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REPORT TO THE CONGRESS

ON

THE STANDARDIZATION OF MILITARY EQUIPMENT IN NATO

AND OTHER RELATED ACTIONS

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II. THE LOSS IN MILITARY EFFECTIVENESS

(U) There is at present no mathematical formula or model that would allow a precise calculation of the overall percent of possible effectiveness that NATO loses through lack of standardization. Such models would require, among many other things: (1) the means to express the contributions of the different parts of our forces on a common scale; (2) the numerical measurement of the individual value of tanks, ships, rifles, aircraft, communications, and all the force components; and (3) most difficult of all, their relationship quantitatively to each other. While the problem of determining the overall loss in effectiveness thus defies precise calculations, NATO's military leaders all staunchly agree that the lack of standardization significantly reduces capability. When he was SACEUR, General Andrew J. Goodpaster made an estimate of the total penalty to NATO. He said,

> "NATO is not getting a satisfactory return on our investment for our vast expenditures. We are losing 30 to 50 percent ... of our capability due to the lack of standardization."

(U) Problems faced by individual components of NATO's forces support General Goodpaster's estimate that the losses are widespread and significant. By looking at the forces a piece at a time it is easier to say something quantitative about what is lost. The absence of standardization frequently means that forces cannot operate together smoothly.

the alternative developments have led to duplicative systems being deployed. Additionally, the cost of making these duplicative systems at least interoperable has usually been considered to be too prohibitive by the nations involved.

(U) The major European industrial nations (Germany, France, United Kingdom, and Italy) have found it somewhat easier to enter into cooperative development and procurement programs among themselves rather than to do so with the United States. Because of their relative similarity in national size, force requirement, industrial base, technology level, and military requirements, they can more readily implement programs with commonly defined hardware and proportional sharing of funding, technology, and industrial participation. However, these few collective efforts have had mixed success relative to their individual national developments.

(U) In addition to management complexity and higher cost, there are two factors that tend to make the United States reluctant to participate in programs with overall pro rata sharing of R&D and coproduction. First, the US has a technological advantage over most nations. An indiscriminate shift of R&D activity to a less developed technology base could result in less effective systems at higher costs. Additionally, general sharing of R&D and production technology would result in

(U) The Europeans have tended to favor jointly managed and funded programs, despite the management complexity and higher cost of this approach. The United States favors interdependent programs, whereby one nation would undertake R&D of a product to be utilized by a number of Allies, and the using country, if it so desires, would produce the item. By this latter approach, the nations could retain the management and cost efficiencies of a single national development, satisfy national economic needs by production and offset arrangements, and achieve standardization by multinational use.

(U) The United States has pressed initiatives at the NATO level, through Four-Power (United States/United Kingdom/France/Federal Republic of Germany) meetings and through bilateral meetings toward achieving common or interoperable solutions to selected weapon system requirements. Our strategy over the past two years, which has met with increased success, has been to emphasize the following:

o Mutual planning and execution of national R&D programs within the Alliance to reduce the excessive degree of unnecessary duplication. Properly structured, such programs can provide options by furnishing competition in their earlier prototype stages and efficient final development, production, and deployment in their later stages.

o The weapon systems to be deployed should be standardized; failing that, interoperability is necessary. Interoperability among such

(U) From this experience (e.g., MBT-70), the United States concluded that joint developments with Europe are too unwieldy management wise and too inefficient cost wise. Indeed, at present, even US joint Service programs are managed by one Service only. The Europeans, however, have successfully completed several such projects (e.g., MILAN, JAGUAR, HOT, ROLAND II, ALPHA JET), concluding that even though total R&D is much costlier, the R&D cost to each nation is less, the unit production cost is somewhat lower, and the political result is unifying.

(U) In 1971-1972, as a way of revitalizing NATO cooperation without the shortcomings of joint programs, the United States proposed international interdependent programs, whereby one nation would undertake R&D of a product to be utilized by a number of Allies. By this approach, the management and cost efficiencies of a single national development could be retained while satisfying national needs by multinational production and offset arrangements and achieving standardization by multinational use.

(U) Interdependency is presently our basic thrust in cooperative R&D. To make it work, we have introduced several abetting mechanisms. To overcome the problems of requirements rigidity and conflicting performance claims, we introduced competitive prototype testing. To remove US industry from an adversary role with its European counterparts, the