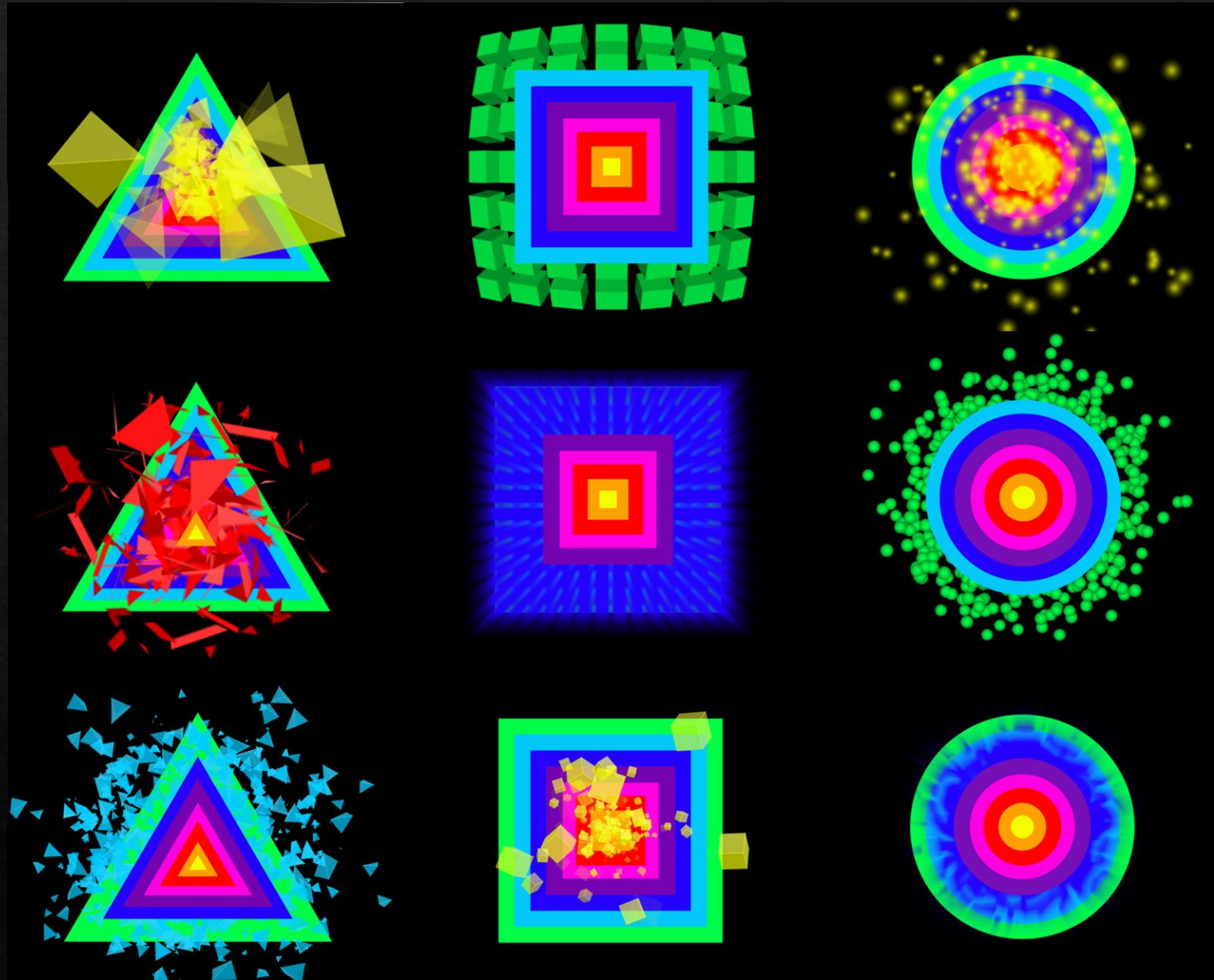




Video Design

Jelena Rubil

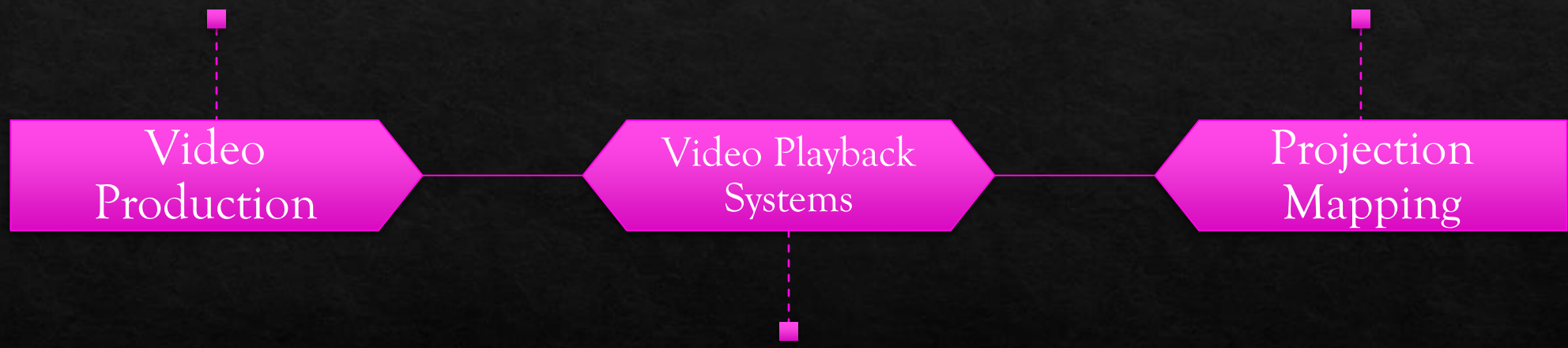
1 session



Technical Proficiency

Video recording, editing, and post-production techniques using digital video equipment and software.

Projection mapping software and techniques to map video onto irregular surfaces, set pieces, or architectural elements.



Video cues and troubleshooting technical issues during rehearsals and performances to ensure seamless execution of video content.

Develop proficiency in operating digital video equipment, including cameras, camcorders, and accessories, to capture high-quality video footage with proper exposure, focus, and composition.

Equipment



Develop proficiency in operating digital video equipment, including cameras, camcorders, and accessories, to capture high-quality video footage with proper exposure, focus, and composition.

Equipment



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High-quality video footage

Frame rate is the measurement of how quickly a number of frames appears within a second

PAL video is composite video because luminance (luma, monochrome image) and chrominance (chroma, colour applied to the monochrome image) are transmitted together as one signal.

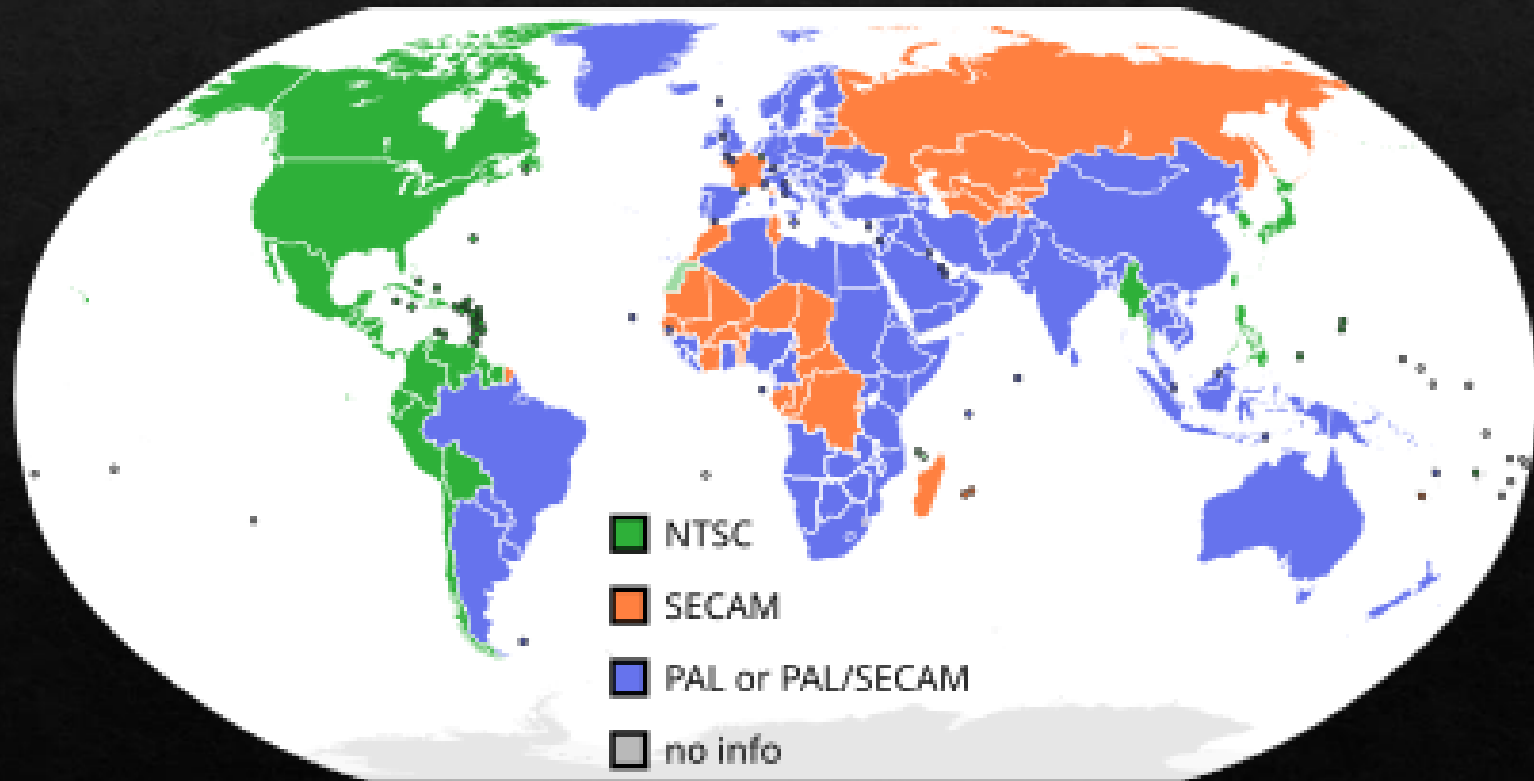
PAL is an abbreviation for Phase Alternate Line. This is the video format standard used in many European countries. A PAL picture is made up of 625 interlaced lines and is displayed at a rate of **25 frames per second**.

SECAM is an abbreviation for Sequential Color and Memory. This video format is used in many Eastern countries such as the USSR, China, Pakistan, France, and a few others. Like PAL, a SECAM picture is also made up of 625 interlaced lines and is displayed at a rate of **25 frames per second**. However, the way SECAM processes the color information, it is not compatible with the PAL video format standard.

NTSC is an abbreviation for National Television Standards Committee, named for the group that originally developed the black & white and subsequently color television system that is used in the United States, Japan and many other countries. An NTSC picture is made up of 525 interlaced lines and is displayed at a rate of **29.97 frames per second**.

Develop proficiency in operating digital video equipment, including cameras, camcorders, and accessories, to capture high-quality video footage with proper exposure, focus, and composition.

High-quality video footage



Develop proficiency in operating digital video equipment, including cameras, camcorders, and accessories, to capture high-quality video footage with proper exposure, focus, and composition.



High-quality video footage

A **video file format** is a type of file format for storing digital video data on a computer system.

Video file format and codec basics

Because video files can be large, programs called codecs were developed to make them easier to store and share. Codecs encode data to compress it for storing and sharing. Then they decode that data to decompress it for viewing and editing. The most common codec for video compression is

H.264.

Audio file formats or file extensions are the containers or wrappers for these codecs. As with lossy audio file formats, most video formats lose data in compression. Which format you choose depends on the balance you want to strike between quality and ease of use.

Develop proficiency in operating digital video equipment, including cameras, camcorders, and accessories, to capture high-quality video footage with proper exposure, focus, and composition.

High-quality video footage

A **video file format** is a type of file format for storing digital video data on a computer system.

MP4 (MPEG-4 Part 14) is the most common type of video file format. Apple's preferred format, MP4 can play on most other devices as well. It uses the MPEG-4 encoding algorithm to store video and audio files and text, but it offers lower definition than some others. MP4 works well for videos posted on YouTube, Facebook, Twitter, and Instagram.

MOV (QuickTime Movie) stores high-quality video, audio, and effects, but these files tend to be quite large. Developed for QuickTime Player by Apple, MOV files use MPEG-4 encoding to play in QuickTime for Windows. MOV is supported by Facebook and YouTube, and it works well for TV viewing.

WMV (Windows Media Viewer) files offer good video quality and large file size like MOV. Microsoft developed WMV for Windows Media Player. YouTube supports WMV, and Apple users can view these videos, but they must download Windows Media Player for Apple. Keep in mind you can't select your own aspect ratio in WMV.

AVI (Audio Video Interleave) works with nearly every web browser on Windows, Mac, and Linux machines. Developed by Microsoft, AVI offers the highest quality but also large file sizes. It is supported by YouTube and works well for TV viewing.

Develop proficiency in operating digital video equipment, including cameras, camcorders, and accessories, to capture high-quality video footage with proper exposure, focus, and composition.



High-quality video footage


What is video **bitrate**?

Every second of video is packed with digital information. It could be a lot of information, like the high image quality of 4K video on physical media. Or less information, such as live streaming social media video from a phone with lower video and audio quality. Those two types of videos have a very different amount of data. The amount of information per second in video is known as bitrate.

“Bitrate refers to depth of information, whether in video or audio.

Bitrate is distinct from other measurements of video quality such as **frame rate, resolution, or video format**. Those factors represent specific things about the nature of the footage, such as frames per second or how large the image is. Bitrate is more fundamental.

Develop proficiency in operating digital video equipment, including cameras, camcorders, and accessories, to capture high-quality video footage with proper exposure, focus, and composition.



High-quality
video footage

What is video **bitrate**?

Bitrate encoding can vary a good deal given types of footage. On the **low end, 720p** is the type of video common in older HD televisions. 720p has a bitrate of about 6.5Mbps at a standard frame rate (24–30 frames per second) or 9.5Mbps on a high frame rate (48–60fps).

High-resolution **4K video encodes at 2160p** and has a bitrate between 44 and 56Mbps on a low frame rate and 65 to 85Mbps with a high frame rate. That higher quality footage will look great, but the level of quality and usability are often at odds with each other.

Explore advanced skills in video editing using software

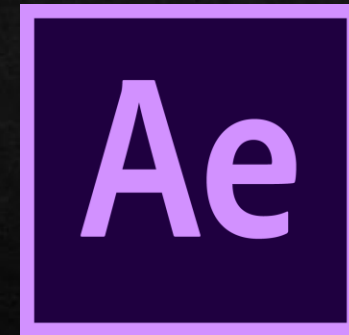
Video editing software



Final cut



Adobe Premier



Adobe After Effects

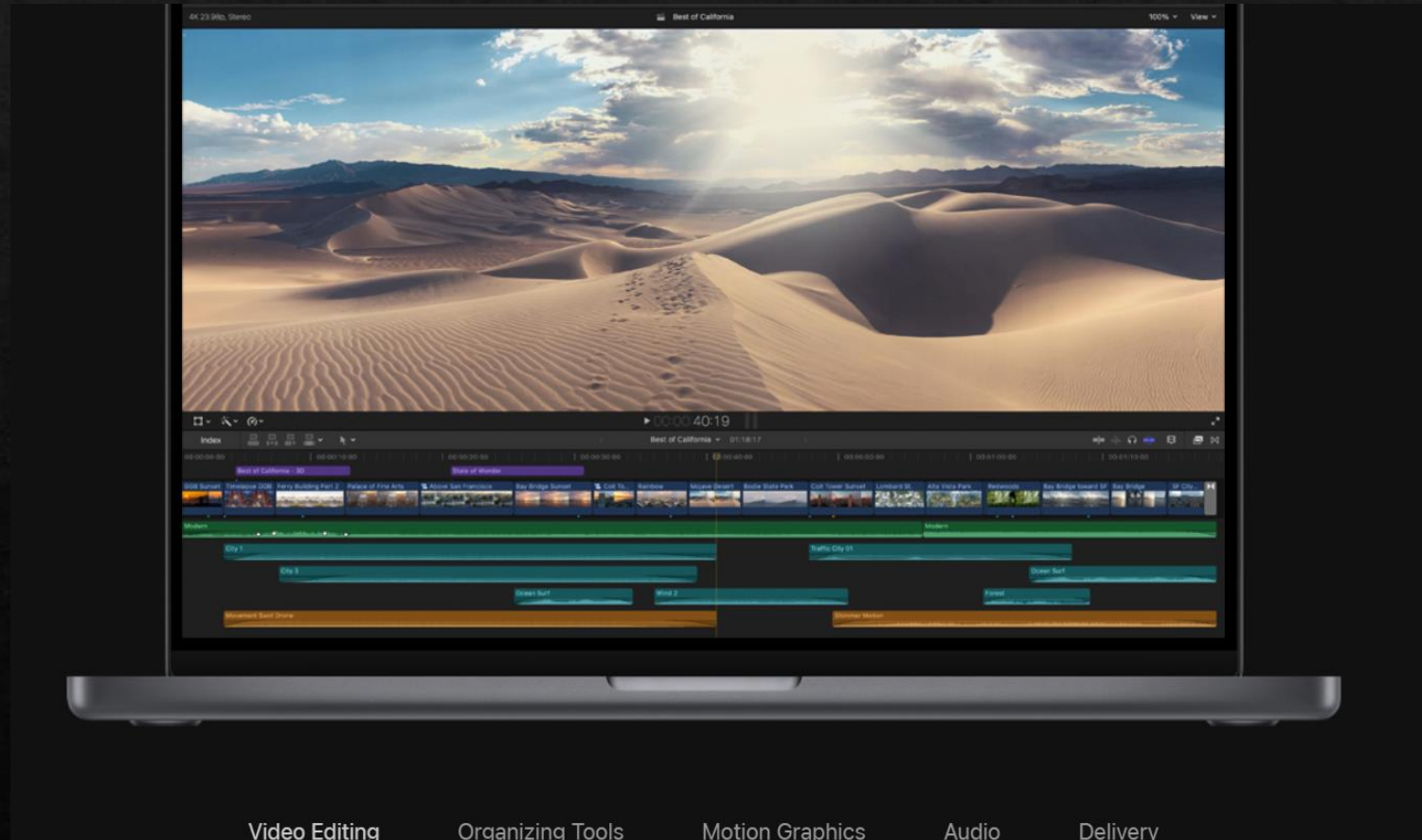
Explore advanced skills in video editing using software

Video editing software

<https://www.apple.com/final-cut-pro/>



Final cut



Explore advanced skills in video editing using software

Video editing software



Final cut

A screenshot of the Final Cut Pro X interface. The main window shows a project named "Waterfalls" with a preview window displaying a woman in a pink dress standing in front of a waterfall. The project browser on the left lists various clips, including "Ancient City", "Blue Steps", "Carnal WS", "Field of Green", "Marketplace", "Peny Mountain", "Ruins", "Waterfalls", "Woman on Path", "Yellowstone", and a folder named "Kenya". A smart collection dialog is open in the foreground, showing filters for "All", "Media Representation", "Format Info", and "Markers". The dialog is titled "Smart Collection: BK With Proxy Media".

Name	Start	End	Media Duration	Proxy Codec
Ancient City	05:35:57:33	06:36:05:03	00:00:07:30	H.264
Blue Steps	08:11:49:51	09:11:55:14	00:00:05:23	H.264
Carnal WS	23:35:39:03	23:35:45:08	00:00:07:05	H.264
Field of Green	05:27:45:20	06:27:47:53	00:00:02:33	H.264
Marketplace	05:47:34:52	06:47:39:52	00:00:05:00	H.264
Peny Mountain	15:41:00:39	16:41:05:38	00:00:04:59	H.264
Ruins	03:49:48:32	03:49:53:07	00:00:04:35	H.264
Waterfalls	01:00:00:00	01:00:03:27	00:00:03:27	H.264
Woman on Path	18:32:07:15	18:32:19:37	00:00:12:22	H.264
Yellowstone	16:06:29:05	16:06:32:04	00:00:02:29	H.264
Kenya (22)				
Antelope	01:00:22:25	01:00:25:21	00:00:02:26	Apple ProRes 422 Proxy
Baby Elephants	01:00:39:27	01:00:44:01	00:00:04:04	Apple ProRes 422 Proxy
Beetle	01:00:25:21	01:00:28:18	00:00:02:27	Apple ProRes 422 Proxy
Elephant Overhead	01:00:32:14	01:00:34:24	00:00:02:10	Apple ProRes 422 Proxy
Elephants Drone	01:00:49:18	01:00:52:17	00:00:02:29	Apple ProRes 422 Proxy
Elephants Drone 2	01:00:44:04	01:00:49:18	00:00:05:14	Apple ProRes 422 Proxy
Elephants Lower Right	01:00:34:21	01:00:44:04	00:00:09:13	Apple ProRes 422 Proxy
Giraffe	01:00:08:14	01:00:12:12	00:00:03:28	Apple ProRes 422 Proxy
Giraffes	01:00:34:25	01:00:39:27	00:00:05:02	Apple ProRes 422 Proxy
Giraffes WS	01:00:00:00	01:00:08:14	00:00:08:14	Apple ProRes 422 Proxy
Man Smiling	01:00:44:01	01:00:48:11	00:00:04:10	Apple ProRes 422 Proxy
Monkeys	01:00:15:21	01:00:17:15	00:00:01:24	Apple ProRes 422 Proxy
Mountain Sunrise	01:00:07:10	01:00:15:21	00:00:08:11	Apple ProRes 422 Proxy
Mountain Timelapse	01:00:28:18	01:00:32:14	00:00:03:26	Apple ProRes 422 Proxy
Rhino	01:01:05:00	01:01:21:27	00:00:16:27	Apple ProRes 422 Proxy
Rhino Close Up	01:00:13:26	01:00:16:27	00:00:04:01	Apple ProRes 422 Proxy
Rhino Eye	01:00:05:24	01:00:12:26	00:00:07:02	Apple ProRes 422 Proxy
Rocks Lower Left	01:00:24:08	01:00:34:21	00:00:10:13	Apple ProRes 422 Proxy
Sunrise	01:00:00:00	01:00:07:10	00:00:07:10	Apple ProRes 422 Proxy
Wildbeast	01:00:16:27	01:00:21:11	00:00:04:14	Apple ProRes 422 Proxy
Zebra	01:00:17:15	01:00:22:25	00:00:05:10	Apple ProRes 422 Proxy

Explore advanced skills in video editing using software

Video editing
software



Final cut

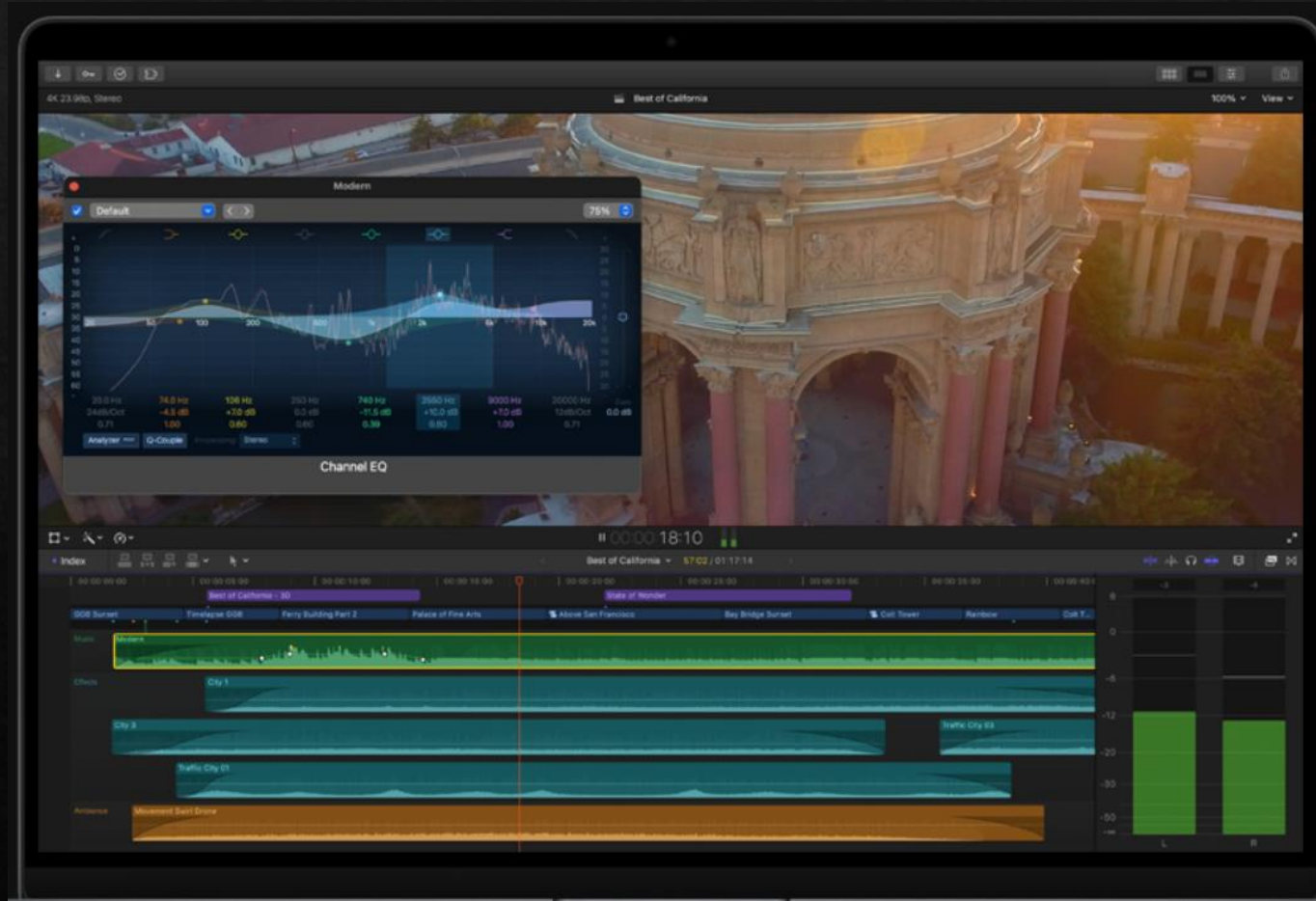


Explore advanced skills in video editing using software

Video editing
software



Final cut



Explore advanced skills in video editing using software

Video editing
software



Final cut



Explore advanced skills in video editing using software

Video editing
software

TUTORIALS



Final cut

<https://www.youtube.com/watch?v=L3bZ-ETKZ8U>

<https://www.youtube.com/watch?v=xmNrB2HpIBs>

<https://www.youtube.com/watch?v=NQEDVGv1wRE>

Explore advanced skills in video editing using software

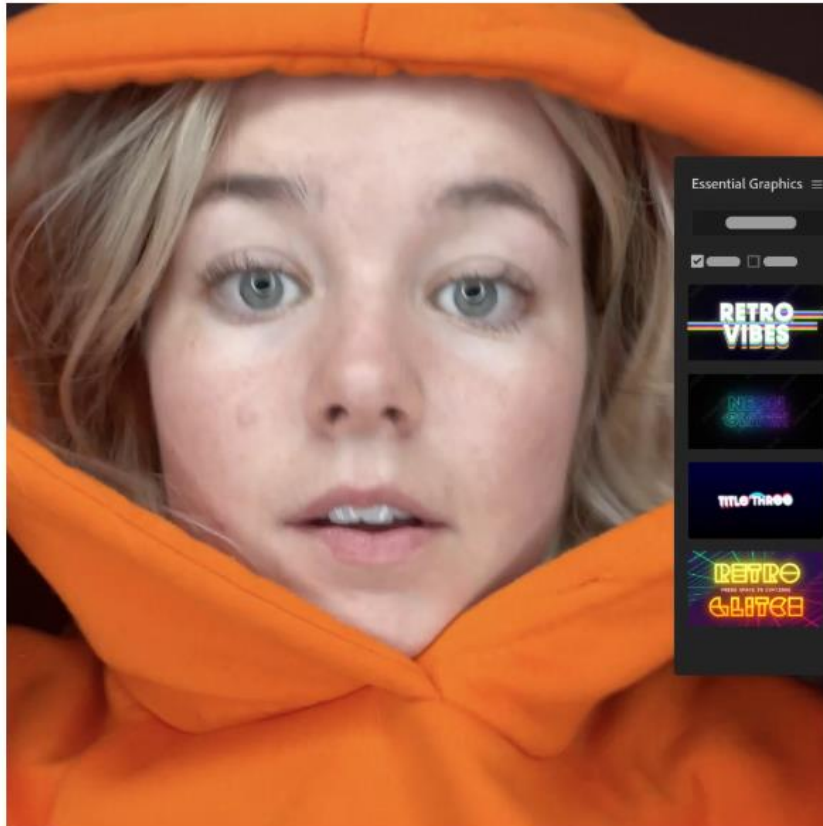
Video editing
software

<https://www.adobe.com/products/premiere.html>



Explore advanced skills in video editing using software

Video editing
software



TITLES

Create animated titles.

Design polished, professional-quality titles, captions, and graphics fast with templates. Customize them to fit the feel of your video directly inside Premiere Pro.

Explore advanced skills in video editing using software

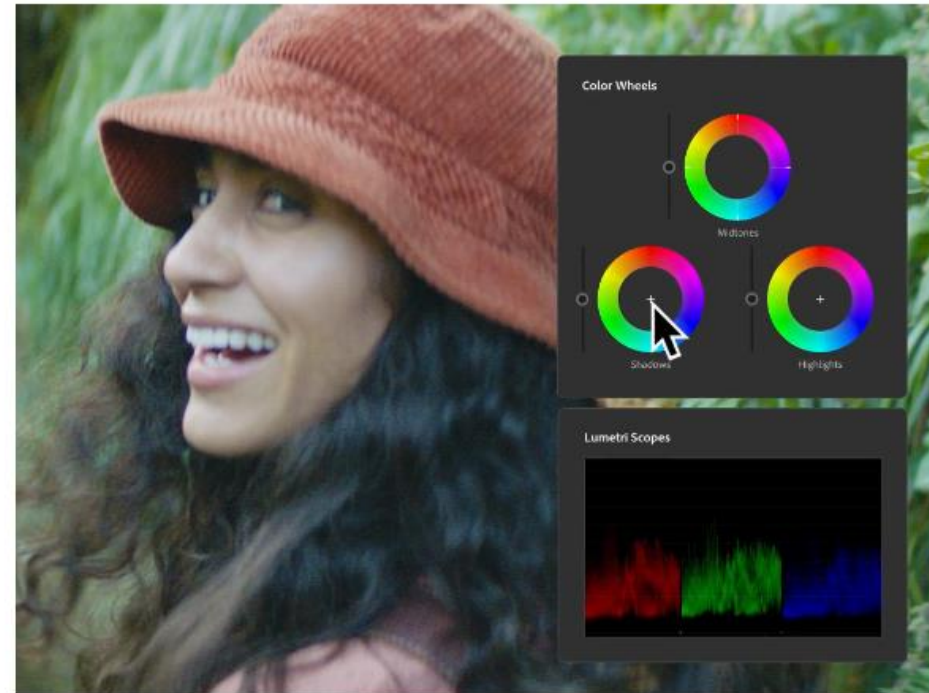
Video editing
software



COLOR

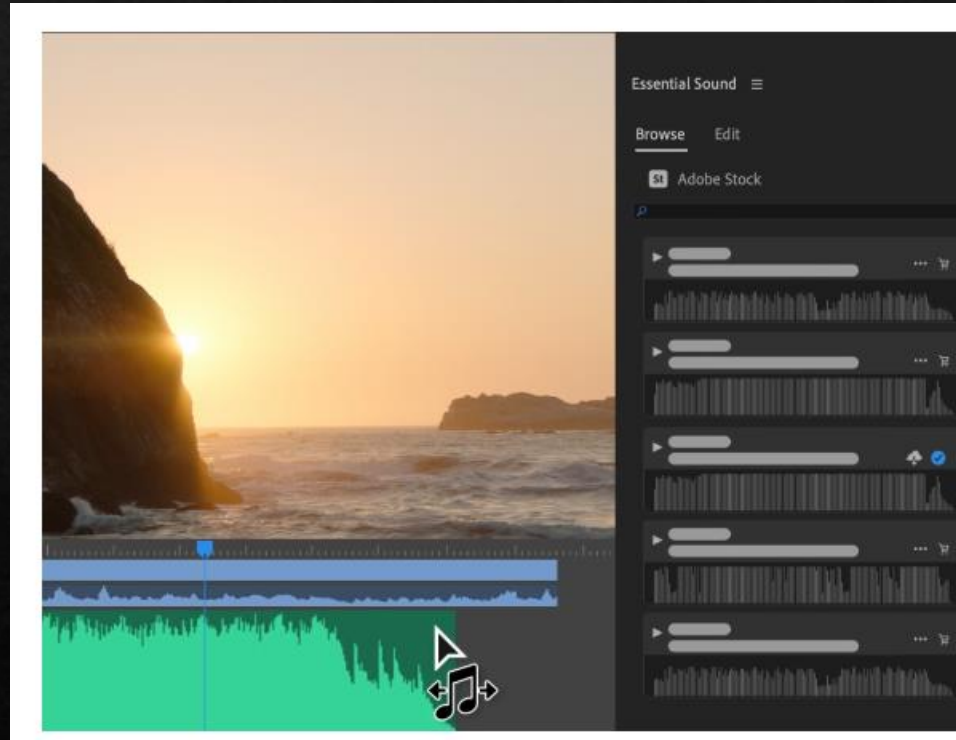
Balance color and set the tone.

Get the right look for your video with powerful color correction and grading tools. Balance color fast with AI, use professional color wheels and curve controls, and check your results with built-in video scopes.



Explore advanced skills in video editing using software

Video editing
software



AUDIO

Mix audio for a memorable soundtrack.

Reduce noise and enhance dialogue with pro audio tools, and add advanced effects as you master sound design. Browse music tracks, use AI to auto-fit them to your clips, and license them – all within Premiere Pro.

Explore advanced skills in video editing using software

Video editing
software

TUTORIALS



<https://www.youtube.com/watch?v=yO52Tx60Keg>

https://www.youtube.com/watch?v=ihHwLflg_Dk

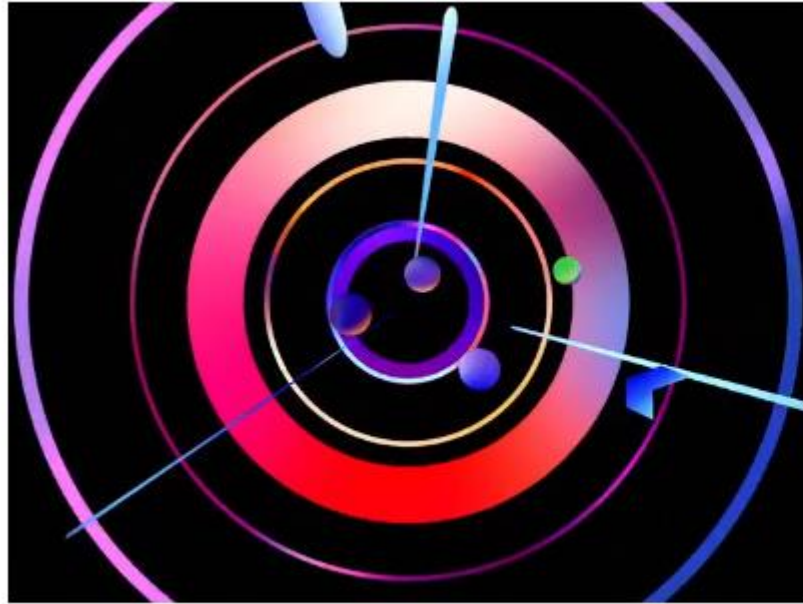
<https://www.youtube.com/watch?v=OQhhtOf4Cd0>

<https://creativecloud.adobe.com/learn/premiere-pro/web/export-video-share-social-media>

Explore advanced skills in video editing using software

Video editing
software

<https://www.adobe.com/products/aftereffects.html>



MOTION DESIGN

Set text and graphics in motion.

Animate still images and illustrations to create striking motion graphics. Add motion to text for cinematic title sequences and simple credit rolls. Work faster with presets or turn your unique vision into reality with power animation tools.

Explore advanced skills in video editing using software

Video editing
software



3D ANIMATIONS

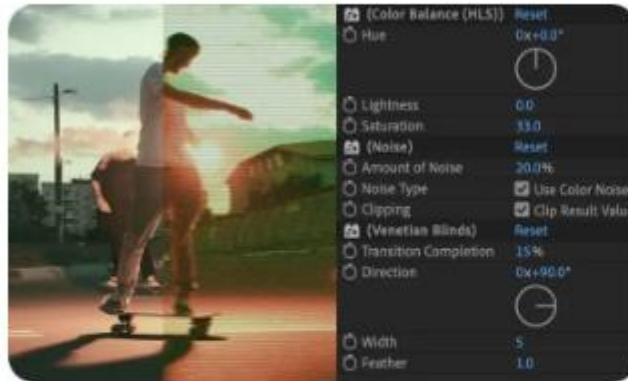
Design dynamic 3D animations.

Bring dimension into your videos in a true 3D workspace right inside After Effects. Get the lighting and shading just right for a realistic look. Or combine 2D and 3D images to create any scene you can imagine.



Explore advanced skills in video editing using software

Video editing
software



Speed up projects with presets.

Design social videos and more, fast. Choose from hundreds of high-quality presets, and then customize them to fit your unique vision.



Get advanced color support.

Work natively in any color space and simplify your Academy Color Encoding System (ACES) workflow with OpenColorIO (OCIO) integration.

Explore advanced skills in video editing using software

Video editing
software

TUTORIALS
















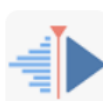



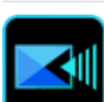


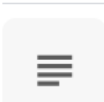
<https://www.youtube.com/watch?v=hb2bbfiNBXA>

<https://www.youtube.com/watch?v=jFbRZZmMW7c>

<https://www.youtube.com/watch?v=yO52Tx60Keg>

Explore advanced skills in video editing using software

Free video editing software

 DaVinci Resolve ▼	 iMovie ▼	 Shotcut ▼
 HitFilm Pro ▼	 Lightworks ▼	 OpenShot ▼
 VSDC Free Video Editor ▼	 Adobe Premiere Rush ▼	 VideoPad ▼
 Clipchamp ▼	 KineMaster ▼	 VideoProc Vlogger ▼
 Blender ▼	 Kdenlive ▼	 ACDSee Luxea Video Edit... ▼
 ActivePresenter ▼	 Kapwing ▼	 PowerDirector ▼
 Video Grabber ▼	 Vimeo Create ▼	 WeVideo ▼

Explore advanced skills in video editing using software

Free video editing
software

DaVinci Resolve is a proprietary color grading, color correction, visual effects, and audio post-production video editing application for macOS, Windows, and Linux



Explore advanced skills in video editing using software

Free video editing
software

TUTORIALS

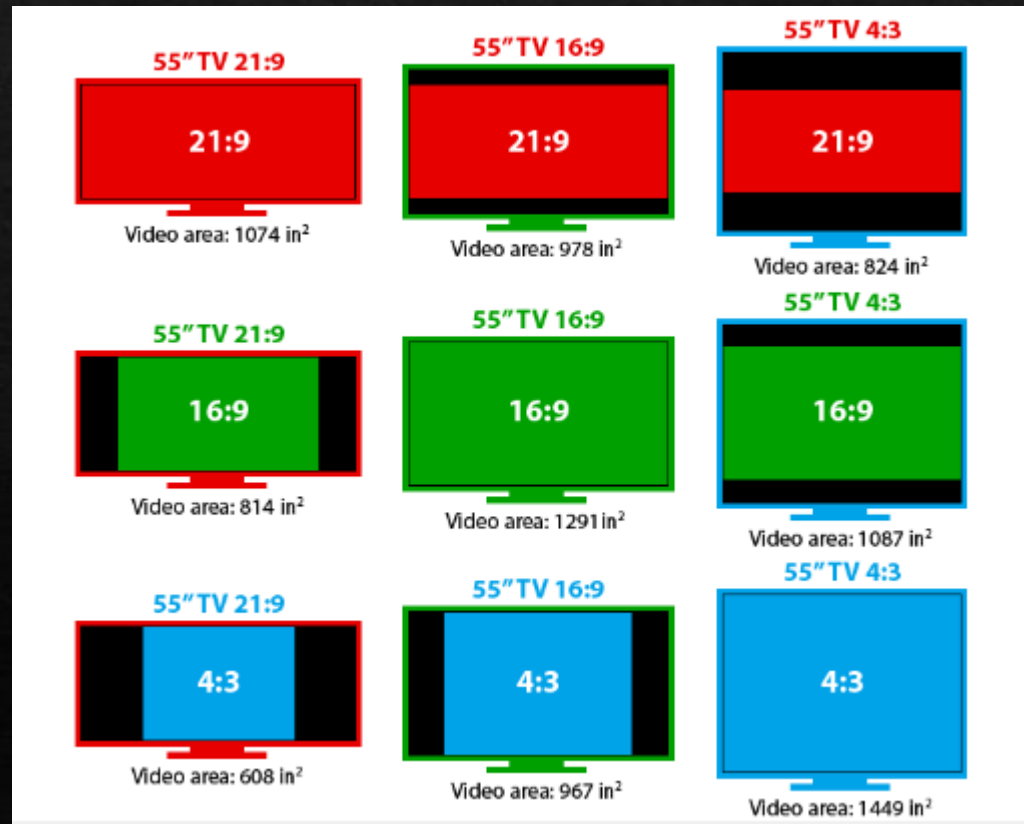
https://www.youtube.com/watch?v=g52gP_bR65E

<https://www.youtube.com/watch?v=liNpzKSo8P8>



Develop proficiency in operating digital video equipment, including cameras, camcorders, and accessories, to capture high-quality video footage with proper exposure, focus, and composition.

The aspect ratio is the ratio between the width and the height of a display. It defines its overall shape, and it is usually presented as W:H (where W is the width, and H is the height).



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Original picture

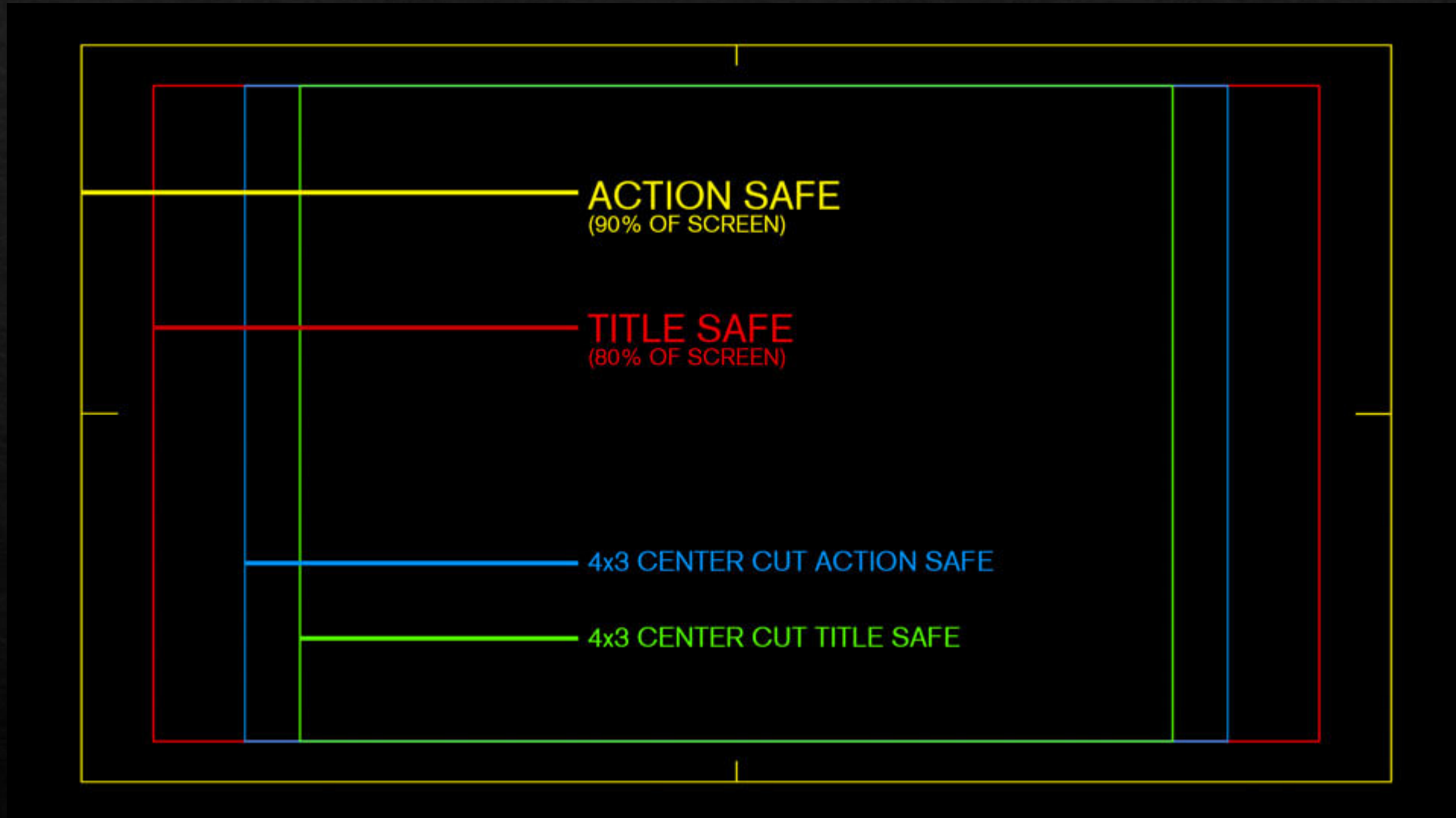


Stretched to fit



Cropped to fit

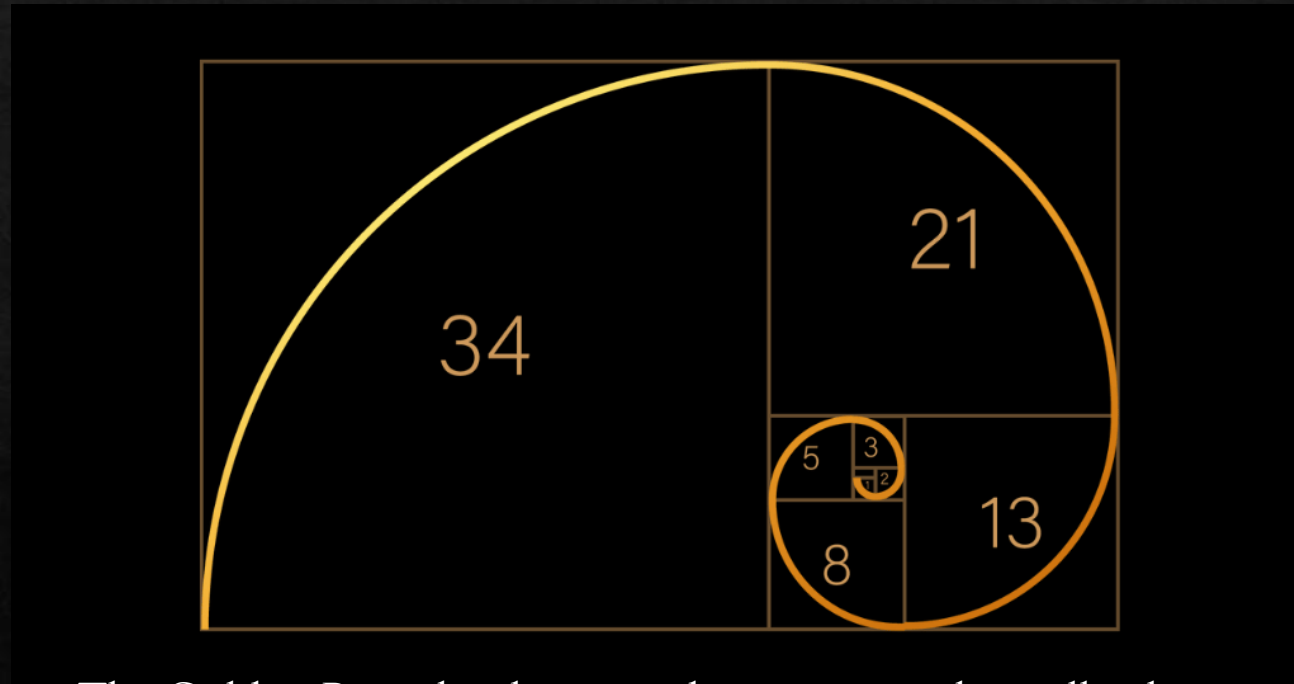
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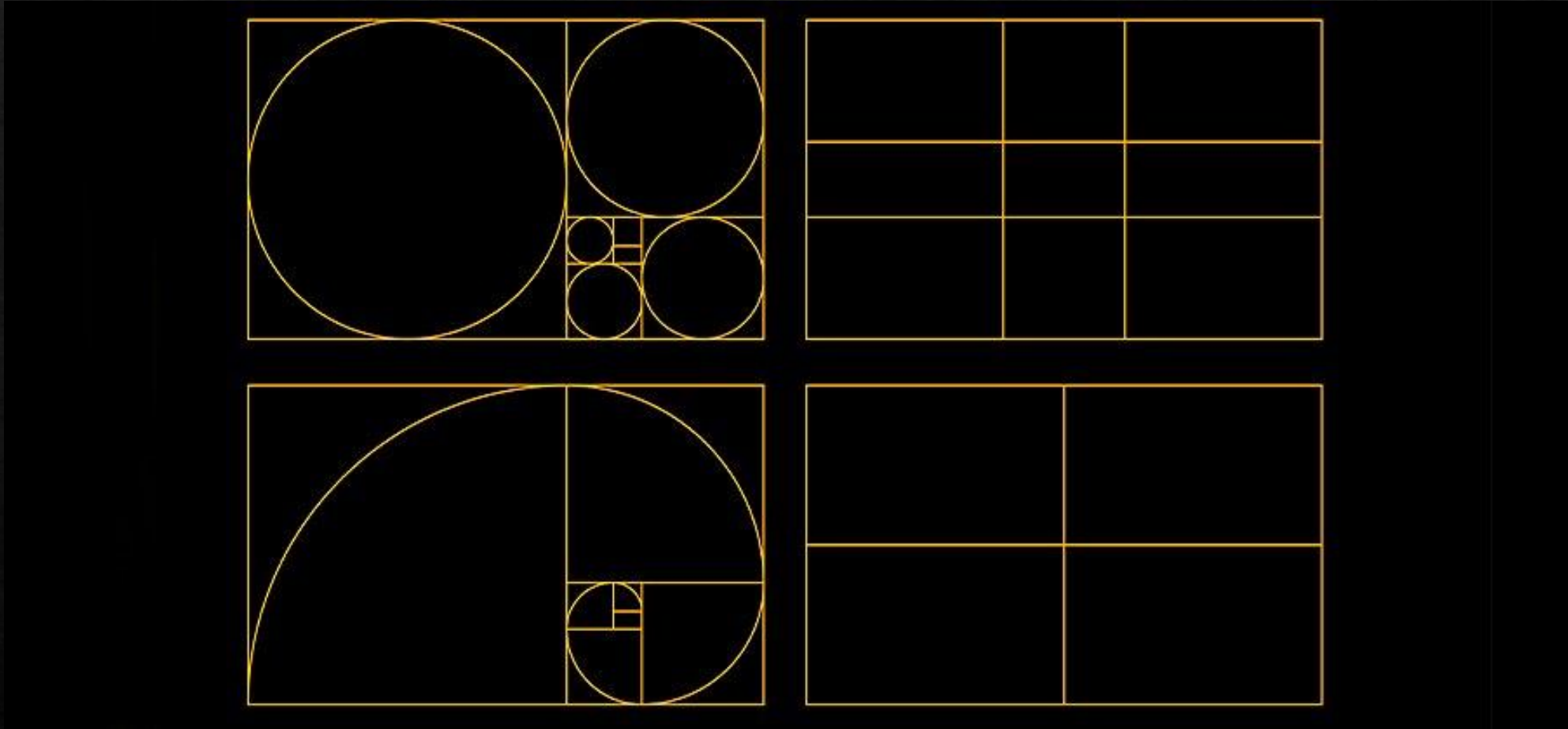
COMPOSITION

Golden Ratio

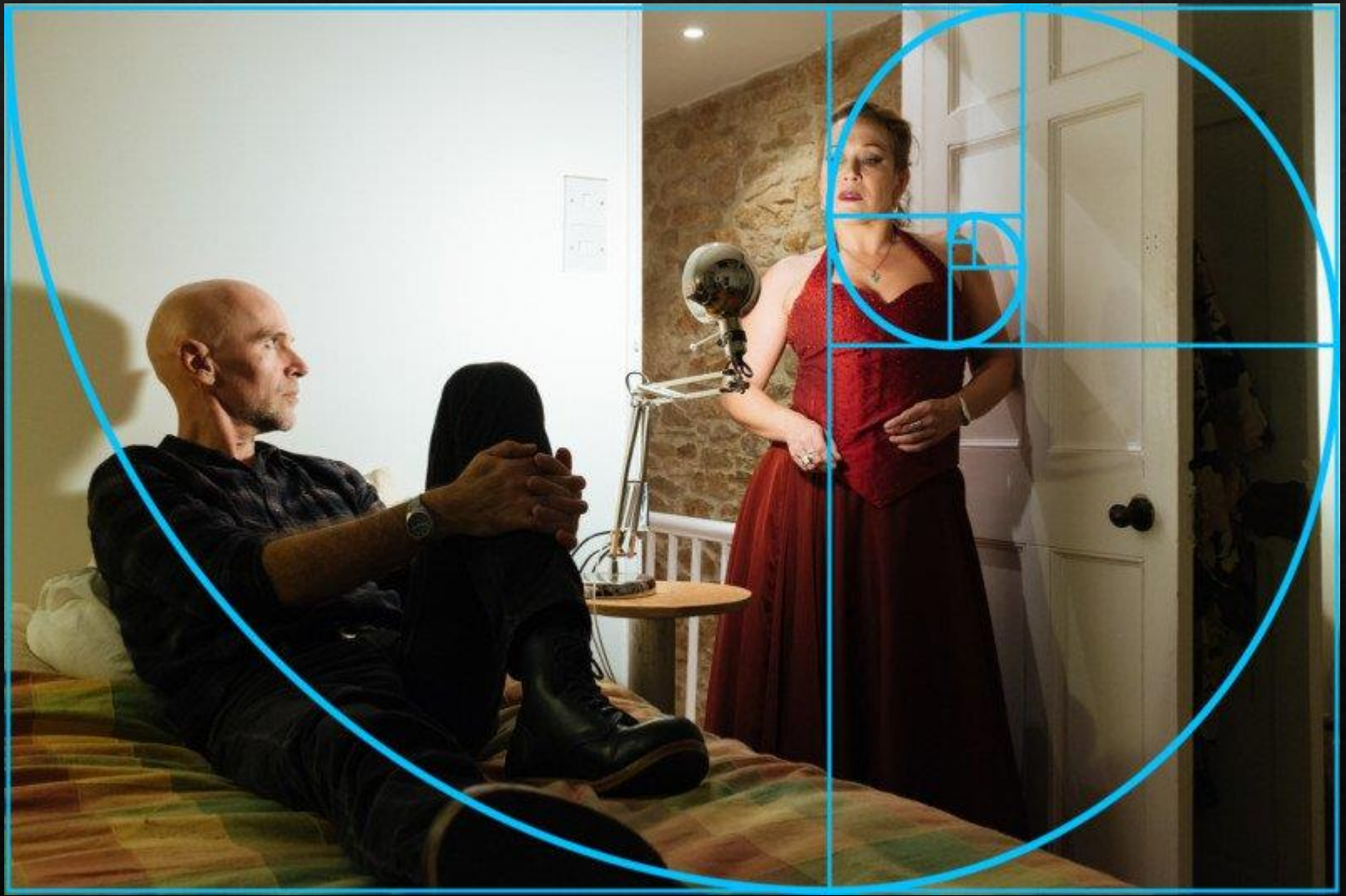


The Golden Ratio has been used to create aesthetically pleasing compositions. Conventional theatrical frames that “directs perfectly the audience’s attention to the object of focus”

Develop proficiency in operating digital video equipment, including cameras, camcorders, and accessories, to capture high-quality video footage with proper exposure, focus, and composition.



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Projection mapping software and techniques to map video

Projection Mapping



<https://madmapper.com/>



<https://resolume.com/software>



<https://derivative.ca/feature/projection-mapping/14>

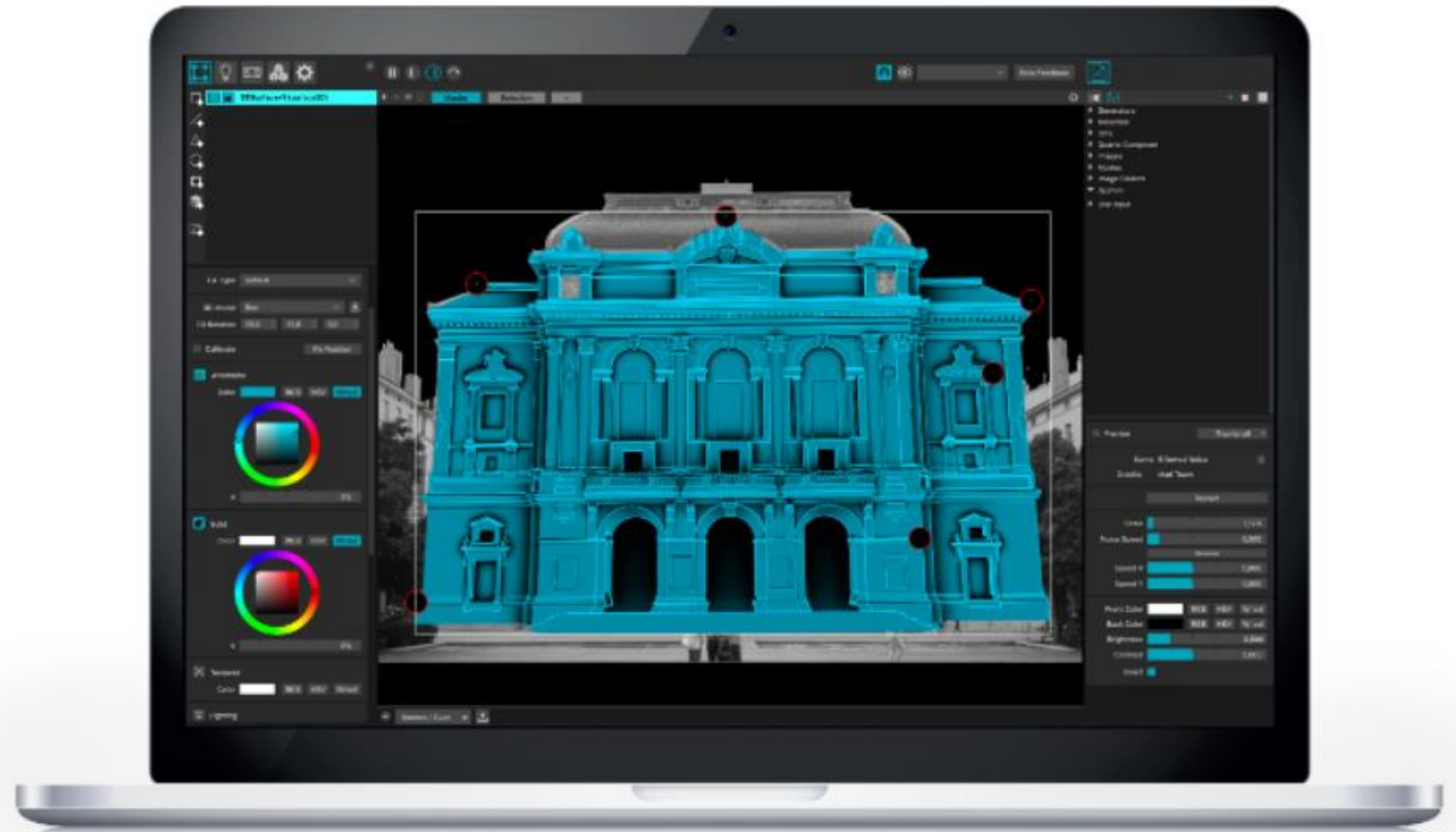
Projection mapping software and techniques to map video

Projection Mapping

 **MadMapper**

The mapping software

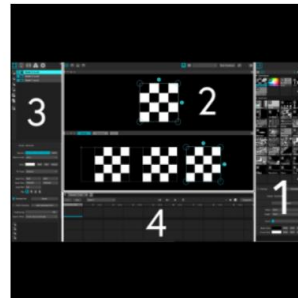
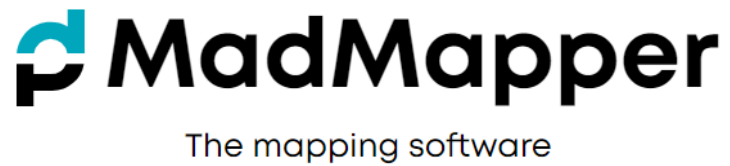
<https://madmapper.com/>



Projection mapping software and techniques to map video

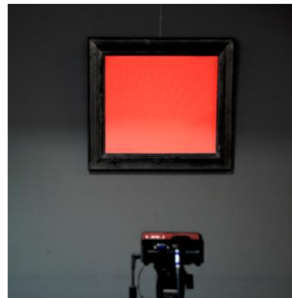
Projection Mapping

TUTORIALS



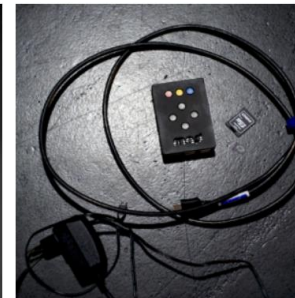
Introduction

DOWNLOAD



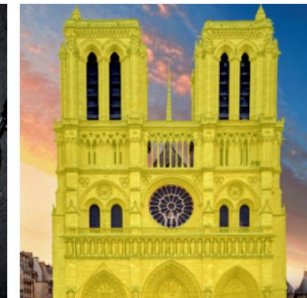
My first mapping

DOWNLOAD



MiniMad video export

DOWNLOAD



Masking

DOWNLOAD

<https://www.youtube.com/channel/UCC9p0fzuYik453n9fXFjgg>

Projection mapping software and techniques to map video

Projection Mapping



<https://resolume.com/software>

The screenshot displays the Resolume Arena software interface. At the top, there is a grid of 15 columns and 3 layers. The columns are labeled 'Column 1' through 'Column 15'. The layers are labeled 'Layer 1', 'Layer 2', and 'Layer 3'. Each cell in the grid contains a small preview of the content for that layer and column. The 'Layer 1' row shows various abstract patterns, while the 'Layer 2' and 'Layer 3' rows show more complex, multi-colored patterns. The interface includes a top menu bar with options like 'Composition', 'X', 'B', 'S', 'M', 'A', 'V', 'T', 'H', 'H'. Below the grid, there is a control panel with buttons for 'Footage Shop', 'Audio Visual', 'Generators', and 'Cyantific'. The bottom section of the interface is divided into several panels: 'Output Monitor' showing a large, detailed view of the projection mapping; 'Composition' panel with settings for 'Example (1920 x 1080)'; 'Clip' panel showing a clip named 'Chaotic Geometries_17'; and a 'Sources' panel on the right listing various video files like 'Cyborgasm_01.mov' through 'Cyborgasm_08.mov'. The 'Output Monitor' shows a complex, multi-colored pattern of lines and shapes, while the 'Preview Monitor' shows a black and white, swirling pattern.

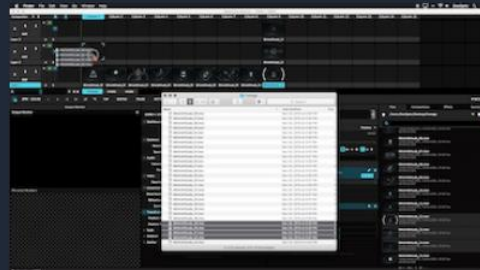
Projection mapping software and techniques to map video

Projection Mapping

TUTORIALS



<https://resolume.com/software>



1.1 Loading Content



1.2 Triggering a Clip



1.3 Layer Opacity & Ejecting a Clip



1.4 Apply an Effect



1.5 Output



1.6 Resolution

Projection mapping software and techniques to map video

Projection Mapping



<https://derivative.ca/feature/projection-mapping/14>

VR SUPPORT

REALTIME 3D AND
COMPOSITING

PROJECTION MAPPING

APPLICATION BUILDING

INTEROPERABILITY

HIGH PERFORMANCE MEDIA
SYSTEMS

LIGHTING AND LIVE SHOWS

EXTENSIBILITY AND
CUSTOMIZATION

Projection mapping software and techniques to map video

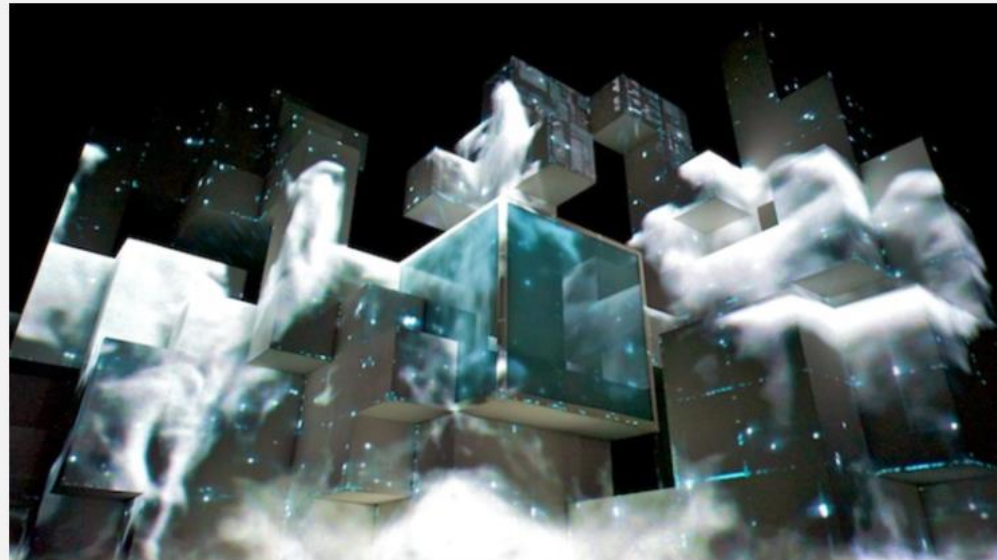
Projection Mapping



<https://derivative.ca/feature/projection-mapping/14>

PROJECTION MAPPING

Projection mapping involves custom solutions to every job, no two projection setups are the same. TouchDesigner's suite of features and customization options ensure any projection project is possible.



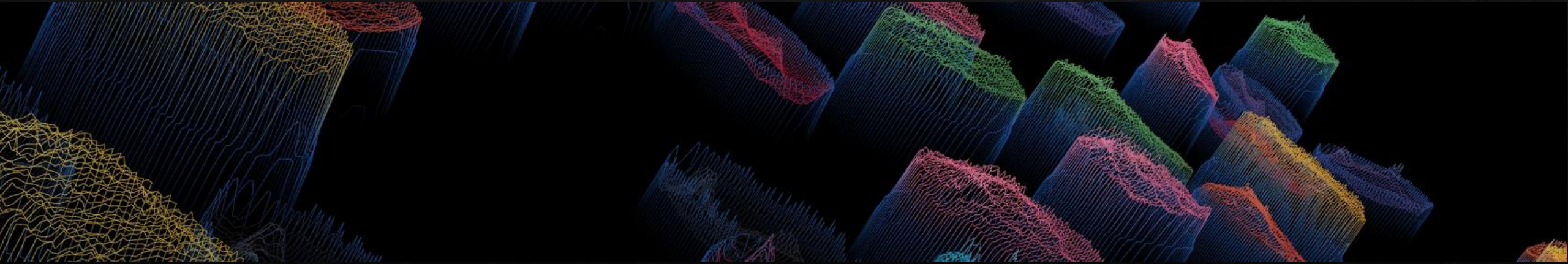
Projection mapping software and techniques to map video

Projection Mapping



TUTORIALS

<https://www.youtube.com/TouchDesignerOfficial>



Projection mapping software and techniques to map video

Projection Mapping

You can also find free softwares.

1. MapMap

A free, open-source video mapping software designed for real-time projection mapping.

Supports multiple video inputs and outputs.

Simple and easy to use, great for beginners.

2. Blender (with Add-ons)

Blender is a powerful open-source 3D creation suite that can also be used for projection mapping with certain add-ons.

Add-ons like **BlendAr** or **Project Mapping Tools** can enhance its mapping capabilities.

Ideal for more advanced users who want to integrate 3D elements into projection mapping.

3. MadMapper (Trial Version)

Although it's a paid software, MadMapper offers a free demo version with some limitations.

It's highly popular in the projection mapping community for its ease of use and powerful features.

4. VDMX (Trial Version)

A versatile software for real-time video mixing and mapping.

It offers a free trial version with access to many of its core features.

Video cues and troubleshooting technical issues during rehearsals and performances to ensure seamless execution of video content.

Chotto Desh - Akram Khan Company



Video cues and troubleshooting technical issues during rehearsals and performances to ensure seamless execution of video content.

<https://www.youtube.com/user/akramkhancompany>





Video Design

Jelena Rubil

