

Appendix J

TACTICAL WARFARE SEMINAR ABSTRACTS

SEMINAR # 1 -- Two Hours

a) **THE STRUCTURE OF TACTICAL WAR** 20 Minutes

Scope -- In the study of tactical warfare, the number of variables, even for quite limited engagements, is so large that only superficial results are possible if the entire conflict is addressed directly. The Structure of Tactical War is briefly described and discussed in the context of a set of study (Interdiction Fire is one) and sub-study areas which are significant to making objective force structure and weapon system requirement decisions.

b) **INTERDICTION FIRE STUDY** 60 Minutes

Scope -- Through the use of a Capability Model, a sensitivity analysis has been performed to isolate the most important parameters that can govern the Requirements FOR and ON an Interdiction Weapon System. This is accomplished by means of a unique hypothesized method for valuing targets. Findings are: 1) *Mobile targets* as opposed to fixed targets are most important, 2) Targets are *time-dependent* rather than range-dependent, and 3) A credible *measure of worth* is a most critical need."

SEMINAR # 2 --Two Hoursa) **THE ANATOMY OF COMBAT**

50 Minutes

Scope -- Provides a Descriptive Model of Combat and thus improves the utility as a communication tool of mathematical models of combat. The emphasis is on describing, as accurately as possible and in quantifiable terms, the totality of land combat, rather than on achieving immediately useful but less meaningful computational models. Although land combat is the vehicle for development, analysis of sea, air and unified combat may require only specialized versions of the same model.

b) **MILITARY ELEMENT VALUE THEORY**

20 Minutes

Scope -- The Objective Function expectation is the *key* to value theory which is closely correlated with a picture of the Command Function, because the Commander's Estimation is an Analysis. However, the analyst can be cognizant of the *real* value, since he can see both sides: whereas, the accuracy of the Commander's estimate of value is dependent on available intelligence, his skill in estimation, and Generalship.

c) **THE VALUE OF MINE WARFARE**

20 Minutes

Scope -- An illustrative example of an air-delivered, influence-fuzed, land mine field is presented to show how the output values in terms of 1) *Damage*, 2) *Delay*, and 3) *Disruption of Enemy Plans* can be quantified. The Input Values are also defined.

SEMINAR # 3 -- Two Hours

a) THE UTILITY OF ARM WEAPONS

90 Minutes

Scope -- Of the ten adversary functions identified in the Structure of Tactical War, Defense Suppression is one of the most difficult of solution. Enemy SAM sites are a nuisance to the efficient accomplishment of the primary objective (i.e.: to deliver air strikes against primary targets). It is then apparent that Defense Suppression is merely a means to the end of delivering other Fires - - and not an end in itself. If one ignores the value to be gained from attacking the primary objective targets, one is unable to establish just when to stop suppressing defenses and get on with the job of attacking primary targets -- or even when to start. What then are the Requirements For and On Anti-Radiation Missiles (ARMs)?

This is an Overview report on the Methodology developed. Sufficient computations were done to check out the methods.

SEMINAR # 4 -- Two Hours

a) EARLY REFLEX RESULTS

90 Minutes

Scope -- This seminar addresses the next higher question. *What is the relative worth of attacking the ground-based Air Defense Command Net*, alone or in combination with Anti-Radiation Missile (ARM) attacks against interconnected SAM sites under varying combat circumstances?

The objective is to provide suitable methodology to answer this question. A quantitative demonstration of the methodology is described in a simplified single-thread analysis that clarifies and reinforces the planned methodological approach. The paper provides conclusive evidence on the validity of the approach as well as a clear picture of the implementation process.

Make sure the listener sees that the sum Productivity of the Individual SAM sites, operating independently, is clearly less than the Optimal Productivity of the Defense Net with perfect Command/ Control/Communications -- and that the Difference in Productivity is the quantified Value gained by Command/Control/Communication (C³) denial!

SEMINAR # 5 -- Two Hours**a) QUEST FOR THE HOLY GRAIL**

60 Minutes

The Holy Grail was identified as a *near universal* Measure of Effectiveness (or Measure of Worth) which can quantify all facets of warfare, including Combat and Support Functions, interconnected by a Command Model that continuously plans and triggers military actions. In brief, it concluded that Tanks, Guns, Airplanes, Mines, etc. do not fight wars. *MEN do* -- with whatever military machines are at their disposal. Then the logical measure of worth is Man-Days in Theater and the Objective Function is to Deny Red Man-Days in Theater divided by the Blue Man-Days in Theater expended to do it unto him.

b) VALUE OF ATTACKING COMMAND & CONTROL (REFLEX) 60 Minutes

It demonstrates that Command and Control Suppression is merely a means to the end of delivering other Fires against the enemy -- and on an end in itself. If one ignores the value to be gained from attacking the primary objective targets, one is unable to establish just when to stop suppressing enemy defenses and get on with the job of attacking primary targets. No one, to my knowledge, has come up with an analytical method do determine just what is gained by attacking Command and Control nets.