Section 2.4: Delivery Systems


   Autonomy of decision making in the developmental process and in strategic matters is an inalienable democratic right of the Indian people. India will strenuously guard this right in a world where nuclear weapons for a select few are sought to be legitimised for an indefinite future, and where there is growing complexity and frequency in the use of force for political purposes.


7. Id.

8. “But I have no interest in diplomacy for the sake of returning Lebanon and Israel to the status quo ante. I think it would be a mistake. What we’re seeing here, in a sense, is the growing—the birth pangs of a new Middle East.... And whatever we do, we have to be certain that we are pushing forward to the new Middle East, not going back to the old one.” “Secretary Rice Holds a News Conference,” The Washington Post, CQ Transcripts Wire, July 21, 2006. Online at http://www.washingtonpost.com/wp-dyn/content/article/2006/07/21/AR2006072100889.html.


See, for example, U.S. Department of the Air Force, Research, Development, Test and Evaluation (RDT&E), Descriptive Summaries, February 2007, Program Element 0604240F, B-2 Advanced Technology Bomber, requesting funds for various electronics upgrades including “a secure, survivable communication and Net Ready infrastructure systems upgrade, preserving the critical ability to guarantee communication in a nuclear environment” and other upgrades that “will provide a dramatic increase in the data flow into and out of the B-2, paving the way for integration into the Global Information Grid (GIG).”


Id., p. 10.

Id., p. 9.


For more on the Common Aero Vehicle, see *Missiles of Empire*, pp. 3-6.

In 2004, Congress expressed concern that “nations possessing nuclear weapons capabilities” might “misinterpret the intent or use of the FALCON/C AV programs.” Congress directed that funds appropriated for hypersonics research could not be used “to develop, integrate, or test a CAV variant that includes any nuclear or conventional weapon,” or “to develop, integrate, or test a CAV for launch on any Intercontinental Ballistic Missile or Submarine Launched Ballistic Missile.” The Conference Report noted, however, that “The Committees on Appropriations will consider expanding the scope of this program in subsequent years if safeguards negotiated among our international partners have been put in place.” House Rpt. 108-622 - Making Appropriations for the Department of Defense for the Fiscal Year Ending September 30, 2005, and for Other Purposes. See also Exhibit R-2, RDT&E Budget Item Justification, February 2007, 0604856F Common Aero Vehicle.


“Classified or ‘black’ programs appear to account for about $28.0 billion, or 19 percent, of the acquisition funding included in the fiscal year (FY) 2006 Department of Defense (DoD) budget request.... This total includes $14.2 billion in procurement funding and $13.7 billion in research and development (R&D) funding. These figures represent 18 percent and 20 percent, respectively, of the total funding requested for procurement and R&D.” Steven M. Kosiak, “Classified Funding in the FY 2006 Defense Budget Request,” Center for Strategic and Budgetary Assessments, March 23, 2006, p.1—only has FY07 page—Online at http://www.csbaonline.org/4Publications/PubLibrary/U.20060517.FY07BlackBudget/U.20060517.FY07BlackBudget.pdf.


“Advances in conventional kinetic and non-kinetic means (e.g., cyberspace warfare, High Energy Radio Frequency (HERF) and directed energy (DE), etc.) may supplement US nuclear capabilities by 2015, nuclear weapons that are reliable, accurate, and flexible will retain a qualitative advantage in their ability to demonstrate US resolve on the world stage. Improving our capability to integrate nuclear and non-nuclear strike operations should further enhance these capabilities. Providing the President an enhanced range of options for both limiting collateral damage and denying adversaries sanctuary from attack will increase the credibility of US nuclear threats, thus enhancing deterrence and making the actual use of nuclear weapons less likely. Additionally, nuclear weapons allow the US to rapidly accomplish the wholesale disruption of an adversary nation-state with limited US national resources.”


As the recently retired Commander of U.S. Joint Forces Command stated in the fall of 2000, “This issue’s been studied by panel after panel after panel and we got it—Our current policy is one that I support and understand. The priority is lower tier theater ballistic missile defense systems first, upper tier systems second, national missile defense third. That’s the way the threat is arrayed.” Admiral Hal Gehman, ret., former Commander-in-Chief, U.S. Joint Forces Command, speaking at a Washington, D.C. conference, “National Strategies and Capabilities for a Changing World,” November 16, 2000, transcript at http://www.fletcherconference.com/oldtranscripts/2000/panel15.htm

See on this point John Steinbruner, “National Missile Defense: Collision in Progress,” *Arms Control Today*, November 1999, pp. 4-5. It is important to note that the full capabilities of satellite sensing systems often are not apparent until the system is deployed, and are likely to evolve as both ground and space-based elements of the system are improved and replaced over time. In a recent speech to the Air Force Association, the Vice Commander of Air Force Space Command predicted that the Space Based Infrared System (SBIRS), a major component of anticipated missile defense systems, would have a variety of applications beyond missile defense:

SBIRS brings exciting new capabilities to the battle space.... But people forget that SBIRS has far more capability than just as a missile warning sensor. The intelligence capabilities, the battle space characterization kinds of capabilities that this fire-improved sensor is going to bring to our national security equation, I think, would have important advantages....
When we get that kind of capability in orbit, we are going to discover all kinds of applications in a horizontal sense across the battle space that we never envisioned because we’ve never had experience with that kind of phenomenology and that kind of timeliness and that kind of sensitivity. It is very difficult to speculate exactly how powerful that will turn out to be.


For a useful account of the way in which some past U.S. satellite sensing systems have provided military capabilities beyond those originally envisioned, see Jeffrey T. Richelson, America’s Space Sentinels: DSP Satellites and National Security, University Press of Kansas, Lawrence, Kansas, 1999.

46 Nuclear Posture Review, pp. 16-17.
47 For example, “Active and passive defenses have little or no ability to encourage adversary restraint. In fact, because they have the synergistic impact on our perceived willingness to impose costs described above, they have the potential to increase adversary concerns regarding preemption. Such concerns, in certain circumstances, could worsen an adversary’s perception of the consequences of restraint. Deterrence planning and operations need to account for this possibility.” Joint Operating Concept, p. 39.
49 The United States currently, however, appears determined to keep all its military space options open. The U.S. National Space Policy released in October 2006, at p. 2, states that:

The United States will oppose the development of new legal regimes or other restrictions that seek to prohibit or limit U.S. access to or use of space. Proposed arms control agreements or restrictions must not impair the rights of the United States to conduct research, development, testing, and operations or other activities in space for U.S. national interests.

Section 2.5: Understanding U.S. Policy

1 Weapons of Terror, p. 53.
2 Id., p. 54.