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United States Air Force
Various Departments and Commands

This request is made pursuant to the Freedom of Information Act.

1. I would like all documents relating to the use of Synthetic Vision in the project being reported as the X-37B and/or the X-40A.

Synthetic Vision is defined by the FAA in FAA Title 14 Part 1 as follows:

Synthetic vision means a computer-generated image of the external scene topography from the perspective of the flight deck that is derived from aircraft attitude, high-precision navigation solution, and database of terrain, obstacles and relevant cultural features.

FAA Title 14 Part 1 is available at: http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&tpl=/ecfrbrowse/Title14/14tab_02.tpl

A mirrored copy is available at: www.jmargolin.com/svr/refs/ref05_faa.pdf

The X-37B project was acquired from NASA where it was known as the X-37.

From: <http://www.globalsecurity.org/space/systems/x-37.htm>

The X-37 program was discontinued in 2003. The X-40A activities were merged with the X-37, where NASA, the Air Force, and Boeing share the cost of the program evenly. The X-37 program, originally a NASA initiative, was transferred to the Defense Advanced Research Projects Agency in 2004. NASA's original X-37 program began in 1999 and ran until September 2004 when NASA transferred the program to DARPA. NASA envisioned building two vehicles, an Approach and Landing Test Vehicle, or ALTV, and an Orbital Vehicle. The ALTV validated flight dynamics and extended the flight envelope beyond the low speed/low altitude tests conducted by NASA from 1998 through 2001 on the X-40A, a sub-scale version of the X-37 developed by Air Force Research Labs. DARPA completed the ALTV portion of the X-37 program in September 2006 by successfully executing a series of captive carry and free flight tests. NASA's X-37 Orbital Vehicle was never built: but its design was the starting point for the Air Force's X-37B Orbital Test Vehicle program. The Air Force's X-37B program builds upon the early development and testing conducted by NASA, DARPA and the Air Force Research Laboratory.

Lest there be any doubt which X-37B project I am referring to, according to Space.com (<http://www.space.com/missionlaunches/x-37b-robot-space-plane-blastoff-100422.html>):

Air Force Launches Secretive X-37B Space Plane on Mystery Mission

By Leonard David

SPACE.com's Space Insider Columnist

posted: 22 April 2010
08:09 pm ET

This story was updated at 8:43 p.m. EDT.

The United States Air Force's secretive X-37B robotic space plane blasted off from Florida late Thursday on a mystery mission shrouded in secrecy for the U.S. military.

The unmanned military Orbital Test Vehicle 1 (OTV-1) – also known as the X-37B – lifted off at 7:52 p.m. EDT (2352 GMT) atop an Atlas 5 rocket on a mission that is expected to take months testing new spacecraft technologies.

2. I would like all documents relating to AF's discussion of U.S. Patent 5,566,073 **Pilot aid using a synthetic environment.**

3. I would like all documents relating to AF's discussion of U.S. Patent 5,904,724 **Method and apparatus for remotely piloting an aircraft.**

4. I would like all documents relating to AF's discussion of pending U.S. Patent Application Publication Number 20080033604 (Serial Number 11/736,356) **System and Method For Safely Flying Unmanned Aerial Vehicles in Civilian Airspace.**

5. I would like all documents relating to AF's discussion of Provisional U.S. Patent Application Serial Number 61/256,765 **System and Method For Sensing Aircraft and Other Objects.**

Before you answer, I respectfully direct your attention to the President's Memorandum on the Freedom of Information, January 21, 2009, available at GPO Access, a service of the government printing office at: www.gpoaccess.gov/presdocs/2009/DCPD200900009.pdf

Costs

I claim the journalist exemption. The answers to these questions are material to the article/blog I am writing called "**How NASA Treats Independent Inventors**" at www.jmargolin.com/nasa/nasa.htm and to an upcoming article "**How the U.S. Air Force treats Independent Inventors.**"

Sincerely yours,

/Jed Margolin/

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