

The future has arrived

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Recent debate over the combat effectiveness and cost of the U.S. Navy's carrier force has focused on the perceived vulnerability of our nuclear powered aircraft carriers to what are called anti-access or area-denial weapons.

On Wednesday afternoon, Chief of Naval Operations Admiral Jonathan Greenert and I stood on the deck of the Aircraft Carrier George H.W. Bush, at sea off the Virginia Capes, and watched the winning argument in that debate.

The unmanned aircraft X-47B, with its stealthy airframe and 62-foot wingspan, made its first arrested landing onboard a ship. It was a historic moment for aviation, a remarkable achievement of naval power and a powerful demonstration of why aircraft carriers will remain relevant and critical to America's future naval supremacy.

As every naval aviator knows, landing on a carrier is about the most difficult thing you can do as a pilot. To put it simply, an aircraft carrier, unlike an airbase ashore, moves.

So landing the X-47B safely aboard the ship without a human operator requires a very sophisticated computer system capable of factoring in airspeed, altitude, and angle-of-attack to a pitching, rolling flight deck, not to mention the changing winds and seas. In less than a decade the air wing on a carrier will include today's modern manned strike fighters, advanced future manned platforms like the Joint Strike Fighter, and our next generation unmanned carrier aircraft. Wednesday was a glimpse at how the carrier and its changing mix of aircraft will be integral to meeting the challenges of the 21st century.

The U.S. Navy and Marine Corps are America's "Away Team." In military terms, we provide presence. Aircraft carriers are critical to maintaining constant presence and the ability to be on the scene without dangerously escalating a tense situation.

The president needs this flexibility when a crisis erupts. A carrier's ability to be a mobile presence without needing an inch of another country's sovereign territory contrasts starkly with attack aircraft at fixed locations based on foreign soil.

There are certainly threats to our carriers. Potential adversaries are developing more advanced anti-ship cruise missiles and ballistic missiles for targeting ships at sea. However, these same missile technologies pose a greater threat to immobile airfields ashore.

Targeting information for fixed shore bases is relatively easy. A moving carrier far at sea is a much harder problem for our adversaries to solve, and our advancing electronic warfare capabilities make it even harder.

The X-47B that “trapped” aboard the Bush is the culmination of an experimental program. It has been one of the Navy’s most successful, meeting all required objectives within budget and on time. The operational unmanned aircraft that will follow it will radically change the way presence and combat power is delivered from aircraft carriers by conducting surveillance and strike missions at extreme distances and over very long periods of time. With this advanced technology, we will put fewer sailors and marines in harms’ way, and we will push the area of potential action even further from the decks of our ships.

And it’s more efficient. Because unmanned carrier aircraft do not require flights to maintain pilot proficiency, they will deploy only for operational missions, saving fuel costs and extending the service life of the aircraft. Not only will the future carrier air wing be more combat effective, they will cost less to build, and less expensive airframes mean we can build more and use them differently, like developing swarm tactics and performing maneuvers that require more g-force than a human body can withstand.

The unmanned systems and platforms we are developing today are wholly integrated with our manned ships, aircraft, and submarines. It is our sailors and marines who will provide the fresh thinking and develop the new ideas crucial to our success. This new, integrated manned/unmanned team will become a central part of the Navy and Marine Corps and ensure that we continue to deploy the most powerful expeditionary fighting force the world has ever known.

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