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Top Aviation News of 2016

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As 2016 comes to a close, let’s take a look back at the changes, advancements, and events that have shaped the aviation domain this year.

- **FAA Issues Small Unmanned Aircraft Regulations under Part 107** - These new regulations apply to the use of non-hobbyist, small unmanned aircraft operations for drones weighing less than 55 pounds. The regulations require that the drone be operated within unaided visual line of sight of the operator or visual observer.

- **Solar Impulse 2 Travels around the World** - The Solar Impulse 2 completed the first ever circumnavigation of the globe by an aircraft with no fuel. The plane has the wingspan of a Boeing 747, but weighs as much as a car. Its longest non-stop leg of the journey lasted 117 hours and 52 minutes.

Do you have suggestions for improving the ASTG newsletter in 2017?

We’d like to hear from you!

If you have ideas for newsletter content or feedback about The Flyer, please send comments to our newsletter editor, Emily Stelzer (estelzer@mitre.org)
• **Drone Advisory Committee Established to Advise FAA on sUAS Integration** - In May, FAA Administrator Michael Huerta announced the establishment of the Drone Advisory Committee. Members of this Federal Advisory committee include leadership from a range of industry sectors, pilot and controller organizations, local governments, and research organizations. The DAC will work in partnership with the FAA to address issues and opportunities for integrated unmanned aerial systems into the national airspace.

• **FAA Offers $500 Rebate to Owners of General Aviation Aircraft who Equip with ADS-B** - In September, the FAA began offering a $500 rebate to assist owners of general aviation aircraft to equip with the required ADS-B Out system. The rebate is intended to encourage equipage of the system prior to the deadline of the 2020 mandate for all aircraft flying in airspace that requires a Mode C transponder.

• **Space X’s Falcon 9 Rocket Explodes during Launch Pad Testing** - In September, a Falcon 9 rocket exploded during a launch-pad test, which destroyed a satellite that was planned for use by Facebook. This setback came after a groundbreaking launch in late 2015, in which the orbital-class rocket was launched and successfully landed, allowing for the rocket to be reused in future launches.

• **Amazon Completes First Drone Delivery** - In mid-December, Amazon made its first commercial drone delivery to an Amazon customer in Cambridgeshire, England. The flight took just 13 minutes, and the delivery included an Amazon Fire device and popcorn.

• **New Small Airplane Safety Certification Standards Envisioned to Improve General Aviation Safety** - The FAA issued an update to Part 23, which to overhauls the airworthiness standards for general aviation airplanes. This new rule is envisioned to shorten the time needed to move new safety technologies for small aircraft into the marketplace and is aligned with similar rulemaking within international aviation agencies.
Notes from the HFES Annual Meeting

The HFES Annual Meeting was held in Washington, DC from September 19th through 23rd and was attended by more than 1,400 people. The meeting opened with an address from the society president, Dr. William S. Marras, who presented the grand challenges that are shaping the new human-technology frontier. Dr. Normal R. Augustine delivered the keynote address entitled, “Caution: This Machine Operated by Humans,” in which he identified the frailties that can exist between the interface between increasingly complex machines and the humans who operate them. Dr. Augustine noted that, in order for this interface to be effective, machines must be designed to

“The next technological revolution will be humans interacting with technology on human terms.”

- Norman Augustine at the HFES 2016 Keynote Address
interact in human terms.

The Aerospace Systems Technical Group hosted a total of five sessions, increasing our presence from the previous year. These sessions examined human factors considerations in the air traffic management domain, mishaps present with the use and integration of unmanned aerial systems, tools and methods that can be used to streamline air traffic control, and the partnership between the human factors research and engineering and the United States Military.

In addition to the lecture and panel sessions, the ASTG also presented six posters during an interactive poster session. The posters provided findings related to the influences of system interaction on cognitive-affective states, confusion in the cockpit, subject matter expert feedback on performance metric selection, use of computer generated aircraft in live air combat training, helicopter mission performance, and mental flexibility training.

The proceedings for all of the conference papers were provided to conference attendees. If you were unable to attend, the proceedings can also be purchased on the HFES website.

### Upcoming Events

The following events are coming up in 2017:

- **Transportation Research Board (TRB) Annual Meeting**: January 8-12, 2017 in Washington, DC
- **2017 IEEE Conference on Cognitive and Computational Aspects of Situation Management (CogSIMA)**: March 27-31, 2017 in Savannah, GA
- **Southeastern Human Factors Applied Research Conference**: April 1, 2017 in Raleigh, NC
- **19th International Symposium on Aviation Psychology**: May 8-11, 2017 in Dayton, OH
- **8th International Conference on Applied Human Factors and Ergonomics (AHFE)**: July 17-21, 2017 in Los Angeles, CA
- **2017 HFES Annual Meeting**: October 9-13, 2017 in Austin, TX

### 2017 HFES Annual Meeting

The 2017 HFES Annual Meeting will be held October 9-13, 2017 at the JW Marriott in Austin, TX.

Proposals are due March 6! Don't miss out on this opportunity to share your work with the organization!
Did you know HFES is on social media?

Join us there and stay connected!

@HFES

HFESociety

Human Factors and Ergonomics Society

Staying Connected: Social Media Edition

Did you know that HFES is on the most widely used social media platforms?

On twitter, @HFES has over 2000 followers and tweets every day about updates that are critical to our field and organization. You can follow @HFES on twitter to get updates on research related to pilot fatigue, opinions about the future role of the human operator, and even the thoughts about the design of the Death Star!

On facebook, more than 1,750 of your colleagues have liked @HFESociety and are getting updated regularly about new textbooks, events, and news.

The Linked In group for HFES has nearly 13,000 members! It’s a great place to make connections, read up to date news, and discuss our industry and research field.
Mystery Craft
Can you identify the aircraft below? If you have a guess, please email Emily Stelzer (estelzer@mitre.org) and put “ASTG Trivia” in the subject line!

Mystery Air Traffic Control Tower
Can you identify the air traffic control tower to the right? If you have a guess, please email Emily Stelzer (estelzer@mitre.org) and put “ASTG Trivia” in the subject line!