

INTERDICT # 63
25 Feb. 75

CONVENTIONAL WARHEAD USAGE FREQUENCY ANALYSIS

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1. In re a verbal request for a plan and estimate to undertake an analysis, using existing information to the extent possible, to answer the question:

"Given a set of conditions, undertake weapon/target matching and provide a plot of Percent of Total Warheads utilized versus Warhead Weight and/or Weapon Volume."

It was further stated that warhead weight and numbers were to be unconstrained. The following approach utilizes the existing CAPMOD Model and the existing Central European scenario with Interdiction Targets for which target values are already developed.¹

2. APPROACH: A curve of relative frequency of use vs. warhead weight will be produced by utilizing the weapon allocation scheme contained in the computer program CAPMOD. An unconstrained mix of hypothetical weapons, with assumed accuracies (may be either constant CEP or Mils as some function of range or both) will be developed and applied to the Central European Scenario target slice consisting of approximately 300 individual targets. As the allocation process proceeds in time, it is expected that weapon use frequencies will asymptotically approach constant values.

¹ The Anatomy of Combat, 1996, Chapter 8.1, Interdiction Fire Study.

3. **TASKS:** The effort will be divided into three tasks as follows:
 - a. Place a compiled version of the CAPMOD on the system disk.
 - b. Develop the hypothetical weapon list and associated lethality matrix, code the data for key punch, insert into the complete data deck, and checkout.
 - c. Prepare and submit the computer runs and analyze results. Document in informal Data Book Report.

4. **OUTPUT:** Specific results will be curves of weapon use frequencies as a function of warhead weight for the specified Central European Scenario slice and for selected range bands (from FEBA). Data will also be provided to indicate total expected numbers of targets and target value destroyed.

5. **EFFORT:** It is estimated that 19 man-days will be required for accomplishment and overall time span will be dependent on other work priorities which can be discussed if it is decided to proceed. Allocation of 60 CRU's of IBM 370 time will be needed as well.