

HISTORIE FOTOGRAFIE

Vybrané kapitoly z technického vývoje
od nejstarších dob po současnost



Mgr. Roman Sejkot

Na počátku byla TEMNOTA a Bůh řekl
“bud’ SVĚTLO” ...

Teorie Velkého třesku ...

Šíření světla ...

Světlocitlivost ...

Světlostálost ...

FOTOGRAFIE = SVĚTLOPIS

Johan Mändler, 25.2.1839
Berlínský astronom

John Herschell, 1839
Britský astronom

Photography

From Wikipedia, the free encyclopedia



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Photography (IPA: [fəˈtɒɡrəfi] or IPA: [fəˈtɑːɡrəfi]^[1]) (from [Greek](#) φωτο and γραφία) is the process, activity and [art](#) of creating still or moving [pictures](#) by recording [radiation](#) on a sensitive medium, such as a [film](#), or an [electronic sensor](#). [Light](#) patterns reflected or emitted from objects activate a sensitive chemical or electronic sensor during a timed [exposure](#), usually through a [photographic lens](#) in a device known as a [camera](#) that also stores the resulting information chemically or electronically. Photography has many uses for business, science, art and pleasure.



The word "photography" comes from the [Greek](#) φῶς (*phos*) "light" + γραφίς (*graphis*) "stylus", "paintbrush" or γραφή (*graphê*) "representation by means of lines" or "drawing", together meaning "drawing with light." Traditionally, the products of photography have been called [negatives](#) and [photographs](#), commonly shortened to *photos*.

The discipline of making lighting and camera choices when recording photographic images for the cinema is dealt with under [Cinematography](#)

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Function and cameras

The [camera](#) or [camera obscura](#) is the image-forming device, and [photographic film](#) or a [silicon](#) electronic [image sensor](#) is the sensing medium. The respective recording medium can be the film itself, or a digital electronic or magnetic memory.

Photographers control the camera and lens to "expose" the light recording material (such as film) to the required amount of light to form a "[latent image](#)" (on film) or "raw file" (in digital cameras) which, after appropriate processing, is converted to a usable image. Digital cameras replace film with an electronic [image sensor](#) based on light-sensitive electronics such as [charge-coupled device](#) (CCD) or [complementary metal-oxide-semiconductor](#) (CMOS) technology. The resulting digital image is stored electronically, but can be reproduced on paper or film.

The [movie camera](#) is a type of photographic camera which takes a rapid sequence of photographs on strips of film. In contrast to a still camera, which captures a single snapshot at a time, the movie camera takes a series of images, each called a "frame". This is accomplished through an intermittent mechanism. The frames are later played back in a movie projector at a specific speed, called the "frame rate" (number of frames per second). While viewing, a person's eyes and brain merge the separate pictures together to create the illusion of motion.^[2]

In all but certain specialized cameras, the process of obtaining a usable exposure must involve the use, manually or automatically, of a few controls to ensure the photograph is clear, sharp and well illuminated. The controls usually include but are not limited to the following:

- **Focus** - the adjustment to place the sharpest focus where it is desired on the subject.
- **Aperture** – adjustment of the [iris](#), measured as [f-number](#), which controls the amount of light passing through the lens. Aperture also has an effect on focus and [depth of field](#), namely, the smaller the opening aperture, the less light but the greater the depth of field--that is, the greater the range within which objects appear to be sharply focused. The current focal length divided by the f-number gives the



Lens and mounting of a large-format camera.



An historic camera: the [Contax S](#) of 1949 – the first [pentaprism SLR](#).



[Nikon F](#) of 1959 – the first [35mm film system camera](#).

Photograph

From Wikipedia, the free encyclopedia

For other uses, see [Photograph \(disambiguation\)](#).

A **photograph** (often shortened to **photo** or **pic** (picture)) is an **image** created by **light** falling on a light-sensitive surface, usually **photographic film** or an electronic imager such as a **CCD** or a **CMOS** chip. Most photographs are created using a **camera**, which uses a **lens** to focus the scene's visible wavelengths of light into a reproduction of what the human eye would see. The process of creating photographs is called **photography**. The word "photograph" coined 1839 by **Sir John Herschel** and is based on the **Greek** φῶς (*phos*), "light" + γραφίς (*graphis*), "stylus", "paintbrush" or γραφή (*graphê*), "representation by means of lines" or "drawing", together meaning "drawing with light".^[1]

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History

Main article: [History of photography](#)

The first permanent photograph was made in 1825 by a French inventor, **Joseph Nicéphore Niépce**, [\[edit\]](#) building on a discovery by **Johann Heinrich Schultz** (1724): that a silver and chalk mixture darkens under exposure to light. Niépce and **Louis Daguerre** refined this process. Daguerre discovered that exposing the silver first to iodine vapor, before exposure to light, and then to mercury fumes after the photograph was taken, could form a latent image; bathing the plate in a salt bath then fixes the image. These ideas led to the famous **daguerreotype**.

The daguerreotype had its problems, notably the fragility of the resulting picture, and that it was a positive-only process and thus could not be re-printed. Inventors set about looking for improved processes that would be more practical. Several processes were introduced and used for a short time between Niépce's first image and the introduction of the **collodion process** in 1848. Collodion-based wet-glass plate negatives with prints made on **albumen paper** remained the preferred photographic method for some time, even after the introduction of the even more practical **gelatin process** in 1871. Adaptations of the gelatin process have remained the primary **black-and-white** photographic process to this day, differing primarily in the film material itself, originally glass and then a variety of **flexible films**.



First known photograph, taken by **Nicéphore Niépce** in 1825 by the **heliography** process. The image is of a 17th Century Flemish engraving showing a man leading a horse.



View from the Window at Le Gras (1826), **Nicéphore Niépce**. Generally considered the first surviving photograph of a scene from nature.

CAMERA OBSCURA

Mo Ti

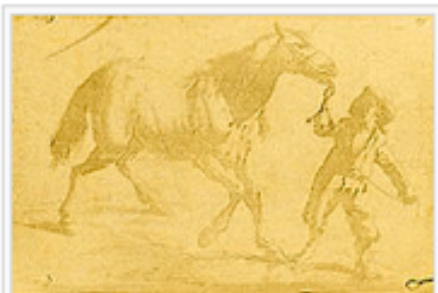
Aristoteles

Abu Ali Alhazen

Leonardo da Vinci

History of photography

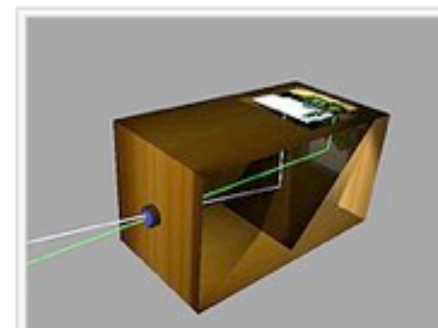
From Wikipedia, the free encyclopedia



First known photograph, taken by [Joseph Nicéphore Niépce](#) in 1825 by the [heliograph](#) process. The image is of a 17th Century Flemish engraving showing a man leading a horse.

The word photography derives from the Greek words 'photos' - meaning light and 'graphien' - to draw. The word was popularised by Sir John Herschel in 1839. Modern **photography** began in the 1820s with the first permanent [photographs](#).

[Photography](#) is the result of combining several technical discoveries. Long before the first photographs were made, Chinese philosopher [Mo Ti](#) and Greek philosophers such as [Aristotle](#) and [Euclid](#) described a [pinhole camera](#) in the 5th and 4th centuries B.C.E.,^{[1][2]} [Ibn al-Haytham](#) (Alhazen) (965–1040) studied the [camera obscura](#) and pinhole camera,^{[2][3]} [Albertus Magnus](#) (1139-1238) discovered [silver nitrate](#), and Georges Fabricius (1516-1571) discovered [silver chloride](#). Daniel Barbaro described a diaphragm in 1568. Wilhelm Homberg described how light darkened some chemicals (photochemical effect) in 1694. The novel [Giphantie](#) (by the French [Tiphaigne de la Roche](#), 1729-1774) described what can be interpreted as photography.



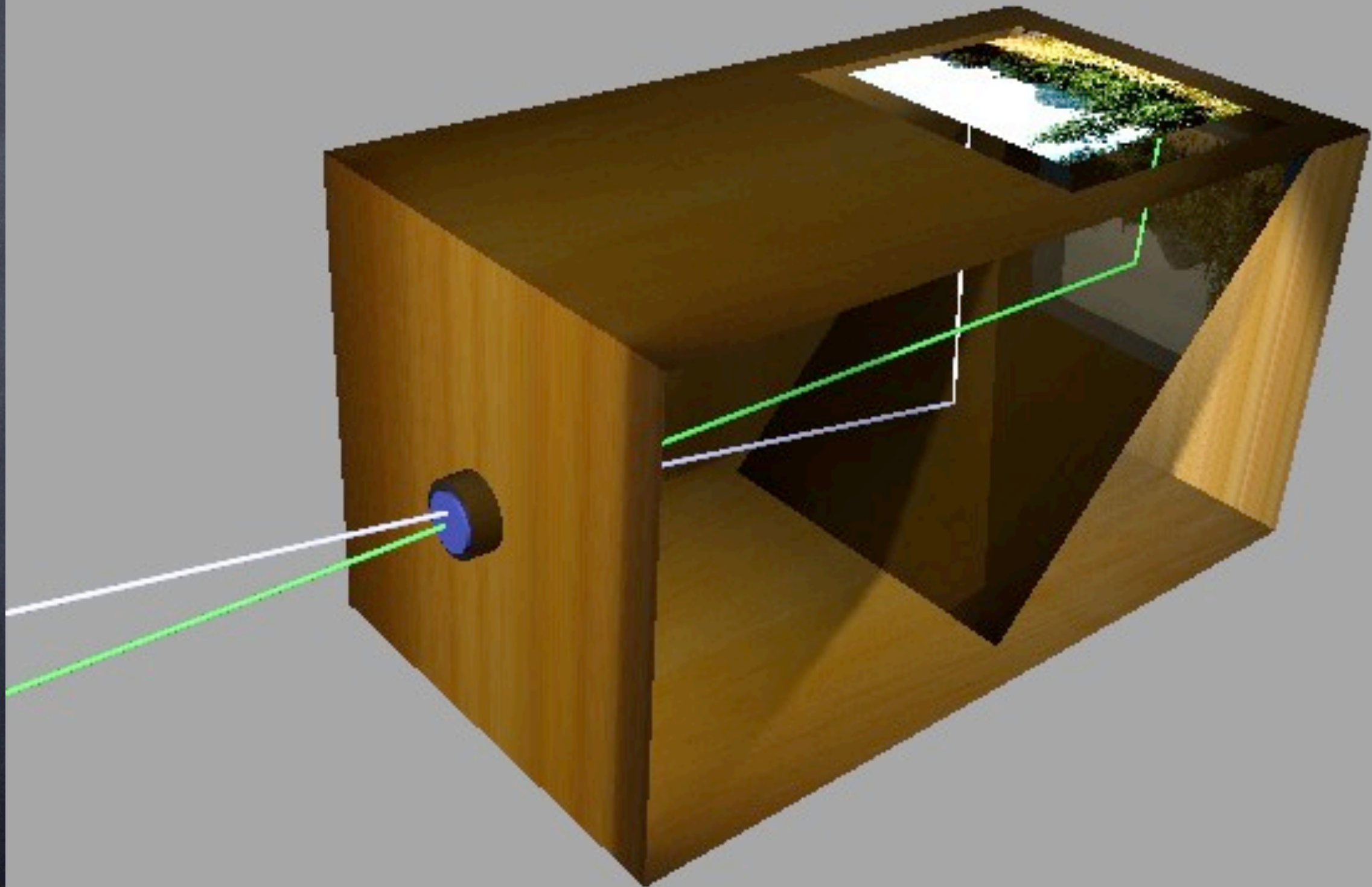
A camera obscura box used for drawing images

For years images have been projected onto surfaces. According to the [Hockney–Falco thesis](#) as argued by artist [David Hockney](#),^[4] some artists used the camera obscura and [camera lucida](#) to trace scenes as early as the 16th century. However, this theory is heavily disputed by today's contemporary realist artists who are able to create high levels of realism without optical aids.^[5] These early cameras did not record an image, but only projected images from an opening in the wall of a darkened room onto a surface, turning the room into a large [pinhole camera](#). The phrase *camera obscura* literally means dark chamber. While this early prototype of today's modern camera may have had modest usage in its time, it was an important step in the evolution of the invention.

Contents [\[show\]](#)

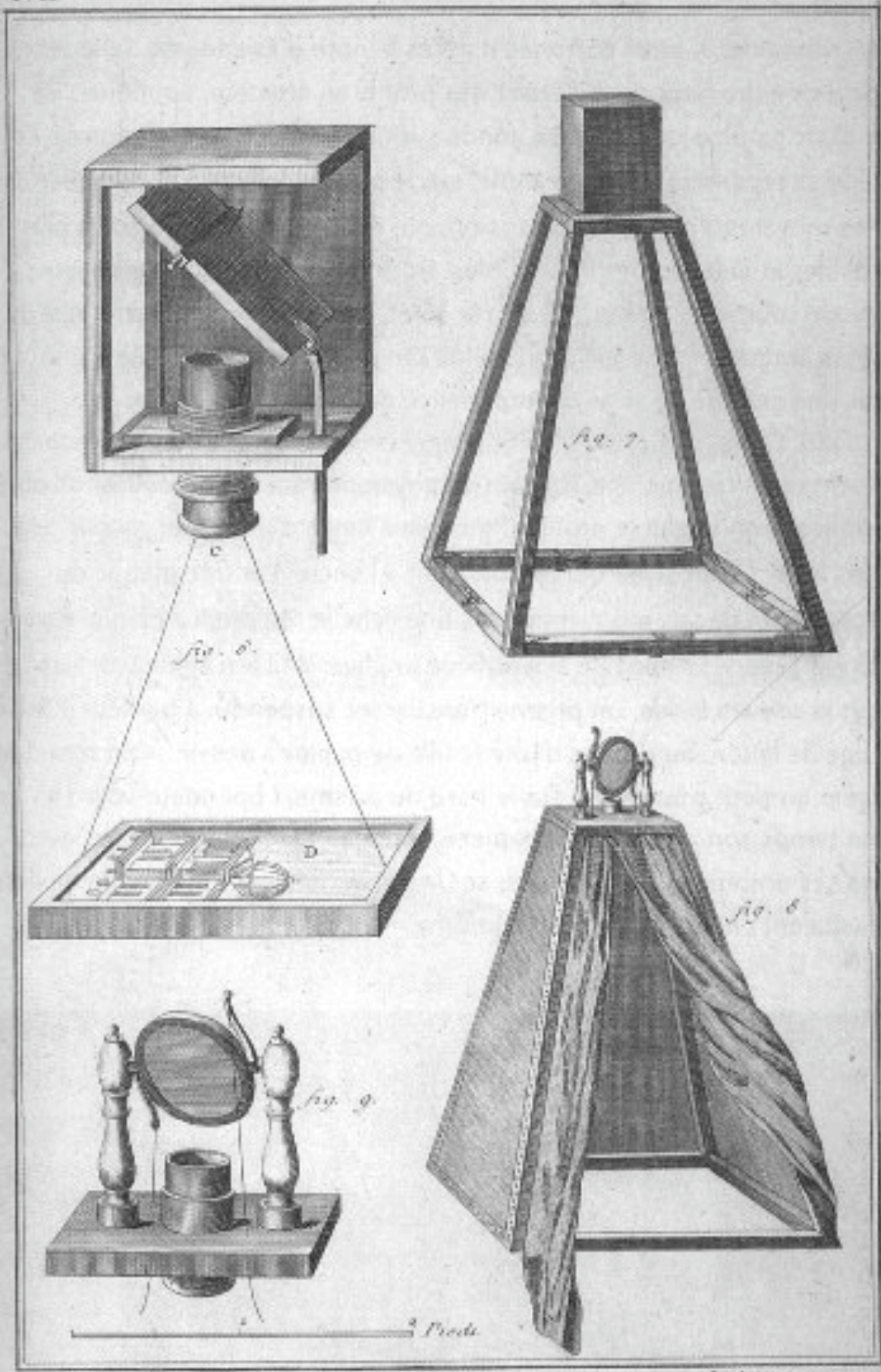
Development of chemical photography

[\[edit\]](#)



T. III

Pl. I.



143

Dessein, Chambre Obscure

Guidotti. F.



Pavel Scheufler

www.Scheufler.cz

Menu ▲

spisovatel

☞ Data 1839 - 1918

🖨️ Tisk stránky

Prezentovaná data z dějin fotografie českých zemí let 1839 - 1918 se průběžně doplňují, zpřesňují a obohacují o ilustrace. Prosím, uvítám případná upřesnění a doplnění, což vše napomůže rozvoji poznání o nejstarší historii fotografie u nás.

Chronologie 1839-1918

[1839](#) | [1840](#) | [1841](#) | [1842](#) | [1843](#) | [1844](#) | [1845](#) | [1846](#) | [1847](#) | [1848](#) | [1850](#) | [1852](#) | [1853](#) | [1854](#) | [1855](#) | [1856](#) | [1857](#) | [1858](#) | [1859](#) | [1860](#) | [1861](#) | [1862](#) | [1863](#) | [1864](#) | [1865](#) | [1866](#) | [1867](#) | [1868](#) | [1869](#) | [1870](#) | [1871](#) | [1872](#) | [1873](#) | [1874](#) | [1875](#) | [1876](#) | [1877](#) | [1878](#) | [1879](#) | [1880](#) | [1881](#) | [1881](#) | [1882](#) | [1883](#) | [1884](#) | [1885](#) | [1886](#) | [1887](#) | [1888](#) | [1889](#) | [1890](#) | [1891](#) | [1892](#) | [1893](#) | [1894](#) | [1895](#) | [1896](#) | [1897](#) | [1898](#) | [1899](#) | [1900](#) | [1901](#) | [1902](#) | [1903](#) | [1904](#) | [1905](#) | [1906](#) | [1907](#) | [1908](#) | [1909](#) | [1910](#) | [1911](#) | [1912](#) | [1913](#) | [1914](#) | [1916](#) | [1917](#) |

Fotografové 1839-1918

[A](#) | [B](#) | [C](#) | [D](#) | [E](#) | [F](#) | [G](#) | [H](#) | [Ch](#) | [J](#) | [K](#) | [L](#) | [M](#) | [P](#) | [Q](#) | [R](#) | [S](#) | [Š](#) | [T](#) | [U](#) | [V](#) | [W](#) | [Z](#) | [Ž](#) |



Adler, Moritz

1849 (1850?) Praha-Nusle - po 1899 Praha?
Fotograf se zaměřením na portrét.

▶ [Více](#)

▶ [zvětšit náhled](#)



Adolph, Alphons

8. 9. 1853 Hachenberg - 22. 3. 1934 Passau.
Jeden z prvních fotografů a vydavatelů fotografií Šumavy.

☞ Novinky

18.09.2007

Tvář průmyslové doby, svědectví fotografie > V sále architektů Staroměstské radnice se uskutečnila vernisáž výstavy ze sbírek Národního technického muzea v Praze autorů Jana Hozáka a Pavla Scheuflera. K výstavě byla vydána stejnojmenná publikace. *~Více~*

24.07.2007

Přednáška na Konopišti > Na zámku Konopiště se uskutečnila přednáška Pavla Scheuflera Rudolf Bruner-Dvořák a Ferdinand d'Este. *~Více~*

16.07.2007

Výstava z workshopu na Šumavě > V minigalerii Centra FotoŠkoda byla zahájena výstava prací účastníků víkendového workshopu na Šumavě, konaného 25. - 27. května 2007 a vedeného Pavlem Scheuflerem. Podzimní workshop se uskuteční 13. a 14. 10. 2007. *~Více~*

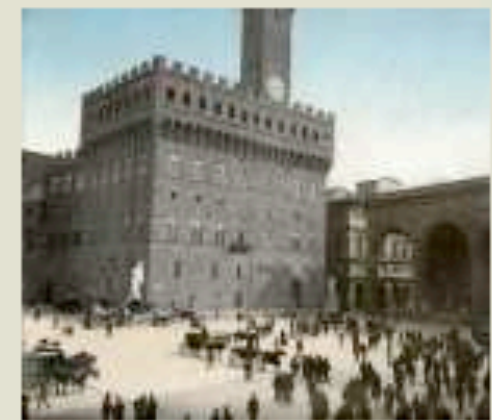
📁 [Archiv novinek](#)

☞ Vyhledávání

☞ WWW výstavy

Výběr výstavy ▼

☞ Aktuální fotografie



☞ Fotografové

Mazura, Woldemar Richard

29. 12. 1838 Žamberk - 3. 6. 1900 Žamberk

Kupec, majitel vinárny a fotograf v Žamberku.





Svět Fotografie

Šat již jsem změnil
bych na cestu se
vydal
v svět neviděný.
- Ójodo Mičikaze -

Fotografie... a její dějiny

Foto týdne

- ▶ 5 století př.n.l. - čínský filozof Mo Ti popsal princip jevu, při kterém světlo procházející malým otvorem do temné místnosti, vytvoří na protější stěně vytváří převrácený obraz předmětů před otvorem.
- ▶ 4 století př. n. l. - stejný jev popisuje ve svém díle Aristoteles.
- ▶ 10. století - Arabský fyzik, matematik a filozof Abu Ali al-Hasan se zabývá lomem a odrazem světla a čočkami. Používá přitom desku s dírkou, před kterou vyrovnal svíčky. Jejich obraz se promítal na druhé straně desky a al-Hasan zakrýváním svíček zjistil, že obraz levé svíčky se promítne vpravo, z čehož odvodil, že světlo se šíří přímočaře. Arabové používají v astronomii při určování polohy Slunce nebo slunečných zatmění přístroj nazvaný později camera obscura.
- ▶ 1408 Leonardo da Vinci popisuje ve svém spisu Codex Atlanticus praktické pokusy s využitím jevu který nazval camera obscura čili temná místnost, a na jejich základě odvozuje vztah mezi funkcí oka a perspektivou.
- ▶ 1545- V díle De Radio Astronomica et Geometrica holandský astronom Regnie Gemma Frisius uveřejnil první náskres camery obscury, s jejíž pomocí o rok dříve pozoroval zatmění Slunce.

Do roku 1700

1700 - 1825

a zpět

TECHNOLOGICKÉ SKOKY

První (dochovaná : 1826) fotografie : 1825

Svitkový film : 1888

Kinofilmový fotoaparát : 1913

Kinofilmová zrcadlovka : 1936

Barevný diapozitivní film : 1935

Autofokus : 1985

Kodak Photo CD : 1990

První (dochovaná ?) digitální fotografie : ???

Joseph Nicéphore Niepce učinil zásadní krok na cestě k zachycení obrazu. Potřel cínovou destičku tzv. judským asfaltem, umístil ji do camery obscury a tu na několik hodin zamířil z okna své pracovny na dvůr. Vzniklý obraz vyvolal ve směsi petroleje a levandulového oleje, která rozpustila asfalt na neosvětlených místech. Výsledkem byla zřejmě první opravdová fotografie.



1826


1827

1828

1829

1830

a zpět

- ▶ 7. ledna - Louis Jacques Mandé Daguerre představil objev svého principu zachycení obrazu Francouzské Akademii věd.
- ▶ 25. ledna - Rozzlobený Talbot publikoval svůj vlastní princip zachycení obrazu.
- ▶ 1. února - Francouz Hippolyte Bayard začíná experimentovat s fotografií a během krátké doby přichází z vlastní metodou, jejímž výsledkem jsou přímé pozitivy zachycené na běžný papír.
- ▶ 19. srpna - Francouzská vláda koupila vynález daguerrotypie a na slavnostním zasedání francouzské akademie věd jej poskytla světu se všemi právy a technickými podrobnostmi. Pro následujících dvacet let se daguerrotypie stává hlavní fotografickou technikou, přestože se nakonec ukáže býti slepou vývojovou větví fotografie.
- ▶  Sir John Herschel před Královskou společností zřejmě jako první použil název "fotografie" když spojil řecká slova: světlo a psaní. Byl také tím, kdo na základě prací Williama Talbota zavedl termíny negativ-pozitiv.
- ▶ říjen - Za pomoci primitivního teleobjektivu byly pořízeny první snímky (daguerrotypie) měsíčního povrchu.
- ▶ Mungo Ponton popsal citlivost dvojchromanových solí ke světlu.

1831

1832

1833

1834

1835

1836

1837

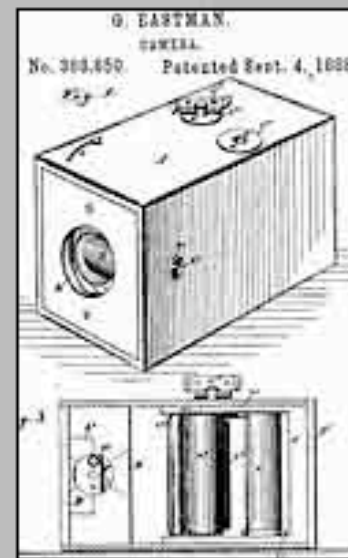
1838

1839

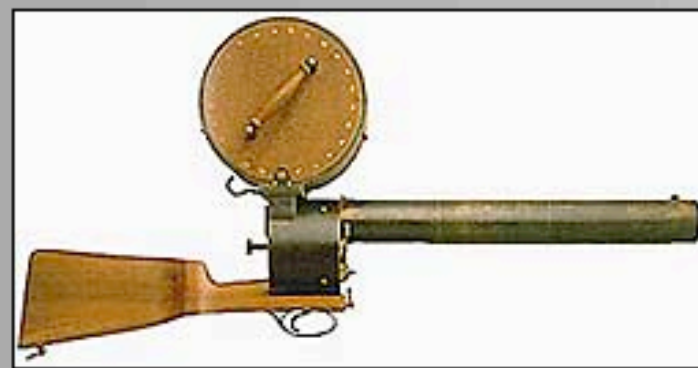
1840

a zpět

- ▶ Fotografie přestává být záležitostí pro vyvolené. George Eastman zahájil výrobu svitkových filmů, přišel s novou konstrukcí fotopřístroje (obr.) a sloganem "Stiskněte spoušť, my uděláme ostatní". Fotoaparát zn. Kodak byl přenosný, cenově dostupný, svitkový film na papírové podložce určený pro přístroj měl dostatečný počet políček (uvádí se až 100). Uživatel jej mohl zasadit do přístroje na denním světle a po exponování zaslat přímo do továrny na vyvolání. Firma mu ho doposlala zpět "nabitý" i s vyvolanými fotografiemi.



1881
1882
1883
1884
1885
1886
1887



Etienne-Jules Marey (1830-1904), vylepšil svůj vynález, fotografickou pušku, úpravou, která mu umožnila nejprve vkládat více obrázků za sebou do jednoho rámečku a později jako jednomu z prvních

používat svitkový film vynalezený Georgem Eastmanem.

1888

1889
1890
a zpět

- ▶ Fotografie nalézá své místo v rozvíjející se kriminalistické vědě. Francouz Louis Alphonse Bertillon obohatil strategii identifikace zločince o fotografie přikládané k identifikačním kartám. Základem byly dvě fotografie, ánfas a profil, zhotovené jednotným postupem, za stejných světelných podmínek a ze stejné vzdálenosti, které v mnoha případech doplňovaly také snímky charakteristických detailů obličeje popřípadě těla. Fotografie sloužily nejen k identifikaci, ale také k pátrání po zločincích. Bertillon také položil základy k soudní fotografii místa činu.



Na trh je uveden nový fotoaparát, Leica, první, pro který se začal používat tzv. kinofilm. Ten má zpravidla 36 políček, velkých dost na to, aby z něj mohla vzniknout poměrně solidní zvětšenina zhruba do velikosti formátu A4. Přístroj je lehký, skladný, dobře se s ním manipuluje. Od této chvíle se



fotografování stává skutečně masovou záležitostí.



8. června - v Mexico City zemřel slavný fotograf a pedagog Clarence H. White, zakládající člen hnutí Fosecese, přední představitel piktorialismu (kterému zůstal věrný i poté, co ho jako styl většina fotografů opustila), mistr dokonalých sentimentálních výjevů a piktorálních portrétů, organizátor a učitel, který učil mnohé z nejznámější

fotografů dvacátého století.

1921

1922

1923

1924

1925

1926

1927

1928

1929

1930

a zpět



Svět Fotografie

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Fotografie... a její dějiny

Foto týdne

- ▶ Firma Kodak jako první uvádí moderní vícevrstvý barevný film Kodachrome. Ten obsahuje tři fotografické emulze, každou citlivou na jinou složku světla (červenou, zelenou a modrou). Při složitém vyvolávacím procesu se šedé stříbro nahradí barevnými pigmenty (modrozeleným, fialovým a žlutým) a vznikne tak barevný diapozitiv.



Americký Farmářský správní úřad, zaměstnává řadu fotografů, aby zdokumentovali nepříjemnou situaci chudých farmářů v období velké hospodářské krize. Mezi nejslavnější patří Walker Evans a Dorothea Lange. Právě ona vytvoří v rámci tohoto projektu jeden z nejslavnějších snímků v dějinách.



- 1931
- 1932
- 1933
- 1934
- 1935**
- 1936
- 1937
- 1938
- 1939



Svět Fotografie

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- Ójodo Mičikaze -

Fotografie... a její dějiny

Foto týdne

- ▶ Společnost Kodak prohrává ve vleklém soudním sporu se společností Polaroid, která ji v roce 1976 zažalovala za porušení patentu, když Kodak začal prodávat vlastní verzi fotoaparátu pro okamžitou fotografii. Rozhodnutí o odškodnění však padlo až po dalších pěti letech. Kodak byl nucen zaplatit téměř miliardu dolarů.
- ▶ Společnost Minolta uvádí do prodeje fotoaparát Minolta Maxxum-7000. Historicky první samozaostřovací (AF) zrcadlovku.



1981

1982

1983

1984

1985

1986

1987

1988



Svět Fotografie

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- Ójodo Mičikaze -

Fotografie... a její dějiny

Foto týdne

Společnost Kodak představuje PhotoCD system, který nabízí zákazníkům vedle běžných fotografií rovněž možnost převedení snímků z kinofilmu do digitální podoby, jejich nahrání na speciální disk, který pak lze přehrát v přehrávači CD-I, CD-ROM XA, Photo CD nebo v CD-ROM XA mechanice počítače a prohlížet fotografie na televizní obrazovce nebo monitoru počítače. Kapacita disku je 100 fotografií o velikosti od 3 do 6 MB.



1981

1982

1983

1984

1985

1986

1987

1988

1989

1990

PRVNÍ DIGITÁLNÍ KAMERY

PRIVÁTNÍ SEKTOR

Televizní průmysl : 1951

Picture Phones

VLÁDNÍ SEKTOR

NASA : 1960s

Špionážní satelity

[Digital camera - Wikipedia, the free encyclopedia](#) - [[Přeložit tuto stránku](#)]

Mobile phones started to incorporate **digital cameras** from 2001 when **first** introduced in Japan by J-Phone. The most rapidly spread technology of all time, ...

en.wikipedia.org/wiki/Digital_camera - 125k - [Archiv](#) - [Podobné stránky](#)

[History of the Digital Camera](#) - [[Přeložit tuto stránku](#)]

In 1991, Kodak released the **first** professional **digital camera** system (DCS), aimed at photojournalists. It was a Nikon F-3 **camera** equipped by Kodak with a ...

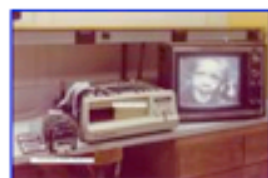
inventors.about.com/library/inventors/bldigitalcamera.htm - 25k - [Archiv](#) - [Podobné stránky](#)

[Retro Thing: Kodak's First Digital Camera](#) - [[Přeložit tuto stránku](#)]

Way back in 1975 -- when Kodachrome color slides and Kodak Instamatics were all the rage -- Kodak researcher Steve Sasson built the **first** ...

www.retrothing.com/2008/05/kodaks-first-di.html - 40k - [Archiv](#) - [Podobné stránky](#)

[Výsledek obrázků na dotaz First digital camera](#) - [Nahlásit obrázky](#)



[World's First Digital Camera](#) - [[Přeložit tuto stránku](#)]

Ahhhhh the 70's... the decade where the **first** Star Wars movie was released, where afro haircuts where all the rage, and where the **first digital camera** came.

www.geeksaresexy.net/2008/05/08/worlds-first-digital-camera/ - 53k - [Archiv](#) - [Podobné stránky](#)

[Digital camera turns 30 — sort of - Tech and gadgets- msnbc.com](#) - [[Přeložit tuto stránku](#)]

It would be a quarter century, though, before Kodak began to capitalize on Sasson's breakthrough: the **first digital camera**. Story continues below ↓ ...

www.msnbc.msn.com/id/9261340/ - 48k - [Archiv](#) - [Podobné stránky](#)

Charge-coupled device

From Wikipedia, the free encyclopedia

A **charge-coupled device (CCD)** are electronic devices that are capable of transforming a light pattern (image) into an electric charge pattern (an electronic image). A CCD is an [analog shift register](#) that enables the transportation of analog signals (electric charges) through successive stages (capacitors), controlled by a [clock signal](#). Charge-coupled devices can be used as a form of memory or for delaying samples of analog signals. Today, they are most widely used in arrays of photoelectric light sensors to serialize parallel analog signals. Not all [image sensors](#) use CCD technology; for example, [CMOS](#) chips are also commercially available.

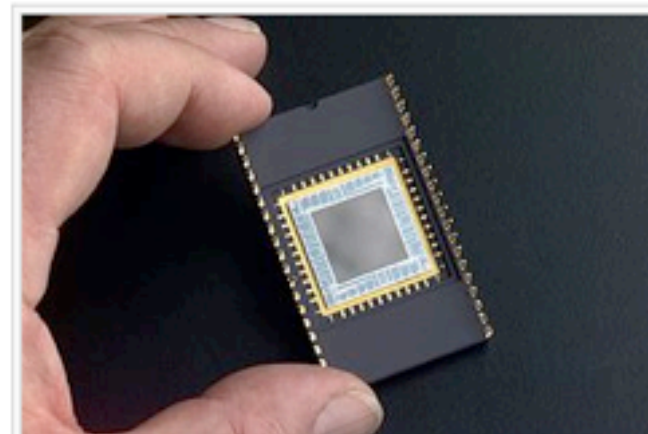
"CCD" refers to the way that the image signal is read out from the chip. Under the control of an external circuit, each capacitor can transfer its [electric charge](#) to one or another of its neighbors. CCDs are used in [digital photography](#), digital [photogrammetry](#), [astronomy](#) (particularly in [photometry](#)), sensors, [electron microscopy](#), medical [fluoroscopy](#), optical and [UV spectroscopy](#), and high speed techniques such as [lucky imaging](#).

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History

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[Eugene F. Lally](#) of the [Jet Propulsion Laboratory](#) wrote a paper published in 1961, "Mosaic Guidance for Interplanetary Travel", illustrating a mosaic array of optical detectors that formed a photographic image using digital processing. [Digital photography](#) was conceived by this paper. Lally noted such an optical array required development so digital cameras could be produced. The required array consisting of CCD technology was invented in 1969 by [Willard Boyle](#) and [George E. Smith](#) at [AT&T Bell Labs](#). The lab was working on the picture phone and on the development of [semiconductor bubble memory](#). Merging these two initiatives, Boyle and Smith conceived of the design of what they termed 'Charge "Bubble" Devices'. The essence of the design was the ability to transfer charge along the surface of a semiconductor. As the CCD started its life as a memory device, one could only "inject" charge into the device at an input register. However, it was immediately clear that the CCD could receive charge via the [photoelectric effect](#) and electronic images could be created. By 1969, Bell researchers were able to capture images with simple linear devices; thus the CCD was born. Several companies, including [Fairchild Semiconductor](#), [RCA](#) and [Texas Instruments](#), picked up on the invention



A specially developed CCD used for [ultraviolet](#) imaging in a wire bonded package.

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In January 2006, Boyle and Smith were awarded the [National Academy of Engineering Charles Stark Draper Prize](#) for their work on the CCD.^[2]

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History of the Digital Camera

By [Mary Bellis](#)

Digital camera technology is directly related to and evolved from the same technology that recorded [television](#) images. In 1951, the first [video tape recorder](#) (VTR) captured live images from television cameras by converting the information into electrical impulses (digital) and saving the information onto magnetic tape. Bing Crosby laboratories (the research team funded by Crosby and headed by engineer [John Mullin](#)) created the first early VTR and by 1956, VTR technology was perfected (the VR1000 invented by Charles P. Ginsburg and the Ampex Corporation) and in common use by the television industry. Both television/video cameras and digital cameras use a [CCD](#) (Charged Coupled Device) to sense light color and intensity.

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During the 1960s, NASA converted from using analog to digital signals with their space probes to map the surface of the moon (sending digital images back to earth). Computer technology was also advancing at this time and NASA used computers to enhance the images that the space probes were sending.

Digital imaging also had another government use at the time that being spy [satellites](#). Government use of digital technology helped advance the science of digital imaging, however, the private sector also made significant contributions. Texas Instruments patented a film-less electronic camera in 1972, the first to do so. In August, 1981, Sony released the Sony Mavica electronic still camera, the camera which was the first commercial electronic camera. Images were recorded onto a mini disc and then put into a video reader that was connected to a television monitor or color printer. However, the early Mavica cannot be considered a true digital camera even though it started the digital camera revolution. It was a video camera that took video freeze-frames.

DIGITÁLNÍ FOTOAPARÁT

První CCD : 1961 - 1969

USA

První patentovaná elektronická kamera : 1972

Texas Instruments

První komerční elektronický fotoaparát : 1981

Sony Mavica

První profesionální digitální kamera : 1991

Kodak & Nikon

World's First Digital Camera

7 May 8, 2008 by admin |



Ahhhhh the 70's... the decade where the first Star Wars movie was released, where afro haircuts where all the rage, and where the first digital camera came into existence. Yep, you read that right! In 1975, Kodak released the world's first digital camera prototype, a clunky-looking device that used cassette tapes as the medium to store pictures. Each photo took 23 seconds to snap, producing a 100-line black and white image that could only be displayed on a television set. No wonder why it never became popular.



Since the mid-1970s, Kodak has invented several solid-state image sensors that "converted light to digital pictures" for professional and home consumer use. In 1986, Kodak scientists invented the world's first megapixel sensor, capable of recording 1.4 million pixels that could produce a 5x7-inch digital photo-quality print. In 1987, Kodak released seven products for recording, storing, manipulating, transmitting and printing electronic still video images. In 1990, Kodak developed the Photo CD system and proposed "the first worldwide standard for defining color in the digital environment of computers and computer peripherals." In 1991, Kodak released the first professional digital camera system (DCS), aimed at photojournalists. It was a Nikon F-3 camera equipped by Kodak with a 1.3 megapixel sensor.

Sony Mavica

From Wikipedia, the free encyclopedia

Mavica was a brand of [Sony cameras](#) which used removable disks as the main recording media. In August, 1981, Sony released the Sony Mavica (**M**agnetic **V**ideo **C**amera) electronic still camera, the first commercial electronic camera. It was not a digital camera, as its CCD sensor produced videosignal of NTSC format. 570*490 pixels. Mavipak 2" diskettes (later adopted industry-wide as the [Video Floppy](#)) were used to write 50 still frames. These pictures were viewed on TV. Otherwise, this camera is positioned as "pioneer of digital era".^[1] ^[2]

The later Digital Mavicas recorded onto floppy 3.5" disks in computer-readable format, a feature that made them very popular in the North-American market. With the evolution of consumer digital camera resolution ([megapixels](#)), the advent of the [USB](#) interface and the rise of high-capacity storage media, Mavicas started to offer other alternatives for recording images: the floppy-disk (FD) Mavicas began to be Memory Stick compatible (initially through a Memory Stick Floppy Disk adapter, but ultimately through a dedicated Memory Stick slot), and a new CD Mavica series — which uses 8 cm [CD-R/CD-RW](#) media — was released in 2000.

The first CD Mavica (MVC-CD1000), notable also for its 10× optical zoom, could only write to [CD-R](#) discs, but it was able to use its USB interface to read images from CDs not completely written (CDs with incomplete sessions). Subsequent models are more compact, with a reduced optical zoom, and are able to write to [CD-RW](#) discs.

The Mavica line has been discontinued. Sony continues to produce point-and-shoot digital cameras in the [Cyber-shot](#) series, which uses [Memory Stick](#) technology for storage.



Mavica FD5, the first digital model.

The first digital cameras for the consumer-level market that worked with a home computer via a serial cable were the [Apple QuickTake 100 camera](#) (February 17 , 1994), the [Kodak DC40](#) camera (March 28, 1995), the Casio QV-11 (with LCD monitor, late 1995), and Sony's Cyber-Shot Digital Still Camera (1996).

APPLE QUICKTAKE 100

Apple's first digital camera - a "serial killer".

by John Henshall



The QuickTake 100 has a binocular style shake-free grip similar to the Canon Ion. It is attractively styled and finished in matt grey.

"Venus is said to be a simple camera with a 640 x 480 pixel resolution - the same as a screenful of VGA - which stores twenty five pictures in solid state memory. Cost may be as low as £700. Rumours that the camera is being developed in association with Kodak and Chinon are said to have been met with a 'no comment' response from Kodak When I have any firm news, you'll be the second to know."

That was Chip Shop as long ago as October 1993. Except for the price, we were very close. When I met the boss of Apple's Advanced Technology Group at Apple's Cupertino headquarters, in California, at the end October 1993, he would say little more - except that the camera was not intended to replace film. Oh, really?

The camera was launched at the Tokyo MacWorld Expo on 17 February 1994 and will be available in May 1994, to work with Apple Macintosh computers, at an expected street price of £535. A Windows version will be available from June 1994 at £599. The one camera does both; only the interface is different.



The rear LCD Panel and eyepiece, as seen before putting the camera to the eye.

The QuickTake 100 runs off three AA-size batteries and weighs only one pound. It is very easy to use and - a major breakthrough - does not require complicated and often idiosyncratic SCSI connection to the host computer. Communication between camera and computer is via a simple serial cable, which plugs into the modem or printer port at one end and the camera at the other.

Apple see the camera being used for business, education and "memories". It is fully automatic, with a built-in flash. A window at the rear of the camera is surrounded by four buttons which control the flash, picture resolution, self-timer, and delete functions. The camera can store up to 32 images at a resolution of 320 x 240 pixels - each a quarter of a 13 inch monitor screenful - or eight 640 x 480 pixel images - each a full 13 inch monitor screenful - for up to a year in its internal flash memory. The resolution can be changed on a shot-by-shot basis if required.



Left: The entrance to the Grand Union Canal, photographed in low winter sunshine with a naturally warm cast.

Right: A file reproduced at the size similar to 'trader' small colour ads.

An internal processor automatically adjusts the camera's exposure time to obtain correct exposure. The lens has a focus range of 4 feet to infinity, with an equivalent focal length to a 50mm lens on a 35mm camera. The camera uses a new file format, QuickTake, which uses QuickTime to decompress images. Images may be saved in TIFF, PICT and JPEG- compressed PICT formats.



It will be interesting to see what uses the camera is put to. We could see an immediate use for grabbing shots of artwork for positional indication in books and magazines, so I mounted it on a Kaiser copy stand, kindly loaned by KJP, and held a 5 dioptre close-up lens in front of the camera. The results were perfectly good enough for that purpose and it would be useful if Apple supplied a close-up attachment, including a frame, since viewfinder parallax at close distances is large.





The QuickTake mounted on a Kaiser copy stand. Attaching a 5 dioptre close-up lens to the camera made this map reproduction possible, displaying reasonable detail.

Using "Get Info" on the Macintosh reveals the copyright statement, showing that the copyright is jointly held by Apple Computer Inc and Eastman Kodak (Japan). The camera comes with simple to use software which enables the stored images to be downloaded to the computer. Once in the computer, the images rotated, sized, cropped and saved in a variety of formats and colour bit depths.



The Apple QuickTake 100 is a simple but well designed 'sexy' product which is easy and fun to use. If it catches on, it will be the forerunner of a line of products which could change the way families take, manage and print their social pictures.

This review first appeared in Digital Imaging Plus, March 1994.

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Nikon Digital Still SLR camera models (inclusive of other labels which use Nikon's body chassis) - Main Index Page -

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Nikon **SVC**
1986/7
Prototype,
([External Link](#))

Nikon **QV-1000C**,
1988
(Prototype)
new uploads

Kodak **DCS-100**,
With DSU,
1991

Nikon **F3 DCS-3**

NASA
Digital F4
([External Link](#))

Nikon **D1 Prototype**,
1993

Kodak **DCS-200**,
1993



Kodak **DCS-410**, 1994

DCS-420, '94/95

Kodak **NC2000**, '94/5

Nikon **E2/E2s**, 1995

DCS-460, 1995/6

E2N/E2Ns, 1996

Kodak **DCS-315**, 1998



Kodak DCS-410, 1994



DCS-420, '94/95



Kodak NC2000, '94/5



Nikon E2/E2s, 1995



DCS-460, 1995/6



E2N/E2Ns, 1996



Kodak DCS-315, 1998



DCS-330, '98/9



Nikon E3/E2s, 12.1998



Kodak DCS 620X, '99/Y2k



Nikon D1, 06.1999



Kodak DCS-720/760, '99/Y2k



Fuji S1 Pro, 2000



Nikon D1X/D1H, 2001



A brief info on Kodak DCS-Series Digital Still SLR cameras

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In 1982-1990 Kodak introduced the Disc cameras (KODAK Disc 2000/4000/6000/8800 Camera , 1982; 3500 (1983); 3100/4100/6100 (1984); HAWKEYE Disc 7000 Camera/KODAK Tele Disc Camera/Tele CHALLENGER Disc/ (1985); 3600/CHALLENGER Disc Camera/MEDALIST I/II Disc Camera (special edition). In one way or another, these Disc cameras formed the basis for digital imaging as they are not entirely considered as conventional film-based cameras. In 1986, Kodak invented the world's first megapixel sensor, capable of recording 1.4 million pixels that could produce a 5 x 7-inch digital output in print. An interesting development in the market was in 1994 where the Japanese electronic giant first demonstrate their Digital Still camera that uses CCD as the medium. The Sony Marvica-Series, uses 1.4 MB Floppy Diskette as storage medium. Lastly, after losing a patent battle with Polaroid, Kodak left the instant camera business in 1986.

1990 - Kodak announced the development of its **Photo CD system**. The system provided an advantage of enabling digitized images for playing on television screens, and the Company was proposed a worldwide standard for defining color in the digital environment of computers and computer peripherals. This has in a way leads to many possibilities in commercial applications for digital imaging.

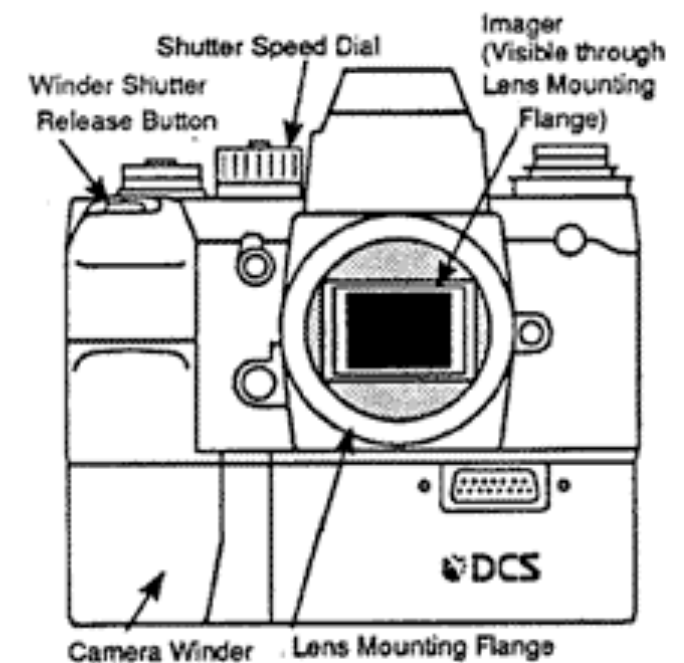


Additional information on **Nikon Video Still Camera Model 1 (1986)** & [Nikon QV-1000C Still Video Camera \(1988\)](#)

The DSU and camera operate from a standard rechargeable camcorder battery or the 12-volt AC adapter supplied by Kodak. When operated from the battery, the DSU and camera are portable, and captured images can be viewed immediately in B&W on a four-inch monitor built into the DSU. You can store up to 156 uncompressed images on the 200 megabyte hard disk in a DSU without a compression board. If your DSU is equipped with a compression board., you can store 142 images if compression is off, and from 400 to a maximum of 699 images if compression is on. Eight-megabytes of dynamic *random access memory* (DRAM) are incorporated in the DSU with an option to upgrade to a total of 32-megabytes of DRAM). This enables the camera can handle up to a six-image burst at 2.5 images per second with eight megabytes of DRAM and up to a 24-image burst with 32 megabytes of DRAM. Then the rate slows to one image every two seconds. Images are stored briefly in DRAM before they an moved to the hard disk.

Credit: Image of this Kodak DCS-100 with the Storage Unit shown at the left hand side was download from this [Russian website](#). Image has been modified slightly to shutter this page - this is the closest image I can find via the net, if you have a better picture (such as the images from the original press release) please mail to me.

The site also listed a prototype Kodak DC-3 model which was produced in 1992, it was a 1280x1024 pixel with a 14 x 9.3 mm sensor which delivers a 1.54 million pixels and has a wider range of ISO from 200-3200





DCS 200 Camera Models: Five camera models are available: DCS 200ci (color camera, 50-image internal hard disk), DCS 200c (color camera, single-image storage), DCS 200mi (monochrome camera, 50-image internal hard disk), DCS 200mi (monochrome camera,, single-image storage) and DCS -200IR (infrared monochrome camera, 50-image internal hard disk). The built-in 80 megabyte hard disk can store fifty pictures; each picture needs 4,5 Meg. To visualize pictures taken, it is necessary to unload the content of the hard disk on a microcomputer via the integrated SCSI interface. DCS 200 does not comprise integrated LCD monitor screen. It is possible to take a picture every 2,5 seconds. Batteries allow to take a hundred of pictures.

NOTE: -See [Instruction Manuals](#) for respective Models at the bottom of this page.

Although the DCS 200 Camera operates with an unmodified Nikon N8808s camera, there are differences between normal operation of the Nikon N8808s camera and its operation as part of the DCS 200 Camera. Firstly, the KODAK camera back comes attached to the Nikon camera body, with the DCS-200, you use the KODAK camera back incorporating a Kodak imager instead of the Nikon N8808s camera back for film. The DCS 200 Camera operates correctly only in single-frame (S) film-advance mode. You must use only the prescribed ISO settings. Select an ISO setting of 50, 100, 200, or 400 for color camera backs, or 100, 200, 400, or 880 for monochrome cameras. Multiple-exposure mode does not work. The film installation mark, film advance and rewind mark, and frame counter do not appear in the Nikon N8808s camera liquid crystal display (LCD). (A frame counter appears in the LCD in the KODAK camera back.)

Digital Cameras Timeline: 2009



The timeline shown below is a graphical representation of new digital camera product announcements going back to 1995. Displayed in reverse chronological order, multiple announcements on the same day may affect the scale of the chart.

- Display: **2009** 2008 2007 2006 2005 2004 2003 2002 2001 2000 1999 1998 1997 1996 1995

Month	Date	Model	Resolution	Features	Specs	Buy
Mar 2009	31	Olympus E-450	10.0 mp		specs	buy
	25	Canon EOS 500D / Digital Rebel T1i	15.1 mp		preview	buy
Feb 2009	3	Casio Exilim EX-Z29	10.0 mp, 2.9x		specs	buy
		Panasonic Lumix DMC-GH1	12.0 mp		specs	buy
	2	Sony Cyber-shot DSC HX1	9.0 mp, 20x		specs	buy
		Pentax X70	12.0 mp, 24x		specs	buy
	27	Epson R-D1x	6.0 mp		specs	buy
	24	Olympus E-620	12.2 mp		preview	buy
	23	Samsung HZ15W	12.0 mp, 10x		specs	buy
Samsung CL5		9.0 mp, 3x		specs	buy	
Samsung TL320		12.0 mp, 5x		specs	buy	

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