

History of Digital Video 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.

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.

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.

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).

However, Kodak entered into an aggressive co-marketing campaign to promote the DC40 and to help introduce the idea of digital photography to the public. Kinko's and Microsoft both collaborated with Kodak to create digital image-making software workstations and kiosks which allowed customers to produce Photo CD Discs and photographs, and add digital images to documents. IBM collaborated with

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Kodak in making an internet-based network image exchange. Hewlett-Packard was the first company to make color inkjet printers that complemented the new digital camera images.

Source: inventors.about.com