EUREKA PROJECT E!892 - EUROCARE AVIDA

1. General description

Project	E! 892 - EUROCARE AVIDA	**Status**	Finished - 17-APR-2000
Title	**Long Term Stability Of Audio-Visual Data**		
Class	Sub-Umbrella	**Technological area**	Environment
Start date	01-JAN-1993	**End date**	01-JAN-1999
Duration	72 months	**Total cost**	0.44 Meuro
Partner sought	No		

Summary Audio-Visual Data Carriers Play An Increasingly Important Role In Cultural Heritage Documentation But Are Prone To Degradation. Aim: Clarify Degradation Mechanisms/Identify Appropriate Preservation Measures For Essential Documents.

Budget and duration

Phase	Budget(Meuro)	Duration (Months)
Total	**0.44**	**72**

Member contribution

Member	Contribution	Position	Since
Austria	**61.00%**	**Notified Finished**	**17-APR-2000**
Germany	39.00%	Notified Finished	17-APR-2000

Participants

Company	Country	Type	Role
Phonogrammarchiv Der Oesterreich.Akademie Der Wissenschaften	**Austria**	**Research Institute**	**Main**
Bundesarchiv	Germany	Governm./Nat. Admin.	Partner
Oesterreichisches Kunststoffinstitut	Austria	Research Institute	Partner

2. Project outline

Project description

In order to strengthen the European electronic software and media industry, in the field of audiovisual communication, the European Community is putting emphasis on programmes directed towards an increased and substantial European input on the engineering side (such as the European High Definition Television Standard). The latter activities are feflected in programmes such as "EUREKA AUDIOVISUAL" or "MEDIA". These projects emphasize European cooperation in the production of "software", i.e. radio, television and film programmes representing European multi-faceted cultural society.
Little attention has so far been paid to the preservation and conservation of historical productions as well as the future availability of present recordings. Audiovisual data carriers (photographic stills, films, phonograms and videograms) are extremely vulnerable and unstable media when compared with conventional paper documents. While it is generally known that historic films made from cellulose nitrate are extremely unstable and difficult to store, there is little public awareness of hazards that endanger vast quantities of other historic and even contemporary data carriers. As an example, the worldwide breakdown of so-called instantaneous acetate discs is mentioned: these are unique documents dating from the Thirties to the Fifties containing irreplaceable recordings of politicians, artists and other eminent personalities. Another risk of hitherto undervalued dimension is the "Vinegar Syndrome", the inherent instability of cellulose triacetate which is the base material for (contemporary) safety film and early magnetic tapes. Moreover, most recently, the "Sticky Tape Syndrome" is affecting especially most recently produced video tapes and cassettes, rendering them unreadable - sometimes after a period of only a few years.
It is obvious that, apart from general historical, cultural and scientific implications, the aim of the European Audiovisual Cultural Policy can only be fulfilled properly if contemporary productions are augmented by historical materials for the future. This is even more important today since due to political developments in the East enormous amounts of material are becoming available which have not been previously accessible to historians, researchers and the culturally interested community.
In pursing this aim, the PHONOGRAMMARCHIV of the AUSTRIAN ACADEMY OF SCIENCES, the oldest audiovisual archive in the world, has joined forces with the CENTRE OF ARCHIVAL POLYMERS, Manchester and the OESTERREICHEISCHES KUNSTOFF-INSTITUT, institutions having a long-standing tradition in polymer degradation research. The project aim is to survey the endangered audiovisual materials in Europe (East and West) and systematically investigate the various degradation processes. A catalogue of conservation, perservation and rejuvenation measures is to be established which will be in the public domain and independent of the polymer industry and its inherent trade secrets. The preservation and conservation of the European audiovisual heritage must be independent of the commercial policies of the industry.

Technological development envisaged

Although the principal goal of the project consists of safeguarding archival data carriers, the research will also lead to improvements in the quality of commercial data carriers. The most appropriate storage conditions, which apply to data carriers in general, will also be identified.
In a world of increasingly automated data securing management, the basic stability of storage media is a predominant handling, management and cost factor.
Technologically, the project will focus on known and potential, as yet undetected, ageing phenomena. These ageing phenomena will be investigated by advanced methods of testing and research (which have not been used before in combination in this special field), such as:
- chromatographical methods
- infrared spectroscopy
- DSC (Differential Scanning Calorimetry)
- TGA (Thermogravimetry)
- TMA and DMTA (static and dynamic thermo-analyses)
- standard and electron-microscopy
- standard chemical analyses.

In the beginning the project will focus on screening activities in order to assess experimentally the relevant degradation processes and their parameters. Further activities will identify the most important particular research (selections of the most endangered data carriers, rejuvenation measures, etc.).

Markets application and exploitation

Project codes

BSI

AC/AI	quality assurance
DY	polymers
LBQ.B	audiovisual materials
LIV	archives
LNC	recording media
MJD	data handling
ZWO	music

NACE

2231	Reproduction of sound recording
2524	Manufacture of other plastic products
5274	Repair not elsewhere classified

3. Main participant

Company	**Phonogrammarchiv Der Oesterreich.Akademie Der Wissenschaften** Liebiggasse, 5 1010 Wien Austria Tel +43 1 4227 29600 Fax +43 1 4277 9296
Contact	**Dr. Dietrich Schueller** Director Tel +43 1 4277 29601 Fax +43 1 4277 9296 pha@oeaw.ac.at
Organisation type	Research Institute
Participant role	Main

Contribution to project

Will survey the situation of endangered audiovisual materials in Europe to link the audiovisual archives with their most significant needs to the polymer research partners.

Expertise

Founded in 1899, the PHONOGRAMMARCHIV is the oldest sound archive in the world. Ever since its foundation, it has been active in the development of sound archivism on an international scale. It coordinates the Technical Committee of the INTERNATIONAL ASSOCIATION OF SOUND ARCHIVES and is a member of the UNESCO-sponsored Technical Co-Ordinating Committee of the International Federations of Audio, Film and Video Archives. The Archive's bibliography contains numerous articles written by staff members on the preservation and restoration of audiovisual carriers.

4. Partner

Company	**Bundesarchiv** Potsdamer Strasse, 1 56075 Koblenz Am Rhein Germany Tel +49 261 505-0 Fax +49 261 505 226
Contact	**Prof. Friedrich T. Kahlenberg** Praesident Tel Fax

Organisation type Governm./Nat. Admin.
Participant role Partner

Contribution to project

Concentration on investigation into actual research needs/ evaluation of ongoing research programmes in full range of audiovisual archives.In accordance with personnel,all means will be made available to coordinate/support this field.

Expertise

Responsible for about 29,000 historical sound carriers, about 150,000 documentary and feature films on 900,000 reels, 7,000,000 photographic stills and a considerable amount of video tapes. Special experience was acquired in the handling, i.e. the conservation and restoration of silver film, glass plates and other audiovisual carriers. The BUNDESARCHIV is a member of the UNESCO-sponsored Technical Co-ordinating Committee of the INTERNATIONAL FEDERATION OF AUDIO AND FILM ARCHIVES (FIAF), the INTERNATIONAL ASSOCIATION OF SOUND ARCHIVES and the INTERNATIONAL COUNCIL ON ARCHIVES (ICA). One staff member contributes to the work of the ICA as Secretary for Technical Matters while another cooperates within FIAF's Preservation Commission.

4. Partner

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Organisation type Research Institute
Participant role Partner

Contribution to project

Work will focus on investigations into the ageing phenomena of data carriers using chemical/physical methods. Screening activities will assess the relevant degradation processes and the most important fields research in the future.

Expertise

The AUSTRIAN PLASTICS INSTITUTE was founded in 1953 and represents a Department of the

RESEARCH INSTITUTE FOR CHEMICAL TECHNOLOGY. It is engaged in fundamental and applied research in the field of destructive and non-destructive testing of polymers. The activities of the Institute encompass the determination of the physical, chemical, mechanical and thermal parameters of plastics, elastomers, compounds, adhesives and binders. Furthermore, the Institute is active in research on the determination of processing techniques, on the degradation of naturally and artificially aged plastics, on the fireproofing of synthetics and on the stability of plastics in microbiological environments.