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EDITORIAL

Helen P Harrison

During the past few months there has been cause and opportunity to reflect on what makes a sound or audiovisual archivist and what constitutes an audiovisual or sound archive, as we have searched to define our terms of reference and form an identity. In the area of training and education of audiovisual archivists we were obliged to look at the content of the profession, what we were training people for. Other areas such as copyright pointed to the special needs of archives and whether separate legal rights had to be promulgated to deal with archival situations, selection in audiovisual archives is different to that in many other collections, and the list goes on. Many will argue that we should not be talking about archives and libraries as different, and of course in some cases, especially with national and some specialised libraries they may have very similar goals. Those who argue that there is little difference use the word collections, but that seems to be a very general term and is perhaps better reserved for groups of material *within* an archive or library. Let us start by defining our terms adequately at one level before moving away. The AV Philosophy group spent much of last year trying to do this at the conferences of the major audiovisual archive associations, IASA, FIAF and FIAT and the debate continues.

As for our identity as audiovisual archivists that is even more difficult to pinpoint. We have as individuals come from a wide variety of backgrounds, some bringing special skills and others learning basic and additional skills 'on-the-job'. We may call ourselves archivists, but what does that mean to people outside the profession? Do we have a corporate identity. Archivists are bred, not born and it is very often the result of 'happen-chance' that leads them into their profession. Have you ever heard a small child declare that they wanted to be an archivist when they grew up! Just looking at the career pattern of one individual may indicate how these things can happen and also perhaps how they could be prevented or alternatives and diversions taken up instead. I am an archivist and given my past history and training I am an audiovisual archivist which of course includes sound and vision. This is a statement of fact and not meant to be an irritant to the purists. This includes sound materials, the visual materials of film and video and also the still materials which may enter archive as part of the collections. It also encompasses the reference books, periodicals and other textual documents which accompany the materials and without which some would be incomprehensible and inaccessible - the scripts, the storyboards, the posters, the trailers and so on.

I happened to begin my career in a film archive as a cataloguer in the National Film Archive in the UK where the work had its effects and lasting influence. It was here that archival principles and leanings were instilled, and archival cataloguing skills, those skills which allow you find material in a mass of information. Moving on to Visnews (now Reuters News Service) it was to work under pressure day in and day out, providing access to information and footage by the hour on the hour, possibly something only our Radio Sound Archivists have to face in these days.

Training and education as a librarian laid the emphasis on access to information and material in any format.

Now begins the dilemma - but should it? It is of course the age old problem of preservation versus access, but it should no longer be looked at in this way - it must be observed differently. As both an archivist and librarian I have to take on the problems of both, in collections management and also consider the goals involved and the possible solutions to meet these goals.

What I am not is an administrator or worse a manager - perish the thought. I did not come into the profession to learn management skills, I came in to practice a craft as an archivist/librarian, nor did I enter the profession out of desperation for something to do, I wanted to work in information and the most interesting area at the time was contained in audiovisual materials. The trouble with most professions nowadays is that the older you get and the further up the hierarchy, the less opportunity you have to practice the real skills of the job. Some are fortunate enough to move up from a skilled position to an administrative post in the same discipline, but beware - here lurks trouble - like other professions there is always a skilled person trying to get out - someone who really knows what they are doing, gets frustrated in not being able to get hands on again, sometimes able to pass on their skills, but sometimes not, and always wanting to do it better for fear of competition! It is the old 'sitting next to Nellie' in reverse.

This has to be the most frustrating part of all - those who can **do** and those can't **teach** - Shaw's adage is unkind. But that is why so many sound archivists are too busy practising their professions rather than helping to train others, and of course one must not forget the economic factor that if sound archivists are busy teaching they are seldom paid to carry on their normal roles - it is an either/or situation. The positions which will allow for salaries at home and even basic essential travel expenses away are very few and far between. Much of this work is done for a pittance and all praise to those who are prepared to carry it out. It would be better if those who can **do** and **teach**.

There are several thoughts to be going along with. The archivist or whatever ilk has to take cognisance of many skills - of these I would suggest management (business) is the least important. We must start thinking about more prolonged debates which concern the different parts of our job which make up the whole. Not all of us have been fortunate enough to do all of the jobs which make for an archivist; but then not all of us could claim to have the necessary knowledge or skills to encompass technical and non-technical tasks with the same degree of expertise. But we should at least aim, if we call ourselves archivists, to understand the complexity of tasks which make up our profession - not be experts in each and every aspect - that would display an arrogance beyond most of us, but we should know that the several aspects have all to be considered and their place in the organisation of an archive and archival functions.

Some of the obvious areas which impinge on our archival lives have been the subjects of some important, if limited, debates in recent months - limited by lack of publicity, communication of results and the necessarily small groups of people who were able to take part. Just to mention a few of these topics the archivist must consider the acquisition of material, the selection and appraisal of the collection: copyright, contractual and neighbouring rights, - the observance of the rules of the game: the training of archivists, the provision of access to the materials so carefully collected and maintained and the ever present technical advances which enable us to carry on keeping the collections usable and accessible.

All of us can go too far in our particular speciality, we get involved and become intense and too precise: I am sure that none of our members fall into this trap: documentalists have to be precise and informative, but they have the end result to consider - rapid and accurate information retrieval; rights officers must be vigilant and fair to owner/donor, recipient and archive alike; technical personnel need chemistry, physics and electronics to enable them to conserve, preserve and restore the materials in their charge, but they also have to have a knowledge of archival principles, to realise the result of their intervention, when to act and when to stand back and wait.

It is a great pity and a great lack in the processes of IASA that we have little time for publication: this *Journal* fills part of the gap, and many of the articles do keep us abreast of activities and current thinking in our own and related fields, but we have given too little time in recent years to developing a corpus of publication. I regret that the only Special Publications of IASA remain as *Oral History*, *Guide to Sound Archives: their establishment and administration* and *Selection in Sound Archives*, based on a series of conference papers. All elderly booklets, but still in demand and used around the world - probably because they are the only materials available. However it is time that they were updated and we should be using our conferences to do so.

It is something I personally have little time left to accomplish albeit with the best will in the world, but I would urge my successor/s to consider such work as important - and also to start some more series of subject conference sessions. Already we see some of the results which can be achieved in this *Journal* - the Cataloguing seminars associated with the conferences are an important source for such separate publication. Copyright which is a major topic of the forthcoming Washington Conference could start another such publication, especially if it is linked with the UNESCO workshop held in December 1994 and reported in the *Information Bulletin* No. 12 January 1995. It does seem to be a subject of conversation in many quarters at the moment. Copyright is something of a catch all term for many aspects including legal deposit, contractual agreements, intellectual property rights, neighbouring rights, to name but a few. It is also not always the boring topic which may appear to many - complex yes and many sided, but ever present. And as an ever present thorn in the flesh or reminder of worse to come it should be addressed.

Other topics which we might consider include an updated *Guide to sound archives* and the *Selection* publication already mentioned. Many aspects have been introduced since they were written and many documents of the principles and criteria involved have been developed within a wide range of archives. Some have been published but it would be useful to draw them together for comparison. Other topics which could be addressed include the Philosophy of the craft of sound archiving, Acquisition and collection, Technical, Access and of course Documentation and Information Retrieval.

This issue of the *Journal* contains some papers from the Bogensee conference which could not be included in the last issue, for space reasons. The patience of the contributors is acknowledged, but I hope that the information is still fresh. One of the more successful joint sessions was one on the Audiovisual Heritage in Switzerland when Serge Roth of FIAT and the television station SSR and Kurt Deggeller of the National Sound Archive indicated how best the two areas of interest could work together for the benefit of the society as a whole. The other session, printed in some detail, as a forerunner to Washington is the Seminar on the Cataloguing Rules for Audiovisual Media and I am grateful to Olle Johanssen for providing the information. One of the papers from that pre-conference seminar was by Rainer Hubert on the

definition of AV materials - not directly connected with cataloguing, more with another lengthy session at Bogensee on the Philosophy of AV media. What any cataloguer and archivist for that matter has first to do is define his terms - we have not, but we are moving towards some definition and Rainer's article will add considerably to the literature on this topic. Chris Clark of the National Sound Archive in London contributes an article about the retrieval system of a National Sound Archive which is a major input to the cataloguing debate.

Much of the work being done by the AV NGOs and others is of course being picked up by the Memory of the World project of UNESCO and for information a paper presented by a staff member of the PGI is included in the issue.

John Spence from ABC in Australia carried out a survey last year to determine how radio sound archivists were trying to conserve their materials: were they going digital or not? The radio sound archivists are some of the people at the sharp end of the digital versus analogue argument and have their special concerns. George Brock Nannestad strikes another note for some of those away from broadcasting and commercial interests, urging caution in the acceptance of digital technology without more thought and consideration. This debate on the unconditional acceptance of digital technology for all situations will form another interesting discussion point in Washington.

Digital technology has been accepted more readily in the print world where parameters are often less critical and the material is less complex than is the case with audiovisual materials.

Information Technology and technological advances are in their way wonderful, but they can be something of a burden as well. Computers and the latest 'Cyberspace' may well help you, especially if you claim to understand them, but they can frustrate, infuriate and bedevil your best efforts. By all means use them as the tools they are but do not allow them too much authority or give over your best efforts to computer interference. In ten years time I doubt if we will be one big happy Internet family.

The *IASA JOURNAL* is constantly looking for material to publish: articles, reviews, reports of meetings or new developments. Please send anything which you may consider of interest to fellow members to the Editor, address on the front inside cover. Please send copy in either good letter quality or better on PC floppy disc in ASCII format.

The date for copy of the next issue, Number 6 to be published in November 1995 is

30 September 1995

IASA PRESIDENT'S COLUMN

James McCarthy

'All aboard the super highway', is one of the most pervasive utterances of the last 10 years. The prospect of unlimited information pouring in a continuous stream from the four corners of the earth and out the spout of your VGA monitor, has caught the imagination of millions and made millionaires out of a few.

Instant electronic erudition, similar to filling shelves with unread books and unplayed recordings is another fashion accessory for the nineties, too often justified in the name of information and learning.

As we are slowly coming to realise, 97% of the material coming through the Internet is rubbish and the time required to sift through the dross in order to find what we want is considerable. Much the same can be said of cable TV. Multiple choices from a very narrow range of subjects at huge expense to seller and consumer alike, with only instant gratification as the principal rationale.

It is a situation familiar to any archivist, many of us have been grappling with similar problems for years. What to keep and what to let go. Do we retain all information for a given period and then make choices? Do we make choices at the point of collection and risk missing the odd treasure?

The recurring nightmare is a world filled with people investigating and studying the past, millions of us sitting in front of computer screens endlessly wading through countless hours of information. All being sent around the world in ever increasing quantities. As parties to this prospect it must be something we should consider regularly. In a world which has seemingly lost its focus, what we decide to keep becomes even more important.

Attendant upon this will be increasing pressure for the privatisation of archives, as governments weary of the costs involved in maintaining expensive centres of information. Thus the temptation to sell them to the highest bidder will increase and attendant upon this will be the desire of the new owners to 'own' the information in the collections.

Already we have many examples of materials, well out of copyright, still attracting royalties because they are controlled by large companies, who see no reason (outside a court challenge) to give them up. As there are few who could seriously challenge such control, the implication for the easing of controls on old materials is of concern.

The concept of the *public domain* is anathema to those who would turn a quick dollar, so the prospect of the world hooked into one vast communications network, controlled by fewer and fewer people and with as much as possible 'owned' by them, becomes a possibility not even George Orwell could have imagined.

All of these scenarios and the manipulation of information which could arise from them, should be of concern to those who collect and keep the history of the world.

IASA / ARSC / FIAT CONFERENCE

WASHINGTON DC 1995

SEPTEMBER 17-20

Three associations combine efforts, hosted by the Library of Congress in Washington DC to present their conferences within the same time framework. The conferences begin during the weekend of September 16th and continue until September 20th with open sessions either in combination or separately. The open sessions will cover some particularly important topics such as cataloguing, an all day session on copyright and legal issues, and the preservation of audio and video materials with special attention to hot and humid climates. There will be other attractions as well.

Thursday the 21st September is being reserved for professional and leisure visits including the Library of Congress, the National Archives, National Public Radio and the Voice of America and local tourist attractions such as the Smithsonian Museum and national monuments. This in particular looks like developing into an action packed day and people may wish to extend their visit to take in more, or disappear into the Washington hinterland for some relaxation after the busy week.

Of course IASA will not forget its working sessions for committees or its business sessions.

Delegates will be staying at the Marriott-Key Bridge hotel across the Potomac river in Rosslyn, Virginia. Some of the sessions will be held there, but IASA will spend much of its time in the Library of Congress - an easy journey from the hotel. Evening entertainment will be laid on by our hosts, but because there is so much to do and see we will be allowed freedom to do our own thing on a few occasions.

Programme information for IASA is being co-ordinated by Magdalena Cséve, Fax: +36 1 138 8310 and she is waiting for your suggestions.

Local arrangements are being co-ordinated by Gerald Gibson who can be contacted at the Library of Congress Washington DC 20540, Fax: +1 202 707 6449 or E-mail at gibson@mail.loc.gov

WE LOOK FORWARD TO SEEING YOU IN WASHINGTON DC

CATALOGUING

THE NATIONAL SOUND ARCHIVE IT PROJECT : DOCUMENTATION OF SOUND RECORDINGS USING THE UNICORN COLLECTIONS MANAGEMENT SYSTEM

Chris Clark (Head of Documentation & Public Services, The British Library National Sound Archive)

As I write this, the final implementation rituals of the three-year project, known as the NSA IT Project, are being enacted and it is now possible to offer IASA colleagues a clear view of what has been achieved and how we managed it.

THE NECESSITY

If the past achievement of the NSA in terms of record creation can be summarised as unrelated, partial views of an accumulation of recorded sound, then the principal objective of the NSA IT Project has been their transformation into a fully-catalogued, integrated archival collection in which the key processes of accessioning and cataloguing (including conservation logging) are governed by a cohesive system.

Crucial to this transformation were:

- procurement of a collections management package;
- conversion of retrospective data;
- wider involvement of NSA staff in record creation;
- derivation of catalogue records from external sources

PROCUREMENT OF A COLLECTIONS MANAGEMENT PACKAGE

Throughout the Project, the NSA has been assisted by Touche Ross Management Consultants. Their initial business appraisal of 1991¹ recommended that NSA select a collections management package and acquire and run its own minicomputer system².

By October 1992, Touche Ross were in a position to finalise the hardware and software requirements. Stemming from their original recommendations, these envisaged a single system approach which would:

- provide access to all the different data sources identified by NSA as vital to the project;
- ensure NSA ownership of its user services and functionality;
- form the basis from which new public services and value-added commercial services could be developed.

There was some debate at that stage about the suitability of their recommended option in the case of oral history and mechanical sound recordings, the successful access to which would require free text retrieval capability. It was noted that several systems coming onto the market were in fact hybrids, combining some of the storage advantages of relational databases with the retrieval power of free text systems.

Work on the business requirements of the system had been proceeding in parallel. These can be summarised as:

- Accessioning product copies and collections
- Cataloguing recordings (and works)
- Conservation management (documentation of dubbings)
- Use of authority file(s) to ensure cohesion & consistency of the data
- Provision of an OPAC to allow specific searching and browsing
- Reports (including production of discographies) & statistics

Due to the size of the contract and our reliance on public funding, we were obliged to follow EEC GATT tendering rules overseen by the CCTA, the UK Government's centre for information systems. This took eight months from the placing of the original invitation to tender to the final selection of the system but it is clear that the process had a significant impact on the competitiveness of the bids.

And the winner was Kinesis Computing Ltd offering the Unicorn Collections Management System (by Sirsi Corp.) running on networked PC's³ linked to an IBM RS6000 minicomputer. The system integrates relational database and free text software technologies, the latter based on BRS/Search.

The system was installed in April 1994, acceptance testing began in June and was completed satisfactorily in December. Almost all of the staff have now been trained and live data is being added.

CUSTOMISATION

Unicorn has been installed widely in the United States over a period of nearly twenty years and has made an impressive start in the United Kingdom after only four years. It is a system which is ideally suited to academic and public libraries holding their records in MARC format. Fortunately it is also a flexible system: the NSA's requirements⁴ have occasionally pushed that flexibility to the limits. The overall structure of the customised database was derived from our analysis of the components of sound recordings from the collections management point of view. We concluded that the recorded sound and its material embodiment were separate entities: Billie Holiday recorded singing *How deep is the ocean* in New York on 14th April 1954 remains the same, singular, captured sound event regardless of the dozens of 78s, singles, albums (on LP and CD) and NSA dubbings which bear its message and which may combine it with a changeable assortment of other recordings by her or any other artist. Each of these message carriers (or products) represents, in turn, a potential liability for the NSA in terms of storage, copyright and conservation. Thus emerged the concepts of recording, product and product copy.

Given that the recording is the singular constant, it was decided to make it the central focus and emphasis of the NSA's IT System thereby vindicating the thinking and policy of my predecessor, Diana Hull.

We then took Hull's thinking a stage further. The relational model for the system identified a separation between published works and their recorded performances⁵. Irving Berlin's song *How deep is the ocean* published in 1932 by his own publishing corporation remains essentially the same "text" regardless of the hundreds of times it's been sung and recorded. Hence the provision in the NSA IT System for author/work packages.

NSA catalogue records are therefore held as documents in Unicorn's BRS/Search databases. There are three databases (or possibly three "parts" to a single database) one for each of what the system refers to internally as "libraries":⁶

Works-file
Recording
Product

each of which represents a group of related logical entities. A Work is the logical creation, usually of a known author or authors, which is performed and recorded on one or more recordings.

A Recording is the event at which a performer is recorded performing or uttering a sound of some nature, which may be of an already extant work or work excerpt. It may be a performance of one or more Works, and must exist on one or more Products.

A Product is the published or unpublished carrier, on which one or more recorded performances are brought together, which is held by the NSA in one or more product copies and must contain one or more Recordings.

Links between the "libraries" are established when items are catalogued. The link between Product and Recording is provided by the .087. field "Accession number". The link between Recording and Work is provided by the .299. field "Short title", an artificial creation to work round the restrictions of the OPAC's Search Results Display Screen⁷. Annex D shows how these links operate between Recording and Product records.

The drawback of this solution is that certain types of discographical query are not supported in the OPAC. For instance, if you wanted all live recordings of works by Sibelius on the Decca label, this would not be possible in the OPAC, at least not in one search. To retrieve all relevant details in one pass requires a report and Sirsi are, at the time of writing, customising such a report for us which will produce sorted discographies drawing on more than one "library" simultaneously. Such reports are potentially a source of revenue for the NSA as well as an enrichment of Sirsi's software.

CONVERSION OF RETROSPECTIVE DATA

Several mutually exclusive approaches to record creation evolved at the NSA over a period of years. Some, like the Wildlife Sound species forms, were perfectly adequate and well-suited to sectional needs; others, like the National Discography database and the microfiche catalogue produced by the NSA Cataloguing Section, provided comprehensive and high quality public access to limited categories of recording. The NSA had also recently (in the Autumn of 1991) reaccessioned and barcoded its holdings of published recordings and brief details (record label name and number plus shelfmark) existed as enormous files in Word format on an individual PC. These were therefore considered the building blocks of the new database.

In addition, some good work had been done by other curatorial areas: unpublished recordings had been documented on paper and some small databases using CardBox Plus had been created. The biggest worry was the immense backlog of retrospective published recordings not covered by National Discography nor by the NSA's catalogues. We therefore approached the BBC Gramophone Library and bought their entire catalogue in the expectation that we would find catalogue records to match 40-60% of this backlog and that the remainder could be quarried when acquisitions of older material are made in the future.

The BBC "gamble" has yet to be seen to have paid off, but all other sources are now converted and are being loaded into the database where, not surprisingly, they will need systematic cleansing in key areas such as titles and name headings, a process which is likely to continue throughout the ten-year lifespan of the system.

Access to NSA holdings will be greatly increased in an instant through the conversion and loading of these retrospective catalogues. For the first time, users will have on-line access to data for all accessioned products, published and off-air - more than 700,000 individual product copies. The presence of fully catalogued records for each accessioned product copy is harder to predict until the data is loaded, but estimates indicate that as much as 60% of our holdings may be covered at the outset.

This level of coverage will not, however, be uniform across all curatorial areas. Popular and classical music (and to a lesser extent, jazz, poetry and drama) will benefit most from the conversion and the ongoing derivation of data from outside. Areas like international music, oral history and mechanical sounds will remain undernourished by the conversion exercise and will not benefit at all from derivation. Original record creation at NSA will therefore give to these areas to attain a balance of coverage.

Retroconversion is a risky business. Briefly, our strategy was to have Touche Ross carry out the work through a sub-contractor and to negotiate a fixed price contract. We did scarcely any data preparation (in the form of editing or cleansing) though in hindsight we should have spent more time on data analysis, particularly in the hard copy sources.

The sub-contract for data conversion was won by DEI. Electronic sources were converted in the UK (mostly by one individual, John Murray) and hard copy sources were filmed and sent to Sri Lanka for rekeying. At that stage NSA had not finally decided on the system, so the initial conversion was to an interim standard.

Verification procedures were established by the consultants. Perhaps not surprisingly, the electronic sources quickly passed acceptance but the hard copy sources failed repeatedly. To cut a long, agonising story short, the wildlife forms (replete with illegible hand writing and Latin names) turned out far better than we had expected, but the cards and forms, the bulk of which were typed, suffered almost every conceivable conversion error. The upshot of which was that DEI had to re-key the NSA card catalogue virtually from scratch using staff in the U.K.

When all sources were acceptable in the interim format, we then passed onto post-conversion. Had the data in each source been 100% internally consistent, this would just have involved translating the interim tags into NSA-MARC tags and adding some extra loading instructions. The structure of the Unicorn database, however, meant that each source had to be dis-aggregated, de-duplicated and only then could the translation be made, and then not always were the interim tags destined for the same Unicorn field in every case. Post-conversion has been carried out by John Murray of Murray Computing. His diligence and involvement with the data have been crucial to the success of this part of the project.

WIDER INVOLVEMENT OF NSA STAFF IN RECORD CREATION

Previously, a small team of four or five staff was responsible for all mainstream cataloguing at NSA. This was never likely to be adequate and the arrangement made with the MCPS in the mid 1980s was designed to offset this. However the legal proceedings between MCPS and the BPI in 1990-1991 over royalty payments which threatened the supply of catalogue data by this means indicated that increased dependency on the National Discography was risky. The only alternative was to extend the documentation base at the NSA in the hope that the retroconversion and National Discography would help to plug the known gaps.

My task is therefore to establish a framework of general working practices governing the documentation of sound recordings at the NSA, mindful of the strong centrifugal tendency which can afflict cataloguing where the variety and distribution of those recordings is so great. In building this framework it has been considered vital to support proper standards of accuracy and consistency and it was therefore decided to follow (adapting where appropriate) rules and procedures for the formulation of descriptive data established by bibliographers and maintained elsewhere in the British Library.⁸

Conformance of authority file headings with BL files⁹ will also be essential if NSA catalogue records are to be made available on the BL OPAC. However, many of the headings the NSA requires to describe recordings "of the moment", eg. reportage on actuality and the contemporary arts, have no precedents and the NSA therefore finds itself at the leading edge of labelling in these areas.

The maintenance of standards at these levels presupposes technical qualifications and aptitudes which are not universally present at the NSA. Staff training at the system's outset and intermittently throughout its lifetime has been and will continue to be essential.

DERIVATION OF CATALOGUE RECORDS FROM EXTERNAL SOURCES

Among the sources identified by the NSA for supply of catalogue records in the future include the National Discography, the BBC and the Gramophone. Of these three, only the National Discography will be a regular supplier in the immediate future since there are problems inherent with the other two: the data structure and style of the Gramophone database is so remote from the NSA's that conversion routines would have to be very sophisticated (and therefore expensive); the outcome of further negotiations with the BBC for supply of data beyond the original consignment is unclear at present.

THE FULFILMENT

The Unicorn collections management system will support the NSA's objectives with regard to the documentation of its collections for the next ten years. We are confident that it provides the means for us to achieve near 100% coverage by the end of that lifespan. But we will only achieve this if we constantly remind ourselves of the project's main purpose - to provide access to the collections, rather than fulfil any grander ambitions such as the creation of an encyclopaedic discography (though in parts it may achieve such coverage and status) or a definitive embodiment of every internationally agreed cataloguing standard governing sound recordings.

Unicorn has met (or will very soon meet) every mandatory requirement of the Project. Our customisation has compromised the software's proclaimed simplicity in certain areas, but no aspect of the NSA's documentation work can claim to be inadequately served by it. It is a robust and mature package and its regular updates (almost annual) are driven, to a large extent, by user feedback. For instance, one facility which was not available at the time we selected the system, the ability to sort result sets in the OPAC, will be available in the next version to be released this summer.

ANNEX A: Table of NSA "MARC" codes

Tags which are not numeric are Unicorn control fields outside of the discographic record.

Tag	Field name
020	National Discography Product ID no.
021	ISRC (temporarily National Discography Recording ID no.)
023	Product barcode
031	Record company name
032 a b c d	Label/prefix/catalogue no./suffix
035	Label match string
041	Language code
044	Pressing code

ItemType2	Broad classification code
ItemType 1	Curatorial collection
087	Accession number
088	Copy designation
089	Archive copy no.
090	Playback copy no.
091	Other copy no.
092	Copy condition code
093	Dubbing ref. no.
239 a b	Alternative title/subtitle
240 a b c	Work title/subtitle/title modifier
246	Item title
260 c	(P) date/Dubbing date/Recording date depending on context
261	Publisher
265	Release date
266	Original (P) date
299	Short title
300	Heading type code
301	Item duration
Recording Shelfmark	Location of item on carrier
310	Carrier description (format extent size chrominance playback speed playback mode direction of play (non-standard) type of cut
311	Product type
311 (AF)	Scope notes
312	Item start time (tapes)
312 (AF)	Establishment code
313	No. of items on product
315	Playback mode
316	Playback speed
350	Terms of deposit
351	Access restrictions
440 a b	Published series & no.
441	Unpublished series
470 a c	Broadcaster & channel/Date of broadcast
474 a	Broadcast title
490	Collection title
499	Product title
500	Work notes
502	Product notes
503	Author notes
504	Programme notes
505	Contents note
506	Item notes
507	Original species

508	Performer notes
509	Recording notes
510	Behavioural notes
511	Number, age, sex
512	Visual identification
513	Tape track ref. no.
514	First line of work
515	Background sounds
516	Recordist perspective
517	Recording equipment
518	Rec. circumstances
519	Recording method
520	Signal Processing
521	Sound quality code
522	Sound quality note
523	Acetate blank mfr.
524	Acetate blank code.
525	Documentation
528	Item copyright
530	Collection inventory
531	Collection description
532	Acquisition source
533	Purpose of original rec.
534	Sponsoring body
536	Product copyright
537	Material
538	Take number / note
539	Live recording indicator
540	Matrix number
541	Original issue no.
542	Live relay indicator
543	Non-standard package
544	Label colour
545	Label design feature
546	Original or copy
547	Conservation plan
548	Critical action date
549	Loaned product note
551	Location
551	Country (Wildlife records)
552	Region
553	District
554	Localitv

555	Performance occasion
556	Dubbing contractor
557	Dubber's ref. no.
558	Dubbing of
559	Dubbing condition
560	Sound description
561	Interview summary
562	Dubbing duration
563	Type of tape
564	Eq characteristic
565	Conservator's notes
566	Eq, NR, etc applied
567	Remasterer
600	Name as subject
631	Country
632	Culture
633	Music category/genre
655	Habitat type
656	Local time
657	Ambient temperature
660	Subject
670	Dialect/accnt
680	Behavioural context
681	Sound category
690	Environment
691	Mechanism
692	Action
693	Operator
700 a b c	Author/dates/function
702 a b c d e	Performer/dates/function/role/occupation
706	Product compiler
707	Recordist
730	Species heading
731	Sub-species heading
732	Miscellaneous sound
733	Mechanical sound
734	Machine name
735	Age
736	Year of manufacture
956	Copy notes
957	Copy usage status
959	Acquisition date
971	Cataloguing status
976	Data source

ANNEX B: updating Unicorn

The input routines are reasonably straightforward on Unicorn though cataloguers entering data into any one of the three libraries need to be fully aware of the context of their update since there are few signposts provided by the system. The displays of data once input and indexed are almost exact reflections of the data as input and the two routines, update and retrieve are never more than a single key stroke away from each other.

Commands such as Edit, Create, Duplicate Item and Browse Authority are linked to function keys and data can be copied and pasted between screens.¹⁰

Inputting is via templates (or entry lists) drawn from eleven different formats designed to reflect the main processes, the different categories of recording and subject areas:

Accessioning uses PRODUCT library with the following templates:

UNPUBLPROD		for unpublished recordings eg NSA live recordings C series
PUBLPROD		for published products eg. donations from UK recordings industry, purchased imports
OFFAIRPROD		for NSA off-air recordings (or ROT)
ACETATPROD		for products and vulnerable carriers with a special conservation priority eg. 'acetate' discs

Cataloguing uses RECORDING and WORKS-FILE libraries with the following templates:

MLRECITEM		for recordings of music and literature
SRECITEM		for wildlife recordings
MECRECITEM		for industrial-mechanical recordings
OHRECITEM		for oral histories and interviews
DOCRECITEM		for documentary recordings, talks and actuality
WORK		for published works with or without an author/composer ¹¹

Conservation logging uses the PRODUCT library with the following template:

CONSRVPROD		for NSA conservation copies of any of the above which involves describing the conservation methods applied.
-------------------	--	---

Authority File maintenance uses a separate set of templates governing eight separate thesauri:

GENRE	for IMC genre headings (633 field)
MECH-MISC	for Mechanical and Miscellaneous classifications (733/732) and Machine names (734)
NAME	for various proper names: record company and label names (031/032), performance occasions (555), names as subjects (600), operators (eg. bus/rail companies) (693), authors and performers (700/702), recordists (707).
PLACE	For country/culture headings (631/632) and dialect/accent headings
SUBJECT	For headings, especially in Oral History and Actuality recordings which define what people are talking about (660)
TITLE	For published series titles only (440). Note that the WORKS-FILE library is essentially an author/title authority file in its own right for published works
WILDLIFE	For species and sub-species names (730/731)

Each record in the database has to be accompanied by a set of control (or holdings) fields - Shelfmark, Format, Permanent (and Temporary) location, Curatorial collection, Broad Classification - plus indications as to which library the record will belong (Product, Recording of Works-file) and which template will be used for the descriptive data. Once this routine is mastered (and default values can be set for each user) it takes less than twenty seconds to negotiate.

ANNEX C: navigating the OPAC

Public access choices

To pick a new option, press TAB to get there, or option's first letter.

Enter a number from below, then press RETURN or ENTER.

HELP GOBACK STARTAGAIN PRINT

CHOOSE:1

PUBLIC ACCESS CHOICES:

- 1) CATALOGUE
- 2) OTHER DATABASES
- 3) INFORMATION DESK

PAGE 1

(c) Sirsi Corporation 62n

| | NUM | PC/TCP | V1.13

Choice 1) leads you directly into Unicorn's OPAC, the NSA's on-line catalogue.

Choice 2) enables you to use Unicorn's Enhanced Researcher's Access module which is currently configured to enable NSA to sort result sets but could be configured in future to search up to twenty other databases simultaneously through its Z39.50 interface.

Choice 3) is a bulletin board which enables NSA to post notices, lists of publications for sale, recent significant acquisitions, etc.

Searching the NSA on-line catalogue

The list of broad search categories has been especially tailored to meet the needs of the NSA's collections and its users.

```
HELP   GOBACK   STARTAGAIN   PRINT
CHOOSE:1
-----
      LOOKUP IN CATALOGUE BY:
      1) NAME (person,group,animal,label)
      2) TITLE (work,album,track)
      3) SUBJECT
      4) PLACE
      5) Any WORDS or NUMBERS
      6) COMBINATIONS (of the above)
      7) BROWSING
PAGE 1                               (c) Sirsi Corporation 62n
      | | NUM | PC/TCP | | V1.13
```

Each of the first four options include field equivalencies. Therefore

NAME permits you to look up specifically by one or more name fields, e.g. Record label {032}, Broadcaster {470} Performance occasion {555} Name as subject {600} Author name {700} Performer name{702} Species{730} Miscellaneous sound {732} Mechanical sound {733}, etc

TITLE permits you to look up specifically by one or more title fields, e.g. Work alternative title {239}, Work [uniform]title {240}, Series title{440}, Broadcast title {474}, Collection title {490}, Product (or album) title{499}, Contents note{505}, etc.

SUBJECT permits you to look up specifically by one or more subject fields, e.g. Music category/genre {633}, Subject {660}, Dialect/Accent{670}, etc.

PLACE permits you to look up specifically by one or more of the following location fields: Location (of recording) {551}, Country (wildlife) {551}, Region (wildlife) {552}, District (wildlife) {553} Locality (wildlife) {554}, Country of performance {631}, Culture {632}, Habitat type {655}

ANY WORDS OR NUMBERS permits you to look up any keyword (including any term category listed above) and since every term in Unicorn is indexed (apart from selected stopwords, e.g. The, A, An, etc) this is an extremely powerful search command which needs handling with care to avoid meaningless or overwhelming search results. However, it is particularly useful for looking up record numbers, NSA shelfmarks and codes.

COMBINATIONS OF THE ABOVE: choosing this leads to a different screen presenting another set of linked, searchable categories which can be combined in many different ways.

```
HELP   GOBACK   STARTAGAIN  PRINT
CLEAR  ENTER    OPTIONS
-----
                CATALOGUE LOOKUP BY COMBINATIONS (of the above)
general ==>
  AND
  name ==>
  AND
  title ==>
  AND
  subject ==>
  AND
  place ==>
  library ==>ALL
```

BROWSING also takes you to a different screen. By choosing one of the categories listed and entering your search term you will be taken directly to lists of indexed terms which you can then browse and select.

```
HELP   GOBACK   STARTAGAIN  PRINT
CHOOSE:1
-----
                BROWSE THROUGH INDEX BY:
                1) NAME (person,group,animal,label)
                2) TITLE (work,album,track)
                3) SUBJECT
                4) NAME & TITLE & SUBJECT
                5) ANY WORDS OR NUMBERS
                6) ACCESSION/DUBBING/ARCHIVE COPY NO.

PAGE 1                                (c) Sirsi Corporation 62n
                | | NUM | PC/TCP | | V1.13
```

Say you chose 1) and were unsure how the NSA spelled a name, e.g. the composer Janacek. By entering those letters or the first three or four only you would be presented a list of terms which may include the name you want to search for. The number on the right of the term indicates how many times that term appears in the database and thus gives an early clue as to how useful your search by that term will be.

BROWSING THE INDEX	
1) JAMES HARRY	[1]
2) JAMES IAN MEURIG	[1]
3) JAMES POLLY	[1]
4) JAMESON MARTIN	[1]
5) JAMIE KATHLEEN	[1]
6) JAMIROQUAI	[1]
7) JANACEK LEOS 1854 1928	[2]
8) JANINE LATOYA	[1]
9) JANSON CIARA	[1]
10) JANSON CLARA	[1]
11) JAPANESE MACAQUE MACACA FUSCATA	[6]
12) JAPANESE MACAQUES MACACA FUSCATA	[2]
13) JARDINE LISA	[1]

Cross references

Cross references appear automatically if:

- a non-preferred term is used in a search
- a search results in no hits

LINK terms

The LINK option is a powerful hypertext search tool which allows you to do a new catalogue lookup by a phrase in an entry currently on the screen.

Linking between "libraries"

In the NSA catalogue, it is also the means by which you can LINK between the "libraries" or different catalogue entry types.

If you are in WORK and you wish to view all recordings of that WORK, then you must link on SHORT TITLE. Likewise if you are in RECORDING and wish to see the full details of the work that has been recorded, then you must link on the SHORT TITLE.

If you are in RECORDING and wish to view details of the product copy or copies on which the recording sits, you must LINK on ACCESSION NUMBER and select the item labelled "PRODUCT" from the SEARCH RESULTS DISPLAY.

If you are in **PRODUCT** and wish to view details of the recording or recordings contained on it, you must **LINK** on **ACCESSION NUMBER** and select the items labelled "RECORDING" from the **SEARCH RESULTS DISPLAY**.

Lookup options

Further means of narrowing a search (eg. recordings since a given date, in a specific language or format) are provided by a list of supplementary options, though you could use these also to conduct very broad searches, eg. all blues recordings or all product copies in a particular store.

Pubyear will enable you to narrow your search to a particular year of recording or publication ((P) date).

Language will enable you to narrow your search to recordings in a particular language that is not English. The terms will also enable you to look up the items if they are a translation from, say, Italian into English

Format will enable you to narrow your search to recordings in a particular catalogue entry format (and NOT product format, e.g. CD, LP, which are covered by Item type below)

Item type enables you to narrow your search to products of a specific type, e.g. only CD's, only tapes, only discs

Location enables you to narrow your search to products located in a specific store or temporary location.

Curatorial coll. enables you to narrow your search to products or recordings belonging to one of the NSA's subject curator areas.

Broad classn. enables you to narrow your search to recordings classified according to certain broad classification terms, e.g. interviews, talks, Baroque, Liturgical.

ANNEX D: Typical OPAC session

To search for recordings of music from Iraq.

```
CATALOGUE LOOKUP BY PLACE
  place ==>IRAQ
  library ==>ALL
```

```
YOU FOUND 2 ITEMS

1) Iraq                               copies: 1 (ON-PRODUCT)
   Omar, Yusuf, 1918- (singer, male)  at: RECORDING
   1LP0041013 S2 OCORA

2) Iraq                               copies: 1 (ON-PRODUCT)
   Omar, Yusuf, 1918- (singer, male)  at: RECORDING
   1LP0041013 S1 OCORA
```

This is Unicorn's Search Result Display from where a user can choose to view items in full. The display shows one line each of title and author information (in this case country and performer are masquerading as title and author) and a shelfmark, which at the Recording level includes side and track details plus the record label name. The right-hand column shows that this a Recording record and that the items are located on product copies.

THIS IS NUMBER 2 OF THE 2 YOU FOUND IN THE CATALOGUE		
1LP0041013 S1 OCORA		
Performer:	Omar, Yusuf, 1918- (singer, male)	
Performer:	Ensemble Al Tchalgi Al Baghdadi	
Country:	Iraq	
Culture:	Arab	
Music category/genre:	classical	
Music category/genre:	maqam	
Language code:	ara	
Item title:	Makam Saygah	
Item duration:	20'25"	
RECORDING CALL NUMBER	COPY MATERIAL	LOCATION
1) 1LP0041013 S1 OCORA	1 RECORDING	ON-PRODUCT
2) 1LP0041014 S1 OCORA	1 RECORDING	ON-PRODUCT
3) NP4128 W NSA DUBBING	1 RECORDING	ON-PRODUCT

This is a typical full display for a recording from the International Music Collection. At the foot of the full display, the different available versions of this recording are shown, including an NSA dubbing. To see details of these products, the user selects LINK and chooses one of the three accession numbers to view.

CATALOG LOOKUP BASED ON ITEM	
1)	Accession number: 1LP0041013
2)	Accession number: 1LP0041014
3)	Accession number: NP4128
4)	Performer: Omar, Yusuf, 1918-
5)	Performer: Ensemble Al Tchalgi Al Baghdadi
6)	Culture: Arab
7)	Music category/genre: classical
8)	Music category/genre: maqam
9)	Item title: Makam Saygah

This is Unicorn's hypertext facility whereby terms not in the original search can be utilised to move into other areas of the database without returning to the start of the look-up sequence. If the user selects 1) or 2) then details of the Product Copy on which this recording is held will be displayed.

YOU FOUND 3 ITEMS	
1) Iraq	copies: 1 (ON-PRODUCT)
Omar, Yusuf, 1918- (singer, male)	at: RECORDING
1LP0041013 S2 OCORA	
2) Iraq	copies: 1 (ON-PRODUCT)
Omar, Yusuf, 1918- (singer, male)	at: RECORDING
1LP0041013 S1 OCORA	
3) Irak: Makamat	copies: 1 (MIC)
OCORA 558633	at: PRODUCT
1LP0041013	pubyear: 1985

The user is taken to a new Search Results Display where this time the RECORDING records are listed together with the PRODUCT (item 3).

THIS IS NUMBER 3 OF THE 3 YOU FOUND IN THE CATALOGUE	
1LP0041013	
Product title:	Irak: Makamat
No. items on product:	2
Label:	OCORA 558633
(P) date:	1985
Pressing code:	fr
Product notes:	Reissue of Ocora OCR 79
Carrier:	disc 2 sides 30 cm 33 rpm mono
Documentation:	Sleeve notes in English and French
Copy condition code:	b
1) 1LP0041013	1 DISC MIC

This is a typical Product display. At the foot of the display the actual storage location of the product copy 1LP0041013 is given, "MIC" being an abbreviation for the NSA's store at Micawber Street in North London.

THIS IS NUMBER 3 OF THE 3 YOU FOUND IN THE CATALOGUE

1LP0041014

Product title: Iraq. Makamat
No. items on product: 2
Label: OCORA OCR 79
Pressing code: fr
Carrier: disc 2 sides 30 cm 33 rpm mono
Documentation: Sleeve notes in English and French
Copy condition code: b

PRODUCT CALL NUMBER	COPY MATERIAL	LOCATION
1) 1LP0041014	1 DISC	MIC
2) NP4128 DUBBING	1 TAPE	47P

By linking on each of the other two accession numbers, displays of the other available product copies can be obtained, in which we see that the NSA dubbing relates directly to the 1st NSA copy of Ocora OCR 79.

THIS IS NUMBER 1 OF THE 2 YOU FOUND IN THE CATALOGUE

NP4128

Dubbing of: Ocora OCR 79
(P)/Dub/Rec date: 1980.09.05
Carrier description: tape 1 reel mono

PRODUCT CALL NUMBER	COPY MATERIAL	LOCATION
1) NP4128	1 TAPE	47P

This relationship can then be confirmed by viewing the Conservation record for the tape dubbing. This particular record is as simple as such records get: the conservation staff have the opportunity to express many other details about the dubbing - methods uses, results obtained, eq and noise reduction applied, etc.

Footnotes

1 The British Library National Sound Archive: automation strategy business appraisal - final report.- January 1991

2 The other options considered were a bespoke system and a tailored free text retrieval system. The immediate NSA inclination to go for a bespoke system on account of the special needs of sound recordings was discouraged as being too costly and too risky.

3. The current implementation of 31 PC's was being upgraded to 36 at the time of writing.

4. The British Library. National Sound Archive IT Project Operational Requirement.- August 1993

5. Note that the concept of a published work is irrelevant in the case of most oral history, wildlife and mechanical recordings. Such recordings may have arbitrarily assigned titles (or item titles) but more often there is no author-work relationship to express.

6. Another way to understand how this structure works is to imagine a union catalogue of virtual libraries within a virtual branch library system.

7. The Unicorn SRD allows for a title and an author only - imagine such a screen display if one asked to view all recordings of any classical symphony or concerto, or, worse, the songs "*Yesterday*" or "*Body and soul*" under such restrictive conditions. The linkage by short title solution also pays dividends in that the field acts as a relational key to a set of data, sometimes complex, which only needs to be created once by a cataloguer; only the short title needs to be added to the Recording record. The short title takes the form of an element from the uniform or given title linked to an element (usually the surname) of the author or composer, plus any named arranger; it is limited to forty characters in length. Some typical examples: How deep is the ocean/Berlin, Concertos, piano, no.2/Rachmaninoff, *Summertime*/Gershwin-arr.Evans

8. This amounts to the formal adoption of AACR2 rules for headings and certain stylistic precedents in the UK MARC Manual. I have recognised the efforts of IASA to establish a common standard, though ISBD NBM is only followed, at present, circumstantially. There has been a wealth of experience at the NSA to draw on with regard to descriptive fields, and we must also acknowledge that this experience has itself been nurtured by the work of amateur discographers whose achievements, often unrewarded, have seldom been emulated by professional cataloguers.

9. Notably the British Library's Name Authorities List (or NAL). The recent development whereby the British Library and Library of Congress have agreed to share authority file data is being watched closely.

10. The present version of Unicorn installed is 6.2. Versions in the 7 series will have the option of a windowed interface (or GUI). The NSA is waiting to see how this new product turns out though we assume that it will bring many improvements for data creation.

11. NB: WORK will generally only be required in conjunction with MLRECITEM.

CATALOGUING RULES SEMINAR

CATALOGUING OF RADIO PROGRAMMES IN YLE

Lasse Vihonen, YLE, Helsinki

Paper presented at the IASA Cataloguing Rules for Audiovisual Media, Editorial Group, pre conference seminar in Bogensee 1994

Before starting to explain the cataloguing system of radio programmes in the Finnish Broadcasting Company, YLE here is some background about radio broadcasting in Finland which may explain some of the elements used in the cataloguing system.

In Finland there are about sixty commercial radio stations and one state-owned national broadcasting (public service) company - YLE. For the time being the commercial stations are allowed to broadcast only local programmes, although this situation might change as some commercial stations have asked for permission to form a network with other commercial stations in order to broadcast over a larger area. The Ministry of Communications which deals with concessions, has rejected these applications until now so that only YLE has the right to broadcast nationwide radio programmes. At present YLE has four nationwide radio channels, three Finnish channels and one Swedish channel. YLE also has twenty five regional studios which broadcast their own programmes in the time-windows within broadcasts on Channel Three.

At present the broadcasting companies and stations in Finland do not have any legal obligations to store their programmes permanently, neither do the companies have any obligations to deposit their programme in a public archive to provide services for researchers. Here the situation differs for example from that in our neighbouring country, Sweden, where the legal deposit covers radio programmes. In Finland the radio responsibility law requires that the companies have to keep all their radio programmes on tape for three months after the date of broadcast. The companies are free to keep the programmes they want in their archives after that period, but in practice a large part of them will be erased.

This is also the reason why YLE has built its cataloguing system and rules from the point of the internal use and the internal needs. YLE also does not follow any international or national cataloguing standards like the ISBD or MARC, but this situation is very common and very similar in many other countries.

DEPOSIT AND CATALOGUING SYSTEMS AT YLE

As already mentioned, YLE has to keep all the programmes on tape for three months after broadcasting in accordance with editorial liability responsibility law and regulations, therefore all YLE broadcasts are recorded on a special logging tape, the reference tape. For this purpose a special 16-track recorder is recording every channel in the Radio and TV centre. The tape speed is very slow, only 2.5cm per second. Every nationwide radio channel, as well as the local/regional programmes in Helsinki and the international programmes goes on a different track. The same happens with television - each television channel is recorded on its own track. The machine simultaneously records a speaking clock on one track so that we know exactly when every programme has been broadcast, and one tape covers 24 hours. In the switching centre there are altogether one hundred reference tapes. We use these tapes in rotation, and erase after the three months retention the law stipulates. These recordings and reference tapes are the responsibility of the technical department, not the Radio Archives.

Local and regional studios and the commercial stations use slow speed analogue tapes or DAT cassettes as a reference tape, and many of these studios have the same rotation system that we have in YLE.

The Radio Archive does not handle the reference tapes but the original programme tapes which means we are responsible for the programmes which are prerecorded on tape before broadcasting. The Radio Archive includes the Tape Library and the Sound Archive. The main task of the Tape Library is to take care of the daily transportation of tapes, receiving the tapes from the production studios and delivering them in time to the broadcast continuity units. Every day the Tape Library receives about fifty programme tapes made for the nationwide channels. That means about 17,000 tapes a year.

The Sound Archive has a more 'archival' task, cataloguing the programme tapes in detail and assisting programme makers to use the material.

The cataloguing process begins in the Tape Library when a programme tape comes from a production studio. The person on duty opens the tape box and removes the production information sheet which always accompanies the tape. This production sheet is a very important document in our company and is completed by editors and producers during the production process. It is main source of information for the cataloguers in the Tape Library and is also important at a later date in the Sound Archive. Details from the production sheet are entered in the database system in the Tape Library. The database is called RARK - deriving from Radio Archive.

Cataloguing in the Sound Archive is more detailed because the people doing the cataloguing listen to the tapes and write a summary of the programme adding appropriate key words to the document (a home-made thesaurus), and the subject and type codes (also home made code lists.) Today there are over 130,000 documents in the database and this is one reason why it is so difficult to change the cataloguing system or the rules in YLE and in other broadcasting systems. The databases are so immense and the cataloguing resources are so limited.

But all programmes are not pre-recorded, there are many live programmes such as news and current affairs. Together with the news department we made a decision that they would record all the main news broadcasts on DAT cassettes and the sound archive will keep the cassettes permanently in its stores. We planned to get the content information direct from the BASYS system which is the newsroom database system, but unfortunately these plans to transfer from BASYS to RARK have not materialised. Instead we receive from the news department running lists of the news broadcasts and put the lists in a file arranged in chronological order. It is a simple, manual system.

In the company there is now also a new editorial office system for the editorial staff who make prerecorded programme tapes. This system is called OSCAR. A proposal has been made to get a link between OSCAR and our DP system RARK and it is possible that the project will start next year.

Finally we must make mention of the music copyrights and the MUSA system created for this purpose. YLE and other Finnish broadcasting companies have an agreement with the Finnish copyright associations like TEOSTO and GRAMEX. TEOSTO looks after the interests of the music makers like composers, arrangers and text writers. GRAMEX looks after the interests of the record industry and the performers of the records. According to this agreement we have to report every single piece of music broadcast in our programmes. Earlier we reported this music using paper blanks, nowadays YLE uses also for this purpose a DP system which we call MUSA - music reporting system. We started using the MUSA application in 1991. By chance I know this application pretty well because I was the leader of the project when the company developed MUSA.

Today the cataloguing of radio programmes and music reporting are a whole separate processes; there is no link between RARK and MUSA, but neither is there a link between MUSA and OSCAR.

As you can imagine the cataloguing of radio programmes in YLE or any other broadcasting company is not a simple task. There are live and prerecorded programmes, many different DP applications which do not communicate with one other and unstandardised information sources. Although well aware of these difficulties I am convinced that it would be useful if we had international recommendations concerning cataloguing rules of the radio programmes.

CATALOGUING AT THE STATE MEDIA ARCHIVE IN DENMARK

Elsebeth Kirring, State Media Archive, Århus

Paper presented to the IASA Cataloguing Rules seminar in Bogensee 1994

Before describing the cataloguing system used in the State Media Archive some information about the institution and how it was established and some of the reasons why we catalogue the way we do.

The State Media Archive was established in 1987 as a section of the State and University Library in Århus, Denmark. The library was chosen to house the Archive, mainly because - besides being a legal deposit library - it has special obligations regarding the field of mass communication, and it contains the national collection of newspapers. Furthermore the Nordic Documentation Centre for Mass Communication, NORDICOMM is placed in the library.

The Archive was established as a temporary archive which should "acquire and preserve Danish radio and television programmes". Two years later in 1989 we took over the national collection of records the so-called Nationaldiskoteket. We also took over the obligation to buy all new Danish records and all complete opera recordings. That is we buy Danish radio and television programmes and also Danish phonograms as if we had a legal deposit act for nonbook materials - which we do not yet have.

We have not catalogued the radio and television collection because we have an arrangement with the Danish Radio about buying the data from them. We did start negotiations with the radio, but at that time there were some problems with the conversion tables, and before we had solved those problems, we took over the record collection, with an insufficient card catalogue.

So we decided to start a cataloguing programme for the record collection, which contains about half a million items. We made an agreement with the Danish Library Bureau to buy the registration data of all the new phonograms from them, since they catalogue - and have done so since 1984 - to the Danish national discography. But we ourselves had to catalogue all the old records. We decided to start with the shellac discs - 67,000 of them, and we also decided to catalogue them at a minor level, but using MARC fieldnumbers the same way the Danish Library Bureau use them, in order to create some sort of harmony between the data we construct and the data we buy.

We constructed a format, based partly on the Danish edition of the MARC-format, partly on the special music cataloguing format used by the Danish Library Bureau. It should be broad enough to hold the four major parts of our archive.

Shellac Disc Collection

Commercially issued Danish sound recordings, almost complete from 1900 onwards
Danish private recordings, eg. well-known men and women of earlier times
Non-Danish recordings covering all categories, but with the accent on the classical repertoire, comprising complete opera recordings.

'New' Phonogram Collection

Commercially issued Danish sound recordings (gramophone records, music cassettes, compact discs etc.). Almost complete current access Non-Danish recordings covering all categories, but with the accent on the classical repertoire, comprising complete opera recordings. Current accession.

Radio/TV Collection

About 300 radio stations, selected periods from 1983 onwards.

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The shellac disc collection

Having constructed a full format, we marked the fields we thought necessary for cataloguing the shellac discs. We started the cataloguing in a test-database but after a while we had to acknowledge that we needed a few more fields to do the work adequately. Then we added some fields, catalogued more records, added a few more fields and this is the format we use today for the old records.

FORMAT FOR OLD RECORDS CATALOGUED IN THE STATE MEDIA ARCHIVE

001 00 *a	Identifying number
020 00 *b	National discographic number (which is also the shelf mark)
041 00 *a	Code for language
041 00 *c	Code for original language
241 00 *a	Original title
245 00 *a	Title
245 00 *c	Subtitle
245 00 *e	Performer, composer, author
245 00 *p	Parallel title
245 00 *s	Parallel subtitle
260 00 *b	Name of publisher
260 00 *n	Record number
300 00 *a	Extent
300 00 *b	Other characteristics
300 00 *c	Size
300 00 *d	Accompanying material
440 00 *a	Series title
440 00 *v	Series number
520 00 *a	Publication date and other bibliographic information
530 00 *a	Note of content
538 00 *m	Matrix number
559 00 *a	Other general notes
560 00 *a	Notes for internal use
565 00 *a	Number of duplicates
700 00	Added entry for personal names
	*a Surname
	*h First name
	*e Roman numeral
	*f Addition

710 00 Added name for corporation
 *a Name
 745 00 *a Title as added entry
 m08 00 General search codes
 *a Code for date
 *b Code for country
 *l Code for language
 *s Code for material designation

=====

Example (1) of a shellac disc:

*Aladdin : Balletmusik, 1.-2. Del / Musik: Carl Nielsen /
 Orkester: Medlemmer af Det Kgl. Kapel / Dir.: Emil Reesen
 Polyphon ; S 50483
 P 1935*

På etiketten: portræt af Carl Nielsen

*Indhold: Orientalisk March ; Morgentaagernes Dans ; Hindudans ;
 Negerdans
 3 dubletter*

Opstilling: 24933

ooooooooooooo

Example (2) of a shellac disc:

*Underlige aftenluftte / Carl Nielsen, Adam Oehlenschläger /
 Thyge Thygesen med pianoack. af Holger Lund Christiansen.
 Prinsesse Tove af Danmark / Carl Nielsen, Helge Rode / Thyge
 Thygesen med Tivolis Koncertsals Orkester / Dir.: Sv. Chr.
 Felumb
 Odeon ; D 834*

*Optaget 1941
 Købt 1993 af Hegermann-Lindencrone*

Opstilling: 150964

=====

The "new" phonogram collection

The format used by the Danish Library Bureau for cataloguing to the National discography is on a high level. It is too long to show in detail, but this is what it looks like in the database.

Example of an LP, catalogued by the Danish Library Bureau

Steffensen, Christian, f. 1953

At reise er at leve : digte af H. C. Andersen / Christian Steffensen, sang / arrangement: Jesper Mark / Michael Moser Thomsen, Blokfløjte / Jørgen Haslev Hansen, viola / Uffe Munksgård, fagot / Jesper Mark, klaver / Bo Isholm, guitar og lut / Jens Juul, horn / Lars Aabo, klarinet / Henrik Simonsen, kontrabas / Teddy Andersen, fløjte / John von Daler, violin / Den Danske Rokokotrio

Danica ; DLP 8075

Indspillet i København 1982-83
Tidligere udgave: Olufsen DOC 5004
Tekster på omslag

Indhold: Det er liv at reise
Sange (Gurre ; Alt farer hen som vinden)
Sange (Dandse, dandse, dukke min ; Det døende barn)
Sange (Studie efter naturen ; Min lille fugl, hvor flyver du?)
Min tankes tanke
Sange (Min søde brud ; En digters sidste sang)
Recension
Bøgetræet
Sange (Snee-dronningen ; Barn Jesus)
Sange (Skyd frem, skovmærke ; Ambrosius Stub)
I foråret i Kjøge

DK: 78.611

Opstilling: 566279

The radio/tv collection

As mentioned before we have not started cataloguing our radio/tv collection, since we plan to buy data from the radio stations. But we do have older broadcasts that we have to catalogue ourselves and in any case we have to decide how the format should be. In the beginning we decided to make one record per channel per day, but changed our minds and now plan to catalogue every single broadcast as one record and to change the data records, we buy according to this. It will give us a lot of records, but it will also give a better opportunity for retrieval. This is a draft record:

FORMAT FOR RADIO AND TV IN THE STATE MEDIA ARCHIVE

001 00 *a Identifying number
096 00 *a Shelf mark
245 00 *a Title
245 00 *c Subtitle
245 00 *e Statement of responsibility
250 00 *a Edition (repeat)
260 00 *a Place
260 00 *b Publisher's name
260 00 *c Date
300 00 *a Extent
300 00 *b Other characteristics
300 00 *c Size
300 00 *d Accompanying material
559 00 *a General notes
700 00 Added entry for personal names
 *a Surname
 *h First name
710 00 *a Added entry for corporation
m08 00 General search codes
 *a Code for date
 *b Code for country
 *l Code for language
 *s Code for material designation

=====

Example of a radio broadcast:

*Efter Maastricht : en ny europæisk forfatning - eller
praktiske justeringer inden for Maastricht-traktaten?
tilrettelæggelse: Bjarke Møller og Ruth Sperling
Kbh.: Danmarks Radio, 1994*

*Debat i studiet om en fremtidig europæisk forfatning
Opstilling: DR-01*

=====

The local radio/tv collection

There are about 300 local radio and tv broadcasting station. Many of them mainly broadcast bingo and popular music, so we decided only to collect broadcasts from two week every year, and we catalogue them as periodicals. We keep one data record of each station with a specification of which week and which year. The format looks like this:

=====

FORMAT FOR LOCAL RADIO AND TELEVISION

001 00 *a	Identifying number
096 00 *a	Shelf mark
246 00 *a	Name of station
260 00 *a	Place
559 00 *a	General notes
981 00 *l	Year of broadcast
981 00 *a	Date of broadcast
981 00 *n	Size of tape
981 00 *p	Accompanying material
m08 00 *s	Code for material designation

=====

Example of a local radio data record:

*Christianshavns Kanal Lokalradio
København K.*

*9. maj 1989: bånd med byvandring på Christianshavn med
kunsthistorikeren Poul Tuxen*

*Optagelsesdatoer: 1988: 7.-11. november + programmer
Optagelsesdatoer: 1989: 24.-30. april + programmer. 13.-24.
november + programmer
Optagelsesdatoer: 1990: 23.-29. april + programmer. 12.-16.
november + programmer*

Opstilling: 0002

=====

THE FUTURE

What about our future cataloguing. - we are going to change the format to bring it in accordance with the Danish National format. The second draft of the format - danMARC 2 has been sent to all the major libraries in Denmark for their comment, and now the Catalogue Data Council are working on a final version taking all the comments into consideration. The format is coordinated with the international UNIMARC.

The joint database called Danbib, started in January 1994. It is a database for both public and research libraries.

THE DEFINITION OF AV MEDIA

Rainer Hubert, Österreichisches Phonotheek, Vienna

Paper presented during the IASA Cataloguing Rules for Audiovisual Media seminar in Bogensee 1994

Our job is to handle AV media, therefore we should know the nature of these media - and of course do. But there are different ways to look at the subject. For a good part of our work a strict definition of AV media is not necessary - or may seem not necessary. For some areas however eg. when trying to come up with cataloguing rules, the definition is obviously of paramount importance.

Unfortunately it is tricky to define AV media. There are some basic facts about these media, which have to be considered, and there is the far from uniform use of the word 'AV media'. How can we get all this under one umbrella?

I will give you my personal view of the problem, that is to say that there may be some differences to the draft of a definition, which Ray Edmondson and I submitted to the Board.

The most important point seems to me, that we leave the most frequent approach towards defining av media: to define them as media which require technical equipment. Most of them do, of course, but that is of secondary importance for the definition. The AV medium already exists before it is technically reproduced, before it is played back. Therefore it cannot be defined by the use. No zoologist would accept a definition of - let us say - chickens as animals, which can be eaten when properly cooked. Such 'definitions' were given in a pre-scientific age, and we should not cling to 'definitions' of that kind.

Not the use, but the creation of AV media is the vital point for the definition - in my view. The special way AV-media come into existence is the basis for the definition.

Let me for a moment stop here. I will come back to definition soon, but a look back at the history of media may make things clearer - at least I hope so. Please note, that this paper is only an outline of the problem and some points have been simplified or overstressed as a result.

Let us ask how we can convey information, eg. the information that my book is black.

* The most simple as well as general way is just showing it so that you can see for yourself.

* The next stage in the evolution of human communication is speech: Instead of showing it I can tell you: "The book is black". With this I have conveyed the same information to you. - Have I? Of course not. The spoken information "The book is black" is very different to the first-hand information you get when I show you my book. When I am only telling you about my book you only get a very specific type of information: Contents of my mind, my thought in the form of human language. You get my thought instead of seeing the thing itself. And I could have lied to you: "The book is fire red". Showing as well as telling is a kind of transmission: you get the information over a distance and you get it nearly at the same time it is sent to you.

* This is not the case when coming to the next stage: writing. I take a slip of paper and write on it "The book is black". What has happened: I transmitted the same kind of information - my thought, the content of my mind - but I didn't so much transmit it over space but over time. You can read the slip of paper now or in ten years. - I have produced a recording. I have recorded information, but - again - information of a specific type: human thought.

* The next step in the development of the information media is not so basic and deep-going - but of utmost social and cultural effects: printing. The printing press shaped a new society and world, a world in which the exchange of ideas and of thinking is of paramount importance. Information of the type "I tell you something about my book" are overshadowing first-hand impressions of our senses. But we all know the pro and cons of the Gutenberg universe, so I need not go into that.

* Next step and next stage: The AV-media:

Their invention marks a break of utmost importance, because they give us the means to convey information of a new type: Now I can produce a mirror image of my black book and hand you over this image.

That is new, that is very different from telling or writing. You don't get verbal information, you don't get contents of my mind, but a mirror image of a part of our physical world.

So my provisional definition for the moment would be: AV-media are mirror images of acoustical and/or visual events of our world.

This leads me to the following provisional division of AV-media: There are transmissions: broadcasting, television, radiotelephony and the telephone itself. And there are recordings: film, video, sound recording and photography. The technical relations as well as the relations in contents between transmissions and recordings are very close of course, but from time to time it may be useful to remember, that there is a difference between transmission and recording.

Another remark: the first mentioned AV-recordings - film, video, sound recording - are so to say "time-containing", that is they mirror a process, while the fourth - the photo - mirrors a state (I know, that is only partly correct, but here we cannot go into this).

Now let us try to think about my provisional definition: AV-media are mirror images of acoustical and/or visual events of our world.

Obviously something is missing there: we have to speak about the way this mirror image is produced.

Think of a tree, eg. we can photograph the tree and will get a mirror image, an analogon of the tree, that is a photo. We can also sketch or draw the tree and if we are a skilful artist we will also get an image of the tree. These two - let us say recordings - are they both visual media? Of course not, because in one case a technical equipment defines the relation between the original tree and its photographic reproduction. In the other case the relation is made by the mind of the artist. The photo is an objective analogon, the drawing a subjective one. This has nothing to do with the fact if the reproduced tree is good, discernible or not. If we take a wrong adjustment of our equipment the photographic reproduction will be bad. But all distortions in the photographic process follow physical parameters, that is the distortion can be defined in physical terms. You cannot do that with the drawing. You can - with the help of art history and psychology - try to interpret the act of drawing, but this is an entirely different approach.

The conclusion is of course, that only such images can be spoken of as audiovisuals, which came into being *by technical equipment*, that is which are mirrored by machinery, not by mind.

That is - in my opinion - the hard core of the definition

AV media are technically made images of optical and/or acoustical processes.

This means technical equipment collects sound and /or light waves and forms them into a transmission and a recording.

In my view this is not only a very clear definition, it also seems to me self evident. Unfortunately the real problems start from here. They have two roots:

* One is the complicated relation of AV-media on the one hand and print media and writing on the other.

* The other is the use of the word AV-media by the public and by ourselves, which doesn't coincide entirely with my definition and cannot be ignored. Therefore some pragmatic additions have to be made to the so far simple definition.

To escape the confusion which is frequent in this field, it is necessary, I think, to analyse the content of print media, writing and spoken language on one side and AV-media on the other.

As I already stated, spoken word, writing and print media contain mainly information in the form of human thought and language (that is a simplification of course). They contain mainly verbal information.

The same is true however of a lot of AV-media: they can store and transmit the same kind of verbal information, they can transport spoken word itself, writing itself, printed material. But they are able to do much more of course - their unique role lies in their **capacity to transport non-verbal information** as such, that is the gesturing of a person, my black book, the tree we have spoken of and so on. We all know that and we also know, that this is the real new and important fact with AV-media.

AV-media contain a variety of information - verbal as well as nonverbal, - while the other mentioned media only contain one specific form of information. We could say: AV-media - that is the general thing, print media - that is something very specific. I will come back to that later.

When AV-media so to say encompass the field of print media, we have problems in drawing a strict border line sometimes. This is especially true, when AV-techniques are used for the reproduction of books, or the making of microforms. Think of a book made by offset printing. Such a book is a print medium of course. But it is an AV-medium as well: somebody has typed or written or made in some other way a layout for a book. Instead of being printed it is reproduced and multiplied by photographic methods. Therefore it is an AV-medium as well: the technically made mirror image of a physical part of our world. Of course it would not make sense to call such hybrids print media as well as AV-media; we have to make a pragmatic restriction: Media which contain primarily text should not be called audiovisual - at least in every-day-speaking, - even if they came into being by audiovisual techniques.

Another small change is necessary - we should include some media forms which are traditionally called audiovisual: I am speaking mainly of overhead transparency. This is a technique which does not fulfill entirely my criteria: overhead transparency only transmits media which did not necessarily come into being by audiovisual means. So it is no AV-medium in the strict sense but we should still include it in the broader area of AV-media.

Cataloguing rules:

Documentalists, museum people, archivists and librarians have their special methods to catalogue their collections. These methods are derived from the kind of medium they store as well as the functions their institutions have.

Let me look at librarian's methods, because they seem the most important for us. Library cataloguing rules are very complicated systems developed to cover print media. Print media however are the most special area within the field of information media: text, styled in the form the traditional publication process give it - with title, author and so on. It is a media form with a special punch on it. Now a double development is challenging the so far peaceful world of library cataloguing rules:

1. All kind of media flow into modern libraries,
2. Computer technics put into question some very old holy cows of library cataloguing.

What is the result: It is tried to adapt the old rules to the new situation. That is very understandable and may be inevitable when libraries and librarians are concerned. In my view this is a makeshift solution however. And we, the AV-archivists, are concerned by that. Firstly because a lot of colleagues are working with AV-media within the framework of a library, secondly because all attempts to come up with cataloguing rules for AV media are overshadowed by the powerful paragon of librarian cataloguing rules.

So we should consider from a theoretical point of view what it means when library cataloguing rules are adapted to our need or to the "non-book-material" as a whole. After what I said before, you may already see what I mean: Print media - that is a very very special area within the big world of information media. Library cataloguing rules were made for that very special area. So, when you try to bring everything - the "non-book-materials" - into the framework of these rules you can hardly avoid making the very specific the measure for the general. That is a very dangerous thing to do. It is the same as if a portrait painter would start to paint an eye very exactly and then try to add the "rest" of the face instead of starting with a general sketch of the head as a whole.

I am realistic about it. We cannot start with zero. We have to count with the existing structures in the information media world. In many cases it will not be possible to escape the adaptation of library cataloguing rules for other purposes. I only would advise us to be sceptical about it. It is a problematic procedure. It is like working with pliers, because you have to pull out nails. Then, later on, you also want to be able to knock nails in. You can use your pliers also for that. You can even adapt the pliers so that it is a bit easier to knock in nails with them. But even then, I think, a hammer would be better. Therefore I think, here we should make a hammer.

MULTIMEDIA STORAGE IN THE AUDIOVISUAL DEPARTMENT OF THE LANDESMUSEUM JOANNEUM - BILD UND TONARCHIV - IN GRAZ

Armgard Schiffer-Ekhardt, Landesmuseum Joanneum, Graz

Paper presented at the IASA Cataloguing Rules for Audiovisual Media seminar in Bogensee 1994

AUDIOVISUAL MATERIALS

To begin with I want to enter the discussion as to whether IASA should include consideration of audiovisual materials or not, for I believe it should. This position is taken not only because I lead an institution with an audiovisual collection, but also because photography - which is not mentioned in the discussion and possibly does not exist in the minds of the supporters of the concept of audiovisual.

Only by dealing with audiovisual materials in a combined way will we be able to use them without a great loss of information in the future. There is also no problem with the idea that there are specialists in a generalised multimedia environment, for only specialists can find the time to deal with the more detailed problems in their discipline and other members of the organisation can profit from that. But specialisation should come from a broad based general education and wide knowledge before working with the AV media.

I also have no problem with the WIPO definition of 'audiovisual' which defines an audiovisual work as one which '*consists of a series of related images and accompanying sounds*'. This is surely only a consequence which relates to the history of civilisation that the sense of sight has precedence over the sense of hearing in our view of life.

Now to the medium 'photography' itself. Moving images are only a sequence of still images, transposed through a projector into movement. Still images are also a major part of video documents and we can expect a more intensive use of them in audiovisual works in future, forced upon us by the new computerised technologies.

PHOTOGRAPHY

The photographic medium is the oldest visual medium: in 1989 the world celebrated its 150th anniversary. The development of photography took a long time, from the first useful process taking images from nature with the aid of a photographic camera

until today. Many different treatments and procedures were discovered after the first photographic process, published 1839 in the Academy of Sciences in Paris, called after its inventor Louis Jacques Mande Daguerre: Daguerreotype. Nearly at the same time the so-called Talbotype as the first negative-positive process was discovered by Richard Fox-Talbot. This paper-treatment was followed by the wet-collodion process on glass, discovered also by an English man, Frederick Scott Archer. The Silverbromide Gelatine process, discovered by the English doctor, Richard Leach Maddox in 1871, got the usual emulsion for all photographic materials in black and white until today, for negative films, but also for each kind of positive, that is all sorts of photographic papers and also for diapositives. Workers in an archive dealing with historical photographs should know something about the technical development of the medium, not only to be able to handle the material and preserve it, but also for cataloguing work, in order to give a correct description of the objects. Correspondingly the cataloguing system should give a subtitle description in more than one dimension.

LANDESMUSEUM JOANNEUM COLLECTIONS

The photographic collection at the Landesmuseum Joanneum contains more than half a million negatives, beginning with Talbotype negatives on paper, collodion and silverbromide negatives on glass, some celluloid films and many acetate films which are still used today. Out of this more than 60,000 positives in the archive from daguerreotypes to polaroids, filmstrips from the time of the Second World War in-house productions.

There are also large divisions: images relating to the history of civilisation, artistic objects like paintings, sculptures and buildings, a large collection of political and war documents from the first and second World Wars, historical events and an extensive collection of travel photographs which stretch from Africa to Alaska and from Japan to the USA. Themes are equally different as is the physical constitution of the materials.

We started in January 1992 with multimedia storage in the archive of departmental photographs because this is the largest part of the collection and already in 1978 we had begun with text storage in this field. Now we have the possibility of image-storage as well as text. The hardware in one working place (we have three at present) is two microcomputers (AT-compatible), the image is taken by a video cameras (Tamson-Fotovix) which takes negative as well as positive, and the storage of the data is on optico-magnetic disc. There are other possibilities for a combined image-text storage today, but ours is a relatively cheap one, to match our modest financial capacity. It is certainly not high tech, but is a great advance for us!

Besides the preparatory training we had in our working with text storage over 15 years, we had a definite boost from the ÖNORM 2653. Years ago through common interest in AGAVA we began to think about cataloguing problems and in a small group worked on ÖNORM, subsidised by the Ministry of education and also from the Institute of standardisation in Vienna.

All AV media have certain characteristics, but we should first single out their particular characteristics.

1. All AV materials require the intervention of technical equipment, whether it is during the production process like the photographic image or in the replay such the stereoscopic image or diapositive to consider only the photographic sector.
2. All AV materials contain information, although their constitution may be very different. In the field of photography we meet various materials like paper, glass, celluloid, sometimes also silver, metal, linen, or porcelain, and there are different chemical processes and treatments, which all contribute to the outward form of the object. These characteristics are important from the historical aspect as they can act as a criterion in dating the object.
3. Another peculiarity of AV materials especially opposed to book materials, also the bearers of information, is that they are to a great extent unpublished materials and require special consideration in cataloguing work and the formulation of rules.
4. Because most AV materials have the characteristics of reproductions there are two aspects in describing the content of a document: the image of the object and the object itself. For example if you have a reproduction of a painting, you have the photographic image as an object to describe, but also the painting, with the artist, the date, provenance etc.

In the published version of ÖNORM 2653 we tried to define rules for the formal description of av materials under both aspects of physical manifestation and information content.

The programme of multimedia storage in our institute was developed in common with the Institute for Information Management of the Research Association of Joanneum in Graz. The user software is in INFORMIX-4GL language. In addition to the user manual from this programme we made our own handbook for internal use. This cooperation between the two institutions proved very useful as we could bring our practical knowledge of image cataloguing to the project. The entry is covered in five computer masks carrying five groups of data, although the main the reason for the division is governed by the dimensions of the computer screen.

1. The first template is used to describe the material, the current number and inventory number, the author or producer, place and date of photograph, physical description (negative or positive), format and special characteristics. Other information includes provenance, date and type of acquisition, copyrights and other usage restrictions.
2. The second mask deals with the content of the photographic image, country and place of origin, description of place such as a special building and its contemporary function and of course the title. The title usually has to be invented and a fairly large area has to be allocated for description.

3. The third pattern is reserved for the description of the object itself, the 'author', the location of the real object with the inventory number of the collection where it may be housed, material and treatment of the real object, date of origin, restoration work and its dates. There is also a section for additional notes and further reading.

4. In principle the programme allows us to search each field, but this process takes longer. In order to make searching quicker and more efficient we have installed another programme called SACHERSCHLIESSUNG which allow for more subject searching. A thesaurus of generic subject terms is stored, which we can expand with free text terms. The index terms are further divided into four groups, geographic, personal, chronological and miscellaneous.

This programme is not completely flexible because there are fixed categories, but it enables a combined search and reflects the diversity of the collections. The system of fixed terms in the description does provide a reasonable control over the vocabulary and ensures some uniformity of entry. It also improves the success rate of a search.

5. The fifth pattern is the IMAGE-MASK. It can be focussed from each position in the programme and by entering the inventory number and path to the image file, the image itself can be displayed. It is also possible to compare images directly on screen.

Photographic images are legion and the work of one photographer may contain thousands of images. The programme allows for the storage and insertion of fixed data elements to save input time. This we call KONSTANTTEIL.

The principle functions provided in our multi-media storage programme are Search, Update and New Entry. We have installed the same programme this year for our other AV media and can input data from records, tapes, films and videos in a single database. The data will be different for each medium, but they can still be stored on the same database.

CATALOGUING AND TELEVISION

GLOBO TV DOCUMENTATION CENTER: NEWS, COMMUNICATION AND ENGINEERING

Nisiclé Moreira Figueira

Paper presented during the joint Cataloguing session of IASA/FIAT during the conference in Bogensee.

1 INTRODUCTION

Created to ensure its executives and technical staff of permanently updated and useful information, the Globo TV Documentation Center - Cedoc - has built up a variety of libraries on a whole range of subjects and media over the past 20 years.

Technical papers and books on equipment and clippings about Brazilian and world television broadcasts were on file at the original Communication Archives. The need to provide input to the news division resulted in the creation of General Archives initially consisting of newspaper clippings and books and subsequently expanded to include stills and moving images.

The Engineering Department turned over its technical files to Cedoc in January 1994.

The central Cedoc files are located in Rio de Janeiro, with sections such as Journalism (local, national and international news), Communication and Engineering. Local stations keep a record of locally generated news.

2. THE GLOBO TELEVISION NETWORK DOCUMENTATION CENTER

Globe TV Network produces approximately 70% of its broadcasts. In addition to series, children's programs, news programs, and entertainment shows, eight newscasts and three soaps are aired daily, all produced in-house. Each week about 100 hours of broadcasting are produced.

To meet the demand generated by this heavy production schedule, roughly 20,000 research requests have to be completed monthly.

Although Journalism, is the biggest user, research performed for soaps and series producers takes up considerable time from our researchers not only because of the details requested by set designers, costume designers, art researchers, etc. but also for the sheer amount of material required.

The Center starts working before the first news goes on the air at 7 am and calls it a day after the last news broadcast at half past midnight.

3. SYSTEM DEVELOPMENT

It was reasonably easy to select the documentation system to retrieve information from the text archives (news clippings and technical journals) since cross indexing was the best at the time. When the Stills files were added to the General Archives (Journalism) a classification and cataloguing system similar to the existing one was sought. After extensive research, the conclusion was that we would try to use the same system (indexing) for the Text Archives and the outcome was positive.

Setting up the Moving image library made it mandatory to adopt a single procedure. The system also had to be consistent with the different types of requests and inquiries, allowing for both overall and specific retrieval.

Since the existing system met these requirements and presented no major problems for footage retrieval, we managed to have the entire library retrieved through a single standard system.

Automating the system was much easier thanks to its standardization and to all the changes introduced as data processing developed.

Adding a data retrieval system for the Engineering Archives did not require more than simply copying programs from the Communication Archives. Thus, data entry was able to start in less than one week.

4. RETRIEVAL SYSTEM

Two extensive dictionaries - one identity glossary (entries for persons, institutions, locations, etc.) and a thesaurus (a lexicon structured by subject) are index managers. Data retrieval is done through inquiries and/or cross-reference of the entries of both dictionaries.

Although the data retrieval system is standard for the several systems involved, the dictionaries are specific. There are thesaurii for Communication, Journalism and Engineering, and identity dictionaries managing the files individually.

Since the entry of new terms is the backbone of the system, both the thesaurus and identity dictionary follow tight preset rules.

4.1. IDENTITY DICTIONARY

The largest identity dictionary (Journalism) now holds about 120,000 entries gradually added in line with indexing demand. When a librarian needs an identity he/she checks the dictionary first.

If the search is negative, the new identity is entered into the system. The librarian must then check the existing rules on names of persons, items, films, shows, etc. Such rules were created following the Anglo-American Cataloguing Code. Depending on special needs, however, some rules have undergone minor changes and others were created, particularly regarding names of places, restaurants, hotels, etc.

Each dictionary identity has an entry that not only helps librarians to index effectively but also aids researchers. Many searches can be answered by simply consulting the dictionary -- the entry will provide information such as date of birth, main activities, etc. For example:

Romario, pseudonym, 1966- (Barcelona)

Entry: Romario de Souza Farias; under-17 soccer player Vasco (1984), South American junior soccer champion (1985), played for Vasco (1987-89), PSV Eindhoven (1989-1993), Brazilian National Team (1989-), Barcelona (1993-); born 01/29/1966.

4.2. THESAURUS

Since no single thesaurus was available to cover both journalism and terms used domestically only, a special thesaurus was developed for the Cedoc General Archives. The need to constantly update technical terms led to the development of special thesaurii also for Communication and Engineering.

Terms are created the same way as identities, ie. only as required. Doing this requires inquiry to other thesaurii. If a term is not found in any of them the search is performed in consultation with experts on the subject.

The Journalism thesaurus today numbers 7,250 terms.

5. CLASSIFICATION

Each type of material in all files is classified through the same eleven-digit system. The two first digits indicate the physical location of the library (ie. the city), the next two digits show the type of material, and the remaining digits indicate classification under each type. For example: RJ50-1 53467 RJ = Rio de Janeiro 50 = videocassette 153467 = Document number

6. DOCUMENT PROFILES

The indexing system is based on profiling. This solution was devised to avoid the main problem in cross indexation which is cross reference errors in multi-faceted documents.

The profile-based indexing system breaks down the group of descriptive items into sub-groups arranged logically so as to prevent two or more descriptive items used in a search from pointing to a nonexistent subject in the document. These subgroups are called profiles and the system does not allow crossing over of descriptive items under different profiles although they may be found in the same document.

7. OTHER SERVICES

In accordance with the philosophy of the Documentation Center in respect to changing traditional filing systems, we took advantage of available technological resources to put emphasis on user motivation, offering additional services other than the requested.

7.1. CALENDARS

We currently offer a Monthly Calendar and an Annual Calendar containing information on the key events/dates for the month or year that might generate news stories or specials, help the Commercial Department, Planning, etc.

A Retrospective Calendar contains the main events of the year. Its main purpose is to help the production of special holiday season broadcasts.

7.2 NEWSLETTER

Information on technical articles from domestic and international publications on Brazilian and world television and media, and reviews of book on the same subjects received by Cedoc are published in a weekly newsletter circulated to key executives of Globo Television Network.

7.3. SELECTIVE DISSEMINATION OF INFORMATION

Set designers, costume designers, engineers, etc. are on a mailing list and select subjects of their interest. Every two months all books and journals arriving at our library are sorted according to areas of user interest to be circulated.

8. TEMPORARY DOCUMENTATION CENTERS

One of the Documentation Center's main users is the Sports Department. So temporary Cedocs are set up to service events such as the Olympic Games and the World Cup.

A whole structure is designed for these events to receive the footage received by satellite. A timed rundown of the footage is done live and immediately input to the computer so that any journalist can both be fed the incoming material and retrieve any footage throughout the event, even highly specific shorts.

Operating from a centralized information bank makes it much easier to meet the increase research demands during an event and provides substantially better quality service to users.

DOCUMENTATION AND INFORMATION RETRIEVAL IN THE FINNISH BROADCASTING COMPANY YLE

Päivi Niskanen and Ritva Tarkki, TV Archives, Finnish Broadcasting Company YLE, Helsinki

Paper presented during the joint Cataloguing session of IASA/FIAT during the conference in Bogensee

We want to introduce to you the documentation of programmes and the information retrieval done in the Finnish Broadcasting Company YLE.

We concentrate on the duties of information specialists working in the TV-archives in Helsinki and in Tampere. Our work is divided into documentation of programmes and information retrieval.

DOCUMENTATION

Besides the news we document by viewing all the current affairs programmes and documentaries, also those done by our Swedish speaking department. We get VHS-copies of the programmes and as we have VHS-equipment with TV-sets in our office rooms the viewing is easy.

Programmes like sports casts, childrens programmes, music programmes, entertainment programmes which YLE has produced are documented without viewing by an assistant librarian basing the information on the scripts of the programmes given on line.

The scripts a database of their own, especially created for them. The assistant librarian transfers the information written by the script into our database. Then depending on the type of the programme either the assistant librarian or information specialists check that the information is correct and document the programme according to our documentation regulations.

The database the scripts are using has been in use since 1992 and it has proved to be useful. Although we must say that the documents done by the scripts are not always the clearest ones. As they do not have the education for documentation the text they produce is not always informative enough to serve the needs of the search- Before the database for the scripts was created, the information from the scripts which were written on paper into the database. You can believe it was sometimes a bit frustrating but some of the scripts have content descriptions which are so complete that we hardly need to change them at all.

The main emphasis of the documentation lies in the news casts, current affairs programmes and documentaries because their use as archive material in new programmes is the most common. The documentation we do is done in detail (eg. we give exact time codes, describe the images in detail and give the image duration) for thus time is saved when the programme maker is choosing the images he wants from the huge amount of information we have. The detailed description is also justified to avoid the possibility of ordering a tape or film in vain, for example from Helsinki to Tampere. We have programme departments using the services of our archives all over the country and it takes at least a day to get a tape from one town to another.

Our search data base, the IBM STAIRS, is based on free text indexing, so we do not use index terms, although we add synonymous terms and broader terms to specify the subject. The subject as well as the usable images (that is long and good enough images) are given a classification notation according to a decimal classification of our own.

The data base we use contains all the programmes YLE has produced since 1977. Programmes done before 1977 are taken to the data base little by little by free-lance documentalists or information specialists. The coverage of card catalogue transfer is now approximately 70%.

INFORMATION RETRIEVAL

The archives serve customers seven days a week in Helsinki and five days a week in Tampere (weekends closed). The requests of archive material come mainly by phone. If the request is an easy one or urgent we give the information on the phone but when there is more time to concentrate on the request we send the printouts of the search results by post. So the customer can choose the required images at more leisure. It is also possible to send the selected documents on line or by facsimile with the keywords underlined automatically.

Nowadays there are several programme makers (scripts, editors, directors) who want to and are able to use our database on their own. This creates unfortunately problems as the rights to use different programmes vary a lot and all can not read our documents well enough.

After having got the printouts the programme maker chooses the best images, watches the tape, cassette or film in the viewing room at our premises or at his own department. He can also go with the tape or film to the editing unit and copy the image wanted straight into his new programme or on a another tape.

PROBLEMS AND DIFFICULTIES

The hardest searches are those dealing with our oldest material. That material consists of the TV-programmes from 1957 to 1976 and the material YLE has bought from the film companies, that is feature films, short films, documentaries and old news reels. This old material covers the years from 1906 to 1965. This material is only insufficiently or not at all documented in the data base. The information of their contents are in manual catalogues. There are also films and tapes whose contents are not described in the manual catalogues either. But we are happy to say that gradually information about these films and tapes is taken to the data base. difficult requests are those concerning detailed needs of archive material; eg. facial expressions or gestures people make when they appear in the programmes. This difficulty is due to the fact that describing moving images creates long descriptions and thus some things must be ignored.

WHAT ABOUT THE FUTURE?

We would like to finish by mentioning that in YLE the use of archive material in lightening up the programme is becoming more popular than in giving the programme a historical point of view or just simply illustrating it. The reuse is, however, impossible if the material is not in good enough condition. That is why the restoration and preservation of material is one of our main tasks in the whole archives. Everybody understands that it is of little use searching if the material itself is unusable. There is lot to be done!

MEMORY OF THE WORLD PROJECT

Joie Springer, PGI (General Information Programme) UNESCO

This paper was first presented at the Fourth Joint Technical Symposium in January 1995, and is reprinted with the permission of the Technical Co-ordinating Committee

UNESCO's basic mission is to maintain, increase and disseminate knowledge by assuring its protection and availability for future generations. Library collections and archive holdings are information treasure-houses containing the wealth and diversity of cultures and peoples. They are the memory of the past, the paths we have travelled to build our future and to shape our cultural identity. However, this memory is transient; its loss means an impoverishment of humanity and it must therefore be recorded, preserved and made accessible for posterity.

Enormous losses have already occurred. Some as a result of natural catastrophes such as floods, hurricanes, earthquakes: the recent catastrophe in Japan immediately comes to mind. Accidents too, are frequent and fire is perhaps the most feared as it can consume a collection in a sudden blaze. We all know of the ravages caused by nitrate fires. Less spectacular perhaps but no less devastating however, are the slow fires in modern archives and libraries which are condemning entire collections today: the acidity of paper, the decay of polymers, in fact the whole spectrum of chemical deterioration affecting all information carriers.

Apart from natural disasters and accidents we must not overlook those deliberate acts to destroy our global heritage: the consequence of wars where often the wilful annihilation of a culture is an extension of genocide; ignorance, attempts to rewrite the past or to cover-up certain events (if it is not recorded then it did not happen) and even more tragically perhaps, the lack of means in some countries where there is no other option but to record over existing information fully aware of the damage that is being done but unable to act otherwise. Faced with a situation where countless valuable and unique collections have disappeared and others are inevitably doomed, in 1992 UNESCO created the Memory of the World programme to preserve the endangered documentary heritage. Designed as a new approach to safeguarding the world's heritage while ensuring an almost universal access to it, the programme seeks to compile image banks of endangered collections for reproduction in various forms such as CD-ROMS, videodiscs, postcards, etc.. These will be marketed or otherwise distributed with proceeds being reinvested in the programme.

The scope of the programme is therefore quite vast and will involve a variety of partners ranging from users of information: researchers, academics or scholars and the general public, to providers and producers of information, not omitting manufacturers of end products.

Documentary heritage within the scope of the programme covers information recorded on all media. This includes books, manuscripts, newspapers and other textual information; maps, prints, and non-textual information stored on paper-based materials; audio recordings, moving or fixed images as well as oral traditions.

UNESCO is therefore called upon to ensure the safeguard of millions of documents, many of them unique or in some way worthy of preservation for future use. It is practically an impossible task requiring far more resources than are available, and we are forced to concentrate on the most endangered collections trying to safeguard them as best as possible and through sales will hopefully obtain additional funding for the programme's continued existence.

The basic concepts of the programme are preservation and access by the most appropriate means. After consultations with different partners, it seems that digitization offers the best solution for the enormous task ahead. In view of the limited resources available, certain criteria have been defined to determine what collections are "most endangered".

The criteria to be considered include: content (the artistic, cultural, literary or scientific value of a work), its national, regional or international significance, context, physical condition, degree of risk (for example, a war zone, disaster area.) and project feasibility (whether it can be carried out in a reasonable period of time). Priority will be given to activities concerning a region, a number of countries or a national project which is of international importance and to an entire collection rather than just individual items. Special consideration will be given to the problem of reconstituting the memory of a people in the case of dispersed or displaced holdings. Combinations of these criteria will determine the uniqueness of the collection or holding and the consequences of its loss for humanity should it become irreparably damaged.

Some preliminary activities are currently underway to enable us to obtain a better idea of the task to be tackled as well as to assist us in mobilizing support for our work by creating an awareness of the problems with which we are confronted. We are first of all preparing an inventory of library collections and archive holdings which have suffered irreparable damage or have been totally destroyed during this century. Earlier losses will be included at a later date if found to be practical; secondly, a world list of endangered collections and holdings, and finally an inventory of ongoing operations to protect the documentary heritage so that duplication and overlapping activities can be avoided. These three lists will be updated periodically and will constitute the basis for the Memory of the World programme. In addition as part of the celebrations of the centenary of film, UNESCO's member states have been asked to submit a list of approximately 15 films which they consider to be among the most important or representative of their national cinematographic heritage. There has been a fairly good response so we will publish this inventory later this year, in collaboration with FIAF, for distribution to archival and other institutions.

A three-tiered structure composed of international, regional and national committees has been established to coordinate the implementation of projects. An International Advisory Committee appointed by the Director-General of UNESCO will guide the planning and implementation of the programme, and will make recommendations concerning fund-raising, funding of projects and attribution of the "Memory of the World" label to projects selected, including those not receiving financial support from the programme. The label is intended to be a guarantee of quality serving to ensure the success and wide distribution of the products manufactured and is granted to projects meeting the criteria fixed by the Committee.

The first meeting of the committee in September 1993 outlined the framework of action for the Programme to prepare a strategy to be followed in its implementation.

A second meeting is slated to be held in Paris from 3 - 5 May this year to review progress achieved to date.

The International Committee will be assisted by two sub-committees: one for technical questions and one for marketing and finance. The technical sub-committee has already met twice and I will speak of this a bit later on.

National and regional committees will be responsible for the selection of projects for registration with the International Committee, and then for their implementation. In addition, they should increase the general level of awareness of the programme and help in raising funds. An idea of the interest the Memory of the World programme has generated in UNESCO's Member States can be seen from the fact that national committees have so far been formed in twelve different countries from all regions, with regional meetings organized in or planned for Eastern and Central Europe, Asia and Scandinavia.

A number of pilot projects have been initiated as examples of what we hope to achieve under the programme and will be used for promotion of its activities. I will briefly describe some of these.

A demonstration CD-ROM which is now available to the public has been prepared by the National Library of the Czech Republic. It contains samples of valuable manuscripts and other documents from its collections with notes in Czech, English and French. The Library also intends to record some of its most valuable items on a set of discs thus making these historic works easily accessible without the need to manipulate the originals.

A prototype CD-ROM is being produced to make the Radziwill Chronicle more accessible. This work which retraces the origins of the peoples of Europe, is a rare example of an illustrated Russian medieval chronicle of drawings and almost 600 miniatures. Known since the seventeenth century, it is of tremendous interest to scholars in particular, and there have already been a number of unsuccessful attempts to publish a facsimile version.

A pilot project to protect the nineteenth century press published in Latin America is underway with the collaboration of seven National Libraries. The preparation of a computerized inventory of some 2,000 newspaper titles has been started with a view to their conservation and transfer to microfilm to facilitate exchanges between national libraries and other organizations.

In Yemen, the collapse of a wall of the Great Mosque of Sana led to the discovery of parchment and paper fragments of manuscripts from approximately one thousand different volumes, the oldest of which dates back to the first century of the Hegira; most are extracts from the Koran. With the participation of Germany, some 12,000 fragments have already been restored and a demonstration disk based on a selection of some of the fragments will shortly be produced.

An interactive compact disk is being prepared to obtain a multimedia edition of Bulgarian manuscripts evoking Sofia the patron saint of the capital. The documents selected include primarily the facsimile reproduction of some manuscripts in the form

of digital images. They are supplemented by reproductions of illuminations, frontispieces and decorative motifs.

Let us conclude by reviewing the more technical aspects of the programme with its two fundamental principles of preservation and access which are interdependent.

The basic steps in carrying out a project within the Memory of the World programme are: selecting and preparing the documents, ensuring that they are stored in an appropriate environment, photographing them where required, digitizing, describing and annotating them, training the personnel required to perform these duties if necessary, translating bibliographic references as required and ensuring that the products which result are distributed as widely as possible. To facilitate this, it has been decided that bibliographic references and other information should ideally be in English and French along with the original language of the collection as a minimum.

The programme must function in compatibility with national legislation. Since one of the objectives of the programme is to ensure as wide an access as possible to the information, there will be important implications for the owners of rights in the collections or holdings. An agreement must be reached for the technical exploitation of the information without, however, enforcing an excessive protection which will limit access to the documents and be contrary to the principles of the programme. To counter some of the difficulties, it may be necessary to create an international convention of the Memory of the World. A decision on this will be made as the programme evolves.

Projects to be funded will require a detailed budget itemizing costs, duration, training and other needs before they can be accepted under the programme. An international fund has been set up in UNESCO to finance some of the programme's projects with priority being given to those having regional or international dimension.

A technical sub-committee has been created to assess the technologies available in order to recommend or set general guidelines and standards for the projects to follow. Another of its tasks will be to ensure compatibility between the different types of systems selected, to permit the free exchange of information.

The committee held its first meeting in June 1994 to examine the methods and techniques of digital preservation. In its deliberations which included a look at preservation standards, mass storage systems, data retrieval and distribution, it was decided that as a more detailed consideration of standards was necessary. Two working groups were set up to prepare technical guidelines with tables for recommended digitization standards and storage requirements based on carriers. One group would work on sound and moving images, the other on texts and fixed images. During its second meeting, the draft recommendations concerning access and preservation standards prepared by the two working groups were discussed and will be presented to the next meeting of the International Advisory Committee for adoption.

The Memory of the World programme is as yet in its infancy with the most important still ahead. For UNESCO, its potential benefits are enormous: it will allow researchers and the general public to have easier access to important, historical documents; it will facilitate the task of the guardians of our heritage and in the final analysis, the global community whose memory will be preserved for the future.

AUDIOVISUAL HERITAGE IN SWITZERLAND

FROM THE DAWN OF COLLABORATION TO A GLOBAL CONCEPT

Serge Roth, SSR (Société suisse de radiodiffusion et télévision), Geneva

Paper presented to a joint session of the IASA/FIAT Conference in Bogensee, 5th September 1994

This is a brief description of how we solve the problem of maintaining the audiovisual heritage in our small, but complex, country.

The author has been in charge of Documentation and Archives (D + A) of the French Swiss Television (TSR - Geneva) since 1st September. This service was created, and up to now directed, by Jean-Sylvestre Cosandey (now Treasurer of the FIAT). Serge Roth has held different positions in SSR over the past 20 years, both on radio and television and in particular, since 1988, has been Co-Ordinator of D + A (general management in Bern).

The paper will touch on the following topics:

Historical account, with a few Swiss particularities
Search for a solution
Work in progress
Conclusion and follow up.

HISTORY AND A FEW SWISS PARTICULARITIES

After the Parliament had made a few interventions which were not followed up in any significant way, the commission of the National Council (grande chambre) who had been working on a project of law, "the radio-TV law", made a request to the Federal Council (the government) to:

"Establish whether it would not be appropriate to look for solutions towards central sound and video libraries within existing institutions" (for radio and TV programmes)".

This request referred to the third paragraph of article 69 of the Radio/TV law (which came in operation on 1st April 1992) which reads:

Article 69 Requirement to inform and recording of programmes

1. The licence holder must give all information and all necessary documents for the study of a complaint or towards establishing facts in the frame of general overview or overview of specific programmes.
2. Broadcasters must record all programmes and keep, for at least 4 months, the recordings and related documents. If an appeal or complaint against one or several programmes is lodged within this time, the requirement to keep recordings and documents continues to the end of the investigation.
3. The Central Government may prescribe that the recording of a valuable programme be handed over free of charge to the national archives institution.

The Federal Office of Culture was thus handed the task of working on the problem of audiovisual heritage. Towards the end of 1990, it started up the Working Group - Audiovisual Patrimony (GT-PAV), which will be the subject of the next section.

The new SSR licence (which started on 1st January 1993) was granted for 10 years. It mentions:

Article 15 Obligation to archive and keep

1. The SSR cooperates with the national media archives in order to gather, record and keep the recordings of its programmes; it contributes to making them available to the public for future uses.

Comment: this new liability supposes that national media archives exist, which is not yet true in all fields; it must therefore be understood as a preparation for the future.

The new Law on the National Library came into effect in 1993. Amongst other new features, it widened its mandate by saying that it must take care, not only of information printed on paper but also of that "... kept on other materials than paper", which therefore includes audiovisual documents (and also computer files).

This law also specified that this institution "...takes particular account of institutions which are active in the fields of the audiovisual ..." and that "the Confederation may take over and attach to the National Library, institutions which own important collections of information on paper or any other sort of material".

On 12th June 1994, a new constitutional article on culture was submitted to the national vote. This article aimed at giving more (subsidiary) powers to the Government compared to the cantons capable of dealing with this. As this was an alteration to the Constitution, the majority vote of both the cantons and the people was required; this is a particularity to our Swiss system. The majority of the voters accepted the Federal government project, but as the cantons refused it, the project was thrown out. In my opinion it is a great shame because it will only complicate the setting up of a global, national solution in the case of audiovisual archives too.

Before getting to the heart of the subject, it is interesting to highlight a few other particularities:

- we are a small country of 7 million inhabitants, with, however, 4 cultures and 4 languages, German, French, Italian and Romanche. The SSR broadcasts radio and TV programmes in each of these four languages. To this are added local radio and TV stations.

- the cultural questions are primarily the responsibility of the 26 cantons (although certain fields, like cinema, are regulated by federal dispositions). The fact that the constitutional article on culture has been rejected (as we said above) limits the extension of the powers of federal authorities.

- on the Federal level, Switzerland does not have a legal deposit, neither for the written or the audiovisual fields (although some cantons apply it partially).

SEARCH FOR A SOLUTION

At the end of 1990, a working group on audiovisual heritage (GT-PAV) was organised by the Federal Office of Culture (on which the national library and the national museum depend). It is multi-lingual and made up of experts from the principal institutions which hold audiovisual documents in Switzerland, ie.:

National Library: Jean Frédéric Jauslin, chair of the group
Federal archives: Christophe Graf
Swiss Film library: Christian Dimitriu
National Sound Library : Kurt Deggeller
SSR: Serge Roth

Its aims are :

- to study the present state of production and conservation of the audiovisual heritage in Switzerland (and abroad)
- to draft a synthesis report, defining a programme of action.

The work of the group was broken down into 3 phases:

1/ We first gathered information on the present state of our audiovisual heritage, which seemed very worrying to us. Our preliminary analysis led us to a first statement: all future solutions must take account of not only radio and TV programmes but also the audiovisual documents edited (records and commercial videos) and scientific, this in a multi-media context.

2/ Aware of this statement, we decided to inform public opinion and especially our members of parliament and other decision-makers. An awareness campaign was launched (newspapers, radio and TV, etc.) with the theme "A country loses its memory". With this in mind, we produced and distributed 3 audio CDs (French, German and Italian) containing a sample of extracts of programmes broadcast by SSR between 1935 and 1950. This action was carried out in connection with the "measures of emergency" in the sound field, which Kurt Deggeller will detail to you later.

3/ We examined various possible solutions.

At the beginning of 1992, our working group set out its draft report which:

- stated the present weaknesses;
- underlined that none of the existing institutions could sort out the problem on its own;
- suggested the creation of a mixed institution (i.e. a foundation of private rights containing the public powers and private sector), to be called "Centre of Information about Audiovisual - CIAV", which seemed to be the best solution, capable of
- facing present and future problems, avoiding duplication loopholes
- taking advantage of the synergies between sound, picture and text (multimedia)
- ensure a coordinated treatment of audiovisual documents.

Principal aims of the CIAV (a sort of national multimedia library):

- To keep, value (classify) and communicate to users, audiovisual documents likely to represent valuable sources for the history of the country and belonging to the Swiss national audiovisual heritage: radio/TV broadcast productions and commercial or scientific productions, Swiss or foreign - sound, static and moving pictures, even text - concerning Switzerland and the Swiss. This must be done bearing in mind that the static pictures and texts referring directly to these archived audiovisual documents should also be kept (posters, photos, scenarios, etc).

- to assume both the roles of selection and conservation (of all broadcast documents more than 10 years old).
- To guarantee, firstly, the regular archiving of the new documents selected. Secondly to enable the retrieval of existing heritage, according to a specific programme.
- To avoid the production and archiving of several copies of the same document, as much as possible within the means of using and conserving.
- To play the role of centre of information and coordination: advise the national market of audiovisual documents, without necessarily keeping them all, and of funds and institutions abroad with which it will have regular and official contacts.
- To harmonise the systems and contribute to the quality of data by starting files of authority and standards.
- To ensure that the international standards of conservation and restoration are respected and to control the state of conservation of the funds which are under its responsibility. It should set up centralised structures of long-term archiving and of restoration.
- To take an active part in the development of the basic formation and specialisation of archivists, documentalists and librarians in the audiovisual field.

A few other characteristics of the CIAV:-

- It may do some editing and producing, depending on the funds available, in collaboration with the rights owners.
- Its users usually come from the world of science, education and media (and any other person motivated by any reason other than recreation).
- It may charge for its services (with a differential tariff).
- It does not look after the history of the media, enterprises or techniques, nor after the collections of equipment.

Principal Sources for the CIAV

- a) producers and distributors of audiovisual documents
- b) broadcasters of radio and television programmes
- c) institutions of scientific research.

The project (as described briefly above) was then set out for consultation to the institution partners to the working group. It was generally received favourably, but the jobs could not all be followed up as planned :

- first because of financial reasons. Because of its severe financial restrictions, the Confederation does not think it will be able to integrate such an ambitious project into

to be borne by the public sector is 43 million Swiss francs of investment and 8 million per year for running costs.

- on the other hand, while the large majority of the partners agree on the final aim, the concept must be revised to take account of the criticisms made. For example, as far as the SSR is concerned, it does not take into account sufficiently its particular needs (decentralisation, quick access, leading to savings, etc); on the other hand, the funding for the CIAV must be independent.

WORK IN PROGRESS

As the partners represented in the working group were convinced of the need to carry on with their work, Federal Councillor Ruth Dreyfus (Home Minister in charge not only of culture, but also of social affairs, science, education and sport) asked the group of experts already established to carry on with their work and submit to her *concrete propositions of action that could be taken in the current technical and economical context....* (November 1992).

Today the working group is composed of:

National Sound Library	Katharina Buergi, project collaborator
Federal Archives	Kurt Deggeller, director
National Library	Christophe Graf, director
	Jean-Frédéric Jauslin, director, president of the group
SSR	Serge Roth, co-ordinator D + A
Federal Office of communication	Pierre Smolik
Federal Office of Culture	David Streiff, director, represents photography
Swiss Film Library	Bernard Uhlmann

(SSR is only represented by one delegate even though it is the main producer, broadcaster and holder of audiovisual documents in Switzerland!).

Without losing sight of the long-term aims of CIAV, we are now working on a limited and decentralised concept which can be set up in successive phases. It is the idea behind RIAV (Network of information on audiovisual).

RIAV

Its members would be institutions and firms already represented in the GT-PAV (SSR, also being considered at the level of units of radio/TV enterprises), to which we would invite an institution representing the sphere of photography and a representative of non-TV videos (no-one else would be invited until the idea has proved successful).

The essential aims and particularities of RIAV would be as follows:-

* help broadcasters, in particular the units of SSR enterprises, to keep and preserve their audiovisual heritage.

* set up one or several limited pilot-projects, so as to test the cooperation between partners on some essential aspects (financial, legal, technical, etc).

* develop transfer-projects (copying) of supports in order to optimise their access and conservation.

* its partner can carry on with its own policy of selection but each one promises to inform the other members of the network before any mass destruction of audiovisual documents. This 'emergency brake' must, if necessary, enable RIAV to find alternative replacement solutions,

- improve the circulation of information and communication among the partners.
- make the databases of existing references easier of access.
- make one official centre of responsibility, for the conservation, restoration and copying of media (one centre per kind of support).
- harmonise valuation of the funds of each partner in the network (minimum cataloguing format): "Helvetica" broadcast by SSR (after selection) or distributed by other means (commercial or scientific audiovisual documents).
- improve access to documents for external non-commercial users (especially scientific documents, for education for example).
- the legal base could be a convention, for example.
- local radio and TV archive would only be dealt with later.

Author's notes:

* I have put these 4 points at the top of the list because they seem, to me, to be the most important ones for SSR.

- The RIAV project should also help to improve contacts abroad.

- The "emergency measures" which will be detailed by Kurt Deggeller (rescue of 78 rpm records produced by SSR), are totally in line with the RIAV project. The same goes for the offer by the National Library to offer new archive rooms for sound documents in 1997.

CONCLUSION

Before writing its final report (first term in 1995), GT-PAV will present the first and main element of its concept to the institutions represented in its working group; in particular to the SSR management (essential partner to any solution), then to the Federal Council (who commissioned the work). If their reaction is positive, GT-PAV

thinks that the introduction of RIAV could take place gradually from 1996 at the earliest.

However, all is not won yet, by far; just think of the financial context which is so weak (limits inflicted by the Federal budget showing a deficit). However, the working group remains highly motivated and convinced that this question of the audiovisual heritage is important enough to warrant particular efforts. To this end, the political will of our elected leaders must strengthen; otherwise the problem will remain unsolved and the future generations could justly blame us for it.

In my opinion, the RIAV system will only be backed up by SSR:

- if the Confederation brings in new financial means, capable of starting up concrete actions;
- if the concept is first accompanied by pragmatic measures bringing really new allowances (this must be obvious for SSR); for example pilot-projects (rescue of old radio/TV documents, particular treatment of news and magazines, improvement of access of non-commercial public, etc.).
- if the network (which is a tool and not an end in itself) is set up in successive stages, with a direct link with the actions undertaken, so that most of the disposable means be attributed first to the preservation of documents (this must be our first aim).

Before finishing, I would like to draw your attention to the project by the European Council of a "European Convention relating to the protection of audiovisual heritage" (written by a group of experts mainly from the cinema world (!!!) which had been the subject of a brief talk by me to the members of FIAT in Sofia). Among other things, this project would involve a legal copyright of moving pictures, at least through a sampling system. The originators hope that this convention will be on the agenda of a meeting of the Ministers of Culture of the Council of Europe. This would be organised for the end of 1995 to link in with the centenary of the cinema. I recommend all participants here today coming from a member state of the European Council to follow this project, even intervene, before it is signed then ratified by your country, as it could have direct influence on your audiovisual landscape.

But let us come back to more practical aspects. The next paper by Kurt Deggeller, a vice-president of IASA and Director of the Swiss national sound library, will indicate some concrete actions with regard to our audiovisual heritage which are direct consequences of the working group GT-PAV which have been illustrated here. This will show that it is possible to set up quickly an efficient network with little means if the partners have the will. You will thus be able to see the excellent collaboration that exists between the national sound library and the national broadcaster, SSR, which is a real pleasure to me.

URGENT MEASURES FOR THE PRESERVATION OF ENDANGERED SOUND DOCUMENTS IN SWITZERLAND

Kurt Deggeller (Director of the Swiss National Sound Archive in Lugano)

Paper presented at a joint session of the IASA/FIAT Conference in Bogensee September 1994

It is now generally well known that together with nitrate films, the lacquer coated discs which radio stations used for their recordings up to the mid-50s are the most endangered types of audio-visual documentation. Due to the differing ageing processes of the lacquer coating and the underlying metal or glass base these documents are literally coming apart.

Within the framework of the programme outlined in Serge Roth's article we initiated a series of emergency measures for this type of documentation, for it was soon all too obvious that in these times of crisis, a global solution to the problem of archival storage of audiovisual documents would take a great deal of time, and that during this time, the process of decay would further decimate the holdings of these audio materials. We could not also ignore the point that the radio stations whose studios are no longer equipped to play these records have little reason to load their archives, already bursting at the seams, with this very difficult to handle material.

In this article, I do not wish to go into details about the running of our programme to rescue these audio materials, but rather focus on the methodological problems which have come to light during its planning and execution.

The total stock comprises about 110,000 records with some 40,000 documents (one document usually occupies several record sides), which are located in the studios of Geneva, Lausanne, Zurich, Basel, Bern, Lugano and Chur. The contents of these documents are very varied and contain all the classical genres of radio programmes from the radio play to the feature article and from political commentary to recreational music, folk, classical and jazz.

As the condition of many records is already very critical we decided not to bring the various collections together to a central location, but to do what needed to be done on the spot. We could see that no matter how carefully they were handled, every manipulation of the records could appreciably worsen their condition. A specifically Swiss problem was the fact that there are documents in all four national languages and that the staff who deal with them must have the appropriate linguistic skills.

Information on the contents of the documents comes in all different shapes and sizes. It goes from some illegible marks on the record label to catalogue cards and stock books with more or less reliable details. As the archives have in the past usually been accessible to anyone, there are sizeable gaps in the collections, that is, not every

document shown in the catalogue is in fact available. There are sometimes surprises, because during the wartime recycling was already very much in fashion. So it can happen that instead of a sports report as it says on the label and accompanying paperwork, you get an ecumenical religious service.

To get some kind of an overview of the contents and condition of the collections, we have in most cases set up a simple computer based inventory, which forms the basis for setting priorities for dealing with the documents. This inventory is based on the written information contained on labels, catalogue cards or accompanying paperwork, but not on listening to the documents. The selection is not made on abstract criteria, but themes are defined which can also form a point of departure for the researcher who will later work with these documents or indeed for a radio producer. For example, a pilot project was initiated in the Geneva studio, in which all documents relating to Geneva were selected. This produced an interesting cross section of the international activities in this city. The next selection contains linked broadcasts and broadcasts from the period of the Second World War, not least because, with the fiftieth anniversary of the end of this conflict coming in 1995, a big demand for such documents can be expected.

During the selection equal attention is paid to the condition of the documents. The worse the condition, the more expensive is the re-recording of any audio material. The content of the material must at least therefore justify the expense. In certain cases it is also worth trying to find a copy, which can be made available for international exchange. Swiss Radio International, keeps in its archives numerous interesting duplicates of documents which have disappeared or been badly preserved. From this winter onwards we shall be installing a laser reader developed by the Swiss Federal Institute of Technology in Lausanne for records in an especially poor condition. This apparatus needs careful handling and will not alter the fact that dealing with badly preserved documents is time consuming. Add to that the fact that, at the present level of this technology, using traditional methods to play back this material gives a better result.

With these two steps, inventory and selection, the essential preparations for re-recording the documents have been done. We must now clean the records, play them back and capture the information on the technical work and content of the documents.

In trying to clean the records we found that their variable condition makes the use of ultrasound very expensive. For almost every document we have to establish, on occasion even with the aid of a microscope, whether the record can stand ultrasound treatment. In the time it takes to do that, individual records can be cleaned with a traditional "Kieth and Monks" machine or even by hand.

So here we have decided on an unconventional solution for the complete scheme of work. One and the same person will carry out both processes, re-recording the record and taking up the information on the document. We adopted this solution for two reasons:

1. While copying the record, the complete work must necessarily be listened to, and this can be used for writing up the contents and

2. the work is thus very much less monotonous. We cannot say much about any time saving thereby. The conjunction of two very different activities, manual and intellectual, leads to an appreciable lengthening of the work process.

The thinking behind the technical work is to keep it as simple as possible; the whole content of the audio material is digitalised without any kind of modification and transferred to a DAT cassette. Test takes are included and failed takes, often scored out on the record with a grease pencil, as well as the synchronisation phases which are at the beginning and end of every record of any document which extends over several sides. "Cleaning up" the contents and properly presenting the documents would be much too time consuming and would go far beyond the intended aim of preserving the documents. All technical processes from cleaning to copying are documented in detail in the databank.

The thinking behind the capture of information on the content of the documents is in its concept also highly unconventional: the assistant who takes on the copying, listens to the record as it is played, hears a series of details such as personal names, place names or events and enters these details into an open structured data bank which is on a laptop computer near the play-back facility. Of course, in doing this mistakes creep in, which can only be corrected through painstaking checking. But the quality of this "corrupt" data can be somewhat improved by means of an algorithm which brings together names written in different ways. A definitive documentary evaluation of the material cannot and should not take place within the framework of our emergency procedures. But the documents are accessible enough, after the work outlined above, to be of use without further ado in a research project or a radio programme planned over a longer term. The data from the computer are regularly transferred via a floppy disk to the National Sound Archive, put through a quality control and stored in a separate compartment in the databank.

In conclusion, I should like to say a word about another important part of the emergency procedures for the endangered radio documents: winning over the professional world, the politicians and the public.

The first grant which we received for the project was relatively small and did not allow us to get systematic work under way. We therefore decided to test a series of re-recordings within the framework of a simultaneous promotion of the complete undertaking. One radio studio in each of the three linguistic regions was required, on the basis of a selection of about 100 documents, to prepare a programme for a compact disc, which was to present a kind of "sampler" of the riches of the archive stocks we had. The production was given a uniform title: "Die Gerausche der Geschichte" (The Sounds of History), "Les bruits de l'histoire", "I suoni della storia"

with the sub-title "Archives of the Swiss Radio". The covers show three different views of the same radio set, and the contents were correspondingly different. The French programme, which comes principally from the archives of the Geneva radio studio, presents different aspects of political and international life, whereas the German programme from Zurich is slanted more towards social and industrial history themes, while the Italian reporting prefers local historical events and personalities.

The records were distributed to persons in public life, but also amongst the radio stations and at the same time offered for sale via the National Sound Archive and in one case in association with the radio station. It was interesting that the promotion was especially successful amongst the radio stations. Programme producers began to get interested in the re-discovered material and even in the higher echelons a certain echo was clearly heard. The sale produced surprising results: whereas in French Switzerland we cleared about 1300 copies, in the much more populous German Switzerland the total was well below 1000, and in Italian Switzerland, with after all only just 300,000 inhabitants, we could only clear about 150 CDs. It was almost worth a study to find out how far this was connected with the more or less developed historical consciousness of the separate regions.

We should not underestimate the success of the distribution to the politicians. The credit for this project is claimed year by year by the government. It is not just the promotional activity - although that is certainly part of it - that we have to thank for being able to sustain interest in the conservation of the audio cultural heritage, now in its third year. Since the SRG is also contributing materially to this project, the total sum invested so far amounts to over 1 million SFr. That is little, if one measures it by the work still to be done, but a great deal if one knows how little public money has up to now been applied to the conservation of the audiovisual cultural inheritance in Switzerland. In French Switzerland a further CD publication, using the oldest radio material, has already appeared. It uses documents in connection with the declaration of human rights, which were published in co-operation with UNO. A publication for schools on the history of everyday life in Western Switzerland during the Second World War is nearing completion. I believe that every project concerned with the conservation of historic sound archives should be accompanied by clear promotional objectives with two aims: on the one side to motivate the suppliers of cash, and on the other to motivate the potential users of the documents now once again made accessible.

RADIO SOUND ARCHIVES

ARCHIVAL SOUND CARRIER SURVEY

John Spence, Head of Radio Archives, Australian Broadcasting Corporation

INTRODUCTION

In mid-1994 the Radio Archive of the Australian Broadcasting Corporation decided to establish a committee to investigate and make recommendations to senior management about the most appropriate sound carriers for long term archival storage. ABC Radio was moving rapidly towards the tapeless radio station, D-Cart, the Corporation's own multi-user hard disc editing system was beginning to be installed in more studios and as DAT recordings started to replace many of the traditional analogue applications the likelihood that archived programs would not come in the old reliable analogue format was becoming patently clear. Tradition and conservatism, two characteristics typical to archiving were under threat.

At the same time as these new technologies were threatening the security of tradition they were promising to launch the sound archive into a brave new era. An era where desk-top delivery of audio via the new super highways or, at the very least, powerful local area networks was giving hope to many archives who had until recently found their very existence questioned by economic rationalism and shrinking institutional budgets.

And so a new archival storage investigative group (NASMIG) was established to look at the literature, manufacturers' claims and research data that was emerging from Europe, North America and Australia. The work of this group was to be used in the preparation of user specifications for a new hard disc program capture system which was to be installed during 1995.

NASMIG

NASMIG was made up of experts from a number of different areas within the ABC. In addition to three archival specialists were representatives from the Corporation's technology research and development department, from our information technology department, the strategic development unit and, as the one outside consultant, the preservation adviser for the Australian Archives, Guy Petherbridge. This diverse group will be reporting on its findings by the end of May. But, one of its first tasks was to survey the international sound archiving community and ask them exactly what sound carriers they were using now and what they were thinking they might adopt in future, with a few pointed questions about their experience with CD-Audio (or CD-R).

THE SURVEY

One hundred and two surveys were sent to institutional members of IASA plus a number of other institutions that I was aware of but who, for one reason or another,

were not members of IASA. The response rate was excellent, with 53 respondents. The proportion would have been greater if I had carefully weeded out the institutional members that were not collecting institutions but rather were simply recipients of the IASA Journal.

One of the lessons learnt from this survey - and doesn't every survey teach the surveyors a few lessons - was that terminology should never be taken for granted. The use of the term 'master sound carrier' caused particular confusion amongst some respondents. In the ABC the recording held in the archival collection that is closest to the broadcast program is the 'master'. In Germany, for instance, radio sound archivists believe that a 'master recording' is the program's original recording, perhaps containing splices or possibly unedited. Next time I will define my terms.

The survey was written in English and translated into IASA's other two official languages, German and French.

THE RESULTS

Quarter-inch analogue tape still dominates archival collections. Forty-two of the 53 respondents are currently collecting open reel tapes as their master recording, and 33 use it for access copies. The entrenchment of DAT in the recording and broadcast industry is supported by its strong second place as master recording and its third behind analogue cassette as access copy - despite its poor reputation for reliability in the long-term. The strong performance by the analogue cassette must be put down to access in many cases meaning access for the public who only require audition quality rather than the copy that is accessed for rebroadcast such as at the ABC. Recordable compact disc was being used for master recording by 13 respondents and by 11 for access, the majority being broadcast archives.

CD-R is the main new sound carrier under consideration with 17 responses. In fact, the second largest response (14) came from those not considering any new sound carrier. Of these, many stated that they were looking to IASA for guidance, whilst others stated that they could not afford to consider adopting a new format at this stage. Seven respondents placed DAT as the fourth place-getter in this question.

Respondents were asked how they were using CD-R. Were most new master recordings made on CD-R? Most new access recordings? Was CD-R just one of several carriers used or was it just being used as a trial? Most who were using CD-R were making most of their access recordings on it. CD-R is excellent, particularly in broadcasting, for access copies of valuable, and sometime fragile, archival recordings. Five respondents were using it for most of their master recordings and five said it was one of several carriers used in their collection building. In some cases CD-R was used as part of the broadcast cycle and came into the archive on CD-R from the production phase.

One of the issues of concern for ABC Radio Archives was how transfers from analogue to CD-R was being done, particularly if and how cue points were being placed in long pieces. Our interest was in using CDs great random access capability within half hour or one hour programs. Nine placed cue points in pieces longer than ten minutes while nine did not. Of the nine, the overwhelming majority (6) used manual methods exclusively while only two used automatic means. This was done

using software that is part of digital hard disc systems.

Fifteen of 18 respondents were already transferring their existing collection to CD-R with 'at risk' recordings being the highest priority (11). No digital tape to CD-R copying was taking place at present.

Finally, twelve respondents often used DAT in the analogue to CD-R copying process, while only three did not use DAT as an intermediary.

COMMENTS ON THE RESULTS

The returns by those surveyed was excellent, especially in view of the sympathetic ear one surveyed-out IASA member received at the 1994 IASA Conference. Despite that person's appeal I believe that surveys are one way the membership can gather information about trends amongst the membership which, in turn, leads to the sharing of information.

CD-R is starting to find a place in many collections but it concerns me that DAT continues to play a large part in archival collections despite the warnings of the IASA Technical Committee, German Institut für Rundfunk Technik and tape manufacturers and distributors themselves. There is no doubt that the search for a replacement for analogue tape is on. Tape and hardware manufacturers will not support analogue tape for too many more years. As the cost of digital recording equipment and digital sound carriers come down from their already (comparatively) cheap price the argument for changing from analogue to digital will become compelling.

I am pleased to hear that manufacturers of CD writers are considering how cue points can be placed on discs more easily than the cumbersome fiddling around with DAT as an intermediary. The interfacing of a hard disc system to compile 'playlists' for downloading to CD-R will facilitate easy placement of these cue points via some form of 'scrubber' device.

It is obvious that entire archival collections will not be able to be digitised in the world of tight budgets. Collections already held in a digital form, such as DAT, are well placed for easy upgrading. The archival custodians will have to make some hard decisions based on the fragility of the analogue original and the needs of their clients (be they broadcasters or the general public).

CONCLUSION

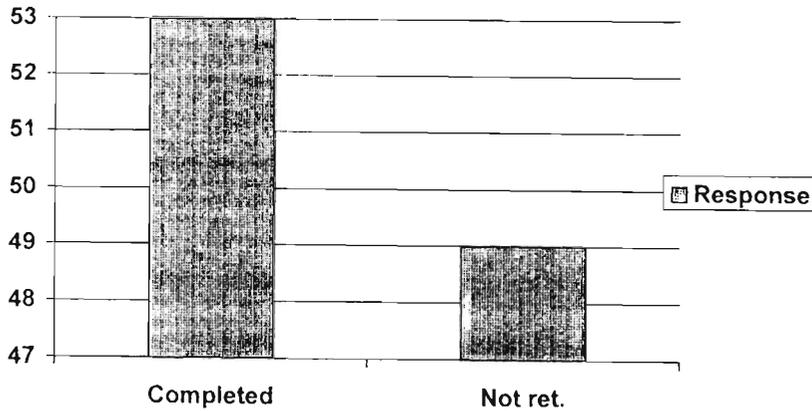
There was a period of adjustment when tape took over from the solid and reliable transcription disc and we would be foolish to think that a move to digital was going to happen smoothly and be anxiety-free. The cost of analogue cannot remain competitive with digital much longer. The success of DAT is due in part to the low cost of hardware and software in comparison to the professional end of the analogue tape market. We archivists have been cautious in the past when it comes to change - but we are now at a crossroads. To quote poet Robert Frost:

Two roads diverged in a yellow wood
And sorry I could not travel both
And be one traveller, long I stood
And looked down one as far as I could
To where it bent in the undergrowth.

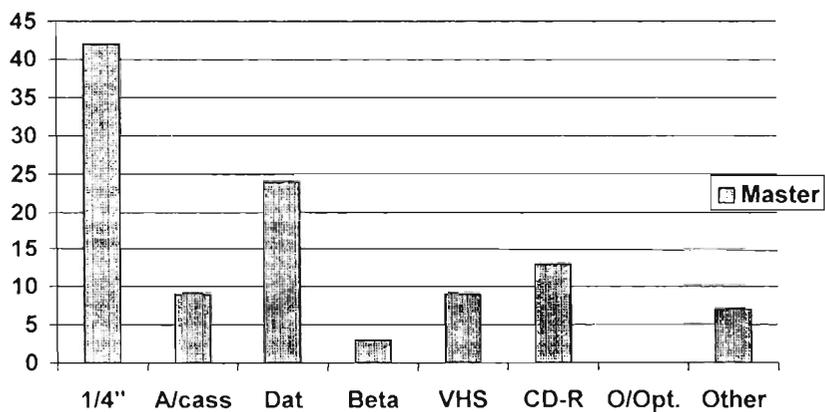
Let us stand, look, make our decision and forge on.

RESULTS

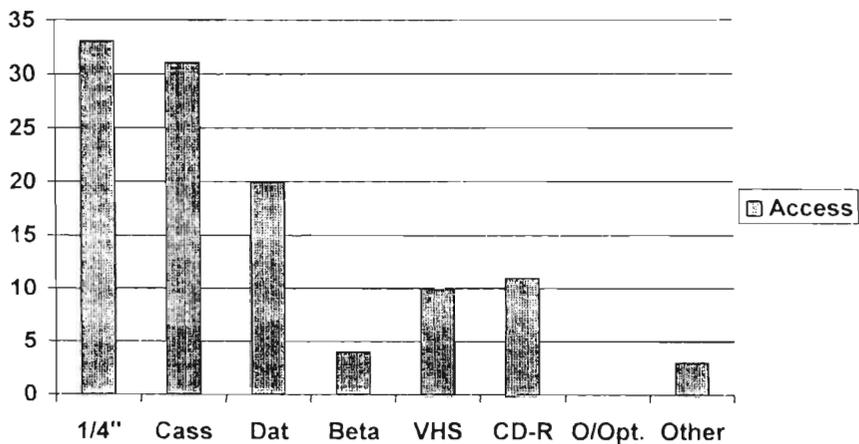
1. Survey response



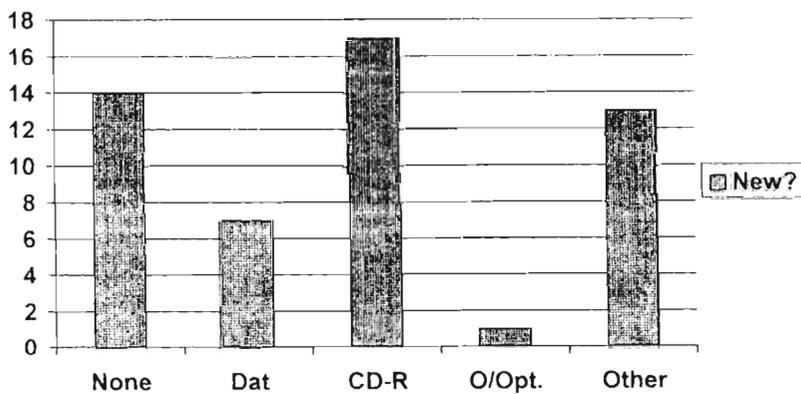
2. Master sound carrier



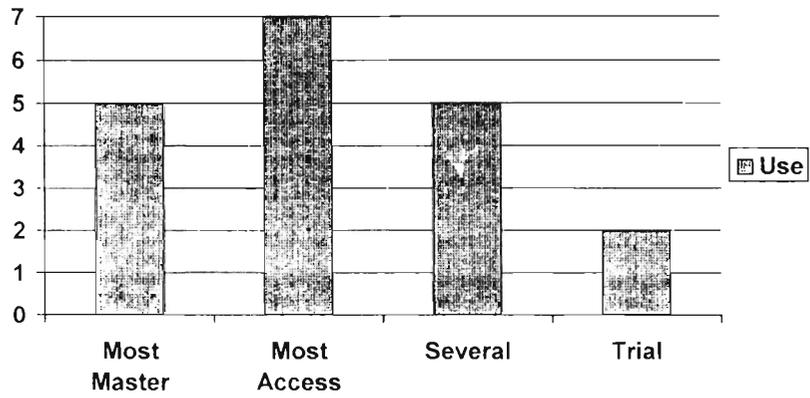
3. Access sound carrier



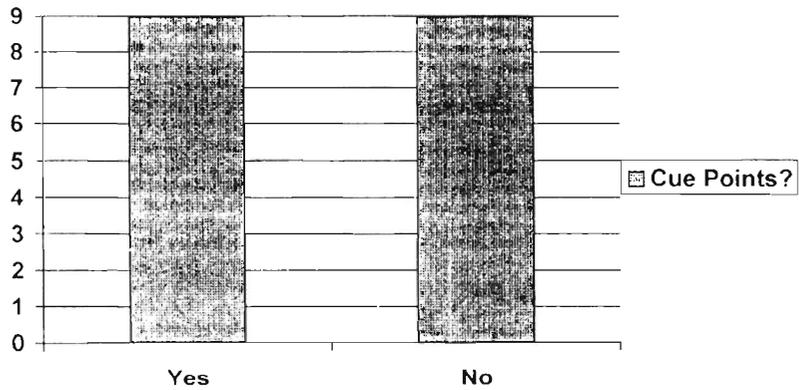
4. New sound carrier?



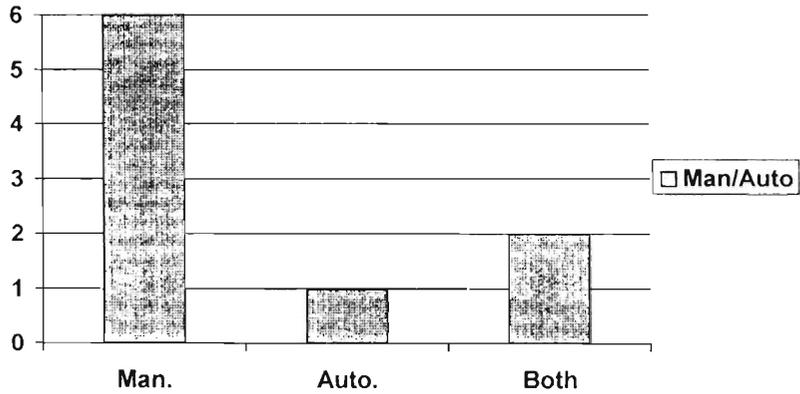
5. Use of CD-R



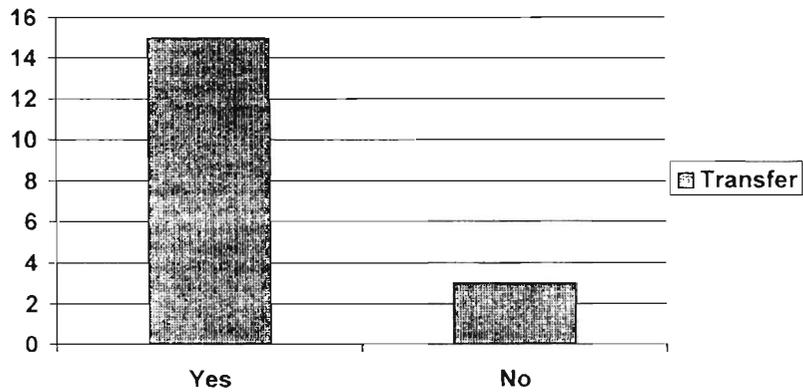
6. Cue point placement



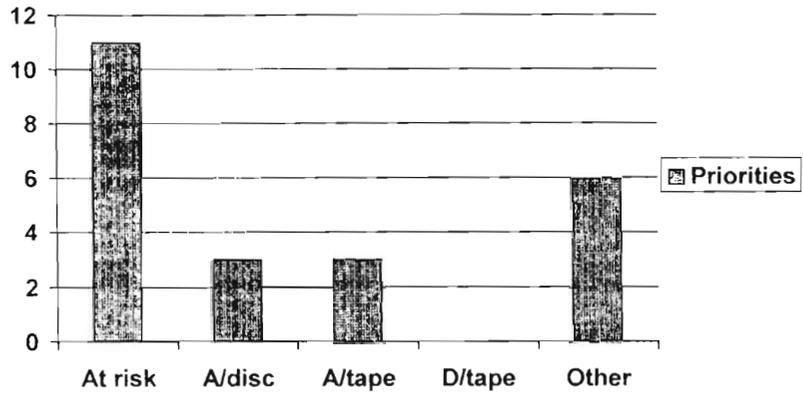
7. Manual or auto cue points?



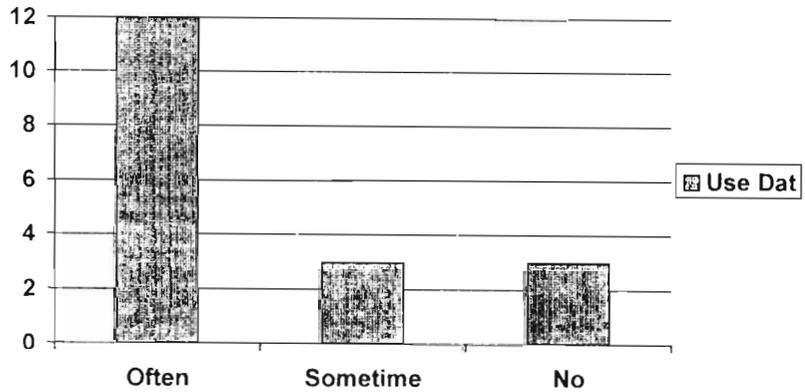
8. Transfer of collection to CD



9. Priorities



10. Use of R-Dat?



TECHNICAL

THE DIGITAL TERMITES OR HOW OUR HERITAGE IS ERODED BIT BY BIT

George Brock-Nannestad, The Danish School of Conservation, Copenhagen, Denmark.

The solutions which are presently suggested to audio archivists invariably involve digital means, and both philosophical and technological disadvantages are usually not discussed. In view of the fact that most of the world's present holdings are still analogue, this is extremely unbalanced and may force a drive towards digital which artificially make prophecies come true. Thus the preservation of our aural heritage is potentially determined by vast private investments in digital systems. This paper identifies issues which are normally forgotten. We must keep our priorities in mind.

I must confess that I am deeply worried over the fact that papers with the kind of content that is represented in Schüller (1994)¹ is the only type that discusses archive matters in the context of the modern digital technology. It is no wonder that the suppliers of digital systems should write² this kind of text - after all it is their job to promote their business. But a proper contribution from the archive world to balance the offer of the Promised Land has not been available.³ The archive world as such has not represented turnover that has interested suppliers in developing archive-specific media, and what we are presented with is the offer to adapt emerging technology to archive needs so that they may contribute towards generating first generation turnover in the use of new systems. Turnover which will in the future be generated, not any more by archives to an appreciable degree, but by the modern telecommunication services and for example pay-per-view video systems.

When I am using the term "archive" I am thinking of archives having a public responsibility for preserving our audio heritage (yes, AUDIO, because there is no reason to spread our forces outside our primary responsibilities!). That is, the national sound collections and those belonging to state funded universities and public broadcasting. Obviously one cannot prescribe what private enterprises should do to preserve their cultural goods - such as commercial broadcasting or record companies.⁴ If they desire to store their recordings by special means for specific future usage we may regret it, but their ownership is absolute. In some cases the states may make rules for compulsory deposition, and the responsibility for that material then becomes public.

There is hence a desperate need to balance the promotion of "digital" as being the only solution for the future, and it must be the responsibility of those who have a chance to understand the development in a wider context to present the whole range of views to the sound archive community, rather than a biased view. The idea of the "eternal archive" is obviously **feasible** but that does not at all mean that it is **feasible** necessarily **desirable**. And it is our duty to see to it that it does not become **compulsory** or even **inevitable**. Hence I am in direct opposition to the sentence in

Schüller (1994) to the effect that smaller institutions "would not attempt to take responsibility for the preservation of their holdings themselves". I shall demonstrate that this is a highly dangerous view.

The present paper is partly a summing-up of conclusions which will be presented in a thorough report which will be available from the School of Conservation at the latest at the end of July 1995. The present paper may contain generalizations which will be dealt with full philosophical rigour in the said report.

THE EXPERIENCE OF ARCHIVES

Historically, archives have mainly been paper archives, and they have been regarded as necessary for establishing the identity of the states and the cultural identity of the peoples. It has been characteristic that archives were labour-intensive when they worked well, but the properties of the stored materials was such that lack of funding, even for extended periods of time, only created a back-log of indexing. The sources themselves, the material, in many cases survived, provided some environmental conditions were complied with. This materially changed when the carriers became cheaper per unit (e.g. wood pulp, compact cassettes, to mention extremes). However, fundamental to the concept of archiving is the preservation of the source, e.g. by "impregnating", restoring or as a last resort faithful transfer to a durable medium. The reason the source itself is so important is that it will give very much supplementary information, in particular by means of scientific tools. These are becoming better literally day by day. And the supplementary information is used for authentication or even for enhancement of the primary information.

Already now we can see a problem with digitization of sources which were generated in traditional ways. It would be presumptuous to think that our present state of scientific knowledge is such that we may transfer both the primary and the supplementary information faithfully to a degree that future needs would be addressed. Hence, even if we perform digitization for certain purposes, we still have to preserve and care for the original sources.

What about sources that were generated in digital form, should they not be preserved in that form? Due to the very nature of the digitization which takes place when "natural" sounds are recorded digitally, there is no supplementary information. It is all available in the string of digits along with the primary information. Philosophically speaking, digitization is a unique sampling of the natural sound, and in contrast with analogue recording, nothing more can be obtained from it. Hopefully, the standard of digitization used when recording took place is sufficient for present and future purposes of that particular source! As a preliminary conclusion we can say that digital recordings may be preserved faithfully as such. It then becomes a question of the survivability of the carrier-reproducer system or of the "eternal archive". And, obviously, that future technologies are able to decode the string of digits which does not represent the pure sound but rather an encoded version in order to permit total reconstruction in case of errors.

THE ETERNAL ARCHIVE.⁵

This is a beautiful idea which, however, only deals with primary information. The concept is that the information, once digitized, may be stored on any medium or slosh back and forth between data stores. Irrespective of the technology for storing the digitized information, the contents of the data stores may be transferred to another

technological base with full fidelity. This also automatically solves the problem of carrier-reproducer system, because all that is needed is to download the string of digits from the store in actual use and to convert it. No more problems with CD players to outdated standards or head drums which cannot play digital tapes.

However, to gain these benefits, there must be a huge data administration system available to monitor the quality of storage and to perform automatically the uncomplicated and safe transfer to the new technological base. Also, high-capacity data channels must be available in a world-wide grid. By pleasant coincidence, there is presently excess capacity on such high-capacity channels which are also called "super highways". And competition in capacity and systems is presently fierce. This all means that the archive world may be offered "eternal-type" systems at costs which are presently quite attractive.

Use of such large computer systems has to be paid for. Either it is capital investment which is not well liked by governments because it leaves less degrees of freedom on the state budget. Or else it is a fee for the use of the system, possibly based on the volume of data stored and the transmission. From the state budget point of view such fees may be cut for a year or two. However, in case the systems and super-highways are owned by private enterprises, the digital data representing our cultural heritage may well be taken hostage in discussions over the level of fees. In both cases, short term decisions instantly endanger our cultural heritage. The public responsibility for the preservation of our identity cannot be privatized. I will go as far as to say that it is naïve to expect a change in government attitudes just because private enterprises are making available huge data transfer rates.

This fundamental flaw in the "eternity", that is the need for absolutely unbroken payment, again must open the eyes of the archive world to the fact that archiving has not changed. The contents of archives will experience budgetary droughts, and will the inherent physical survivability of locally stored material becomes essential. And it becomes essential that media are chosen or developed which will ensure survival, at least of a selected part of our material, be it with a robust system or in such a simple form that re-construction of reproduction equipment is a simple task. Obviously, we may possibly have to conclude that even some digitally recorded material must be preserved in analogue form, in order to ensure maximum survivability.

Such considerations should obviously not detract from the use of digital distribution and production as well as indexing and selection. But it would be wrong to think that preservation and archiving is made available free as a spin-off from such activities. Various digital formats have already entered into the audio archive world, no catastrophic volumes of breakdowns have been reported, but the time frame within which the archive world must wake up to physical reality and to resist the lure of cheap data transfer and storage rates is probably no more than five years. That time should be spent, not on obtaining the final truths of how to convert to digital but rather on how to find a medium/system which will hold safely at least that information which has the highest historical priority. And by all means cooperate with the video world, but do not let IASA take responsibility.⁶ We may envisage sufficient problems as it is.

Endnotes:

1. Dietrich Schüller, *Strategies for the safeguarding of audio and video materials in the long term*, IASA Journal No 4, pp 58-65 (November 1995). This is an expanded version of a paper read on 6 September 1994 at the IASA/FIAT Conference in Bogensee entitled *Beyond Petabytes - Strategies to Safeguarding the Audio and Video Heritage in the Digital Domaine* (a more descriptive title).
2. Joachim Stark, *Mass storage based solutions for digital media archives*, IASA Journal No 4, pp 66-68 and Horst Niederehe, *On the way to a fully integrated media-archive digital mass storage in media archives: a solution based on the SONY DIR-1000*, IASA Journal No 4, pp 69-79 (November 1994)
3. One exception which evaluates current possibilities is Ian Gilmour, *Digital Audio in Archives*, IASA Journal No 4, pp 38-51 (November 1994)
4. One interesting attempt to agree on data formats for the digitized holdings of record companies is currently developed by a working group of the German phonographic industry. Dietrich Schüller is a personal member of this working group (personal communication from Dietrich Schüller).
5. This concept was originally proposed by Dietrich Schüller, *Towards the Automated "Eternal" Sound Archive*, in Boston, G. (Ed.), *Archiving the Audiovisual Heritage Proceedings of the Third Joint Technical Symposium, Ottawa 1990, 1992*, pp 106-110
6. Fundamentally there are both physical and psychophysical differences between aural and visual stimuli which call for different approaches - at least before digitization. These issues will be dealt with in the complete report. But in a digitized world we could just as well be discussing and caring for bank account data!

REVIEWS

Svensk fonogramförteckning. 1991. Stockholm, Arkivet för Ljud och Bild, 1993. 310 pages. SEK 350.

The third annual volume of the Swedish national discography follows the model of the two previous volumes issued so far. The volume lists all domestically produced sound recordings published in Sweden during the year and received through legal deposit. The recordings are listed in alphabetical order, and the usual discographical details are included. There are indexes for titles and personal names. The lay-out is clear and easy to read.

About 3000 different recordings are listed in this volume. Of them, 50,4 % fall under the category "rock, pop, soul", 19,8 % feature "dance bands, popular songs, entertainment", 5,5 % "religious music", 4,6 % "jazz, blues, rhythm & blues" and 4,1 % "classical music". Other, smaller genres include speech recordings, children's music and folk music.

A recent newsletter from the Arkivet för Ljud och Bild informs us that the institution has just received a special grant to speed up the retroactive cataloguing of older Swedish recordings. The total documentation of the Swedish record production from its beginnings to the present appears now a realistic possibility.

Don Niles: *Commercial Recordings of Papua New Guinea Music*. 1989 Supplement. Boroko, National Research Institute, Cultural Studies Division, 1993. 146 pp. K 6.00.

Don Niles and Clement Gima: *Commercial Recordings of Papua New Guinea Music*. 1990 Supplement. Boroko, National Research Institute, Cultural Studies Division, 1993. 134 pp. K 5.75.

Don Niles and Clement Gima: *Commercial Recordings of Papua New Guinea Music*. 1991 Supplement. Boroko, National Research Institute, Cultural Studies Division, 1993. 136 pp. K 5.75. (Available from the publisher at P.O.Box 5854, Boroko, NCD, Papua New Guinea).

Many third world countries have an impressive production of local music in cassette form. Information about such products is generally hard to come by. Papua New Guinea is a shining exception: the National Research Institute has since the eighties regularly documented the country's entire output of commercial recordings. So far nine volumes have been published. As the first volumes go back to the beginnings of the country's music industry, Papua New Guinea today is one of the very few countries in the world which have documented their entire record production.

Each annual volume lists several hundred recordings. The listings are arranged numerically by label. There are alphabetical indexes by artist and province, and a cumulative numerical index which helps the user to track recordings listed in earlier volumes.

The volumes are of course primarily aimed at Papua New Guineans themselves and students of PNG music, but they also have wider uses. Each annual volume has an introductory essay on new developments in local musical life, and thus we are informed about the introduction of locally-produced music video clips on Papuan television and other similar events. Papua New Guinea is an interesting case study of the development of the recording industry in the third world, and these volumes provide uniquely well documented, detailed information.

Ron Simpson: *Mastering the Music Business*. Reviews and Listings of Music Industry Books and Resources for Songwriters and Educators. Orem, Utah, Sound Column Publications, 1994. 214 pp. (Available from Sound Column Publications, Country Manor, 812 S. 890 East, Orem, Utah 84058, USA).

If you are an aspiring songwriter, musician or producer trying to get started in the music business, you can avoid a lot of trouble if you start with this book. With short and sensible reviews of books like "How to have your hit song published", "How to get a record deal" and "Insider's guide to advertising music", you will be able to locate the information you need. And if you haven't gotten that far yet, you can start with "Learn to read music" and "Songwriter's rhyming dictionary".

The emphasis here is on the practical side of the music business, but Simpson also includes the basic works which treat the (American) music industry from a historical, economic or legal viewpoint. The general music librarian will find this volume an excellent reference tool, and even the specialist will probably find a few items he missed the first time around.

Pekka Gronow

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