The integrated wideband communications system (IWCS) is the DCS long-haul communications subsystem in Vietnam and Thailand. This subsystem forms the backbone transmission circuitry required in and between Thailand and Vietnam for command and control, logistics, administrative, intelligence, and other types of traffic. The number and dispersion of troops greatly determines the requirement for types, quality, and quantity of equipments utilized in the nework. [Deleted.] Details concerning these phases are most complex. With your permission, I would like to summarize our actions. If more detailed briefing or information is desired on any particular phase or aspect of this

Basically, our implementing actions for the initial three phases have

included all or portions of the following:

Integration of existing broadband systems composed of fixed and transportable equipments,

Replacement of tactical broadband being used in a fixed comm role to release them for tactical use or IWCS extension into areas of in-

Installation of new, additional tropo and microwave lines to improve

or increase quality and quantity of channels.

Installation of technical control facilities at nodal points permitting more effective interconnection in internal SEA and interface with the DCS in external areas.

This implementation is effected by contract—by Philco-Ford in Thailand and Page in Vietnam. Phases I and II have been completed. Acceptance of the phase III effort is underway on a link-by-link basis with the last link scheduled to be completed in November.

Funding of this program was complicated by several factors. First, the initial cost estimates have to be derived from desktop engineering and costing techniques. Site surveys and detailed engineering efforts proved them to be low. Additional equipment needs were also developed later in the program. Many problems associated with military, political, and terrain factors added further complications. These difficulties necessitated reprograming and additional program budget requests. However, current programs show approximately \$250 million committed to phases I through III in fiscal years 1966-68. An additional \$18 million is programed in fiscal year 1969 for claims against these phases, some due to Tet and other actions. [Deleted.]

General Klocko. Although much of our recent communications improvement efforts have been in the Pacific, the needs of the Western Hemisphere and Europe (including the Middle East and Africa) have not been overlooked. [Deleted.]

General Klocko. Another matter worthy of note, at this time, is the use of commercial communications for transatlantic DCS use. At the present time, our major reliance on quality communications across the Atlantic is upon the submarine cable systems. However, we have started using commercial satellites in January of this year and expect to increase this use as the capability of satellite communications increases. A basic concept essential to communication reliability used by DCA is the diversification in the use of transmission media. It is difficult to predict with precision the future amount of communications