his materials in archives. Due to potential conflicts relating to copyright and confidentiality of much material he would not intend to do so.
- One team of researchers has always been backing up all video 8 recordings on VHS tapes. They are currently in the process of converting all the recordings to digital format. Once converted they are stored on large hard disks, and back- ups are made onto DVDs in two copies. They are concerned that a number of blank DVDs have deteriorated very quickly so they are constantly trying to monitor their preservation status.
- One researcher made arrangements to deposit a selection of the most important materials he collected 'in the field' in an appropriate place for 'permanent' storage. Content is stored on external hard drives, additional copies exist on CDs. Materials have also been repatriated to the places of where they were recorded. 'Not in need of the services of TAPE'.
- '…stored in a book shelf in the office and on minidisk … also been copied digitally and stored as mp3 files on two computers, an external hard disk and on the university server.'
- One researcher who is well aware of the time needed for elaborate documentation bought the necessary equipment for digitisation of his material from his private funds. He contributed articles on preservation and digitisation, discussed it again and again with experts but '...nothing happened, no support from nobody. So I did it myself. It nearly ruined my finances.'
- '… are not able to answer your questionnaire because till now we did not anything in the field of storage of our collections … ready to cooperate with a trustful institution to safeguard our material in the long term.'
- An example for a researcher's own initiative: '50 % with safety copies as wav-files (hard disk, burned back-up), 50 % on DAT and on S-VHS tape. Stored at my home, under permanent control, with annotations for teaching and research purposes ...'
- 'Now we are near the end of our long-year program of transferring all audio content from reel tapes (which once was the main medium of storage), also from DATs, to CDs. However, we are aware that CDs are not perfectly reliable medium of storage either. Now I have a vision, somewhere in the future, of setting up a really huge (amounting in terabytes), stand-alone and network ready HDD raid unit to store all content as audio files. However, it will take some years when this idea gains its material advancement.'
- 'We store the material a general storage room, with no special climate control, together with paper documents. It is assumed that our Institution will be moved to the new National Library building when it is built. The latter though still remains uncertain.'
- Relatively large sound archives of own field researches, those not yet all stored in a public professional archive....intention to install a virtual archive, which is to be linked to other appropriate archives.

These statements exemplify a few facets that are or may become evident in the context of long-term archiving and conservation. They range from the jump-start of the questionnaire as a trigger for important considerations about the digitisation of archive inventories, to the regretful realization that long-term archiving is impossible without outside funding ('Nothing happened, no support from nobody. So I did it myself. It nearly ruined my finances.'), and to the diligent care for AV data within the private realm.

Summary

In summarising we should remind readers that the purpose of this questionnaire was not to get a basis for a quantitative extrapolation. Relative results, however, are very interesting and generally encouraging, specifically the high level of awareness, and - surprisingly - the readiness for cooperative solution specifically in Eastern Europe, where scepticism prevailed in the past. This positive picture, however, should not lead to over-enthusiasm, as to some extent it may be an artefact: those, who responded, may have a greater level of awareness and willingness to cooperate, while the others did not respond.

Appendix

Questionnaire as sent out

Dear Mr/Mrs…….
Dear Sir/Madam,

We are working on the TAPE project (Training for Audiovisual Preservation in Europe (http://www.tape-online.net/). One of the aims of TAPE project is an assessment of audiovisual collections in Europe outside the major specialised collections. A questionnaire has been sent already to Museums, libraries and archives, which had a good response. We have experienced, however, that many important collections are still kept by researchers and have not (yet) been deposited in an institution which would preserve these unique materials for the future.

The long-term survival of conventionally stored audio and video materials is at risk. Within decades, all original carriers are prone to decay beyond retrievability, but even more dangerous is the rapid retreat of the industry from spare part production and service support for obsolete audio and video formats. It must be assumed that there is only a time window of 20 years left to transfer analogue and digital discrete audio and video carriers to digital repositories.

Our mission is to create a general overview of audio and video collections still in the hands of researchers in the field of social/cultural anthropology, (ethno-) musicology, linguistics, oral history and European folk music. Should you already have filled out the TAPE-questionnaire 2005, please disregard this letter. Should you know anybody who also collects audiovisual material resulting from field research, please forward this message.We would be grateful to get your information on the following issues:

Have you produced audio and/or video field recording which have not (yet) been deposited in an Archive?

Please list your collection by formats (open reel audio, compact cassettes, R-Dat, VHS, Video 8/ Hi8, DV, other, in terms of numbers, preferably hours)

How and where are the collections stored?

Is there a preservation programme already in place, or under preparation?

Would you be ready to cooperate with a trustful institution to safeguard your material in the long-term?

We would be very pleased to have your answer by 15th of June 2007.Thank you very much for your support.
Best regards from Vienna
Mag. Sabine Pinterits
Dr. Burkhard Stangl

Annex 2. Audiovisual research archives in Eastern Europe: five case studies

In the 19th and early 20th centuries, nation building was one of the central political driving forces all over Europe. Apart from many conflicts, some of which continue until today, these political forces also strongly furthered research disciplines like linguistics, folklore and ethnography, and ethnomusicology. Ethnographic collections and museums, but also sound collections, are natural results of these originally politically motivated interests. Once established, these disciplines continued to flourish also outside the original historical environments. In Eastern European countries, folklore studies in the widest sense became very popular and enjoyed considerable support, specifically after the Second World War until the times of political changes around 1990. Beyond the scientific community these holdings attract the attention of wider circles and the public at large, as they reflect part of the enormous cultural and linguistic diversity and richness of orally transmitted traditions. The political change around 1990 and the radically changing economic situation in these countries severely threatened the further existence of these collections and their parent institutions. Support for research institutes, mainly organised within academies of sciences, diminished, which left many of these collections unattended, without the support specifically needed at present for the transition from the traditional analogue and digital single carriers into safe digital repositories. The greater part of collections may still be at risk. The following reports on the development of five important audiovisual collections in Eastern European countries demonstrate how these institutions managed to improve their situation, each of them in their own way. These reports may serve as examples and incentives for institutions facing similar situations.

The collections presented here are:

Institute for Folk Culture, Albanian Academy of Sciences, Tirana, Albania

Introduction

The *Institute for Folk Culture* deals with the research, collection, documentation and promotion of Albanian traditional culture in the country and abroad. It was established in 1947 primarily as a section for the collection of Albanian folklore (music and narration) within the *Institute of Sciences*. This section began to gradually consolidate itself as a structural unit and soon turned into the *Institute of Folklore* (1960), which was still attached to Tirana State University. During the following political period, the government emphasised scientific research by integrating all important research institutes under the roof of an Academy of Sciences (1972), an organisational structure typical of Eastern Block countries following the model of the Soviet Union.

Most significantly, the audiovisual archive, attached to the department of ethnomusicology**,** was well organised and kept in good condition, although the economic condition of the country increasingly declined because of its political isolation. Still, the institute was able to buy professional recording equipment like a portable UHER Report 4000 and NAGRA 4.2L recorders, which were state of the art in analogue field recording. Despite the political situation, the institute actively maintained contact with the scientific community, specifically European folklorists, ethnomusicologists, and audiovisual archivists. Several researchers and engineers also visited the Vienna Phonogrammarchiv in the course of an exchange scheme between the Austrian and Eastern Academies of Sciences.

In the course of the 1990s, after the political change in the country, it became difficult to maintain archival standards. Support for infrastructure gradually diminished and thus the physical condition of the tapes that had been accumulated over decades was endangered.

Holdings

Since becoming part of the Academy of Sciences, the institute has been comparatively well supported and, over the decades, has built up a considerable stock of various materials: audio recordings on magnetic tape, amounting to some 3,000 tapes of a total duration of approximately 2,000 hours; an ethnographic collection, which comprises around 33,000 material objects; a photo archive with 25,000 images; archives for folklore narratives and ethnographic reports, etc.

Activities

On the basis of the previous contacts between the Institute and the Vienna Phonogrammarchiv, a project to safeguard the collection of the Folklore Institute was proposed to the Austrian Ministry of Foreign Affairs to be considered for support within the framework of the Austrian Development Cooperation. In 2005, the project was granted a budget of 180,000 Euros. Analogue replay equipment as well as digital audio work stations and a server of sufficient size have since been purchased. Personnel have been trained in Vienna and in Tirana. Digitisation is well under way, and it can be assumed that the majority of the holdings will be digitised by the end of 2008. As the project also serves as a pilot for the Kosova region, Macedonia and Albania, a survey has been made of the holdings of the entire region, and a first training workshop focusing on the theoretical aspects of audiovisual preservation was held in Tirana in December 2007. This will be followed by a second workshop emphasising practical work ('hands-on') in autumn 2008.

Outlook

The problems still unsolved are caused by the reorganisation of the research structure of the country. As in all former Eastern Block countries there is a general tendency to move research from academies of sciences to universities, thereby moving from the old Soviet system to what is considered Western and modern. This may pose a threat specifically to archives. Examples from the Western World, specifically from the United States, tell us that archives and museums are inherently endangered in pure research environments, as the success of such institutions is measured by the output of scientific innovations and publications, while the organisation of research infrastructures like archives does not necessarily enhance the reputation of the institutions concerned.

The further success of the audiovisual archive of the Institute for Folk Culture in Tirana, like in many other similar situations, will need a clear decision from the authorities that long-term preservation of the archival holdings is a central aim of the institute, whatever institutional framework will be chosen. In this respect, academies of sciences still have a strong role to play.

Report by Bledar Kondi

Contact

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IRAM (Institute for Research and Archiving of Music), Skopje, Macedonia

Introduction

IRAM was established in 2000 as a research unit of the UKIM FM (University 'Ss. Kiril i Metodij' Faculty of Music) Theory and Composition Department, its main objective being the digitisation of Macedonia's cultural heritage. IRAM activities were financially supported and sponsored by three EU Tempus projects (enabling the purchase of equipment for the four studios) and one SCOPES project, with Fulbright visiting professors in Macedonia also playing an important role. Since there are no employees at IRAM, all the work is based on the enthusiasm of UKIM FM professors and students, who do their research and the digitisation mainly as part of their MA and doctoral projects.

Holdings

The IRAM Archive currently possesses:
- over 280 hours of digital audio (170.79 GB 44.1 KHz/16 bit)
- over 20 hours of digital video (215.56 GB standard definition)
- over 2,000 photos
- over 700 transcriptions

Audio and transcriptions collections (donated by relatives of the respective ethnomusicologists or other deceased folklore collectors):
- Firfov Collection (1,362 folk songs and dances)
- Firfov Transcription Collection (383 transcriptions from Macedonian folk songs)
- Badev Collection (359 songs)
- Vidoeski collection (60 hours of speech material, Macedonian dialects, folk tales, customs etc.)
- Brzanov collection (songs, speech and other materials, 68 transcriptions)
- Turkish makams and usuls (319 transcriptions)
- Penusliski collection (in the process of digitisation, tapes and cassettes with folk tales, customs, Macedonian dialects, instrumental and vocal music folklore)

Audio and video recordings from concerts and other cultural events:
- 75 audio recordings from concerts
- 3 videos from the concerts
- Yeni Yol (Turkish folklore) video
- 5 documentary videos (Gjorgji Donevski, Bapchorki, Kosturchanki, Kalistrat Zografski, Tempus in Macedonia)
- 5 IRAM Chronicle movies with over 100 short documentary videos

Activities

- digitisation of analogue audio and video recordings, scores, photos and other graphic materials
- audio and video recordings of concerts and other cultural events
- documentary videos
- international conferences and presentations
- website
- publication of DVDs, CDs, books, posters and other promotion materials
- maintenance of four studios for digital audio/video recording, editing and postproduction

IRAM has organised 15 international conferences and presentations, including 'Contemporary Trends in Musicology and Ethnomusicology', 'Cultural Policy and Music Education', 'Reflections on Macedonian Music - Past and Future',and various presentations in Europe and the US.

On its website (http://mmc.edu.mk/) IRAM offers the IRAM digital library of musicological and ethnomusicological books, textbooks and papers, including three books by Prof. Dr. D. Buzarovski, one book by Prof. Dr. Tome Manchev, and over 200 papers from IRAM international conferences. Additional features include information about composers, performers, musicologists and ethnomusicologists as well as an Internet Student Radio (80 programmes with more than 100 hours of audio) and the IRAM video Chronicle (101 short movies).

Outlook

The unstable economic, and particularly political and legal environment in the region has direct repercussions on the activities of the preservation of the cultural and audiovisual heritage. IRAM was one of the first Balkan institutions to promote digital archiving, but despite the obvious results in the quantity of the digitised materials and the high standards of the applied methodology, it did not manage to establish permanent (or in fact any) government support for its activities. The solution is found in the needs of the master and doctoral students for research materials, i.e. the education, and the enthusiasm of the individuals for the preservation of the cultural traditions.

As one can expect more and more students at UKIM FM master's and doctoral programmes, there is hope that IRAM will be able miraculously to continue with all its activities in the future too.

Report by Dimitrije Buzarovski

Contact

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Sound Archive, Institute of Art, Polish Academy of Sciences, Warsaw, Poland

Introduction

Established in 1949, the Institute of Art of the Polish Academy of Sciences in Warsaw (ISPAN) is an interdisciplinary institution carrying out research on Polish art and culture; it employs ca. 70 scholars in four departments (History of Fine Arts; History of Music; History and Theory of Theatre; Cultural Anthropology, Film and the Visual Arts). The Institute preserves unique collections of over 450,000 photographs of works of art and monuments, as well as the largest and oldest collection of Polish folk music recordings.

The Sound Archive of the Institute holds the most valuable collection of folk music recordings in Poland. ISPAN's present collection is a descendant of two Polish folk music archives from the interwar period. One of them was the Regional Phonogram Archive (RAF) founded in 1930 at Poznan University by Professor Łucjan Kamienski; of the collection of ca. 4,020 recordings of folk songs and instrumental music, most probably destroyed in 1939-40, only copies of 23 cylinders survived in the Berlin Phonogrammarchiv. The other institution from the interwar period was the Central Phonogram Archive at the Polish National Library in Warsaw, established in 1934 by Julian Pulikowski. Until 1939 ca. 20,000 recordings on 4,850 cylinders had been recorded. In 1944 Pulikowski was killed in the Warsaw Uprising, and the whole collection was burnt by the Nazis.

After World War II the documentation of Polish folk music started from the beginning. In 1945 Marian Sobieski and Tadeusz Wrotkowski established the Western Phonogram Archive in Poznan, whose collection of instantaneous 'Decelith' discs was absorbed into the newly founded Institute of Art (1949).

In 2006/2007 the Archive underwent substantial modernisation. The collection was relocated to new rooms which are equipped with special shelves and air conditioning.

Holdings

The oldest part of the ISPAN sound archive consists of the 420 'Decelith' discs mentioned above, and some 46,000 recordings made during the Folklore Collecting Campaign of 1950-1954, when more than 300 documentalists divided into regional teams made ca. 46,000 recordings from all over Poland. The earliest recordings preserved in the archive were made in 1904 by Roman Zawilinski (two wax cylinders with wedding speeches from the South of Poland).

Today, the archive also includes ca. 13,000 reel-tapes (of which ca. 6,500 are original field-recordings, and the rest are copies), ca. 200 minidisks and a new section of video recordings. In addition, there is a large range of music-related documents like manuscripts, letters, journals and photos connected to the field research.

The collection concentrates on Polish folk music with only marginal representation of immigrants from former Eastern regions of Poland (today: Ukraine, Belarus, Lithuania) or minorities (Lithuanians, Belarusians, Ukrainians, Jews, gypsies). The items contain performances of vocal and instrumental music as well as different forms of spoken information (speeches, interviews etc.). With more than 100,000 recordings, the Archive is a true national treasure of Polish folk music, and in many cases the only source of knowledge of vanished tradition.

Activities

The activities of the archive include:

- field documentation of folk music,
- preservation and conservation of the collection (incl. digitisation),
- providing public service to visitors,
- publication of the series *Polish Folk Song and Folk Music. Sources and materials*, edited by Ludwik Bielawski (ten volumes published so far, comprising ca. 5,000 tunes)
- individual research projects.

A major part of the metadata has been digitised (over 86,000 items), and digitisation of sound recordings has been carried out as well.

Outlook

The archive has been granted money to buy technical equipment allowing digitisation of recordings. The Institute of Art has recently become a partner in the EU-co-funded project DISMARC (DIScovering Music ARChives), aimed at linking major European archives into a network.

Reprot by Ewa Dahlig-Turek

Contact

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Phonogram Archive, Institute of Russian Literature (Pushkinsky Dom), Russian Academy of Sciences, Saint Petersburg, Russian Federation

Introduction

In 1908 the Phonogram Archive was founded as part of the Library belonging to the Russian Imperial Academy of Sciences on the initiative of its director, A.A. Shakhmatov. The first manager of the archive was E.A.Volter, who started collecting recordings of the Slavic peoples of Russia and Eastern Europe. These were the results of folkloristic and linguistic expeditions undertaken by A.A. Shakhmatov, E.A. Volter, M.S. Derzhavin and other scholars.

After 1917 several other collections were added to the Phonogram Archive, such as the important material from the Museum of Anthropology and Ethnography, which included many samples of the folklore and dialectology of the peoples of Siberia, the Russian Far East and Central Asia. Another rich addition to the archive was the large collection from the Leningrad State Conservatory. In the 1930s the director of this enlarged institution was E.V. Gippius, and in 1939 the Phonogram Archive became part of the Institute of Russian Literature and the Academy of Sciences of the Soviet Union. In recent years joint projects with scholars from other institutions have made it possible to digitise the valuable data in this archive and to use them for further research, publications and educational facilities.

Holdings

The Phonogram Archive contains about 10,000 Edison wax cylinders and more than 500 old wax discs. In addition, an extensive fund of gramophone records exists together with one of the largest collections of tape recordings of Russian folklore. Featuring speech, songs and musical performances, the folklore recordings of the peoples of Northern Russia, Siberia, the Russian Far East and neighbouring parts of Asia are very important for the study of ethnolinguistics, anthropology and ethnomusicology. In total, sound samples from more than 100 peoples of the world are represented in the collection, a wide range of materials mainly illustrating the oral traditions and the ethnography of the Russian Federation since the beginning of the 20th century. Many of these recordings form one of the basic collections used since 1995 in several joint European projects with Saint Petersburg.

Activities

The first of these joint projects on the *Use of Acoustic Data Bases and the Study of Language Change* (1995-1998) was financially supported by the organisation INTAS of the European Union in Brussels. It was possible to digitise part of the many recordings in the Pushkinsky Dom and to make them available for further research. In the second INTAS project, *St. Petersburg Sound Archives on the World Wide Web (1998-2001)*, some of these sound recordings were placed on the internet and are now available on a special website for further study. Within the framework of these INTAS projects, various collections have been digitised and stored in special databases.

Important activities related to these linguistic databases in Saint Petersburg concern the recordings of Russian dialects and minority languages in the Russian Federation. Within the framework of the research programme *Voices from Tundra and Taiga*, the data from old sound recordings have been combined with the results of modern fieldwork, in order to give a full description of the languages and cultures of ethnic groups in Russia. In these projects the techniques developed earlier are applied to some of the disappearing minority languages and cultures of Russia in order to set up a phono- and video-library of recorded stories, and of the folklore, singing and oral traditions of the peoples of Russia.

In order to safeguard many old and unique recordings of great historical and cultural importance, which still remain hidden in other Russian archives or private collections, frequently under inadequate storage conditions, several activities have recently been launched. A project on the

Reconstruction of Sound Materials of Endangered Languages for Sound Archives in Russia, financially supported by the British Library, makes part of the Russian recordings available to researchers all over the world and adds them to the database developed in Saint Petersburg. The digital re-recording and the storage of the material in a central facility will modernise the possible archiving activities in the Russian Federation and bring them up to date with present-day world standards. Such work can only successfully be organised in a central place where a good technical infrastructure is available. The Saint Petersburg Phonogram Archive will, for this purpose, serve as a competence centre, for it contains the most important historical collections of sound recordings in the Russian Federation and is already equipped with basic audiovisual machines. Various collections to be safeguarded have already been brought to Saint Petersburg, where they will be transferred and stored along with the relevant linguistic materials. One example of this is a large collection of ethnomusicological recordings which has been taken from the Moscow conservatory to the Phonogram Archive of the Pushkinsky Dom.

A further positive development is the fact that authorities in the Russian Federation show a growing interest in the safeguarding of this national heritage. As an example we should mention the fact that the local government of the Yamal-Nenets Autonomous Region gives financial support to the work in the Saint Petersburg Phonogram Archive as a follow-up of the project on the *Reconstruction of Sound Materials of Endangered Languages for Sound Archives in Russia*.

Outlook

In most Russian sound archives, the quality of preservation is not guaranteed, due to insufficient financial support, the lack of technical facilities and specialists for handling the collections, and the absence of standards for the preservation and description of the recordings. Consequently, the role of the Saint Petersburg Phonogram Archive as Russia's central sound archive of linguistic data, created with the most up-to-date technical facilities, is of vital importance; it provides a source of authentic material not only for scholars specialising in languages and cultures of minority peoples in the Russian Federation, but also for teaching younger members of certain ethnic groups who do not have sufficient knowledge of their native language. Many of these languages and cultures are endangered, and it is important to obtain all existing sound material and to make new recordings of speakers of these languages. The results of modern fieldwork and the reconstructed data from sound archives provide important information for the preparation of language descriptions, grammars, dictionaries and edited collections of oral and written literature.

Information about the database obtained in this central facility in Russia will become available on the internet and enable the exchange of information with other institutions all over the world. Other Russian archives will profit from the expertise in the new centre in Saint Petersburg, and the links with foreign institutions will be strengthened. In this way joint international projects with the Russian Federation will further contribute to the documentation and the preservation of the important cultural heritage in this part of the world.

Report by Tjeerd de Graaf

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Introduction

The audio archive in Bucharest, the largest in South-East Europe, contains a unique collection of traditional music from Romania. Most of the Institute's sound recordings were made during ethnological and sociological field research and are accompanied by extensive written documents, images, sometimes musical scores, choreographic and other field notes. Given the richness and variety of the Bucharest collection, the IEF archive will pose complex challenges to the structure of digital archives.

The archive holds documents of traditional music featuring numerous performers, genres, styles and variants, mostly connected with the cultures of peoples living within the country's borders (Romanians and minorities – Hungarians, Serbians, Tatars, Turks, gypsies), but also of peoples from some other geographical regions (Bulgarians, Serbians, Ukrainians, Moldavians, Aromanians from Greece, Bulgaria, Albania, Macedonia).

Often financially supported by the Romanian Academy, the earliest phonographic recordings were made by Pompiliu Pîrvescu in Dobrogea (1907), Béla Bartók (Romanian folk music from Bihor, 1909) and Dumitru Georgescu-Kiriac (1912). In 1927, a Phonogram Archive, led by George Breazul, was established at the Department of Culture in Bucharest. The following year saw the foundation of the Folklore Archive at the Composers' Society in Bucharest under the direction of Constantin Brăiloiu. These archives formed the basis of the Institute for Folklore, which came into existence in Bucharest in 1949 (with a section in Cluj/Klausenburg) in order to research the traditional culture within the country's borders. In 1962, the Institute for Folklore became part of the Romanian Academy of Sciences; one year later, the Ethnographic Section of the Institute of Archaeology entered under the jurisdiction of the Institute, which subsequently changed its name first to Institute for Ethnography and Folklore and, in 1990, to 'Constantin Brăiloiu' Institute for Ethnography and Folklore.

Holdings

Mechanical sound recordings:	
wax cylinders	14,164
discs (shellac and vinyl)	5,722
silver matrices	732
Magnetic sound recordings:	
original tapes	5,922
copies of wax	1,524
copies of discs	3,161
copies of tapes	1,341
others	174
audiocassettes	900
Digital sound recordings:	
CDs, DATs	few
Movies:	
positives on celluloid	355
negatives	315
reversible films	141
videos and CD-ROMs	100

Activities

The main problem of the sound archive is the chemical and microbiological degradation of the carriers. The matter of preserving the audio collections may be defined on two different levels: (1) preservation of the carrier; (2) preservation of the information.

1. Carrier preservation, no matter their type (mechanic, magnetic, digital), requires proper temperature, humidity and safety storage conditions. In 2002 the Institute, in collaboration with the National Institute for Optoelectronics, started a project in order to preserve and save the audio collections. Financed by CERES, it was entitled: 'Advanced studies on the measures taken for protecting and preserving the collections in the audio libraries'. Due to this project, a thorough monitoring process started in 2003. It was meant to identify the optimal parameters in both our deposits of that time (the Institute's building and the House of Free Press) and to develop a strategy for improving the micro-climatic storage conditions in order to preserve the recordings. As it turned out, the physical and chemical condition for preserving the sound carriers were micro-climatically insecure and had already caused damage to the tapes. The situation of the phonograph cylinders was even more complicated, their cartridge being contaminated with mould spores, a contamination which is irreversible.

The critical state of the sound recordings called for active intervention to prevent and stop the loss of cultural information stored in the IEF archives. As a consequence, the Institute's director obtained from the Academy new storage place at the House of the Academy, where the holdings formerly at the House of Free Press and parts from the holdings deposited at the Institute were moved. The new place permits better air monitoring and air conditioning, although the technical situation is still insufficient.

2. The preservation of information required the copying of the old recordings on new carriers; the strategy adopted is two-fold, encompassing a) the digital domain and b) the analogue domain.

a. Digitising the audio collection started as part of the research project 'Sound Archives' (2000-2002), carried out by the Institute's researchers in collaboration with the National Institute for Development in Informatics. Using common PCs and old tape players, the sound recordings were copied on CDs. At the same time, an audio database was set up, which should represent the complete systematisation of the audio documents and their accompanying written materials. Next steps involved a Siemens digitisation project and, above all, participation in a European project (see below).

b. The process of copying in the analogue domain, begun in the early 1970s but later stopped, was resumed after 2000; old tape recordings are copied onto tapes which are in better condition.

Outlook

It is hoped that the IEF will benefit greatly from having become a partner in ethnoArc (Linked European Archives for Ethnomusicological Research, 2006-2008), a European Research Project in the 6th Framework Programme. As its website (www.ethnoarc.org) states, this project 'aims to improve access to the wealth of Europe's ethno-musical cultural heritage' and 'contribute to the preservation, connectedness and exploitation of some of the most prestigious traditional sound archives in Europe'; this is to be done by providing a "linked archive': a common internet portal for distributed field collections from different sources'; efforts to digitise and catalogue collections are likewise supported.

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Annex 3. Memoriav

Kurt Deggeller

Memoriav, the Association for the Preservation of the Audiovisual Heritage of Switzerland was founded in 1995 with the aim of improving the preservation of photographs, films, sound and video recordings of national relevance. In the network all important collections of audiovisual documents are represented, including those of public radio and television. Memoriav is funded by the Federal Government. Currently the annual budget is of 3.3 Mio. CHF (= € 2,046,000)

Projects with research institutions have, until now, only been realised with sound archives. So far no project has been proposed for video, film or photography.

Last year Memoriav finished 2 important projects in the field of scientific sound archives: the field recordings of the Italian/Swiss ethnologist Roberto Leydi and those of the Swiss pioneer in ethnomusicology Hanny Christen. A third one with the recordings of the ethnomusicologist Alphons Maissen is still on its way. The technical part of these projects is carried out by the Swiss National Sound Archives in Lugano (FN).

In the planning phase all these projects met the same technical problems: different tape brands and different recording standards often not identified on the box of the tape; some tapes were also in a bad shape. For this reason it was difficult to calculate the cost of the digitisation in advance.

The Swiss National Sound Archives uses for the replay of this material a Nagra T-Audio and/or a Studer A807 machine, and for digitisation a NOA N6000-system.

Restoration, digitisation and cataloguing of the field recordings of the ethnomusicologist Roberto Leydi (1928-2003)

1572 tapes with field recordings
About 2162 hours of material
Formats: Preservation copy: 2/3 on WAV-files (96kHz, 24bit), 1/3 on DAT-cassettes (44.1kHz, 16bit); Access copy: 2 x CD-R (44.1kHz, 16bit), MP3-files (128kbps).

Total storage need for the preservation copies: 3328GB (3.25TB)
The preservation copies are stored in the mass storage system of the Swiss National Sound Archives

Database for metadata: FN-Base of the Swiss National Sound Archives
Share on the Costs for digitisation and cataloguing: CHF 150,000 = € 93,000

The originals remain at the Swiss National Sound Archives for long term preservation.

Restoration, digitization and cataloguing of the field recordings of the ethnomusicologist Hanny Christen (1899-1976)

71 tapes with field recordings (music, interviews) and broadcast programmes on popular music.
About 117 hours of recorded sound
Formats: preservation copy: WAV-files (96kHz, 24bit), access copy: 2 x CD-R (44.1kHz, 16bit), MP3-files (128kbps).

Total storage need for the preservation copies: 232GB
The preservation copies are stored in the mass storage system of the Swiss National Sound Archives.

Database for metadata: FN-Base of the Swiss National Sound Archives
Costs for digitization and cataloguing ?: CHF 60'000 = € 37'000

The originals remain at the Swiss National Sound Archives for long term preservation.

Restoration, digitisation of the field recordings of the ethnomusicologist Alphons Maissen (1905-2003)

120 tapes and 100 gelatine-discs with field recordings.
About 97 hours of recorded sound
Formats: preservation copy: WAV-files (96kHz, 24bit), access copy: MP3-files (128kbps)

Total storage need for the preservation copies: 192GB
The preservation copies are stored in the mass storage system of the partner institution

Database for metadata: FN-Base of the Swiss National Sound Archives
Costs for digitisation: CHF26,000 = € 16,000

The originals remain at the Swiss National Sound Archives for long term preservation.

We can see that in two cases the infrastructure of the Swiss National Sound Archives has been used to store the linear files as well as the originals. In the Maissen project the storage system of the partner institution should be used. It has to be checked if the security requirements for long time storage are fulfilled.

The availability of storage place for the original sound carriers and for the files is one of the main topics on the agenda of Memoriav. In the future a solution for this problem will be required before a new project is started. Memoriav has participated in the funding of the ingest and mass storage system of the FN. Therefore in cases where no infrastructure is available, Memoriav will propose to the project partners to rent storage space at the FN.

Later on, other storage infrastructure should be developed on a regional basis.

http://de.memoriav.ch/

Annex 4. Audiovisual holdings in Austria: a quantitative survey of materials held in- and outside audiovisual archives in a narrower sense[1]

The purpose of this study by Sabine Pinterits was the quantitative assessment of audiovisual holdings in Austria, with an emphasis on the inclusion of those materials which are held outside audiovisual archives in the narrower sense, i.e. the Österreichische Rundfunk (radio and television), the Österreichische Mediathek, the Phonogrammarchiv of the Austrian Academy of Sciences , and the Filmarchiv Austria.

The survey was organised on the basis of a short questionnaire which concentrated on the amounts of materials, and possible digitisation projects already under way or planned. This questionnaire was sent to all archives, libraries, research and cultural institutions listed in 'Handbuch audiovisueller Medien in Österreich'[2]. As the handbook was published already in 1989, this list was carefully updated and amended. It can be assumed that this list of institutions holding audiovisual materials is fairly complete, as no significant holdings in qualitative and quantitative terms are left out.

Non-responding institutions were contacted per email and telephone which resulted in an unusually high rate of respondents: For the first time in Austria, the holdings of audiovisual archives in the narrower sense have been completely assessed. Due to the efforts of the author in contacting non-respondents on a personal basis, the holdings of libraries, non specialised archives, museums, research and cultural institutions have been assessed to the unusually high percentage of 71%. This high percentage permits the extrapolation of the entire holdings of non-specialised archives, and therewith, in combination with the specialised archives, a fairly valid assessment of the total amount of audio and video recordings held by institutions and major private (record) collectors in Austria. Researchers that have not deposited their holdings in an archive, have not been included. Still, the survey gives a realistic picture of the amounts available, and also provides a basis for a future national digitisation plan.

The figures derived from this survey are as follows (in hours):

	audio	video	total
audiovisual archives	570.000	470.000	1.040.000
non-specialised archives	380.000	160.000	540.000
total	950.000	630.000	1.580.000

The omission of private research collections does not invalidate this figure significantly. From the results of the *Hidden Collections Study (Annex 1)* we may assume that, on an average, field collections of researchers amount to around 100 hours. Even if we assume that 500 of such collections exist in Austria, the amount missed in the total figure, namely 50,000 hours, would not significantly change the outcome.

The study also assessed existing digitisation programs: All audiovisual collections have their preservation programs in place, while only 42% of the non-specialised collections have started digitisation. It must be mentioned, however, that some of these projects are not carried out to international standards, mainly because CDs, recordable optical discs and even mini-discs are used as digital target media.

1 Abstract by Dietrich Schüller of the study: Sabine Pinterits: Audiovisuelle Bestände in Österreich. Eine Bestandserhebung unter Berücksichtigung von Sammlungen außerhalb spezifischer Archive [Dipl.]. Eisenstadt: FHS Informationsberufe 2006 (http://eprints.rclis.org/archive/00006187/01/AC05685113.pdf)

2 Handbuch audiovisueller Medien in Österreich

Because these figures have a high level of completeness and probability, they offer the possibility for a novel approach to the quantification of audiovisual collections. Up till today, on the basis of a survey done by the Presto project, worldwide holdings of audio and video recordings are estimated to be 100 million hours of audio and 100 million hours of video. Taking the Austrian figure as a fairly realistic assessment, we can relate the amount of around 1.6 mio hours to the number of Austrian inhabitants, namely 8 mio, which provides a 'per capita' index of audiovisual holdings of 0.2 hours or 12 minutes. If we take this figure and transfer it to Europe, where we may assume an equal 'density' of stored audiovisual materials, the European population of about 500 million would yield 100 million hours held in Europe. If we compare now this figure with the estimate made on the basis of the Presto figures, the result seems plausible, as it may be assumed that 50% of the worldwide audiovisual holdings are held in Europe. Any lower percentage of European holdings would only inflate the worldwide figure.

Of course, this first attempt to arrive at a per capita index of audiovisual holdings has to be challenged by similar surveys in other countries. Sweden, which by law records all radio and television programs broadcast in the country, most certainly will have a higher index than other countries where audiovisual archiving is less developed.

In summarising we have to remind ourselves that many holdings assessed in such surveys are redundant as they consist of commercially produced CDs and DVDs held in multiple copies in libraries, research and cultural institutions, and also of radio and television broadcasts that have been recorded for research or educational purposes. A special study would be needed to assess a realistic amount of unique materials which form - in a narrower sense - the audiovisual heritage of a nation or the continent.

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