

Studebaker Time

Higher, faster, farther. Well, that's two out of three.

IT OCCURS TO ME THAT IF YOU ARE AN AMERICAN BORN ON OCT. 14, 1947, you're eligible to receive Social Security payments, and in fact may have been collecting checks for the past half year. I find that possibility a bit disheartening — No, not that you finally got the chance to put your feet up after 40-plus years of toil, but rather that Chuck Yeager's double Bam! marking your arrival seems to have signaled so little.

His flight that day in the Bell X-1 rocket plane was the start of the supersonic age, of course. And since yours and the era's launch there's been a steady parade of Mach-plus experimental and military aircraft marking your passage. If you were really lucky, you might have even been assigned to fly one while in service to your country. Alternatively, you might have been one of the relatively pampered few to have darted across the Atlantic in a Concorde before the dozen that provided commercial service became stilled artifacts. But that's been it for supersonic flight.

It now appears that you'll be able to buy a ticket to space aboard Virgin Galactic's SpaceShipTwo before you'll be able to superspeed to São Paulo, St. Petersburg or Singapore. The next generation airplanes envisioned by the jetliner builders are targeted to cruise at about 490 nm/hour — continuing a performance pattern set by the Boeing B-47. That aircraft, the first swept-wing jet bomber, flew two months after Yeager's breakthrough flight. We've seen no real speed gain since then. That's 63 years, and counting.

Frankly, I don't get it.

Yes, yes, there was the Concorde, the non plus ultra of swift travel. An elegant, technological triumph, and utter economic disaster. Some point to it as proof that a civilian supersonic aircraft cannot succeed, but I disagree. The Concorde was too small, too thirsty, too loud, too expensive, too complicated and too short-ranged — facts that, combined, doomed the project. However, that's no more proof of SST inviability than was the Comet's short, calamitous record proof that jetliners were inherently unsafe.

The appeal of speed is undiminished, and as global travel becomes more commonplace, moving faster across time zones becomes ever more attractive. And yet we're plodding along at a pace set when Studebakers were cool. Why?

The barrier to supersonic flight now isn't some mysterious sound wall, but mostly a combination of obstacles, including technology, formidable capital investment, obstructionist politics, some really bad PR and will.

It is an immutable fact of physics that a vessel exceeding Mach speed will produce a boom. The bigger the

body the louder the Boom!, and conversely, the smaller, the milder. Thus, there's a certain consensus that a smallish-sized aircraft is a logical so-called "first mover." Coincidentally, a business jet needn't redeem itself through ticket sales, thereby simplifying the commercial considerations surrounding such an aircraft. Moreover, passengers who can afford business jets prize going long distances quickly.

So, with the target aircraft and use identified, there are two distinctly different supersonic approaches being pursued. Aerion, a project backed by financier Robert Bass, aims to sidestep the prohibition of supersonic flight over populated areas by slowing down to near-Mach speeds there and accelerating to Mach 1.5 elsewhere. Either way, the laminar-flow aircraft would deliver about 4,500-nm range.

Meanwhile, Gulfstream believes that to be successful such an aircraft must be free to fly supersonically everywhere. Accordingly, it has worked steadily at minimizing the shock wave to a level earthlings would find readily acceptable. Pres Henne, the Gulfstream executive leading the effort, says they're 90 percent of the way to the technological goal. But that's still a long, long way from putting an airplane on the ramp. The next big step, he says, is having NASA build, fly and prove the technology. And then get the prohibitions lifted around the world, and then. . . Well, you get the idea.

Aerion notes that its approach is simpler since the technology exists — it has even selected proven engines — and thus faster to market. In theory. However, in a world where green is king and elitism out of favor, a speedy but noisome \$80 million executive carriage that burns about 1,100 gallons of fuel per hour, might encounter social resistance. Additionally, Aerion is an organization of about 40 engineers and marketers in need of an aircraft manufacturer with the will and wherewithal to take on the \$3 billion project. The Aerion folks have been pitching OEMs for six years now, and still nothing . . .

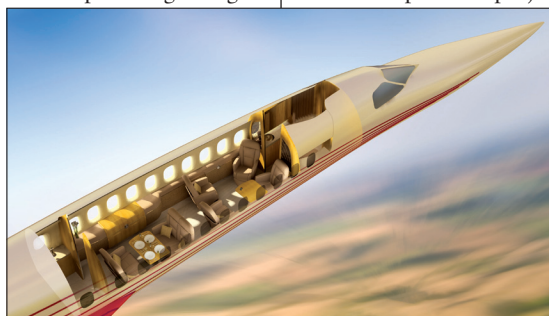
Other supersonic projects have been touted in recent years, but all seem to have gone into hiding, hibernation or historical footnotes.

While declining to attach any sort of timetable to Gulfstream's supersonic explorations, Henne does allow that creating such an aircraft in the next 20 years "is feasible." For its part, Aerion says a go-ahead today could result in a certified airplane on the ramp in 2017.

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Aerion SSBJ