

Changing the Game - Changing the World

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In his 1986 State of the Union address to Congress, President Ronald Reagan told the assembled congress, as well as the nation that was following the speech on national television, that we were going to build an "Orient Express". He used this term because his speechwriter thought that this catchy phrase would be more understandable to the American public than the actual goal of developing a Mach 25 hypersonic airplane that could circle the globe in less than an hour. And it also avoided alluding to the fact that a Mach 25 airplane could deliver payloads into space or around the globe quickly and effectively.

After the address, a team was assembled to create and manage the project, which was quickly renamed the "National Aerospace Plane" program, or in typical government acronym fashion, NASP. I had the good fortune of heading up the program, ostensibly because of my background in hypersonics and advanced technology. In actuality, we ended up getting over 5000 of the best scientists, engineers and test pilots in the country to participate in the program, and my role was primarily focused on cheerleading and interfacing with over fifteen government agencies who wanted to "manage" the program.

Because President Reagan, and his successor President George H. W. Bush, strongly supported NASP, we were able to stay on course for six years, until the Clinton administration cancelled the program because they viewed it as "Republican". We were not able to build a Mach 25 hypersonic airplane, let alone fly one, by the time the program was cancelled, but did advance the state of the art in many areas of technology, program management and innovative processes. When NASP ended in 1992, I asked many of the 5000 people who had worked on the program if they thought we had failed. Almost to a person they said, "We didn't fail, we changed the world". And I agree, because here's what really happened.

The stimulus for President Reagan's "Orient Express" came from Scott Crossfield, an aviation pioneer and the first man to fly at hypersonic speeds in the airplane-launched X-15 test aircraft. Crossfield believed that we could develop a Mach 25 airplane and actually was hoping that he would be the first test-pilot to fly it. He wrote to the President in 1985, and Reagan got very interested in such a capability for a very different reason than flying around the world in less than an hour. At the time, President Reagan was assembling his Star Wars program that was expressly designed to overwhelm the Soviet Union in terms of defense capabilities. While there were many weapons-based capabilities already in the

Star Wars portfolio, a Mach 25 hypersonic airplane was a real stretch-goal, but one that clearly had weapon potential. So Reagan bought into the program and showcased it in his State of the Union address. Crossfield was asked if such a plane could go from the US to Asia in a few minutes and when he said yes, the speechwriter nicknamed it the "Orient Express".

While no one can prove that the Star Wars effort and the NASP program was really what led to the collapse of the Soviet Union in the early nineties, it certainly contributed to their realization that it was futile to continue the arms race with the United States. And so, all of us who worked on developing the aerospace plane feel that we contributed to something that changed the world. Our motto was "The sky is not the limit," because we were literally trying to fly beyond the atmosphere into outer space. And the paradigm that was created during the NASP program, that we *can* change the world, has stayed with most of us ever since.