

Jon Fauer ASC

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Sept 2017

Issue 84

FILM AND DIGITAL TIMES

Art, Technique, and Technology in Motion Picture Production Worldwide



Sony's VENICE Full Frame Camera

Full Frame Lenses

Angénieux FF U35 S35 Optimo Ultra 12x

Panavision Primo Artiste

Yves Angelo, AFC, SBC

Raptor PL and XPL

SIGMA Cine FF

Leica Thalia

Scorpio AFF

Cooke S7/i

100 Years of ARRI History

100th Anniversary of Gitzo

RED Sensor Swap Program

Blackmagic URSA Mini Pro

Flowtech Quick Sticks

Panasonic AU-EVA1

Kino Flo Freestyle

Litepanels Gemini

Artist Profiles

AJA 12GM



FILM AND DIGITAL TIMES

Art, Technique and Technology

Film and Digital Times is the guide to technique and technology, tools and how-tos for Cinematographers, Photographers, Directors, Producers, Studio Executives, Camera Assistants, Camera Operators, Grips, Gaffers, Crews, Rental Houses, and Manufacturers.

It's written, edited, and published by JON: Fauer, ASC, an award-winning Cinematographer and Director. He is the author of 14 bestselling books—over 120,000 in print—famous for their user-friendly way of explaining things. With inside-the-industry “secrets-of-the-pros” information, *Film and Digital Times* is delivered to you by subscription or invitation, online or on paper. We don't take ads and are supported by readers and sponsors.

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Tulip mania was an economic bubble during the Dutch Golden Age. The 1637 crash was chronicled in a famous 1841 book *Extraordinary Popular Delusions and the Madness of Crowds*, written by Charles Mackay.

Another mania unfolded for FDTimes, as a torrent of stories arrived, even after the dreaded "Stop the Presses" deadliest deadline. Please forgive hasty typos and errors.

380 years after Tulip mania and mere moments after FDT frenzy, the motion picture industry convenes at Amsterdam's RAI Convention Center for the 50th annual IBC Exhibition.

Alicia Vikander stars in *Tulip Fever*.
Photo: Alex Bailey
© The Weinstein Company

History of ARRI in a Century of Cinema



ARRI was founded a century ago by two aspiring cinematographers who saw the value of technology in the pursuit of their dreams. The excellent adventure of August Arnold and Robert Richter reads like a good screenplay. There is a dramatic arc, with competition, conflict, struggle against odds, stumbles, success and celebration. Serendipity helped, along with good business sense. They were involved in all fields of film production—from manufacturing cameras, lights, and lenses to managing post and rentals.

Endurance is elusive in the pursuit of cinematographic dreams. A film begins as a spark, a story to be told. The cast of characters assembles. There are adventurers and artists, storytellers and actors, entrepreneurs and impresarios. The expedition begins with great expectations. The story plays with action and images. It is an art form where stamina is rewarded. As the director said in François Truffaut's *Day for Night*, "Shooting a film is like a stagecoach ride in the Wild West. In the beginning, you hope for a pleasant journey, but pretty soon, you begin to wonder if you'll reach the destination."

Providing the tools to tell those stories is also risky business requiring resilience. The journey can be arduous. Along the way, there's research, development, design, financing, manufacturing, marketing and distribution. Like the premiere of a film, the outcome is unpredictable. Chasing the flying moments of creativity, there's fulfillment in both completion of the dream and commendation in successful distribution. As successful merchants of the means to those dreams, ARRI has provided the tools and services of cinema production for one hundred years.

The centennial celebration of the connections between cinematography and ARRI is a story about artists and artisans, technique and technology, creativity and tools. Cinematographers are known for their artistry, aptitude and experience—hopefully as supportive and ever pleasant to work with, even on the eighth week, on the 14th hour of night, exterior, in rain and bitter cold. It's the same with Cinematographers' gear—cameras are constant companions, lenses shape character, and lighting is style prompted by notes and sketches in the margins of a script. Collecting ephemeral images inside a dark box is an intertwined intersection of art and machine.

Making these machines is also an art—and it is a remarkable achievement for one family-owned enterprise to have successfully engaged in that pursuit for a hundred years. ARRI is among a handful of companies founded at the birth of cinema that con-

tinue to this day: Carl Zeiss (ZEISS) 1846, Ernst Leitz (Leica) 1849, Taylor Hobson (Cooke) 1886, Kodak 1888, Éclair 1907, Vinten 1910 and Paramount 1914. Panasonic, Nikon and Gitzo are also celebrating their centennial this year. ARRI's longevity might best be explained as a confluence of technique and technology with added ingredients of talent, tenacity and transition. Actually, Haskell Wexler, ASC had a catchier alliterative aphorism about the longevity of his illustrious career: "Cameras, Cars and Chicks." Clearly there are many muses inspiring artists who make moving pictures and the artisans who make the devices that enable those pictures to move.

August Arnold was born on September 12, 1898, son of an Austrian arborist. Robert Richter was born a year later in Nuremberg to a wealthy family that owned the household fixture company of Richter+Frenzel (founded in 1895 and still running today). The boys met as classmates in 1913 at the Oscar-von-Miller-Gymnasium in Munich. Their hobbies were movies and mechanical things. Christmas came with a motorized lathe, which was soon put to good use. By modifying an old slide projector, adding an electric motor and arc lamp, they were able to watch discarded newsreels and short film clips.

A couple of years later, still in school, the two aspiring cinematographers bought a Gaumont hand-cranked camera. When not in class, they worked as camera assistants and also as cameramen covering the news. The boys often scooped stories by racing around on their bicycles to get more angles than their competitors. Perhaps the technology of bicycles enabled the mobility of their technique.

On September 12, 1917, August Arnold and Robert Richter founded ARRI in a small shop on Tuerkenstrasse in Munich to satisfy an eclectic assortment of interests as announced on their business cards: "Fine mechanics, electrical devices, arc lamps, film apparatus, film printers, camera operating and projection." Their first commercial products were movie lights and film printing machines. In the beginning, the boys were not even old enough to legally sign their business documents. One hundred years later, the company they started is still located at same address, now much larger, with 1,400 employees worldwide.

It's interesting to look at the history of a company through the prism of history and the context of events, artistic trends and industrial influence. By the time Arnold and Richter set up their first shop on Tuerkenstrasse, cinema had been flourishing for 22 years. About 740 km southeast of Munich, the Lumière family of Lyon was second only to Kodak, manufacturing about 15 million glass plates a year for still photography. The story goes that Antoine Lumière returned home one day after seeing an Edison Kinetoscope peepshow and told his sons Louis and Auguste, "You can do better. Try to get that image out of the box." They did. It was 1885.

Auguste and Louis built their own camera: the small, light, portable Cinématograph that combined the tasks of shooting, printing and projecting. The Cinématographe used 35mm film transported by an intermittent movement inspired by sewing machines that were widely manufactured in their native city of Lyon. We often think of inventions as arriving spontaneously, but the reality is more like a thick cloud of converging talent and knowledge, commercializing a technology that was emerging in the currents of concurrent global arenas.

ARRI Centennial History, cont'd

The history of the movies has been a chicken and egg confabulation since the beginning. Does the idea come first and then you look for the equipment to get the shot? Or is it the other way around—an innovative new piece of gear inspires a new way to tell the story?

Actually, it's both, and technique is totally intertwined with technology. Most of it is about streamlining the steps from script to screen: lighter, smaller, faster, brighter, more ergonomic.

There are waypoints of brilliance. Lumière wanted to project moving images on a screen. Méliès dreamed of special effects to enchant an audience. Akeley needed to film with long lenses on safari. Coutant believed that cameras deserved to rest on shoulders. And the founders of ARRI set off on a cinematic path of eclectic invention to support a hobby that became a successful business.

There's along list of inventors on the brink of cinema: Le Prince, Marey, Friese-Greene, Muybridge, Demeny, Skladanowsky, Latham, Jenkins, Armat, Acres, Rudge, Edison and many more. It is very similar to asking, "Who invented the search engine or social networking?" Louis and Auguste Lumière were in the right place (Lyon, 300 talented workers, vast resources) at the right time (Impressionism, Post-Impressionism and Photography). They were the first in France to successfully implement a marketable technique from the nascent technology.

On December 28, 1895, they projected ten short films on a screen in the Salon Indien, a billiard room in the Grand Café at the corner of Rue Scribe and Boulevard des Capucines in Paris. The show cost 1 Franc per person. It was not an immediate success. Only 33 people arrived. However, word spread quickly, and soon more than 2,500 tickets were sold each subsequent day. The Lumière films were short documentaries with roots in the subjects and style of Impressionism: workers leaving the factory, a train arriving in a station, a family dining together, street scenes of Paris.

These were the years when art celebrated the society it often depicted. Subject was taking precedence over style. Style was influenced by machines. The Impressionist technique of capturing the moment was made possible by the technology of new railroads that could quickly transport artists out of their studios and into the countryside. Newly invented paint in metal tubes enabled "location painting."

Pierre-Auguste Renoir said, "Without paint in tubes there would have been nothing of what the journalists were later to call Impressionists." These concepts were not lost on the Lumières in 1895. Cameras could be as portable as an Impressionist's easel, but Louis and Auguste astutely realized that exhibiting films to large audiences could be even more lucrative than just manufacturing cameras. They built 425 Cinématographe cameras and trained camera operators to photograph, process and project. From 1896 to 1905, more than 1400 Lumière films of 50 seconds were shot and projected on locations around the world.

It was the inception of a new experience that would introduce universal ideas to even more people than ever before, the democratization and globalization of an art form that would be seen by the largest audiences in history, and would change the world. Long before punchy Variety headlines, an early film critic wrote, "Someone went somewhere and saw something and brought



it back for us to look at." This was the world in which August Arnold and Robert Richter grew up as youngsters. Like the Lumières, their instinctive proclivity to get involved in all facets of cinema, not just building cameras or being cameramen, most likely helped in their success.

Back in the US, Thomas Edison was filing numerous patents. Never mind that his first camera, the Black Maria, required a studio the size of a house that rotated on tracks to film static scenes of sneezes, magicians, politicians, dancers, and scantily-clad women. The Edison Manufacturing Company and later the Motion Picture Patents Company sued or threatened domestic competitors. The result was quite the opposite.

Independent production flourished. Two thirds of the films exhibited in the US came from Europe, along with camera equipment that was lighter, smaller, faster, and cheaper. The migration of East Coast independent producers to Hollywood beginning in 1908 was not only for the sunshine; it was a long way from Edison's headquarters in New Jersey.

A panoply of cameras followed as filmmakers experimented with various mechanisms, movements, bodies and lenses from Méliès, Acres, Darling, Urban, Pathé, Prestwich, Moy & Bastie, Gaumont, Démény, Akeley, Debrie, and Ernemann. Most were hand-cranked and sat on tripods.

The Aeroscope was invented by Kazimierz Prószyński in 1909 and built by Newman & Sinclair and Cherry Kearton Limited in the UK. The Aeroscope was powered by a pump similar to the ones that pumped up bicycle tires. Pressurized air could run the camera up to 10 minutes. This freed the camera operator from cranking, so one hand could adjust focus and iris, while the other hand could hold the camera. As a result, the Aeroscope became one of the first handheld cine cameras. It was used extensively for aerials and by combat and newsreel cameramen.

Most cine cameras had bodies made of wood and leather or steel. They often rotted or rusted. Then, in 1912, Donald Bell and Albert Howell built their famous Bell & Howell 2709 B out of aluminum. It withstood weather in the tropics and heavy use in studios. Next, Mitchell Camera Corporation patented their variable shutter, rackover Mitchell Standard in 1920. Both cameras became the stalwarts of many Hollywood productions for years to come.

...Continued on Page 72

A Camera called VENICE



“When I went to Venice, I discovered that my dream had become incredibly, but quite simply, my address,” Marcel Proust uncharacteristically succinct, described the city.

“VENICE is the first camera I want to own,” Claudio Miranda ASC, uncharacteristically loquacious in his enthusiasm, described VENICE, Sony’s new Full Frame camera, after shooting its product launch demo. “I can light tabletop pop tarts or a giant night exterior. I can easily work with VENICE on any job.”

This is the Full Frame 24x36 camera that Sony signaled in June. The big news was the big picture. Few details were revealed then.

The camera is named VENICE. In one of the fastest whispers-to-product launches we’ve ever seen, the camera was presented to the world on September 6. It was shown with PL mount, S35 format, with Full Frame, E-mount and updates coming soon.

No more number names. Not F246. VENICE is a high-end, 6K, Full Frame camera with an entirely new Sony designed 24x36mm sensor that has 15 stops of dynamic range and an artistic look. VENICE supports every format from Full Frame 3:2 to Super35 4K full 18mm height 4:3, Anamorphic and Spherical, and everything in between.

Sony Manager Peter Crithary explained, “We really went back to the drawing board for this one. It is the next generation camera system, a ground-up development initiative encompassing a completely new image sensor. We carefully considered key aspects such as form factor, ergonomics, build quality, ease of use, a refined picture and painterly look—with a simple, established workflow. We worked in close collaboration with film industry professionals. We also considered the longer term strategy by designing a user interchangeable sensor that is as quick and simple to swap as removing four screws, and can accommodate different shooting scenarios as the need arises.”

Sony’s VENICE

Full Frame Sensor 24x36 mm

Painterly Look

6K Full Frame 6048 x 4032 maximum resolution

4K Super35 window

Full Frame, full 6048 photosite width of the sensor
Widescreen spherical 2.39:1 or Large Format 'Scope

Super35 full height 2.0x squeeze Anamorphic

8-Step, 8-Stop Internal NDs

PL and Ruggedized E-mount

Spherical FF & S35

Anamorphic FF & S35

15+ Stops of Exposure Latitude

Native ISO 500 (maybe 800)

Retains highlights and color detail 6 stops overexposed and 9 stops into the shadows

Power: both 12 VDC and 24 VDC

Ergonomics

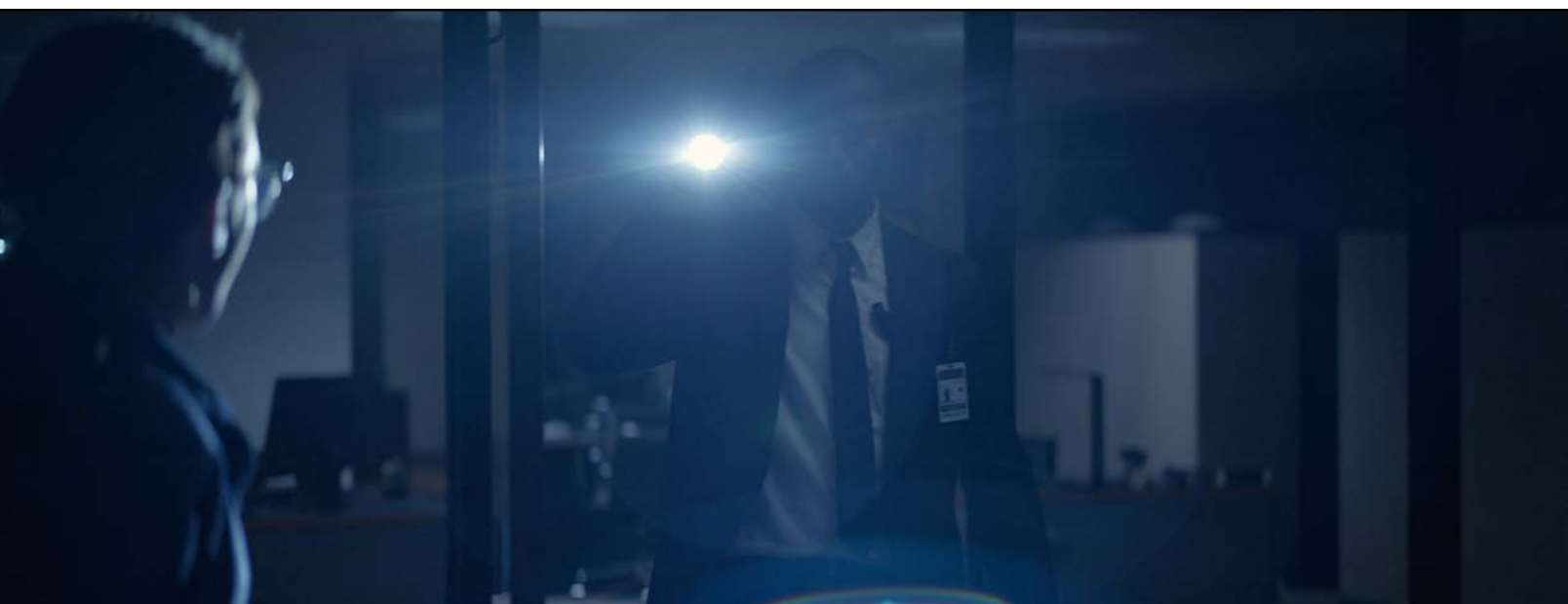
VENICE is compact and comfortable. Sony answered the wish lists and complaints of cinematographers, crews and rental houses. Controls are where you expect them to be. There are LED panels with menus and buttons on both camera left and right sides—ready for operator, assistant or DIT. Menus are streamlined, logical and intuitive.

Sony's VENICE



L-R: Director Joe Kosinski, Cinematographer Claudio Miranda ASC, Focus-Puller Dan Ming—shooting VENICE espionage thriller demo film "The Dig." Starring Lily Collins and Taylor Kitsch. Production stills by Jeff Berlin.

4K Framegrabs from “The Dig”



VENICE Production Stills from “The Dig”

Production stills by Jeff Berlin



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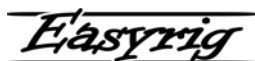
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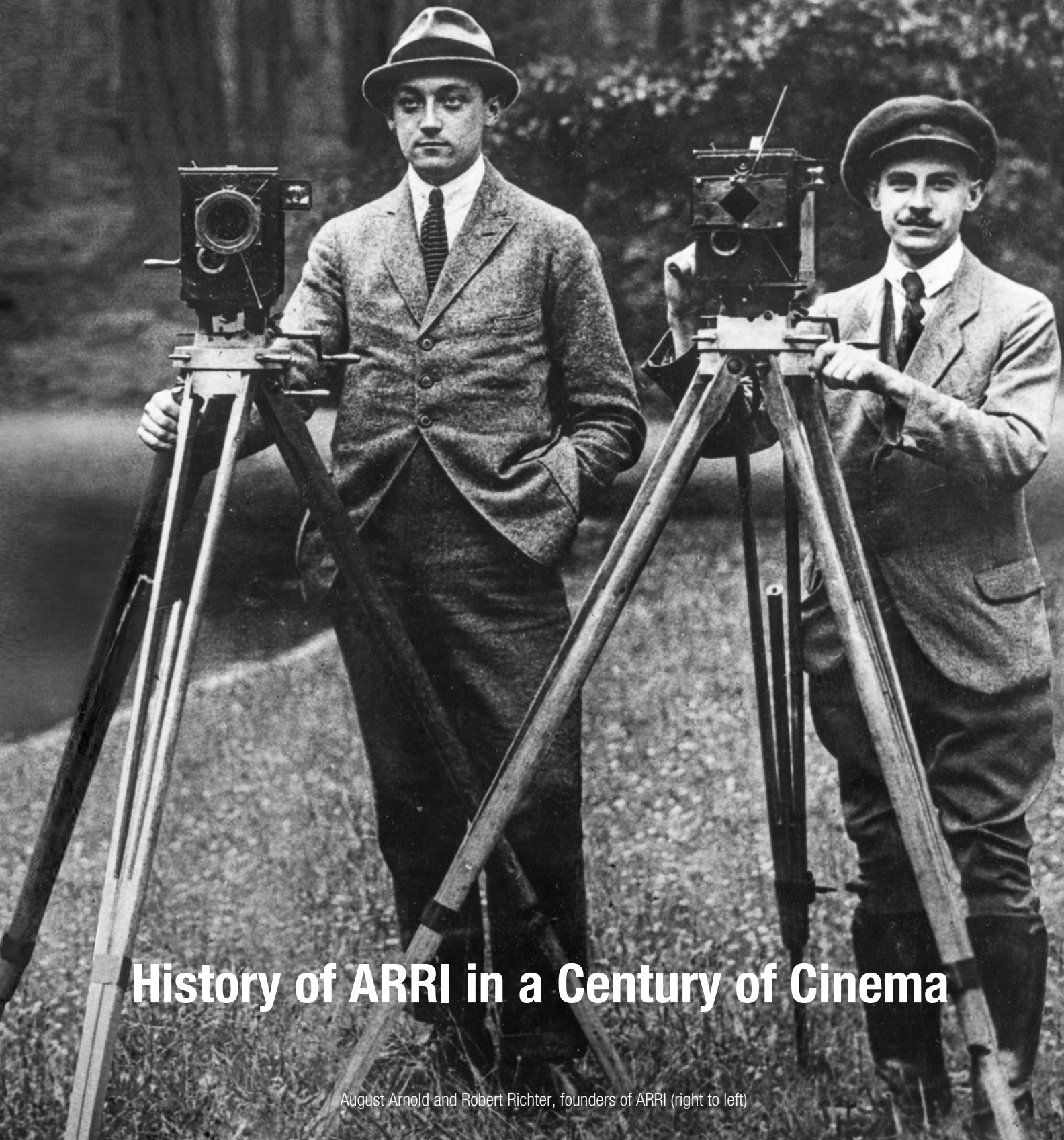
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History of ARRI in a Century of Cinema

August Arnold and Robert Richter, founders of ARRI (right to left)