

Time is right to go forward with supersonic business jets

By Michael Paulson
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Many of you may remember my article “Putting a ‘Q’ into supersonic flight” (*Pro Pilot*, Sep 2007, pp 58–62). That article focused on SAI’s successful design study completed by Lockheed Martin’s “Skunk Works” team, which created the first ever aircraft design capable of “virtually boomless” supersonic flight—the Quiet Supersonic Transport (QSST).

The QSST design truly did put a ‘Q’ into supersonic flight. It did so with a patented design capable of supersonic flight at only 0.3–0.5 psf overpressure, which makes the QSST over 100 times quieter than the now-retired Anglo-French Concorde supersonic airliner.

Although the 2008 global economic meltdown put a damper on our progress toward production of the QSST, we actually had our intellectual property licensed with a prominent aviation and investment capital group for 18 months. During this period, SAI and the licensee studied the market for a larger supersonic aircraft that could also be used as a 20-plus-passenger “all-first-class” airliner, in addition to the larger business jet we had dubbed QSST ‘X.’

Adding the X was for good reason. This newer larger variant of the QSST embodied all of the “X” superlatives—excellence, exceptional, exciting, extended and extra.

Lockheed’s preliminary figures showed that the QSST ‘X’ would have extra range, with a projected increase in nonstop range of about 15%, to well in excess of 5000 miles. Also, the QSST ‘X’ would have extra passenger

QSST ‘X’—the next logical step to advance aviation in the 21st century.

capacity and significantly greater cabin space—expected to be larger than that of the new Gulfstream G650—with convertible 20-pax airliner/bizjet cabin configuration capability.

While market studies and financial prospects of this larger variant of the original QSST looked both promising and viable, the project did not move forward with the licensee. This was due to internal factors among the partners, including the global economic outlook at the time. However, I believe that both the aviation industry and the global economy have weathered the storm and that brighter days are ahead—so I’m hopeful that the time is ripe for getting this exciting and revolutionary quiet supersonic aircraft project back on course in 2013.

Also, since we completed our initial design feasibility study about 8 years ago, there have been some significant advances in engine design and airframe manufacturing. These can now be applied to the QSST ‘X.’ They have the potential to give the aircraft more range and efficiency through better specific fuel consumption (SFC) and substantial weight savings with advanced composites and aerodynamics.

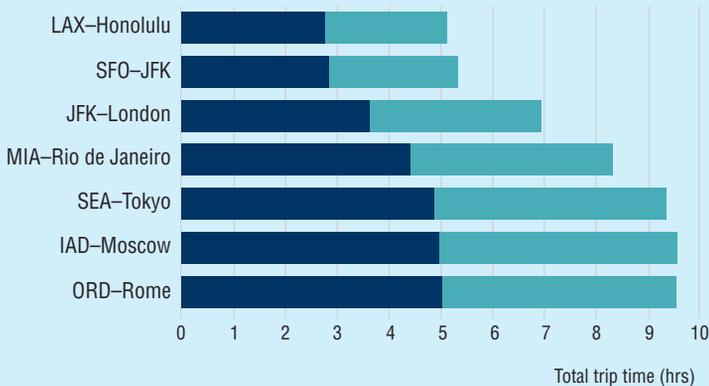
All these advances make the QSST ‘X’ the next logical step in moving aviation forward in the 21st century. To achieve this, the first task will be to put an extra effort into finding an aviation OEM and a US/international consortium with excellence in its résumé to build the aircraft, and to secure the necessary funding for the project.

Distance and time

• Non-stop flights at Mach 1.6

• Flight times are generally half

■ QSST Supersonic
■ Conventional LR-BBJ

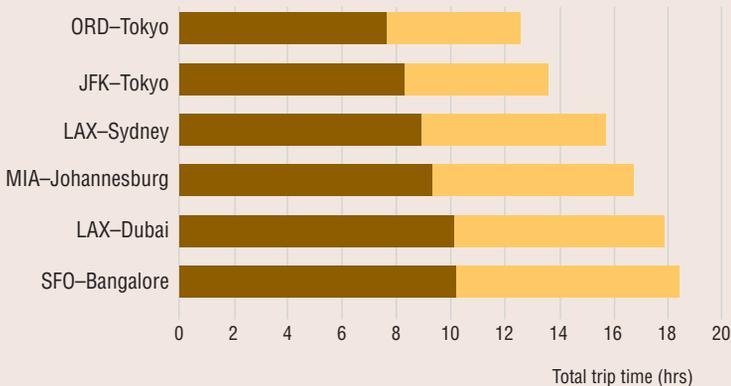


Distance and time

• One-stop flights at Mach 1.6

• Trip times include time for fuel stop

■ QSST Supersonic
■ Conventional LR-BBJ



Large multimode interior

• Same aircraft would be designed for “business jet” or “airline” seating modes

- Seats would adjust automatically into desired configurations at touch of controls.
- No crew rest areas would be required, thus restoring substantial cabin space to passenger areas.
- Cabin would be larger than a Gulfstream G650.



Both commercial supersonic and business jet services can use the same aircraft assets in either operation at any time.

More information available at www.sai-qsstx.com

Lockheed Martin has 60-plus years of excellence in supersonic aircraft design. The company has played a vital role in the QSST’s exceptional design and has indicated an interest in continuing its design work under contract.

However, some of the fundamental questions I posed to industry leaders in my Sep 2007 article are still unanswered and unfulfilled. Questions like, “Why hasn’t any company put in the resources to build a new supersonic aircraft?” Yes, we’ve had a few difficult years with the global economy, but there’s nothing better to help revive the aviation industry and global economy than the development of a revolutionary new aircraft like the QSST ‘X.’

As I noted in my original article, despite much talk about the interest in supersonic aircraft and many complaints about long flights among both pilots and travelers, the truth is that everyone has become complacent about our subsonic transports.

Thus far, no major OEM has agreed to invest the capital and resources to accomplish the formidable endeavor of developing a supersonic business jet (SSBJ). To make a quantum leap forward, we need aviators and leaders in business and government to be vocal and demand that the aviation industry provide the 21st-century traveler with something bold and new in the next decade—not more “repackaged” derivative models from a bygone era. What’s next? A Mach 0.80–0.90 aircraft with a range of 20-plus hrs? Let’s hope not. Global transportation truly needs a new revolutionary “quiet” SSBJ for business and government leaders.

Why is supersonic flight necessary? Time is virtually the only nonrenewable resource we have, so supersonic flight saves us this precious commodity by providing double the opportunity to achieve optimum productivity. My late father, Allen Paulson, the former CEO of Gulfstream, knew that, and made it his passion during his final years to find a path toward a truly revolutionary SSBJ. That has now been accomplished with the QSST designed for SAI by Lockheed Martin.

Let us hope that the business community and aviation industry will finally replace talk with long overdue action, and do it soon, in order to create an aircraft like the QSST ‘X.’

Like the Wright Brothers in the last century, we need to be bold and committed to aviation progress in our second century of flight.

Hopefully, we will see a QSST ‘X’ before the end of this decade. I will do my best to keep the promise I made to my father to see that an aircraft like the QSST becomes a reality. I hope that the business aviation community will do its vital part too and assist me in this worthy endeavor. I also hope that the aircraft that revolutionizes 21st-century aviation is the QSST ‘X.’



Michael Paulson founded Supersonic Aerospace Intl in 2001 to fulfill his promise to create a revolutionary QSST for the 21st century. He is an experienced private pilot.