



The Wright Icon News

Bringing an Icon to Dayton - The Birthplace of Aviation

Today's Modern Aerospace Hub - Tomorrow's Aviation Leader

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Soaring 250 feet above the intersection of I-70 & I-75 and seen by thousands of vehicles daily, this 144 foot wingspan monument to the Wright Flyer will symbolize Dayton, Ohio throughout the world.

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WIG Builds Tunnel Model

When project architect Steve Brown promised last December to deliver a 4' wingspan model of the Wright Flyer for OSU's wind tunnel testing, a key aspect of their Capstone Project supporting the WIG's design development process, he understood it would be complicated and difficult. After it was built and delivered, however, he sighed with relief and said, "I had no idea...!"

Crucial to getting started was the ability to cut heavier gage metal to the exact specifications needed for the parts of the Flyer, and Steve did not have that ability on his own. Turning to someone who had helped us out last year with the UD wind tunnel test models, Tom Budde of Budde's Sheet Metal Works, Inc., Steve approached him with an even bigger request. Tom stepped up to that task without hesitation, offering to use his three-dimensional laser-cutting production machine to produce those parts out of 1/8 inch thick aluminum plate. All that was needed were the drawings (blueprints) of the model, and Steve had those readily available. The laser-cutter doesn't read blueprints, however, and Tom had to translate them into three different stages of software coding to program it correctly. For Tom, luckily, this is business as usual.



Tom Budde (l) and Steve Brown review plans for the 4 ft OSU wind tunnel model.

The next step was assembling the parts into a solidly constructed model of the Flyer, representative of what would actually be constructed on the monument, and also strong enough to withstand winds of up to 100 mph in OSU's wind tunnel. Steve took the parts home to his own workshop and called on Chuck Stevens, one of the WIG's resident engineers and a wind tunnel expert in his own right, to help assemble it. Chuck and Steve went to work on it in early February.

See [Tunnel Model](#) on page 2



Chuck Stevens and Steve assembling the laser-cut parts.

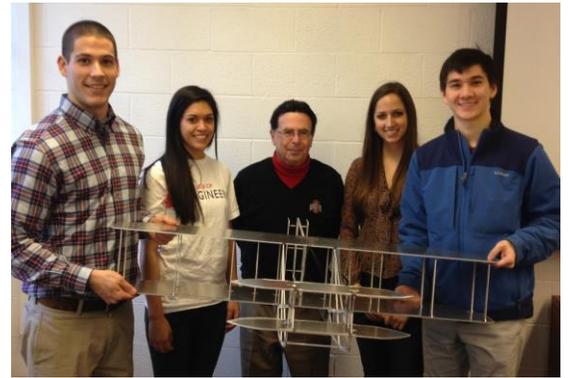
'57 Thunderbird Donation in Work



Ms Zoe Dell Nutter, longtime supporter of the Wright Image Group, is donating her 1957 Thunderbird to the project. It has been well kept in a climate-controlled garage, and remains in mint condition, rust-free - only 62,590 original miles! The WIG will sell or auction this classic in the near future. **This car could be yours!** Or maybe someone you know would be interested? Please direct all serious inquiries to Board Member, Mr Jon Kurtz at 937-545-0135.

Tunnel Model from page 1

Initially, Steve thought that welding the parts, something that had proved impractical on the smaller UD model, might be the best technique on the heavier gage aluminum. However, that also proved to be impractical, so they used the same "cold weld" process that the UD students used in building their test models. Luckily Steve was well equipped with frames and clamps to facilitate the job, and because using this JB Weld (a slow drying but strong metal glue) is a slow process, they had to work late into the night every night for a week to make their promised delivery date to the Capstone Team. They even took the extra time required to string wires between



The OSU Capstone Team receives their tunnel test article. (L to R, Tim Hendrickson, Lindsey Crump, Dr. Mike Benzakein, Chelsea Curtin, and Mitchell Le)



The 4 ft wingspan model mounted in OSU's 5 ft tunnel and almost ready for action.

the wings and struts, just as the Wright Brothers strung cables on their Flyer to enhance its strength.

Finally, on February 18th, Chuck and Steve carried their model to Columbus and presented it to Dr. Mike Benzakein and his senior student aero team. The team was not only happy that they did not have to build the model, but was very impressed with its quality. As team leader Tim Hendrickson said, "It is an amazing model." With that, they were nearly ready to enter the wind tunnel.

They were initially scheduled to conduct their testing the week of February 10th, but they were "bumped" a couple of times and had it moved back to the week of the 18th. They installed the model in the tunnel that day

and completed all their testing on the 19th. Everything went smoothly, but Chuck Stevens was concerned enough about the possibility of the model disintegrating at the higher wind speeds and damaging the tunnel that he recommended the team install a screen to catch any parts. They did so, but it turned out not to be needed. To everyone's delight, the model held up perfectly.

The team went away from their tunnel testing with a completely executed test plan and reams of data to be analyzed. Along with their earlier analysis through computational fluid dynamics, these data should provide strong evidence that our current design is adequate. Alternatively, they could provide evidence of a problem that would require an adjustment in the design. We await their final report later this month with baited breath!

NASA Drafts Space Act Agreement

Earlier this month Dr. Joe Shaw of NASA Glenn Research Center sent a draft Space Act Agreement to the WIG for comment. A hastily convened meeting of principals decided that the draft was adequate for Wright Image Group purposes and so advised Dr. Shaw. NASA will now formalize the draft, coordinate it through the appropriate staff agencies, and secure approval before returning it to the WIG for our approval and signature. We hope to see that happen this spring. Once signed and in effect, NASA can become a more active partner in planning the way forward.



Regional Priority – Not This Year

As reported in our last issue, the WIG competed in the Dayton Development Coalition's Priority Development and Advocacy Committee (PDAC) process for 2012-13. Our 2011-12 application went to the Quality of Life Panel which ranked our project in the lowest category, "Reviewed."

This year we submitted a much stronger application to the Economic Development Panel, anticipating that we could compete more effectively in that forum. The Panel's recommendations went to the full Committee which published its final results in January. We were pleased to learn that the Monument ranked higher than in 2011-12, receiving the ranking of "Recommended," but disappointed that it did not warrant the highest ranking of "Priority."

The projects which won the coveted Priority ranking this year were the Dayton Aviation Heritage National Park – Wright Company Factory Site and Hawthorn Hill, and the Springfield Unmanned Aircraft System Hangar. Although NAHA provided invaluable assistance and support in the WIG's application process, the Factory Site was its top priority because of the money provided by Ohio to begin its transformation as another aviation heritage asset.

The Wright Image Group will continue to participate in this process. Although not as good as a Priority rating, our Recommended ranking this year will actually be helpful in efforts to obtain federal, state, and private funds for the project.

Flashback....

"I am intending to start out in a few days for a trip to the coast of North Carolina... for the purpose of making some experiments with a flying machine. It is my belief that flight is possible, and while I am taking up the investigation for pleasure rather than profit, I think there is a slight possibility of achieving fame and fortune from it."

- Wilbur Wright, 1900

"With a short dash down the runway, the machine lifted into the air and was flying. It was only a flight of twelve seconds, and it was an uncertain, wavy, creeping sort of flight at best; but it was a real flight at last and not a glide."

- Orville Wright, first flight of a heavier-than-air aircraft, 1903

"To go places and do things that have never been done before – that's what living is all about."

- Michael Collins



Help Build Ohio's Aviation Community



You can help us celebrate and promote Ohio's aviation heritage by purchasing the "Leader in Flight" special interest vehicle license plate from the Ohio Bureau of Motor Vehicles. It costs only \$25 in addition to your normal registration fee, and \$15 of that \$25 will be returned to the Wright B Flyer Inc. and the National Aviation Heritage Alliance. Ohio is the "Birthplace of Aviation" and continues to have a robust aerospace industry, but it is getting harder to see those words on our plates. The "Leader in Flight" plate clearly conveys the message! You can purchase the plate at a Deputy Registrar's office, online, or by phone. You will be proud to proclaim what we all know, that Ohio (and not North Carolina) is the world's leader in flight, and at the same time help support the Wright B Flyer and all of the partners of the National Aviation Heritage Alliance (the Wright Image Group is one!).

To join, make a donation, or get information explaining the different contribution and recognition levels, write to us at:

Monument
1605 N. Main St
Dayton, OH 45405
or visit our website,
www.wrightmonument.org

Annual Membership Dues*

1 year - \$20
2 years - \$35
3 years - \$50

**Applicable to Individuals, Families or Businesses*

Board Member Spotlight



Franz Hoge

Franz graduated from the City College of New York in 1966 and began his career in the New York office of PricewaterhouseCoopers LLP (formerly Coopers & Lybrand LLP). His career advanced rapidly, interrupted only by a two year stint in the US Army, until he achieved partnership in 1977. Three years later he was named the Managing Partner of the Dayton Office.

While in New York, he chaired the New York State Society of Certified Public Accountants' Federal Contracts Committee as well as holding other key positions within the company. In Dayton Franz was the industry leader for Emerging Business Practice for the company's Columbus, Cincinnati, Lexington, Louisville, and Indianapolis offices.

He is included in *Who's Who in America*, *Who's Who in Finance*, and *Who's Who in the World*, and he is the first Honoree of the Beta Gamma Sigma Chapter of Wright State University.

He serves on numerous Boards of Directors/Trustees in the Dayton area, including as Co-Chair of Montgomery County's General Fund Financial Plan and as Vice-President of the Greater Dayton Regional Transit Authority. He has chaired or co-chaired several local area capital campaigns and has received numerous local awards, including the Citizen Legion of Honor Award in 2008.

Expected Donation Pledge

Payment Schedule

\$ Up to \$1000 - 1 month
1001 to \$2500 - 3 months
\$2501 to \$5000 - 6 months
\$5001 to \$10,000 - 12 months
\$10,001 to \$50,000 - 18 months
\$50,001 to \$100,000 - 24 months
Over \$100,000 - Negotiable

The WIG is a proud partner of the National Aviation Heritage Alliance



Make checks payable to:

Aviation Heritage Foundation, Inc.

With the following comment on the "For" line:

"Restricted for WIG"

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