



## Buzz Aldrin still believes in big rockets and Mars

**Trendwatch** | By Humphrey Cheung | Wednesday, September 19, 2007

**Long Beach (CA) - It's been almost four decades since Buzz Aldrin walked on the moon, but the famed American astronaut still has a sparkle in his eyes for space travel. But these days Aldrin has traded in his space suit for a business suit as he helps plan out trips to the Moon and Mars. Speaking at the Space 2007 Convention in Long Beach, we caught up with Mr. Aldrin to get his take on the future of space exploration.**

With Google's recent Lunar X Prize announcement and the successful winning of the Ansari X Prize by Scaled Composites in 2004, most science news outlets have focused on private sub-orbital and orbital flights, but Aldrin says privatization, in varying degrees, has actually been around for decades. During the early years of the Space Shuttle program, Aldrin said a group of United Airlines pilots wanted to fly in a shuttle because "they got sick of flying planes."

Aldrin added that private individuals and companies had wanted to buy a Space Shuttle of their own, presumably to fly their own missions. All of that came "to a screeching halt" after the Space Shuttle Challenger accident, according to Aldrin.

Space travel has gone through huge transitions. The transition from the Apollo era missions to the Space Shuttle was "very long and drawn out," Aldrin said.

***"We were flush with success, but people got tired of us kicking dust on the moon."***

Compared to the huge disposable rockets of the 60s and 70s, the Space Shuttle was a monumental change. The craft was reusable and needed to ferry people and supplies to a space station.

Now the U.S. government is faced with a big transition as it tries to move from the shuttle to the next generation of spacecraft. Aldrin's been impressed with the candidates coming out of the Ansari X-Prize and while companies like Virgin Galactic are touting sub-orbital tourism flights, he thinks the big prize is with orbital flights. "The real payoff for tourism and the nation is cheap orbital flights. The leap from sub-orbital to orbital isn't that much," Aldrin said.

But while Aldrin likes the relatively modest goals of sub-orbital flights, he really wants another manned mission to the Moon and one to Mars. Let's face it, this guy has been to the moon so atmosphere skimming is probably too boring for Mr. Aldrin.

We already have most of the technology needed to get to Mars and the trick is to build a crew module that won't slam into the Martian surface. Getting people close to Mars is a fairly easy proposition and Aldrin says big rockets, with multiple small ships

attached, are the way to go.

“We should probably put a patent on it, but that probably guarantees that you’ll never see multiple spacecraft on a big rocket ever,” joked Aldrin.

Aldrin is a big believer of landing on Phobos, Mars’ moon, first. There the crew can “dock” their craft to the moon and have some artificial gravity. Ships could also stage fuel canisters on or near the surface.

From Phobos, astronauts would take small spacecraft - Aldrin calls them space taxis - to Mars. A big parachute would probably be needed to slow the craft because the alternative wouldn’t be very appealing to people.

“I can’t think of anyone who wants to bounce on airbags,” said Aldrin. The NASA Mars Rovers used large airbags to cushion their landing. The craft bounced for miles before coming to a stop.

Getting to the surface is one thing, but taking off is a completely different story. Any manned craft would probably only carry enough fuel to fire navigation jets and rockets to slow the descent. This would make landing a one-way trip, but Aldrin thinks robotic vehicles should be pre-landed months before the manned landing. These unmanned craft would hold extra fuel or could contain machinery that would manufacture fuel from the Martian atmosphere and ground.

The flight time to Mars would be approximately five to six months and Aldrin is a firm believer of setting up some type of manned base on the surface. “We need to use the resources [of the planet] and have people come and add to what you have. It needs to be more than a three or five year mission,” said Aldrin.

The ideal situation would be to take 40-year-old astronauts for a ten year tour. Using military jargon he said, “You’re basically going PCS [permanent change of station] to Mars.”

Despite wanting a Mars base, Aldrin says other worlds are not the greatest places to live.

***“Take it from a visitor, it’s a crappy place to set up house.”***