The Early History of Ampex

• Alexander Mathew Poniatoff was born March 25, 1892, in the Kazan District of Russia.

• His first job in the United States was with General Electric in New York as an electrical engineer.

• He moved to San Francisco in 1930 and worked for Pacific Gas & Electric. In 1940 he moved to the Dalmo Victor Company and patents were issued in his name for design of temperature controls used on permanent wave machines. Eager for product development he joined Westinghouse in Sunnyvale. In 1942 he went back to work for Dalmo Victor to develop Navy Airborne radar scanners. Two components needed in the Dalmo Victor system, sophisticated motors and generators, were virtually impossible to obtain from exiting sources. Mr. Poniatoff took this opportunity to establish his own company. He rounded up a handfull of men, outfitted the abandoned furniture loft above Dalmo Victor and started Ampex Electric and Manufacturing Company.

• Ampex Electric and Manufacturing Company was formed by Alexander M. Poniatoff, November 1, 1944, in San Carlos, California. Mr. Poniatoff was 52 years of age at the time.

• The motors and generators built by Ampex Electric and Manufacturing Company for the U.S. Navy radar units were so reliable -not a single Ampex unit failed in service- that the Navy made the unprecedented move of appointing Ampex as the single supplier in spite of military rules that there must be a minimum of two manufacturers for critical items.

• April 25, 1948 marked the first use, by American Broadcasting Comapny, of the "Ampex", an audio recorder, Model 200, for the recording of the Bing Crosby radio show. It allowed for the first ever tape delayed radio broadcast. Eventually 112 of the original units were built and sold at the price of $4,000 each. The historic Model 200 was built through 1948. Decca Records was the second customer which used the 200 for mastering of phonograph records. The Ampex Model 300 was shipped in July, 1949 and design patents of the 300 became the NAB standard.

• Raython ordered 25 Model 301s (modified Model 300 audio recorders) for instrumentation recording in the early 50's.

• The Model 500 was the first militarized unit built for use by the U.S. Navy.

• In 1955, Ampex built the first instrumentation recorder which could be used by industry and science that did not need to be adapted or modified for different customers.

• The first prototypes of the FR-200, digital tape transport, were shown at the Eastern Computer Conference in Boston in late 1955 and again at the Western Joint Computer Conference in San Francisco in February, 1956. Some of the first customers for the new transport included International Business Machines, Remington Rand Corporation, the Massachusetts Institute of Technology, Philco, and National Cash Register.

• Also in 1955, the first Todd-AO film -*Oklahoma*- was released featuring the new six-track sound system developed by Ampex.

• The introduction of the first practical videotape recorder, the Ampex VRX-1000, took place on March 14, 1956 at the National Association of Radio and Television Broadcasters in Chicago. It was later renamed the Mark IV.

• In March, 1957, Charles Ginsburg accepted, for Ampex, an Emmy for technical achievement, for development of the video recorder.

• An Ampex color videotape recorder is used to record the Nixon-Khrushchev "Kitchen Debate" at the Moscow Trade Fair, July, 1959.

• December 1960, Ampex was presented with an *Oscar* for technical achievement by the Academy of Motion Picture Arts and Sciencees for its theater sound system.

• The Ampex Computer Products Company introduced the LQ, the first commercially available large capacity ferrite core memory with a rapid cycle time of 1.5 microseconds. Not even giants in the computer field such as IBM had been successful in developing such a product.

• The VR-1500 portable television recorder was introduced by Ampex in December 1962 and utilized helical scan recording.

• In 1963, Ampex developed Terabit memory, which used videotape technology for large capacity storage of digital information.

• Also in 1963, EDITEC was perfected. This unit gave broadcast television editors frame-by-frame recording control, simplifying tape editing and making animation effects possible.

• The VR-2000 was introduced at the 1964 NAB convention in Chicago. This was a high band videotape recorder capable of the color fidelity needed to make good quality color broadcasting feasible. Ampex received its second Emmy for its development in June 1967.

• Ampex *Dimension 150* was introduced to theater audiences in 1967. It was an eight-track stereo sound system that featured five speakers behind the screen and groups of speakers throughout the theater for off-screen sound effects.

• ABC went on the air in Vail, Colorado for the "World Series of Skiing", with the Ampex-developed HS-100 disc recorder in March, 1967. It was the beginning of "instant replay" because of its ability to rapidly playback short segments of a program in normal, slow, or stop action. It marked the first use of a magnetic disc for color video recording and triggered a new family of Ampex products: the HS-200 which was used in broadcast, education, x-ray technology and scientific experimentation.

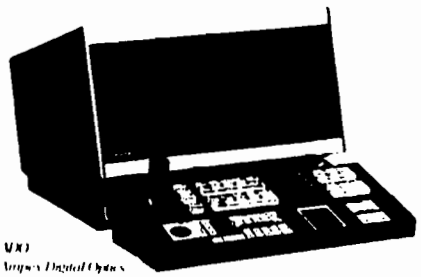
• Ampex introduced the first battery-powered broadcast recorder, the VR-3000, with high band color compatibility in 1967.

• The AVR-1, the replacement machine for VR-1000s and VR-2000s, was introduced in 1970.

• In 1970, the Ampex ACR-25, an automatic library system video cassette recorder, was marketed for the programming/playing of short duration spots for television stations.

• 1974 saw the introduction of the AVR-2, the first modular quadruplex recorder/reproducer for professional broadcasters. It required one-half to one-third the operating space required by other quad recorders.

Ampex History



VR1
Ampex Digital Optics

A.M. Poniatoff, an electrical engineer, founded Ampex in 1944, naming the company after his initials plus "ex" for "excellence." The California company built airborne radar motors and generators for the U.S. Navy.

The Birth of Magnetic Recording in America

At war's end in 1945, with military contracts drying up, Poniatoff began his search for a civilian product. He found his opportunity in professional magnetic audio tape recording, which the Germans had developed before World War II. Ampex engineers introduced America's first professional audio tape recorder in 1947 for radio and studio recording. Bing Crosby became the first U.S. performer to use tape technology on the air. Within one year, the name "Ampex" had become synonymous with audio recording throughout the world.

Ampex' mastery of the technology of recording on tape quickly led to other opportunities:

1950 – the world's first magnetic instrumentation and data recorder for fixed-base, and later in-flight, use

1951 – the first multi-track audio recorder derived from multi-track data recording technology; and the first magnetic theater sound system, made for Todd/AO CinemaScope.

1955 – the first computer tape drive

1956 – an invention with profound impact on 20th Century life, the world's first practical videotape recorder, or "VTR," which went on the air from Hollywood in 1956 with "Douglas Edwards and the News" on CBS Television

1957 – by acquisition, Ampex established itself as a supplier of tape.

Development of The Government Market

Beginning in 1949, Ampex has applied its magnetic recording technology skills to military fixed-base and in-flight recording needs. A diverse instrumentation product line has followed:

1950 – the first-ever "dedicated" instrumentation recorder

1955 – the first airborne magnetic recorder

1957 – the FR-100, used for data recording on almost every U.S. space mission

1959 – magnetic core memories, non-volatile and impervious to radiation

1977 – the HBR-3000, a high bit rate, high-density magnetic recorder for logging and storage of electromagnetic data

1978 – the parallel transfer disk drive for simultaneous access to multiple data tracks

1983 – the DCRS, digital cassette recorder system, offering compact cassette storage of the equivalent of 16 computer tape reels on one six-inch cassette.

Ampex History

Development of The Broadcast Market

Ampex followed its introduction of the world's first videotape recorder with a line of successful tape recorders and digital video equipment matched to broadcasters' needs:

1961 – the first commercial helical scan videotape recorder, the basis for *all* videocassette equipment made right up to today

1964 – the first electronic video editor, introducing the technique for all video program production today

1967 – the first portable color VTR, along with the first instant replay machine featuring stop-action, slow-motion and color – two inventions that changed televised sports coverage and the very way games themselves are played

1978 – the one-inch Type C helical scan recorder, the industry standard for video programming in the 1980s

1977 – the Electronic Still Store, the way producers store video images for later editing and broadcast

1980 – Ampex Video Art, for artistic creation of broadcast images to complement camera input

1981 – Ampex Digital Optics, used to generate special effects incorporating rotation and perspective.

These video innovations have secured Ampex a dominant position as a supplier to the broadcast industry of the highest quality video recorders and digital image processors.

Today Ampex offers the market a full range of professional studio equipment: video editors; switchers; video paint and graphics systems; electronic still stores; digital special effects devices; and the precision blank tape that yields top performance.

Ampex *has* an impressive record of technological innovation.

Every videotape and videocassette recorder made today employs basic Ampex video patents.

Every day, people throughout the world watch Ampex technology bring color and action into their homes.

However, the company has not always capitalized fully on its inventions.

AWARDS RECEIVED BY AMPEX CORPORATION

Emmys:

1956 -- Development of the first practical videotape recorder.

1967 -- Development of high-band color videotape recording.

1979 -- Development of AST^{tm} Automatic Scan Tracking technology.

1979 -- Co-development of the Type C video recording format.

1981 -- Development of the first digital still store.

1983 -- Development of the ADO^{tm} digital special effects system.

1984 -- Co-development of the VPR-5 portable Type C videotape recorder.

1986 -- Development of the VPR-3 microprocessor based production VTR.

1986 -- Development of the Zeus^{tm} picture processor/time base corrector.

Other Awards:

1979 -- Geoffrey Parr Award, Royal Television Society of London, for the development of Automatic Scan Tracking that provides instant replay and slow motion capabilities for Type C helical-scan VTRs.

1961 -- Oscar Award presented by the Academy of Motion Picture Arts and Sciences for development of a multi-purpose theater sound system popularly known as Todd A-O.

1986 -- Pioneer Award from the Videotape Producers Association (VPA) in recognition of the creation of the first videotape recorder.

1985 -- VPA Monitor Award for special achievement in engineering for the VPR-5 portable Type C VTR.

1983 -- VPA Monitor Award for engineering achievement for the introduction of the ADO^{tm} digital special effects system.