The original documents are located in Box 21, folder "Lightweight Fighters (Navy & Air Force), 1974-75 (4)" of the Martin R. Hoffmann Papers at the Gerald R. Ford Presidential Library.

1 OCT 1974

MEMORANDUM FOR MR. HOFFMANN

Marty:

I checked with Ken Carr on the nature of the meeting Mr. Clements reportedly was having tomorrow with one or more of the competitors on the lightweight fighter. Ken tells me that there is a meeting tomorrow which will be attended by GD, Northrop, McDonnell Douglas, and LTV. While the Air Force was requested to arrange the meeting by Ken last Wednesday, the meeting will actually be run by Mr. Clements. There is no formal briefing per se and Ken does not know what Mr. Clements intends to say. Further, He is not sure that Mr. Clements is aware of the details of the solicitation agreed to by the Air Force and Navy in your office Friday and presumably now in the hands of the competitors.

Jim Nash

THE SECRETARY OF DEFENSE
WASHINGTON, D. C. 20301

NOV 1 1974

Honorable John L. McClellan
Chairman, Committee on Appropriations
United States Senate

Dear Mr. Chairman:

This is to inform you of our current plans for the utilization of the $20,000,000 recently appropriated by the Congress for the Navy Air Combat Fighter (NACF). Pursuant to the expressed Congressional intent that this aircraft make maximum use of Air Force Lightweight Fighter (LWF) and Air Combat Fighter (ACF) technology, it is essential that studies and evaluations be made of NACF designs of both ACF contractors. To this end, requests for design of suitable derivatives have been issued to the two ACF contractors.

This additional effort, of course, requires financing. Accordingly, we propose to use up to $9,000,000 of the $20,000,000 appropriated for the NACF program for this purpose. In addition, the Navy requires the use of $3,500,000 of the appropriated amount for the performance of evaluation efforts and related studies and engineering activities in order to comply with the intent of the Congress.

I consider this course of action to be in full compliance with our mutual efforts to achieve a lower cost fighter for the Navy. I am proceeding along these lines and would appreciate your concurrence.

Sincerely,

Deputy

FOR OFFICIAL USE ONLY

DEPARTMENT OF DEFENSE
OFFICE OF GENERAL COUNSEL
WASHINGTON, D. C. 20301

Thanks
JRS

20 December 1974

MEMORANDUM FOR MR. HOFFMANN

SUBJECT: Lightweight Fighter

In my conversations with individuals in Air Force and Navy, I was provided the following information.

Air Force -- The next meeting of the Source Selection Advisory Council is January 4, and it is anticipated that by that date the Air Force will have completed its evaluation and negotiation and will have four proposed contracts (two airframe and two engine) signed by the competitors. Presumably, the Council will then proceed to a decision on a recommendation, because I am told the following week the head of the Council will start his briefing of the Air Force hierarchy, ending up with the Secretary of the Air Force by the end of the week. It is anticipated that the Secretary of the Air Force will make his decision about that time and that sometime between the 12th and 14th of January Congress will be notified of that decision and an emissary will be dispatched to Europe to notify the consortium. It is intended that on either the 15th or the 16th a public announcement will be made.

Also by the Air Force I am told that the consortium committee has agreed to postpone making its report to the consortium until the end of January with the understanding that it will have all pertinent information from the Air Force by the middle of that month. It is anticipated now that the consortium countries will make their selection by the end of February.

Still with the Air Force I was told that yesterday its Source Selection Advisory Council was to be briefed on what, if anything, in the submissions of the Navy version were of interest to the Air Force in terms of commonality or improvement to the Air Force versions.

Navy -- There was a meeting of the Navy Source Selection Advisory Council on the 17th of this month in which it was briefed as to the highlights in the submissions of a Navy version. Apparently one of the competitors (probably McDonnell through Northrup) submitted two models.

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By early January the Navy intends to give the Air Force a rundown on its preliminary evaluation. However, according to present schedule the Navy does not intend to complete its evaluation of the bids until March at which point it will commence discussions with the offerors with a possible selection not being made until late spring or early summer with award in late summer or fall. While it was not said explicitly, I got the feeling that the Navy intends to proceed very slowly and cautiously, and if it does not look like things are working out to what it considers its best interest, it plans to try to scrap the whole idea and to convince Congress of the wisdom of that action. I would be surprised if the Air Force decision, which will soon be made, could in any significant way be affected by the Navy portion of the exercise since it appears that the Navy is so far away from any real evaluation. It appears to me that the Air Force will proceed to a selection of the plane it best likes with the consortium following along and the marriage with the Navy will remain far from consummation.

For possible use attached is a copy of the RFP amendment which you will recall we worked on early in October and which went to the competitors notifying them of the Navy link-up.

James P. Nash
Assistant General Counsel
(Logistics)

Attachment

DEPARTMENT OF DEFENSE
OFFICE OF GENERAL COUNSEL
WASHINGTON, D. C. 20301

20 December 1974

MEMORANDUM FOR MR. HOFFMANN

SUBJECT: Lightweight Fighter

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SIGNED

James P. Nash
Assistant General Counsel
(Logistics)

Attachment

~~CONFIDENTIAL~~

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AERONAUTICAL SYSTEMS DIVISION (AFSC)
WRIGHT-PATTERSON AIR FORCE BASE, OHIO 45433

REPLY TO ATTN OF: ASD/YP

12 Oct 74

SUBJECT: Request for Quotation for Full Scale Development of Navy Fighter/Attack Aircraft

TO: General Dynamics
Ft Worth Division
P. O. Box 748
Ft Worth, Texas 76101

Northrop Corporation
3901 Broadway
Hawthorne, Ca 90250

1. The Navy is initiating a program for the development and production of a new carrier based fighter/attack aircraft weapon system to be a derivative of the Air Force Lightweight Fighter program. In the House of Representatives Report No. 93.1363 of 18 September 1974, it was directed that the development of this aircraft make maximum use of the Air Force Lightweight Fighter (USAF LWF) and Air Combat Fighter (ACF) technology and hardware.

2. Enclosure (2) reflects performance characteristics and other parameters of the aircraft as described in the Navy's operational requirement. Achievement of these characteristics and parameters is an important goal. Maximum reasonable commonality between the Air Force ACF and the Navy derivative is also an important goal. Contractors should provide at least one point design of an aircraft which responds to the operational requirements as defined by the requirements specification and the desired maximum use of the USAF LWF and ACF technology and hardware. Trades should be performed which analyze the gains and penalties associated with achieving this goal. Gains may include cost and schedule savings during development, and acquisition and lower overall life cycle costs based on commonality with the ACF aircraft. Penalties may include failure to meet performance and specification goals, thereby reducing the potential effectiveness of the Navy aircraft. The trade studies should quantify derived benefits and identify any penalties so that the Navy can determine an acceptable balance between the two. In order to assure that all opportunities for commonality are explored, the contractors must provide a design including the same engine which they propose for use with the USAF ACF. In addition, the contractors also are requested to provide a variant which has only provisions in place of the full all weather air-to-air missile capability and identify gains and penalties associated therewith.

~~CONFIDENTIAL~~

3. It is the Navy's intent to consider reliability, maintainability, survivability, schedule and cost along with performance and capability in accordance with the solicitation evaluation criteria in judging designs. Flexibility and trade-offs are encouraged where significant cost savings can be realized or reliability and maintainability can be enhanced. These trade-offs should be documented to the Navy. It may not be possible in the time allowed to submit a fully documented engineering development proposal. In addition, it is recognized that the time allowed is not sufficient to provide the full costing detail requested in enclosure (2). Therefore, the contractor should provide his complete costs for the development program and his estimate of the average program unit cost for 800 aircraft produced at nine per month. The Navy may request the additional costing detail required in enclosure (2) at a later date.

4. The new Navy aircraft is intended to replace F-4 aircraft in both the Navy and Marine Corps and eventually the A-7 in the Navy. Accordingly, the aircraft should have a capability to effectively perform long range fighter escort and strike missions into high threat areas. The aircraft must possess good carrier suitability features and be fully compatible with that environment. It must also provide a significant improvement in reliability, maintainability, and survivability over current Navy tactical aircraft. Furthermore, it must offer affordable acquisition and life cycle costs. Initial Fleet deliveries are required no later than calendar year 1981 with an initial operational capability by late calendar year 1981.

5. With respect to proposals to be submitted to the Air Force by November 1, 1974 in response to the proposal instructions for its ACF, the Air Force intends to evaluate them in accordance with the evaluation criteria set forth therein. The Air Force will, however, review the responses to the Department of the Navy in accordance with the above for a Navy ACF (NACF). If, as a result of the Air Force's review of the NACF responses, there is reason to believe that modifications would improve its ACF program or increase commonality with the NACF, the Air Force reserves the right to negotiate with each offeror features of that offeror's NACF proposal into its ACF proposal. Further, in the event that the ACF proposals are determined to offer substantially the same advantage to the Air Force, the Air Force reserves the right to award on the basis of that aircraft which can best accommodate the objective of maximizing the commonality of hardware and technology between the Air Force and Navy aircraft.

CONFIDENTIAL

6. In the development of their quotations, the contractors are encouraged to use imaginative approaches in achieving lower costs and increased commonality between the ACF and the Navy derivative. Quotations for full scale development of the new Navy aircraft will be submitted to the Naval Air Systems Command (Code AIR-02E) by 1 December 1974. They will be evaluated by the Navy to determine acceptability of the proposed design. If a derivative of the Air Force Lightweight Fighter program can adequately satisfy Navy requirements, it is anticipated that a full scale development contract for the Navy aircraft will be initiated by the Naval Air System Command.

7. Contractor effort associated with the preparation of the quotation in response to this Request for Quotation will be incorporated as a separate task under the current Light-weight Fighter Transition contract. A cost proposal for accomplishing this effort should be forwarded to the Deputy for Air Combat Fighter by 18 October 1974. Negotiations to consummate this task will be initiated the week of 21 October 1974.

8. All questions regarding this solicitation will be addressed to Mr. Frederick S. Wood, Deputy for Air Combat Fighter (ASD/YP), Wright-Patterson AFB, Ohio, telephone 513,255-6151.

J. Stewart

JAMES T. STEWART
Lt General USAF
Commander

2 Enclosures
1. Criteria for Evaluation and Source Selection
2. Request for Proposal for the VFAX Weapon System (C)

Cys to:
McDonnell Douglas Corp.
St Louis, Mo.

LTV Aerospace Corp.
Dallas, Texas

CRITERIA FOR EVALUATION AND SOURCE SELECTION

Proposals for Full Scale Development received in response to this solicitation will be evaluated by the Naval Air Systems Command pursuant to a formal source selection procedure. The following evaluation criteria apply, in the context of the considerations outlined in the covering letter.

1. General Considerations

In evaluating each of the specific criteria of paragraph 2 below, consideration shall be given to the following factors as applicable, which are themselves listed in order of importance.

a. The Offeror's understanding of the scope of the development program as described in this solicitation and demonstrated in his proposal.

b. The past performance of the offeror on prior aircraft development programs from the standpoint of technical, managerial and cost control aspects.

c. The availability and competence of the engineering, management and administrative personnel who will be dedicated to the development program.

d. The availability of adequate research, manufacturing and development facilities that will be utilized in the development program.

2. Specific Criteria

The major areas for detailed evaluation are listed below, cost and performance are to be weighted equally. Other items are listed in order of relative importance ranking from the most important to the least.

a. The technical design most closely achieving the desired levels of performance and capability requirements specified in paragraph III of the Operational Requirement - Strike Fighter Aircraft (VFAX) - and the VFAX proposal Statement of Work. Two missions, Fighter Escort and Interdiction are of prime importance. Of secondary importance is the practicability and feasibility of the VFAX design being mofified to derivative aircraft

configurations for other naval missions as described in paragraph III. c. of the Operational Requirement. Trade-offs shall be made in favor of enhancement of those characteristics which increase the Fighter Escort and Interdiction capabilities.

b. The technical aircraft design most closely meeting criteria(s) which proposes the most creditable design, development and projected production cost estimates, assuming a base of 800 aircraft produced at a rate of 9/month expressed in January 1975 dollars. The cost base to be considered includes unit production costs including the value of all GFE. Cost estimation methodology and creditability will be based on:

(1) A detailed submission of method to be employed in production cost prediction of the aircraft design proposed, and the validation of such methodology.

(2) An analysis in accordance with the contract work breakdown structure, level 4, of fly-away unit production costs support by proposed production baseline cost budgets in accordance with SECNAV Instruction 7000.2.

(3) Identification of alternate equipments, components or subsystems considered for use as backup to the basic design proposal in the event that those included in the proposed design breach cost, schedule or performance thresholds set forth in the RFQ.

(4) Documented experience in performance under previous development projects either military or commercial wherein design/development was undertaken to produce at previously determined cost or selling price.

c. The proposal which demonstrates the highest degree of commonality with, and makes the maximum use of Air Force Lightweight Fighter and Air Combat Fighter technology and hardware.

d. The proposal which demonstrates the greatest probability of achieving the Reliability and Maintainability requirements set forth in the VFAX Proposal Statement of work.

e. The Offeror's understanding and approach to the Integrated Logistics Support process from conceptual design through positioning and utilization of Fleet support assets.

f. The technical aircraft design which employs demonstrated technology and represents the lowest development risk against development cost and schedule mile-stones set forth in this solicitation.

g. Demonstrated creditability and reasonableness of the proposal estimated cost, and support thereof, for LOT I.

h. Completeness and realism of the offerors development, test and evaluation program.

i. Depth and excellence of the offeror's management system including but not limited to qualifications of key personnel, overall organization, related design and production experience, production management, cost/schedule control technique, documentation, and procedures for sub-system integration management and life cycle support.

j. Offeror's facilities and resources to undertake full scale development and production contracts concentrating on the existence and availability of facilities for the design, development, test, evaluation, high rate production, and life cycle support of high performance, multimission, tactical aircraft.

Drawer w/JTR's

OFFICE OF THE GENERAL COUNSEL

SPARROW (AIM-7 [redacted] Radar Missile

Purpose: All Weather Intercept and Kill of Penetrating Enemy Attack Aircraft

Has not demonstrated a significant capability against fighters in typical conventional air battle situations.

Effectiveness in SEA:

AIM-7E Pk/Attempt was about .12

Weighs 500# cost >$100,000.ea

D 4012

OFFICE OF THE DEPUTY SECRETARY OF DEFENSE

20 Dec 1974

MEMO FOR Mr. Hoffman

- Attached papers on the Requirements Struggle may be useful to the SecDef.
- Also have attached a copy of my AIM-7 Analysis which leached Carrie and has been reviewed by others but never sent to Sec Def.
- The Sparrow syndrome is not completely dead in the AF as can be seen by viewing their ACF Radar RFP and the fact that the ACF will have "provisions for". That "do" makes a difference in sophistication, weight & cost.

Dave

October 7, 1974

THE REQUIREMENTS STRUGGLE

ACF/VFAX

The primary obstacle to evolving a VFAX configuration that can profitably be derived from the USAF ACF is the Navy insistence that the VFAX be capable of performing the Fleet Air Defense (FAD) All Weather (AWX) Interceptor Mission vis-a-vis the Sparrow and appropriate radar. Such an airplane is inconsistent with the message delivered to the Senate Tactical Airpower Subcommittee on 2 May 1974 wherein the Deputy Secretary clearly stated the mission and probable character of the VFAX. (See Attachment, Statement by Deputy Secretary of Defense)

Equally important is the fact that the basis for DepSec agreement to accept, in principle, the proposed procurement of F-14A attrition aircraft was to relieve the VFAX of the "requirement" for All Weather Fleet Air Defense. He did so in order to provide an opportunity to develop a significantly less expensive system than the F-14X and VFX as then portrayed by the Navy.

In the discussion between DDR&E and Staff and DepSec to establish the basis for his position as delivered to Congress, the case for buying some attrition F-14A's was directly and clearly based on the

need to relieve the VFAX of the FAD All Weather Interceptor (radar weapon) burden. If the Navy insists that the VFAX be capable of AWX FAD, then the need for additional F-14's should not be supported. This point should be cleared up prior to any further exercise regarding degree of commonality which can be attained between the ACF and VFAX.

Additionally, experience to date with radar weapons systems (even without ECM) for missions other than classical point defense has been so poor that it is difficult to understand why anyone would support incorporation of radar missile systems on any more fighters than are already programed to accept them (F-14A Phoenix/Sparrow; F-15 Sparrow).

Late in May 1974, the Navy began to shift the blame for the Sparrow/AWX Interceptor "Requirement" to the USMC. As difficult to justify as it is, the decision to provide the USMC with about 70 F-14A's still stands. If the F-14A is present, why a Sparrow - VFAX? Further, the defense of deployed USMC division assets will be protected by HAWK (at least) which is a more practical low visibility solution than AWX Interceptors, particularly against the threat level we visualize for the Marine Corps. An additional increment of protection could better be implemented by acquisition of some

AAA. In any event, the need for an additional Sparrow/AWX Interceptor capability is difficult to justify for either Service, particularly in view of the claimed capability of the F-14A.

The ability to shift F-14A squadrons in response to commitments, threat densities and levels of tension has apparently been ignored by the Navy. Further, it is not apparent that the evaluation of Fleet Air Defense has given full credit to the contribution of surface-to-air systems to complement or replace the AWX Interceptor.

Further, the FAD potential of a fighter such as the ACF is not insignificant. An ACF with modest radar and short range air-to-air (Sidewinder & gun weapons can be very effective for point defense under conditions of low visibility, particularly when directed by AWX Interceptors such as the F-14A and ground/air radar control systems. Elements composed of cannon/Sidewinder equipped VFAX's working with F-14's can satisfy FAD and other point or area defense needs.

The inclusion of the "requirement" for Sparrows and appropriate radar drive the size, weight and cost of the VFAX to the extent that the F-14X may appear to be a better choice. The Navy radar missile "requirement" much complicates the task of developing an

acceptable fighter from LWF resources, primarily because of the air combat performance, range and cost penalties associated with the carriage of Sparrows and appropriate radar. (different - more powerful than radar for AF ACF)

It is suggested that the Navy be informed that: a VFAX (ACF derivative) which exhibits the character of an AWX Interceptor (Sparrow/appropriate radar) (1) weakens the "case" for the F-14A, (2) is inconsistent with the DepSecDef position of 2 May, and (3) will impede progress toward satisfying the desires of the Congress and DepSecDef relative to the development of a lower cost alternative to the F-14A.

~~SECRET~~

74-2741
Cy 9

AW Cmbk

MEMORANDUM FOR THE SECRETARY OF DEFENSE

SUBJECT: AIM-7 Radar Missiles - INFORMATION MEMORANDUM (U)

(S) The following paragraphs provide my comments on the May 20, 1974 letter sent to you by Mr. G. S. Graff of the McDonnell Aircraft Company. The primary thesis of this letter was that the AIM-7 radar missiles produced most of the victories in Southeast Asia. The letter also states that a large number of missiles are fired "out-of-envelope" which will be corrected by newer digital computers. These findings were supported by data provided by McDonnell Douglas.

(S) A thorough examination of combat data did not verify this thesis and, in fact, using the latest information, we arrived at quite the opposite conclusions.

(S) For example, the letter states that the combat P_k of the AIM-7 was .16 through 1968 and .23 during the LINEBACKER operations in 1972. The actual Air Force and Navy data for the AIM-7 are:

	ATTEMPTS	KILLS	P_k
Through November 1968	331	24	.07
LINEBACKER 1972	273	30	.11

(S) The McDonnell paper states that the missiles fired out-of-envelope (also called out-of-parameters) cannot be charged as a missile failure because the fighter target geometry is beyond missile design capability. This situation will be corrected by newer digital computers. This mixing of the terms out-of-envelope

and out-of-parameters as is done in the paper is improper. There were 172 attempts that were boresight firings, i.e., missiles fired without full system lock-on. Most of these are considered out-of-parameters, but are well within the envelope. Unfortunately, a complete analysis has only been made on the LINEBACKER data. It indicates that a proper computer display would have saved not more than five attempts.

(S) The missile, besides being quite complex, is dependent on sophisticated aircraft subsystems and on complex, time-consuming pilot/radar operator actions. The interaction of these events has been examined by a thorough fault analysis when an AIM-7 fails in combat. The attachment provides a partial list of the failures that could be identified. Because it is often the case that two failures occur simultaneously there are 739 failures noted, with only 604 attempts. Reliability remains a serious problem with this complex weapon system.

(S) The letter states that the AIM-7 produced most of the victories in Southeast Asia. The kill distribution provided by McDonnell Douglas was 63% AIM-7, 23% AIM-9 and 15% 20mm gun. The data provided is a small sample extracted out of the total war. The actual Air Force and Navy kills for the entire war follow:

	KILLS	% TOTAL
Total	183	100%
AIM-7	54	29%
AIM-4/9	82	45%
Gun	47	26%

(S) These numbers are somewhat biased in favor of the missiles by the fact that the F-4 aircraft which participated in the majority of the engagements was either a Navy F-4 or an earlier version Air Force aircraft which did not have a gun.

(S) The Israeli experience during the Yom Kippur War also does not support the McDonnell Douglas contention.

	KILLS	% TOTAL
Total	261	100%
AIM-7	5	2%
*AIM-9/Shafrir	171	45%
*Gun	85	33%

*Most of these were accomplished by the Mirage III which established a kill ratio of 198:0. Gun & IR Missiles

(S) Of course, one might break out only the F-4 because it alone had the AIM-7, in which case the following applies.

	KILLS	% TOTAL
Total	63	100%
AIM-7	5	8%
AIM-9	36	57%
Gun	22	14%

(S) The AIM-7 has not produced most of the victories in Southeast Asia or anywhere else.

(S) In summary, the AIM-7 weapon system has substantial problems with reliability. The out-of-envelope firings that would be prevented by an accurate digital computer are small. In addition, the AIM-7 has achieved less kills than either the IR missile or gun.

Malcolm R. Currie

Attachment

Prepared By: Mr. C. E. Myers/mks/53015/15 July 1974 AIR WARFARE

PARTIAL LIST AIM-7 FAILURES

Pre-launch Failures			
1. Lack of radar settling time		24	
2. Maintenance error		15	
3. Launch failure undetermined		___	
	Sub total		39
Pilot Errors			
1. Improper (search) firing mode		14	
2. Wrong target aspect SW.		10	
3. Wrong switch settings		12	
	Sub total		36
Launch Failures			
1. No motor fire		42	
2. Missile hit launch aircraft		6	
3. Motor malfunction		3	
4. Undetermined launch failures		65	
	Sub total		116
Guidance Failures			
1. Speedgate lock-on clutter		50	
2. Wild guidance		11	
3. Partial guidance to target		34	
4. Radar broke lock		70	
5. Unknown guidance failures		148	
	Sub total		313

Terminal Intercept Failures

1.	Early fuzing	94	
2.	No fuzing	44	
3.	Late fuzing	6	
4.	Fuzing but no kill	52	
5.	Target evaded missile	39	
	Sub total		235
	TOTAL		739

~~SECRET~~

COVERING BRIEF

28 JUL 1974

TO: DIRECTOR OF DEFENSE RESEARCH AND ENGINEERING

THRU: DEPUTY DIRECTOR (TACTICAL WARFARE PROGRAMS)

FROM: ASSISTANT DIRECTOR (AIR WARFARE) /s/ David R. Heebner

PROBLEM: To provide the Secretary of Defense a DDR&E view on the value of the AIM-7 radar missile as an air-to-air Close Combat Weapon.

BACKGROUND: The letter from G. S. Graff to the Secretary is a typical effort to defend the Sparrow missile system through the mistreatment of facts, albeit he may well believe his own story. Establishing a more realistic portrait of Sparrow combat usefulness is long overdue; the attached paper will serve this purpose.

RECOMMENDATION: I recommend you sign the enclosed memorandum to the Secretary of Defense.

Enclosure

Prepared By: Mr. C. E. Myers/mks/53015/15 July 1974 AIR WARFARE

~~SECRET~~ W4m 4/23/03 UNCLASSIFIED WHEN ATTACHMENTS ARE DETACHED

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, D. C. 20301

PROGRAM ANALYSIS
AND EVALUATION

First draft

- Written the week of the 16th -
revised in Leg Affairs &
shortened in PA+E.
- Ahearne on leave week of 23rd
- Sent 30 DEC 1974

MEMORANDUM FOR MR. GUNN, SENATE APPROPRIATION COMMITTEE

SUBJECT: Air Force/Navy Lo-mix Fighter Aircraft Commonality Considerations

Tom -

In accordance with our recent telephone conversation, I will defer action on the Committee request for a DoD report on Air Force/Navy lo-mix fighter aircraft commonality considerations by January 1, 1974 (reference page 27, Senate Report No. 93-1104 of August 16, 1974) because of the difficulty in addressing the subject until the YF-16/YF-17 DSARC.

The Services' evaluation and selection process will proceed in the following manner. The Air Force is scheduled to announce its lo-mix fighter source selection based on the Lightweight Fighter Program on Jan. 15, 1975. The DSARC is now scheduled to meet on Jan. 21, 1975 to review the proposed Air Force program. The Navy is scheduled to complete its review of contractor proposals by Jan. 6, 1975 for a lo-mix fighter aircraft which is to be derived from the Air Force Lightweight Fighter program. When these actions have been completed a proper assessment of the commonality considerations can be made. A tentative study completion date of Feb. 15, 1975 is suggested.

John F. Ahearne
Deputy Assistant Secretary
General Purpose Programs

Copies to:
OASD(IA)
OASD(C)
ODDR&E(Air Warfare)

Lightweight Fighter Prototypes

The committee recommends that the Secretary of Defense insure competitive and independent flight evaluation of the YF–16 Lightweight Fighter Prototype and the YF–17 Lightweight Fighter Prototype. Such a flyoff should be conducted with the same objectivity used in both the A–9/A–10 and A–7/A–10 flyoffs and provide for a thorough evaluation of the fighter capabilities of both competitive prototypes.

The Committee recommends that the Secretary of Defense provide the committee with a report by January 1, 1975, that (1) justifies the need for duplicative development of a lo-mix fighter aircraft by both the Air Force and Navy, (2) cites both the cost and operational advantages and disadvantages of the use of the same basic design aircraft (e.g., F–4, A–7) by Air Force, Navy and Marine Corps, (3) lists the life cycle cost implications of different basic design Air Force and Navy lo-mix fighter aircraft for the future force.

Duplication of Test Facilities

The Committee is concerned about costly duplication of Department of Defense test facilities. At the same time, limited resources apparently prevent establishment of adequate facilities for other testing requirements. The Secretary of Defense should compile and provide the General Accounting Office with an inventory of all installations that perform major weapon systems development and/or operational testing. This inventory should identify each installation's test capabilities, FY 1974 operating costs, and total dollar investments. GAO should review the major DOD test facilities and provide a report to the Committee by April 30, 1975 with appropriate comments and recommendations.

Transferring R. & D. Costs to Foreign Buyers

The Committee is concerned as to whether the Department of Defense is recovering an appropriate share of Research and Development costs in sales to foreign buyers and whether recovered amounts are adequately accounted for. DOD should set out in detail a specific plan accompanied by guidelines and regulations as to the procedures of recovering R. D. T. & E. costs. Any exceptions to the implementation of this plan should require immediate notice to all appropriate Congressional Committees and no exceptions should be made in cases where the government has guaranteed a loan to a contractor.

A report outlining steps taken in this regard should be submitted to the Committee by May 1, 1975, to permit consideration during the review of the Fiscal Year 1976 appropriation request.

B–1

The B–1 strategic bomber development program has undergone some major changes during calendar year 1973 in the areas of cost, schedule, and technical performance. The December 1972 Selected Acquisition Report showed an estimated program cost of $11.3 billion. As of December 1973, by comparison, the estimate had in-

OFFICE OF THE DEPUTY SECRETARY OF DEFENSE

3 Jan 1975

MEMO FOR Mr. Hoffman

Marty

A Congruent Expression of Selection Criteria by the Secretary AND Dep Sec is a must —— can we expect that —? Also, the criteria as per the Secretary's drawthers needs to be understood by DOR&E / PA&E.

Thanks for help.

Chuck

Lightweight Fighter file

CONSIDERATIONS RELATING TO THE FORTHCOMING SELECTION OF THE USAF AIR COMBAT FIGHTER

The product of the Air Force Source Selection Board (AFSSB) may be merely an assessment of the material submitted by the contractors and the prototype flight test data. The AFSSB may offer a comparison of the candidates as related to various missions. Presentations of such "findings" will invite various reviewing authorities to offer their individual views in support of their favorite goals which range from AF Tactical Fighter thru Foreign Sales Best Potential and/or Navy Maximum Commonality. In the absence of clear guidance as to the goal of the ACF program, an airplane other than that which would most benefit the USAF could be "selected" by this process. Suggested guidance is offered as follows:

° The criteria for selection is that candidate which will provide (in the view of the AFSSB) the best combination of:

1. Air Combat Maneuvering Performance in the area of flight envelope where dominance is most valued in the opinion of the USAF SSB.
2. Compatibility with programmed AF tactical resources.
3. Minimum life cycle cost.

° Foreign Sales Consideration: appropriate derivatives of the AF ACF will be offered to NATO and other countries. Extra features (such as ground map, nuclear strike, all-weather intercept, etc.) will be financed by the customer nation with appropriate off-set and other compensations.

° A prospective Navy ACF, as per the language of the Conference Committee, should be an "Adaptation of the selected Air Force Air Combat

Fighter ..... Future funding to be contingent upon the capability of the Navy to produce a derivative of the selected AF ACF design."

Significant commonality can be attained thru the use of the same propulsion, radar and other avionics, flight controls, seat, cannon, actuators, etc. A high degree of structural commonality may not be a realistic goal because of the severe basic design considerations for carrier suitability.

After the AF selection, a Navy Requirements Review should be conducted followed by a final design effort with a goal of improving the "adaptability" of the Air Force selected design. In this Requirements Review, full consideration should be given to the fact that the NACF will generally be working in company with the F-14 or F-15.

The AFSSB should be encouraged to make a clear choice and provide support of same. The more positive is this selection, the less tendency there will be for reviewers to tamper or attempt to modify the selection.

Congruent understanding and acceptance of selection criteria is a requisite for evolving the best choice. The congruency must permeate down thru the OSD Principles and Service Secretary levels.

NEWS RELEASE

OFFICE OF ASSISTANT SECRETARY OF DEFENSE (PUBLIC AFFAIRS)

WASHINGTON, D.C. - 20301

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AIR FORCE SELECTS YF-16 AS AIR COMBAT FIGHTER

Secretary of the Air Force, Dr. John L. McLucas, announced today that the General Dynamics Corporation, Fort Worth, TX, YF-16 has been selected for full-scale engineering development as the Air Combat Fighter.

General Dynamics has been in competition with Northrop Corporation and its YF-17 lightweight fighter prototypes, built at the company's plant in Hawthorne, CA. The decision in favor of General Dynamics was based on cost and technical engineering proposals submitted by the two companies for fabricating the Air Combat Fighter. Results of the prototype flight test evaluations conducted at the Air Force Flight Test Center, Edwards AFB, CA, were also included in the evaluation.

Secretary McLucas said included in today's action is the award of a fixed price incentive contract for $417,904,758 to General Dynamics to fabricate 15 engineering development F-16 aircraft. In addition, Pratt & Whitney Company, East Hartford, CT, received a fixed price incentive fee contract for $55,500,000 to produce the F100 engine used in the F-16.

The F-16 is being developed for the U.S. Air Force inventory as a relatively low cost supplement to more sophisticated weapons systems. Current Air Force plans call for introduction of a minimum of 650 F-16 aircraft into the active USAF inventory by the early 1980's with deployment of some 200 of the planes to USAF units in Europe.

At the same time, the United States is negotiating co-production arrangements for the Air Combat Fighter with a multinational fighter consortium, comprised of Belgium, Denmark, Norway and The Netherlands. A decision by the Consortium is expected within the next 90 days.

-END-

NEWS BRIEFING
BY
SECRETARY OF THE AIR FORCE, JOHN L. McLUCAS
AT THE PENTAGON
MONDAY, JANUARY 13, 1975

- - - -

Secretary McLucas: Ladies and gentlemen, I am here today to announce the selection of the F-16 of General Dynamics Corporation, as the winner in the competition which we conducted for our Air Combat Fighter.

As you know, this airplane goes back to the lightweight fighter prototype program which was begun back in April, 1972. At that time we initiated a program which we expected to run for about two years, and to culminate in a flight test of about a year, and which would demonstrate a number of advantages in advanced fighter concepts through a prototype program which we did not have the confidence at that time to go directly into production with. We wanted to do the lightweight fighter program then to give us that confidence and to give us the option of later making a decision to put a lower-cost fighter in the inventory if we decided that that was a good thing to do. That program went extremely well, as you know.

In April, 1974, we made a definite decision to put the air combat fighter in the Air Force inventory. We felt that it would be good to have in the high-low mix of aircraft something like the air combat fighter and we felt that this airplane which would be useful to the U. S. Air Force would also be attractive to our Allies. So, in April of last year, as I said, we made that decision, the Secretary of Defense announced that decision.

The flight test program that was conducted on the two lightweight fighters went extremely well. Both of the aircraft performed very well. Both of the contractors did an excellent job of supporting the prototype test program. Both of the engine companies did a good job of supporting the aircraft companies.

On the other hand, there were significant differences in the performance of these prototypes. The YF-16 had many advantages in performance over the YF-17. It had advantages in agility, in acceleration, in turn rate and endurance over the YF-17. These factors applied principally in the transonic and supersonic regimes. There were other minor advantages to the YF-16 over the YF-17. These factors included better tolerance of high G because of the tilt back seat, better visibility and better deceleration. In any case, the YF-16 met all the performance goals that we had established for it. The YF-17, while performing very well, did fall short of some of these goals. In the sub-sonic mission areas, the YF-16 and YF-17 were not as far apart as they were in the supersonic. This is indicative of the fact that the YF-16 had lower drag and was a cleaner design.

Now, of course, our selection is not based on the results of the prototype program alone. We had to evaluate the proposals which came into us which were requested last September and which we received in November. In evaluating those proposals, we of course took into account the fact that many of the perameters of these proposals had been demonstrated in the prototype program,

(MORE)

but we also took into account the changes which were proposed. We evaluated those and we used the prototypes as a measure of whether we thought those proposed changes could be achieved. So in the evaluation we took into account, first, the prototype experience; second, the technical proposals that came in. Then we looked at operational factors, life cycle costs, and how difficult we thought it might be to transition these prototypes into a production configuration.

Based on all of that, I, as the source selection authority, decided that the YF-16 was a proper choice for the Air Force.

I received a final briefing from General Stewart, who heads up our Aeronautical Systems Division, at Wright Patterson Air Force Base, on the 7th of January. I had been in touch with General Stewart many times before that final meeting, and, of course, in evaluating the results that I received from General Stewart on the 7th of January, I took into account the views of the Chief of Staff and other senior people in the Air Force. All of us agreed that the YF-16 was the right choice for the Air Force. Following that I had a number of meetings with the Secretary of Defense and his advisors, and I obtained the concurrence of the Secretary of Defense and the Deputy Secretary in the choice that was made.

Simultaneously with this announcement here today, and one reason why we chose this day, Mr. Frank Shrontz, who is the Assistant Secretary of the Air Force (I&L)is announcing to our consortium friends in Europe, of this selection. Mr. Shrontz is in Brussels where he is meeting with the consortium members to explain to them the factors which were used in our source selection. As you know, the consortium members did participate in the evaluations that were conducted here at Wright Patterson Air Force Base over the last several months. Also, we had Navy participation. We had a number of Navy technical people at Wright Patterson with us. We had a Navy pilot fly the aircraft. Of course, in the meetings that we have had here in the Pentagon, the Navy has participated. Some time back when it was decided that the Navy might be able to derive an aircraft for its own use from one of these two prototype programs, we, the Air Force, sent out additions to our requests for proposal, and incorporated the Navy's material and asked the contractors to respond to the request to derive the best aircraft they could from their existing Air Force proposals for submission to the Navy. We passed that material to the Navy.

In summary, I would like to say that the YF-16 is our choice as a winner of this competition because of first the performance. The performance of the YF-16, in our opinion will greatly exceed the performance of the YF-17. Second, because of the cost. There is a savings in the R&D phase, a savings in the procurement phase, and a life cycle cost savings, if we go with the YF-16.

Third, because of confidence in the transition. Because the YF-16 was able to demonstrate essentially all performance perameters that were called for, we feel a very high degree of confidence in transitioning that aircraft into production. At the same time, if we had gone withthe YF-17, there were considerably more changes that would be involved to take the YF-17, into a production configuration for the YF-17. As you know, we already have an engine, the F-100 engine which is used in the F-15 aircraft, which can be used with no change in the F-16. This is an additional reason why it is cheaper for us to go this way, and also an additional reason why we can go this way with a higher degree of confidence than if we had to develop an engine. Even though we don't anticipate problems in developing new engines, there is an element of risk when you take on such a program. Finally, we have for reasons of

commonality with the F-15, reason to believe that money will be saved in the life cycle cost phase by going with the YF-16 which uses the F-100 engine.

I will be glad to entertain your questions.

Q: What is the cost per copy that you anticipate based upon a conservative estimate of how many that you are going to sell?

A: Of course, if you ask how many do we expect to sell, we think that the market for this aircraft is about 2500 to 3000 aircraft?

Q: Is that in addition to the 650?

A: That would include the 650. The unit fly away, is that the question that you asked about the cost?

Q: Yes.

A: For a buy of 650 aircraft which is the current Air Force plan, we expect the unit fly away cost of $4.6 million.

Q: What would be the unit program cost under a buy of 650?

A: $6.7 million is the cost per airplane for the 650, the program cost.

Q: If you took that out to 3000 aircraft what would be the program cost?

A: I don't have that specific number for that. You can make an estimate that we would continue to get savings by extending the program length, but history would show that some of those savings would be achieved, and, on the other side, you would probably think of improvements you want to make to the aircraft.

Q: You said the members of the Consortium participated in the evaluation. Did they also have what you would call a vote in recommending which plane? And secondly, could you tell us whether the Europeans seem to be going along with this choice or whether there is disagreement with it?

A: I don't think you could say that they had a vote. I would rather say they were with us throughout. Their views were taken into account and theu served as advisors to us throughout the process.

Q: Did they indicate a preference for one aircraft or the other?

A: They did not, to my knowledge, at any time indicate a preference. I specifically talked to the senior members of the team about that subject. They told me repeatedly that the principal criteria they were concerned with was to buy the same airplane that the U.S. Air Force bought, if they indeed decided to buy an airplane and decided to go U.S.

Q: Can you tell us some costs again how the YF-16 costs compared with those of the 17? You referred to the cost benefits in your statement.

A: Yes. On the fly-away costs we expect about an 8 percent cost advantage. On the R&D costs, the principal difference is the development of a new engine which exceeds $300 million.

Q: In other words, you are saying the 16 was 8 percent cheaper than the 17; is that correct?

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A: The figures I have are $4.6 million fly-away (YF-16) and between $4.9 and $5 million fly-away for the 17.

Q: How about the program costs?
A: The program costs, $6.7 for the 16; $7.7 for the 17.

Q: Mr. Secretary, did you say that you are confident that NATO countries will buy this aircraft?
A: I did not say that. We are hopeful that NATO countries will buy the aircraft. When we say the market is 2500 to 3,000, we are including our hopes that some NATO countries will buy it.

Q: When you raise that figure, Mr. Secretary, how wide a market within that figure would be NATO's part of it?
A: The planning that we have been doing with the four countries of the Consortium is for a 350 aircraft buy,

Q: Mr. Secretary, could you give us some rough idea how much the plane will cost the NATO countries based on that 350 buy which I assume is what they have to base their price on?
A: Of course, the date for final submission of data to the NATO countries has not yet arrived. In round numbers their prices would be roughly the same as ours, plus the differential due to the fact that they intend to produce the airplane on two different production lines. Of course, the production runs would be much shorter and they would have to buy tooling. In addition to that, we must pro-rate the R&D costs of the airplanes.

Q: In other words, the net costs of the airplane would be roughly the $6.7 if you would pro-rate the R&D?
A: As I say, we have not yet reached the cut off date on when we price out, exactly, to the Consritum what they will have to pay for these aircraft.

Q: Is that $4.6 million a ceiling_ price that we are talking about?
A: That is the target.

Q: What is the ceiling, if you go above the target price?
A: We do not have a ceiling price. We do not have under contract the total of the 650 aircraft, so, I cannot quote you a figure on that. That is the most probable cost, to use our terms.

Q: In other words, it is safe to say, is it not, Mr. Secretary, that would be the minimum price, the $4.6, and there would be some elasticity on a ceiling price contract?
A: I probably did not point out, when I say in the prices here I am talking about 1975 dollars. Of course, your guess about inflation is as good as the next person's.

Q: Mr. Secretary, when you say 1975 dollars, what do you expect would be the total expenditure over the life of the program for these airplanes?
A: For a proposed Air Force buy of 650 aircraft?

Q: For the entire expected 2500 to 3,000 planes, how much money would be involved in '75 dollars?

(MORE)

A: That would be something in the $15 billion plus area if we achieve our objective of selling 3,000 airplanes.

Q: What would you say for the 650 airplanes, what is the total on that?

A: I gave you the program costs; I believe. It is $4.3 billion which is the sum of the R&D amount, $584 million plus the production amount for 650 aircraft of $3.7 billion. That gives a total of $4.3 billion, I believe.

Q: Mr. Secretary, does the Navy concur in your selection taking into consideration the stipulation by Congress that the Navy build a Navy air combat fighter based upon the Air Force selection?

A: The Navy has been involved in all of the steps that we have taken. As I said, they were with us at Wright Patterson Air Force Base. They had a pilot who flew the aircraft. They have sat with us in preparing the material that would go out to the bidders when we re-solicited them to include the Navy in bids. The Navy, on the other hand, has not completed their evaluation. So, the Navy could be said to have concurred in the sense that they have not said, "No, we think this is a mistake." What they have said is, "Yes, we agree that the Air Force should go ahead." We have not seen any evidence that the Air Force should not go ahead.

Q: Would the Navy purchase increase the projected number of 2500 to 3,000 aircraft or is the Navy included in that projection?

A: The Navy is included in that.

Q: How many Navy aircraft do you anticipate?

A: The Navy buy which has been anticipated is, I believe, 800 aircraft, But, I gave you a spread of 2500 to 3,000 and so. . . . .

Q: You just said it was $4.3 million final cost, before you said it was $4.6.

A: $4.3 billion program. (A $4.6 million per unit fly-away cost).

Q: In the press release you talk about 15 engineering development aircraft. When you use the number 650 is that all production aircraft or is that the prototypes and 15 development aircraft?

A: The 650 is the proposed buy of production aircraft.

Q: Mr. Secretary, when do you anticipate the Navy will make a decision after weighing the information you provided for them? and isn't it true that if the Navy does choose the 16, they will have to re-engine it with either the 401 (inaudible) to accomplish the Navy Mission at sea?

A: I don't know that I can say that definitively. The Navy has certainly been looking at those alternatives. I believe the Navy does not plan to make a final decision for a month or two. I think you should really ask the Navy that question.

Q: Did the Navy ask you to delay your decision on the F-16?

A: No.

Q: Did the Secretary of the Defense ask you to delay your decision?

A: No, the Secretary of Defense reviewed our decision. He considered whether it should be delayed to take account of the Navy interests and decided in the negative, that it should not be delayed.

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So, we are making an announcement Monday afternoon, the time that we proposed to announce it when we laid out the program.

Q: Is it true that Mr. Clements had decided on a three weeks' delay, Mr. Secretary, to give the Navy time to evaluate?

A: Mr. Clements considered such a delay. All that I can say is that in all the deliberations it came out that we were not asked to make a delay.

Q: Mr. Secretary, has it been clear from the start of the European participation in this program that they would not have a voice in the Air Force source selection?

A: I don't want to say that they did not have a voice. The Consortium members sat with us. Their views were heard at every stage and their views were taken into account. You asked me if they voted. There was no vote taken.

Q: Do you think the fact the 16 is a one engine plane will hurt you in foreign sales opposed to the 17, a two engine plane, some foreign countries have indicated a preference for?

A: None of the countries that we've been working with has indicated a preference one way or the other. There are four such countries in the Consortium and those countries had many opportunities and I have asked them specifically on this question and none of them have chosen to tell me they prefer one or the other. They have stuck with their line and I believe that the important criteria to them is which way does the U. S. Air Force go.

Q: How does the French Mirage F-1 enter into this consideration?

A: I am afraid you must ask the Consortium.

Q: People are already saying the fact that General Dynamics is headquartered in Texas was influential in this decision. Would you want to comment on whatever political input or considerations might have gone into your decision?

A: All I can say on that is that we made the selection on the basis of the merits of the aircraft and the proposals, and what aircraft we felt would result from those proposals.

Q: Has the Air Force decided to turn the prototypes back over to Northrup on the 17, or have you refused to do so?

A: We have not refused to do so, we just have not planned that far.

Q: Mr. Secretary, do you see a possibility here that both planes will go into production?

A: I think that is a possibility. But of course that is a decision to be made by someone other than the Air Force.

Q: Mr. Secretary, did you say that you selected this date some time ago to make this announcement?

A: Yes.

Q: Why did you?

A: Because this was the time that we had set up for Mr. Shrontz to go to Brussels to confer with the Consortium members. He went over there last night. He is over there today and he will be there for two or three days to meet with and to elaborate on the considerations that were involved in this.

(MORE)

Q: This date was selected six months ago?

A: It was not six months ago. I am not sure I can tell you when that date was finalized.

Q: Mr. Secretary, what do you think the chances are of all four countries in the Consortium buying the plane? How would you compare that with the chances of two or three countries buying it?

A: That is pretty speculative. We have high hopes that all four countries will join us in this procurement.

Q: You have less hopes for Belgium than you do the other three?

A: I don't want to get into speculation about it. I think that those countries ought to make that decision. We hope that our offering receives a good hearing.

Q: If all four do choose the U.S., which two countries will have the production line?

A: The Netherlands and Belgium.

Q: (Inaudible)?

A: It will be roughly 50-50.

Q: Mr. Secretary, the price of General Dynamics' stock last Friday bounced up by 10 percent which means if you are a quick speculator you could make a quick buck. Are you investigating to see whether word leaked out from your staff on the Air Force decision which in turn led to this speculation on the stock market?

A: I don't have any such investigation going on.

Q: Mr. Secretary, you said in discussing it that none of the countries indicated a preference one way or the other. Were you referring to the planes themselves or to the single engine versus twin engine argument?

A: Both.

Q: In both cases, in words, they did not. . . .

A: I am sorry. Let me start over. We were talking twin engine versus single engine. I asked these people if that would be a factor in their -- did it make a difference to them. I was told, that is not the question. The question is which way does the U.S. Air Force go.

Q: The production facility in Belgium. I can't think of the name of it now, but isn't it the subsidiary thatmakes the Mirage?

A: We will have to get an answer to that.

Q: How would you compare the American plane cost to what you expect the cost of the Mirage to be?

A: We think that our costs will be very competitive. There has been a lot of talk about the French costs. We are not quite sure what their final presentations will be to the Consortium. I suspect that the cost will not be the main factor. I would think that offset arrangements, etc. are more dominant.

(MORE)

Q: Does the F-16 have a range that would make it competitive with the F-15?

A: Does the F-16 have a range to make it competitive? Well, on those missons where total ordnance carrying is not at stake, it would be competitive . . . I don't want to say competitive, it would be in the same range.

Q: You mean without the payload, without a certain amount of armaments?
A: Yes.

Q: In the course of the tests, Mr. Secretary, we were being told that the capabilities in terms of the performance of the two planes, was almost identical and it was very difficult to make a choice on just performance. You indicate today there is a gap larger than I anticipated, anyway, in terms of supersonic performance. It leads me to wonder about the political side of it, in terms of the similarity to the F-15 engine. Does that make the F-15 cheaper for the Air Force to sell to Congress? Does it make it easier to lift the F-111 out of General Dynamics? Were those things considered?

A: I think that any information you have received that the airplanes were essentially identical in performance in the prototype evaluation was not correct. Because at every stage, I believe, that the YF-16 was showing up better. Of course, it was in the air earlier. So, it is hard for me to believe that there was a stage where you were being told by anyone in an official capacity that the performance was different from what I am telling you.

Q: Does this decision effect your long-range plan for the F-15?

A: Let me answer it this way. We have not changed our plan to buy 729 F-15's. We expect this airplane to be complementary to the F-15. It may be, way out at some point beyond our 729 aircraft, that we would decide to buy some more light-weight fighters instead of some more F-15's. But certainly within the program years and the program that we talk about, we have not made any change in our plans to buy the F-15.

Q: What weapons and avionics systems will be incorporated (inaudible)?

A: It will have the 20 millimeter gun and it will carry the AIM-7 Sidewinder missiles. It will have provisions to carry the Sparrow AIM-9 but we have not decided to include this.

Q: (Inaudible)?

A: Certainly we expect the Consortium members to go with us on the F-16. That is what they have told us that they will do if they buy U.S.

Q: But will you discourage Northrup from immediately and abruptly intensifying sales pitch in Europe?

A: I do not know whether that would be necessary. We will have to wait and see how the developments go. And we think the Europeans agree with us, we are very sold on the idea of the standardization in NATO, and an attempt to divert the Europeans into something other than standardizing with the Air Force would be considered counter-productive.

Q: West Germany expressed a desire for a twin engine aircraft in the light-weight fighter category, as well as Iran and a couple of other countries. There are several nations right there that could buy that aircraft. The key is whether you let the prototypes go back to Northrup. Without a prototype they have no sales program. When do you anticipate in making that decision?

A: I think we will make it as the questions come up. I think that although as you say, some countries have expressed a preference for a twin engine aircraft, I don't know that there are any countries that would say that no matter what,we will still buy a twin engine aircraft.

I think they will do what we did, we'd take everything into account in that decision, at least I hope they would.

Q: What is the present unit cost for the F-100 engine for the F-15? What has been the cost record of that in the past few years and what do they expect the unit cost will be now that you are going to use it in the F-16?

A: On the650 aircraft buy we would expect for the engine to pay about $1.35 million. That is '75 dollars and, of course, we are not buying them in '75, that is a few years hence. This is lower than we are paying for the engines now, but that is considerably down the learning curve.

Q: I understand. I am just trying to get some figures to establish what your purchase of the YF-16 is going to do onyour price of the F-15.

It is going to lower your unit cost on the F-100 engines, isn't it, about $300,000 per engine?

A: We estimate that the savings to the F-15 program by the larger buy of engines to be about $100 million in the procurement phase.

Now we expect an additional savings in the support phase of life cycle cost at about the same amount.

Q: Mr. Secretary, is there an inflation clause in this contract?

A: Yes, we have included a 6 percent annual inflation in the contract. That is for pricing purposes. We have also included a statement that we will negotiate -- or rather that we will establish after the fact, based on the economic indices what the actual inflation factor to be factored in will be.

Q: What is the status of the avionics now?

A: The principal selection yet to be made is radar. As you know, we have a competition going on between Hughes and Westinghouse. We would expect to have a flyoff between those two radars beginning late this year. We will startfly-off tests this summer and by the end of the year we should be able to select one of these two, Hughes or Westinghouse.

Q: (Inaudible) GFE?

A: Yes.

Q: So how much would the fully equipped aircraft go for?

A: I am including that in the cost that I gave you.

Q: Mr. Secretary, how long will the engineering development phase take? When will you expect this to be completed? Why is it assumed, as it seems to be, that a go-ahead production decision will be made?

A: What was the last part of your question?

Q: It seems to be assumed that at the end of the engineering development phase, that you will make a production decision -- a favorable one -- and I asked, why is it assumed that is the case? In other major aircraft programs recently you have been emphasizing the fact that this is going to be a go, no-go production decision. That does not seem to be included in this.

(MORE)

A: You have to assume something. We assumed that if the prototype demonstrates out at perameters we ask it to demonstrate, that if you make slight changes in that to go into full scale development that the full scale development article you will also meet your objectives.

Q: Mr. Secretary, how long is that engineering development phase?
A: About two years.

Q: You gave figures of up to 3,000 in sales, and you said figured into that the Navy will buy 800 and the Air Force 650. That leaves 1550 sold overseas?

A: Mr. Beecher here has just reminded me we have not included the 800 Navy into the original estimates.

Q: So your overseas sales would be 2,000 and up?
A: That is right.

Q: Mr. Secretary, could you clarify that?
A: We gave a figure of 2500 to 3,000.

Q: That does not include the 800?
A: It does not.

Q: So that is 800 on top of that?
A: If the Navy chooses to go that way. We don't know yet.

Q: What do you think the chances are the Navy will really select the Air Force plane, find it is adaptable to its use?

A: I don't know that, I could give a good answer on that. I think you had better ask the Navy.

Q: Mr. Secretary, along those lines, could you give us some insight, is it the view of the Secretary of Defense's office in general, that they would prefer only one plane to be built? In other words, for the Navy to build some variant of this airplane. Is that the general feeling?

A: I think if everything else was equal the answer to that question would obviously be yes. I believe the Secretary of Defense does not want to ask the Navy to buy an aircraft which he is not convinced meets the Navy mission requirements. The evaluation has not proceeded yet to the point where we are sure that either of these aircraft is in that position.

Q: Mr. Secretary, you said the engineering development phase would run about two years. That means the contract you are letting for the small number of aircraft now, these are the only aircraft of this type built for the next two years?

A: That is right.

Q: You have said the cost to the Consortium countries will be roughly the same as ours. You were referring to the program costs, weren't you? Is it safe to say it will go about $6.7 million per plane, for their 350 planes?

A: The figure would not be radically different from that. But I am saying that we have not yet completed our negotiations with them and I do not think we should get too specific about details.

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Q: Mr. Secretary, you talked about 2500 to 3,00 aircraft. The Secretary of Defense's office has had a proposal for some time now to go with both aircraft and offer them for sale abroad figuring 1,000 YF-17's to some nations that prefer a twin engine aircraft, and 1,000 YF-16's to other nations, and the possibility that the Navy would go for a twin engine aircraft, that if you sold 1,000 each, then you would not get any more of a benefit to go for the single aircraft? There is a crossover point. That decision as of a week ago is still a prime consideration.

Is it still being considered if the Navy goes with the YF-17?
A: The question was a little too long for me.

Q: What I am really saying, if the Navy goes with the 17, the Defense Department would then produce both aircraft?
A: That is a good assumption. If the Navy goes with the F-17, we would have them both in production.

Q: There is supposed to be an internal Air Force estimate for the purchase over more than a 10-year period, of nearly 1400 of those air combat fighters?
A: As I say, we have a planning figure of 650. That we consider a minimum buy. We have talked about a buy of 1,000 as being a reasonable number. We think it is purely speculative to go much beyond five or six years in our planning. If you look at the F-4, you know we never had any plans to buy as many as we did, but the same kind of a thing could happen here.

Q: 650 over a five-year period?
A: That's right.

Q: Beginning two years from now?
A: That's right.

Q: One last question. One thing that I am not clear on, will the Navy decision pre-date the European decision? You say the Europeans were expected to make a decision within 90 days. Do you anticipate the Navy will choose its fighter first, or are the Europeans waiting for the Navy decision?
A: I don't know that there is any connection. They seem to be more or less simultaneous, but I don't know that they are connected.

- E N D -

Lightweight Fighter

DEPARTMENT OF THE NAVY
OFFICE OF THE SECRETARY
WASHINGTON, D. C. 20350

14 January 1975

Honorable John L. McClellan
Chairman, Committee on
Appropriations
United States Senate
Washington, D. C. 20510

Dear Mr. Chairman:

The purpose of this letter is to inform you as to the extent of the Navy's participation in the series of events which has led to the U.S. Air Force's selection of the F-16 as the Air Force Air Combat Fighter (ACF).

As you know the Navy is currently conducting its own source selection for a Navy Air Combat Fighter (NACF), and since its inception, the Navy source selection process has been fully integrated with that of the USAF for their ACF. The Navy source selection team contained official non-voting members from the USAF and the Navy in turn, provided official non-voting members for the Air Force's ACF source selection council. Further a Navy pilot flew five flights in the YF-16 and six flights in the YF-17, evaluating principally those features of importance to Naval flight operations. As a result, there has been a full and continuous exchange of technical data between the Air Force and Navy Air Combat Fighter Projects.

Additionally, the Office of the Chief of Naval Operations and the Air Staff have conducted extensive joint reviews of respective service requirements for the two aircraft and continuing liaison exists.

Finally, Navy representatives were present at two of the OSD meetings immediately preceding the Air Force's announced decision on the F-16. The Navy ACF evaluation is not scheduled to complete until early March. At the present time, the contractors are still submitting data which the Navy is validating, and it is anticipated that additional modifications to their proposals may be forthcoming from the contractors as the Navy technical evaluation of their submittals is provided.

With respect to the selection of a common airplane, the Navy was fully informed on the Air Force analysis and cost position on the two candidate ACF's. The savings and enhanced capability of the Air Force selection were outlined and the potential savings from a common airplane were compared to them. The rationale offered by the Air Force and accepted by the OSD staff and the Navy, made it clear that the Air Force selection of the F-16 was the most economical and effective option for the DOD independent of any subsequent actions by the Navy. It was the considered judgment of the Navy in the final OSD meeting prior to the Air Force decision that no new cost data would be uncovered in the ongoing NACF evaluation which would materially affect the relationship between the cost position advanced by the Air Force in support of their F-16 selection decision, and the cost position which would result from the selection of a common aircraft for the Navy and Air Force Air Combat fighter. Given this, and the situation with the consortium, the Navy agreed that the Air Force selection should proceed.

The Navy is continuing to work closely with the Air Force in the Air Combat Fighter Project with full exchange of technical and operational data.

Sincerely,

Bill

J. William Middendorf II
Secretary of the Navy

OFFICE OF THE SECRETARY OF DEFENSE

21 February 1975

Memo For Mr. Hoffman

The Development Concept Paper and dialogue with the Air Force pretty well establishes that the future character of the F-16 will be an all purpose fighter attack airplane to replace the F-4. It is a far cry from the austere FIGHTER to complement the F-15 in a HI-LOW MIX concept.

A management constraint on AVIONICS could restore the character of the airplane and provide an attractive base for possible force expansion. OSD/USAF management needs strong encouragement from the Secretary toward restoration. See attached paper.

Chuck Myers

F-16 (LWF/ACF) PROGRAM RESTORATION

In approving the Lightweight Fighter DCP, Secretary Rush reiterated that $3M would remain the design-to-cost goal. The $3M cost goal included a specified maximum avionics unit cost of $450,000 (FY 72 dollars for a quantity of 300 aircraft). The $450,000 goal was the management constraint on the level of capability to be projected for an eventual missionized airplane which would fit the LOW portion of the HI-LOW MIX in the tactical force structure of the eighties.

It was and is the intent of the Secretary that the F-16 be configured to optimize the aircraft for the visual range air superiority role while retaining a minimum of equipment to provide for a fall-out visual air to ground attack capability. Consistent with this view of the ACF (F-16) is the SecDef's 29 July 1974 PDM statement regarding the transition from LWF to ACF which is quoted as follows: "This (ACF R&D) program implements the AF's planned conversion of one of the LWF prototypes into a missionized ACF, and this should stress simplicity and low life cycle cost with a minimum of sophistication in fire control and weapons delivery systems."

On 1 August 1974, DDR&E and the Assistant Secretary of Defense (I&L) jointly signed a memorandum regarding control of cost of the ACF. The second paragraph states: "With respect to Design-to-Cost, we wish to emphasize the significance of the original $3M (in 1972 dollars) Design-to-Cost goal for the Lightweight Fighter (LWF). Our continued support of the ACF program will depend on the ability of Air Force management to restrain the tendency to increase the sophistication and cost of the ACF." Further, it states: "It will doubtless be helpful in constraining cost to keep in mind that a key objective is to provide an alternative which can serve as a basis for force expansion in the face of a constrained budget."

In DCP 143, the Air Force suggests that the $450,000 avionics DTC will be exceeded by $300,000. The CAIG view is that it will increase to over double the $450,000 goal. DDR&E would tend to support that a million dollar cost is more than likely.

Equally important to cost is the significant change in mission character represented by the avionics equipment. The F-16 has become a multi-purpose tactical aircraft with emphasis on accomplishing all manner of air-to-ground missions including low visibility attack. It also incorporates the electronics which serve as

a basis for inclusion of the all weather intercept mission. The expansion of mission spectrum is accomplished with an associated increases in weight, complexity, support burden and a loss of air combat maneuvering capability, the one mission for which the original design had been optimized.

This mutilation of the character of the LWF through the ACF missionization process is a management travesty which cannot go unchallenged. The trauma associated with immediate restoration of the program to its original track may be small compared to the long term problems if permitted to continue on the projected course.

The LWF/ACF program can be restored to the original track by directing the USAF to restructure their plans around an F-16 with a rigid avionics ceiling cost of $510,000 (FY 75 dollars, installed cost). The relatively simplified avionics suite dictated by such a cost ceiling will:

- o Require considerably less development test and permit a shortening of the FSD period, thus affording an earlier production start.
- o Lower the FSD program cost.
- o Lower the burden of ownership and LCC.
- o Preserve the mission orientation.

Additional direction should include:

o Elimination of a two place model.

o Relaxation of strength and fatigue criteria so as to permit weight reductions with attendant performance improvement and cost reduction for the airframe.

The accumulated savings through the measures suggested could account for a reduction in the FSD cost of over $150M, reduce the projected unit fly away cost by nearly $1M and recapture the character of the program as portrayed by the Secretary of Defense to the Congress in both his FY 1975 and FY 1976 Posture Statements. The resulting F-16 will be a very effective combat system, particularly in the NATO arena where it will be working with the F-15, AWACS and the projected GCI network.