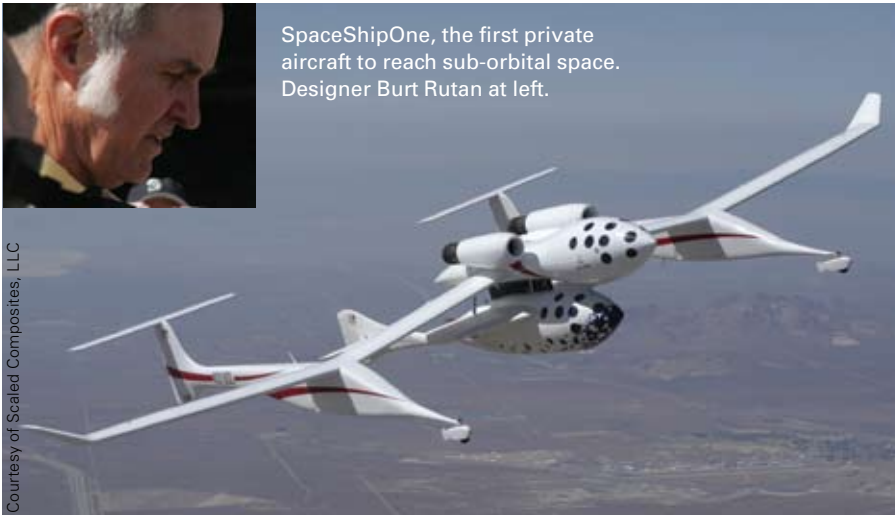


THE RIGHT STUFF FOR THE 21ST CENTURY



SpaceShipOne, the first private aircraft to reach sub-orbital space. Designer Burt Rutan at left.

Courtesy of Scaled Composites, LLC



Burt Rutan, winner of the \$US10 million Ansari X Prize for the first private flight into space, has a vision.

If there is anyone today who represents “the right stuff” when it comes to aircraft design, it is Burt Rutan.

Rutan first gained acclaim in 1986 when his now-famous Voyager, piloted by his brother Dick Rutan and Jeana Yeager, became the first aircraft to fly non-stop, non-refuelled around the world. The trip took nine days.

Burt Rutan again made headlines in 2004 when his SpaceShipOne became the first private aircraft to reach suborbital space, exceeding 318,000 ft twice within a 14-day period. As a result he won the \$US10 million Ansari X Prize, founded in 1996, and modelled on the Orteig Prize that Charles Lindbergh won in 1927 by flying solo across the Atlantic Ocean.

As well as Voyager and SpaceShipOne Rutan’s aircraft designs include the Raytheon Beechcraft Starship, the Proteus, VariEze, Long-EZ, Quickie, Quickie 2, Defiant and the Boomerang.

In March of this year, the Virgin GlobalFlyer, piloted by Steve Fossett, made the first solo, non-stop, non-refuelled flight around the world. It was also in record time: 67 hours, 1 minute and 46 seconds. The aircraft designer? Burt Rutan.

Rutan is considered by many aviation experts to be one of the few creative pioneers to have made a real difference to aerospace advancement.

No kits: Rutan’s dreams began modestly,

building and flying model aircraft as an eight-year-old.

According to Dr Vera Foster’s 1991 biography of Rutan, the young Rutan’s interest in model aircraft was different. Unlike other kids his age, he wasn’t interested in kits – he wanted to design his own.

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In 1965 he graduated from California Polytechnic University in aeronautical engineering. Soon he was working for the US Air Force as a flight test project engineer working on fighter spin tests and the XC-142 VSTOL transport.

After a long stint as Director of the Bede Test Centre for Bede Aircraft at Newton, Kansas, he struck out on his own, creating the Rutan Aircraft Factory in the Mojave Desert in California. In 1982 he formed Scaled Composites Inc to develop research aircraft. The company now employs over 130 people and rolls out, on average, a new aircraft type each year, mostly proprietary to the customer.

After SpaceShipOne rocketed into history,

Burt Rutan announced a truly courageous and ambitious venture. In a partnership with Sir Richard Branson of the Virgin group of companies Scaled Composites would aim to commercialise private space travel.

He shares a vision with Branson to develop commercially viable space travel that will “provide the foundation for the human colonisation of space”.

He told *Flight Safety Australia* he would like to see affordable travel to the moon by 2050 or so.

To make that happen, he says “we should expect to see a high-volume suborbital personal spaceflight industry that has high safety and profitability very soon (around 100,000 people flown by 2020), then competing resort hotels in earth orbit by 2035 or 2040.

“Once that is in place, the side trips to the moon would be easy to add, at least for lunar orbital excursions.”

He is scathing of the status quo. According to Rutan, the right stuff is not just about innovation and courage, it’s also “the ability to recognise that what we have now is inadequate, and the courage to take risks to find new solutions”

He thinks the US government’s plans to return to the moon don’t make the cut. “[They plan to use] existing hardware, and not try innovative solutions. So the outcome is known before they start.

“One could correctly ask the question why bother?”

Rutan does not believe that there will be continued high growth in commercial aviation over a long-term timeframe of around 20 years.

He thinks that as we generate high-performance virtual reality, our future needs for travel will be reduced. “The technologies of today have already eliminated most of our needs for business travel,” he says.

Space, then, is the real area for future growth and innovation, the real frontier.

Asked what advice he would give someone who is just starting out in aeronautical engineering, he says, “Follow a career path that results in you having the most fun you can think of. This is far more important than money”.

Burt Rutan will deliver the Sir Reginald Ansett Memorial Lecture at the Safeski's 2005 conference on October 26 at Parliament House, Canberra. For details see the Safeski's 2005 conference advertisement on page 6.