



Workshop Memoriav Fachtagung



Erfolgsfaktoren & Stolpersteine.
Lernen aus 20 Jahren Memoriav-Projekten

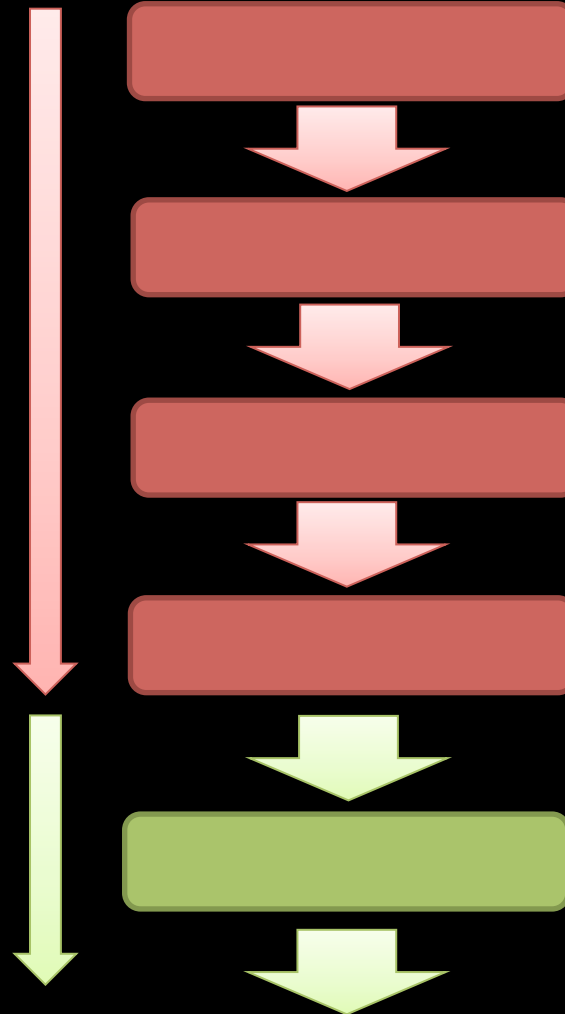
Identifikation der physischen Elemente eines Films,
Auswahl für Restaurierung und/oder Digitalisierung;
Kommunikation mit Dienstleistern
(Pflichtenheft schreiben, Offerten lesen)

20. Mai 2016 – David Pfluger

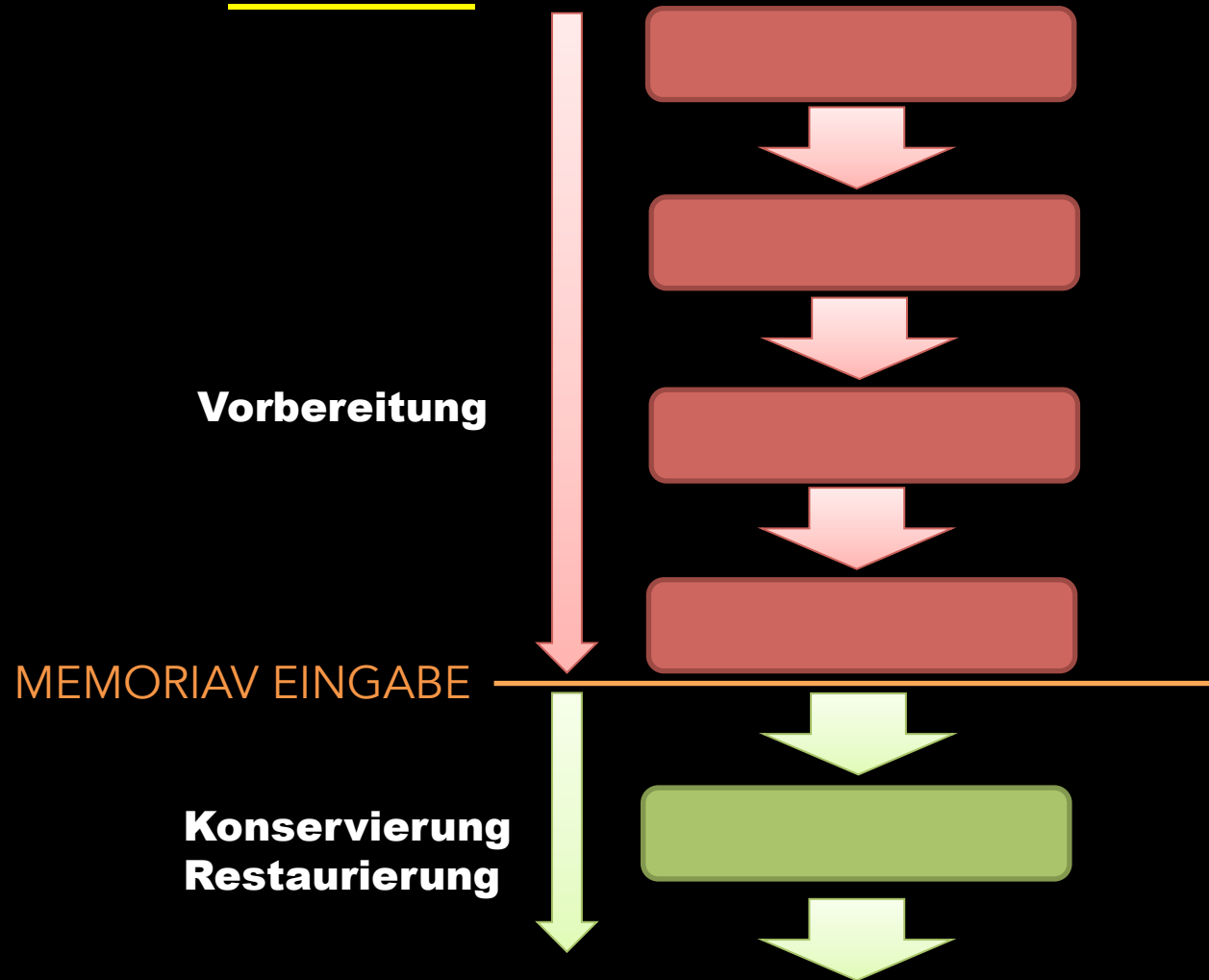
> Dilemma

Vorbereitung

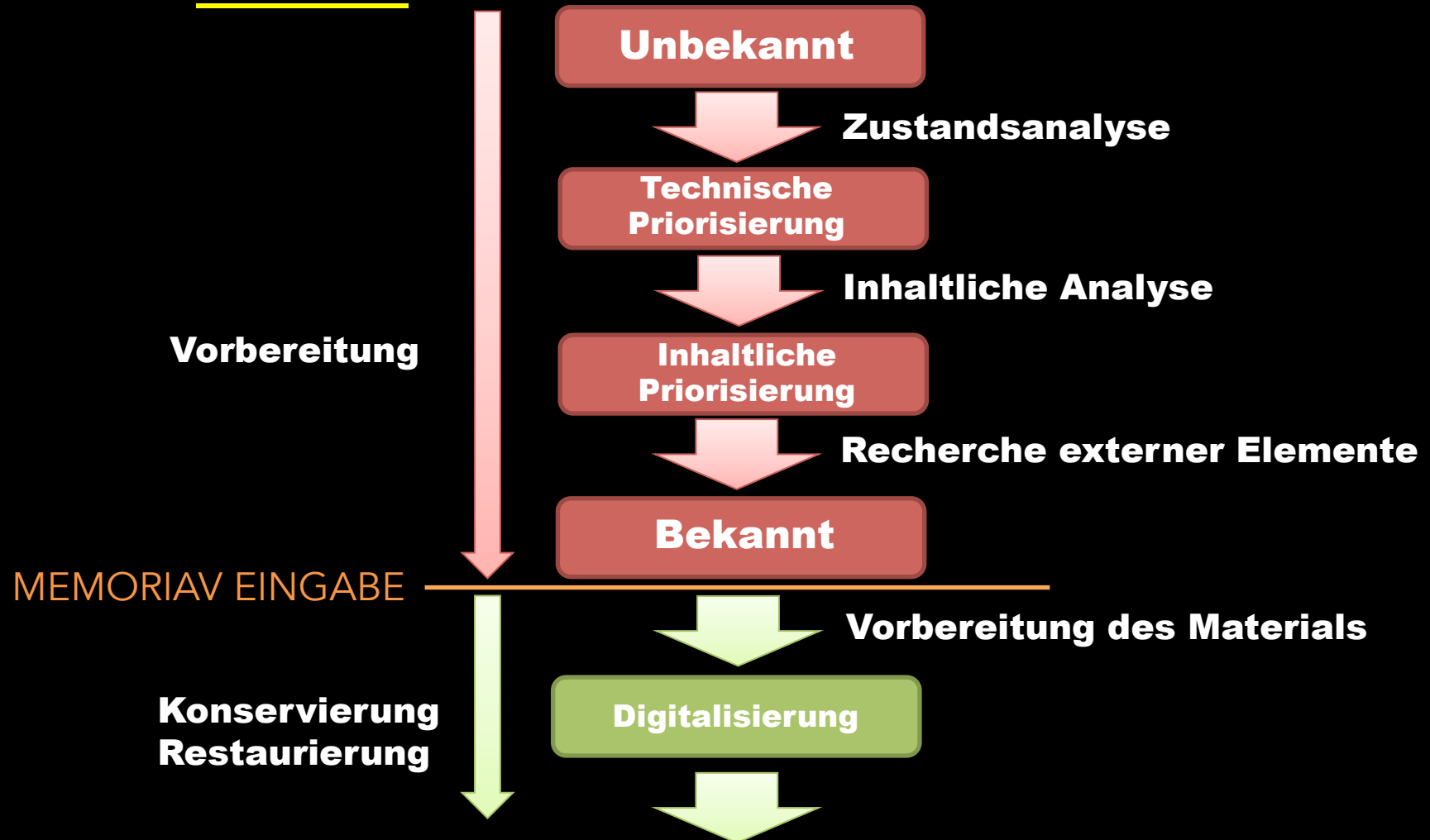
**Konservierung
Restaurierung**



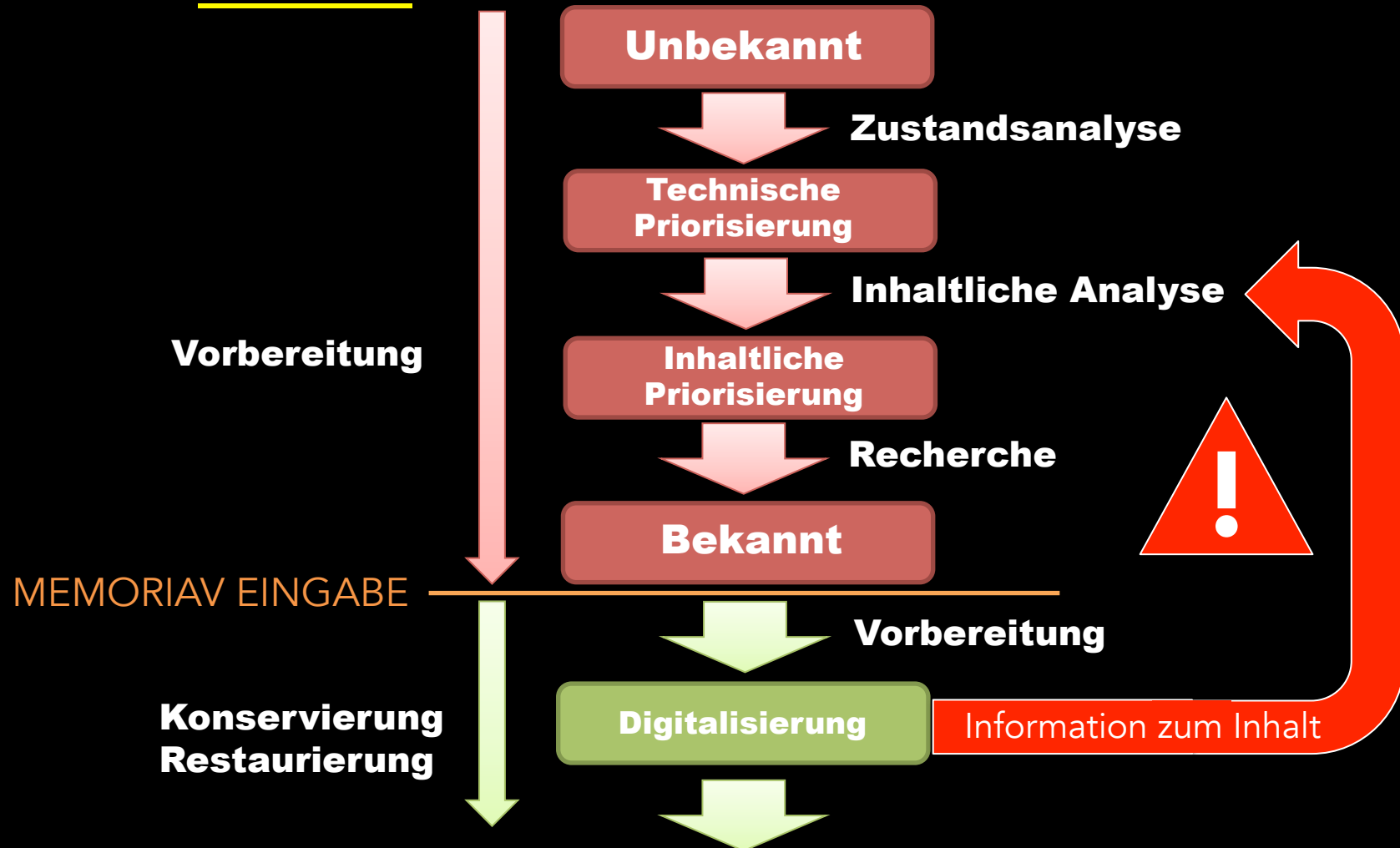
> Dilemma



> Dilemma



> Dilemma



> Dilemma

- Metainformationen aus dem Bestand (Vorsicht!)
- Bestehende Transfers (Vorsicht!)
- Analyse am Sichtungstisch



> Elemente eines Films

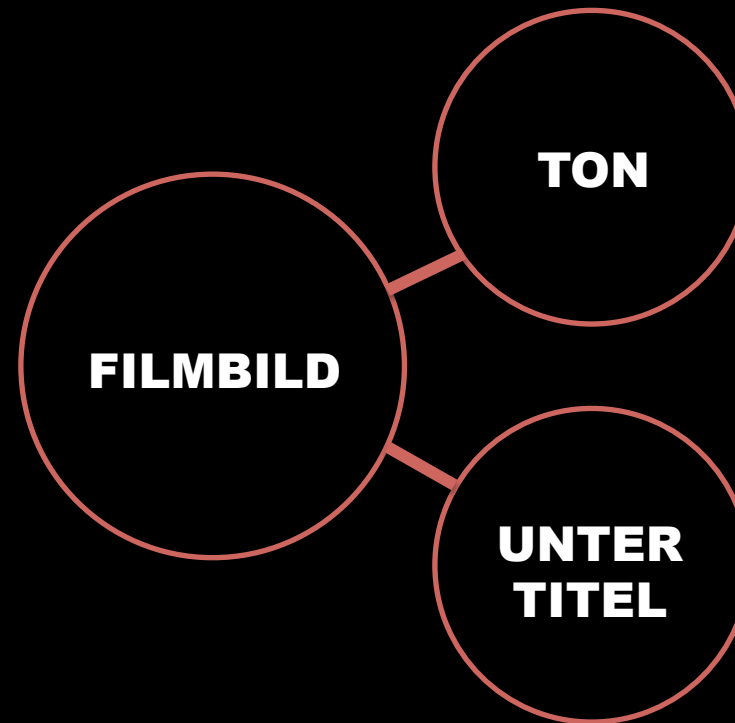


FILMBILD

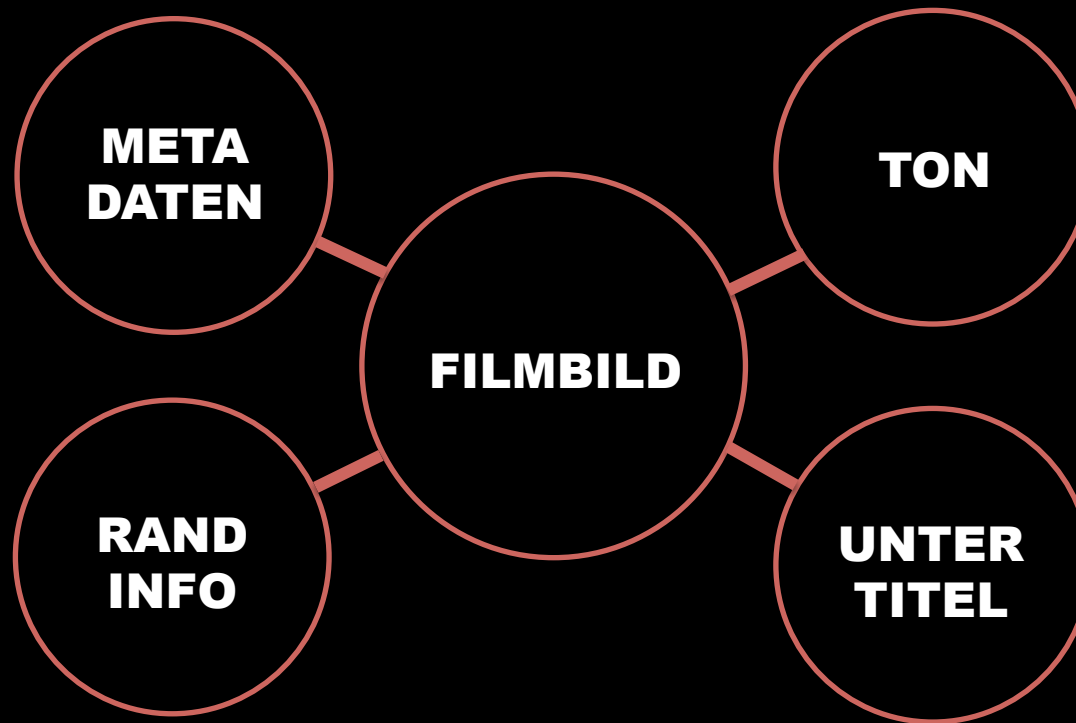


20. Mai 2016 – David Pfluger – Workshop Memoriav Fachtagung

> Elemente eines Films



> Elemente eines Films



> Elemente eines Films

Umkehrfilm, „Amateur“-Workflow



Aufnahme



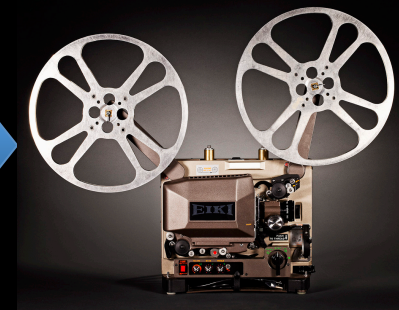
Entwicklung



**Kameraoriginal
Positiv**



Schnitt



Projektion

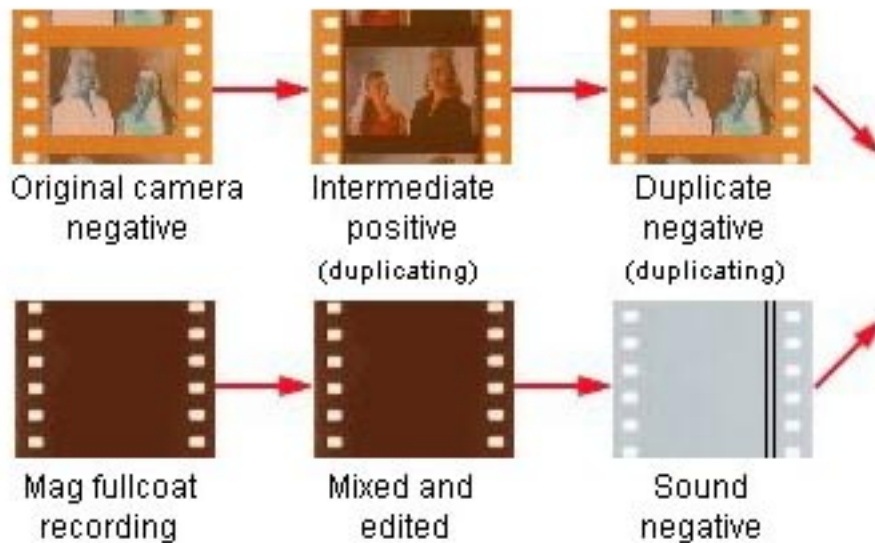


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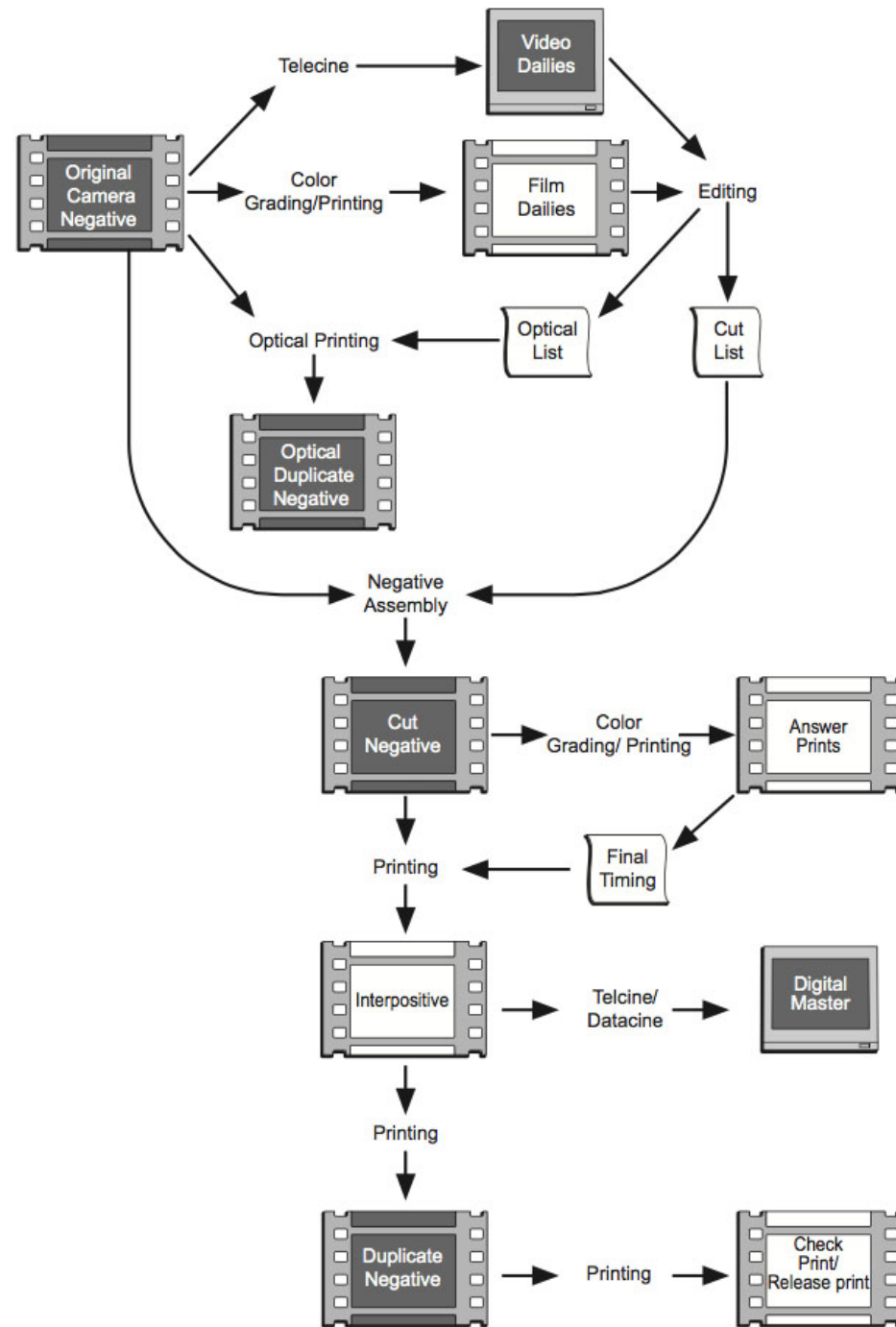
Professioneller Workflow

Der Negativ/Positiv Prozess



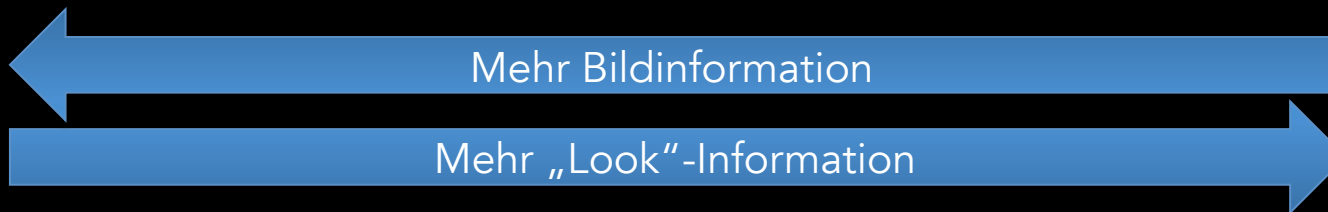
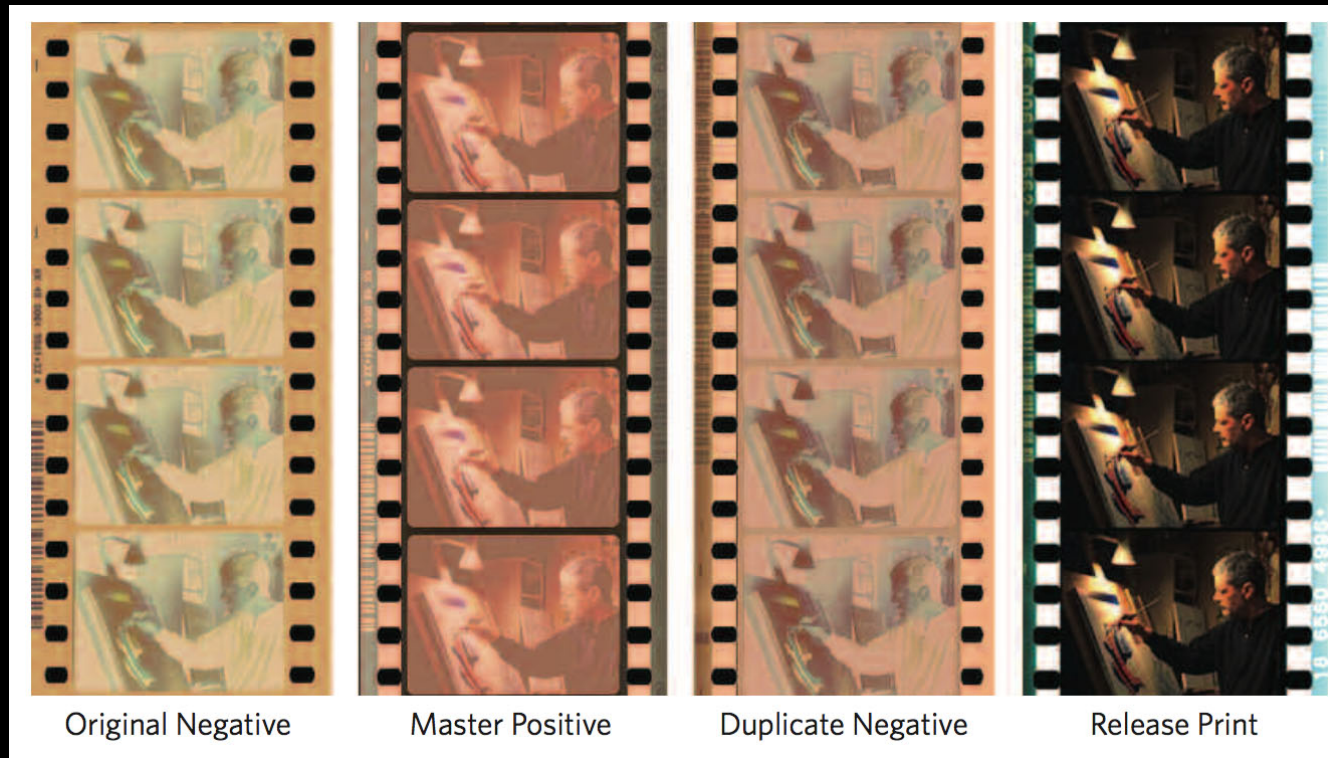
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PROJEKTIONSKOPIE

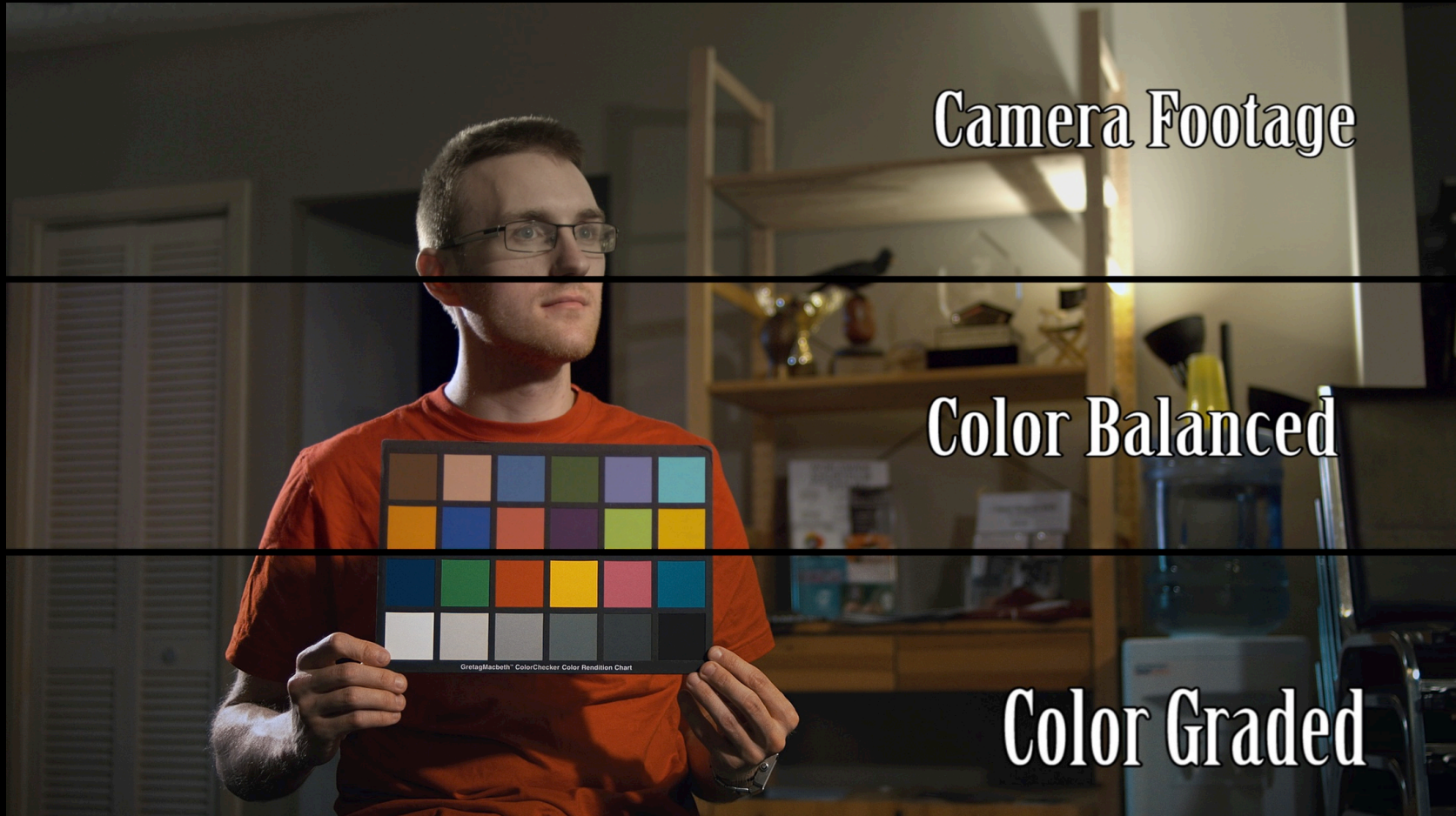


Kodak
„Optical Workflow“

> Elemente eines Films - BILD



> Elemente eines Films - BILD



Camera Footage

Color Balanced

Color Graded

FilmPool Canada



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> Elemente eines Films - BILD

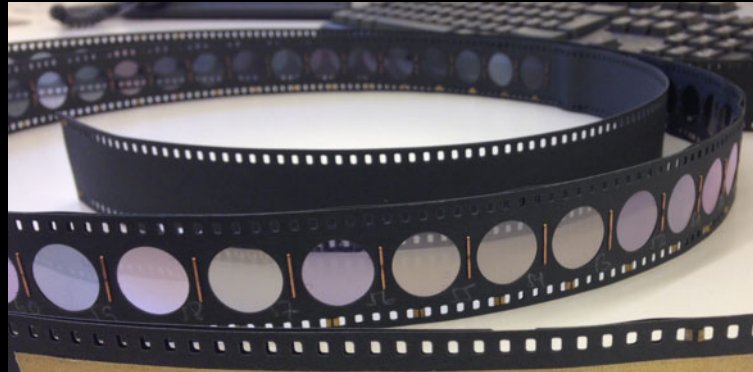


Phil Wesson



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> Elemente eines Films - BILD



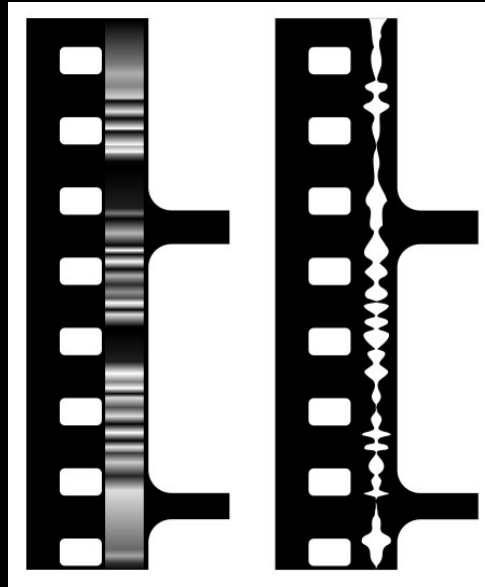
Job	502015	ZEITGEIST	12/09/02 14:28:19						
	CUE	FCC	Fade	R	G	B	Link	Descriptor	
	1	000000		25	25	25		START	
	2	000783		29	29	29			
	3	001820		28	28	28			
	4	002119		30	30	30			
	5	002221		29	29	29			
	6	003431		28	28	28			
	7	003985		00	00	00			



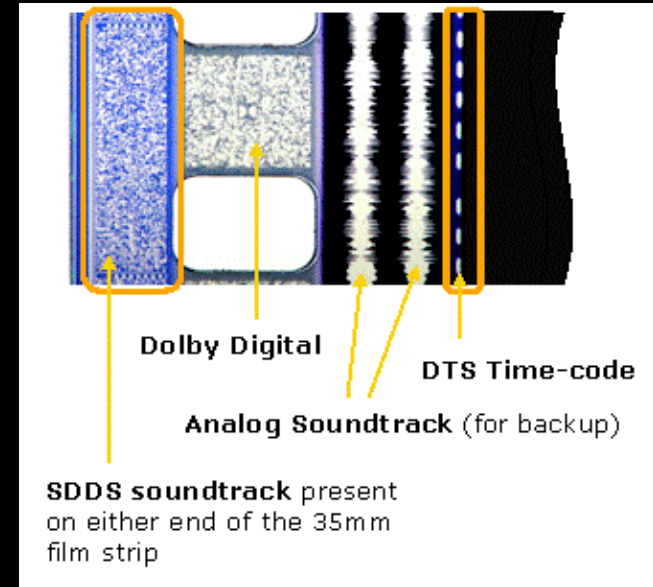
> Elemente eines Films - TON



„Sepmag“ (analog)



Analoger optischer Ton



SDDS soundtrack present
on either end of the 35mm
film strip

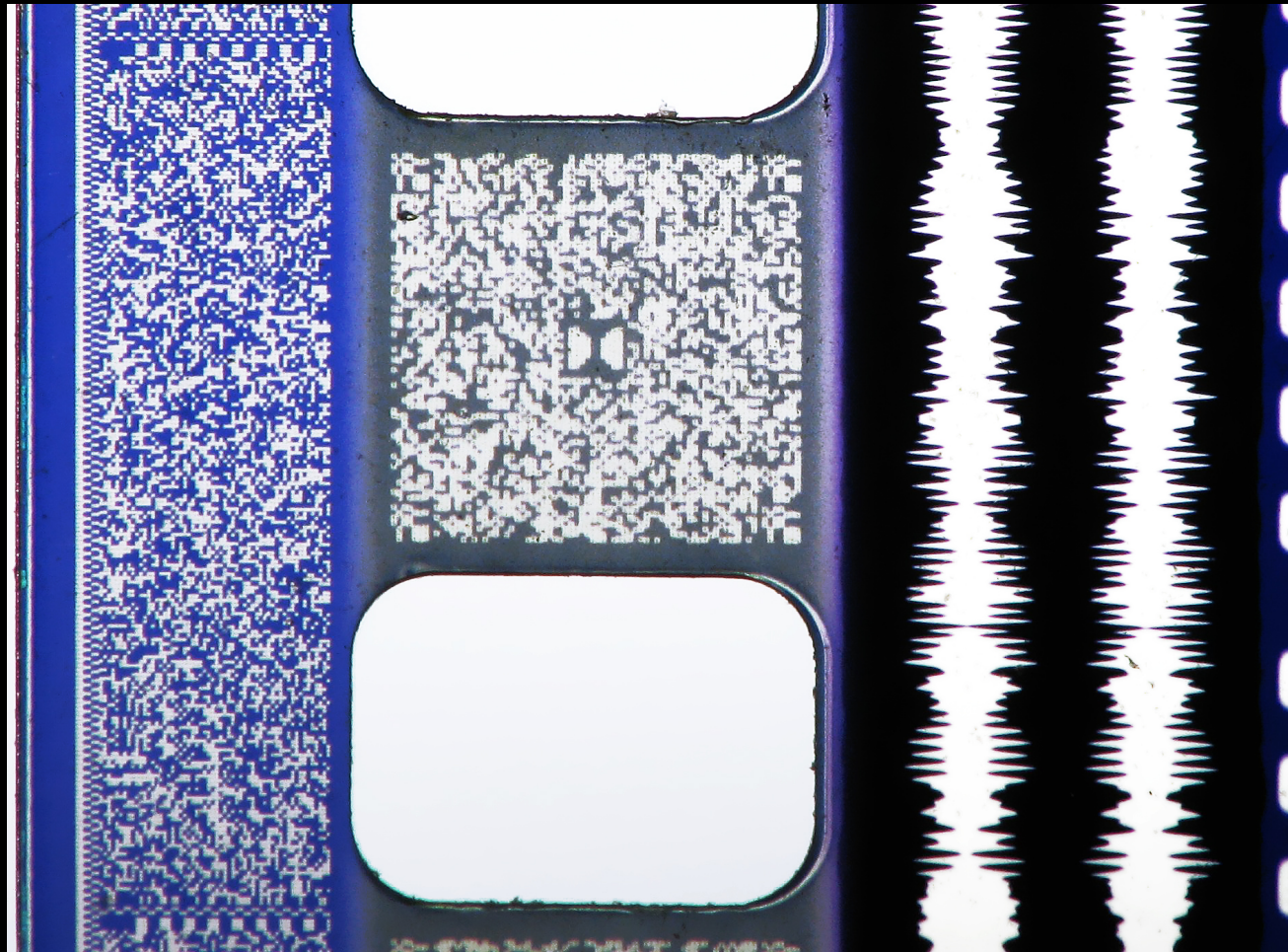
Digitaler optischer Ton



Analoger magnetischer Ton

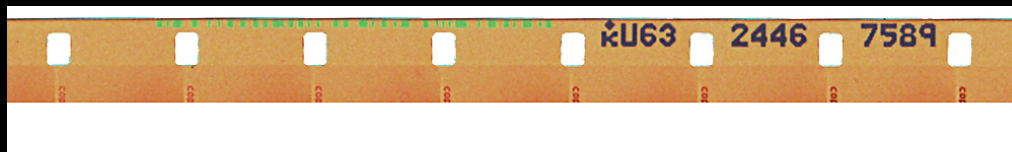
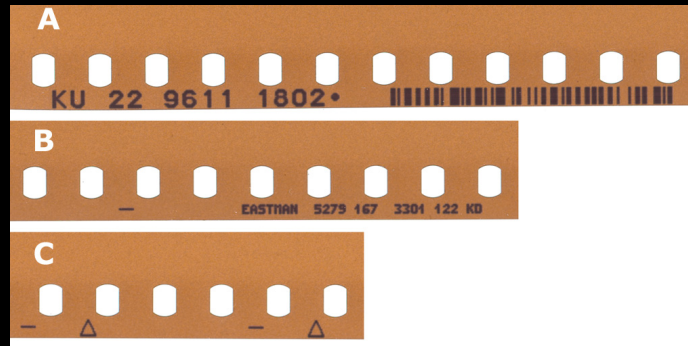


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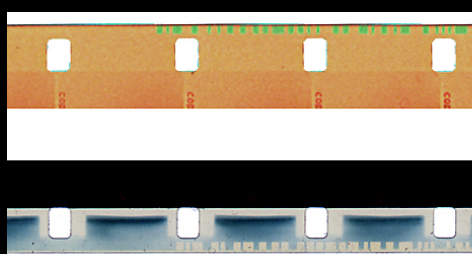
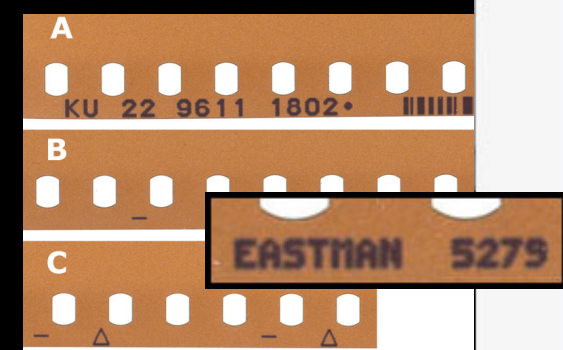


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> Elemente eines Films - RANDINFORMATION



> Elemente



en.wikipedia.org

- 5296/7296 EXR 500T introduced in 1989 (DISCONTINUED in 1995)
- 5298/7298 EXR 500T introduced in 1994 (DISCONTINUED in 2003)

VISION color negative (ECN-2 process 1996–2002) [edit]

- 5246/7246 VISION 250D introduced in 1997 (DISCONTINUED in 2005)
- 5263/7263 VISION 500T introduced in 2002 (DISCONTINUED in 2003)
- 5274/7274 VISION 200T introduced in 1997 (DISCONTINUED in 2006)
- 5277/7277 VISION 320T introduced in 1996 (DISCONTINUED in 2005)
- 5279/7279 VISION 500T introduced in 1996 (DISCONTINUED in 2006)
- 5284/7284 VISION 500T "Expression" introduced in 2001 (DISCONTINUED in 2003)
- 5289 VISION 800T introduced in 1998 (DISCONTINUED in 2004)
- 7289 VISION 800T (16 mm) introduced in 1999 (DISCONTINUED in 2004)

VISION2 color negative (ECN-2 process 2002–2007) [edit]

- 5201/7201 VISION2 50D introduced in 2005. DISCONTINUED in 2012.



1933	1953	1973	+▲
1934	1954	1974	+●



> Elemente eines Films - RANDINFORMATIONEN



20. Mai 2016 – David Pfluger – Memoriam Fachtagung

> Arbeitsmittel

Identifikation heisst zumeist Abrollen des Films!



Bild Chicago Film Archive



20. Mai 2016 – David Pfluger – Workshop Memoriav Fachtagung

> Arbeitsmittel



CIR



Kinoton



Steenbeck



> Praktischer Teil



Workflow digitale Restaurierung

Der unten abgebildete Workflow ist ein Versuch die Schritte der digitalen Restaurierung eines Films abzubilden und chronologisch zu ordnen. Da Filme und ihre überlieferten Bestände sehr unterschiedlich sind, kann der Workflow nicht für alle Fälle gelten, er dient zur groben Wegleitung.

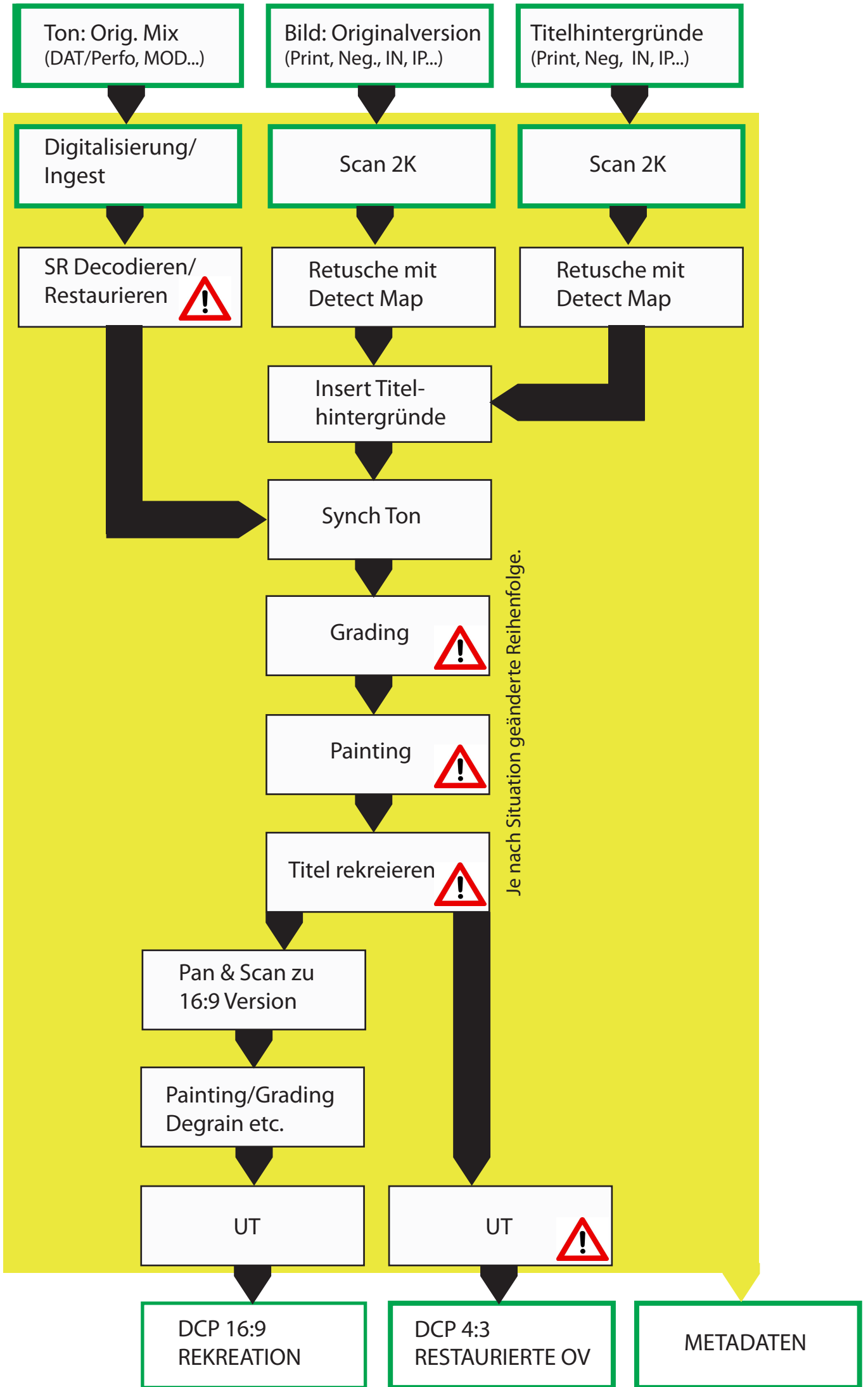
Der Workflow orientiert sich an einem Vorbild aus der Realität, wo ein Spielfilm bearbeitet wurde. Der Ton lag als analoge Dolby SR Mischung vor und die Titel wurden mittels noch existierendem Ausgangsmaterial (Originalmaterial der Titelhintergründe) neu digital reproduziert. Das Ziel war eine restaurierte Originalversion im 4:3 Seitenverhältnis sowie eine 16:9 Fassung (moderne "Rekreation" des Werks).

Bei allen Schritten wo ein "Achtung!"-Symbol abgebildet ist, wird von Expertenhand in das Bild (oder den Ton) des Films eingegriffen und es bestehen viele Freiheitsgrade der Gestaltung. Die Eingriffe müssen nach den ethischen Gesichtspunkten der Restaurierung kontrolliert werden.

Das ebenfalls angehängte Beispiel eines Kostenvoranschlags spiegelt die Schritte des Workflows ziemlich gut wieder. Bei den dort aufgeführten Schritten sind allerdings Titelarbeiten und eine zusätzliche 16:9 Version nicht enthalten.

Die Angegebenen Preise sind insofern nicht verlässlich, als dass die Industrie die Preise regelmässig anpasst und für grössere oder kleinere Aufträge unterschiedliche Paketangebote gemacht werden.

WORKFLOW



Datum
Anfrage vom
Kundennummer
Projekt

Telefon
Telefax
E-Mail
Unser Zeichen
Ihr Zeichen
Währung

OFFERTE

Nr.	Leistung	Anzahl	Gesamt	Einheit	Preis	%	Betrag
Wir danken für Ihre Anfrage, gerne unterbreiten wir Ihnen folgendes Angebot:							
6401	Vorbereitung der Filmrollen	1	3	h	150.00		450.00
6504	Ultraschallreinigung	1	1'000	m	0.40		400.00
5200	Einrichten Scanner	1	1	p	200.00		200.00
5206	Northlight Filmscanner 2K	1	135'000	frm	0.07		9'450.00
5209	Retusche mit detect map	1	135'000	frm	0.04		5'400.00
5320	Conforming inkl. Inhouse Editor	1	1	d	1'250.00		1'250.00
5305	Baselight Colorgrading, exkl. Colorist Cinéma Beamer	1	4	d	2'900.00		11'600.00
5304	Inhouse Colorist	1	4	d	450.00		1'800.00
6401	Vorbereitung und Identifikation Ton	1	3	h	150.00		450.00
6690	Ton Digitalisierung ab 35mm LT-Negativ	1	2.5	h	290.00		725.00
1373	Retusche nach Aufwand, pro Tag	1	1	p	1'500.00		1'500.00
1011	Render nach Minuten, Export	1	90	min	3.00		270.00
1044	Fertigstellung Bild und Ton	1	1	d	1'900.00		1'900.00
1350	Basispreis D-Cinema für Digitales Filmmaster	1	1	p	500.00		500.00
1381	Encoding JPEG2K ab Daten pro Filmminute	1	90	min	5.00		450.00
1389	DCP Authoring pro Filmminute	1	90	min	5.00		450.00
1390	DCP - CineDisk Duplication	1	1	p	90.00		90.00
1388	Testscreening Inhousekino mit Operateur	1	1	p	300.00		300.00
1400	DCP-Cine-Disk CRU-DataPort (DX115DC) 1TB	1	1	p	290.00		290.00
1011	Render für DVD	1	90	min	3.00		270.00
1802	DVD oder BluRay Authoring	1	90	min.	3.00		270.00
1386	Datenspeicherung auf Harddisk / Raid	1	1	p	1'000.00		1'000.00
1386	RAID / Harddisk nach Bedarf ca.	1	1	p	500.00		500.00
							39'515.00
	Rabatt					10.00	-3951.50
	Geschätzte Gesamtkosten bei 2K						35'563.50

KONDITIONEN:

- Alle Preise zuzüglich gesetzliche MwSt.
- Die aufgeführten Angaben sind Schätzungen. Es werden die effektiven Aufwendungen verrechnet.
- Faktura zahlbar innert 10 Tagen.
- Gültigkeit der Offerte: 3 Monate.
- Es gelten unsere AGB.
- Versandkosten und Verpackung nach Aufwand.

Freundliche Grüsse

OPTICAL WORKFLOW

The traditional film process can be described as an optical workflow—the process that existed before digital technology. Film was replicated and special effects were created optically.

In a traditional film process, camera negative film is processed and printed so the production company can view the unedited film footage, or dailies/rushes. Today, dailies are more typically viewed electronically, thanks to telecine technology. Faster scanning technology has allowed film-to-digital transfer much earlier in the process, and that is discussed in the Digital Workflow section of this book.

Whether your dailies/rushes are film or electronic, two types are available:

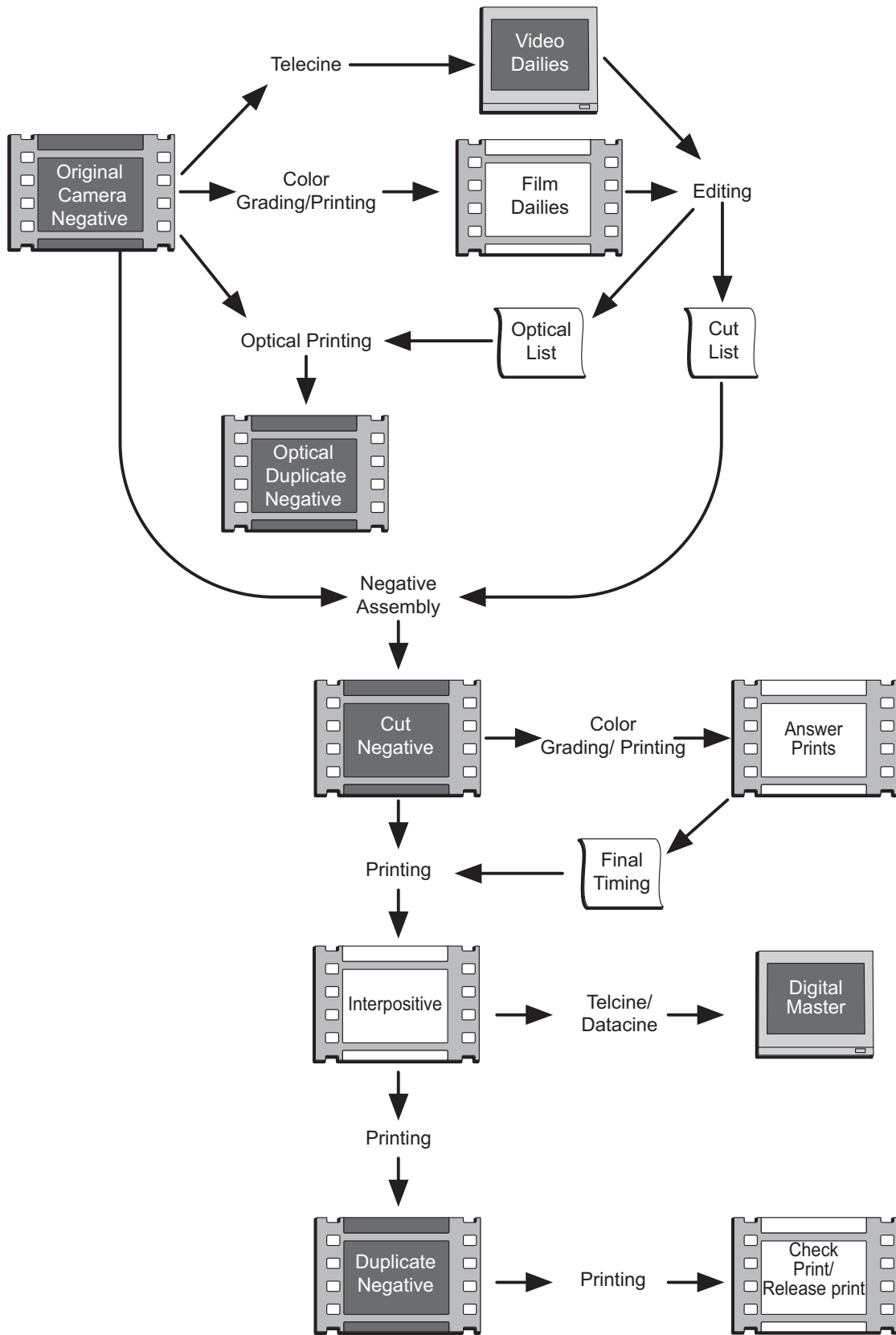
- **One-light dailies** are the most common type, made using the laboratory standard or average printing light. One-light dailies assume the negative is correctly exposed.
- **Timed or graded dailies** are assessed and sent for printing with appropriate printer lights for each camera roll. Not every shot or take in the roll is timed, as would be the case when timing a cut negative to make an approval print. Instead, an average light for that particular camera roll is timed. During timing, the timer typically improves the odd rogue shot in a roll.

After color timing, the film is printed. Different printing methods are used for different purposes:

- **Contact Printing** is the most common type. The original negative and the raw stock are printed in contact with each other, emulsion to emulsion. Contact printing produces a 1:1 transfer of the image size, and the printed image is a mirror image of the original.
- **Optical Printing** projects the original image, which is rephotographed in a camera through a copy lens. Optical printing lets you change the image size. Additionally, you can print base side of the original to the emulsion side of the printing stock, which produces the same image configuration as the original. This is useful when inserting a copy into an original negative.
- **Rotary or Continuous Printing** allows a printing sprocket to transport the film at a constant speed across a printing aperture, through which the exposing light beam passes.
- **Intermittent Printing** exposes the film frame by frame while stationary in the printing gate. Intermittent movement of a shutter and register pin is used to position, expose, and pull down the film after each frame of exposure in exactly the same way as a motion picture film camera exposes original film.

Commonly used printers are:

- **Rotary Contact Printers** are used for printing rushes, answer prints, show prints, and release prints.
- **Intermittent Optical Printers** are used for printing titles, special effects work, and for changing image size by blowing up or reducing the image.



VIDEO DAILIES

Video dailies/rushes are an alternative to traditional film dailies, and they're preferred when the film is intended exclusively for television production or electronic projection. Rather than physically editing the original camera negative immediately following processing, the film is scanned using an electronic imaging device. Telecine or datacine scanners are designed to suit the needs of the lab facility. Video dailies have become the industry standard.

Despite this shift to video dailies, some cinematographers still prefer film dailies for image evaluation when going out to a print.

VIEWING

After processing, the print is checked by the dailies/rushes department to report to the production company the condition of the material, the quality of the images, and, if required, the quality of the action and sound. Problems that might necessitate retakes are identified before the set is broken or moved to a new location.

After viewing and completing the laboratory report, the print and a written report are sent to the editor. The crew assesses the report before the print is dispatched. The laboratory stores the negative until it is needed for negative cutting after the dailies are edited. The negative is also available to the laboratory for use in making rush reprints of selected rolls or takes for the editor.

OPTICALS

Some shots and effects must be created as the editor is working. These are called opticals because traditionally they were made on an optical printer. The editor makes an optical list, or layout, and notes KEYCODE Numbers that match the negative.

Some examples of opticals are:

- Transitions, such as fades (for single strand negative) or wipes
- Reverse motion
- Composite shots (such as a blue screen)
- Titles over picture

Today, opticals are usually created digitally, even when the film is not following a digital intermediate workflow.

Sound Tracks

Traditional sound recording methods, mixing, and playback have been largely replaced by digital technology, offering significant improvements in audio quality and creative flexibility—and automating much of the process.

In addition to conventional analog photographic audio soundtracks, most 35 mm release prints use one or more types of digital audio sound to enhance the theatrical experience.

Commercial film laboratories and audio post-production studios are equipped with recorders to create the type of sound tracks ordered by the production company for release.

NEGATIVE CUTTING

Once edited, the final cutting copy of the original film is returned to the laboratory for negative cutting. Often, an edited video copy with a negative cut list is made. The negatives are then assembled and spliced per the editor's directions.

Splicing Techniques

Cut negatives must be spliced together into the desired sequence. There are three techniques commonly used:

Tape joins—Films are butted together and clear polyester tape is applied across the join, back and front. This type of join is used for joining prints together, and for editing work.

Cement joins—Films to be joined are cut with a common overlap. The emulsion is scraped from one overlap to reveal the film base underneath and film cement is applied. Cement joins result in a clean, permanent join that won't stretch.

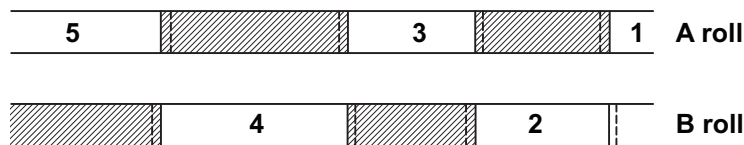
Heat Weld (Ultrasonic) Splice—Heat weld splices result in strong permanent joins, which don't stretch. They're not as clean as good cement joins, however, and they're less suitable for acetate base films. Heat weld splices are used for polyester base films, which cannot be joined with film cement.



NEGATIVE CUTTING TECHNIQUES

Cutting 16 mm film

16 mm negatives are normally cut as A and B rolls. This involves successive shots being cut alternatively into the A roll negative and the B roll negative. An opaque black leader is joined between the shots on each roll to match exactly the length of the shots in the opposite roll. The layout of a typical A and B roll after negative cutting looks like this:



This negative cutting technique is known as Checkerboard cutting. It's used to conceal the overlap cement splice at each join, which, in the case of 16 mm film with its very narrow frameline, would normally encroach into the picture area. The opaque leader hides the overlap of the splice so that when the join is made, the emulsion is scraped in the picture overlap area beyond the last frame of required picture. The opaque leader, which is not scraped, is laid over the scraped picture up to the frame line and conceals the join during printing.

A print is made in two passes on a printing machine; the A and B roll are printed in succession onto one roll of stock. When negatives are cut and printed as A and B rolls, it is possible to incorporate fades and dissolves by

overlapping scenes on the two rolls and closing or opening a fader on the printing machine at the appropriate time.

Cutting 35 mm film

Because the frameline on conventional 35 mm film is much wider than on 16 mm film, it is possible to make overlap cement joins that do not encroach into the picture area; hence 35 mm negatives are normally straight cut in a single roll with A and B rolls used only when fades or dissolves are required (A and B for opticals only).

Cueing and Timing/Grading

Cut negatives must be prepared for printing. During this process, each scene is individually timed and its cue points are identified to tell the printing machine where each scene change occurs and therefore each timing change.

This operation is similar to cueing the dailies/rushes, but every shot and event (fades/dissolves) is cued prior to timing.

Cleaning

Before printing, cut negatives are cleaned in an ultrasonic film cleaner to remove traces of dust and dirt that would appear as white sparkle on the final copy print. Cleaning is essential due to handling during cutting, cueing and grading/timing.

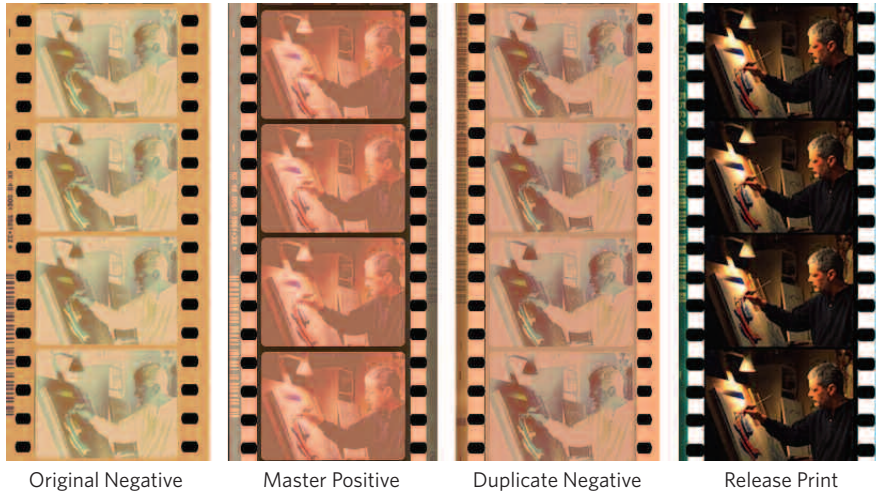
Answer Prints

Answer Prints are made from the cut negative after the final cut, after the final color balancing, and after all titles and effects have been added. The laboratory timer in consultation with the director, cinematographer, producer, and/or editor finely times them for color and density. The timing for the answer print is used to make the interpositive, also called IP or Master Positive.

Duplication

After the production company approves an answer print, a master positive, or an interpositive is made. From the interpositive, several duplicate negatives, or internegatives, are made. The final release prints are printed from the duplicate negatives.

- Using duplicate negatives to make release prints protects the original negative from the wear and tear of multiple printing, and provides insurance against damage.
- Multiple language versions, different length or format versions, and simultaneous worldwide release of films all require the existence of duplicate negatives that move between laboratories around the world.
- Scene-to-scene corrections incorporated into a duplicate negative mean it can be one-light printed at high speed. Polyester base duplicate negatives may be used for extra strength when using high printing speeds.



The interpositive is also often scanned or telecined to create the video master for home distribution.

Check Prints

Check Prints are made from the duplicate negative; they are used to assess the quality of the bulk release work.

Release Prints

Release Prints are produced in large numbers at high speeds for theaters around the world.

“Due to budget restrictions, so far we haven’t been able to go with proper 2K scan and realize the full image quality that was captured on the Super 16 negative. But once we have a distribution deal, we will be able to go back to the negative and access the full richness of the images.”

—*Alessandra Piccione, Writer - Producer*

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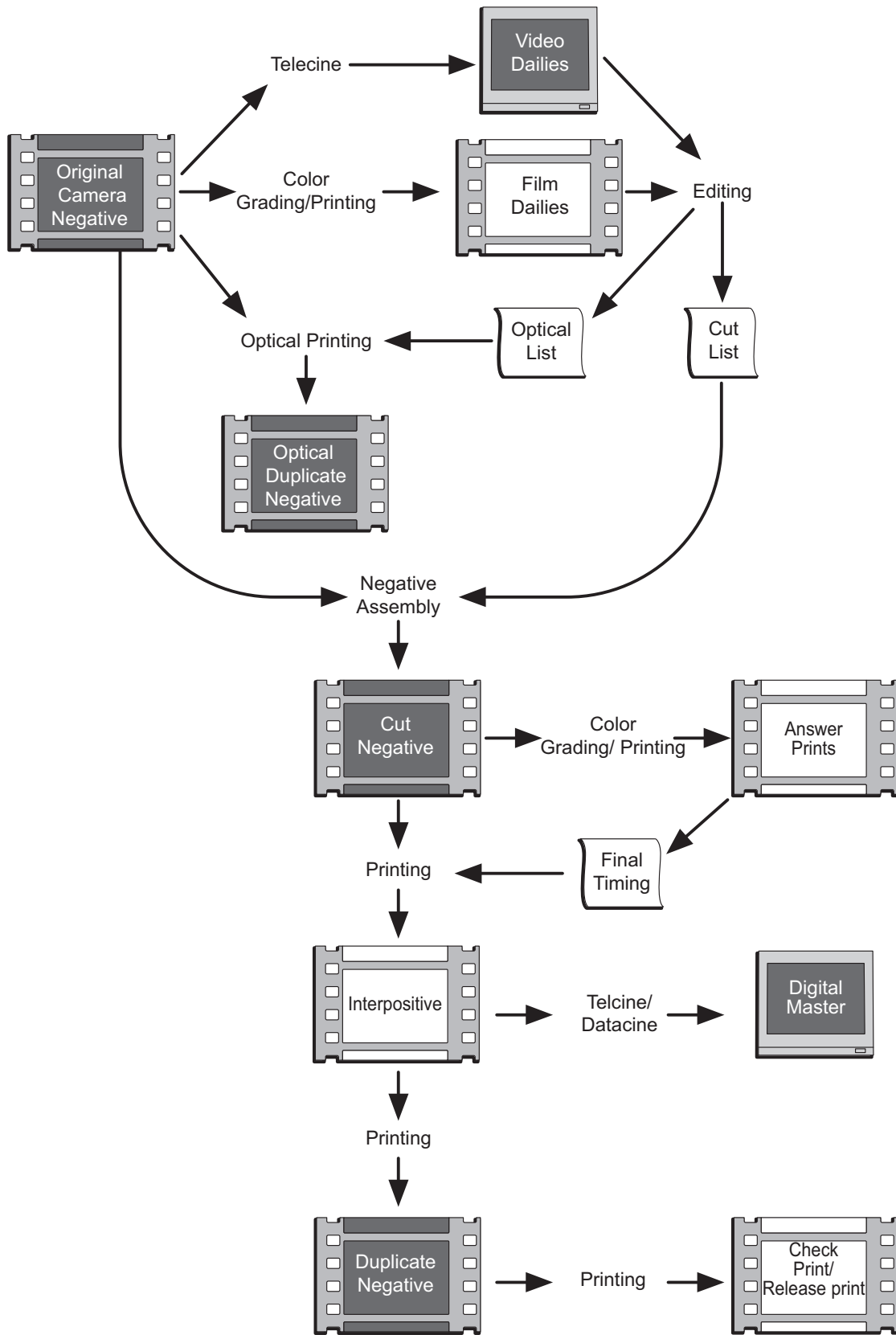
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Traditional sound recording methods, mixing, and playback have been largely replaced by digital technology, offering significant improvements in audio quality and creative flexibility—and automating much of the process.

In addition to conventional analog photographic audio soundtracks, most 35 mm release prints use one or more types of digital audio sound to enhance the theatrical experience.

Commercial film laboratories and audio post-production studios are equipped with recorders to create the type of sound tracks ordered by the production company for release.

NEGATIVE CUTTING

Once edited, the final cutting copy of the original film is returned to the laboratory for negative cutting. Often, an edited video copy with a negative cut list is made. The negatives are then assembled and spliced per the editor's directions.

Splicing Techniques

Cut negatives must be spliced together into the desired sequence. There are three techniques commonly used:

Tape joins—Films are butted together and clear polyester tape is applied across the join, back and front. This type of join is used for joining prints together, and for editing work.

Cement joins—Films to be joined are cut with a common overlap. The emulsion is scraped from one overlap to reveal the film base underneath and film cement is applied. Cement joins result in a clean, permanent join that won't stretch.

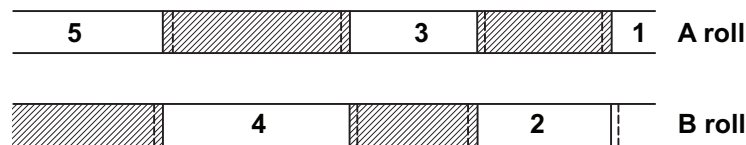
Heat Weld (Ultrasonic) Splice—Heat weld splices result in strong permanent joins, which don't stretch. They're not as clean as good cement joins, however, and they're less suitable for acetate base films. Heat weld splices are used for polyester base films, which cannot be joined with film cement.



NEGATIVE CUTTING TECHNIQUES

Cutting 16 mm film

16 mm negatives are normally cut as A and B rolls. This involves successive shots being cut alternatively into the A roll negative and the B roll negative. An opaque black leader is joined between the shots on each roll to match exactly the length of the shots in the opposite roll. The layout of a typical A and B roll after negative cutting looks like this:



This negative cutting technique is known as Checkerboard cutting. It's used to conceal the overlap cement splice at each join, which, in the case of 16 mm film with its very narrow frameline, would normally encroach into the picture area. The opaque leader hides the overlap of the splice so that when the join is made, the emulsion is scraped in the picture overlap area beyond the last frame of required picture. The opaque leader, which is not scraped, is laid over the scraped picture up to the frame line and conceals the join during printing.

A print is made in two passes on a printing machine; the A and B roll are printed in succession onto one roll of stock. When negatives are cut and printed as A and B rolls, it is possible to incorporate fades and dissolves by

overlapping scenes on the two rolls and closing or opening a fader on the printing machine at the appropriate time.

Cutting 35 mm film

Because the frameline on conventional 35 mm film is much wider than on 16 mm film, it is possible to make overlap cement joins that do not encroach into the picture area; hence 35 mm negatives are normally straight cut in a single roll with A and B rolls used only when fades or dissolves are required (A and B for opticals only).

Cueing and Timing/Grading

Cut negatives must be prepared for printing. During this process, each scene is individually timed and its cue points are identified to tell the printing machine where each scene change occurs and therefore each timing change.

This operation is similar to cueing the dailies/rushes, but every shot and event (fades/dissolves) is cued prior to timing.

Cleaning

Before printing, cut negatives are cleaned in an ultrasonic film cleaner to remove traces of dust and dirt that would appear as white sparkle on the final copy print. Cleaning is essential due to handling during cutting, cueing and grading/timing.

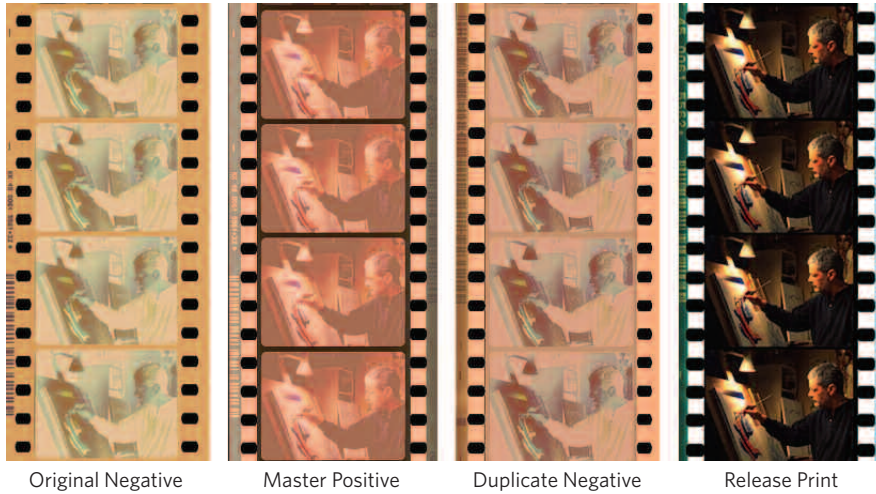
Answer Prints

Answer Prints are made from the cut negative after the final cut, after the final color balancing, and after all titles and effects have been added. The laboratory timer in consultation with the director, cinematographer, producer, and/or editor finely times them for color and density. The timing for the answer print is used to make the interpositive, also called IP or Master Positive.

Duplication

After the production company approves an answer print, a master positive, or an interpositive is made. From the interpositive, several duplicate negatives, or internegatives, are made. The final release prints are printed from the duplicate negatives.

- Using duplicate negatives to make release prints protects the original negative from the wear and tear of multiple printing, and provides insurance against damage.
- Multiple language versions, different length or format versions, and simultaneous worldwide release of films all require the existence of duplicate negatives that move between laboratories around the world.
- Scene-to-scene corrections incorporated into a duplicate negative mean it can be one-light printed at high speed. Polyester base duplicate negatives may be used for extra strength when using high printing speeds.



The interpositive is also often scanned or telecined to create the video master for home distribution.

Check Prints

Check Prints are made from the duplicate negative; they are used to assess the quality of the bulk release work.

Release Prints

Release Prints are produced in large numbers at high speeds for theaters around the world.

“Due to budget restrictions, so far we haven’t been able to go with proper 2K scan and realize the full image quality that was captured on the Super 16 negative. But once we have a distribution deal, we will be able to go back to the negative and access the full richness of the images.”

—*Alessandra Piccione, Writer - Producer*

BESTAND I

Eigenschaften:

16mm Film

15 Filmrollen à 120m auf Metallspulen und in Metalldosen (Aluminium).

Azetatfilm

Umkehrfilm

Schwarzweiss

Doppelperforation

Zustand:

4 Rollen mit Essigsäuresyndrom

Nassklebestellen alt und brüchig, z.T. schlecht ausgeführt

Spuren von Projektion sichtbar (Linien, Kratzer)

Perforation stellenweise beschädigt.



Herkunft:

Filme die ein Schweizer Journalist und Fotograf in den 1930er Jahren in Fernost gedreht hat.

BESTAND II

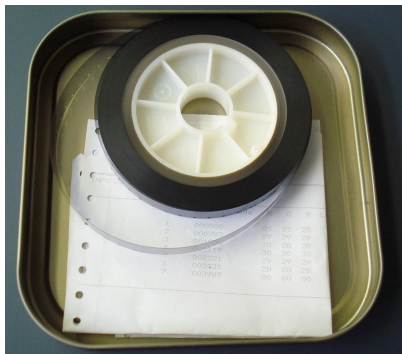
Eigenschaften:

16mm Filmrollen und 35mm Filmrollen auf Spulen und auf Kernen in Metall Dosen.

Azetatfilm

Farbe und Schwarzweiss

Rolle	Umkehroriginal Kodachrome 16mm (120m)	Internegativ 16mm (120m)	Projektionskopie mit Lichtton 16mm (120m)	Tonnegativ 35mm (300m)
1	R 1	R 1A	Teil 1	R 1A
2	fehlt	R 1B		R 1B
3	R 3	fehlt		R 2A
4	R 4	fehlt		R 2B
5	R 5	R 3A	Teil 2	R 3A
6	R 6	R 3B		R 3B
7	fehlt	R 4A		R 4A
8	fehlt	R 4B		R 4B
9	fehlt	R 5		R 5



Filmnegativ/Filmintermediate



Filmkopie 16mm



Tonnegativ 35mm



Beilage der Negative

Zusätzlich DVD mit Ton, abgefilmt von Projektion.

Zustand:

Projektionskopie: Starke Gebrauchsspuren, wenig geschrumpft, leichter roter Farbstich

Umkehroriginal: Makelloser Zustand, wenig geschrumpft, kein Farbstich

Internegativ: Guter Zustand, wenig geschrumpft, Farbstich unbekannt

Tonnegativ: Guter Zustand, wenig geschrumpft

DVD: Bild in schlechter Qualität

Herkunft:

Semiprofessioneller Dokumentarfilm eines Geistlichen von seiner Reise durch Südamerika.

BESTAND III

Eigenschaften:

10 Rollen 8mm Film

15m und 120m Spulen aus Kunststoff und Metall

Teilweise in Metalldosen, teilweise in Kartonboxen

Azetatfilm

Umkehrfilm

Kodachrome Farbfilm

Stumm



Zustand:

Gut.

Gewisse Klebestellen brüchig.

Herkunft:

Home Movies einer Schweizer Industriellenfamilie.

BESTAND IV

Eigenschaften:

22 Rollen 9.5mm Film in Kassetten, 15m und 60m

Azetatfilm

Umkehrfilm

Schwarzweiss

Stumm

12 Rollen 35mm Kopien

1x 300m sowie kleinere Rollen ohne Kern

Nitratfilm

Stumm



9.5mm Filme



Nitratfilme

Zustand:

9.5mm Filme: Gebrauchsspuren und stark geschrumpft

Nitratfilme: Gebrauchsspuren, stark geschrumpft und brüchig. Perforation stellenweise beschädigt.

Herkunft:

Home Movies einer Schweizer Industriellenfamilie.

Inhalt der Nitratfilme unbekannt.

BESTAND V

Eigenschaften:

- 12 Rollen 35mm Nitrat Projektionskopien in Schwarzweiss mit Ton, alle ca. 600m
- 1 Rolle 35mm Nitrat Projektionskopie in Farbe "Technicolor" mit Ton, 300m
- 63 Rollen 16mm Azetat Projektionskopien in Farbe mit Ton, 120m - 600m
- 22 Rollen 16mm Azetat Projektionskopien in Schwarzweiss mit Ton, 120m - 600m
- 6 Rollen 16mm Azetat Negative in Farbe, 120m - 600m
- 3 Rollen 16mm Azetat Negative in Schwarzweiss, , 120m - 600m
- 14 Rollen 16mm Tonnegativ, 120m - 600m

Alle Negative auf Kernen in Blechdosen.

Alle 16mm Projektionskopien auf Kunststoffspulen in Kunststoffdosen.

Alle 35mm Projektionskopien auf Kernen in Metalldosen.

Zustand:

12 der 16mm Projektionskopien in Farbe mit Esigsäuresyndrom.

34 der 16mm Projektionskopien in Farbe mit Farbstich.

Starker Rost in der Dose der Nitratkopie.



16mm Filme



35mm Nitratfilm

Herkunft:

Auftragsfilme eines Schweizer Kommunikationsunternehmens

BESTAND VI

35mm Negativ (5 Rollen à 600m)

35mm Tonnegativ (10 Rollen à 600m)

2 Kopien mit deutschem Ton, eine mit französischen und eine mit englischen Untertiteln.

16mm Sepmags (D, E, F)



35mm Negativ/Tonnegativ und Kopien



Sepmags

Zustand:

35mm Negativ und gewisse der 16mm Sepmags mit Essigsäuresyndrom.
Projektionskopien stark abgenützt.

Herkunft:

Spielfilm eines bekannten Schweizer Filmemachers.

ZIEL I

Es soll eine Rettung der Elemente die am meisten gefährdet sind durchgeführt werden. Die restlichen Elemente sollen passiv konserviert werden. Gleichzeitig muss aber der Inhalt des Bestandes sichtbar gemacht werden.

Ziel II

Es soll eine komplette Konservierung und Restaurierung der Elemente durchgeführt werden. Alle Elemente werden anschliessend in der Cinémathèque suisse deponiert. Erstellen sie ein komplettes Archivierungspaket nach deren Richtlinien.

Rein digital

- "Rohscan" in hoher Qualität (Unkomprimiert, Einzeldateien)
- Lichtbestimmte, restaurierte digitale Kopie in hoher Qualität (Lossless komprimiert, Einzeldateien)
- Unkomprimierte, digitale Tonelemente
- DCP
- Digitales Sichtungselement
- Metadaten

Ziel III

Es soll eine komplette Konservierung und Restaurierung der Elemente durchgeführt werden. Alle Elemente werden anschliessend in der Cinémathèque suisse deponiert. Erstellen sie ein Komplettes Archivierungspaket nach deren Richtlinien.

Analog und digital gemischt

- Restauriertes, lichtbestimmtes intermediate Negativ oder Positiv
- Tonnegativ
- DCP
- Digitales Sichtungselement
- Metadaten

Ziel IV

Es soll eine Restaurierung in höchster Qualität nur jener Elemente durchgeführt werden, die inhaltlich als historisch am wichtigsten priorisiert werden.

Die restlichen Elemente sollen in einer kleineren, aber akzeptablen Qualität digital konserviert werden werden.

Das Schweizer Fernsehen hat um eine digitale Sendekopie der inhaltlich am höchsten priorisierten Elemente im 16:9 Seitenverhältnis gebeten.

Die inhaltlich am höchsten priorisierten Elemente sollen auf DVD herausgegeben werden.

Wet Gate	Recadrage / Pan & Scan 4:3 zu 16:9
„Digital Wetgate“ / Detect Map	Analoge Umkopierung Negativ / Positiv
Abtastung auf einem HD Scanner (16mm, 9.5mm, S8, 8mm) als Quicktime. Ohne Wetgate Option.	Desmetkopie
Abtastung auf einem 2K Scanner (35mm, 16mm, S8) als Einzelbilder. Ohne Wetgate Option.	Ultraschallreinigung
Abtastung auf dem High-End Scan- ner in 4K als unkomprimierte Ein- zelbilder. Wetgate Option.	Prüfen und Vorbereiten des Filmmaterials

Digitalisieren des optischen Tons	Umschachteln in Archivdosen
Digitalisieren des Tons ab Sepmag	Ausbelichten auf Negativfilm (Farbe/SW)
Digitale Daten ausspielen auf LTO-Band	Ausbelichten auf Archiv-Positivfilm (Farbe)
Digitale Daten ausspielen auf Harddisk	Nullkopie ziehen (erste Projektionskopie mit Ton)
Digitale Daten ausspielen auf HDCam Band	Lichtbestimmung (digital oder analog)

Chemische Vorbehandlung	Titelarbeiten
Erstellen von Checksummen	Untertitel spotten
Erstellen von Konsultationsdateien in niedriger Qualität ausgehend von den hochauflösenden digitalen Dateien.	Rendering / Ausspielen als Einzelbilder
Automatisierte Retusche von Bildfehlern	DCP Mastering
Manuelle Retusche von Bildfehlern	Authoring DVD / Blu-ray

Kurzrollenhandling	Rendering / Ausspielen als Einzelbilder
Ausspielen von Standbildern	Untertitel DVD / Blu-ray