

BIOGRAPHICAL SKETCH

Name: John R. Boyd

Address: 4930 Beauregard Street
Alexandria, Va 22312

Education: BSC Economics, University of Iowa, 1951
BIE Industrial Engineering, Georgia Tech, 1962

Experience and Contribution:

Officer in the USAF from 8 July 1951 through 31 Aug 75. Retired in the grade of Colonel - 1 Sept 75. Served in Korea as an F-86 pilot with the 51st Fighter Interceptor Wing 1953-54. Flew 22 combat missions before the war ended. Assigned to Nellis AFB, Nevada from 1954 -1960. While there served as a combat crew and fighter weapons instructor in both the F-86 and F-100. As a member of the USAF Fighter Weapons School developed and wrote the maneuver-counter maneuver, tactic-countertactic concept of Fighter Tactics which appeared in the "Aerial Attack Study" - 1960. During this period as Chief, Training Analysis and Development (1957-58) and Chief, Fighter Weapons School Academics (1958-1960) was responsible for and developed many of the training concepts as well as wrote much of the supporting literature such as mission cards, publications etc. At Eglin AFB, Florida during 1962-1966 with co-worker Mr. Thomas P. Christie evolved the Energy Maneuverability Theory which is now used by designers and tacticians to develop new airplanes and new fighter tactics.

Also during this period, once again, with Mr. Christie evolved the digital simulation of SA-2 missile. These simulations were used to evolve maneuvers that were subsequently employed to effectively counter the SA-2. During 1966-69 as a member of AFRDQRT, was responsible for and developed the design trade-off concept and methodology for the F-X which resulted in the F-15. During 1970-1972 with Mr. Pierre Sprey and Col E.E. Riccioni evolved the Lightweight Fighter (LWF) Concept and supporting trade-off methodology that resulted in the YF-16 and YF-17. During 1970-1972 also evolved the Maximum Maneuver Concept which was used in the Design Trade-Offs and Source Selection Evaluation of the LWF competition and in Linebacker operations in Vietnam. During 1972 - 1973 was Vice Commander Task Force Alpha then Base Commander at Nakon Phanom, Thailand. From 1973 until retirement in 1975 was Chief, Development Plans and Analysis (AFRDQL) at Headquarters USAF. In this capacity evolved the ideas and formulated the concept for integrating development planning with force planning. That concept, and derivations thereof, are now being pursued by the Air Force in planning the size and composition of future forces. From 1 Sept 75 to present has been working on a Destruction and Creation notion of evolution and Patterns of conflict.

Awards and Recognition

- 1965 - AFSC Scientific Achievement Award for developing the Energy-Maneuverability Theory
- 1966 - USAF Research and Development Award in Aeronautical Engineering for developing the Energy Maneuverability Theory
- 1969 - Air Force Association Citation of Honor for pioneering development of air-to-air fighter tactics
- 1970 - Arnold Air Society Gen Hoyt S. Vandenberg Award for major contributions to the development of theory and tactics for air-to-air combat with special emphasis on blending of missile tactics into an overall spectrum of air-to-air tactics
- 1975 - Dr. Harold Brown Award for the creation of advanced scientific theories of energy maneuverability and for leading others in detailed design trade-offs and fostering the validation of the theories in hardware prototype (LWF)



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I

QUESTIONS FOR THE RECORD
HEARING ON ACQUISITION REFORM
MARCH 20, 1986

QUESTION FOR ALL THE PANELISTS

1. The Packard Commission recommended, and many people have agreed with that recommendation, that the acquisition work force be upgraded. One recommendation which has been made is the establishment of an elite core within the work force as a way of rewarding those who do a good job. Do you believe that the work force as a whole should be upgraded or do you favor the approach of establishing a special subset of the work force that would be recognized as professionals within their branch? Should this group only include contracting personnel, those in the so-called 1102 series, program managers, and those in cost and pricing fields, or should it also include the engineers who evaluate proposals and others involved in the acquisition process?

II

QUESTIONS FOR MR. RITTENHOUSE, MR. SPREY AND COLONEL BOYD

1. Mr. Gansler pointed out that the increased emphasis on competition has resulted in awards based on low cost only, with little assessment of the quality or technical advantages of the bidders. However, nothing in the legislation or regulations that we are aware of state that awards must be made to the low bidder irrespective of quality or technical differences. What is it then, in your opinion, that is causing this problem?

2. Mr. Gansler indicated that a key ingredient to improving the acquisition process is the maintaining of an alternative contractor. Are there circumstances in which you believe it would not make sense for the government to maintain a second source?

III

QUESTIONS FOR MR. SPREY AND COLONEL BOYD

1. Mr. Rittenhouse stated that the new Under Secretary for Acquisition should have the authority to establish policy and to ensure that each of the Services follows the same policy. Is there a rationale for allowing each of the Services to set their own acquisition policies, just as different divisions of a company set their own policies for purchasing?

2. Mr. Rittenhouse indicated that industry feels contractors should be rewarded in future competitions for exceeding contract performance on previous contracts. This recommendation is consistent with the Packard Commission recommendations as well. This seems like such a simple idea one wonders why it hasn't been done in the past. However, past performance has not been used as a separate evaluation criteria - can you explain why this has been so.

I. We need some kind of definition of what we mean by upgrading and elite before upgrading the workforce or before establishing ~~an~~ an elite corps within that workforce. I'm against upgrading if we use glowing reports on how well individuals have been educated and the prominent positions they've held.

In other words, if upgrading places emphasis on input -- rather than output -- such as we see in the latest annual DOD report to congress, I cannot support such a recommendation.

On the other hand, if upgrading means finding people who have the character and mental toughness (as well as the requisite mental agility and physical energy) to produce workable, affordable and reliable real world results that are in the interests of the soldier and taxpayer -- rather than vague promises with such benefits that please prominent politicians, corporate executives and other hangers on -- then I'm for upgrading.

Unfortunately, the proposals I have seen so far do not address the acquisition workforce in the manner.

① I'm not sure there is the problem that is mentioned by Mr. Barber. My view is, while cost is considered, other factors such as performance, reliability, etc., are also addressed. If quality and technical advantage do not address these other factors, then quality and technical advantage have little meaning.

② An alternative contractor makes sense if the alternative contractor is a competitive alternative contractor. Competition does not exist if the alternative and regular contractors get fixed percentages of the production or if we have the alternative contractor sitting idly by all toolled-up (at government expense) with nothing to do. On the other hand, if production percentages are varied with a higher percentage of production going to the better contractor -- in terms of ^{mission} ~~value~~ usability, cost, reliability etc. -- then we have competition, provided there are periodic reviews to set the production percentages in favor of the better performing contractor.

① It's OK for services or lower-level divisions to set their own policy, provided these policies do not violate the upper-level policy. If there is a violation then the lower-level policies should be adjusted unless there appears to be a flaw/weakness in the overall policy; in which case the overall policy should be adjusted. Close examination may reveal that both upper- and lower-level policies should be adjusted.

② If my memory serves me right part ~~performance~~ performance has been used as a separate evaluation criterion, & in the case of the lightweight fighter program Boeing was viewed (by some) in a negative light because they were not a fighter manufacturer. However, in this case, I do not believe it was an explicit evaluation. Rather, there seemed to be an unstated understanding by some.