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Featured Projects

## Upgraded B-52 is Still on the Cutting Edge

*By David Hopper*

LANGLEY AIR FORCE BASE, Virginia (Air Combat Command News Service)—The B-52 Stratofortress is continually modified with new technology, making the 50-year-old airframe one of the Air Force's most effective, long-range heavy bombers.

According to Air Combat Command (ACC) officials, B-52 aircraft modified with modern technology are capable of delivering a full range of joint-developed weapons and will continue to be an important element of national defense.

Upgrades have not only given the B-52 pinpoint targeting capability but they also enable it to carry the largest variety of weapons among the heavy bombers, said Lt. Col. Grey L. Morgan, Air Combat Command B-52 Program Element Monitor.

"We are capable of attacking multiple targets with just one aircraft," said Colonel Morgan. "With the advent of GPS-capable weapons we can service more targets across the spectrum."

"With the newer weapons and the B-52's capacity to carry them, it's no longer a question of how many bombers per target, it's evolved into how many targets per bomber," he said.

An example of a recent advance in the B-52 is the LITENING Advanced Targeting pod that is used for targeting, intelligence, reconnaissance, and surveillance.

According to ACC officials, the targeting pod contains a high-resolution, forward-looking infrared sensor that displays an image of the target to the aircrew. It has a wide field-of-view search capability and a narrow field-of-view acquisition and targeting capability. The pod contains a digital camera used to obtain target imagery in the visible portion of the electromagnetic spectrum.



*Bombers, like this B-52 Stratofortress ready to refuel from a KC-135 Stratotanker over Afghanistan, provide coalition ground forces on-demand close air support here and in Iraq. The bomber is from the 2nd Bomb Wing at Barksdale Air Force Base, Louisiana. Photo by Master Sgt. Lance Cheung, U.S. Air Force.*



New modifications on the B-52 also include a laser designator for precise delivery of laser-guided munitions and a laser rangefinder for exact target coordinates.

One B-52 can engage dozens of targets simultaneously, said Lt. Col. Bryan L. Harris, ACC B-52 Weapon System Team Chief. "It is the most combat-capable bomber that we have in the United States Air Force."

The last B-52 built was delivered to the Air Force in October 1962, and currently there are only 94 of the original 744 aircraft still operational.

"Despite its age, the B-52 has the highest mission-capable rate of the three heavy bombers currently in the Air Force," said Colonel Morgan. "It is still effective in many roles and is capable of performing missions that otherwise would go unfilled."

*Air Combat Command's B-52 is a long-range, heavy bomber capable of flying at high subsonic speeds at altitudes up to 50,000 feet. During Desert Storm, B-52s delivered 40 percent of all the weapons dropped by coalition forces. Two B-52s, in two hours, can monitor 140,000 square miles of ocean surface. Photo courtesy of U.S. Air Force.*

Other recent B-52 initiatives involve its use as a testing platform for synthetic fuels. The B-52 was chosen as the Services' first aircraft in synthetic fuel testing because it has a unique fuel management system that makes it possible to isolate various fuel tanks in the aircraft.

"This allowed us to put synthetic fuel in one fuel tank, which allows us to control feeding into the desired engines and put more conventional JP-8 in the remaining fuel tanks for the remaining engines," said Colonel Morgan.

ACC officials said the Air Force will continue to upgrade the B-52 to sustain the aircraft's capability and effectiveness.

The older airframe will continue to be useful as long as it can be modified with new technology at costs cheaper than purchasing new bombers, said Colonel Morgan.

*Editor's Note: This article first appeared on the Air Force Web site on March 31, 2008.*