



**PORTRAIT**

**The Phantom Works' Automated Aerial Refueling Program team**

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We believe in discipline and innovation – working inside the rules but outside the box. That’s because we are involved in a fast-moving, competitive technology that is important to the United States military capability – automated aerial refueling. Here in St. Louis we’re serving one of Boeing’s most important customers, the U.S. Air Force Research Laboratories. The key technologies that we and our four subcontractors have just demonstrated allow an unmanned aircraft to fly safely behind a tanker. Ultimately, the autonomous vehicle will be able to maneuver behind the tanker, receive fuel, perform a break away and, with more refuelings, remain in the air for days on end. The capability will also augment the operation of manned aircraft by improving safety and reducing pilot workload. We’re proud of our success in putting together the software and flight control hardware quickly and efficiently, using Boeing’s best talent, rapid prototyping and some new validation tools. We had no hardware or software problems in flight. The end result: We’re helping to make the world a little safer.

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*From left to right*

**Brad Swearingen**  
Real Time Software Engineer

**Jason Lahr**  
Flight Controls Engineer

**Clint Sigler**  
Avionics Engineer

**Lance Portell**  
Real Time Software Engineer

**Zach Nielsen**  
Flight Controls Engineer