



JOURNEY INTO IMAGINATION

THE KODAK STORY



"In the words of Ralph Waldo Emerson: 'An institution is just the lengthened shadow of a man'....Eastman Kodak Company is the lengthened shadow of one remarkable man.

"George Eastman deserves our abiding admiration as an inventor, business leader, philanthropist and far-seeing citizen of the world. We are confident he would applaud our extending the boundaries of the photographic process he helped shape more than a century ago."

*Colby H. Chandler
Chairman and Chief Executive Officer
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I

NTRODUCTION

He was a high school dropout, judged “not especially gifted” — when measured against the academic standards of the day. He was poor, but even as a young man, he took it upon himself to support his mother and two sisters, one of whom was severely handicapped.

He began his business career as a 14-year-old office boy in an insurance company and followed that with work as a clerk in a local bank.

He was George Eastman, and in the century following his founding of a new photographic dry-plate business, that firm became the world renowned Eastman Kodak Company. Today, it ranks as a premier multinational corporation and one of the 25 largest companies in the United States.

Eastman’s ability to overcome financial adversity, his gift for organization and management, and his lively and inventive mind — all led him through the difficult teens and into successful entrepreneurship by his mid-twenties.

These same qualities enabled Eastman to direct Kodak to the forefront of American industry. Along the way, he pioneered in the establishment of a profit sharing system for employees, as well as retirement, disability and insurance benefits.

On the pages that follow, you’ll learn more of George Eastman’s remarkable accomplishments and a chronology of the company that today is bringing new dimensions to his legacy.



Eastman in his teens.



A self-portrait on experimental film.



Eastman relaxing in his library.



GEORGE EASTMAN...THE MAN

There is a plaque on the lobby wall of Kilbourn Hall, a concert chamber in the Eastman School of Music in Rochester, N.Y. The plaque dedicates the hall to Maria Kilbourn, a touching gesture by George Eastman in remembrance of his mother.

And it is symbolic. The man who created Eastman Kodak Company had a deep love for his mother, with whom he shared difficult times in boyhood and as a young adult. Music was one of the joys of his life and he firmly believed that the progress of the world depends almost entirely on education.

These beliefs and emotions came together when Eastman made the University of Rochester the beneficiary of a gift to establish the Eastman School of Music and to build the Eastman Theatre, home of the Rochester Philharmonic Orchestra.

This philanthropic act, one of many by Eastman, is tangible evidence of the tremendous impact his generosity had on hundreds of thousands of people, and on the City of Rochester.

But building a multinational corporation and emerging as one of the nation's most important industrialists required dedication and sacrifice. It did not come easily.

Boyhood

George Eastman was born to Maria Kilbourn and George Washington Eastman, the youngest of three children, on July 12, 1854 in the village of Waterville, some 20 miles southwest of Utica, in upstate New York. The house on the old Eastman homestead, where his father was born and where George spent his early years, has since been moved to the Genesee Country Museum in Mumfordsville, N.Y., outside Rochester.

When George was five years old, his father sold his nursery business and moved the family to Rochester. There the elder Eastman devoted his full energy to establishing Eastman Commercial College. Then tragedy struck. George's father died, the college failed and the



A childhood photo of Eastman.



Eastman's mother, Maria Kilbourn.



Eastman's boyhood home in Waterville, New York.

and experimented at home in his mother's kitchen at night. His mother said that some nights Eastman was so tired he couldn't undress, but slept on a blanket on the floor beside the kitchen stove.

After three years of photographic experiments, Eastman had a formula that worked. By 1880, he had invented and patented not only a dry plate, but also a machine for preparing large numbers of the plates. He quickly recognized the possibilities of making dry plates for sale to other photographers.

Birth of a Company

In April 1880, Eastman leased the third floor of a building on State Street in Rochester, and began to manufacture dry plates for sale. One of his first purchases was a second-hand engine priced at \$125. "I really needed only a one horse-power," he later recalled. "This was two horse-power, but I thought perhaps business would grow up to it. It was worth a chance, so I took it."

As his young company grew, it faced total collapse at least once when dry plates in the hands of dealers went bad. Eastman recalled them – and replaced them with a good product. "Making good on those plates took our last dollar," he said. "But what we had left was more important – reputation."

"The idea gradually dawned on me," he later said, "that what we were doing was not merely making dry plates, but that we were starting out to make photography an everyday affair." Or, as he described it more succinctly: "to make the camera as convenient as the pencil."

Eastman's experiments were directed to the use of a lighter and more flexible support than glass. His first approach was to coat the photographic emulsion on paper and then pack the paper in a roll holder. The holder was used in view cameras the same way as the holders for glass plates.

The first film advertisements in 1885 stated that "shortly there will be introduced a new sensitive film which it is



believed will prove an economical and convenient substitute for glass dry plates both for outdoor and studio work."

This system of photography using roll holders was immediately successful. However, paper was not entirely satisfactory as a carrier for the emulsion because the grain of the paper was likely to be reproduced in the photo.



Top Left: Eastman's first office was on the third floor of this building on State Street, in Rochester.

Bottom Left: An early ad featuring a slogan coined by Eastman.

Top Right: Eastman in his office.

Bottom Right: The Eastman roll holder made it possible to replace glass plates with flexible film.

Eastman's solution was to coat the paper with a layer of plain, soluble gelatin, and then with a layer of insoluble light-sensitive gelatin. After exposure and development, the gelatin bearing the image was stripped from the paper, transferred to a sheet of clear gelatin, and varnished with collodion.

As he perfected transparent roll film and the roll holder, Eastman changed the whole direction of his work and established the base on which his success in amateur photography would be built. He once said: "When we started out with our scheme of film photography, we expected that everybody who used glass plates would take up films. But we found that the number which did so was relatively small. In order to make a large business we would have to reach the general public."

Advertising

Eastman's faith in the importance of advertising, both to the company and to the public, was unbounded. The very first Kodak products were advertised in leading papers and periodicals of the day — with ads written by Eastman himself.

By 1889, the slogan "You push the button, we do the rest," coined by Eastman with the introduction of the Kodak camera in 1888, was becoming well known. Later, with advertising managers and agencies carrying out his ideas, magazines, newspapers, displays, and billboards bore the Kodak banner.

Space was taken at world expositions, and the "Kodak Girl," with the style of her clothes and the camera she carried changing every year, smiled engagingly

at photographers everywhere. In 1897, the word "Kodak" sparkled from an electric sign on London's Trafalgar Square – one of the first such signs to be used in advertising.

Today, company advertising appears around the world and the trademark "Kodak," coined by Eastman himself, is familiar to nearly everyone.

It was in 1888 that the word "Kodak" was first registered as a trademark. There has been some fanciful speculation, from time to time, on how the name was originated. But the plain truth is that Eastman invented it out of thin air!

He explained: "I devised the name myself...The letter 'K' had been a favorite with me – it seems a strong, incisive sort of letter...It became a question of trying out a great number of combinations of letters that made words starting and ending with 'K.' The word 'Kodak' is the result." Kodak's distinctive yellow trade dress, which Eastman selected, is widely known throughout the world and is one of the company's most valued assets.

Thanks to Eastman's inventive genius, anyone could now take pictures with a handheld camera simply by pressing a button. He made photographers of us all.

Benefiting the Employee

Beyond his inventive genius, Eastman blended human and democratic qualities, with remarkable foresight, into the building of his business. He believed employees should have more than just good wages – thinking that was far ahead of management people of his era.

Early in his business, Eastman began planning for "dividends on wages" for employees. His first act, in 1899, was the distribution of a substantial sum of his own money – an outright gift – to each person who worked for him.

Later he set up a "Wage Dividend," in which each employee benefited above his or her wages in proportion to the yearly dividend on the company stock. The Wage Dividend was an innovation and



Above and bottom right: Three early advertisements demonstrating the ease of photography.

represented a large part of the distribution of the company's net earnings.

The prosperity of an organization, he felt, was not necessarily due to inventions and patents, but more to workers' goodwill and loyalty, which in turn were enhanced by forms of profit sharing.

In 1919, Eastman gave one-third of his own holdings of company stock – then worth \$10 million – to his employees. Still later came the fulfillment of what he felt was a responsibility to employees with the establishment of retirement annuity, life insurance, and disability benefit plans. With these benefits, and the Wage Dividend, employees could confidently look forward to a more secure future.

Carl W. Ackerman, his biographer, writing in 1932, said: "Mr. Eastman was a giant of his day. The social philosophy, which he practiced in building his company, was not only far in advance of the thinking during his lifetime, but it will be years before it is generally recognized and accepted."

Giving Away His Fortune

Eastman is almost as well known for his philanthropy as he is for his pioneering work in photography. In this field, as in others, he put the direction of an enthusiastic amateur to work.

He began giving to nonprofit institutions when his salary was \$60 a week – with a donation of \$50 to the young and struggling Mechanics Institute of Rochester, now the Rochester Institute of Technology.

He was an admirer of the Massachusetts Institute of Technology because he had hired some of its graduates, who had become his best assistants. This admiration, after thorough study, was translated into a handsome gift to M.I.T., eventually reaching \$20 million. It was given anonymously from a "Mr. Smith," and for several years the mysterious "Mr. Smith" was speculated about, even finding expression in a popular M.I.T. song.



Eastman and Thomas Alva Edison collaborated to make motion pictures possible.



The first Kodak camera for the amateur market, loaded with enough film for 100 pictures, was placed on the market in 1888.



Dental clinics were also of great interest to him. Eastman devised complete plans and financial backing for a \$2.5 million dental clinic for Rochester. He then started a mass-production, remedial dental program for children. Dental clinics were also given to London, Paris, Rome, Brussels and Stockholm.

When asked why he favored dental clinics, he replied, "I get more results for my money than in any other philanthropic scheme. It is a medical fact that children can have a better chance in life with better looks, better health and more vigor if the teeth, nose, throat and mouth are taken proper care of at the crucial time of childhood."

Eastman loved music and wanted others to enjoy the beauty and pleasure of music. He established and supported the Eastman School of Music, a theatre and a symphony orchestra. Eastman said, "It is fairly easy to employ skillful musicians. It is impossible to buy appreciation of music. Yet without a large body of people who get joy out of it, any attempt to develop musical resources of any city is doomed to failure." So his plan had a practical formula for exposing the public to music – with the result that the people of Rochester have for decades supported their own philharmonic orchestra.

Interest in hospitals and dental clinics had grown with his work and study of the field. He promoted and brought to fruition a program to develop a medical school and hospital at the University of Rochester, which became as nationally prominent as the university's music school. Rochester is filled with Eastman landmarks that contribute to the enrichment of community life.

His sincere concern for the education of blacks brought gifts to the Hampton and the Tuskegee Institutes. One day in 1924, Eastman signed away \$30 million to the University of Rochester, M.I.T., Hampton and Tuskegee. As he laid down the pen he said, "Now I feel better."

In explaining these large gifts, he said, "The progress of the world depends



Eastman enjoyed spending leisure hours in his workshop.



How newspapers reported his death, March 14, 1932.

almost entirely upon education. I selected a limited number because I wanted to cover certain kinds of education, and felt I could get results with those named quicker and more directly than if the money were spread."

Eastman often made the beneficiary match his gift in some way, so the institution would have the confidence of standing on its own. For him, great wealth brought the greater opportunity to serve.

Leisure Hours

Eastman was reticent and shunned publicity. It seems paradoxical that the man whose name is synonymous with photography should have fewer photographs taken of him, and less known of him, than any other outstanding leader of his time. He could walk down the main street of Rochester without being recognized. But having been denied pleasures in his hard-working youth and middle age, in later years he went hunting for things he had missed, such as music, flowers and paintings, as well as outdoor life.

Eastman lived his philosophy, "What we do during our working hours determines what we have; what we do in our leisure hours determines what we are." A tough competitor, hard-bitten and practical in business, he was gentle and congenial at home or in the field of outdoor enjoyment.

Being a craftsman with tools, he liked working as a carpenter or repairman at his simple hunting lodge in North Carolina. For his many hunting and fishing trips, he thoroughly organized his camping equipment — each item was numbered, packed for space and weight, and each had to have at least two uses. Eastman was an expert cook — his recipes were as accurate as chemical formulas and he was always in charge of the camp cooking.

In his yearly visits to Europe, he toured the art galleries methodically — even cycling from place to place. By the time he could afford masterpieces, he had learned enough to say, "I never buy a painting until I have lived with it in my home." The result: his home became one of the finest private collections of paintings.

The Vision of a Pioneer

Eastman was a modest, unassuming man...an inventor, a technologist, an organizer and executive with vision, a patriotic citizen, a philanthropist.

At the time of his death in 1932, the New York Times editorialized: "Eastman was a stupendous factor in the education of the modern world. Of what he got in return for his great gifts to the human race he gave generously for their good; fostering music, endowing learning, supporting science in its researches and teaching, seeking to promote health and lessen human ills, helping the lowliest in their struggle toward the light, making his own city a center of the arts and glorifying his own country in the eyes of the world."



ODAK...THE COMPANY

In 1879, London was the center of the photographic and business world. George Eastman went there to obtain a patent on his plate-coating machine, and an American patent was granted the following year.

In 1880, he began the commercial manufacture of dry plates. Success of this venture so impressed businessman Henry A. Strong, that he invested some money in the infant concern.

On January 1, 1881, Eastman and Strong formed a partnership called the Eastman Dry Plate Company. Late that year, Eastman resigned from his position at the Rochester Savings Bank to devote all his time to the new company and its business. While actively managing all phases of the firm's activities, he continued research in an effort to simplify photography.

In 1883, Eastman started the trade with the announcement of film in rolls, with the roll-holder adaptable to nearly every plate camera on the market. With the Kodak camera in 1888, he put down the foundation for making photography available to everyone.

This Kodak camera, loaded with enough film for 100 exposures, could be easily carried and handheld during operation. It was priced at \$25. After exposure, the camera and film were returned to Rochester. There the film was developed, prints were made and new film was inserted – all for \$10.

In 1884, the Eastman-Strong partnership had given way to a new firm – the Eastman Dry Plate and Film Company – with 14 shareowners. A successive concern – the Eastman Company – was formed in 1889.

The company has been called Eastman Kodak Company since 1892, when Eastman Kodak Company of New York was organized. In 1901, the present firm – Eastman Kodak Company of New Jersey – was formed under the laws of that state.



The Eastman Dry Plate and Film Co., on State Street, in Rochester, was established in 1884.



Eastman's partner in the original Eastman Dry Plate Company was Henry A. Strong.

At the firm's beginning in 1880, George Eastman was the sole proprietor. When the Eastman Dry Plate Company was formed in 1881, Eastman and Strong became joint proprietors. From the organization of the Eastman Dry Plate and Film Company in 1884 until 1919, Strong was president. During the same period, George Eastman served as treasurer and general manager and as president of the New Jersey holding company. Eastman was named president of the New York company, as well, in 1919, and served as chairman of the board of directors from 1925 until his death in 1932.



Film processing and printing, circa 1890.

Business Principles

Eastman had four basic principles for the business:

- mass production at low cost
- international distribution
- extensive advertising
- a focus on the customer

Eastman saw all four principles as closely related. Mass production could not be justified without wide distribution which, in turn, needed the support of strong advertising. From the beginning, he imbued the company with the conviction that fulfilling customer needs and desires is the only road to corporate success.

To his basic principles of business, he added these policies:

- foster growth and development through continuing research
- treat employees in a fair, self-respecting way
- reinvest profits to build and extend the business

The history of Eastman Kodak Company is one of progress in development of these basic principles and policies.

Mass Production at Low Cost

In the very early years of the company, Eastman was devoted to the idea of supplying the tools of photography at the lowest possible price to the greatest number of people. The rapid growth of the business made large-scale production



This Victorian era photograph for an advertisement demonstrates that picture-taking was easy even for a child.

a necessity. The creation of ingenious tools and processes for manufacturing film enabled the new company to turn out high-quality merchandise at selling prices that put them within the reach of the general public.

In 1896, the 100,000th Kodak camera was manufactured, and film and photographic paper were being made at the rate of about 400 miles a month. In those days, the pocket Kodak camera sold for \$5. Not content with this, Eastman worked toward a camera that would operate simply and efficiently and sell for \$1. The result of this effort was the introduction in 1900 of the first in a long line of popular Brownie cameras.

World Distribution

By the time Eastman launched his dry-plate business in 1880, European interest in photography was keen, but its practice was limited to professionals.

Eastman recognized the potential of the world market for amateur photographers. Only five years after the company was established in the U.S., a sales office was opened in London. Within the next few years, particularly after the introduction of the Kodak camera and Eastman's simplified methods, picture-taking became popular with hundreds of thousands of amateurs.

In 1889, the Eastman Photographic Materials Company, Limited, was incorporated in London, England, to handle distribution of Kodak products in countries outside the U.S. At first, all goods were manufactured in Rochester. Before long, the combined international and domestic demand outpaced plant resources.

Construction of a factory at Harrow, England – just outside London – was completed in 1891. By 1900, distribution outlets had been established in France, Germany, Italy, and other European countries. A Japanese outlet was under consideration, and construction of a factory in Canada was under way with



Camera manufacturing in the 1890s.



Eastman's first overseas manufacturing facility, at Harrow, England, was completed in 1891.

Today, the company has manufacturing operations in Canada, Mexico, Brazil, the United Kingdom, France, Germany, Australia and the U.S. And Kodak products are marketed by subsidiary companies to people in nearly every country in the free world.

The first ad for Kodacolor home movies appeared in 1928.

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BOUT FILM AND CAMERAS

The keys to Eastman's success in making photography a popular leisure-time activity for the masses were his development of roll film and the inexpensive box camera. Although film and cameras are far more sophisticated and versatile today, the fundamental principles behind his inventions have not changed.

A camera exposes an image on sensitized film. When exposed properly, photochemical changes occur in the photographic film. Later, special developing and processing techniques reproduce the recorded image as a photographic negative, from which prints can be made. Color-reversal films produce positive images that can be mounted as slides.

Cameras are available in all shapes and sizes. They can be small and simple to operate, or they can be very sophisticated, with a vast array of mechanical controls, advanced optics, and state-of-the-art electronics.

Despite their differences, though, all cameras contain these elements:

Lens—A glass or plastic element that collects light and focuses an image on the film.

Diaphragm—An "aperture" or opening that controls the amount of light entering the camera. The aperture can be fixed, manually adjusted or automatically controlled. In some cameras, a light-sensitive cell adjusts the opening for varying light conditions. Simple cameras usually have a fixed lens opening.

Shutter—A device that determines the length of time film is exposed to light entering the camera. Fast shutters can "freeze" fast-moving objects.

Body—The light-proof housing for the camera mechanism.

Viewfinder—A lens that allows the photographer to see the content of the picture being taken, either through the lens in single-lens-reflex cameras, or through a separate viewfinder in simpler cameras.



In the early years of the company, film base was manufactured and coated on long glass tables.

Making Film: Art and Science

The two chief parts of photographic film are its base and its light-sensitive emulsion. The base is a transparent, flexible sheet on which light-sensitive emulsions (or layers) are coated.

An emulsion is made up of micro-thin layers of gelatin in which light-sensitive ingredients are suspended. It is the light-sensitive emulsion that is triggered by light to create a chemical reaction, resulting in a photographic image. The base is merely the carrier for the chemicals and the recorded image.

The type of base used for most camera films is cellulose acetate base, which is manufactured from wood. Another form of base is polyester film base, a petrochemical derivative, used for sheet films, such as x-ray film and graphic arts film.

The process starts with cellulose, in the form of cotton linters or wood pulp, which is treated chemically to produce a thick, syrup-like cellulose acetate liquid. The cellulose acetate liquid is then precipitated in the form of pellets, which are washed and dried, and then mixed with solvents to form a clear, honey-like liquid called "dope."

To form the plastic sheet, the dope is coated into a thin layer and the solvents removed. The first plastic film base was made this way on long glass tables. When the solvent evaporated, the sheet was coated with emulsion. After drying, the coated sheet was stripped off the table and wound.

Today, the glass tables have been replaced by machines that contain highly polished coating wheels nearly two stories high. A constant flow of thick dope is spread in a highly uniform layer on the turning wheel with extreme care, since standard thicknesses of film base are measured in ten-thousandths of an inch.

As the wheel turns, solvents evaporate and are removed by air circulation, permitting the dope to dry and then be separated from the wheel as a sheet. For



By the turn of the century, glass tables were replaced with large wheels that allowed film base to be manufactured and coated in a continuous process.

ease of handling, the base is wound in long rolls thousands of feet in length. These are now ready for the sensitizing process, where photographic emulsion is coated on the base.

Emulsion, the Image Recorder

The light-sensitive ingredients in photographic film are silver salts. Kodak starts with bars of extremely pure silver bullion. The bars are dissolved in nitric acid and the resulting crystals are processed to form dry, highly-purified silver nitrate crystals.

At this point, the remaining manufacturing steps must be performed in total darkness. Gelatin is dissolved in pure distilled water and then solutions of potassium iodide and potassium bromide are carefully mixed with it. To this heated mixture is added silver nitrate solution, and the desired light-sensitive silver halide [silver iodide and silver bromide] salts are precipitated as fine crystals. Because these crystals are suspended in the gelatin, the mixture is called an "emulsion."

Once the emulsion is adjusted and tested for desired photographic and physical features, it is piped to large machines where, in a continuous operation, rolls of base are unwound and the emulsion applied to one side. A dried layer of some emulsions can be six one-hundred-thousandths of an inch thick. Color film requires several successive layers of different emulsions and additional color-forming chemicals.

After the film is coated and the emulsion hardens and dries, the film is cut into rolls of the appropriate length and width for packaging in the familiar yellow cartons.

Throughout this process of manufacturing film, a commitment to quality stands out. Kodak films are produced to demanding standards, so that these products perform consistently when purchased anywhere in the world.

Quality, a Kodak Tradition

In the production of film, cameras, and all other Kodak products, quality has been a



Ingots of extremely pure silver are dissolved in nitric acid to form silver nitrate – a light-sensitive chemical that is a key ingredient in photographic film.

hallmark of the company since it began. George Eastman said: "To make good goods requires experience and is a slow matter...but when we get there, we get there to stay."

Today quality has a new and critical meaning for Kodak. To provide a focus for all of our quality programs and efforts, there is a statement of policy:

Eastman Kodak Company is committed to be the world leader in the quality of its products and services. The company is committed to continuous quality improvements in all of its products and services, and in all of its line and staff operations.

All company units will have quality goals consistent with this commitment. This will require teamwork on the part of those who share an interest in the company's success — employees, suppliers, and customers.

At Kodak, quality adds value to every function of every business enterprise. It is a personal commitment, collectively realized: a critical common denominator shared equally by everyone in the Kodak organization and directed solely at the customer.



NEW TECHNOLOGIES

The entrepreneurial spirit that began with Eastman's quest to simplify the complex art of photography remains very much alive more than 100 years later. Today, Kodak is pioneering in the development of new forms of imaging technology – creating, storing, manipulating and reproducing images in ways that were undreamed of in Eastman's time.

Kodak is expanding the boundaries of photographic science and redefining the art of photography: from electrophotographic copiers that set new standards for image quality, when introduced in 1976 – to light-emitting-diode "image writers" capable of printing 92 pages of images a minute – to thermal dye transfer printing of electronic pictures to form high-quality color photographs in only 90 seconds.

In traditional photography, Kodak scientists have literally reshaped the very building blocks of photography by reformulating individual silver-halide grains into tablet-shaped crystals. With a larger surface area capable of gathering more light, these T-GRAIN crystals have made possible high-speed films with excellent sharpness and resolution.

Although amateur picture-taking will continue to be based on advancements in silver halide technology for many years to come, many commercial and industrial imaging needs are being met with alternative technologies being commercialized by Kodak. Among them are:

- photo identification systems that utilize a video camera to capture electronic images and a thermal dye transfer printer to produce high-quality color photo ID cards.
- computerized pre-press publishing systems that enable publishers to electronically "create" all the words, graphics and photographs that would make up an entire magazine or newspaper.
- data storage and retrieval systems that combine laser and optical disk technology capable of storing nearly 6 million pages of information, any page



Kodak's 14" optical disk is the heart of an information storage and retrieval system that can handle a trillion "bytes" of information.



The Videk Megaplus camera contains a Kodak-developed solid-state sensor capable of imaging 1.4 million individual picture elements (pixels).

of which can be accessed electronically in only 12 seconds.

- an electronic still video system that can capture, store, display, transmit, and print electronic pictures, at low cost, for professional and commercial use.
- an electronic printer that utilizes a complex array of light-emitting diodes to print images at a speed of 92 “pages” per minute.
- a video camera for machine vision systems with an image sensor made up of 1.4 million “pixels” or picture elements—nearly six times the resolving power of the average video camera containing 250,000 pixels.



ILESTONES

1878 – George Eastman was one of the first to demonstrate the great convenience of gelatin dry plates over the cumbersome and messy wet-plate photography prevalent in his day.

1879 – Eastman invented an emulsion-coating machine which enabled him to mass-produce photographic dry plates.

1880 – Eastman began commercial production of dry plates in a rented loft of a building in Rochester, N.Y.

1881 – In January, Eastman and Henry A. Strong (a family friend and buggy-whip manufacturer) formed a partnership known as the Eastman Dry Plate Company. In September, Eastman quit his job as a bank clerk to devote his full time to the business.

1882 – The Eastman Dry Plate Company completed transfer of operations to a four-story building at what is now 343 State Street, the company's worldwide headquarters.

1884 – The business was changed from a partnership to a \$200,000 corporation with 14 shareowners. EASTMAN Negative Paper was introduced. Eastman and William H. Walker, an associate, invented a roll holder for negative papers.

1885 – EASTMAN American Film was introduced – the first transparent "film" negative as we know it today. The company opened a wholesale office in London, England.

1886 – George Eastman became one of the first American industrialists to employ a full-time research scientist to aid in the commercialization of a flexible, transparent film base.

1888 – The name "Kodak" was born and the KODAK Camera was placed on the market, with the slogan, "You push the button – we do the rest." This was the birth of snapshot photography as millions of amateur picture-takers know it today.

1889 – The first commercial transparent roll film, perfected by Eastman and his



research chemist, was put on the market. The availability of this flexible film made possible the development of Thomas Edison's motion picture camera in 1891.

1891 – The company marketed its first daylight-loading camera. The manufacture of photographic film and paper was transferred to four newly-constructed buildings at Kodak Park, in Rochester,

and a new manufacturing plant for film and paper was opened in Harrow, England.

1892 – The company became Eastman Kodak Company of New York.

1893 – A six-story Camera Works was built on State Street, in Rochester, to manufacture the growing line of box and folding roll-film cameras.

1895 – The Pocket KODAK Camera was announced.

1896 – One year after the discovery of x-rays, Eastman entered into an agreement to supply plates and paper for the new process. Kodak marketed the first film especially coated for motion picture use.

1897 – Kodak marketed the Folding Pocket KODAK Camera, now considered the ancestor of all modern roll-film cameras.

1898 – The employee suggestion system was begun.

1899 – The company developed the continuous wheel process for manufacturing transparent film base, which had previously been coated on long tables. Eastman awarded Kodak employees a bonus from his personal funds for their "extra good work."

1900 – The first of the famous BROWNIE Cameras was introduced. It sold for \$1 and used film which sold for 15 cents a roll.

1901 – Eastman Kodak Company of New Jersey, the present parent company, was formed. George Eastman became president of the New Jersey holding company,



Top Left: Wet-plate photography in the 1800s was a cumbersome, inconvenient process.

Center Left: Eastman was the first to successfully mass-produce dry plates for photographers.

Bottom Left: Eastman's State Street offices, circa 1890.

Top Right: Kodak Park was opened in 1891 in what was then the "outskirts" of Rochester.

Bottom Right: The original "Camera Works" opened on State Street in 1893.

while Strong remained at the head of the New York company until his death in 1919.

1902 – The KODAK Developing Machine simplified the processing of roll film and made it possible to develop film without a darkroom.

1908 – Kodak produced the world's first commercially practical safety film, using cellulose acetate base instead of the highly flammable cellulose nitrate base. A manufacturing plant was formed in Australia.

1911 – The company's Blair Camera factory in Rochester was renamed the Hawk-Eye Works and a department for the design of optics was established there in 1912. Eastman created a benefit, accident, and pension fund for employees. The company's first safety committee was organized to study accident prevention.

1912 – Dr. C.E. Kenneth Mees, a British scientist, was hired by George Eastman to organize and head a research laboratory in Rochester, one of the first industrial research centers in the U.S. Kodak employees received their first wage dividend.

1913 – The introduction of EASTMAN Portrait Film began a transition to the use of sheet film instead of glass plates for professional photographers.

1914 – A 16-story office building, the company's present worldwide headquarters, was completed at 343 State Street, in Rochester. Three more stories were added in 1930.

1917 – Kodak developed aerial cameras and trained aerial photographers for the U.S. Signal Corps during World War I. Eastman also offered the U.S. Navy supplies of cellulose acetate for coating airplane wings and producing unbreakable lenses for gas masks.

1920 – Tennessee Eastman Company was organized to manufacture wood alcohol for film base.

See photo this, before you see the film.



KODAK
Developing Machines

do away immediately with the dark-room and give better results than the old way. Anybody can make perfect pictures by the Kodak System. Ask your dealer to show you.

Kodak... \$1.00 to \$15.00 Kodak... \$1.00 to \$15.00
Kodak... \$1.00 to \$15.00 Kodak... \$1.00 to \$15.00

KODAK EASTMAN CO.
Rochester, N. Y.

The Kodak Developing Machine made it possible for amateurs to process their own film without a darkroom.

1921 – The Eastman Savings and Loan Association was established to help employees save and to finance home purchases.

1923 – Kodak made amateur motion pictures practical with the introduction of 16 mm reversal film on cellulose acetate (safety) base, the first 16 mm CINE-KODAK Motion Picture Camera, and the KODASCOPE Projector. The immediate popularity of 16 mm

resulted in a network of Kodak processing laboratories throughout the world.

1928 – Motion pictures in color became a reality for amateur cinematographers with the introduction of 16 mm KODACOLOR Film. The first microfilm system, designed to simplify bank records, was introduced by Recordak Corporation, a newly-formed subsidiary of Kodak. Retirement annuity, life insurance, and disability benefit programs were established for Kodak men and women.

1929 – The company introduced its first motion picture film designed especially for making the then-new sound motion pictures.

1930 – Kodak purchased a gelatin manufacturing plant in Peabody, Massachusetts, and formed Eastman Gelatin Corporation.

1931 – Tennessee Eastman began marketing its first cellulose acetate yarn in the textile field. Kodak introduced KODALITH Film and Plates, which replaced the collodion wet plates used in the graphic arts industry. KODAK VERICHROME Film was introduced.

1932 – The first 8 mm amateur motion-picture film, cameras, and projectors were introduced. Tennessee Eastman began production of its first plastic – TENITE Acetate. George Eastman died, leaving his entire residual estate to the University of Rochester. In 1949, his Rochester home was opened as an independent public museum – the International Museum of Photography at George Eastman House.

1933 – Kodak and Western Electric jointly



Kodak Office in the 1920s was a 16-story building – three additional floors were added in 1930.

commercialized high-speed industrial photography with a high-speed camera, synchronized with an electric timer.

1934 – Kodak A.G. (Germany) introduced the first of its 35 mm precision KODAK RETINA Cameras.

1935 – KODACHROME Film was introduced and became the first commercially successful amateur color film, initially in 16 mm for motion pictures. Then 35 mm slides and 8 mm home movies followed in 1936.

1936 – A new home movie camera was announced which used film in magazines instead of rolls – the 16 mm Magazine CINE-KODAK Camera. A year later, Kodak introduced its first 16 mm sound-on-film projector, the Sound KODASCOPE Special Projector.

1938 – The first camera with built-in photoelectric exposure control was developed – the Super KODAK Six-20 Camera.

1939 – Kodak added a READY-MOUNT service for 35 mm KODACHROME Film which made it possible to project slides as soon as they were received from a Kodak processing laboratory. The company began a program of annual fellowship grants to colleges and universities throughout the nation.

1941 – Kodak marketed the versatile KODAK EKTRA Camera which had a shutter-speed range from 1/1,000 to 1 second. Airgraph, or "V-Mail," was developed by Kodak as a system for micro-filming letters to conserve shipping space during World War II.

1942 – KODACOLOR Film for prints, the world's first true color negative film, was announced. Kodak's Rochester plants were awarded the Army-Navy "E" for high achievement in the production of equipment and films for the war effort.

1946 – Kodak marketed KODAK EKTA-CHROME Transparency Sheet film, the company's first color film which could be processed by the photographer with



Cellulose acetate fiber has been produced at Tennessee Eastman since 1931.



Kodachrome film for color slides was introduced in 1935.

newly marketed chemical kits.

1947 – The world's first commercial production of synthetic Vitamin A began at Distillation Products Industries; DPI discontinued Vitamin A production in 1973. Kodak introduced the EASTMAN Television Recording Camera, in cooperation with Du Mont Labs and NBC, for recording images from a television screen.



Kodak developed the "V-Mail" system in 1941 for sending letters to servicemen overseas.

1948 – Kodak announced a 35 mm triacetate safety base film for the motion picture industry to replace the flammable cellulose nitrate base – and received an "Oscar" for it two years later. Fully automatic processing of snapshots was made possible for the first time by the KODAK Continuous Paper Processor – the machine produced 2,400 finished snapshots an hour.

1951 – The low-priced BROWNIE 8 mm Movie Camera was introduced. The BROWNIE Movie Projector was added in 1952, and the BROWNIE Turret Camera was introduced in 1955.

1952 – Kodak received an Oscar for the development of EASTMAN Color Negative and Color Print films, introduced in 1950. Recordak Corporation introduced the new BANTAM Microfilmer with the highest reduction ratio ever achieved – 40:1. Texas Eastman Company began operations in Longview, Texas, for the production of alcohols and aldehydes for the chemical trade.

1953 – The company introduced KODAK Photo Resist, designed for making photolithographic printing plates; the business was sold to Union Carbide in 1987. A new subsidiary, Eastman Chemical Products, Inc., was formed to market products made by Tennessee Eastman and Texas Eastman.

1954 – Kodak began selling color films without the cost of processing included, as the result of a consent decree. The long-term result was the creation of a new market for Kodak, providing products and services to independent

photofinishers.

1956 – The company formed the Apparatus and Optical Division, which included the Camera Works and the Hawk-Eye Works in Rochester.

1957 – The BROWNIE STARMATIC Cameras were introduced. These cameras eventually included seven models and more than 10 million were sold over the next five years.

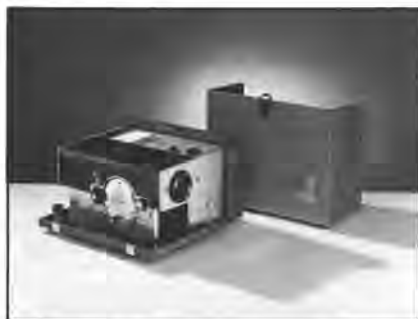
1958 – The KODAK CAVALCADE Projector, the company's first fully automatic color slide projector, was introduced. The KODAK X-OMAT Processor reduced the processing time for x-ray films from one hour to six minutes. The company's first single-lens reflex camera, the KODAK RETINA Reflex Camera, was manufactured by Kodak A.G. in Stuttgart, Germany. KODAK Polyester Textile Fiber, developed by Tennessee Eastman, was made available for use in clothing.

1960 – ESTAR Base (a polyester film base) was introduced to give improved dimensional stability to KODALITH Graphic Arts Films. The RECORDAK RELIANT 500 Microfilmer was introduced and was capable of photographing up to 500 checks or 185 letters in one minute.

1961 – The company introduced the first in its very successful line of KODAK CAROUSEL Projectors, which featured a round tray holding 80 slides.

1962 – The company's U.S. consolidated sales exceeded \$1 billion for the first time and worldwide employment passed the 75,000 mark. John Glenn became the first American astronaut to orbit the earth and Kodak film recorded his reactions to traveling through space at 17,400 miles per hour.

1963 – The line of Kodak INSTAMATIC Cameras was introduced, featuring easy-to-use cartridge-loading film, which eventually brought amateur photography to new heights of popularity –



The Kodak Cavalcade projector was the first automatic slide projector and a precursor of the now familiar Carousel projectors.



Kodak Instamatic cameras, introduced in 1963, boosted consumer picture-taking by making it almost impossible to make mistakes.

more than 50 million INSTAMATIC Cameras were produced by 1970.

1965 – Kodak developed the super 8 format and launched super 8 movies with new cartridge-loading KODACHROME II Film and INSTAMATIC Movie Cameras and Projectors. The new line of “flashcube” model KODAK INSTAMATIC Cameras enabled

picture-takers to take four flash pictures without changing flashbulbs.

1966 – The KODAK 2620 Color Printer incorporated an electronic memory to produce 2,000 to 3,000 prints an hour. “The photograph of the century,” a close-up of the crater Copernicus on the moon, was made by Lunar Orbiter II, using a dual-lens camera, film, processor, and readout device supplied by Kodak. Combined sales of all Kodak units around the world surpassed \$2 billion and Kodak employment throughout the world passed 100,000.

1967 – Relocation of the Camera Works plant was begun on a 600-acre site in the town of Gates, now home for the Kodak Apparatus Division.

1968 – Carolina Eastman Company was dedicated in Columbia, South Carolina, for the manufacture of KODEL polyester fibers and yarn.

1969 – Construction began on Kodak Colorado – a manufacturing unit for films and papers, located in Windsor, Colorado. A very special stereo camera made by Kodak accompanied astronauts Aldrin and Armstrong when they set foot on the moon. Kodak received an “Emmy” Award for its development of fast color film processing for television use. The number of shareowners passed the 200,000 mark.

1971 – Kodak introduced “movies by the light you live in” with KODAK EKTA-CHROME 160 Movie Film (Type A) and two new super 8 movie cameras which, in combination, made possible “existing



“Movies by the light you live in” became possible in 1971 with Kodak XL super 8 movie cameras and a new high-speed film.

light" movies for home use. The Marketing Education Center, a training center offering a variety of educational services to the people who use Kodak products, was officially opened.

1972 – Kodak reduced the popular INSTAMATIC camera to pocket size with the introduction of five different KODAK Pocket INSTAMATIC Cameras, using a new 110-format film cartridge – the line was so popular that more than 25 million cameras were produced in slightly under three years. Worldwide sales passed \$3 billion.

1973 – The company unveiled sound home movies with the introduction of two super 8 sound movie cameras and cartridge-loading super 8 film, magnetically striped for sound recording. Sales surpassed \$4 billion.

1975 – Technical achievements in the field of electrophotography led to the introduction of the KODAK EKTAPRINT 100 Copier-Duplicator, which provided high copy quality and user convenience.

1976 – The line of KODAK EKTAPRINT Copier-Duplicators was expanded to six different models. New KODAK ORACLE and STARVUE microfilm products were introduced, providing high-speed, automated retrieval of the microfilmed images. New Kodak instant cameras, and a print film for self-developing color prints were announced.

1977 – Arkansas Eastman Company, the newest member of the Eastman Chemicals Division, began commercial production of organic chemicals.

1978 – Eastman Chemicals Division introduced KODAPAK Polyester Plastic for use in manufacturing beverage bottles.

1980 – Kodak celebrated its 100th anniversary. The company announced its entry into the clinical chemistry market with the KODAK EKTACHEM 400 Analyzer, utilizing dry-process chemistry.

1981 – Company sales surpassed the \$10 billion mark.



Actress Cybill Shepherd helped Kodak introduce its popular pocket Instamatic camera line in 1972.

1982 – Kodak launched “disc photography” with a line of compact, “decision-free” cameras built around a rotating disc of film. KODACOLOR VR 1000 Film was introduced, utilizing a new T-GRAIN Emulsion technology, which represented a major breakthrough in silver-halide emulsions.

1983 – The KODAK KAR-4000 Information System provided advanced capabilities for computer-assisted storage and retrieval of microfilm images. Tennessee Eastman began operation of the only commercial plant in the U.S. for making industrial chemicals from coal. The KODAK EKTACHEM DT60 Analyzer, a desk-top unit, brought the convenience of dry-chemistry blood serum analysis to the physician's office.



Eastman Chemicals Division has become a major supplier of plastic beverage containers since introducing Kodapak polyester plastic in 1978.

1984 – The company announced a full line of flexible floppy disks for personal computers and introduced Kodak videotape cassettes in 8 mm, Beta, and VHS formats. A major restructuring of the company resulted in the creation of 17 business units and a new Life Sciences Group.

1985 – The company introduced two new image management systems – the KODAK EKTAPRINT Electronic Publishing System (KEEPS), and the KODAK Information Management System (now the KODAK KIMS System). Minilab systems for photofinishers were also introduced, offering consumers exceptionally fast photo print service.



Kodak scientists introduced the world's first 9-volt lithium power cell designed for consumer use in 1986.

1986 – The company introduced two new KODACOLOR VR-G films and re-entered the 35 mm camera market with two new KODAK VR 35 Cameras. The company also announced KODAK ULTRALIFE Lithium Power Cells, the world's first 9-volt lithium cells for consumer use, and entered the general consumer battery market with a line of KODAK SUPRALIFE Alkaline Batteries. Advances in technology from Kodak included the world's first electronic image sensor with 1.4 million “pixels,” or picture

elements; a 14" optical disk capable of storing 6.8 billion "bytes" of information; and a printer using light-emitting diodes to print images at speeds of up to 92 pages a minute. Kodak entered a new health-care business with the establishment of its Eastman Pharmaceuticals Division.

1987 – The company entered the electronic still-video market with seven products for recording, storing, manipulating, transmitting and printing electronic still video images. Also announced was a new clinical test to detect AIDS and T-cell leukemia. Construction was begun on a new state-of-the-art sensitizing plant in Rochester for coating color films for professional and motion picture use.

1988 – Kodacolor VR-G films were renamed Kodacolor Gold films. The company introduced a high-speed color copier. Construction began on a new bio-products manufacturing plant in Cedar Rapids, Iowa. Kodak acquired Sterling Drug, Inc.

Back Cover: A 1900 magazine advertisement for the popular Brownie camera, which sold for \$1 and truly made photography a popular pastime for all.

EASTMAN KODAK CO.'S BROWNIE CAMERAS **\$1.00**

Make pictures $2\frac{1}{4} \times 2\frac{1}{4}$ inches.
Load in Daylight with our six
exposure film cartridges and are
so simple they can be easily

**Operated by
any School
Boy or Girl.**

Fitted with fine Meniscus
lenses and our improved
rotary shutters for snap shots
or time exposures. Simply
made, covered
with imitation
leather, has
durable hinge
and produce the
best results.
Has four page
booklet giving
full directions
for operating the
camera, together
with chapters on
"Snap Shots,"
"Time Expos-
ures," "Flash
Lights," "Ex-
posure," and
"Printing," 100
x 125 x 100
millimeter.



Brownie Camera for $2\frac{1}{4} \times 2\frac{1}{4}$ pictures	\$1.00
Transparent-Film Cartridge, 6 exposures, $2\frac{1}{4} \times 2\frac{1}{4}$.15
Paper-Film Cartridge, 6 exposures, $2\frac{1}{4} \times 2\frac{1}{4}$.10
Brownie Developing and Printing Outfit	.75

The Brownie Camera Club.

Every boy and girl under sixteen years of age should join the BROWNIE CAMERA CLUB. Fifty
Kodaks, valued at over \$500.00, will be given to the members of the club as prizes for the best pictures made with
the Brownie Camera and every member of the club will receive a
copy of our Photographic Art Brochure. No initiation fee is asked if
you own a Brownie. Ask your dealer or write us for a Brownie
Camera Club Constitution.

Send a dollar to your local
Kodak dealer for a Brownie
Camera. If there is no Kodak
dealer in your town, send us
a dollar and we will ship the
camera promptly.

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