WORLD WAR 1 Aeroplanes, INC.

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a tax-exempt service organization founded in 1961, devoted to:
- Those Magnificent Flying Machines of 1900-1919, and 1920-1940
- Their enthusiasts, including: Builders, Historians, Modelers, Restorers,
Museums and Collectors

WW1 AERO (1900-1919), and SKYWAYS (1920-1940):
our two Journals, which contain:
- information on current projects
- news of museums and air shows
- technical drawings, data
- news of current publications of all kinds
- information on paint and color
- aeroplanes, engines and parts for sale
- scale modeling manual

SERVICES WE PROVIDE:
- early technical books and magazines
- assistance in locating parts, engines, aircraft, information
- a worldwide networking service on which to draw
- back issues of both Journals
- from a 40-year collection, copies of original drawings and manuals for
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We are currently re-evaluating our membership program and benefits. In the meantime if you would like to support our
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Please visit www.ww1aeroinc.org for updates about the organization as they happen.
FROM THE EDITOR

Issue #90 includes a look at the Dayton-Wright RB racer, now on exhibit at the Ford Museum in Ohio. The RB participated in the first Gordon Bennett Cup Air Race, which took place 90 years ago. We are honored to have a personal perspective on the restoration of the RB from NASM’s Chief Conservator, Malcolm Collum, who headed up that project when he worked at the Henry Ford Museum a few years ago.

Mark Lightsey gives us an inside look at the work that went into building and flying Tom Wathen’s magnificent Caudron C.460 with his flying report and coverage of his international travels with this attention-attracting machine. As a result of this article, Daniel Brett of Williams Brothers Model Products has offered to develop a special “Skyways” edition of his soon-to-be re-released kit of the Caudron C.460, and SKYWAYS Issue #90 will be included in the kit in digital format along with flying footage of the reproduction.

Our racer coverage in this issue also includes the conclusion of Henry Haffke’s two part article on the Gee Bee R-2 and Pete Miller. Special thanks to Jonathan Fallon for editing and laying out this article for us.

The story of Paul Dougherty’s magnificent restoration of an original Curtiss Jenny finished in Earl Daugherty colors is featured on our cover and in Paul’s report.

Dave Ostrowski and Gordon Stevens collaborated for our coverage of ARMY Wing Stripes. Dave has generously provided some superb photos from his collection for all of us to enjoy.

We are also pleased to present reports from Gary Hyatt and Phil Stewart on their unique Golden Age projects, and Paul Stevens gives us a look at some of the stunning pieces of flying history that appeared on the air-show circuit last year.

Tom Polapink
THE CONGRESS OF GHOSTS:  
THE REGISTER OF THE DAVIS-MONTHAN 
AVIATION FIELD, 1925-1936 
A Web-Based Golden Age History Project

By Gary W. Hyatt
Author can be contacted via the www.dmairfield.org Web site

“Studying the microcosm is one way to gain knowledge about the global.”
G.W. Hyatt, May 4, 2005

THE CHALLENGE

Question: How do you eat an elephant?  
Answer: Today, you do it with computing technologies and the Web. Here’s how.

THE REGISTER

The “elephant” is the Register of the Davis-Monthan Aviation Field, Tucson, Arizona. The Register is a folio-sized, leather-bound book that recorded air traffic to and from the Airfield between 1925 and 1936. You can see the well-worn cover with its original gold leaf lettering in the accompanying composite image.

I acquired a copy of the Register in a used book store in Alexandria, Virginia on June 13, 2000. The book changed my life by catalyzing a project that is at once persistent in its attractiveness and productive in its yields. The project has occupied much of my time for the last decade, and the research, data-analysis, and writing have taken me into many dusty archives, museums, old barns, libraries, private homes, workshops and airfields.

An example of the raw material driving the life change is in Figure 1. It shows the upper left-hand quarter of Register pages 22-23. It lists a mere 21 of the 3,689 records signed by hand across its 218 pages. Click on the image (or click here) to view it and all the other Register pages interactively on the Web.

I exhibit this page of the Register, not so much to show off the signatures of T. Claude Ryan and Charles Lindbergh, but because it is an example of the primary data I work with. This is important to know, because everything I describe in this article, and in the links there from, derives from this original, 218-page, handwritten record.

The fact that you can find signatures of many other famous Golden Age aviators in the Register pales when compared with other riches discovered inside its covers. Each Register line represents a single landing. Each a moment in time; each demanding to be examined, explored, related, questioned, understood and placed in historical context and perspective. Addressing and illuminating each landing, and prying from the Register the patterns of landings by individual pilots and individual aircraft, soon became my commitment. What to do first?

THE DATABASE

To gain traction on the patterns and meanings of Register entries, I built a Microsoft Access database: one record per Register line, representing 3,689 landings. Look at Figure 1 again. It took me four months, considerable eyestrain, and painstaking judgment interpreting handwriting to build my database. It also required an upgrade to my computing platform and software suite (the first of three over the past decade). The database was useable by February 1, 2001. It continues to be updated and refined.


These kinds of counts and queries enabled me to focus on, as an example, the 42 female pilots and their airplanes. Logistically, 56 landings by 42 women was a relatively tractable quantity to work with. Likewise, it was easy to discover that nine of the aircraft they flew...
are still registered with the FAA. After more than a year of further research about their lives, as well as contacts and visits with the contemporary owners of their aircraft, I published “Women of the Golden Age” in 2004.

In another example, I found that Fokker aircraft contributed an inordinate number of landings: 328. Three Fokker Universal and Super Universal airliners, NC3317, NC8011 and NC9724 accounted for 233 of the 328. As well, I found these aircraft were flown consistently by the same half-dozen pilots for about two years. Why did these three aircraft and their pilots land so frequently over so brief a period?

I discovered that they were owned and operated by Standard Air Lines, which flew the route from Los Angeles, California to Phoenix, Tucson and Douglas, Arizona, then to El Paso, Texas and return. Day after day, week after week they arrived and departed Tucson following the same punctual schedule. At the link is an article that I published in 2006 that describes my economic analysis of the Standard Air Lines business as it was derived from traffic through Tucson recorded in the Register.

These two articles were just the beginning. Since 2000, my work with the Register resulted in four books, three journal articles (all linked from the References listed

Figure 1: Part of Pages 22-23 of the Register. Click this image to link to the entire Register. You can explore the Register page by page, or by year.
below), many invited talks and travel across the United States and abroad to meet people and see airplanes. With all the information in the database, these activities won’t end any time soon.

Perhaps more satisfying, though, is a 7,000-page (so far) Web site I created that celebrates the people, aircraft, places and events of the Register. It embodies the real spirit of my project.

THE WEB SITE

It may be a romantic metaphor, but fundamentally, to me, my Register represents a Congress of Ghosts. When I open my copy of the book, or sit down at my computer and activate my database, I hear the obligatory keen of the pilots and the rumble of their aircraft, sitting at idle, imprisoned in a dusty Register. They haven’t been aloft in a very long time. They tell me they want to be released to fly again. If you’re a pilot, you know that feeling. Now multiply by 3,689. How to get them airborne?

If you’ve examined my Register pages by clicking Figure 1, you probably formulated some of the same questions I did. How to manage the complexity of multiple people, flying in multiple aircraft, coming from and going to multiple places; each person related by skills, if not by collaboration, or competition, or both, or more? What is the best way to present the abounding, threaded relationships between people, places, machines, events and geographies? How to grapple with that combinatorial nightmare? One reasonable answer was a Web site, algorithmically-driven, exploiting the synthesizing power of my database.

Long story short, my Web site, www.dmairfield.org, came into being on May 4, 2005 after about two years of trials and preparations. The database, with 3,689 records partitioned over 166,000 individual fields, is installed on the server that hosts the site. I installed it originally to organize, control and direct the presentation of information on my site. A fortuitous, unanticipated consequence soon became apparent.

Namely, search engines, in their magnificent power, indexed each and every field of my database: all 166,000 of them. As an example of what this means, try this now: Open a separate window in your favorite Web browser and search for “NC126M.” Take a minute to click that link and explore 126M on my site, and view the rare movie film of it in operation. Now extrapolate this to all the other aircraft registration numbers, all the pilot and passenger names, all the home bases and destinations listed in the Register. Your favorite search engine finds them all, individually. How else does the spirit of my project live in the Web site?

THE CONGRESS OF GHOSTS

It is The Congress and their histories that stir and drive my efforts and bring my site alive. They do this for a few reasons. First, the travelers of the Register are not just aviators and aircraft. The people and aircraft recorded there helped spawn the intellectual and physical infrastructures of global aviation practices and technologies, in peace and in war, during the 20th century. From the Register stems all manner and direction of United States aeronautical development. It is not an overstatement to say they formed the ideas, performed the actions, and served as loci from which, in many significant ways, we enter our second century of powered flight. They were people and technologies which moved the world in profound ways. We are yet to know where their legacies will finally take us.

Second, because of my database and Web site, I have met personally, or spoken on the telephone with, four pilots who signed the original leather-bound Register as it lay on the desk in Tucson eighty years ago.

I met William T. Piper, Jr. at his home in Florida during March, 2001. Bill landed at Tucson once in December, 1934 on his way to California from Bradford, Pennsylvania. He flew a Taylor Cub equipped with side curtains and a five-pound capacity canvas luggage sling behind the pilot’s seat. Bill told me he navigated across the continent in the usual manner: following railroad tracks, and landing frequently on dirt roads to refuel at automobile gas stations (nine-gallon fuel capacity). At his link, you can see a chart of his itinerary from Bradford that brought him into Tucson and beyond. There is also a link to a video of Bill narrating a walk-around of a Piper J-2 Cub. Notice he was flying a Taylor Cub in 1934. He visited Tucson even before the Piper name was associated with the Cub.

Imagine what a pleasure it was to sit down and talk (and email) with John Miller (he signed the Register twice in May and June, 1931). At his link you’ll discover he signed the Register while setting a record he held for a long time. He was the first pilot to cross the U.S. flying the Pitcairn PA-2 autogiro NC10781. John and I met at
his home airport in Poughkeepsie, New York and spent a couple of sunny afternoons together in September, 2002. As he scrolled through my database, he talked about the people and aircraft he knew from my Register, and about his life in aviation. John's record for transcontinental autogiro flight stood for 72 years. It was finally broken October 3, 2003. At his link, you’ll find a special video of John flying an Eastern Airlines Kellett autogiro off the roof of the Philadelphia Post Office in 1939. He remained, until age 102, a vigorous, interested and attentive contributor to my project.

And I met Bobbi Trout in September, 2002. A garrulous, fun-loving pilot who set many endurance records during the late 1920s, she became an intrepid entrepreneur later in life. We had cocktails and set the sun at her home in California. She invited me as her date to the Powder Puff Derby reunion in San Diego the following day. That evening, she was surrounded by the other participants, and I stood in the background watching her hold court. She wore her crown as Pioneer Aviator very well, and with great respect for her craft and that of her fellow pilots. She countersigned my copy of the Register next to her original signature dated March 11, 1929, and gave me an autographed picture of herself from the same period, which I treasure and feature at her link.

I spoke only on the telephone in March, 2006 with Robert Buck. He signed the Register three times during 1932-33 flying his Pitcairn PA-6 Mailwing, NC549K. He was just past sixteen years old, headed cross-country setting junior speed records. Later in life, he became a captain for TWA and a popular author. He passed away due to an accident shortly before I could visit with him. All four of these legends have flown West to their final horizons. I like to think their spirits still fly on the Web, and that of her fellow pilots. She countersigned my copy of the Register next to her original signature dated March 11, 1929, and gave me an autographed picture of herself from the same period, which I treasure and feature at her link.

Third are the relatives of the people. There are many sons, grandsons, granddaughters and nieces that have Register signers in their ancestry. Following hits from among the 166,000 indexed entities on my site, they contact me using the CONTACT US button available at the bottom of any Web page. To-date, I have communicated with over 150 relatives of the pilots and passengers who signed my Register.

In all cases, they are happy to share information and photos of their kin. In some cases, that information-sharing has led to much broader photograph and document collections that I have set off as a separate category on my site.

For example, follow these links to view the 144 images and documents of The Lee Lysle Willey Photograph and Document Collection. And this one to see the 48 treasures in The Harold B. “Hap” Russell Photograph and Document Collection. Or this one to explore the 282 items of The C. Burton Cosgrove, Jr. Photograph and Document Collection. At this link, you can explore all seven IMAGE COLLECTIONS on my Web site. Other contributing families of note are the daughter and granddaughters of Margery Doig, the niece of Edwin E. Aldrin, Sr. (Buzz’s father), the son and grandson of Clema Granger and Jim Granger, the son of E.E. Harmon, the son and nephew of Frederick M. Trapnell, the daughters of Dick Ranaldi and the son of Joan Shanks and “Dutch” Shanks. All the biographies enhanced by families at these links are rich in photographs, documents and anecdotes, probably unknown to the general public.

Another significant contact was with William V. Davis, III whose father, W.V. Davis, Jr., was the navigator of the Travel Air, Woolaroc. In partnership with Register pilot Arthur C. Goebel, Davis guided the Woolaroc from Oakland, California to Honolulu in August, 1927 and won the Dole Race. Bill’s contact with me led to publication of the book, Winners' Viewpoints: The Great 1927 Trans-Pacific Dole Race in 2009. Bill wrote the Foreword, and he and his sisters shared family photos and anecdotes, which balance their father’s contribution to the Race with that of Goebel’s. They make the book come alive.

Finally, there are a lot of people out there in “The Cloud” who find old photographs with a readable airplane registration number on the rudder or wing, or a person posed in helmet and goggles with a name written on the back. Through their search engines, they discover their airplanes and people in the Davis-Monthan Airfield Register.

Many others have photographs or information about other Register entities like airfields and events. For example, you can visit the MOTION PICTURES page on my site. There you will find fourteen films of various Register notables, including Charles Lindbergh in September, 1927, at Tucson with the “Spirit of St. Louis”. Most of these films were shared by site visitors. There are also contemporary videos of Register aircraft that I photographed in museums and hangars around the country. As visitors and I build the site, the WHAT’S NEW ON THE SITE? page always lists the most recent content additions.
Indeed, one thing leads to another, and it all got started by the chance discovery of a book in June of 2000. The complexity of the relationships between and among Register entities, fueled by information supplied by site visitors, has contributed to the hyperlinked “threadiness” of the Web site over the past five years. Eventually, information on the site becomes more refined and accurate through visitor discussion, critique and contributions. It is, and will remain in this regard, a work-in-progress.

When I clicked my mouse at 2:15 PM on May 4, 2005 to release my Web site to the globe, I said, “Studying the microcosm is one way to gain knowledge about the global.” I feel as certain about that five years later. My commitment to The Congress is to provide each of them, and their aircraft, airfields and activities, enough pages on my site to celebrate them in the 21st century. Spend some time with my site and you’ll understand what I mean.

SKYWAYS ONLINE

This year observes the 10th anniversary of the Register coming into my possession, and the 5th anniversary of www.dmairfield.org. I can think of no better way to acknowledge The Congress than to introduce them to readers of Skyways in this way. When your Editor and I originally discussed this article, I took him at his word when he asked me to exploit the power of the Web. It was written to take advantage of the wise decision made by the Journal’s Board of Directors to publish online. The links and cross-references I’ve included enable you to dig a little deeper than just these few printed pages. If you use them fully, the three dozen or so links can deliver the equivalent of thousands of pages of additional information, thousands of still images, and miles of motion footage, some never published in any format before. Eat some elephant. CLICK and let me know your comments.

REFERENCES

(Referenced articles are hyperlinked as PDF downloads from www.dmairfield.org. Please direct your browser to the REFERENCES link on the site to download other free materials. As of the date of publication of this article there are 26 free PDFs for you to download and explore. Many are eReader-compatible. To hire the author to speak at your venue, contact him through the Web site. Books cited are available for purchase at their respective links, below. Your book purchases support the research and development of www.dmairfield.org.)