



AIL History

As extracted from the 1991 issues of the AIL Record.

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1941 The Columbia University Division of War Research begins to organize its "airborne project" under contract number OEMsr-20, which also covered operations at the Underwater Sound Laboratory at New London, Connecticut.

1942 Airborne Instruments Laboratory begins production of the "Mark IV-B2 MAD." The Magnetic Airborne Detector, used to locate submerged submarines, helps turn the tide of the Battle of the North Atlantic.

1942 AIL begins work on the AN/ASQ-2, a system which would automatically fire markers and retro-bombs for the location and destruction of submerged submarines. This is a refinement of the Magnetic Airborne Detector, AIL's first product.

1942 Airborne Instruments Laboratory, still part of Columbia University, moves to 150 **old** Country Road, Mineola.

1944 The AIL Magnetic Attack Trainer 3 (MAT-3) is placed in operation at Key West, Florida. The MAT-3 was used by the Airship (Blimp) Antisubmarine Training School.

1944 The first V-2 rocket is fired at Paris. AIL subsequently develops a ground-based jammer (shipped in the fall of 1944) and an airborne jammer (AN/ARQ-11), ten of which were delivered in late 1944 and early 1945.

1945 The U.S. drops Atomic bombs on Hiroshima and Nagasaki. Japan surrenders on August 14th. AIL's research contracts with the U.S. government are cancelled effective August 31st. Hector Skifter scrambles to locate funding and keep AIL's scientists and engineers together as an independent corporation.

1945 AIL begins its life as a separate corporation. Development contracts in the first year totaled approximately \$1 million. American

Airlines provided working capital until joint ownership by the airlines could be finalized.

1946 AIL's first Retirement Income Plan becomes effective. 47 employees enrolled in the plan and contributes a total of \$413.10 per month. ALL, in turn, contributes \$466.89 per month. Within 10 years, close to 500 employees contribute to the plan.

1949 The Berlin Airlift officially ends. The airlift provided 2,325,000 tons of food, fuel and supplies in the course of 194,489 flights. AIL air traffic control systems made the airlift possible.

1954 Laurence Rockefeller and the American Research and Development Corporation each sell 5,000 shares of AIL stock to the general public.

1955 AILER Fred Kaplar breaks his leg sliding into first base in a softball game against Fairchild Camera & Instrument. The AIL team was so upset that they lost the game 15 to 4.

1955 The Airborne Recreation Association holds a Beach Party at Jones Beach. The staff eats 50 pounds of hamburgers and hot dogs.

1955 AIL is featured on the Quentin Reynolds program, "Operation Success," on Channel 4.

1956 AIL adds a computer division through a new wholly-owned subsidiary, Mountain Systems, of Thornwood, New York.

1956 AIL exhibits at the Mineola Fair and Industrial Exhibition at Roosevelt Raceway.

1956 The AIL Record has a story about the AIL Astronomy Club. Members of the club built an optical telescope (a ten inch Newtonian Reflector), including grinding the mirror. The telescope only costs \$100 but required almost 400 hours of labor by the club members.

1957 AIL's Cytoanalyzer, a mass screening device for

PAP smears, is featured on Edward R. Murrow's "See It Now" program on Channel 2.

1957 AIL begins an 8 week summer work experience program for 21 juniors and seniors from Mineola and Westbury High Schools. AIL's program is a pioneering one in the defense industry.

1957 AIL begins its first training program for new employees in the electrical assembly department. The program compresses the normal experience months of electrical assembly work into 40 hours of intensive training.

1957 AIL equipment permits Bell Telephone Researchers to simulate voice transmission over great distances. This offered significant savings over other types of testing.

1957 The first women begin work in the harness room of the Electrical Assembly Department. There were 10 members in the first group of "Wirewomen Trainees."

1957 As part of radar tests, AIL builds its largest model plane ever: a 1/8th scale model of a Boeing B-47. The model's wingspan was $14\frac{1}{2}$ feet.

1958 AIL ships a MICROTOL system to IBM's Endicott, New York, manufacturing plant. The AIL equipment cuts IBM's inspection time on cams from 12 hours to 12 minutes.

1958 AIL is acquired by Cutler-Hammer, a Milwaukee based company founded in 1892. At the time of the acquisition, Laurence Rockefeller owns 20% of ALL. (He had been an investor since 1950). The combined sales of ALL and Cutler-Hammer in 1958 totals \$81 million.

1958 Idelwild Airport holds the official dedication of an AIL ASDE (Airport Surface Detection Equipment) system to control movement of planes and vehicles on the ground.

1958 AIL develops an EKG for measuring a pilot's action during flight. Earlier EKG's required the patient to be at rest.

1958 AIL's AN/BDQ-1, a radiation monitoring system is aboard the U.S. Navy Submarine "Skate" it sails under the Arctic ice cap.

1958 The Engineering and Production Division moves into AIL's enlarged facility at 971 Stewart Avenue which was formerly occupied by the Castro Convertible Corporation.

1958 At the annual Five Year Club dinner, the club's first honorary membership is given to Philip Ryan, President of Cutler-Hammer

1959 The beginning of the move to the new Melville plant. The Research and Engineering Division, is the first to move, reporting for work in Melville on May 18, 1959.

1959 AIL is awarded the prime contract on the ADS-1 (later named the USD-7), the most sophisticated airborne system of its type ever ordered. Among the subcontractors to AIL were Sperry Gyroscope. Raytheon, and Sylvania

1959 AIL receives an \$8 million Air Force prime contract for 29 Video Integrating Groups (VIG) to filter radar data and eliminate interference. John Clarke and John Bischoff head the project.

1959 The FAA puts the new Air Traffic Control Radar Beacon: Although AIL developed the "defruiter" portion of the equipment, AIL's main role was that of evaluator, critic, and synthesizer in assisting the FAA in developing a safe and useable system.

1960 AIL begins a training program for its secretarial staff.

1960 Hector Skifter resumes his duties as President of ALL after a 14 month leave of absence to serve in Washington as Assistant Director for Defense Research & Engineering (Air Defense) in the Department of Defense.

1960 Mechanical sandwich dispensers are removed from the Melville facility. They are replaced by an in-plant luncheon ordering service operated by Barnes Commissary

1960 Cutler-Hammer is rated the 13th best managed company in America, according to the 171 company executives on the *Dun's Review* President's panel. The top 20 included 18 industrial giants (Fortune 110 or less) and 2 smaller companies: Cutler-Hammer and Texas Instruments. The larger companies included

DuPont, General Electric, General Motors, IBM, 3M, AT&T, Kodak, Proctor & Gamble, Esso, Ford, and Nabisco.

1961 On June 24th, the ALL developed, "Topside Sounder", satellite is launched. The satellite is designed to measure the degree to which the ionosphere reflects radio waves. The "Topside Sounder" reached a peak altitude of 633 miles.

1961 AIL's Apparatus Division begins selling a Nuclear System for measuring the stock contents of an operating blast furnace. Called "Stockray", it used an arrangement of radioactive sources and radiation detectors. AIL previously had developed the monitoring devices for U.S Nuclear submarines.

1961 AIL exhibits at WESCON (Western Electronic Show & Convention in San Francisco. AIL distributes 10,000 copies of a 62 page book, "A Technical Review of Some Programs in A popular article describes a radio system for In re-entry guidance of a space vehicle ("Spacescan and the feasibility of a manned re-entry vehicle ("Dyna-Soar") landing in a predetermined area.

1961 AIL's third military marketing office is opened in Dayton, Ohio, near Wright Patterson Air Force Base.

1961 The Duplicate Bridge Club holds its first meeting of the 1961-62 season.

1962 Larry Paine of the ALL Medical and Biological Physics Department takes first place in the economy run sponsored by the Volkswagen Club of Long Island. Paine averages 51.8 miles per gallon over a 100 mile course from Wantagh to Patchogue and back again over regular roads in Sunday afternoon traffic. During a late night tune-up run on the Sunken Meadow Parkway, Paine's 1960 V.W. averages 76 miles per gallon.

1962 Governor Nelson Rockefeller tours AIL's Deer Park plant and meets numerous staff members.

1962 A survey reveals that the average age of AILstaff members is only *35.31* years.

1962 AIL installs the first Data-Phone in Suffolk It is used by the Department of Aviation Systems Research in a project involving a hyperbolic position determining system

1962 The USD-7 system undergoes its first flight test in Greenville, Texas. The USD-7 award of \$38.9 million in 1959 was AIL's largest contract to date.

1963 The Department of Aviation Systems Research, working under a 3 year contract with the Federal Aviation Administration (FAA), develops a mathematical model that forms the basis for a computer program capable of predicting the maximum practical operating capacity of any airport.

1963 Walter E. Tolles agrees to teach a special course on electronic methods in clinical medicine at the Downstate Medical Center. Tolles joined AIL in 1942 and in 1955 established AIL's Department of Medical and Biological Physics. He left ALL in 1968 to complete his doctorate in biophysics.

1963 President John F. Kennedy appoints Dr. Eugene F. Fubini, one of the original AILers, as Assistant Secretary of Defense for Research and Engineering.

1963 AIL uses a full-scale mockup of the Apollo spacecraft to test the antennas it developed for the ground-based recovery teams. The AIL antennas are to be used for homing signals and voice communications.

1963 Membership in the 5 year club passes the 1,000 mark. Club membership doubled in just three years.

1963 Fortune magazine includes an article on "The Transistorized M.D." which highlights AIL's efforts to scan and interpret electrocardiograms.

1964 The computer group of Aviation Systems Research acquired an IBM 1620-11 computer, the first of its kind installed on the East Coast. This state-of-the-art computer has an internal memory of 60,000 characters and a disk pack capable of holding 4 million characters. AIL's computer group had been organized in 1958 with a staff of 5 people. By 1964 there were 17 people in the group.

1964 On July 25th, Dr. Hector R. Skifter, AIL's founder and

first president, dies at the age of 63. In September 1945 Dr. Skifter led the effort to organize AIL as a separate corporation, almost overnight, following the dropping of atomic bombs on Hiroshima and Nagasaki the rapid surrender of Japan.

1964 A traffic light is installed at the intersection of Commack Road and Grand Boulevard1964 .

1964 ALL delivers a payload to NASA that will measure a little-known span of the cosmic noise spectrum (radio frequencies emitted by planets and stars).

1965 Total coverage of AIL staff members in the Group Life Insurance Plan tops \$100. million

1965 A new ALL Waveguide Glide Slope Antenna has its first operational installation at Nice Airport.

1965 The Department of Medical and Biological Physics completes a 3 year development by delivering the initial components of an automated clinical laboratory system to the National Institutes of Health in Bethesda, Maryland.

1965 The first Hector Skifter Memorial Scholarship is awarded to Leonard Meyer, son of John A. Meyer. He used the \$500 grant toward his engineering program at C.W. Post.1965 The first Hector Skifter Memorial Scholarship is awarded to Leonard Meyer, son of John A. Meyer. He used the \$500 grant toward his engineering program at C.W. Post.

1965 The first annual AIL Handicap Yacht Race is held off Lloyd's Point, Huntington. Twelve sailboats participate.

1965 Effective October 1, the ALL Retirement Income Plan undergoes its first major revision since-its establishment in May 1946. The main change is that the basic plan is now non-contributory for employees.

1965 AIL honors its first twenty-year employees: Sidney J.Brass; Cyril H. Eady; Winfield E. Fromm; Lyman C. Ihrig; John Masek; James A McDonough; Charles B. Miller; Donald M. Miller; George W. Morton; George F.Seitz; Rodney F. Simons; and Walter E. Tolles.

1966 Effective June 1st, staff members with 20 or more years of continuous service receive 20 days paid vacation. In the first year, 34 employees are eligible.

1966 AIL Ham Radio Club has 81 members and is issuing a monthly newsletter.

1966 A front page story in *Electronic News* discusses the AIL developed PPS-5 Portable Battlefield Radar. One unit is being tested in Viet Nam.

1966 AIL wins a production contract for the AN/PPS-5 portable battlefield radar. The PPS-5 can detect personnel and vehicles at a distance of 6 miles. AIL began developing the PPS-5 in 1960.

1966 Manfred T. Hall becomes the first 20 year employee to retire. He came to AIL in January, 1946 from Harvard University

1966 Governor Nelson Rockefeller visits the ALL Deer Park plant. "Rocky" shakes the hands of hundreds of ALL employees during his whirlwind visit.

1966 The AN/PPS-5 portable battlefield radar is being tested in Germany by NATO. While the PPS-5 was being transferred by ship in the North Sea, the ship's radar went dead in a heavy fog. The crew unpacked the AIL portable radar which worked perfectly and saved the day.

1966 On October 29th, the Viet Nam war becomes a personal reality at ALL. William G. Mansfield of Massapequa Park is killed in action, the first AILER to give his life in Viet Nam. Mansfield, 21 years of age, had worked at ALL as a trainee in the Machine and Sheet metal Shops for the 11 months immediately prior to his induction into the armed services

1967 AIL takes possession of a 150,000 square foot Research and Development Building in Farmingdale, that formerly was part of Republic Aviation.

1967 AIL's "Christmas in July Program" sends 51 needy children to summer camp.

1967 The "Sound Off, Please" column in the AIL Record contains the following complaint: "Why is the company permitting the young girls and women to prance about in these disgustingly short mini outfits? I am not referring to the hemlines one or two inches above the knee, but to the hemlines six to eight inches below the waist!... This mode of dress definitely does not belong in a place of employment."

1967 AIL is awarded a \$635,732 contract for the development of a tactical aircraft scanning system called A-Scan. The system will transmit

azimuth and elevation guidance to approaching aircraft by means of angle-coded scanning beams. Two people will be able to install an operating system within ten minutes.

1968 AIL's Applied Electronics Division delivers a 10.6 micron infrared heterodyne receiver to NASA's Goodard Space Flight Center. It will be used for pioneering research in laser communications in space. AIL began work in infrared technology in 1964.

1968 First contractual delivery of EA-6B equipment made to Grumman.

1968 Donald M. Miller is appointed Executive Vice President of AIL's parent company, Cutler Hammer of Milwaukee. John D. Dyer becomes the 3rd president of AIL and Winfield Fromm becomes Executive Vice President.

1968 NBC and ABC use the ALL Model 4041 Radio Broadcast Microphone to cover the political conventions. This portable system weighs just **3 1/4** pounds and features a hand-held microphone and a radio headset.

1968 "The Front Office" column appears in the AIL Record for the first time. It was written by President John Dyer.

1969 AIL establishes a maternity leave policy providing for "reinstatement of employment for those women who left ALL temporarily because of 'blessed events'."

1969 The name of the company officially changes from "Airborne Instruments Laboratory, Division of Cutler-Hammer" to "AIL, A Division of Cutler-Hammer".

1969 On July 20th, the world watches the first humans walk on the moon. AIL-built receiving stations in the world-wide Apollo and TV communications networks play a key role in making this possible.

1969 AIL is awarded a \$40.4 million contract for the AN/TPX-42 air traffic control system. It will provide 3-dimensional position

data correlated on the controller's display with aircraft identity

1970 AIL's Radar Engineering Department receives a \$1.4 million Coast Guard contract to develop a new airborne radar to detect small boats in distress.

1970 AIL's new Quality Performance Program helps Electrical Assembly Area 01 achieve zero defects in just 13 weeks.

1970 The EA-6B program team delivers its first production On-Board System one month early.

1970 The Sheet Metal Shop achieves zero defects for a week. This accomplishment was due to the combined efforts of 90 staff members on the day and night shifts.

1971 *Aviation Week and Space Technology* features a 24 page story about ALL's C-SCAN (Carrier System for controlled Approach of Naval Air craft), an instrument landing system for aircraft carriers.

1971 On June 5th, 2,830 visitors attend "Saturday at ALL '71," an open house for families and close friends of AIL staff members. This is the second time in 25 years that ALL held such an open house.

1971 The first Quality Improvement Awards for the Manufacturing Division are presented to the Harness Area and the Paint and Finish Area.

1971 The ALL Radio Astronomy Group listens to Apollo 15 on a homemade antenna. They picked up the 13 watt transmission (1/4 of the output of a light bulb) at a distance of a quarter of a million miles away. While NASA uses antennas with diameters of 85-210 feet, the AILer's used Dick Knadle's homemade portable 12 foot parabolic antenna. The AILer's used food cans to make the antenna feed horn. After measuring the diameters of all the cans in a Farmingdale supermarket, they settled on an American paint can and a Scottish oatmeal can. In recognition of this first reception of NASA signals by a non-commercial antenna, Knadle is invited to visit the Manned Spacecraft Center in Houston.

1971 ALL conducts engineering feasibility tests on the Sagtikos Parkway. AIL was working on a new system of motorist communications featuring repeaters on light poles.

1971 The Radiation Systems Division wins the competition for a U.S. Coast Guard Marine Traffic Radar System for San Francisco Harbor.

1972 AILTECH, a new operating unit, is formed by combining AIL's Microwave Instrument Division with the recently purchased Instrumentation Division of Microdot, Inc. of Los Angeles. AILTECH will produce and market sophisticated commercial test equipment.

1972 The AIL Radio Astronomy group "eavesdrops" on the Apollo 16 moon landing mission. They taped over 15 hours of voice recordings of the mission.

1972 The Radiation Systems Division wins an important contract in a new field for ALL: Radar detection and optical countermeasures against anti-tank missiles.

1973 AIL's Executive Vice President, Winfield E. Fromm becomes the 9th recipient of Dowling College's "Distinguished Citizen Award". AIL's second president, Donald M. Miller, had received the same prestigious award 6 years earlier, which is given annually to a "Long Islander who has contributed to the growth, prosperity, and vitality" of the region.

1973 The AIL Vessel Traffic System in San Francisco Bay is honored for one year free of accidents involving major vessels. There were 25,708 vessel movements in the bay in 1972.

1973 369 people attend the Five Year Club annual dinner. A highlight was former president John Dyer playing some of the recordings from his 1933-34 expedition to the Antarctic with Admiral Richard E. Byrd.

1974 Eleanor Lisberg of the Personnel Department becomes the first woman to complete 25 years of service with AIL. She joined the company in 1949 as a Typist in the Publications Department.

1974 AIL achieves its first major milestone of the B-1 program with the on-time completion of the Defensive Avionics Systems Design Review (SDR).

1974 The first B-1 is "rolled out" of its hangar onto the air field at Palmdale, California.

1975 The 101st Airborne Division receives a demonstration of AIL's Tactical Landing System at its assault landing zone at Fort Campbell, Kentucky.

1975 Dewitt Combs receives the first auto loan issued by the AIL Employees Federal Credit Union.

1975 Secretary of the Navy J. William Middendorf II presents the first annual Vice Admiral Robert B. Pine Award to the Navy Air Traffic Controller of the year. AIL sponsored the award.

1976 The nation celebrates the Bicentennial of the Declaration of Independence. In a letter to employees AIL President Winfield Fromm writes: "For 31 years the people at AIL have tried to make a contribution, both to the quality of life and the defense of freedom. It has been said that the most important social service that a government can do for its people is to keep them alive and free. On this July 4th, 1976, let all of us at AIL resolve to continue to do our part well for the cause of freedom."

1976 AIL libraries begin providing interactive, on-line literature searches on a trial basis during the Dialog Information Retrieval Service. Previously literature searches were done manually.

1976 At the Five Year Club annual dinner, Linda Bellotti becomes the club's first female president.

1977 Space Shuttle "Enterprise" goes on its first solo flight (separated from a 747) at the Dryden Flight Research Center. AIL designed the landing system for the shuffle.

1977 The AIL cafeterias report using 68 pounds of coffee each morning and 120 pounds of tuna fish per week.

1978 The fourth annual Bocci Playoff and Picnic is held in Deer Park. For the 3rd consecutive year, the "Baccalas" win the playoff.

1978 In the 33 years since its founding, AIL has been issued 142 patents stemming from the ideas of 166 different employees.

1978 AIL signs a \$17.8 contract to provide a Vessel Traffic Management System for the Suez Canal.

1979 Ron Fischer of Traffic Control Systems takes first prize in a spaghetti sauce contest at Monte's Venetian Room in South Brooklyn.

1980 Scientists and engineers from the Tokyo Astronomical Laboratory visit AIL for design review of low noise RF Amplifiers and converters AIL is providing for 2 radio telescopes. The \$3 million contract is AIL's largest ever for radio astronomy equipment.

1980 Four representatives of the Civil Aviation Administration of China visit AIL to discuss air traffic control for Canton Airport.

1980 AIL's Maintenance Department begins providing a place where employees can bring waste motor oil in order not to pollute the environment.

1980 On October 24th, AIL's Anechoic Chamber is destroyed by fire.

1981 Eaton President, James Stover makes his first visit to AIL. AIL also celebrates President Reagan's decision to proceed with B-1B bomber.