

Video Finds Its Memory

Lead: In the early days, television was very exciting. It had one major problem. No memory. Once broadcast, a live television program was gone.

Intro.: *A Moment in Time* with Dan Roberts.

Content: The networks had devised a way of filming live telecasts. The machine was a kinescope, actually a 35 mm movie camera which filmed live East Coast television for rebroadcast programs three hours later in the West. “Kines” were grainy, had trouble getting the television picture in

sync with the movie camera, and were very expensive. By 1954 the networks were using more movie film than Hollywood.

The solution was to store the video signal magnetically, but that was easier said than done. The transfer of audio signals to magnetic steel wire had been perfected in the 1930s but wire was not dense enough to store the huge amount of information in a video signal. Before World War II, the Germans had developed an audio recorder that used cellulose tape covered with tiny particles of iron. A U.S. Army Signal Corps officer, Jack Mullin, found one of these machines in a Radio Frankfort studio at the end of the war. He brought the machine back

to the United States, modified it, and interested pop singer Bing Crosby in using it to tape his weekly radio program. Crosby hired him and encouraged him to begin applying the technology of audio tape recording to television.

In 1951 three companies were hard at work developing the video tape recorder: Bing Crosby Enterprises, RCA under General David Sarnoff, and a little-known electronics company based in Redwood City, California called Ampex. The key to winning this race was getting all that information through a video head. Crosby and RCA used a machine that dragged many yards of tape on huge spools past a stationary video head.

This was expensive, cumbersome, and in the end failed to produce a satisfactory picture. At Ampex the team, which included a brilliant high school student named Ray Dolby, perfected a mechanism much like a wheel with four video heads spinning at great speed. The tape was then slowly dragged past the spinning heads.

On April 14, 1956, the Ampex VT-100 the first commercial videotape recorder was unveiled at the Chicago meeting of the affiliate stations of the CBS Network. Television at last had a memory.

At the University of Richmond, this is Dan Roberts.

Resources

Wolpin, Stewart. "The Race to Video," *American Heritage of Invention and Technology*, 10:2 (Fall, 1994), 52-62.

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