The Air Force and *Joint Vision 2010*

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EDITOR'S *Note*

Joint Vision 2010 depends upon airpower. Air and space superiority confirm dominant maneuver. Airpower also provides dominant maneuver of global proportions. Operating from centralized or dispersed locations, it can engage myriad targets throughout the world. And new air expeditionary forces which are being provided to regional CINCs further strengthen capabilities for global attack. At the heart of the concept of precision engagement in *JV 2010* is the precise and accurate delivery of munitions by the Air Force. Of all the aerospace assets, though, people are the most important. Only they can provide the innovations necessary to make a joint vision of the 21st century a reality.

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For almost fifty years the United States planned for the relatively straightforward task of containing and deterring the Soviet Union. Although the Cold War has ended it is clear that the world has not seen an end to conflict. Nation-states and non-state actors continue to use force to achieve political goals. Today the Armed Forces, operating with tremendous dedication and skill, are engaged in meeting national priorities around the world. At the same time, we must develop the conceptual framework and weapons to meet future security challenges.

The future architecture for transferring such information is contained in the global broadcast system (GBS). This system builds on commercial innovations to meet military requirements. GBS satellites transfer imagery and large amounts of data to numerous units much like direct-broadcast television. Users will be able to obtain specific information and continuous or regularly scheduled updates. As DOD executive agent for space systems used by all services, the Air Force will lead the fast-track program for acquiring and fielding GBS.

Also vital is assuring access to space through a cost-effective launch capability. The most important program in this area is the evolved expendable launch vehicle. It will take us beyond the current ICBM-based launch vehicles and is designed to move a broad range of spacecraft, reducing launch costs by 25 to 50 percent. The program is on track with the first test launch scheduled for 2001.

Space superiority also demands a constant commitment to innovation. In order to provide institutional focus the Air Force is creating a space battle lab using inputs from Phillips Laboratory at Kirtland Air Force Base and the Space Warfare Center at Falcon Air Force Base.

C–130s at Cap Haitian.

U.S. Air Force (Frank Oplanic)

Global Attack

The Air Force has the unique ability to find and attack targets anywhere in the world using the synergy generated by air and space assets. In essence, the capability to engage at various places in minimum time from centralized or widely dispersed sites describes a flexible, dominant maneuver force of global proportions. World-spanning mobility forces and CONUS-based bomber or missile operations provide a responsive, worldwide capability to meet national interests.

Throughout the Cold War most Air Force global attack assets were dedicated to a nuclear retaliatory mission. Today many are being shifted to a conventional mission. Long range bombers are being upgraded to improve our unique ability to project power. The B–1 force is undergoing modifications to both offensive and defensive systems and has demonstrated the capability to drop cluster bomb units. The B–2 has seen steady progress in the conventional role, highlighted by the dropping of global positioning system (GPS)-aided munitions in October 1996. The B–52 remains a viable and important component of our global attack capability, demonstrated during conventional air launched cruise missile strikes against Iraq.

Global attack also reflects our expeditionary nature. As the United States reduces forward-based forces, the Air Force will use expeditionary capabilities. These forces will contribute rapidly tailored air and space assets to regional CINCs when and where needed. We have demonstrated this capability through a CONUS-based air expeditionary force (AEF) three times over the last year and will refine our future ability to rapidly deploy tailored forces—lethal and non-lethal—through a battle lab focused on the AEF located at Mountain Home Air Force Base.

Rapid Global Mobility

As we have seen since the end of the Cold War, mobility forces are on call and in use every day, a trend that will continue. This core Air Force competency provides the means for bringing forces forward for combat, peace operations, or humanitarian efforts.

Rapid global mobility is the key to a quick and decisive response to unexpected challenges anywhere. Airlift and aerial refueling aircraft provide the air bridge by which the United States can support and move joint, coalition, or multinational forces for combat or peace operations. In short, this capability also provides dominant maneuver of a global nature, assuring the early arrival of forces or logistics to deter conflict or fight.

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While C–141s and C–5s provide the majority of airlift today, C–17s will be the backbone of our future heavy airlift force. While the very existence of the C–17 was in doubt several years ago, today it is an acquisition success story. In its first year of operation it has demonstrated its capabilities to warfighters around the world. In addition, we are modifying the KC–135 air

refueling fleet and the C–5 force, improving their performance while reducing both maintenance time and operating costs.

Precision Engagement

The precise and accurate delivery of munitions has a long legacy for airmen and has been an integral aim of Air Force planning and procurement strategy for years. This core competency is at the heart of the operational concept of precision engagement spelled out in *JV 2010*.

Although past visions of precision employment often outpaced technological capabilities, we have made great strides. In the first operational B–2 tests the GPS-aided munition set a new standard for precision and reliability. In October 1996, three B–2s dropped 16 weapons against 16 aim points—destroying or badly damaging all targets. This level of precision will redefine the way we think about using mass in warfare, shifting us away from the number of aircraft needed to destroy a target toward the effects of a single plane.

Improving stand-off and all-weather precision capability is another critical area in precision employment. The joint direct attack munition adds an inertial navigation system and GPS-guided nose and tail kit to improve the accuracy of both the standard MK–84 general purpose bomb and BLU–109 penetrator munition. The joint air-to-surface stand-off missile is a precision long-range, stand-off weapon, and the joint stand-off weapon is a 1,000-pound accurate glide munition for attacking from intermediate stand-off ranges. These weapons fit various niches and together provide a full range of options to national leaders and military commanders.

This precision is not limited to weapons. The ability to drop cargo from aircraft and steer it to within a few feet of its target is on the horizon. And precision detection of targets, provided by the joint surveillance and target attack radar system (JSTARS), unmanned aerial vehicles (UAVs), Rivet Joint aircraft, and satellites is improving, largely because of more capable sensor technology. Precision engagement hones the usually blunt instrument of military power, providing the ability to deliver precision effects to meet political and military objectives.

F–22 (center) with F–15 (left) and F–16 (right).

U.S. Air Force

Information Superiority

Each service must develop its own capabilities in the area of information superiority, contributing to the ability of the joint force to gain and maintain it as envisioned by *JV 2010*.

The Air Force, makes distinctive contributions in information superiority with "heavyweights" for dominating the information medium such as the U–2, JSTARS, AWACS, Rivet Joint, and satellites, and the architecture to support their integration. Such systems are much in demand by JFCs worldwide during each phase of an operation and are being expanded every day. We recently demonstrated the ability to provide warfighters with real-time information through the rapid targeting system (RTS) that transmits pictures from airborne collectors such as U–2s, UAVs, or in the future from satellites directly to fighter cockpits, providing up-to-date pictures of the target area. This allows crews to put precision ordnance on target, greatly increasing their ability to find and hit mobile or stationary targets from troops to ballistic missile launchers.

Future capabilities to enhance information superiority include advanced communication and information systems, real-time information to the cockpit, UAVs, remote multi-spectral sensors, and advanced multi-spectral satellites. No doubt more ideas will be generated by the Information Warfare Battle Lab at Kelley Air Force Base.

There is immense promise in using UAVs to fill some critical gaps in information warfare. The Air Force currently operates the Predator UAV to collect information, and a UAV battle lab is being established at Eglin Air Force Base to explore the full potential of this technology. Future UAVs will be employed as surveillance and communications platforms and form an integral part of the "system of systems" so important to winning the information battle.

As the executive agent for battle management, the Air Force serves as joint force integrator and is working to provide JFCs of the next century with a picture of the entire battlespace—air, space, and surface forces—to facilitate real-time control and execution of air and space missions. This initiative will rely heavily on innovative efforts at the Battle Management/Command and Control Battle Lab at Hurlburt Field.

U–2 aircraft.

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Agile Combat Support

Because air and space forces provide worldwide response and are generally the first forces called forward in a crisis, we must remain light, agile, and far-ranging. The Air Force accordingly provides a core competency known as agile combat support, a concept that reaches beyond pure logistics to include functions such as force projection, engineering, and other combat support functions.

Logistics, the lifeblood of the military, is a prerequisite for asymmetric force application. The concept of focused logistics described in *JV 2010* involves a combination of information and logistics technologies which ensures that wartime assets consistently arrive at the right place at the right time—during theater-wide conflicts or military operations other than war.

logistics is a prerequisite for asymmetric force projection

The Air Force has been developing and refining practices to support focused logistics since 1994. We are shifting from logistics based on large stockpiles to a system that will get resources to warfighters on demand. This depends on a rapid, time-definite transport and communications system. Moving materiel by both commercial carriers and advanced airlift such as C–17s (an inter- and intra-theater lifter) and using innovative technologies to track cargo improves battlefield distribution by bringing the warfighting means closer to fielded forces, minimizing the overall size of a force.

Reducing the "footprint" of a deployed force is just part of our force protection effort. We are also looking into new ways to protect our people from various threats through a force protection battle lab at Lackland Air Force Base.

Quality people are the key to transforming the operational concepts and technologies identified in *JV 2010* into war-winning capabilities. Every service must continue to attract, recruit, and retain such individuals. As Air Vice Marshal Tony Mason of the Royal Air Force has said, "of all aerospace assets, only the value of people appreciates over time," a fundamental truth reflected in *JV 2010*.

To provide the proper background and common focus for employing air and space power, the Air Force will establish a new air and space basic course for new leaders. It will center on history, doctrine, strategy, and the operational use of air and space power and also will impart a thorough knowledge of capabilities provided by air and space forces. After this training most officers will go to operational assignments before moving into their functional specialties.

The services must work together to meet future security needs because our Nation expects its military professionals to apply the resources that are entrusted to them to their full potential with minimal casualties and risks. The contribution of the Air Force comes from our focus on providing the ability to exploit and control the air and space environment. This vision will serve the Nation well as we enter the 21st century and search for ways to prevent, deter, fight, and win wars.

JV 2010 paints a challenging picture. Indeed, it is difficult to exaggerate America's expectations for its Armed Forces. Each capability available today and in the future confers higher expectations. Yet in a world of unrelenting technological advances which can be harnessed for or against joint forces, there can be no retreat.

As General Henry ("Hap") Arnold, who commanded Army Air Forces in World War II, warned, "For us to have expended our effort on future weapons to win a war at hand would be as stupid as trying to win the next war with outmoded weapons and doctrines." Now is the time to invest in the future so that the Armed Forces will have the capable people, organizations, weapons, and doctrine to maintain our Nation's security in a dangerous world. **JFQ**