

Edited extract from: *Department of Defense Annual Report for Fiscal Year 1966*, (Washington D.C.: U.S. Government Printing Office, 1967).

Annual Report of the Secretary of Defense, Operational Forces and Programs, p. 19:

Antimissile Defenses

Warning of a ballistic missile attack continued to be provided primarily by the Ballistic Missile Early Warning System (BMEWS). All three of the presently planned stations were operational during the year, and completion of the Clear, Alaska, tracking radar further increased the warning reliability of the system. Additional development work was done on the over-the-horizon (OTH) radar, which permits the near-instantaneous detection of extremely distant ballistic missile launchings by bouncing radar or radio waves off the ionosphere. The installation of oversea-based OTH radar complexes was begun. Steps were also taken to improve the sea-launched ballistic missile detection capabilities of selected SAGE and SPACETRACK radars.

Further substantial progress was made during the year in developing an effective anti-ballistic missile (ABM) defense system, a project which has had the highest priority for many years and in which about \$2.4 billion has been invested during the last years. As currently conceived, this system, known as NIKE-X, would consist of a family of radars, long-range ZEUS missiles, short-range SPRINT missiles, and the necessary control and data processing equipment. A powerful Multifunction Array Radar (MAR) would provide central control and battle management, a long-range acquisition radar would identify targets for the extended-range ZEUS missile, and a smaller Missile Site Radar (MSR) would control both the SPRINT and ZEUS missiles. The new extended range ZEUS would intercept enemy warheads at high altitudes outside of the atmosphere, thereby providing, in effect, an area defense. The high acceleration SPRINT would attack enemy warheads that successfully penetrate the ZEUS defenses and enter the atmosphere.

The NIKE-X system was well advanced in development by the end of the year. Although certain technical problems remained, there was high confidence in the feasibility of the system as a whole. Early in the fiscal year the development contract was let for the extended range ZEUS missile, while extensive testing was continued on the basic ZEUS missile, which had demonstrated its intercept capability earlier. Test firings of the SPRINT missile, which began in early 1965, were also continued throughout fiscal year 1966. After the successful test of an experimental version of the Multifunction Array Radar (MSR) at White Sands Missile Range in fiscal year 1965, components for additional test radars were procured during 1966 and construction of another test facility was started at Kwajalein Atoll.

Annual Report of the Secretary of The Army, Firepower, pp. 223-224:

To provide a replacement for HERCULES and HAWK air defense missile systems, the Army undertook a study of the surface-to-air missile defense system, called

SAM-D for short. This was designed specifically for use in a field army, primarily against a high performance aircraft threat, but may also be used to combat short-range tactical ballistic missiles. In the Army's view, SAM-D would be the principal tactical air defense weapon of the 1970's, although it might also be used in conjunction with an antiballistic missile system for terminal bomber defense in the continental United States.

The Army received approximately \$390 million in fiscal year 1966, for continued research and development on the NIKE-X, an anti-ballistic missile (ABM) system. This was the largest item in the Army Research, Development, Testing & Experimentation (RDT&E) budget. Included in the system are two missiles--a long-range ZEUS type missile and a short-range, very high acceleration missile known as SPRINT--together with complex phased-array radars and high-speed/high capability data processing equipment. The first successful guided flight of the new SPRINT missile took place in November 1965.