

Videotape Restoration: "Where do I Start?"

By Jim Lindner

Prioritizing the use of limited resources is a constant challenge in any organization. The process of determining which videotape elements of a collection should be restored first may seem an overwhelming problem when faced with dozens or hundreds of tapes, all of which may need restoration over a period of time, and all of which look identical on the shelf. Actually, choosing which tapes are the most urgent candidates for restoration can be a relatively painless and quick procedure.

One of the most frustrating aspects of evaluating which videotapes should be restored first relate to the unfortunate reality that often one does not know the content of the tape before the restoration process has been completed. Indeed, it seems ridiculous to have to spend valuable resources to restore an object before evaluating its importance to the organization. Assuming detailed records have not been kept, a wall full of tapes all of which basically look the same with only similar, short and often cryptic titles (which seemed perfectly logical at the time of production) presents a daunting task for anyone. Certain aspects of the video production process, however, may often be a helpful guide in determining which tapes in any given production may be the most important candidates to start with.

Determination of Production Elements In most film and video production there are multiple tapes, commonly referred to as "elements" that are made during the production process. Film or video elements start with the camera original which is the actual film or tape that was in the camera during the photography of the piece, and end in an Edited Master which is the final finished piece. There may be several versions and revisions of an edited master which could encompass different organizational needs, applications or markets that have different requirements. Examples of how different versions of an edited master could be different include a foreign version which could have a different language sound track an airline version of a feature film, or a sales film that would have one version showing an entire product line and another that concentrates on a specific product. Grouping the collection by elements for each project or title will allow you to determine which elements were used as intermediate processes and which elements are the complete project in its full length. Given limited resources, one must determine which elements have the best overall utility for the organization, the edited master(s) or the camera original which may have additional scenes not used in the final production. In general, the longest length Edited Master should receive first priority.

Choosing the highest quality element Within a given element type or production, there may be many copies that exist in a collection. Generally, however, there is only one master which should be the highest quality version of

the various copies that may exist. If one has several boxes all of which have the same label, the edited master will generally be the tape that is of the highest quality format. For example, editors will often have many 3/4" U-matic cassettes of a given production that are used in the editorial process, but there will normally only be a very few 1" tapes which most often are either the final edited master, high quality duplicates of that master (often called protection masters), or high quality original elements that were used in the final editing (similar to camera original). For this reason, look within any given production elements for the highest quality format tapes because these will usually be either the edited master or the camera original in the best quality that existed for any given production. It is quite possible for there to be 20 or more tapes in the collection for any given production, but there is usually only 1 or 2 edited masters in the highest quality format for any production.

Format Evaluation Once one has determined which tapes are most desirable candidates for any given production, one has to choose which productions to do first. Obviously the first place to start in this matter are the ones of most importance from a historical or organizational perspective. But if they all seemingly have similar priority from a content perspective, the place to start is with obsolete video formats that have a track record of poor long term storage performance and a small machine population. As a general rule of thumb, start with tapes that are 10 years or older, have been mistreated, or appear to be in an unusual container or cassette. Examples of these types of formats include 2" videotape which are very large and heavy reels that were most often used in broadcast applications, and 1/2" reel to reel tapes that was the first truly affordable video format for organizations and consumers. Since the invention of videotape recording, there have been well over 100 different formats that have been commercially introduced. Some of these could be considered a commercial success, but many were not. Any unusual or esoteric formats such as early cartridge, cassette, or reel to reel formats should be placed high on the list for immediate restoration because these obsolete machines are often rare and the tapes often have experienced a difficult "life".

Evolution of Formats If a tape was made early on in the life of a format, it may be a good candidate for immediate restoration. Often improvements are made in both the quality of the tape and the mechanical functioning of the equipment during the life of a format. A good example of this is the 3/4" U-matic format which has had many generations of machine improvement as well as many different tape formulations. Early machines did not handle the tapes as well as later versions, so these tapes may have been subjected to more mechanical abuse than other tapes in the collection.

Single Copies Of highest restoration priority are sole copies of a production. If only one copy exists, there is no recourse if this tape is lost or damaged. An unfortunate reality is that single copies may have been played often or held in

"pause" for extended periods of time which damage the tape. Since there are no additional copies to refer to, these tapes must be given top priority.

Check list for prioritizing candidates for video tape restoration. Tapes with the highest numerical values should be restored first. It is assumed that all candidates are of equal value to the organization.

- Does the tape exhibit any symptoms of "sticky shed syndrome" (squealing during playback, frequent head clogging, flaking or sticky surfaces)? If yes add 5 points.
- Is the tape a single copy and exhibit any symptoms of "sticky shed syndrome" (squealing during playback, frequent head clogging, flaking or sticky surfaces)? If yes add 5 points.
- Is the tape a single copy? If yes add 5 points.
- Is the tape an obsolete format? If yes add 5 points.
- Is the tape physically damaged? If yes add 4 points.
- Is the tape the highest quality element in the production? If yes add 3 points.
- Is the tape an early example in a format popular format? If yes add 3 points.
- Is the tape 10 years old or younger? If yes add 2 points.
- Is the tape between 10 and 15 years old? If yes add 3 points.
- Is the tape 10 years old or younger? If yes add 2 points
- Is the tape between 15 and 20 years old? If yes add 4 points.
- Is the tape 20 years or older? If yes add 5 points (older than 25 years add one point per year over 25. (example 30 years old add 10 points)
- Has the tape been in a stable environment with proper temperature and humidity control? If yes deduct 4 points.