

be necessary and proper to accomplish a minor reorientation and employ these facilities on other work within the Army rather than to consider transferring these to another Service with attendant degradation in progress in other essential Army efforts.

*Question 3.* Explain how you would expect Army interests to be protected in the fields of mapping and geodesy under the terms of the directive. Would the Army develop suitable satellites for Air Force launching, or would the Army merely plot the results brought to it from Air Force developed and operated satellites?

*Answer:* The Army is in receipt of Department of Defense Directive 5160.34, subject: "Reconnaissance, Mapping and Geodetic Programs," dated 28 March 1961, which defines the Army responsibilities in these fields, including the exploitation of space systems. The Army is in complete accord with this directive, a copy of which is attached for your information.

(The directive has previously been printed following the testimony of March 18, 1961 in these hearings.)

*Question 4.* General White described point defense as an Army responsibility, and area or interceptor defense as an Air Force responsibility. Suppose that the Nike-Zeus shows further growth potential. At what point does it cross the definition of General White to become an Air Force responsibility for development?

*Answer:* The Army's responsibility for point defense was assigned by the Office of the Secretary of Defense. In that assignment of responsibility a point defense was, in general, characterized as one in which the radars of the system were located in the vicinity of the defended area and did not require a distant interlocking network of radars. An area defense was characterized as involving the concept of locating defense units to intercept enemy attacks remote from and without reference to individual vital installations, industrial complexes or population centers.

Nike-Zeus as designed, being developed and recommended for deployment by CINCNORAD is, under the above definition, a point defense system to provide protection against the ICBM. It is believed the growth potential inherent in the system is such that, with modifications to some of the equipment, Nike-Zeus from its ICBM defense positions could provide a secondary capability to intercept satellites.

It would therefore appear that Nike-Zeus would always be primarily a point defense system and hence an Army responsibility.

*Question 5.* Please define "preliminary research."

*Answer:* Preliminary research is a term not previously used in Army research and development. It would seem reasonable that the intent of this DoD Directive is to consider preliminary research as all basic research plus some early part of applied research. It is expected that a more precise definition of this term will be issued later in the implementation of the directive.

(Whereupon, at 12 noon, the committee recessed, to reconvene at 10 a.m., Tuesday, March 21, 1961.)