

## Strategic Defense Command/ Strategic Defense Initiative

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The Strategic Defense Initiative concept envisioned a three-tiered defensive system — creating the ability to intercept a target missile in the boost, midcourse and terminal phases of its flight.

By 1984, with over 25-years of experience in ballistic missile defense, the Army and more specifically this command, then known as the U.S. Army Strategic Defense Command (USASDC), was given the lead in most of the SDI programs.

In the boost phase, the system incorporated a Boost Surveillance and Tracking System, the Space Based Laser and the Ground Based Laser. The Army shared responsibility for the SBL with the Air Force, while it was assigned sole control over the GBL.

In the midcourse phase, the SDI system architecture envisioned a Space-Based Surveillance and Tracking System, a Space Based Interceptor (SBI), a Neutral Particle Beam, and the Exoatmospheric Reentry-vehicle Interceptor Subsystem (ERIS). The Air Force oversaw the development of the SSTS and the SBI and shared responsibility with USASDC for the NPB. The Army directed the development of the ERIS.

The final layer of defense, the terminal phase, employed the Airborne Optical Adjunct, the Ground Based Radar, the Ground Based Surveillance and Tracking System (GSTS) and the High Endoatmospheric Defense Interceptor (HEDI). The USASDC was the lead on all of these programs.

Finally, development of a Battle Management/Command, Control and Communications system was shared by all three primary elements: the Air Force, the Army and SDI Organization.

As the programs continued to progress through the decade, they were increasingly redefined by budget concerns. With the advent of the 1990s, budget cuts in the SDI program resulted in the termination in some of these technology programs. The Ground Based Laser Project Office closed in January 1991, six months after the dedication of the ground based free electron laser facility. Both directed energy programs, however, continued in a research status.

Although President George H.W. Bush announced a plan to “vigorously pursue” the Strategic Defense Initiative in 1989, change was on the way. Later that year, President Bush commissioned an independent review of strategic requirements for a “new world order.” The resulting Strategic Defense Architecture emphasized boost phase kill technologies and the Brilliant Pebbles.

The new world order was soon upon us. 1991 saw both the advent of the “age of Star Wars” and the demise of the Soviet Union. Coined by a reporter from The Los Angeles Times, the Age of Star Wars recognized the first use of missile defense technologies to intercept a target missile during combat. At the end of that year with the dissolution of the Soviet Union, the Cold War came to an end. The new environment brought a reassessment, but not a termination of the Ballistic Missile Defense program and an increased emphasis upon the Theater Missile Defense program.

In his 1991 State of the Union Address, President Bush announced a new direction for the Strategic Defense Initiative. The new system known as the Global Protection Against Limited Strikes or GPALS would provide a defense against “purposeful strikes by various Third World powers developing ballistic missiles, or accidental or unauthorized launches from the U.S.S.R.” The GPALS architecture focused on three elements — a ground based national missile defense system, ground and sea-based Theater Missile Defenses, and a space-based global defense system.

The Program Executive Office-GPALS, which has since evolved into the PEO Missiles and Space, was created in 1992 to transition the technologies for this new initiative. To create the new organization, the command’s PEO Strategic Defense and the U.S. Army Missile Command’s PEO Air Defense merged to form the PEO-GPALS.

The following command Strategic Defense efforts transferred to the PEO GPALS: Ground Based Radar, ERIS/Ground Based Interceptor, GSTS, HEDI, Site Defense and Regional Operations Center/Communications. They were joined by other command initiatives — the Theater High Altitude Area Defense and Extended Range Interceptor (now known as PAC-3) Project Offices, and the Adjunct Sensors, Arrow and Testbed Product Offices. That, however is another chapter.



High Endoatmospheric Defense Interceptor (HEDI)

- A modified Sprint
- Contains infrared seeker in nosecone which must endure temperatures of 1,500 to 200°F as well as pounds pressure
- Sapphire window cooled by flowing gaseous nitrogen
- Speed — Reached Mach 7 in 8.5 seconds
- Tests conducted — 3
- Intercepts attempted — 0

### Neutral Particle Beam/Ground Based Laser



- Concept destroy target by disabling vital electronics
- Line of site weapon
- Goal demonstrate long-term space capability

- Boost Phase Interceptor
- Free Electron Laser
- Radio Frequency FEL
- Induction FEL

