

Study of the Current State of American Television & Video Preservation

by

The Library of Congress

*Submission by*

**ABC BROADCAST OPERATIONS & ENGINEERING**

**(CAPITAL CITIES/ABC, INC.)**

Michael C. Lang,  
Senior Vice President, Business Affairs  
ABC Broadcast Operations & Engineering  
47 West 66th Street  
New York, New York 10023

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In June, 1993, Robert Iger, who was then President of the ABC Television Network Group and is today President of Capital Cities/ABC, gave his enthusiastic support to a project proposed by Preston Davis, President of ABC Broadcast Operations & Engineering, to ensure that the network's vast archive of owned video material would be preserved.

In the over 2 1/2 years since then, representatives from ABC News, Sports, Entertainment and Broadcast Operations & Engineering have worked together to build the foundation of what eventually will be a unified network film and tape archive -- carefully housed, properly maintained, and consistently indexed.

The magnitude of this task is daunting. ABC now holds approximately 1 million separate reels and cassettes of Network-owned material. At the time we began contemplating the creation of a unified archive, these massive holdings had long been Balkanized into different collections, located in different places, operated by different divisions or departments, catalogued in different ways and to different standards, and stored with different levels of care

Even worse, we soon realized that some unknown percentage of this material was in danger of being lost. For example, during preparation for a retrospective Barbara Walters special, a number of field tapes were retrieved from storage for viewing as possible source material. Damage caused by adhesives once used in the assembly of reels was discovered on one important interview tape, other 2" and even newer 1" reels were found to be dirty,

brittle and flaking, and there was mysterious warping damage that caused tracking problems on an interview tape that was only seven years old.

It soon became obvious that no quick and easy fix for this problem would be forthcoming -- we could find no technological Heracles capable of cleansing our video Augean Stables.

Instead, ABC Broadcast Operations & Engineering, the technical arm of the network, proceeded to design and construct the ABC Media Conservation Facility (MCF), which is exclusively dedicated to the on-going process of preserving the network's videotape assets

Attached to this submission is a description of the MCF, but I would like to briefly discuss in general terms both the facility and the way it works. The physical space (approximately 2000 square feet) is divided into two basic functional areas: one for screening, and the other for dubbing

The screening area, which is not yet operational, will be where representatives from ABC News, Sports and Entertainment preview, when appropriate, endangered tapes, in order to determine whether any of the existing material need not be dubbed to fresh stock. For example, unlike film, videotape cameras are often rolling several minutes before a newsmaker arrives at the podium or in the doorway, and sometimes reporters doing "standuppers" don't get it "right" the first time. When multiplied by the myriad of news field cassettes in the ABC inventory, excising repetitive shots of unoccupied podia or preoccupied reporters may, in the end, save thousands of hours of dubbing time, and hundreds of thousands of dollars in materials and labor costs.

In the dubbing area of the MCF, in order to satisfy operating requirements as well as meet our obligation to ensure the long-term preservation of valuable material, two copies of each endangered tape are being made: an analog beta copy and a digital D2 copy. Each fresh beta copy is returned to the shelves of the working library from which it was plucked, and the D2 copy -- the long term archival storage copy -- will be placed in an appropriate facility, either on or off the Company's premises, where it can quietly reside until another working copy is required. During the initial planning process, all parties had agreed that the deteriorating copy -- once it had been dubbed afresh -- could be discarded. Even a mildly skeptical observer, however, might easily conclude that only the intense pressure of overflowing shelves will force this cleansing deaccession to occur.

Although D2 is our initial choice of format for long-term archival storage, it almost certainly won't be our last. For the moment, at least, considering the massive quantity of material with which we will have to deal, it meets the two most pressing criteria: it is digital, and it isn't ridiculously expensive. As other options become viable -- disk based media, for example -- we may move away from D2. Indeed, when disks become economically competitive with tape, the random access capability of the disk format, plus the likelihood of a very extended shelf life, would certainly make it an attractive successor format.

Unfortunately, with a perpetual archiving process that will involve changes in the selected storage medium, one of our most troublesome concerns is how to ensure that we continue to possess and maintain the technical equipment required to permit the playback of electronically stored images.

Unlike printed paper, which presents itself directly to the human eye, analog and digital signals are incomprehensible until played back through an electronic mediating device that converts them into recognizable pictures and sound. As formats evolve, the greater risk lies not in the eventual deterioration of properly stored archival media, but in the probable unavailability of the equipment (including spare parts) needed to play the stuff back.

Like Proteus, formats will continue to change. But great caution should be exercised before scrapping one established archival storage medium and substituting another. Considering the volume of material with which we must deal, the possibility of reconverting all previously archived material to each successor medium to maintain a neat consistency, and eliminate the need for more than one sort of playback device, will almost surely be impractical and uneconomic.

For entities like ABC with several hundred thousand hours of material on hand, the desire to achieve preservation at a reasonable cost is obvious. We must, therefore, consider the possible use of compression. Compression technology would permit a radical reduction in the amount of both the storage medium required and the space in which to house it.

The issue of whether it is archivally responsible to compress video material is, we understand, a highly charged one. Some opponents of compression pronounce it anathema, maintaining that to use it is to needlessly throw away a percentage of the material which we are committed to save.

But what is the material to be preserved? Is it the analog magnetic signal or, in the case of digital formats, all those 1's and 0's, resting on the tape? Or is it instead the pictures and sound which are created when these invisible elements are processed by an electronic mediating device?

If what we mean to save are the images and sounds, and if they can be created -- using less electronic information -- to a degree virtually undetectable by any human being, then we have preserved everything of value. It is even possible to compress to a higher standard than that of human comprehension. Using so-called "lossless" compression (probably under 2:1), image creation can occur to a degree that preserves levels of sharpness and color well beyond the capability of the human eye to discern. And the difference between an uncompressed image and one created at this low level of compression would be virtually undetectable even to an electronic measuring device. In either case, the pictures and the sounds will have been saved -- at a significant saving.

Obviously, for material which may be used for production purposes involving much editing or other electronic manipulation, the less compression the better. But for material which most likely will not be subjected to intensive processing, the notion of a compressed archival format should not be ruled out.

It would surely benefit ABC and the many other public and private organizations who have decided to preserve their respective videotape holdings, if these and similar issues could be discussed on some continuing basis. A forum is called for in which ideas and information pertaining to the preservation of videotape records can be shared. I certainly hope one outcome of these hearings will be periodic gatherings at which the archival

problems, both technical and conceptual, we each encounter individually can be discussed, and perhaps even solved, together.