

# Time Travel

Better use of airspace, local airports and air taxis will speed up America, says Rutan

GUY NORRIS/LOS ANGELES

Pioneering aerospace engineer and Scaled Composites founder Burt Rutan makes no secret of his frustrations with today's air transport system or his gloomy prognosis for the future unless radical changes are made.

Rutan's forthright views are built on a career of breakthrough innovations, fierce independence and a string of eye-catching designs that culminated with the world's first privately developed sub-orbital spacecraft.

For an industry that based its entire *raison d'être* on reducing travel time, Rutan says progress effectively halted five decades ago. "We've done nothing of significance for probably half of the time back to the Wright Brothers in terms of door-to-door speed in the U.S. It hasn't improved in 50 years. Throw a dart at the map of the U.S. and find any two locations and look at how long it took to get from one to another, and it will take you about the same time or longer than it did in 1961."

The decline, particularly in the U.S., can be tied closely to the emergence of the hub-and-spoke networks. "These pretty much guarantee you have to stop someplace else. So we've not improved the speed at which it takes to go from Idaho to Southern California. It's strange as we'd made these wonderful improvements to scheduled airline travel—DC-3 etc—but the [Boeing] 787 and [Airbus] A380 aren't any faster than the DC-8. If you had interviewed someone in the airline industry in the 60s and told them that was going to happen they'd have said you'd gone crazy. They'd say 'What!?! Did we get bombed into caves and now we're slowly crawling out?'"

Air transport will face mounting challenges from all directions, including improvements in teleconferencing over the next 25 years or so. "We'll probably have the capability to duplicate all the senses—sounds, sight, feel and smell. So with virtual reality, once it gets close to the resolution of basic senses, then we'll travel 100 times more than we do now, and do it instantly. We'll look at [air] travel like we look at Greyhound

buses. No one rides in them now."

Recalling his experience of how teleconferencing and other communications technology impacted business travel at Scaled Composites, from which he retired earlier in 2011, he says "My company went to [having] about one quarter of its travel needs because of email and Powerpoint. Yet you still have these folks who say you have to



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Undeterred by the false dawn of the Eclipse 500 and others, Rutan says air taxi fleets could still accelerate the ailing U.S. air transport system.

have a supersonic business jet and they can justify two Gulfstream Vs."

The incentives for flying have also dramatically waned, he says. "I did a lot of business travel in the '60s, '70s and, as an entrepreneur, back in the '60s I enjoyed getting on an airliner. It was new and exciting and the stewardesses wore miniskirts, and were pleasant to you and brought you food. They were competing for your business by offering the best kind of service. We've lost that, so as early as the mid-'70s I started not liking business travel and by the 2000s I hated it."

As a supporter of the very-light-jet and air taxi concepts, Rutan argues "the only way to increase speed is to be able to fly from the nearest smallest airport to another small airport near where you want to go. There are thousands of smaller airports across the country and you could fly from those when you want, rather than on somebody else's schedule, and without having to use the grid-locked roads to get to those major airports.

Overseas you don't have the option of

small airport to small airport. For those routes something larger than an A380 makes a lot of sense—but not domestically. Internationally, you will continue to see that because you don't find many people taking ships to Europe or Australia—and that's a reasonable reflection of what we can do with the technology we have."

But can air taxis and personal jets, currently the preserve of the wealthy, possibly evolve into this role, particularly after the false starts of the past decade? How do you make it affordable for the masses, Rutan asks. "There are 13,000 taxicabs in Manhattan—if there were only 5,000 the system wouldn't work—people would get frustrated. If it didn't have a full infrastructure it wouldn't work. So how do you have

an on-demand air taxi system for the domestic U.S.? You'd have to have this all in place—it would need around 10,000 to 12,000 aircraft to get to this threshold. It would be done with very little non-revenue flying and insurance costs would be tiny, because the crew flying

rate would be high and it would be a mature system operating on demand. That has the potential to half the door-to-door time."

The result would be cathartic for air transport. "The airlines would wither like the Greyhound buses did. If they're smart they'll realize they're in the transportation business rather than the bus business."

Technology can still come to the aid of the system, he believes. "The big block to capacity is the archaic air traffic system. You need to have cockpit-controlled collision avoidance—rather than listening on the radio to someone who knows your license plate and telling you when to turn. Do you know how well that works at a crowded intersection? We have relatively unpopulated skies—you see them arriving into hubs because the system itself crowds them together. I think these things are pretty obvious—I got pretty excited about it when Dr. [Sam] Williams wanted to certify a personal jet for this type of thing." ☺