

L BHARATI VILVAR	Introduction to Video Editing
∘ Pre-pr ∘ Produ	es of production: oduction ction roduction
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★ Main stages of production: ○ Pre-production - In this first phase of production, we have to finish script/agreement about what is to be filmed. People are organized into different departments. Each department analyses exactly what is required to create the film (camera, sound, graphic/animation, artists, etc.), covers all planning, scripting, storyboard, research and extensive preparation before the shooting. ○ Production - In film and video, production refers to the part of

the process in which footage is recorded. This is what most people imagine when they think of a film being made - actors, cameras rolling, sound, action on the set, etc. Filming from the first to the last day of completion of the shooting/recording video includes sounds and images to convey an idea.

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Introduction to Video Editing

- Main stages of production:
 - Post Production Post-production is where you organize and assemble your production footage, putting scenes in proper order, selecting the best takes, and eliminating unnecessary elements. Production sound is synchronized (with the picture), edited, sometimes rerecorded, and mixed. Music is composed and added. The footage is colour-corrected and special effects are created. The final movie is output to tape, film, or any other high quality media format.
 - There are many things which can happen in post-production. Common tasks include editing video footage, editing the soundtrack, adding sound effects, music, etc. Other tasks involve adding titles and graphics, colour and exposure correction, adding special effects, voiceover, etc.
 - Post-production is complete when all final decisions regarding the picture, audio, titles and graphics have been determined.

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Concept of Video Editing

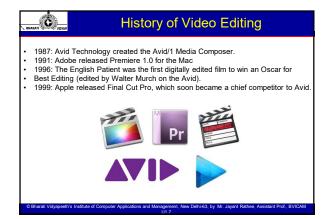
- Shooting in many single-camera or multi-cam productions happens in a non-sequential manner. Scenes are often shot many times and from many angles.
- Video editing is about stringing them in such a manner so as to 'construct' a story for the viewers.
- It is the process of manipulating and rearranging video shots to create a new assignment.
- In the production process, whether in film industry or television industry, editing is considered a part of the post-production process that is it is a process taking place after production, or the filming/collection of imagery.
- Other tasks included in post-production are color correction (adding a mood to the film using color, contrast, etc.), and sound mixing (this occurs after audio has been recorded).

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History of Video Editing

- 1895 Lumiere Brothers invented <u>Cinematographe</u>. Cinematographe was a three-in-one device that recorded, captured and projected motion picture
- 1898 British film pioneer <u>Robert W. Paul's Come Along, Dol</u>, made in 1898 and one of the first films to feature more than one shot.
- 1903 <u>The Great Train Robbery</u>, written, produced and directed by Edwin S. Porter, used a number of innovative techniques including cross cutting, double exposure, composite editing and camera movement.
- 1915 David Wark Griffith, considered to be the father of narrative cinema, invented some techniques like parallel editing, pushing them to higher level of complexity and depth. His film 'The Birth of a Nation' had spatial continuity, 180 degree rule, establishing shot and reverse shot.
- 1920 Russian director Lev Kuleshov from Russia Introduced cross cutting and theory of Montage in editing.





Importance of Video Editing

- A good video, whether it be a music video, marketing campaign video, corporate video, or anything else, must follow 3 important stages Pre-production, Production and Post-production.
- Video editing is important because it is the key to blending images and sounds to make us feel emotionally connected and sometimes truly there in the film we're watching. It's a safe assumption to say that video editing is among the most important jobs in the film industry. With professional video editing you can create an emotion-evoking masterpiece, and it can make or break your film, which is why it's just as important to choose the right video editor as it is to choose the right camera equipment.
- Editing, at its most basic, can help you put all your shots into the proper sequence. You use editing tools to weed out or fix any mistakes made during the production process. It can be used to trim the video to the length you want and it can also be used communicate the right aesthetic to the audience.

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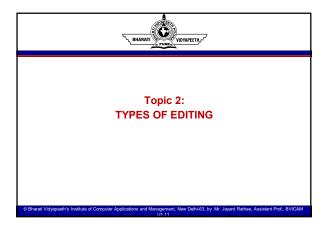
Objective of Video Editing

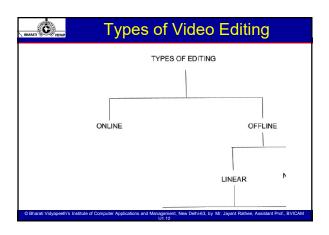
Video editing is essentially the process of editing segments of motion video production footage by cutting, trimming and overlaying them, and adding special effects and sound recordings.

Following are some objectives which can be achieved with editing process:

- → Remove unwanted footage This is the simplest and most common task in editing. Many videos can be dramatically improved by simply getting rid of the flawed or unwanted bits.
- → Choose the best footage It is common to shoot far more footage than you actually need and choose only the best material for the final edit. Often you will shoot several versions (takes) of a shot and choose the best one when editing.
- → Create a flow Most videos serve a purpose such as telling a story or providing information. Editing is a crucial step in making sure the video flows in a way which achieves this goal.

Objective of Video Editing Add effects, graphics, music, etc. - This is often the "wow" part of editing. You can improve most videos (and have a lot of fun) by adding extra elements. Alter the style, pace or mood of the video - A good editor will be able to create subtle mood prompts in a video. Techniques such as mood music and visual effects can influence how the audience will react. Give the video a particular "angle" - Video can be tailored to support a particular viewpoint, impart a message or serve an agenda.





Online / Live Editing	
→ Online Editing ◆ In some situations multiple cameras and other video sources are routed through a central mixing console and edited in real time. ◆ Live television coverage of Sports events and award functions are few common examples. ◆ The "live production edit" approach involves mixing all of the camera feeds together (using a video mixer/selector) and then having a director select shots/edit, in real time, to produce a complete sequence at the end of the show. ◆ A big advantage of the live event approach is that it produces an edited sequence of the show very quickly. ◆ Some disadvantages with this approach are that it requires special equipment (video mixer/switchers) to connect and mix/select the video feeds and special skills to communicate (and direct) the different cameras to coordinate their shots.	
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Types of Video Editing Linear Editing Linear editing was the original method of editing electronic video tapes, before editing computers became available in the 1990s In linear editing, video is selectively copied from one tape to another starting with the first shot and working through to the last shot. The basic process is to play the original tape in the source machine and record a new (edited) version on the record machine. Linear video editing is rarely used nowadays. It involves copying video clips from one tape to a new one in a specific sequence. For example, tape 1 has ten scenes of 5 minutes each. You need 4	
of those, so you bring another tape and copy only those four scenes from tape 1 to tape 2.	
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Linear Editing	
 → Most professional VTRs (Video tape recorders) let editor switch between two major editing modes. ◆ Assemble Editing ◆ Insert Editing → In the assemble mode, the record VTR erases everything on its tape 	
(video, audio, control, and address tracks) just ahead of copying the material supplied by the source VTR. Every time a new scene is recorded, it will simply erase what was there before and replace it with a new audio and video. Very useful in news broadcast.	

→ Assemble video editing is a raw type of editing which consists of putting together a series of video clips without any transitions between them.
 → The video clips are "glued" together in a linear fashion, without adding

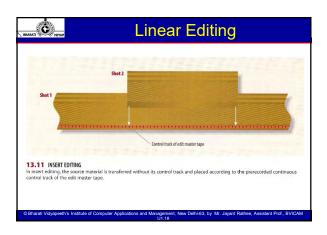
smoothing effects or visual improvements.

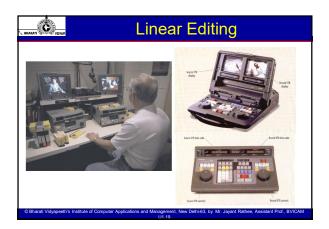


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Linear Editing

- → In Insert Editing It is assumed that material already on the tape is to be retained. New material is inserted into old. Not all of the signals during the edit need to be replaced The operator sets the editing machine to change the picture or either of the sound channels or any combination of the three.
- → It is faster way of editing. All edits are tear free. New video or audio can be inserted anywhere in the tape. A shot can be inserted without affecting audio or sound track.
- → Insert video editing is a more sophisticated video editing process that implies adding new video clips into existing video footage.
- → This technique gives the editor more control when creating a new project, in comparison with assembling editing.







Non - Linear Editing

→ Non-Linear Editing

- A non-linear editing system (NLE) is a video (or audio editing) digital audio workstation system that performs non-destructive editing on source material. The name is in contrast to 20th century methods of linear video editing and film editing.
- Video footage is recorded (captured) onto a computer hard drive and then edited using specialized software. Once the editing is complete, the finished product is recorded back to tape or optical disk.
- Non-linear editing is the most natural approach when all assets are available as files on video servers or hard disks, rather than recordings on reels or tapes—while linear editing is tied to the need to sequentially video and audio. Non-linear editing enables direct access to any video frame in a digital video clip, without needing to play or scrub/shuttle through adjacent footage to reach it, as is necessary with video tape linear editing systems. It is now possible to access any frame by entering



Non - Linear Editing

→ Non-Linear Editing

An editor can, for example at the end of the day in the Olympic Games, easily retrieve all the clips related to the players who received a gold medal. So instead of going in a set order, you are able to work on any segment of the project at any time, in any order you want. In nonlinear video editing, the original source files are not lost or modified during editing.





Film Splicing

→ Film Splicing

- It was the first way to edit moving pictures and conceptually it forms the basis of all video editing. Traditionally, film is edited by cutting sections of the film and rearranging or discarding them. The process is very straightforward and mechanical.
- In theory a film could be edited with a pair of scissors and some splicing tape, although in reality a splicing machine is the only practical solution.
 A splicing machine allows film footage to be lined up and held in place while it is cut or spliced together.
- A film splicer (also called a film joiner, usually in Europe) is a device which can be used to physically join together lengths of photographic film. It is mostly used in film motion pictures. The units are made in various types depending on the usage: Single-8, Super 8 film, 16mm, 9,5 mm,35mm and 70mm. Used in film editing to make a cut (transition).

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Film Splicing

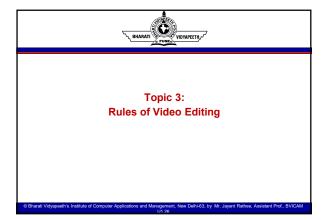
→ Film Splicing

- Cement slicers join films together by using chemical called film cement
 which is made of film base dissolved in a solvent. The Photographic
 emulsion is removed from the area to be joined and the base of the other
 end is brought into contact with it.
- Film editors use a version with a very small overlaps at the top and bottom
 of the picture frame to edit film negatives, although units with a longer
 overlap are preferred for projection release prints.

· Tape splicers

- Here a piece of thin transparent adhesive tape is used to join the two ends. The tape may be pre-perforated for the film perforations, or the splicer may make perforations as the splice is made (this type of splicer is sometimes referred to as guillotine splicer).
- Tape splicers can be used on most types of film. This is the most popular way to join polyester prints in theatres.





Rules of Video Editing → Stay Motivated • Every cut should have a motivation. There should be a reason

- Every cut should have a motivation. There should be a reason that you
 want to switch from one shot or camera angle to another. Sometimes
 that motivation is a simple as, the camera shook, or someone walked in
 front of the camera.
- Ideally, though, your motivations for cutting should be to advance the narrative storytelling of your video. One of the most obvious signs of amateur editing are cuts and transitions that have no motivation behind them.
- Adding a cube spin transition may look cool to you but ask yourself, "does this advance the narrative or is it merely distracting".

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Rules of Video Editing

→ Match the Scene

- The beauty of editing is that you can take footage shots out of order or at separate times, and cut them together so that they appear as one continuous scene. To do this effectively, though, the elements in the shots should match up. For example, a subject who exits frame right should enter the next shot frame left. Otherwise, it appears they turned around and are walking in the other direction. Or, if the subject is holding something in one shot, don't cut directly to a shot of them empty-
- If you don't have the right shots to make matched edits, insert some broll in between.

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Rules of Video Editing

→ Cut on Motion

This means that when changing from one shot to another, you as the
editor should always try to cut from motion in the first shot. This makes
the scene much smoother. Imagine the difference between cutting from
a still train to an opening train door as opposed to a moving train cutting
to an opening train door. The latter was much smoother.

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Rules of Video Editing

→ B-Roll

A-roll is your main footage, your main subject or the main elements of
your narrative, while B-roll is everything else. B-roll refers to video
footage that sets the scene, reveals details, or helps illustrate or
enhance the narrative. For example, if you are editing an event like a
show opening you can use footage of the building exterior, or the
attendees arriving. These clips can be used to cover any rough cuts, or
smooth transitions from one scene to another.



Rules of Video Editing

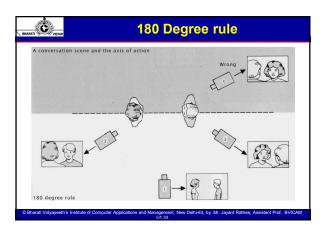
- → Stay on your Plane (Don't Cross the Line)
- When shooting, imagine that there is a horizontal line between you and your subjects. Now, stay on your side of the line. By observing a 180degree plane, you keep a perspective that is more natural for the audience.
- It is important to maintain interest in an interview by having a variety of shots that show different perspectives or angles. However, it is essential to maintain "consistency of screen direction." This means that you should not cross the "Axis of Action" or the imaginary line that follows the main subject's action or direction of focus.
- The 180 Degree Rule states that you can place the camera anywhere along the 180 Degrees of one side of the axis of action and maintain consistency of screen direction.

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Rules of Video Editing

- → Stay on your Plane (Don't Cross the Line)
- · You should not cross the axis of action without:
 - The use of a moving shot that shows the crossing of the axis of action.
 - ✓ Indicate on screen that a shot is a "Reverse Angle" as is done in sporting events.
 - ✓ If you're editing footage that disobeys this rule, try using b-roll between cuts. This way, the change in perspective won't be as abrupt, if it's noticeable at all.





Rules of Video Editing

→ Avoid Jump Cuts

- A jump cut occurs when you have two consecutive shots with an exact or similar camera set up, but a difference in the subject... or the same subject in 2 different positions.
- It happens most often when editing interviews when going from one piece of A-Roll to another, or going from Voice Over with the subject to the same subject in an interview.
- If you leave the remaining shots side-by-side, the audience will be jarred by the slight repositioning of the subject. Instead, cover the cut with some b-roll, or use a fade.
- Avoid cutting from a person in the B-Roll to the same person in an interview (A-Roll). Either use a Cut Away or a Transition (Dissolve or Wipe).

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Rules of Video Editing

→ 30 degrees rule

- If your scene utilizes multiple camera angles, you should always try to use shots that change the view on the subject by at least 30 degrees. This helps avoid a jumping effect.
- When editing scenes shot with multiple cameras, always try to use shots that are looking at the subject from at least a difference of 30 degrees. Otherwise, the shots may be too similar and appear like a jump cut to the audience. If your shots are within that 30 degree arc you may still be able to make use of them if the camera had two different levels. A close-up can usually be cut to a long shot without worry.

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Rules of Video Editing

→ Change the level (Change Focal Lengths)

• This requires multiple cameras to achieve but is often worth the effort. When you have multiple shots of the same subject, its easy to cut between them without creating a jarring experience for the audience. So, when shooting an interview, or a lengthy event such as a wedding, its a good idea to occasionally change focal lengths. A wide shot and a medium close up can be cut together, allowing you to edit parts out and change the order of shots without obvious jump cuts

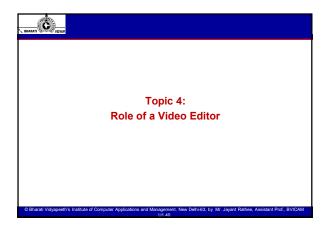
Rules of Video Editing	-
→ Cut on similar shots • Cutting on motion and cutting on similar elements are great techniques for changing shots or scenes. Cutting on similar elements refers to	
cutting from similar looking objects or scenes between consecutive shots. For example, cutting from flowers in a garden to flowers in someone's hair, cutting from one blue sky to the next, or cutting from a	
fan to helicopter blades. The focus of the shots doesn't have to be the same, simply they must look alike.	
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Rules of Video Editing → Wipe	
 Wipes occur when the frame fills up with one element such as a person walking in front of the camera. Believe it or not, this can be a helpful transition between shots because it is not a clashing change for the 	
audience.	
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Rules of Video Editing	

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Music can add a depth to your video project, but it can also detract from it. Choose your music wisely for the tone of your video. You may need more than one piece of music within your project. Avoid music with vocals unless it is there is no Voice-Over/Narration. Keep the levels around 10%-15% under your Voice-Over/Narration. You can use the music as a transitional tool, bringing it up full volume between V/O segments. There are several music services/sites that provide Royalty Free tracks designed to be used as background.

Save Frequently
There's nothing worse than spending hours editing something and then
poof, it's gone. Get in the habit of saving your progress a couple of
times every hour, especially after you've made significant edits to the
project. When you first start your editing project, you'll need to name
your project and give the project file a location to save it on your
computer. Name your project something that's relevant to you and
again, save frequently!

Save Frequently



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Roles of a Video Editor

- A film and video editor is a highly skilled film industry employee who
 edits movies or videos. The success or ultimate failure of the
 production lies in their hands.
- The final production must be a coherent project that incorporates the storyline and personality of the starring actors.
- The film and video editors job has changed over the years. When
 movies were black and white, editing was simple. With computer and
 advanced technology, a film and video editor's job became increasingly
 more complex using computer graphics to aid in editing films and
 supplying the necessary elements to create the finished product.
- The job and duties of a video editor are numerous. An employee might find himself studying scripts to understand the storyline and collaborating with directors, producers, and film staff regarding the script and director's goals.

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Roles of a Video Editor

- Throughout the filming, the film editor will examine tapes for editing purposes, looking for errors, segments that run long or parts that do not match the story or go with the storyline. He / she will work with others adding sounds, voices and music that match the script and place them in the appropriate place.
- Creating a video project of any kind is a long process with many important phases, and one of the most important steps in creating the final cut of your project is the video editing process.
- The editing phase of your video is a crucial step in video production.
 Once you have all your footage and all your audio recorded it is time to edit it down into something manageable.



Roles of a Video Editor

- · Here are three reasons why video editing is so important -
 - Reviewing all Footage and Audio: The video editing process allows you to look over everything you shot during the shoot. During filming it is easy to overlook certain shots you are creating because of how fast paced a film set is. The editing process lets you slow down and carefully review all the content that you have to work with so that you can formulate a way to put it all together.
 - Organize: Keeping your edits tidy and organized is one of the best ways to save incremental amounts of time. Try to have my bins, sequences, and folders laid out in such a way that if another editor had to sit down at my edit with no outside input, it would be obvious what the latest sequence is, where the title graphics are, how the project is structured, and so on.

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Roles of a Video Editor

- · Here are three reasons why video editing is so important -
 - > Improve or degrade the quality of the product: The editing stage is the stage where you can make or break your video. This is where all the content you have comes together in a meaningful way. This is where you bring together disparate clips into a cohesive story. There sometimes are shots you never really thought would work, but in the editing room, they come alive. This is also where you make big decisions about coloring, visual effects, transitions, and more.
 - ➤ Creative Decisions: A well-edited project will be crisp and flow with great precision. All the creative decisions you have made from preproduction through post-production shine through after it has all been edited down to its final form. This is the process where you decide the pacing of the film, and how all the shots work together to create a unified whole.

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Roles of a Video Editor

- Video editing is a core role in film and television production. Virtually every program requires editing of some sort, even most "live" shows.
- There are many different types and levels of editing. At the most basic level, an editor may be required to:
 - Dub (copy) footage to different tapes or disks.
 - Organize footage for distribution, archiving, etc.
- Convert formats of footage, etc.
- · These basic tasks are often performed by a junior editor or archivist.
- When most people think of editing, they think of a person sitting at a workstation arranging shots into the correct order to tell a story.
- · Although this describes the basic editing function,
- It is a simplistic view somewhat like describing a musician as a person who places musical notes in the correct order.
- Good editing requires flair as well as technical competence.



Roles of a Video Editor

- In practice the editor's job description depends on the situation, the editor's skills and other factors. Here are some common scenarios:
- The editor is required to perform specific edits as instructed by a director or producer. In this case the editor has a fairly mechanical, non-creative role.
- The editor is allowed to make their own editing decisions, perhaps using a particular style or adding their own unique touch.
- The editor's role is somewhere in between. For example, a news editor may work with a journalist to create a piece reflecting both their input. Often, an editor works independently with some creative control.
- As much as the directing and cinematography, the edit has a major effect on the final product.
- Serious editing is not just about assembling footage. It is about designing a complete package and flow of the story.

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Required Skills and Qualifications

- ✓ Experience and proof of ability are the key. Formal qualifications are nice and may help you to be taken seriously when applying for a position, but in the end an employer just wants someone who can do the job.
- It helps a lot to be familiar with different types of edit systems, e.g. Avid, Final Cut Pro, Premiere, etc.
- ✓ You should be familiar with different styles of editing, and know how to achieve them.
- ✓ You need work well in both collaborative and solo projects.
- ✓ You must be able to work to deadlines and cope with pressure.

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