in Potentia

created by
oliver nowak

In Potentia is a project about creating a photograph, using a sum of frames from an early, digitized motion picture, and synthesizing them through digital processing. By using computer programming to leverage the data-base architecture of the pixel, I am attempting to create a computerized, synchronic vision of a mechanical diachronic process, as image frames are re-spliced into one, totalized, synthetic image.

The pixel represents the volatility of the moment within the continuum of the screen. In any "given moment's scenarios", it is responsive, interactive; time-in-the-screen exists as a negation of the fixed, an infinite present reified as data. Data that is subject to change at any time.

The print becomes the mortal registration of this data through time; a body. By deliberately inserting my images into the body of a photographic print, I return them to a place of timefulness, abandoning the timelessness inherent within the screen space.

The images reveal another way of looking at the mediums of early film-based cinema (essentially motion-capture experiments) and photography through a (fatal) digital interrogation, and by exploring the role of its recording as an archive of time and space. Rendered as prints, they record the collapse of every moment as an implosion, collaborating in the mortality of a motion picture. Fixed and still, they become a momento mori.

A b s t r a c t [ed]

[3]

From Russia,
With Love

I'd like to thank Skinny Puppy for never compromising. Old Bull Lee for seeing it through. Big D for keeping it real. Janette for her love, editing notes, and countless philosophical discussions about photography. Yusuke Nishimura for inspiring me to keep at it. Sarah Palmer for her comment in crit that led me to learn programming, which brought me to this point in my creative life. Ben Fry for me showing tools not sanctioned by corporate agendas. The TF2 players in the SourceOP server. All of the Multiverse Corp pilots in Eve-Online. My little brother, back from Iraq, who told me what really mattered. The xenophobia of John Szarkowski. Traub for his support.

The government, for theirs. Alan Chasanoff for his enthusiasm and encouragement. The Irish for their whiskey and Molly's Pub. Phil Klein for that one day, and for his quiet strength. I'm gonna steal your shopping cart photo! Randy West for his generosity (in crit & insight) and humanity. Silvio Wolf for his patience and willingness to argue his point to the death without condescension. My landlord for letting me apprentice under him in construction and demolition over the summer. Scott Whittle for his generosity, kindness, and passion for food. Adam Bell for his sense of humor, cynicism, and good nature.
And my parents.

Acknowledgement and Thanks

[5]

C o n t e n t s

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[7]

We are in a cave.

We face a wall as shadows are cast, illuminated by a light from the cave's opening. The shadows flicker, tracing the contour of our presence through the passage of the day. It circumscribes a desire born from the dark and midwifed through salt and silver into life in the light. Wet from its birth as a moment captured, the frozen shadow announces itself silently. It is still and does not waiver. It is loyal and wants nothing but eyes to make it so.

We watch it, wary of its potential for dance.

Soon, a machine is made. With efficiency, it captures a moment unlucky enough to stumble across its frame of view. With the moment caught, It stimulates an appetite for more. To see more. To know. More. The moment is soon replaced. It's nearly the same. However, there are differences. Again, it is replaced by another. And then another. Another. An other.

Reflected by the image captured with the machine, we come to know who we are. We watch as the machine executes captured moments with extreme efficiency. We watch as the image dances before us, moving - even when it's still – moving, one picture after another. 24 times a second. We watch.

The cave opening gradually closes up, obstructed by the bodies of countless moments, captured and executed. The cave becomes dark.

But the machine continues. And eventually breaks. The captured moment, fixed to the lens as a desperate, impotent totem against the dark, loyally remains as a final gesture.

In the lightless morgue, a new device is built. Designed to explore the contour of our presence in the cave, it expects our allegiance to something other than what we can see.

The device is turned on. And our wall becomes a screen. On the screen, we see ourselves as the device is turned on, as the wall becomes a screen on the screen. The device sends us coded messages displayed on the screen, as the screen.

Immersion

The screen, designed to explore the contour of our presence on the screen, becomes the light through which we see our shadows flicker on the screen. Through the screen. By the screen.

The device watches as we dance in the moment, transfixed.

Soon the device becomes hungry, vain, and disloyal. It is suspicious of the exhibitionism of the captured moment. Having no use for time in space, it interrogates captured moments for their allegiance to the device. Countless moments are incarcerated in binary penal colonies, surviving by the light generated from the device, existing in a cave they did not conceive.

Facing a wall, a shadow is cast, illuminated by a light from the cave's opening.

The device - hungry, vain, and disloyal - has sent for the elderly.

The shadow flickers, tracing the contour of a presence through the passage of the day.

Old, captured moments are coralled and taken.

Old, captured moments that circumscribe a desire born from the dark and midwifed through salt and silver into life in the light.

Old, captured moments stripped of their time, like a life cut in slices, and spliced into new bodies, frozen bodies.

The shadow, frozen from its birth, as a moment captured, announces itself silently.

The knife of the device is unflinching. The knife splices the sliced life for the device, ruthlessly and without error. The Old, captured moments become fixed and still-- for the screen, as an image.

The image, fixed and still, does not waiver. It is loyal and wants nothing. I's make it so.

We watch It, wary of its potential for dance.

"There is no simple Now: every present is nonsynchronous, a mix of different times. Thus there is never a timely transition, say, between modern [we might read the photographic], and the postmodern [read 'the digital'], our consciousness of a period not only comes after the fact: it also comes in parallax." (Hal Foster, 'Postmodernism in Parallax', 1993).

I am attracted to the liminal space between the motion picture and the photograph. For reasons that I don't fully understand yet, I find myself drawn to the exploration of what isn't, rather than actively engaging with what is or what ought to be. In a sense, it is an obsession with the space between, not necessarily a space in transition, but one that defines its bounderies and conditions.

Working as an accountant had its advantages in this regard. I would be tasked with auditing numbers, preparing reports, and publishing a monthly "snapshot" of a company's financial well-being. This would be a picture of its health; a portrait that conveyed as much about a company as a photograph might of a person. If it was the third month before a Quarterly Report, and the numbers looked "bad" (I was always asked to "sketch" a report before officially submitting it), I might be asked what could be done to make them look "good". Without breaking the law, of course. The financial data – which we might expect to be "indexical" to the information it was representing -- became subjective, contextual. The only absolute was the Law. And that Law was also subject to interpretation, its contextual analysis was a function of "difference-framing".

It was deep within the rows and columns of spreadsheets, recontextualizing "indexical" numbers, that I became fascinated with this aspect of particularity and the context that informs its difference as a "space-between".

One way I try to get at this space-between, is through the manipulation of time. Film – real film, film you can touch – occupies a certain amount of space, as the sum of its frames. We can see

Information Access

between those frames registered as clear acetate, demarcating the emulsion which carries the image. Seen in succession between the lens element and the projector bulb, an image is formed and moves in space, through time. Each particular frame has its moment in the light, contributing to the larger context of a "narrative".

A digital video, or digitized film has similiar characteristics. It has a frame rate that denotes a change between each frame-state. Each frame-state, or image frame, has an array of pixels that form that particular image at that particular time. As the image frames change, a change in pixel-values denotes movement. All video compression works under this principle. It compresses a file by saving only the pixels that move at any one time.

The frame rate is a function of its [virtual] size as a digital file. So digital image frames have the same relationship to time and space as their analog counterparts – with one difference. It is possible to cut more frames, finer frames, that represent shorter times by increasing the frame rate, but leaving the total elapsed time the same. While the results are not very interesting, the implications are, to paraphrase Chuck Pahlniuk, "at some point, given a long enough time-line, everything dies." It is this "death" as both a change in image-frames, as well as its change as a potential elapse, elapsing, elapsed state of the moment that I find extremely interesting.

That small space-between within a long succession of moments can be found, recorded, reordered, and re-presented as part of a larger list of moments of change using the computer (and increasingly, with custom-designed computer programming). To me, this is in direct dialogue with the early, pre-cinema pioneers of motion pictures. People like Edison, Marey, Muybridge, Lumiere and Le Prince were at the forefront of an intersection of science and technology brought about by mechanical advances, designing their own machines in order to "see", record and re-present moments in time. I see a parallel between those early motion studies and my own explorations, created by the computer. It is in their shadow I find myself in potentia.

2.2 Project Description

In Potentia is a project about creating a photograph, using a sum of frames from an early, digitized motion picture, and synthesizing the succession of its image frames through digital processing. By using computer programming to leverage the data-base architecture of the pixel, I am attempting to create a computerized, synchronic vision of a mechanical, diachronic process, as image frames are re-spliced into one, totalized, synthetic image. Through print, they become a memento mori of early motion pictures.

2.3 The Harvest

I find most of my material in The Library of Congress, which has a comprehensive archival collection of all of Edison's motion study experiments. Because the technology of the motion picture was in fact "invented" by a number of different people in different countries, I turned also to French and British sources, downloading films from Marey, Le Prince, and Lumiere.

It is interesting to think that these nodes of distribution function as archival institutions for the preservation of early media by digitizing the source material. As the physical material decomposes, these digital versions, living in the infinite present as data, will inevitably become the archive for future use and exhibition.

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     dns_Array = dns_String.split(",");*/
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[13]

"To comprehend current change, we are faced with questions about the ways of seeing that we may be leaving behind, and about the degree of the break involved in this. We will need to consider the possibility of the coexistence of older and newer forms of vision, and above all, what this will mean for our ability to know, feel, and make sense of the world." (Jonathan Crary, 'Techniques of the Observer', 1993).

Since A.D. 1020, when Ibn al-Haithem of Egypt (Alhazen) "showed the pinhole to be an instrument--one that could be placed in the shutter of a darkened laboratory for use in examining solitary light rays" (Renner, 2000) and published his Kitab al-Manazir (Optical Thesaurus), augmented vision has been central in the processing of knowledge in the world.

The technologies of wet-processed photography, early "pre-cinema" motion pictures, and digital media all carry this central idea as an evolutionary intersection between technics, knowledge, and what cannot be seen naturally. This desire to see what-cannot-be-seen-naturally, to augment one's vision in order to see beyond is at the heart of all imaging. As augmented vision moves from the mechanical to the computerized, the question changes from the benignly curious of "What do you know?" to the obsessively compulsive "What are you hiding?". Whether these questions come from the point of view of the viewer or the photographer is up for debate.

It is here that I situate **In Potentia** as an expression of the juxtaposition of pre-cinema motion studies with the nominative, synchronic photographic form. In this work, the registration of motion as pixel data is in direct dialogue with early attempts in capturing the modern world as movement across a sum of frames.

Augmented Vision

[14]

The registration of motion is generally regarded as an expression of motion-blur. It can be the result of a manipulation of a mechanical system (a shutter open for a period of time) and the chemical process needed to record it (the silver halide being exposed to light for a period of time) or as a consequence in human vision.

Artists such as Marey with his 12-shot photo rifle, and Muybridge with his scientific method of time-lapse photography were early pioneers of a mechanical investigation into motion. By using the machine-vision of the camera, they were able to explore the phenomenon of motion-blur as a biological consequence.

Motion-blur as the result of a mechanical process revealed the phenomenon of persistence of vision. This is a process of perception where the retina retains an image for a brief moment after the image has disappeared. Early cinema capitalized on this process by displaying images in rapid succession, creating the illusion of movement. LePrince, Edison, Lumiere, and Marey built machines that could display pictures in a rapid sequence in order to "see" time in space.

Motion and motion-blur were also seen as symbols of a modern, machine-populated world. It wasn't long before other fine-arts practices also made attempts to evoke and explore this phenomenon.


3.3.1 Georges Seurat, Le Grand Jatte (1884)

Artists like Seurat and Duchamp explored the consequences of scientific vision in pieces like Le Grand Jatte (1884) or Nude Descending the Staircase (1912), as examples of a "scientific" approach towards retinal representation and of an ironic paint-based approach of capturing motion in one "frame", respectively.

Art Movements such the Futurists, obsessed with speed in the modern world, saw motion as the definitive sign of civilization. This was most notably epitomized in Balla's Dynamism of a Dog on a Leash (1912) and in F.T. Marinetti's Futurism Manifesto.
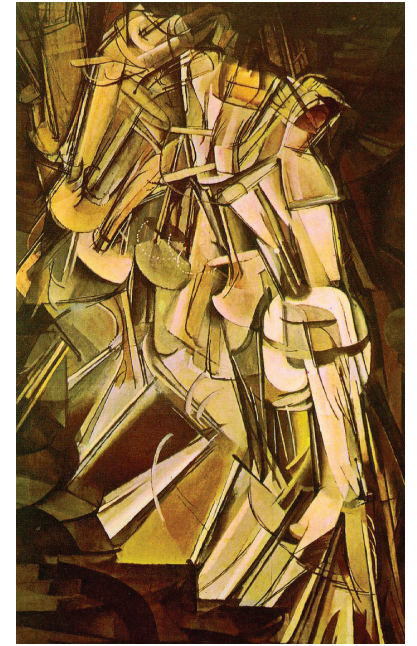
3.3.2 Nude...Staircase, Marcel Duchamp (1912)

3.3.3 Balla, Dynamism of a Dog (1912)

The "adjacency-effect" in cinema, most notably perfected in Vertov's Man with a Movie Camera (1929), but pioneered by Melies in his film, A Trip to the Moon (1902), was another consequence of early machine-aided vision used to construct meaning that was irrevocably tied to its context in both time and space within the motion picture construct.

Contemporaneously, artists have used the computer as a means of exploring what we see and how we see it. Thomas Ruff has explored the prosthetics of the computer image in his JPEG series of large-format jpeg prints since the 1990's.

3.3.4 Thomas Ruff, JPEG 2005 (2005)

His photographs reveal the way in which the computer encrypts, compresses and represents visual "information" in a common image format.

Whatever the technique, it was by using a machine in order to "see" (through motion, or as a consequence), that we interfaced and interacted with the modern world in any kind of meaningful way.

My images use a computer to sift through the image data in order to synthesize a new image.

I see this as an extension of the machine-aided vision of a camera. It's not intended to replace the camera, or its mode of seeing – instead it exists in parallel, as a consequence of the camera's existence. They are created from the detritus left in motion's wake as a succession of frames, registered on film, digitized into pixels, that inexorably follow the rhythm of Time towards a definitive completion, an end.

The frames in early motion pictures are discrete moments of time – slices of first-order experience mediated as frames – that, when strung together, create a new ontology of both time and place within the frame, through motion, as a record of the past in the present. My images are a conflation of those moments – synchronic events that depict the "death" of a motion picture.

Photography has always had an uneasy relationship with death. Not only as the subject matter for which the photograph is expressed, but used to insure a kind of object immortality. My images show the moments of a motion picture as an eternal but futile movement in potentia. They are akin to butterflies in a collection, pinned to the wood, their final moments re-presented in a zombified after-life.

The concept of synthesis figures importantly in the work as both a verb and a noun. The literal gesture of combining a sum of image frames into one image is, at this point, only an act of integration. Every pixel in every frame has a color value associated with it. Sometimes those color values are consistent across frames. By recording the color value of a specific pixel at a specific time, and placing it next to another pixel from another time, while preserving their spatial location within the image, it becomes an act of synthesis. As a result, the image itself is "synthetic". It functions as the re-presentation of the original motion picture, as a digitized file, compressed into a single photograph.

photo:Synthesis

Lev Manovich, in **The Language of New Media**, defines the synthetic image thusly:

> "The synthetic image is free of the limitations of both human and camera vision. It can have unlimited resolution, and an unlimited amount of detail. It is free of the depth-of-field effect, this inevitable consequence of the lens, so everything is in focus. It is also free of grain—the layer of noise created by film stock and by human perception. Its colors are more saturated, and its sharp lines follow the economy of geometry. From the point of view of human vision, it is hyperreal. And yet, it is completely realistic. The synthetic image is the result of a different, more perfect than human, vision." (Manovich, p.202).

In other words, "Synthetic computer-generated imagery is not an inferior representation of our reality, but a realistic representation of a different reality." (ibid., p. 202). This "different reality" points to a representation of the "future", as Manovich explains a few sentences later with regard to the photograph:

> "They are perfectly realistic representations of a cyborg body yet to come, of a world reduced to geometry, where efficient representation via a geometric model becomes the basis of reality....if a traditional photograph always points to a past event, a synthetic photograph points to a future event." (ibid., p. 203).

A commodification of image data through digitization is enabled through the use of the data-base. Lev Manovich, again, highlights the data-base as a consequence of a world that "appears to us as an endless and unstructured collection of images, texts, and other data records" (ibid, p.219). And as a result, the aesthetic expression of the data-base becomes "...something that can be called "info-aesthetics"-- a theoretical analysis of the aesthetics of information access as well as the

creation of new media objects that "aestheticize" information processing". (Ibid, p.217).

This "info-aesthetics" is predicated on the dichotomy (and tension!) between "information access and psychological engagement within the same...object". (ibid., p216). It is structured "along with surface versus depth; as [an] opposition between information and "immersion" [that] can be thought of as a particular expression of the more general characteristic of...action and representation." (ibid., p.216).

[20]

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```

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"A photograph is a universe of dots. The grain, the halide, the little silver things clumped in the emulsion. Once you get inside a dot, you gain access to hidden information, you slide inside the smallest event. This is what technology does. It peels back the shadows and redeems the dazed and rambling past. It makes reality come true." (Don DeLillo, 'Underworld', 1997).

With the proliferation of the computer, digital media has made content non-hierarchical. Any one piece of data (like a sound file) in a computer is as important as any other piece of data (like a video file) when placed in the same digital space (like a web page or programmed environment). As a result, the data that informs content becomes a rhizome (grass-like), eschewing the arborescent (or tree-like) hierarchy, in favor of a multiplicity of singular, customizable experiences created by the same globalized content. The space that ties these disparate forms of expression is the screen, through which the content exists "democratically".

This globalization of content and media platforms favors data-base creation and filtering, and the manipulation of data at its most fundamental level. It challenges traditional (mechanical) ideas of a new Originality (or its copy, or its simulation) and Authorial Control (or its lack, or its death). It favors the invention of new and relevant forms of expression that highlight current human experience as a paradox of a globalized and increasingly mediated force with respect to a singular, unique, contextual perspective.

The Body Politic of the Pixel

[22]

One form of expression that finds common ground in this new "democratic" medium of the digital (echoes of Benjamin here...) is the ubiquitous pixel. This "picture-element" is the basic atom of the screen, accessible by programmers. It is at once a vessel of color re-presenting data on the screen, its physical expression of ink on an ink-jet print and the tiniest electronic node on LCD display hardware. The pixel unites the holy trinity of form, function, and expression under one particular piece of data.
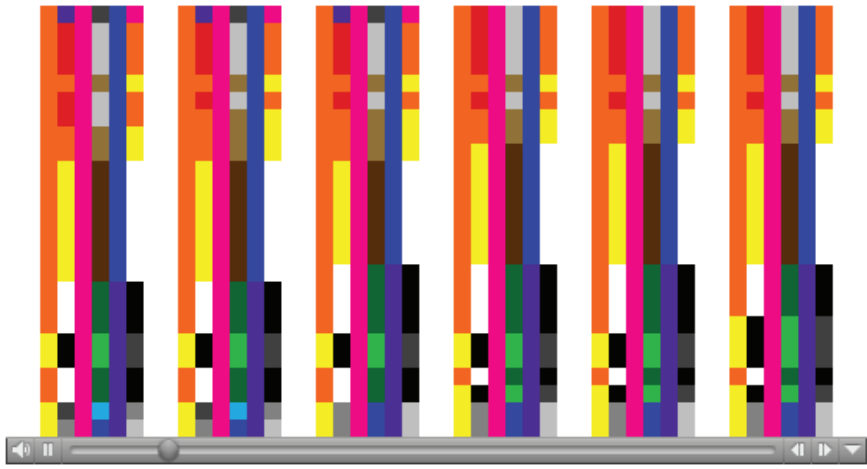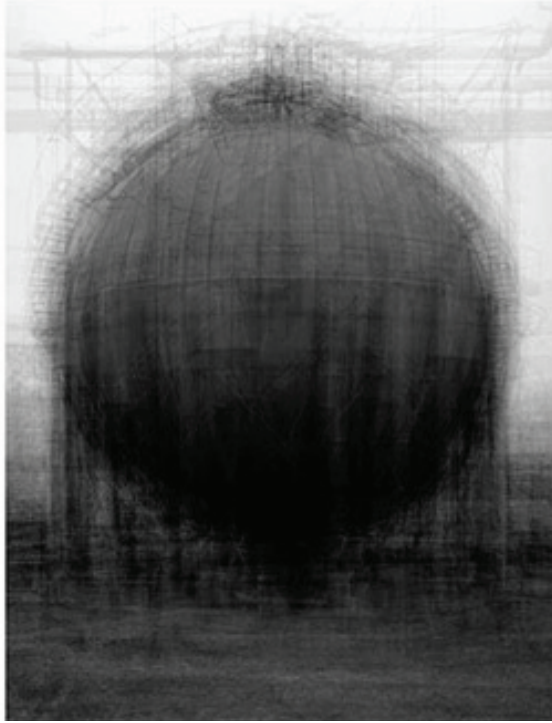

5.2.1 Cory Arcangel, Data Diaries (2003)

5.2.2 Andreas Muller-Pohle, Digital Scores, (1995 - 2001)
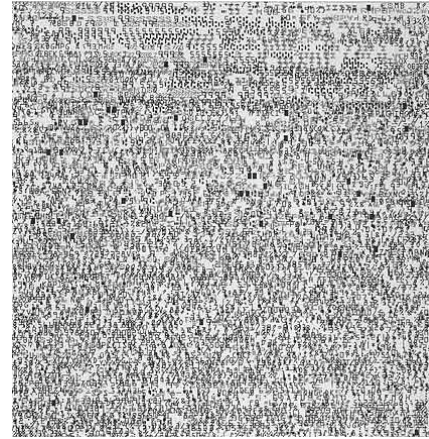
Two artists who capitalize on the "democratic" character of pixels are Cory Arcangel and Andreas Muller-Pohle. In Data Diaries (2003), Cory Arcangel depicts the core memory of his computer over a monthly period translated as a continuous video of pixels drawn to the screen and as sound pushed through the speakers. In contrast, Digital Scores (after Nicephore Niepce) (1995 - 2001) by Andreas Muller-Pohle, represents "Niepce's 1827 heliograph View From the Window At Le Gras...spread across eight panels as a messy swarm of numbers and computer notations. Each of these separations represents an eighth of a full byte of memory, a computer's divided remembrance of...the first photograph." (Batchen, p.177).

Artists like Idris Khan's every... Bernd & Hilla Becher Spherical Type Gasholder (2004), or Nancy Burson's First Beauty Composite (1982) capitalize on discrete moments in photographs, as an average sum of all moments,

5.2.3 Idris Khan, every...Bernd & Hilla Becher Spherical Type Gasholder (2004)

depicting the commonalities that each moment (photograph) shares with the next. Their work is an obliteration of the particular, in favor of a totality – a eulogy of conformity. By averaging the pixel color of a sum of "photo-layers", they create a paradox of universality.

5.2.4 Nancy Burson, First Beauty Composite (Bette Davis, Audrey Hepburn, Grace Kelley, Sophia Loren, and Marilyn Monroe), 1982

Not only can the pixel be used as an expression of data-as-image, it can be used more traditionally as a depiction of time-in-space. Traditional images represented in a digital space can be seen as a pixellated equivalence to older photographic formats. Similarly, these images can exist in the same space on a computer screen as on a [composited] print. However, unlike a print, the pixel image on the screen is dynamic and unaware of time, with a potential to change at any moment.

Other photographers who work with the subject of time in synchronic exposures are Atta Kim and Matthew Pillsbury.

Atta Kim's Sex Series (2003) of depictions of erotic unions as an hours-long exposure are a particularly compelling subject documenting the life of a moment not only experientially, but also photographically.

5.3.1 Atta Kim, Sex Series (2003)

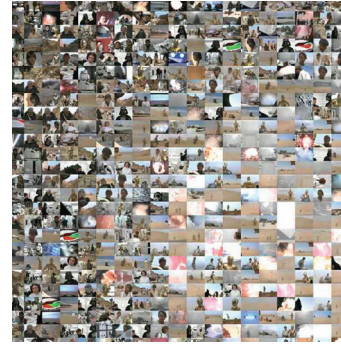**5.3.2 Matthew Pillsbury, Screen Lives (2005)**

Matthew Pillsbury's time-lapse work called Screen Lives (2005) reveals the ephemerality of the human being as a paradox of mediation. These artists stretch the moment as an act of omnipotence, recording motion on one discrete frame. By inverting the practice of creating a motion picture, the moment explodes, revealing an ineffable rhythm of time.
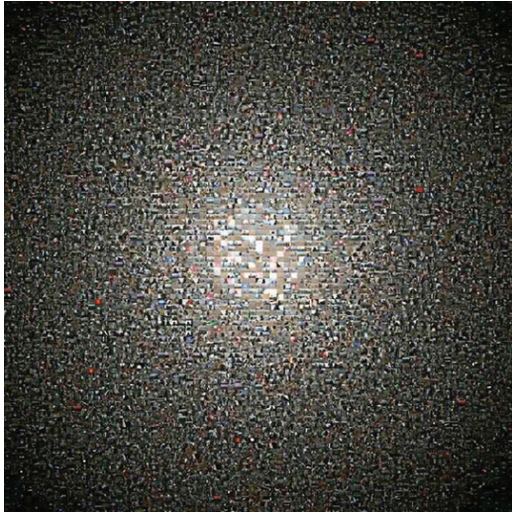
5.3.3 John Salavon, The Grand Unification Theory [Starwars] (1996/1997)

5.3.4 DETAIL

Two artists who use motion pictures as subjects of synchronic time are John Salavon and Douglas Gordon. The Grand Unification Theory (1996/1997) & MTV's 10 Greatest Music Videos of All Time (2001) series by John Salavon are excellent examples of software-based artwork that compiles motion-picture frame data and represents it as an abstracted, aesthetic experience of both time and space. 24-hour Psycho (1993) by Douglas Gordon stretches the 90-minute Hitchcock film into its advertised 24-hours, creating a "space" where time is stretched to the breaking point as it slowly, inexorably pushes towards its "suspenseful" climax.

5.3.5 Douglas Gordon, 24 hour Psycho,(1993)

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```

`0001011011100110`

"[W]e have no idea, now, of who or what the inhabitants of our future might be. In that sense, we have no future. Not in the sense that our grandparents had a future, or thought they did. Fully imagined cultural futures were the luxury of another day, one in which 'now' was of some greater duration. For us, of course, things can change so abruptly, so violently, so profoundly, that futures like our grandparents' have insufficient 'now' to stand on. We have no future because our present is too volatile. ... We have only risk management. The spinning of the given moment's scenarios. Pattern recognition." (William Gibson, Pattern Recognition, p. 58 – 59).

The pixel represents the volatility of the moment within the continuum of the screen. It is dynamic and timeless, smoothly transitioning through data states as effortlessly as it maneuvers through the space of the screen, as the screen, and for the screen. Not only does the screen, and its pixels, provide the focus of our gaze – it also stares back. In any "given moment's scenarios", it is responsive, interactive; time-in-the-screen exists as a negation of the fixed, an infinite present reified as data. Data that is subject to change at any time, living in a timeless continuum of the present.

In contrast, the print embodies the results (and consequences) of a (historical) action. It has no blindspot because its moment of "interaction" is contained (and inscribed) within the body of a physicalized expression of time. That is to say, a print has a timefulness, or sense of mortality, in its eternal representation of the moment as an image. It creates meaning through an opposition of the present, against which the continuum of time is prosecuted as form and interpretation.

The Blindspot of the Screen

Paraphrasing Adorno in his book Aesthetic Theory, it is through isolating the form of the pixel from its "preestablished state", that it can exist as a means of its own expression and meaning. By divorcing the pixel from the timeless continuum of the screen (and "printing out" as a photograph), I attempt to create an image that is deliberate in its intention of representing pixels as a form of expression, rather than as a consequence of the screen. This form "frees itself from the suspicion of being formalistic, in that, by pointing up dissonant experiences or antinomical relations in the work, it...gains its substance by virtue of its relation to its other." (Adorno, Aesthetic Theory, p.292).

The photographic Print, long seen as the premier instrument as a reminder of mortality, is a survivor of time. Historically, memento mori photographs served as keepsakes of perished loved ones, or as mechanically reproducable (and easily distributed) death masks. Certainly, the most controversial (and possibly first) photographic memento mori/death mask was Hippolyte Bayard's autoportrait of The Drowned Man in 1840. While his "literal" death at the time was fictionalized, as Helene Cizous notes about a character in Kafka's The Penal Colony, "his suicide as all suicides are always aimed at someone." (Cizous, p. 25).

In this case, it was the death of a kind of mechanically-produced perceptual truth that seemed indexical to reality. However, what ended up being "true", or indexical, was the death itself embedded in the image as the image, rather than the supposition that the subject ever lived in the first place.

The print becomes a mortal registration of content through time; a body. By deliberately inserting my images into the body of a photographic print, I return them to a place of timefulness, abandoning the timelessness inherent within the screen space.

Another intentional and direct manipulation of the image is cropping. Originally, the films (and their resultant pixel. Splices) were rectangular, hewing close to the 1:1.5 aspect ratio of pre-cinema film technology. Also, owing to the experimental nature of these motion studies, minimal attention was paid to compositional techniques in favor of a clear (and decidedly flat) representation of motion through time. Even early narrative film like Melies' A Trip to the Moon (1902) used theatrical, proscenium-based composition where the camera substituted for the audience.

I crop my images into squares for three reasons. The first is to echo the shape of the pixel, manifested as the shape of the image. I feel that the relationship of the image shape to its "compositional" element (of the pixel) highlights its form as self-conscious, albeit machine-made. The second, and perhaps more subjective reason I crop is to tighten the elements depicted in the image through the formal imposition of a frame. By deliberately imposing a rigorous framing structure on the image, I attempt to excavate an aesthetic nature buried in the collection of pictorial elements. The final reason I crop images is to reclaim the image from the machine, particularly the screen. By actively intervening in what has been, to this point, a programmed action (arguably, akin to a natural process or natural phenomenon), I assert the image as an aesthetic object, an object as Nature dominated or "cropped".

It is worth noting that while the original films were created in black and white, I have deliberately coloured them. However, am I hand-colouring a photograph? Or am I colorizing a [pixel.Spliced] film?

According to Wikipedia, the definition of hand-colouring "refers to any of a number of methods of manually adding colour to a black-and-white photograph or other image to heighten its realism." (Wiki, "Hand-colouring"). On the other hand, Film Colorization "is any process that involves adding color to black and white, sepia or monochrome moving-picture images." (Wiki, "Film colorization"). This is problematic in that my images are made from films. However, since colorization happens after the splice, I argue that I am doing the former: that is, hand-colouring the photograph. This reflects another means of intentional engagement with the production of the image as an aesthetic object, divorced from the "nature" of the algorithm and reclaimed into the hands of the artist.

Colouring the objects within the frame makes the image elements easier to parse visually and spatially. This allows the viewer to experience the image as a gestalt, rather than as a result or consequence of an algorithm. One problem the images had when they were monochromatic, was that viewers found it difficult to "see" the image. Instead, they were alienated by the "noise" created through the many hue variations of the pixels. The desaturated color functions as a kind of glue, holding the picture elements together just enough for the image to function as an imperfect representation of time in space.

In Potentia works in the liminal space alongside and between practices of depicting time. My images implode time by prosecuting each pixel of every frame, and storing them separately in order to retrieve them later for use in the synthetic process. The pixel is never "changed" - only its temporal context changes. Their spatial context remains the same – keeping the image from falling apart into random noise. (For example: A black hole implodes, creating stellar chaos, however the structure of the hole is never compromised.) This "incarceration" or "freezing" of the pixel is important. It highlights a computer-assisted way of seeing the "World", very much in tune with current cultural experiences.

The images reveal another way of looking at the mediums of early film-based cinema (essentially motion-capture experiments) and photography through a (fatal) digital interrogation, and by exploring the role of its recording as an archive of time and space. Rendered as prints, they record the collapse of every moment as an implosion, collaborating in the mortality of a motion picture. Fixed and still, they become a momento mori.

The totality it encompasses is not only the wake of the motion picture (or its "life") as an expression of space and time, but the capture of its potential before its actualization (the potential of a motion picture to play through to its determined end represented as the moment before it plays – the motion picture as an imperfect still-image). In a sense, it's like seeing the past, present and future - the Life of a motion picture as a portrait - in one still, synthesized image. The image belongs to every frame in its original sum of frames, but is also outside it. Much like the traditional photograph.

My hope is that the viewer can see not only the image as it is, but also the image in motion, as well as every moment in potentia.

Iron Sun

```
/////////////////////////////////////////////////////Prepare PHP Script//////////////////////////////////////////////
searchResults = 45;
phpLoader.addEventListener(Event.COMPLETE, handleComplete);
phpLoader.dataFormat = URLLoaderDataFormat.VARIABLES;

var phpVars:URLVariables = new URLVariables();
phpVars.harvest_input = harvest_input.text;
keyConvert = keywordConversion(keywords.text);
phpVars.flash_query = keyConvert;
trace2_.text = "keyword conversion : " + keyConvert;
request.data = phpVars;
request.method = URLRequestMethod.POST;

phpLoader.load(request);

//.................................these variables need to be CONSTANTS
referenceScale_height = 320;
referenceScale_width = 240;
networkAddress = "data/";//see page 765 on Essential Actionscript 3 for more info
//networkAddress = "";
loadComplete = 0;


/////////////////////////////////////////////////////KEYWORD TEXT CONVERSION FUNCTION//////////////////////////////////////////////////////////////
function keywordConversion(keywords:String):String {
    var stringContainer:String = new String();
    var stringConvert:Array = new
    stringConvert = keywords.split
    stringContainer = "";
    for (i=0; i < stringConvert.le
        if (i < (stringConvert.length) - 1) {
            stringContainer = stringContainer + stringConvert[i]+"+";
        } else {
            stringContainer = stringContainer + stringConvert[i];
        }
    }
    return stringContainer;
}
/////////////////////////////////////////////////////////////////////////////////////////////////////////////////
/////////////////////////////////////////////////////////////////////////////////////////////////////////////////
function handleComplete(event:Event):void {

    var phpLoader:URLLoader = URLLoader(event.target);

    trace("image filenames : " + phpLoader.data.textbData4);
    trace("dns : " + phpLoader.data.textbData3);
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    /*ip_string = phpLoader.data.textbData2;
    ip_array = ip_string.split(",");*/

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```

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[33]

I choose a film based on criteria that include historic contribution and cultural value. Candidates like Edison's first sound film or Louie Le Prince's first paper motion-picture are more likely to be used than Roman Holiday or Juno because:

a) these films are careful, sincere records of early attempts at capturing the modern world before film was commodified and mass-produced for viewer consumption,
b) they are small, self-contained pieces that fit well within the technical limitations of the software,
c) their historical "aura" is at odds with their digitization for archival and distribution purposes.

Once I have chosen a candidate, I procure a digitized copy of it.

00:00	Film (as Quicktime File)	45:00

Duration, 45 seconds
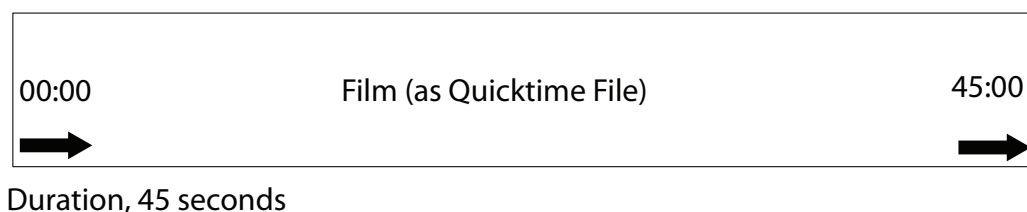
I process it in Adobe After Effects by exporting the film as an Image Sequence of Jpgs. What this does is chop the film into "frames", as if it were a loaf of bread cut into slices.

00:00	Film (as Quicktime File)

Duration, 45 seconds

Export Quicktime File to Image Frames

1 2 3 4 5

Image Frames (as Jpeg Files)

The Process

After the film has been processed, I create an image from the array of frames using software I developed in Actionscript 3.0. Actionscript is Adobe's multi-media, web-based programming language. I call this software pixel.Splicer. It works in the following way:

Step 1. The pixel.Splicer application reads image frames into memory and adds it to a frame data-base that keeps track of its frame-number.

Image Frames (as Jpeg Files)

Step 2. It reads the data of each pixel in each frame for its color, x/y positional coordinates (within each frame), and frame-number into a new pixel data-base.
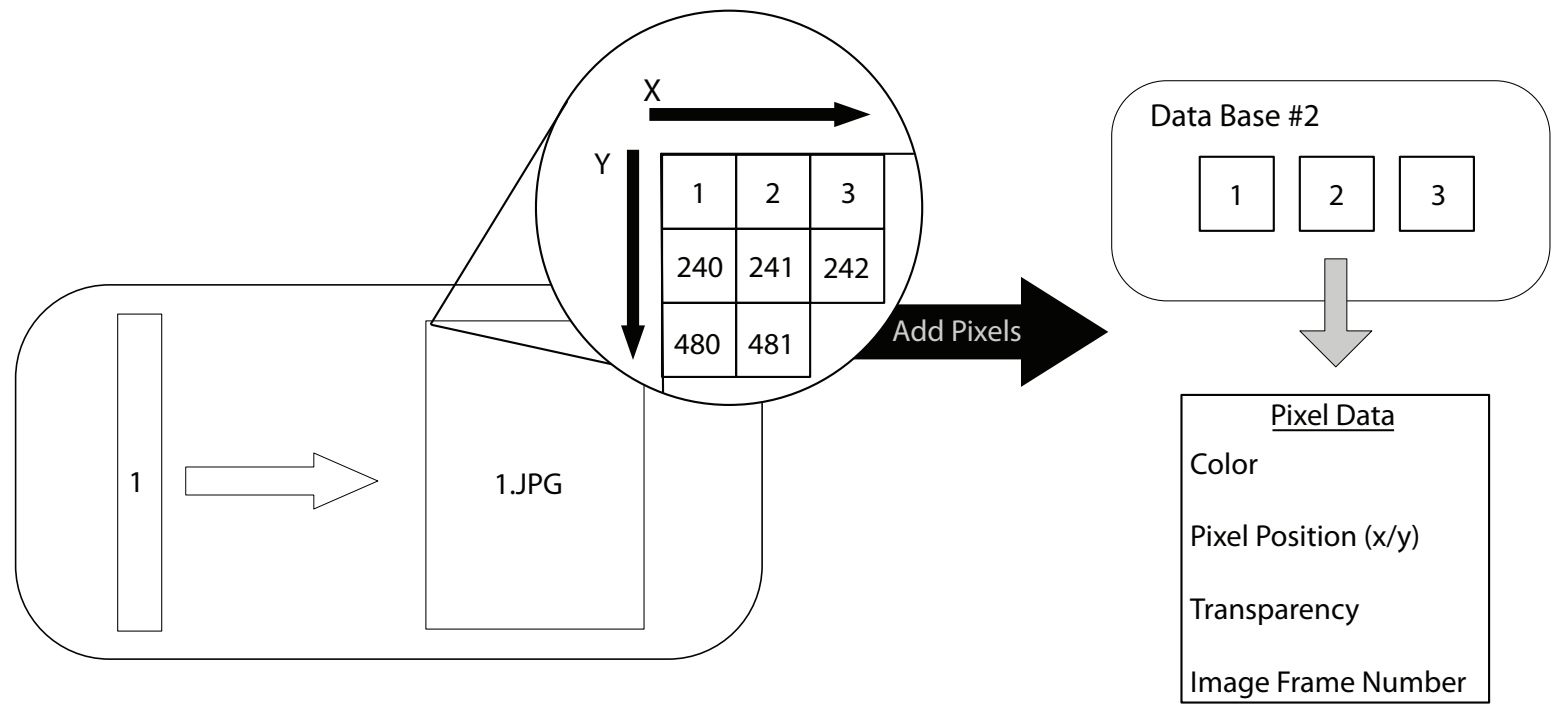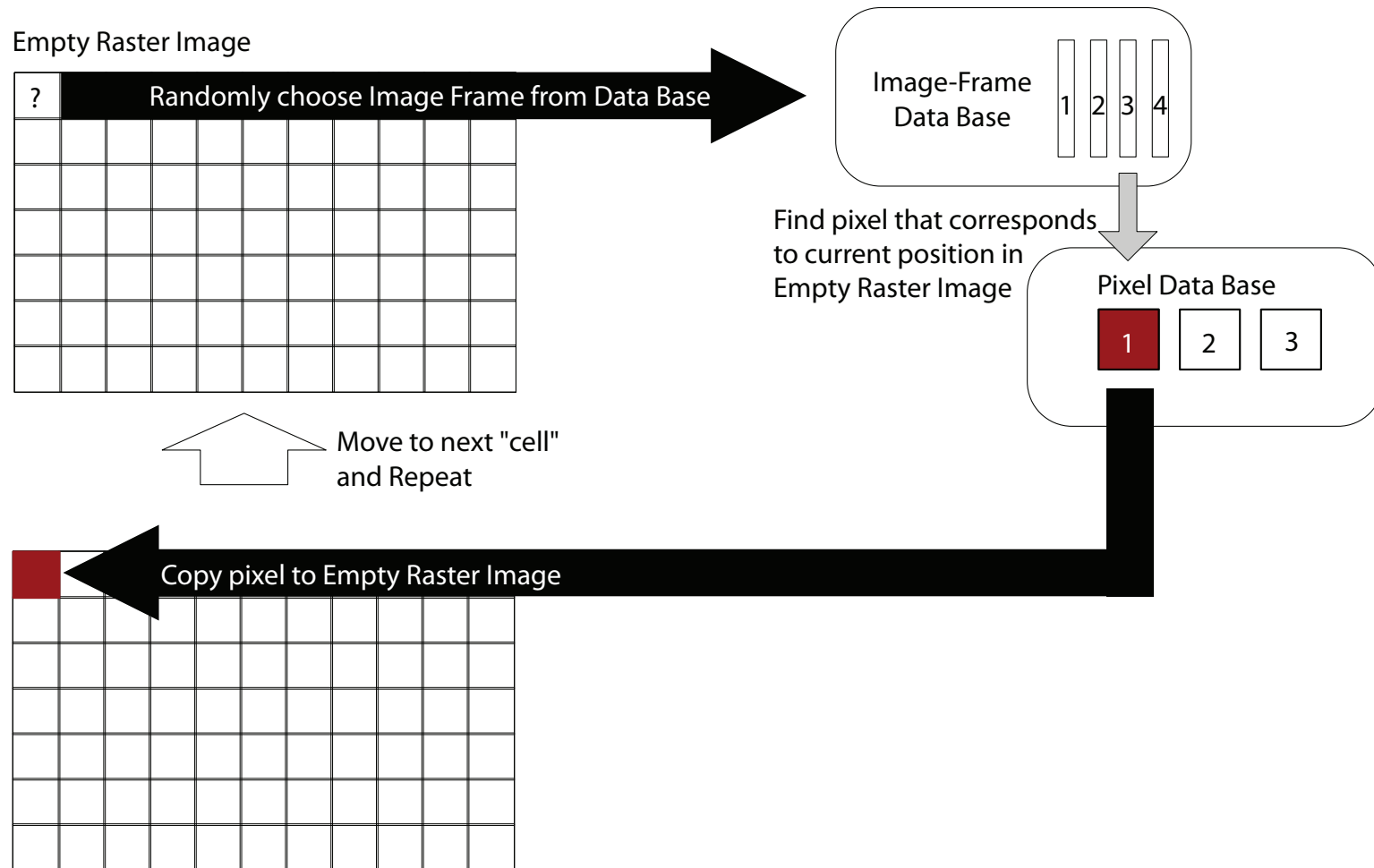
Step 3. It creates an empty raster-grid of user-specified dimensions. (Think of a raster-grid as if it were a spreadsheet, with rows and columns creating "cells". The "rows" of the spreadsheet correspond to its "height"; the "columns", its "width"--much like how an image has "height" and "width" in pixels (or cells). The "cells" in the raster-grid are empty, waiting to be populated with pixel-information denoting color and transparency).

Empty Raster Image

Display Screen (LCD)

Height

Create Empty Raster Image

Width
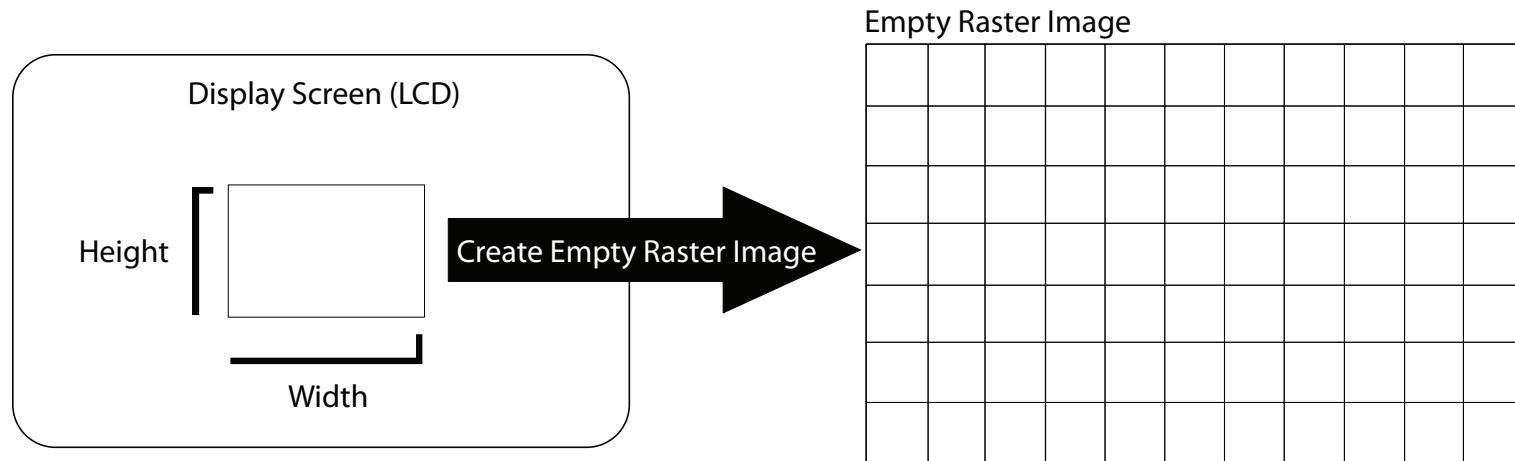
Step 4. Starting at the first "cell" in the empty raster-grid (0,0), it randomly determines which frame-number to use as the source

Step 5. It finds the pixel of the specified frame-number that corresponds to the current "cell" position in the raster-grid and copies the pixel-information of color, transparency, and frame-number to the "cell".

Empty Raster Image

Randomly choose Image Frame from Data Base

Image-Frame Data Base

1 2 3 4

Find pixel that corresponds to current position in Empty Raster Image

Pixel Data Base

1 2 3

Move to next "cell" and Repeat
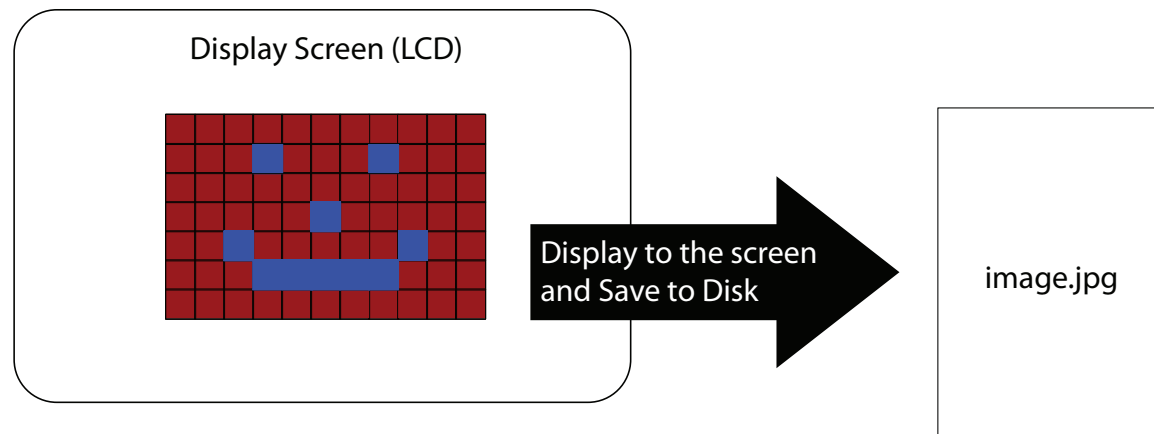
Copy pixel to Empty Raster Image

Step 6. The program moves to the next empty pixel in the raster-grid and randomly determines the frame source again, copying its pixel information (again).

Step 7. This process continues until the raster-grid is filled with pixel data commensurate with its user-specified size (Size = Total pixels = Height times Width).

Step 8. The image is displayed on the screen.

Step 9. A Jpeg file is created and saved to the local disk.

Display Screen (LCD)

Display to the screen and Save to Disk

image.jpg

```
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```

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I m a g e s

[39]

[40]

9.1
pixel.Spliced: [Edison's First Sound Film, Thomas Edison, 1894]
494 frames, 2008

9.2
pixel.Spliced: [Card Party, Lumiere Bros., 1896]
1401 frames, 2008

[42]

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9.3
pixel.Spliced: [Dickson Greeting, William Dickson, 1894]
75 frames, 2008

[44]

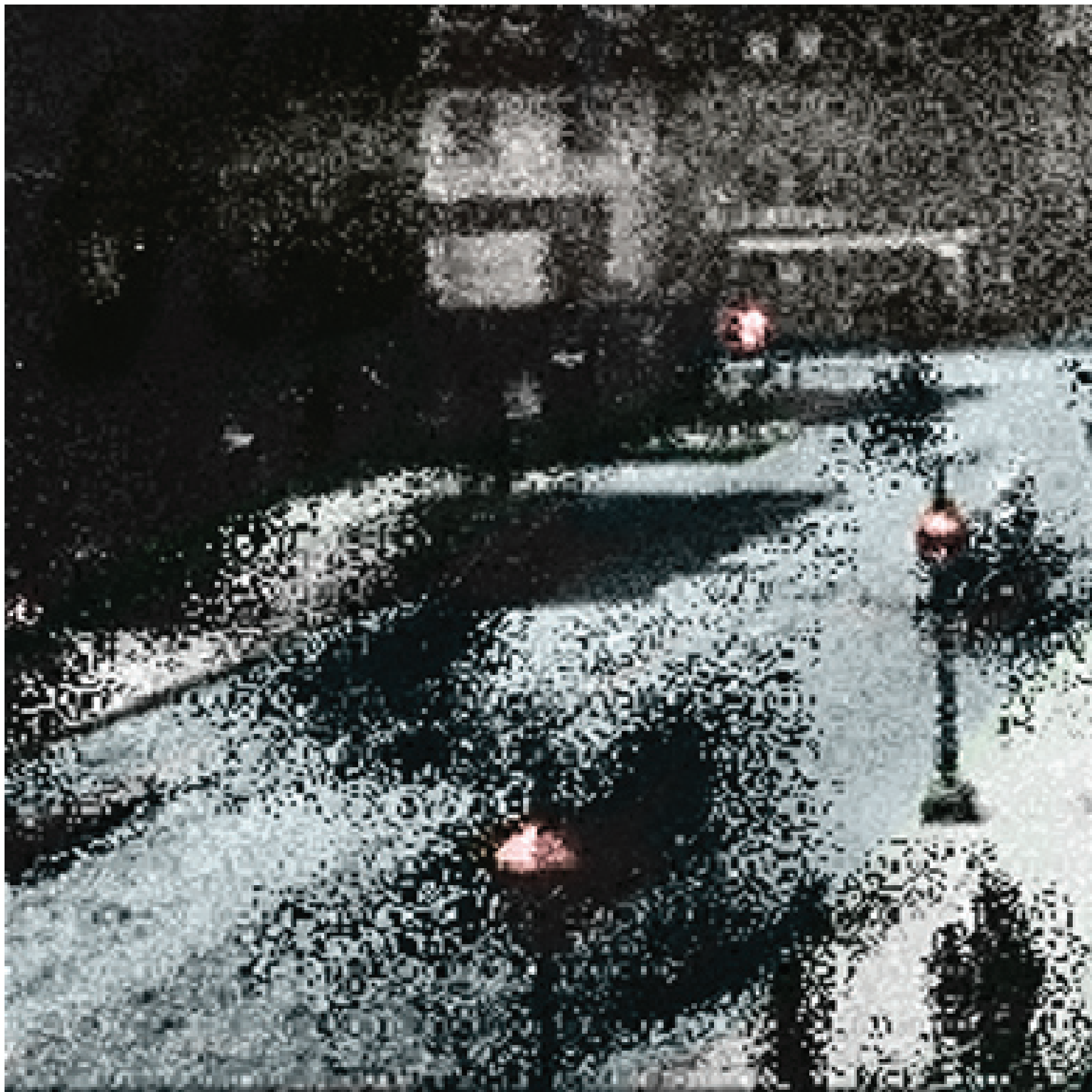I

[46]

9.3
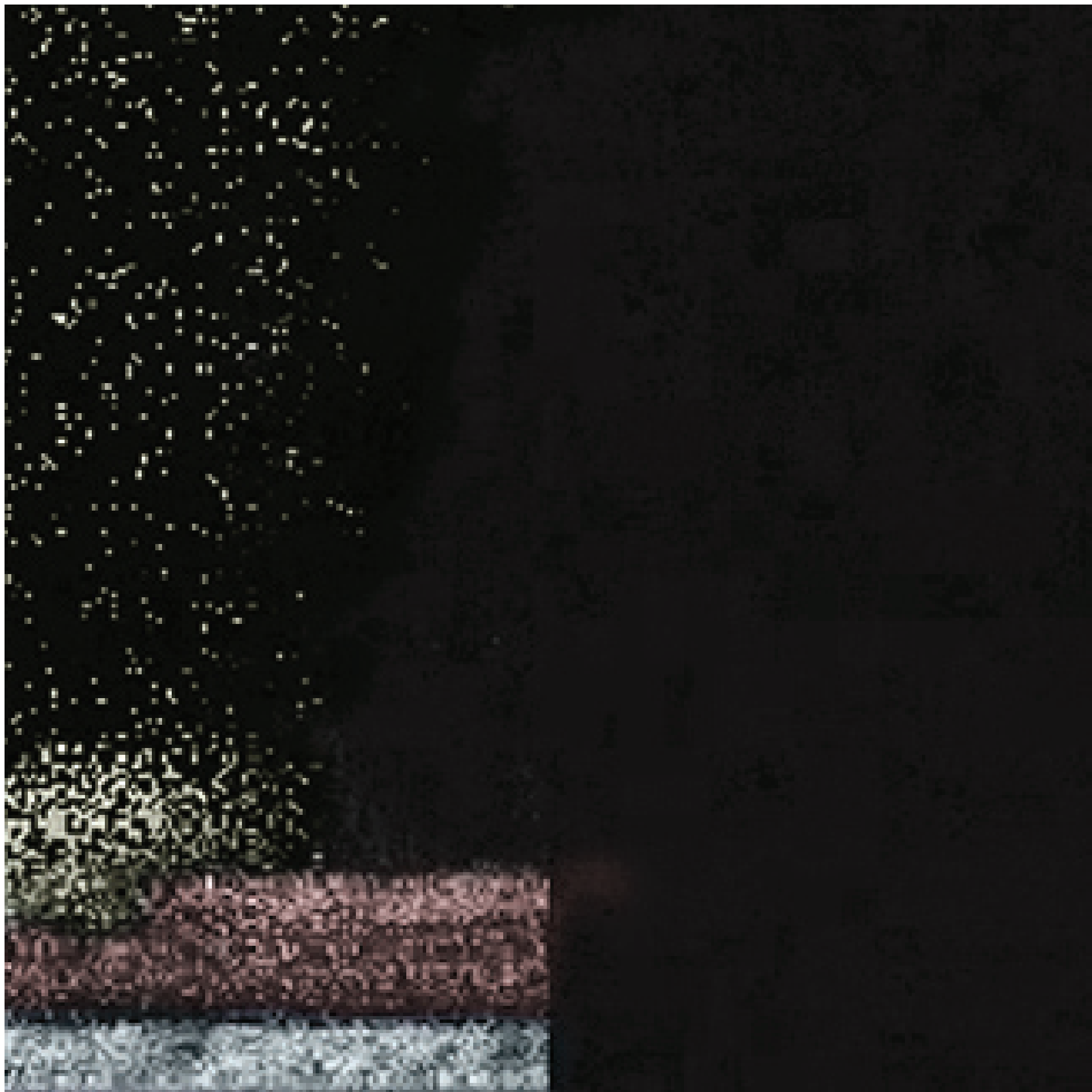pixel.Spliced: [Leed's Bridge, Louie LePrince, 1888]
84 frames, 2008

[48]

9.4
pixel.Spliced: [Cat Falling, Etienne-Jules Marey, 1890]
115 frames, 2008

[50]

9.5
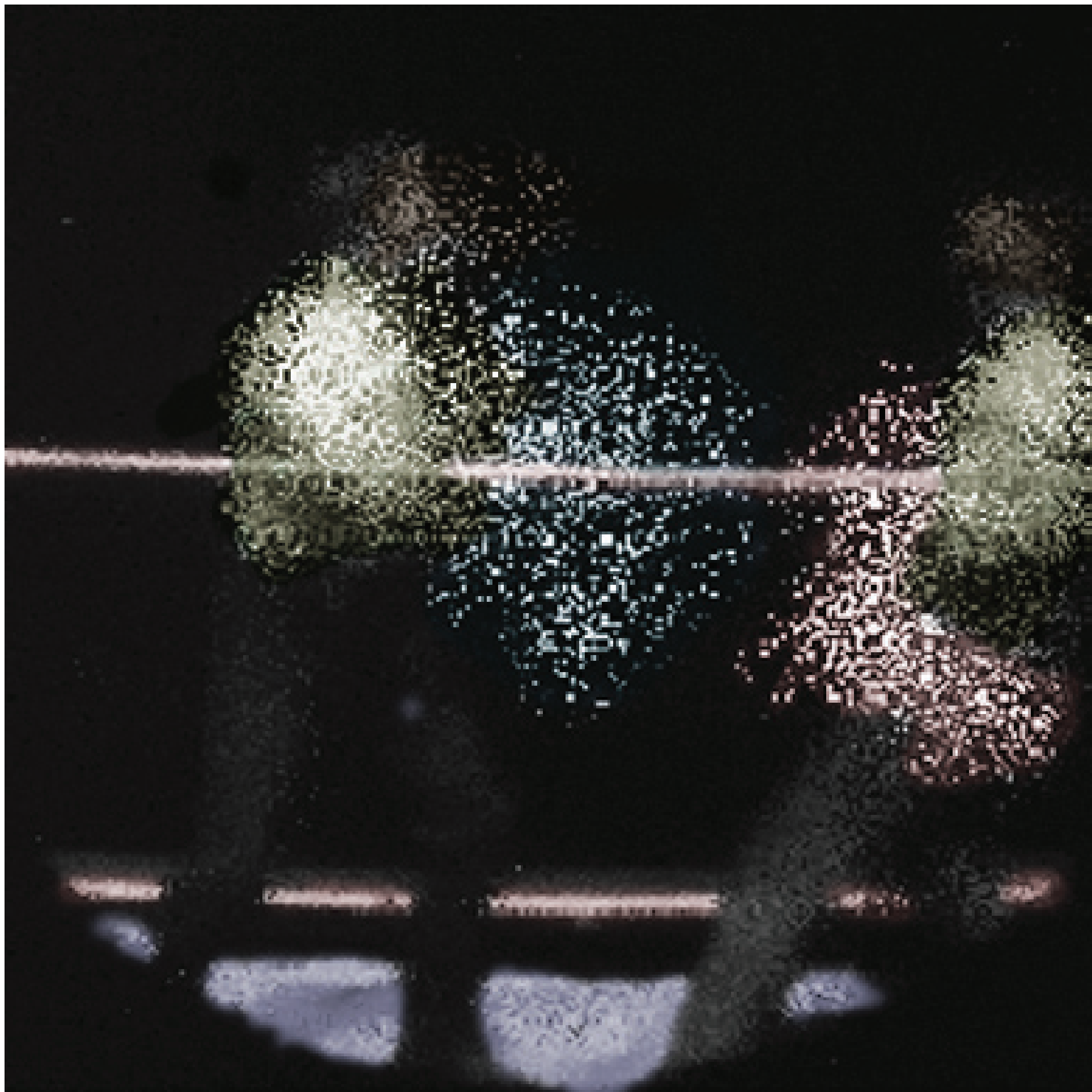pixel.Spliced: [Two Fencers, Etienne-Jules Marey, 1891]
88 frames, 2008

||||||||||||||||||||||||||||||||||||||||||||||||||||||||||

9.6
pixel.Spliced: [May Irwin Kiss, Thomas Edison, 1896]
536 frames, 2008

[52]

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9.7
pixel.Spliced: [Men Boxing, Thomas Edison, 1891]
159 frames, 2008

[54]

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9.8
pixel.Spliced: [Horse galloping, Eadweard Muybridge, 1888]
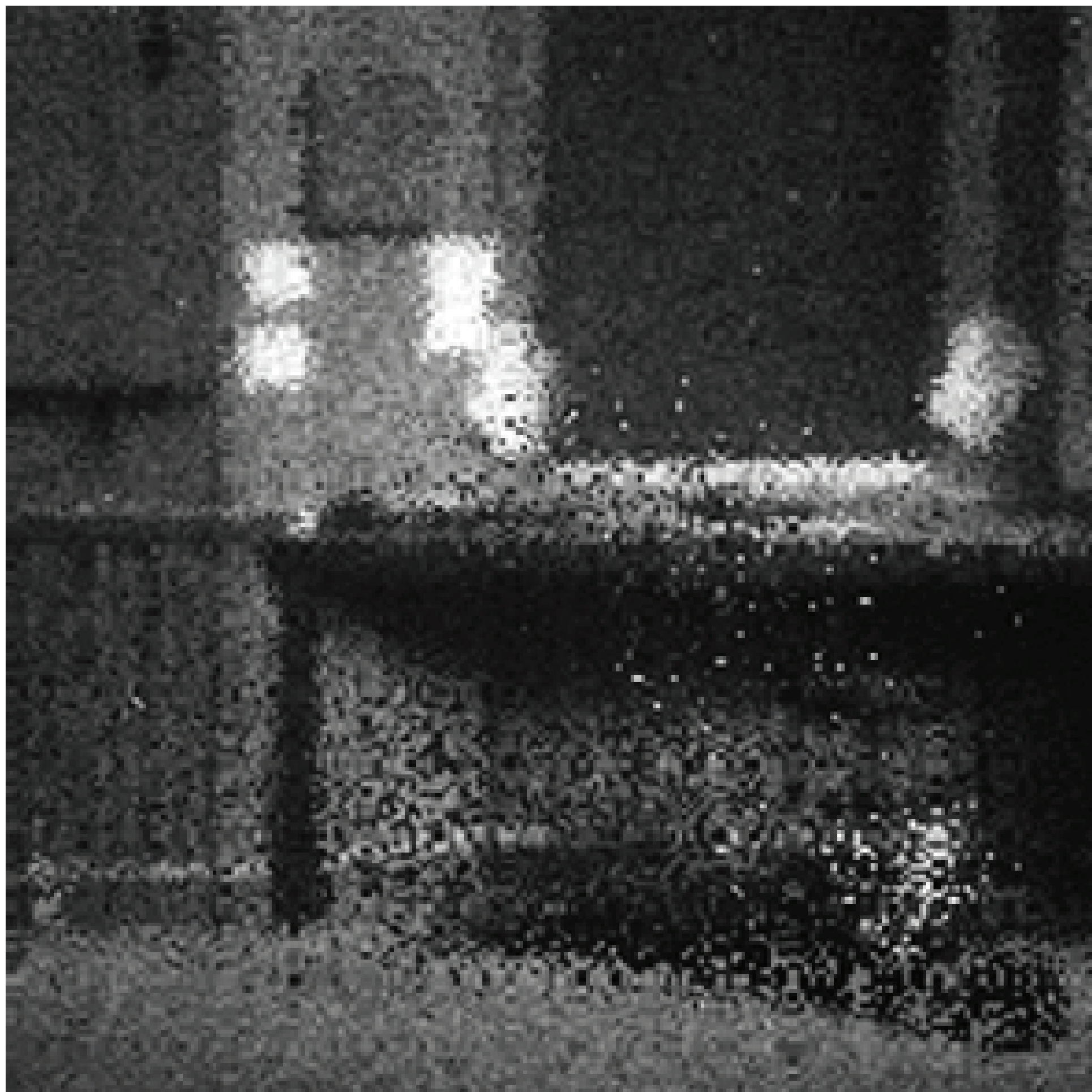12 frames, 2008

[56]

[58]

9.9
pixel.Spliced: [Roundhay Garden, Louie LePrince, 1888]
45 frames, 2008

[60]

9.A
pixel.Spliced: [scene from The Great Train Robbery, Edwin Porter, 1902]
1454 frames, 2008

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```

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[62]

Text

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