UNIVERSAL CITY STUDIOS

FILM PRESERVATION

Statement presented to the Library of Congress, pursuant to their public hearings as part of its film preservation study on February 12, 1993 at the Hotel Sofitel Ma Maison Board Room.

Appearing:

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The Universal library consists of more than 2,330 theatrical titles. This material is protected by either separation masters, interpositives or fine grains. Of our 740 color titles, 89% have Y.C.M. separation masters as protection (approximately 17,058,000 feet). The balance of these titles are either "negative pick up" titles or shot on 16mm, however, these titles are protected by color interpositives.

Our black and white theatrical titles are protected by over 10,611,660 feet of either nitrate or acetate fine grains or dupe negatives. As part of our ongoing preservation program we are replacing our nitrate elements with acetate elements.

Additionally, we have created over 27,471,960 feet of color interpositives or fine grain masters for our television product. The exception to this is a thirteen year period before the advent of video cassettes and laser discs when other smaller gauge film formats were considered acceptable protection. However, we are currently in the process of manufacturing interpositives on these television titles.

Since 1976 Universal has spent approximately $21,000,000 building and maintaining vaults, creating a computer data base, relocating material to provide for geographical separation and maintaining knowledgeable staff personnel.

Our main archive facility is located at Universal City, California. There are five buildings totaling over 49,000 square feet with a capacity of 1,700,000 containers. In 1976 Universal built its first major modern vault building. This structure is a state of the art facility in which we were able to meet the then recommended storage conditions of 50 degrees fahrenheit and 50% relative humidity. In addition, movable storage racks were installed providing maximum utilization of space. In 1987 Universal converted one of its older vaults to an environment of 46 degrees fahrenheit and a relative humidity of 35%. We realized the correlation between humidity and the deterioration of color negative and chose to improve the storage conditions beyond Eastman Kodak's recommended standard of 50 degrees fahrenheit and 50% relative humidity. In making this change we extended the life of our color elements before they succumbed to color fading. In both instances Universal was well ahead of the industry in the area of archival film storage.

In 1986 Universal established an additional storage location in Boyers, Pennsylvania owned by National Underground Storage. These vaults are situated in underground limestone caves and are guarded by 24 hour security. Currently our storage environment at NUS is 50 degrees fahrenheit and 25% relative humidity. Universal was the first major studio to enter into an agreement with this facility and was later followed by Paramount, Columbia and Disney in 1992/93. This operation is the cornerstone of our geographical separation philosophy wherein we are able to store separate pre-print picture or sound elements 3,000 miles apart.

In 1988 Universal expanded its total storage area by adding a state of the art video tape, audio tape and viewing print vault. This area comprises a total of 7,000 square feet, with a capacity of 510,000 containers. Incorporated into this vault is a high tech movable shelving system that allows 60% more usable space than that of conventional stationary storage systems. This facility operates at an environment of 65 degrees fahrenheit and 50% relative humidity.

Kearny, New Jersey is another location dedicated to the storage of assets for Universal. Approximately 23,000 cans of nitrate film are the primary residents of this facility. These filmed assets are inspected on a regular basis. If a film element is found to be deteriorating, Universal Vault Services researches other film element availability to expedite preservation. Universal is also currently reviewing the new A.N.S.I. standards and the S.M.P.T.E. recommendations for the storage of motion picture film and will be addressing them in the near future.

In 1986 Universal undertook the arduous task of creating a computerized tracking system for picture, sound and video tape elements. The task of implementing this system included the creation of a vault inventory software program, the establishment of nomenclature, the inventorying and bar coding of over 1,000,000 elements, thus providing interface throughout all Studio Post Production Departments, Home Video and MCA TV areas. This system also allows us to track elements in our vaults in New Jersey and Pennsylvania.

STATUS OF PRESERVATION EFFORTS

In the area of film and sound preservation Universal has spent approximately $7,600,000 since 1981. Additionally, $2,000,000 is earmarked for calendar year 1993. These figures do not include the cost of separation masters made for theatrical products or the manufacture of protection interpositives for our television series.

In the area of theatrical production, Universal creates timed separation masters on all its current color features. As a follow up, we physically inspect all our current separation masters and periodically make color internegatives and check prints to further confirm the quality of these masters. It is very important to note that Universal is the only major studio to inspect its own separation masters. Universal has had great success restoring its older (1930's) theatrical titles to their original length and quality by utilizing its separation masters.

Another goal is the total preservation of nitrate titles. Universal began the process of transferring its nitrate material to acetate film in the early 1980's. We are continuing with this process and to date approximately 429 features

have nitrate pre-print elements with acetate back up. In the event two pre-print elements exist (i.e. a black and white original negative and a black and white fine grain) an analysis is made to confirm the best element for the preservation process. When completed, Universal will retain an answer print, composite fine grain, dupe negative, check print and optical track negative. If the title was originally shot on 3-strip camera negative we produce a 35mm answer print, timed interpositive, internegative, check print, optical track negative and separation masters. In all cases utilizing this procedure, each title is both protected and geographically separated.

Although a majority of our nitrate titles have undergone preservation, we will continue to store these elements for the foreseeable future in the likely event new technology emerges, thus assuring quality without compromising the original integrity.

We are currently working with the Director's Film Foundation on the restoration of ten features. These restorations are being undertaken in cooperation with the U.C.L.A. Film Archives. Titles such as **PHANTOM OF THE OPERA** (1943), **THE PLAINSMAN** (1936), **ANIMAL CRACKERS** (1930), and **SHANGHAI EXPRESS** (1932) are on this list.

SOUND PRESERVATION AND RESTORATION

In the mid 70's the Universal Sound Department began protecting sound track masters, creating what were then called "STUMPF Copies." This process involved the copying of track masters to 1/2" non-sprocketed tape with sync pulse.

The phrase STUMPF was defined as:

S tudio

T track

U niversal

M ulti-channel

P rint

F acility

It incidentally was also the name of the then Director of our Sound Department, Dick Stumpf.

The STUMPF COPY process of protecting our feature and TV sound masters continued into the mid 80's. We concluded that as stereo sound

tracks became more complex, the three tracks available on the 1/2" tapes were insufficient for our needs. Under the guidance of Bill Varney, Vice President of Sound, Universal instituted the following procedures for preservation of sound elements:

1. The physical cleaning and/or repairing of the original master element whether magnetic or optical.
2. The re-labeling and bar coding of those masters.
3. The simultaneous transferring of these tracks to both digital (32-track) and analog (24-track) protection masters.
4. The shipping of protection masters off lot to underground storage facilities.
5. Older sound masters with unique inconsistencies are processed through the "SONIC SOLUTIONS" digital noise removal area.

The sonic solutions equipment removes distracting noise from valuable titles without damaging the integrity of the original mix or track. This affords the preservationist the ability to choose many different degrees of noise reduction with minimal adverse effect upon the original sound track. Most importantly, this process allows all of this flexibility and improved quality through the digital medium, eliminating any additional analog generations.

Universal's Sound Facility continues to evaluate emerging technology which could assist our sound preservation goals.

COOPERATIVE RELATIONSHIPS

Universal Studios has mutual cooperative relationships with various archives, museums, foundations, libraries and educational institutions. Because of this relationship we are able to inquire as to the availability of alternate film elements on our various titles. Occasionally we have found different versions of elements for use in preservation at these institutions. In the past, Universal has been cooperative in this manner to outside archives for the betterment of preservation. A large number of titles are also stored at the U.C.L.A. Film Archives, Library of Congress, Museum of Modern Art, Museum of Broadcasting, Academy Foundation, etc. Under existing agreements, scholars may access titles for research free of charge in a library or classroom environment. With prior authorization, under certain circumstances, screenings are permitted provided no fee is charged for admission.