

iEARN MovingVoices : The Filmmaking Process : Plan on Paper

Intro: The Phases of Production

Pre-production: Plan on Paper:

The Idea

The Elevator Version

Treatment

Script

Script Format

Writing Narration

Connecting Scenes

Storyboard

Production Plan

Production: Record and Gather Elements

Post-Production: Editing

Sharing Your Work Online

Introduction: The Phases of Production

Most professional filmmakers and television news journalists organize their "production" into three phases:

- The preproduction phase (Plan on Paper), in which filmmakers/journalists conduct their inquiry into a subject. At the same time, they are thinking about how to use cinematic approaches (camera angles, sound design, overall production "look and feel") might be used to help tell the story to their audience. Their ideas are put down on written documents for all members of the production team to share and comment upon. We refer to preproduction as the "planning on paper" phase of production.

- The production phase (Record and Gather Elements), in which the team gathers and organizes all the visual and sound elements they want to include in their movie. These will include specific shots and camera angles, specific sound effects, specific script points, specific graphic elements. Filmmakers and television producers are after the highest quality and the most efficiency use of time, money, and effort. They meticulously plan and schedule each video or audio recording session, making sure the weather, the lights, the "talent", and the production team all work together. They also keep notes that will help them easily locate each shot or sound recording for assembly during editing. Throughout this phase, the scriptwriters carefully keep track of changes to the story and ideas for storytelling.

- The postproduction phase (Edit, Share), in which the filmmakers edit together the visual and sound elements into a coherent, moving, cinematic story. Postproduction specialists like editors and sound editors carefully merge one image to the next, one sound to the next, so the story flows from beginning to middle to end. Sometimes the resulting end product as good as the original "pre-production" vision. Sometimes it's even better. And often the end product is

quite different from what was originally envisioned. The final stage of production is encoding different versions of the end product for different presentation venues such as an auditorium and the World Wide Web.

These three phases of production are generally followed by feature film producers, documentary filmmakers, and television news producers alike. And within these phases are a wide array of specialties (writing, camerawork, lighting, sound, production planning, editing, etc.) to which a student may be attracted. Each are crafts and art forms that engross someone for a lifetime.

Pre Production: Planning on Paper

The pre-production phase of the filmmaking process is all about developing the story you want your digital movie to tell. This is an iterative writing and research process. Over the course of time, the film concept grows from a sentence, into something called "an elevator version" of a story, then to the four essential documents of television and film production: the treatment, the script, storyboards, and the production plan.

To get an idea of how thoroughly professional filmmakers prepare on paper, visit <http://www.dependentfilms.net/files.html> and review the different kinds of documents they recommend for producers.

Getting agreement on the basic idea for the film involves:

- Presenting, debating, discussing, defending your ideas.
- Putting this idea into the form of a story with a beginning, middle, and end.
- Identifying the elements of story: the people, sights, sounds, activities, historical accounts, facts about the school, pictures, narratives or personal anecdotes students may want to share - just to name a few.
- Thinking about what you need to tell the story. Is your research complete? Do you know all you need to know to tell the story? Do you need additional research? Are there local experts they might want to identify and interview to help explain the story?
- Thinking about your audiences. Why are you telling this story? What do you want your audience to know, how do you want your audience to feel after seeing and hearing this story?
- Creating drafts of documents for your production team to share.

Why bother? Why not just go out and shoot? Many extraordinary documentaries are made this way. But these filmmakers have a luxury that you and your colleagues may not have: almost unlimited time to have fun in the editing room. They use the Post -production Phase to do what every filmmaker must: to develop story structure (beginning, middle, and end), visual and sound approaches, titling, narration, and all the other creative and technical choices that go into making a video.

For most student filmmakers - and most filmmakers in general - the time to develop the story is before shooting the film's "principle photography".

Planning your film on paper is the best way to get the vision down, to get and maintain team consensus on the film, to keep track of good ideas, to refine the story over time, and help make the production and post production phases as efficient and effective as possible.

The Idea

So what is the idea? What will your production be about? What is the story you want to tell the world? As a class production team, you are going to have to talk about it and think it through. Here are some ideas that might help you along.

- Explore the Theme. MovingVoices productions are typically organized around a common theme. For instance, all the students in the 2004 pilot of MovingVoices developed their stories from a basic question they asked of themselves: WHAT IS IT WE WANT THE WORLD TO KNOW ABOUT OUR SCHOOL? Each of the resulting films is original and individual. Students clearly explored traditional and unconventional responses.

- Who Are Your Audiences? How many audiences are there? Think about it. Who are the local people who might see it? Are there any government officials who might see the film? Any film festival audiences? What about the worldwide audiences who might see your film via the Internet? How are you going to make your idea clear, important, and exciting for all these different audiences and for posterity? What is it you want present and future audiences to see, hear, know, and feel?

- Think Cinema! What cinematic approaches might you use? Think about the kinds of things you see in movies or on television. Pay attention to the way filmmakers choose what to let you see and what to let you hear. Learn the language of film by reading through glossaries of film terms. (Do a Internet search on "glossary film terms site:edu"). Incorporate what you learn into your production plan.

- Think Two Minutes. Two minutes may not sound like a lot of time in which to tell a compelling story, but television commercial producers and animators tell great stories in even less time. Hone your story so it fits. Make your two minutes shine!

Here's a useful writing exercise. As a team, produce three separate documents:

- The movie idea in a sentence
- The movie idea in three sentences
- The movie idea in one paragraph (which should be more than three sentences long!)

As you write and amend these documents, be prepared to debate, defend, compromise, take someone else's ideas and run with them. Group creation is very challenging and will be something you will be very proud of in the end

The Elevator Version

Here is a very useful exercise professional filmmakers and writers use to make their stories as clear and as compelling as possible.

One day you are in Hollywood, USA looking for someone to help turn your idea into a major motion picture. You walk into a hotel elevator. Just as the elevator door is about to close, a famous and powerful Hollywood producer gets on the elevator with you. Suddenly you have a perfect chance to get this producer excited about your film idea. But, elevator rides are very short, 30 seconds at most. In 30 seconds, what is the story your group "pitches" to the famous Hollywood filmmaker?

In thirty seconds, what is "elevator version" of your story? Write it down.

During the MovingVoices pilot, Steve McKinnon's class in Athens, Ontario had lots of ideas for stories. The student production teams had to choose representatives to actually present their elevator versions before a panel of student judges. The judges decided what film would be produced based on the quality of the "pitch".

The Treatment

A "treatment" is a term used by filmmakers to describe a document that sets out the story, goals, and creative and cinematic characteristics of a film. As you might expect, different writers have different approaches for writing treatments. They also have different goals. For instance, many documentary filmmakers use a treatment as part of the process of finding grants and other funds to help pay for the movie they want to make. For students, writing a treatment is an important exercise in reaching agreement on what you want your film to convey.

Thinking about potential audiences comes in handy when writing a treatment. That's because a treatment is essentially a document that accurately describes the film from the point of view of the audience. Answering these questions can help put the treatment together:

- What is the story that will be told to the audience. Adapt the elevator version. How will the story unfold--beginning, middle, and end--on the "screen"? What will they see first? What will they see next?
- What "locations" will the audience be shown by the camera?
- What are the natural, environmental sounds that the audience will hear at these locations?
- Who will tell the story? A storyteller (also known as a narrator). Interview subjects? A combination of both? (This is a very useful and traditional approach in documentary film.)
- Who is the narrator? Does he or she introduce herself to the audience or is the voice an "omniscient" storyteller?
- Who are the people that the audience will meet, and why are they important? What unique contributions to the story will these people ("characters") make?
- What do you want your audience to know or realize after seeing the movie?
- How do you want your audience to feel after seeing the movie? What emotions are you trying to stir?

For more insights on the craft of writing treatments, visit this page, <<[http://wl.middlebury.edu/sightsound2/stories/storyReader\\$48](http://wl.middlebury.edu/sightsound2/stories/storyReader$48)>> prepared by Deborah Ellis, Visiting Assistant Professor of Film and Media Culture, for her students at Middlebury College, Vermont, USA.

The Script

A film or television script is a written document that details exactly how the story unfolds scene-by-scene, shot by shot. It is a detailed expansion of the treatment. Did you hear the word "details"? The more details there are, the better the script will be able to guide production. With a clear, accurate script that reflects the filmmakers' detailed intentions, camera operators will record exactly what is needed and editors will have well-organized materials from which to choose as they put the movie together. A script, then, is vital for helping all the people involved in the creation of a film work together.

Even television news journalists use a script, even when they are "live". It may only be a notion in the reporter's head or a few notes scribbled down, but the reporter and crew know give report a structure: beginning, middle, and end.

A filmmaker should be able to read his or her script at a leisurely pace and get a good idea how many minutes and seconds the film will be in length.

Usually scripts go through many revisions. The revisions come as people who have different production responsibilities (sound, or camera, or editing) add their own details. Also, as the "Production Phase" begins, even the best ideas meet reality and the film will have to change accordingly. Print and share as many scripts within the production team making sure to put a date on each version so everyone is working with the latest and greatest version.

Script Formats

Scripts are usually printed double-spaced or with a lot of white spaces in the margins so that hand-written notes can be added, especially when filmmakers are out in the world recording sights and sounds with their equipment or working with actors or complex scenes.

There are different kinds of formats for scripts that are used for different purposes such as Hollywood-style movies, television shows, news reports, or commercials.

For MovingVoices, we're going to recommend a simple but effective script format that is different from either a "screenplay" or "AV" format.

(If you don't know about these styles but want to explore them and use them, visit <http://www.mnstate.edu/johnsdan/dtv/ScriptLayout/ScriptLayout.html> for info about Hollywood-style script formats and <http://www.delmar.edu/comm/rtv/FOCUS-AV.htm> for AV style formats.)

The main advantage of the script format we're recommending for MovingVoices is that any word processor can handle the simple formatting involved. It provides room for details but also makes it easy to understand the flow of details.

Here's how it works:

The script contains two different formatted styles of paragraphs:

1 The first paragraph is centered, indented on both sides, is lower-case, and can be san-serif font. In Microsoft Word, we assign these attributes to a style called "AV". We use this style to describe what we want the audience to see, and the sounds and sound effects (sfx) we want them to hear. Notice there is a number at the start of the paragraph. Numbers are important for keeping track of what is recorded on tape (called "logging") and keeping track of rewrites.

Below is a second paragraph style. It has a corresponding number to the paragraph above it. It is all upper case with a different font style. We call this second Microsoft Word style "NAR", short for narrator.

1A: NARRATOR: THIS STYLE IS USED TO NOTE THE WORDS THAT THE NARRATOR READS OR THE WORDS THAT PRINCIPLE CHARACTERS OR INTERVIEW SUBJECTS SAY. OFTEN IN THE EARLY DRAFTS OF THE SCRIPT, THIS PART OF THE SCRIPT WILL SUGGEST WHAT THE FILMMAKERS WANT THE INTERVIEW SUBJECTS TO TALK ABOUT. FOR EXAMPLE: "THE GARDENER TALKS ABOUT PLANTING SEEDS AND WHAT IT TAKES TO MAKE PLANTS GROW."

This variation of the A/V style should be used to include as many details as possible. For example:

8. Fade up from black to the outside of the school. The wind is blowing and the trees are swaying. Birds are singing. Cut to a new shot of students walking by. We hear bits and pieces of their conversation as they come into and out of the range of the microphone. Add GRAPHIC: The Preparatory School

8A. NARRATOR:

IT IS MORNING. MOST STUDENTS ARRIVE WELL AFTER THE SUN HAS RISEN. YOU MAY NOT KNOW IT, BUT SOME OF THESE STUDENTS HAVE ALREADY DONE THEIR CHORES AT HOME AND WALKED SEVERAL MILES, THEIR DAY STARTING LONG BEFORE DAWN. TODAY, ALMOST EVERYONE IS WORRIED ABOUT EXAMS.

Writing Narration

If your film is to have a narrator, there are a couple of ideas to consider. Writing narration is "writing to be heard", which is obviously different from writing to be read. This means that some grammar rules might be abandoned. For instance, when writing to be heard, sentence fragments can be effective. The legendary British broadcaster Alistair Cook described this kind of writing as "writing for talking".

Another trick for writing narration is to let the narrator tell the audience what may not be obvious to the audience from what the camera reveals, such as the idea that many of the students above have walked a long way or that they are worried about exams. If, in planning for production, the camera operators try to find camera shots that go along with the narration to show tired or worried students, so much the better!

Connecting Scenes

The best way to start a script is to think about the first thing the audience will see and hear. Describe this scene as completely as possible. Just as a good story has a beginning, middle, and end, a scene or film sequence can, too. In the example above, the scene started with the idea of day beginning. The middle of the story was information about how they day began much earlier for many students. The end of the scene presented the idea of the dread of exams.

Now the stage is set to make a transition to the next scene. What will it be? How can the words, sounds, and camera be used to move the audience from one scene to another? What editing style might you use? Close up, cut to wide shot? Wide shot, dissolve to close up? Learn about and use the kinds of techniques filmmakers use to make transitions from one moment of film to the next.

Storyboarding

The Storyboard is a visualization of the script. It uses drawings and pictures to reveal the sequence of key scenes in a film. It provides an estimation of what the camera will show the viewer.

Storyboards do not have to be works of art. They simply have to get the filmmakers' intentions on record. A good storyboard includes depictions or notes about the framing of the picture (wide shot, establishing shot, close-up, medium close-up) etc. Additional notes can be made for accompanying audio elements. Scenes should be number to correspond to the script.

Most storyboards have two elements, a frame that represents the screen and a space to accommodate the words that go along with the scene.

Here's a very good example ([link to new pop-up storyboard.pfd](#)) from MovingVoices pilot students in Buenos Aires.

Production Plan

You can sit down with the scrip and storyboard to organize and schedule your shooting and recording.

You must consider how many days you have to record all the audio and video elements and organize your time to capture the elements as efficiently as possible. Television and film producers use these documents to develop a production plan that answer import questions such as:

- Where are the natural efficiencies? For instance, if the script and storyboards call for several shots of the same subject but at different points in the script, can we shoot them at the same time? (This is called shooting out of sequence. Few productions follow the script from first page last. Instead, a master schedule helps filmmakers record similar sights and sounds and at same locations as efficiently as possible. These elements are then properly sequenced during the editing process.)
- When are we recording our interviews? Do we have all the questions we want to ask ready? Have we adequately arranged the interview? Will the subject need help getting to the recording location? Will the location be quiet and have adequate lighting? Do we have release forms for the interview subject to sign?
- Could we schedule the use of the camera to record all the sounds and sound effects called for in the script? Are they at many different locations? Can we organize video recording and sound recording to make best use of our time?
- When will we record still photos or music called for in our script? If still photographs exist in digital form (e.g. jpeg, tiff, gif, etc), you might be able to import these images using your editing software. Otherwise, you will have to use the digital camera to shoot the still. Same goes for audio and music files that might exist in digital formats (.wav, .aif, .mp3, .acc, etc.). If not, you may have to use the digital camcorder as an audio recorder. (Remember, stills and recordings are intellectual property. You must secure the rights to the use these elements in your film unless you find them in the public domain or unless the owners grant license for their use for educational purposes.) Make sure you know the audio, photo, and digital video file formats that your editing software can import and plan accordingly.
- What happens if it rains or if "talent" doesn't show up or school is canceled because of weather? When are our make-up dates?

As students, you have the extra burden of planning your production in conjunction with all of your other school activities. Effective planning is a must!

Production: Record & Gather Elements

This is the "production" phase of making a film or video: recording on digital video tape all of the elements called for in your script and storyboard. (As previously noted, some elements such as still recordings and music selections may already exist in digital form and may be imported into your editing software. PLEASE BE SURE YOU HAVE THE RIGHT TO USE THESE ELEMENTS.

It is not recommended that you begin production until you have thoroughly planned your story and production on paper. This even applies to electronic newsgathering, the art of going out and covering an event and turning it into a story.

Here are our top recommendations for recording sights and sounds with a digital video camera for MovingVoices projects:

- Know what your camera can do. Read the manual to understand what timecode, white balance, focus, and exposure mean to your production. Today's cameras are powerful tools. Get the most out of them both in terms of sight and sound.
- Know precisely what it is you want the camera to record. The script and storyboard are your guides. Use them as you would a recipe. Shoot exactly what is called for. Keep improvisation and experimentation to a minimum during your "shoot".
- Use a production log to plan, monitor, and cross-check all the different elements you need to put on tape for each part of your film.
- A "log" is a record of what elements are recorded. Such logs are invaluable during the editing process. The best way to record where different sights or sounds are on tape is to use "timecode", a reference system generated by digital cameras that sequentially identifies each frame of video. Generally, timecode has a format that shows Hours:Minutes:Seconds:Frames per second. Generally, timecode starts at 00:00:00:00 and builds continuously to the end of the tape. Use scene numbers from the script (and storyboard) and timecode numbers from the camera to keep track of the different elements you are recording. Here is a template for a field log.pdf formats (MV_field_log.pdf)
- Think of video tape as a precious resource. Start recording only when you are ready. Stop recording when you are sure the action you are trying to capture is complete. "Lights, Camera, Action!" is old time Hollywood signal-calling to make sure everything and everyone is ready. Some television productions use these signals: "Roll Tape", "Speed", "Action". What signals will your production team use?
- Keep the camera steady. Use a tripod or monopod, if you have access to them. If not, lean against a building or tree or steady the camera on a piece of wood or a tree branch - anything you can to keep the camera steady. Lock down your camera and let people and other camera subjects move through the frame. This means do not zoom in or zoom out. Do not follow people or objects by moving the camera up and down or side to side. Why not? Because you are making movies for the World Wide Web and these movies will use compression technologies to reduce the file size. Unwanted movement means bigger file sizes. Besides, 90% of the best television and cinema is shot with a locked-down camera because unnecessary motion distracts the audience. Filmmakers lead their audiences by the eye. Break these rules only if you have a compelling reason to do so.
- Pay special attention to audio. If you are using the camera's built-in microphone, be aware that the closest noisemaker to the microphone is the camera operator! If you can use a separate microphone and can monitor the microphone with headphones, you are lucky indeed. Ask the people you interview to speak clearly and to speak up. Ask the people in the production crew to keep still. Remember, you can use the camera as a portable sound recorder to record audio elements. Log these recordings just as you will log the video elements. Some

filmmakers go so far as to shoot a "silent" film and then re-create and overdub every sound in the studio. We are not recommending that you do this, but we want you to know that special sounds and words may require special attention. The Web handles sound very well. Good sound makes great movies.

- GET RELEASES FROM EVERY PERSON, INCLUDING STUDENTS, WHO APPEARS IN YOUR FILM. A "release" is a document that allows you to use a person's picture or voice in your film. Make it clear to the people you want in your film that you are making a student film for educational purposes. We are providing release form below

MOVINGVOICES Student Film RELEASE FORM

I _____ hereby grant to you the universal and perpetual right to use, and to grant others the right to use, my actual or simulated likeness, photograph, voice, personal characteristics and other personal identification in all manner and media whatsoever in, and in connection with, the your film and any other productions.

I hereby release you from all liability and obligation to me of any and all nature whatsoever arising out of or in connection with the exercise of the rights granted above. I hereby indemnify you against all claims, liability and expense respecting this Release. I agree that I shall be entitled to no additional consideration as a result of the exercise of the rights granted herein and that you may rely upon this letter in preparing and exploiting the Picture and any other production.

The word "you" as used herein shall mean _____
(producer's name)and its successors, assigns and licensees.

Date:

Print Name:

Producer's name:

Signature:

Address:

(IF THE ABOVE SIGNATORY IS UNDER THE AGE OF 18 YEARS, THE PARENT OR LEGAL GUARDIAN OF SUCH PERSON SHOULD SIGN BELOW.)

I hereby warrant that I am the parent and/or legal guardian of the person who signed the foregoing agreement, that I have caused said person to execute said

agreement, that I will indemnify you against all claims, liability and expense respecting said agreement, and that, knowing of your reliance hereon, I agree to cause said person to adhere to all of the provisions of said agreement.

Date:

Print Name:

Minor's name:

Signature:

Address:

- Shoot sequences so you can edit sequences. Your script and storyboard should have specific ideas about how to mix combinations of wide shots, medium shots, and close-ups. Take your time learn what these are! Take time to set up your special and unique combinations of shots. It is OK to ask the people in your film to do something two or three times so you can "cover" what they with different camera framing. Keep the camera steady, and note down the framing in your log.

- Make good use of available light. Today's cameras are very sophisticated. Read the camera manual to be sure you know how to make the most of very bright or low light situations. Make sure you set the white balance for the different combinations of natural and artificial light in your shooting locations. Take your time to get it right before you hit the record button.

- Use a checklist for each shot. A checklist is a way a making sure you eliminate as many mistakes as you can. (Everybody makes mistakes. Try to learn from them.) Here are the questions we recommend you ask before you press the record button.

- Do we know exactly what script element we are recording?
- Are we ready to log the recording session by scene number and timecode?
- Do we have releases from the people who will be in the shot?
- How will we keep the camera steady?
- How good will the sound quality be?
- Is the camera's exposure right?
- Are our subjects in focus?
- How is the lighting?
- Do we like the framing?
- Should we change angles to provide a variety of shots?
- Is our battery charged?

- Do we have enough empty tape for the elements we are about to record?
- How long will we be recording? Can we be steady and quiet for the whole "take"?
- How is this "take" going to be better than the one before?

Post Production: Edit

Editing is the process of turning your script into a reality in video by arranging and weaving together the audio and video elements called for in your script and recorded during the production phase.

Generally, post production involves:

- Capturing (or selecting) the elements by connecting your camera to your computer (via a firewire port) and saving selected scenes and elements to your computer's hard drive.
- Editing, which entails organizing your elements, editing sequences, fine tuning both video and audio.
- Adding effects, such as transitions between scenes (wipes or edits or dissolves), and titles and credits
- Sharing by determining which video architectures (Windows media or QuickTime, for example), formats (MPEG-4 or AVI, for example) and media (DVD, CD, narrowband Web, broadband Web) will be used to reach audiences near and far.

Each digital editing software suite has its own conventions, processes, and terms. Try to become as familiar as possible with all that your software application can do by reading the documentation and working through tutorials. Here are some links that might help;

- imovie2 tutorial from Apple
<http://www.apple.com/ilife/imovie/>
- Step-by- step video clips imovie2 tutorial
<http://www.atomiclearning.com/freeimovie.shtml>
- MovieMaker tutorial
<http://www.microsoft.com/windowsxp/moviemaker/default.asp> and
<http://www.microsoft.com/windowsxp/using/moviemaker/default.msp>
- Pinnacle tutorial
http://www.pinnaclesys.com/PBN/default2.asp?Langue_ID=7&vProduct_ID=595&Category_ID -
- AVID DV tutorial
<http://www.avid.com/freedv/tutorials/>

Other helpful sites:

- http://newali.apple.com/ali_common/build/helpcreatevideo.shtml
- <http://videoexpert.home.att.net/index.htm>
- <http://hotwired.lycos.com/webmonkey/02/15/index4a.html?>

Editing Overview

Digital editing software typically provides access to video and audio tracks. "Tracks" are like flowing streams of time. Editing software often uses the convention of a "timeline" that enables the editors to examine and move elements of the the stream in detail. (Another convention, sometimes called "storyboard" or "filmstrip" allows editors to view and arrange the film as a progression of clips or scenes

A timeline presents an application window with the streams of time flowing from left to right, some for video and others for audio all synchronized together. A "playhead" or "scroll bar" moves across the tracks to allow you access to specific moments of your video. The great thing about digital editing is you can manipulate and adjust the elements you add to the video and audio timelines, usually by merely selecting and dragging or selecting and replacing. You can add time, remove it, replace video, and manipulate the volume levels of the streams of audio at any point along the stream. These adjustments can be made in very small increments, as small as 1/30th or 1/24th of a second. These increments of time are called "frames".

The art of editing relies on the ability of the editors to work with frames the way a mosaic artist works with tiles. The goal is to put the pieces together in a way that presents the viewer with a flowing whole.

To edit, one must learn how to use the artist's tools. In this case, it means learning the capabilities of your video editing software by exploring help files, tutorials, and the Web's resources.

Here are our recommendations for beginning the process of editing your digital film.

Be ready. Be careful.

Walk into your editing session with your script and production logs in hand. You should have the latest written version of what your hopes for the finished film (the script) and an accurate and detailed record of where video and audio elements of your movie are located on tape (production log). The best production logs also have clear notes and recommendations of the best versions (or "takes") that have been recorded. Of course, you have to have the elements you have recorded during the production phase. Be very careful to protect your "master" tapes. You definitely do not want to lose, damage, or record over your master recordings.

Be selective.

The editing process begins by transferring the sights and sounds you need from the camera to the computer. Different video editing software programs use different terms to describe this process. Some call it "transferring", some call it "importing", some call it "capturing". Editors must choose and select the sections of audio and video they need for their script and move the digital information from the camera's storage system (usually mini DV tape) to the computer's storage system (usually a hard drive). Choose the best takes.

Transfer what you know you need and a little extra "padding" at the beginning and end of each selection.

Be aware of file size.

Digital video, the kind that flows from a miniDV camera through a firewire card and into a hard drive, has a data rate of 3.6 megabytes per second. 30 seconds of such video (and audio) requires about 108 megabytes of storage space. One minute requires about 216 MB of storage space. Five minutes, about 1,1 gigabytes. Thirty minutes, about 7 gigabytes. One hour, about 14 gigabytes. These are estimates. Actual storage requirements vary because of the vagaries of hard drives and fragmentation. Video effects applied during the editing process can also increase the storage requirements.

How much storage space do you need to complete a two-minute MovingVoices video? It depends on your "shooting ratio". A shooting ration of 10:1 means that you have ten minutes of raw material to make 1 minute of finished (edited) video. Generally, the more you can plan a film on paper, the lower your shooting ratio, the easier the edit (not so much raw material too choose from), and the lower your storage requirements.

The video and information in the camera can use up computer hard drive space very quickly. If you run into storage problems, remember that the camera is itself a storage system, You do not have to transfer everything you need all at once. Store audio and video on the camera until you need it.

Build your movie from audio up.

Building from audio means building the foundation of your film by concentrating on the spoken word and music elements that move your story from beginning to end.

What's the first thing your audience will hear? Do you have a combination of a narrator and interview subjects? Transfer all the spoken elements from camera to hard drive. Edit together all the words of your story, from beginning to end, just as the script indicates.

Don't worry about the video that accompanies the words. Sometimes, as in the case of an interview subject, the video of their faces that accompanies their spoken words will end up in your finished film. (Some call this "sync". Often, as with narration, there may be no video or you may have recorded meaningless video while you recorded narration. You will cover the narration with precise video images later in the editing. If you can, put all the words in one audio track. Save the other audio track for the natural, environmental sounds of different scenes, sound effects, and or music - if your going to use sound effects of music.

Be aware that as you build from the audio up, you will want to give your movie "breathing space" and "room". Don't jam different spoken word sections too

closely together. Imagine how you want your final film to sound and try to create that pace and mood right from the first edit.

Save Your Work.

If storage space is an issue, you can save your work back to the camera's tape by following directions to export your movie to the camera. Be sure to use have an extra tape. Don't record over your masters.

Sharing: Video for the Web

MovingVoices is very interested in sharing your final movie on the World Wide Web in the MovingVoices Digital VideoLibrary. This section will help you determine the best method for preparing your movie for the web. We then encourage you to burn the movie onto a CD-ROM and send it to us at the address below.

As of this writing there are three main video architectures on the World Wide Web: Real Media (filename.rm) Windows Media (filename.wmv), and QuickTime (filename.mov).

Currently, the MovingVoices Video library accepts and presents two of these architectures: Windows Media and QuickTime formats. Within these two video architectures, there is a vast array of available encoders for both audio and video. Different codecs have different strengths. our recommendations.

Produce two versions of a Quicktime Movie, one big (for people with relatively fast internet connections) and one small (for people with relatively slow Internet connections). QuickTiem Pro is required. For information about Quicktime pro, http://www.apple.com/quicktime/download/qtpro_faq.html

For the Big movie, use QuickTime' "DSL/Cable - Medium" settings. The specifics for this setting should include:

Video Compression: MPEG-4, Best Quality,
Framerate:15,
KeyFrame Rate; 75,
Data rate; 28.8 k bytes/sec,
Width: 320 by Height: 240 (for "4:3" aspect ratio) or
Width: 384 by Height: 216 (for "16:9" aspect ratio).
Sound Compression: MPEG-4 audio,
Sample rate: 32 kHz,
Sample size: 16,
Channels: 1 (mono)
Prepare for Internet Streaming: Hinted Streaming

Captions for Big movies should use

For the Small movie, use QuickTime's "Export, Use: Modem" settings. The specifics of this setting should include:

Video Compression: MPEG-4, Best Quality,
Framerate:6
KeyFrame Rate; 30,
Data rate; 3.878 k bytes/sec,
Width: 160 by Height: 120 (for "4:3" aspect ratio) or
Width: 192 by Height: 108 (for "16:9" aspect ratio).
Sound Compression: MPEG-4 audio,
Sample rate: 8 kHz,
Sample size: 16,
Channels: 1 (mono)
Prepare for Internet Streaming: Hinted Streaming

The MovingVoices team would also like you to send us a CD of your work, if possible. Our aim is to have the highest quality version practical for showing various international education audiences. To Burn a CD version of your film from editing software that supports QuickTime, try to export or "share" a full quality DV version of your film. Typically, Cds provide 650 MB of storage space. You should be able to save all three versions of your film, full DV, a big version, and a small version on the CD to submission to the MovingVoices Digital VideoLibrary.