

FAM 14

Prepared by the SAN FRANCISCO AERONAUTICAL SOCIETY

President's Message

Winter 2012

SOCIETY HAPPENINGS

It has been a busy year here at the Aeronautical Society. In the Spring of 2012, the Society launched a scholarship fund in recognition of the historical contributions made by many legends of aviation. Scholarships were open to high school seniors attending a public high school in one of the following school districts: San Francisco Unified School District, San Mateo Union High School District, Jefferson Union High School District and Sequoia Union High School District. Five scholarships were awarded of \$1000 each to five very deserving students and we are pleased to share the 2012 SFAS Scholars' essays here in FAM14.

On October 26, 2012 the Society celebrated the 75th anniversary of San Francisco International Airport with a gala celebration in the Museum. We were joined by more than 125 guests who spent the evening immersed in the history of the airport. Pictures from this very special event are included in this edition of FAM14. From all of us to all of you, best wishes for a very Happy New Year. The Society thanks you for your generous and willing support.

Louis A. Turpen
President



Legend of Charles A. Lindbergh Aviation By Hirdeep Chahal

Hirdeep Chahal attended Menlo-Atherton High School and is attending San Jose State University studying nursing.

Many legends of aviation exist throughout different regions. However, one of the supreme aviators known for his eye opening victory was Charles A.

Lindbergh. Lindbergh's success led to the invention of modern airplanes and machines. Lindbergh was born on February 4, 1902. He saw himself fascinated in aviation when he saw an airplane fly over his house as a young boy. Lindbergh began his career in U.S. Army flying school at San Antonio, Texas in 1924. This entrance led him to acknowledge the importance of studying, in order to achieve his goals. He saw the benefits in studying. Therefore, his education directed him to be legendary in the legend of aviation.

Lindbergh's dedication and hard work paid off when he became

the first mail pilot in Chicago, Illinois, and St. Louis, Missouri. This led to Charles' future victory in terms of becoming a solo international aviator. He managed to undertake one triumph after another. With the Ryan Airlines, Lindbergh helped design a monoplane to initiate his objective. He planned to construct the Spirit of St. Louis to make his international flight. Lindbergh opened the eyes of many individuals by his international success.

In 1927, Lindbergh was the first individual to fly across the Atlantic Ocean by a constant airplane flight. The airplane he flew across the Atlantic Ocean was known as the Spirit of St. Louis. He helped design this plane. Lindbergh departed from New York and landed in Paris, after flying the single engine airplane for three hours and twenty nine minutes. He had hovered about 3,600 miles in that time period. Charles Lindbergh became famous for being a brave hero. His performance directed him towards achieving several awards. Lindbergh was awarded with a \$25,000 prize along with the entire New York City's celebrating his accomplishment. He was also awarded the Congressional Medal of Honor, as well as, the first ever Distinguished Flying Cross which was given to Lindbergh by the U.S. government. This was what ultimately attracted more individuals into aviation. Lindbergh's victory led people to realize the success that could be drawn with aviation. Many other aviators were motivated to learn because of Lindbergh's achievement. In fact, after Lindbergh had made his solo non-stop international flight, aviation was seen more in commercials. Airplanes were then invented by other aviators, to transport people across the Atlantic Ocean. Pilots tried different methods in order to make a safer airplane.

After Lindbergh's victory, he continued to use his intelligence to aid the Air Force Reserve. When the attack on Pearl Harbor occurred, Charles served as a technical advisor and as a test pilot for the United Technologies. He applied all his knowledge and experience to help with airplane management. Charles also tended to carry out lowered-body and high-altitude temperature experiments. Then in 1954, he was re-commissioned in the Air Force Reserve. Charles Lindbergh the famous pilot died in 1974. His talent in aviation directed him to expand the knowledge of other inventions, building even safer and more superior airplanes.

FAM 14 is the abbreviation for the world's first transoceanic Foreign Air Mail route, which originated in San Francisco and linked the East and West by air. The FAM 14 masthead photograph, on page one, was taken by Clyde Sunderland and shows the Pan American Airways' China Clipper over the city of San Francisco on November 22, 2935, departing on the first trans-Pacific commercial flight to Manila, Courtesy of Pacific Aerial Surveys.



Charles Lindbergh: A Hero of Aviation
by Jessica Syracuse

Jessica Syracuse is a graduate of Burlingame High School and is attending Menlo College studying business.

Charles Lindbergh was born in Detroit, Michigan in 1902 and in his early years, he attended over a dozen schools across the country. He enrolled in the College of Engineering at the University of Wisconsin Madison, and dropped out mid-sophomore year to begin light training in Nebraska. Despite the fact that he had never been close to an airplane, Lindbergh held a strong interest in mechanics and flying. After a few years of flight preparation and practice, Lindbergh had set his eyes on the Orteig prize. The Orteig prize was an award of \$25,000 offered to the person to complete a non-stop flight between New York City and Paris. Lindbergh faced six opponents, all of whom lost their lives in pursuit of the prize. On the early and rainy morning of May 20, 1927, Charles Lindbergh took off in the Spirit of St. Louis. Thirty-three and a half hours later, he landed in Paris. The flight faced many challenges including the weight of 2,710 lbs of gasoline, icy storm clouds, and the fact that no one else had ever completed it before. Upon landing in Paris, the French Foreign Office flew the American flag. This was the first time they saluted someone that was not a head of state. Lindbergh earned numerous awards and honors, including the Medal of Honor, the Legion of Honor, and the Pulitzer Prize. He also held a strong voice in the National Advisory Committee for Aeronautics.

Lindbergh is a true hero in aviation history for his immense amount of courage and for the completion of the first flight from New York to Paris. The success of the flight encouraged the public that air travel was achievable and desirable. The amount of applications for pilot licenses tripled the year that he landed in Paris. The number of US airline passengers increased drastically by 3,000% over three years. Lindbergh's daring actions impacted the future of aviation notably.



by Kira Ghandhi

Kira Ghandhi is a graduate of Carlmont High School and is attending the University of Chicago studying mathematics.

From the rafters of my great room hangs a large, pristine model airplane inherited by my brother when our grandfather passed away. My grandfather loved to build, fly and occasionally rebuild model airplanes with other artistic aviation enthusiasts. At one point he had access to the only existing full size replica of an Igor Sikorsky S-16 fighter biplane which resided in Stratford, CT. Being a designer by training, he took this rare opportunity to recreate plans for the plane and build a quarter scale model to such perfection that, when the Sikorsky Archives discovered the recreation, they wanted it for a special exhibit in the Moscow Polytechnical Museum, Where the plane still resides, to celebrate the 11th anniversary of Sikorsky's birth.

My grandfather's passion for the work of aviators, specifically Sikorsky, exemplifies the enthusiasm the legendary Igor Sikorsky instills in many aviators.

Sikorsky was legendary for revolutionary designs of both helicopters and fixed-wing aircrafts. His first attempt at a helicopter failed, so he focused on fixed-wing aircrafts to begin his career. His first fixed-wing aircraft, the S-1, also proved a failure for the engine would not allow the plane to fly. Learning from his failure, Sikorsky was then able to develop the S-2 with the proper engine to fly. He earned national recognition for his originally designed two-seat S-5; the plane could stay aloft over an hour and reach 1500 feet. However, when a mosquito in the system of the engine caused Sikorsky to crash land during a demonstration, he set out to design a plane that could stay airborne in the case of engine failure. Sikorsky's subsequent twin engine S-6 held three people and became the winner of the Moscow aircraft exhibition in 1912. During Sikorsky's work for the Russian Railroad Car Works in St. Petersburg, he constructed the first four-engine airplane, the Le Grand, with innovations such as an enclosed cabin, a lavatory, and upholstered chairs. Following the S-21, Sikorsky developed the world's first four-engine bomber, the Ilya Murmets (S-22), at the outbreak of World War I.

In 1919, with Russia heading into a civil war, Sikorsky emigrated to the United States and worked many jobs before, in 1923, he was able to form the Sikorsky Manufacturing Company in Roosevelt, NY. Shortly after creating his company, Sikorsky produced the first twin-engine aircraft in America, the S-29, which could carry 14 passengers at 115 mph. By 1929 Sikorsky moved to Stratford, CT and became part of United Aircraft and Transport for which he produced the S-38, a two-engine amphibian used to pioneer Central and South America air routes, and the S-42, the iconic Clippers ships, for the Pan Am flights.

Sikorsky began his aviation career with a vision to make innovations on direct lift aircrafts, but he quickly realized that aviation technology was not advanced enough to build successful helicopters. He scrapped his efforts but did not give up the dream, which he fulfilled from 1929 to 1931 through his significant advances in the area of helicopters. By 1939 he successfully built the Vought-Sikorsky VS-300 model with a single rotor. In 1942, after the VS 300, Sikorsky was able to perfect his design in the R-4 helicopter that became the first mass produced, completely controllable helicopter with a design that is still relevant today.

On March 25, 2003 the state of Connecticut enacted legislation designating each May 25th as Connecticut Aviation Pioneer Day in honor of Igor Sikorsky. They honored him for being an aviation pioneer and the father of the helicopter. In fact, Sikorsky's success with the helicopter inspired the young Bay Area's Stanley Hiller to pursue similar advancements in direct lift aircrafts. Sikorsky worked up to his death in 1972, but he still lives on through his accomplishments in aviation. Not only did Sikorsky technologically advance the practice of aviation, but also Sikorsky influenced people such as my grandfather and Hiller. Sikorsky developed advancements in aviation, but he also encouraged passion for aviation that, in turn, creates further advancements in aviation.



**Chuck Yeager
by Tommy Ng**

Tommy Ng is a graduate of Westmoor High School and is attending UCLA studying medicine/molecular biology.

There are many famous aviators in the 20th century that have made contributions to the field of flying.

Chuck Yeager falls under this category of pilots who have influenced the development of flying. Chuck Yeager was born in Myra, West Virginia in 1923. After graduating from high school, he enlisted in the United States Air Force at the age of eighteen. His career began in World War 2, but he was shot down after he took down his first enemy aircraft in 1943. He had to cross the Pyrenees to get to Spain where he could return to the United States. There, he was reinstated by the Allied Supreme Commander, Dwight D. Eisenhower, who allowed him to carry out missions again.

Yeager was an exceptional flyer who was able to outmaneuver and lead flying missions. He shot down a record five planes in one day and a total of 13 aircraft by the time the war ended. He was assigned the rank of captain for his skill and bravery as a pilot of the US Air Force. Yeager is most famous for breaking the sound barrier. He is the first pilot in history to fly faster than sound can travel. After World War 2, he was assigned to fly the rocket powered X-1 airplane. Even after breaking several of his ribs during a horseback riding accident, he flew the X-1 at Mach 1.07 or 1.07 times the speed at which sound travels. Later in his flying career, Yeager reached a higher flying speed of Mach 2.44. He spiraled out of control shortly after, but he was able to land safely without any major injuries. As an experienced pilot who has flown for many years, Yeager was assigned the duty of commandant of USAF Aerospace Research Pilot School where he trained young pilots for the United States Air Force and astronauts for National Aeronautics and Space Administration (NASA). From 1962 to 1966, he worked at this school, inspiring young pilots and astronauts with all the records he has set and experiences he has been through. In 1966, he took command of the 405th fighter wing in the Philippines, flying 127 air support missions while at the same time, training bomber pilots. Then he led missions in South Korea, helped the Pakistan Air Force from 1971 to 1973, and went through assignments in Germany. He retired in 1975 but continued to serve as a consulting test pilot for the next several decades.

Yeager accomplished much during his flying career and earned many awards and recognition. In 1968, he was promoted to brigadier general. Some awards that he has earned are the Congressional Gold Medal which Gerald Ford gave to him and the Presidential Medal of Freedom which Ronald Reagan gave to him. Throughout his years of service, Yeager has also earned the Purple Heart, Bronze Star, Air Force Commendation Medal, Silver Star, Legion of Merit with oak leaf cluster, Distinguished Service Medal, Distinguished Flying Cross, and their Air Medal.

His accomplishments will be remembered as footholds in the development of flying: breaking of the sound barrier, successfully leading dangerous flying missions, setting up a

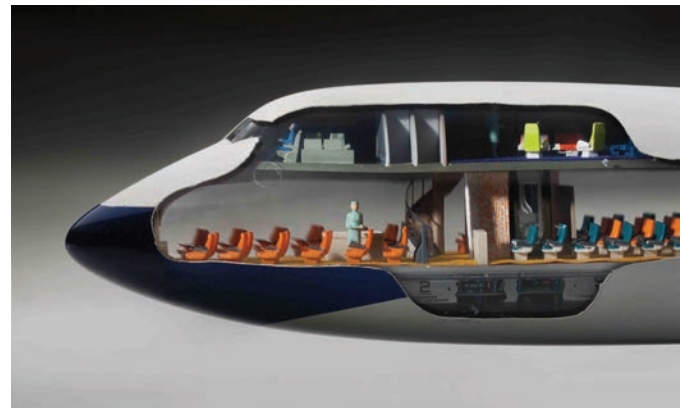
school to promote flying in younger people, and spending years advising other pilots based on his flying experiences. As one of the most influential pilots in the history of flying, Chuck Yeager will continue to influence people to pursue a flying career.

EXHIBITION HIGHLIGHT

Interiors Revealed: Cutaway Airliner Models from the Collection of Anthony J. Lawler

Louis A. Turpen Aviation Museum
September 2012 – April 2013

Interiors Revealed presents a diverse assemblage of cutaway airliner models from the late 1940s to 2001. They are from the collection of Anthony J. Lawler, an aviation industry professional and avid airplane model collector since he witnessed the De Havilland Comet—the world’s first jetliner—fly over his boyhood home in Rhodesia. Lawler has spent decades assembling one of the finest collections of scale airliner display models, most of which were acquired while working as a senior sales representative for Airbus North America during the 1980s and 1990s. His collection spans a century of commercial aviation design innovation. *Photos courtesy of SFO Museum.*



BOAC (British Overseas Airways Corporation) Boeing 747 cutaway model early 1970s
Westway Models, London
scale 1:72
plastic, wood, metal, paint
Collection of Anthony J. Lawler



Western AirLines Lockheed L-188 Electra model aircraft late 1950s
Osgaard, Denmark
scale 1:20 wood, plastic, metal, fabric, paint
Collection of Anthony J. Lawler

Louis A. Turpen Aviation Museum EXHIBITION SCHEDULE

Interiors Revealed: Cutaway Airliner Models from the Collection of Anthony J. Lawler

September 2012 - April 2013

Civil Air Transport: Asia's Airline of Distinction

October 2012 - April 2013

China Clipper Continuous

Women at Work: The World War II Aircraft Factory Photographs of Alfred T. Palmer

September 2012 - April 2013

LOUIS A. TURPEN AVIATION MUSEUM *Hours of Operation*

No admission charge, open free to the public.

10:00am to 4:30pm Sunday through Friday.
Closed Saturdays, Holidays, and during private events.

CONTACT! For Society general membership and other programs, please contact:

San Francisco Aeronautical Society
P.O. Box 250250

San Francisco, CA 94125-0250

Tel: (650) 821-6720 Fax: (650) 821-6721

Email: info@sfaero.org

WEBSITE: www.sfaero.org



The San Francisco Airport Commission Aviation Library and Louis A. Turpen Aviation Museum is located at San Francisco International

Airport, International Terminal, Pre-Security, Level 3. It is open Sunday - Friday from 10:00 am to 4:30 pm. The telephone number is (650) 821-9900. For additional information and to learn about volunteer opportunities, please contact the SFO Museum at (650) 821-6700, or email curator@flysf.com or visit www.sfoairport.com.

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P.O. Box 250250

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Aviation Legend Igor Sikorsky by Marie Shadowen

Marie Shadowen is a graduate of Capuchino High School and is attending UC Davis studying civil engineering.

Presently, people living in the 21st century enjoy luxuries and technologies that were non-existent in the past century. From commercial airplanes to recognition jets, the world of aviation was forever changed by the contributions of aviators of the past. Some are considered legends in the area of aviation like Charles Lindbergh and Amelia Earhart, but others are not as well-known as these aviators. One of these overlooked legends is Igor Sikorsky, whose advances in the helicopter industry and other innovations are still used today.

Igor Ivanovich Sikorsky is most famous for his R-4 helicopter, which was the first mass-produced helicopter in the world, yet he did not achieve this success at first. While growing up in the Soviet Union, Sikorsky became interested in machines that could fly because of his mother's fascination with Leonardo da Vinci. He studied at the Kiev Polytechnic Institute in 1906, and in May 1909 he began assembling his helicopter. His first attempt failed and so did his second in 1910. After multiple unsuccessful models, Sikorsky was able to obtain more flight experience and continued making improved models. He was finally successful in 1911 with his S-5 that won him an international Pilot's License Number 64. Further success with the S-6 also allowed Sikorsky to have a competitive edge in the aircraft industry.

Upon examining this Russian born engineer's contributions to the field of aviation, he produced more than just helicopters. While still in Russia, Sikorsky designed and flew the world's first successful four-engine bombers and commercial transport used today were based off the model of this aircraft which was called "Le Grand." Sikorsky immigrated to the United States in 1919 with the intent to "construct aircraft" as was said on his passport. With the encouragement given to him by others interested in the aircraft industry, Sikorsky started his own company called the Sikorsky Aero Engineering Corporation on March 5. The company still exists today.

Through much persistence and patience, Igor Sikorsky was able to make aviation history in Europe and the U.S. The optimism he had in spite of his many failed models allowed him to improve his designs and ultimately make a machine that is still flown in the sky today. The innovations he left behind after his death in 1972 have been used to create newer, more efficient modern marvels, as they should be. Perhaps Sikorsky's work is not as famous as aviators like Lindbergh or Earhart, but he did contribute a significant amount of work for the aviation industry, which rightly makes him an aviation legend.

March 15, 2013 is the postmark deadline for submissions for the 2013 SFAS Scholars Program. For more information on the Scholars Program, please visit our website at www.sfaero.org/Scholars-Program.

Mills Field Memories: SFO at 85

October 12, 2012

Louis A. Turpen Aviation Museum

The first ten years of San Francisco International Airport (SFO) were filled with challenges and successes. Like the commercial aviation business, the development of airports evolved slowly from modest beginnings. The commitment made by the City and County of San Francisco to create its own municipal airport started with minor allocations of public funds. Due to the lack of available land within San Francisco, property was leased south of the city limits for a three year term. This temporary arrangement further limited the amount of capital San Francisco was willing to invest in improvements. Converting the leased 150-acre cow pasture to an airfield required only the cutting of the hay and grading a dirt airstrip. Structures would be basic, and only the barest necessities—an unfinished wooden administration building and a partially built steel hangar—existed when the airfield was officially dedicated on May 7, 1927, as Mills Field Municipal Airport of San Francisco.

At first considered temporary and experimental, the airport was named after its landlord, the Mills Estate. And, although its name would be officially shortened to San Francisco Airport in 1931, after the land was purchased, it would simply be called Mills Field for decades to come. The first few years of operation were difficult. Delays in completing hangar facilities and apprehension about weather conditions caused several of the new airline companies to take their business across the San Francisco Bay to Oakland where an airport was also opened in 1927. Slowly, however, the advantages of operating on the San Francisco peninsula became apparent to air carriers. Improved facilities and competitive business incentives began to attract more airlines to Mills Field. Despite the Great Depression, by the mid-1930s aviation had made considerable progress due mostly to larger and faster airplanes. Major construction began on new facilities that included paved runways, and in 1937, San Francisco Airport opened its new administration building, which was considered a state-of-the-art air terminal.

San Francisco prepared for the coming Jet Age with the construction a new Terminal Building in 1954. The addition of the North Terminal and the South Terminal (now Terminals



Table centerpiece from the Mills Field Memories Celebration

1 and 3) in subsequent decades kept pace with the growth of commercial air service. This pattern of development was crowned with the completion of the International Terminal Complex in 2000, and the original 1954 structure was reborn as Terminal 2 in 2011.

By the 1920s, the reality of commercial aviation was just over the horizon, and civic leaders were determined to place San Francisco on the airways of the world. On March 15, 1927, a three-year lease between the Mills Estate and the City and County of San Francisco for the 150-acres of pastureland that would eventually become today's San Francisco International Airport was signed. With this bold move, SFO began its role as a formative, economic engine for the Bay Area.

The Society would like to thank everyone who made this evening possible from our very generous sponsors and Honorary Committee members to the lovely former flight attendants who acted as our hostesses. It was a pleasure and an honor for the Society to celebrate this aviation milestone.



Our elegant hostesses l-r: Dorene Goad, Ululani Jung, Shirli Caselle, Kim Modersbach, Marian Bruns and Debi Gould



l-r: Mrs. Louis A. (Pee Dee) Turpen, SFAS Board Member, Zoe Dell Lantis Nutter, SFAS Board President, Louis A. Turpen



Table setting from the Mills Field Memories Celebration

With Our Thanks...

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