

Ronald Reagan Presidential Library

Digital Library Collections

This is a PDF of a folder from our textual collections.

Collection:

Laux, David N.: Files

Folder Title:

Taiwan – U.S. Relations – Arms Sales – Indigenous Fighter
Aircraft (7 of 15)

Box: RAC Box 32

To see more digitized collections visit:

<https://www.reaganlibrary.gov/archives/digitized-textual-material>

To see all Ronald Reagan Presidential Library Inventories, visit:

<https://www.reaganlibrary.gov/archives/white-house-inventories>

Contact a reference archivist at: **reagan.library@nara.gov**

Citation Guidelines: <https://reaganlibrary.gov/archives/research-support/citation-guide>

National Archives Catalogue: <https://catalog.archives.gov/>

WITHDRAWAL SHEET

Ronald Reagan Library

Collection: LAUX, DAVID N.: Files

Archivist: mjd

-US Relations-

FOIA ID: F98-054

File Folder: Taiwan Arms Sales - Indigenous Fighter Aircraft (5)

Date: 10/28/1999

Box 90856 32

(7)

DOCUMENT NO. & TYPE	SUBJECT/TITLE	DATE	RESTRICTION
1. memo	Mark Pratt to Paul Wolfowitz re: meeting, 3p D 5/5/06 NLSF98-054 #48 D 8/24/07 NLRM 1454 #1	nd	P1/F1
2. draft memo	John Chain/Wolfowitz to Michael Armacost re: IDF program, 4p D " " #49 D " " #2	nd	P1/F1
3. chart	re: IDF program, 2p D 12/6/85 M03-1454 #3	1/28/85	P1/F1
4. memo	Martin Chen to the Assistant Secretary re: IDF, 1p R, 6/30/00 NLSF98-054 #51	nd	P1/F1
5. paper	re: executive summary, 2p " " " #52	nd	P1/F1
6. paper	re: Radar review, 2p P, 6/30/00 NLSF98-054 #53 R 8/24/07 NLRM 1454 #4	nd	P1/F1
7. chart	re: radar performance, 1p PART 8/24/07 NLRM 1454 #5	nd	P1/F1
8. chart	re: figure 1, 1p R, 6/30/00 NLSF98-054 #55	nd	P1/F1
9. chart	re: antenna, 1p R 8/24/07 NLRM 1454 #6	nd	P1/F1
10. chart	re: aircraft performance, 1p PART " " #7	nd	P1/F1
11. chart	re: missions, 1p R, 6/30/00 NLSF98-054 #58	nd	P1/F1
12. paper	re: comments, 1p R, 6/30/00 NLSF98-054 #59	nd	P1/F1
13. memo	Frank McNeil to Lt. Gen Chain re: IDF, 3p D 5/5/06 " #60 D 8/24/07 NLRM 1454 #8	3/1/85	P1/F1
14. draft memo	Anderon/Pratt to William Brown re: IDF, 6p D " " #61 D " " #9	nd	P1/F1
15. draft memo	Wolfowitz to Armacost re: EAP views, 5p PART " " #62	nd	P1/F1

RESTRICTIONS

P-1 National security classified information [(a)(1) of the PRA].
P-2 Relating to appointment to Federal office [(a)(2) of the PRA].

P-3 Release would violate a Federal statute [(a)(3) of the PRA].
P-4 Release would disclose trade secrets or confidential commercial or financial information [(a)(4) of the PRA].
P-5 Release would disclose confidential advice between the President and his advisors, or between such advisors [(a)(5) of the PRA].
P-6 Release would constitute a clearly unwarranted invasion of personal privacy [(a)(6) of the PRA].

C. Closed in accordance with restrictions contained in donor's deed of gift.

F-1 National security classified information [(b)(1) of the FOIA].
F-2 Release could disclose internal personnel rules and practices of an agency [(b)(2) of the FOIA].
F-3 Release would violate a Federal statute [(b)(3) of the FOIA].
F-4 Release would disclose trade secrets or confidential commercial or financial information [(b)(4) of the FOIA].
F-6 Release would constitute a clearly unwarranted invasion of personal privacy [(b)(6) of the FOIA].
F-7 Release would disclose information compiled for law enforcement purposes [(b)(7) of the FOIA].
F-8 Release would disclose information concerning the regulation of financial institutions [(b)(8) of the FOIA].
F-9 Release would disclose geological or geophysical information concerning wells [(b)(9) of the FOIA].

RONALD W. REAGAN LIBRARY

THIS FORM MARKS THE FILE LOCATION OF ITEM NUMBER / LISTED ON THE
WITHDRAWAL SHEET AT THE FRONT OF THIS FOLDER.

LIST OF TABS

TAB A: Decision Memo (Draft): US Involvement in LDF

TAB B: Taiwan LDF: Requested Avionics & Status Report

TAB C: US Air Force Evaluation of Taiwan LDF

TAB D: PRC Reactions to LDF: INR Memo & EAP Draft Memo

TAB E: Info Memo (Draft): Aircraft Options for Taiwan

TAB F: Background: August 84 Decision Memo on LDF
December 83 Decision Memo on LDF

RONALD W. REAGAN LIBRARY

THIS FORM MARKS THE FILE LOCATION OF ITEM NUMBER 2 LISTED ON THE
WITHDRAWAL SHEET AT THE FRONT OF THIS FOLDER.

③

RONALD W. REAGAN LIBRARY

THIS FORM MARKS THE FILE LOCATION OF ITEM NUMBER 3 LISTED ON THE
WITHDRAWAL SHEET AT THE FRONT OF THIS FOLDER.

DEFENSE PROCUREMENT DIVISION
DEFENSE PROCUREMENT AND SERVICE COORDINATION MISSION
2224 R STREET, N.W.
WASHINGTON, D.C. 20008

TELEPHONE: (202) 234-9334

CABLE ADDRESS: "SINOPROSE"
TELEX: 89689 CCNAADPD WSH

February 15, 1985

Mr. David Dean
Chairman of the Board
and Managing Director
American Institute in Taiwan
1700 North Moore St., 17th Floor
Arlington, Va. 22209

Dear Mr. Dean:

The United States is fully aware that my country has embarked on major undertaking to develop and to produce the Light Weight Defense Fighter (LWDF). This project will enhance significantly the selfsufficiency of my country in maintaining a credible defense posture. With encouragement from the United States, my country has made major resource commitments to the LWDF program. However, without continuing cooperation and technical assistance from the United States the LWDF program can not proceed in an orderly and efficient manner.

The LWDF program is now at a point where lack of export licenses from the United States for several key items has frustrated any further progress. Specifically, we have been planning to receive export license approval from the United States by no later than February 1, 1985 for eight first priority, critical long lead time items. The major subsystems for which we need export licenses are as attached.

Your assistance in expediting the approval of the export licenses for the subsystems is hereby requested. The United States is renowned throughout the world for its expertise in program management. We fully appreciate, therefore, the importance of timely U.S. responses to our requirements. Without them the LWDF program, the

the LWDF program, the.....

largest and most sensitive defense project we have ever undertaken, simply will not fulfill its objective.

Meanwhile, with no export licenses and no progress, we are wasting \$250,000/per day on un-productive manpower costs along.

Sincerely,


KUN, YUN
Director

KY/jw
Attachments

cc: Mr. James A. Kelly, Deputy Assistant Secretary of
Def. NESA, Dept. of Defense
Mr. William A. Brown, Deputy Assistant Secretary
EAPA, Dept. of State
Lt. Gen. John T. Chain, Director, BPMA, Dept. of
state
Lt. Gen. Herman O. Thomson, Director, J-5
Lt. Gen. Philp C. Gast, Director, DSAA



Widuch
DEPARTMENT OF THE AIR FORCE
WASHINGTON 20330

OFFICE OF THE ASSISTANT SECRETARY

15 JUL 1985

MEMORANDUM FOR ASSISTANT SECRETARY OF DEFENSE (INTERNATIONAL
SECURITY AFFAIRS)

SUBJECT: Taiwan's Lightweight Defensive Fighter (LWDF) (Your
Memo, Jan 7, 1985) (U) - INFORMATION MEMORANDUM

(S) The results of our initial assessment of Taiwan's LWDF proposal are enclosed for your review (Atch 1-2). Please note that the short suspense precluded a USAF review of the entire LWDF requirements list. Instead, a quick comparison of the Golden Dragon-53 Westinghouse radar and LWDF concept relative to USAF fighter configurations was accomplished. A complete operational assessment could be completed within four months. The comparison draws heavily from US contractor-furnished projected performance data on the engines and radar, since this data was not provided by Taiwan. As such, the Air Force cannot validate this data or the conclusions drawn from them.

(S) The USAF strongly supports the envisaged concept of Taiwan's indigenous fighter aircraft development through US industry license technical assistance agreements. However, continued USAF support to this initiative is contingent upon receipt of the following:

- (U) Formal OSD program direction outlining specific USAF responsibilities and the established operational limitations upon which the aircraft configuration baseline is to be set.

- (S) A Foreign Military Sales administrative case which provides Taiwan funds for USAF manpower, travel and management services attendant with the LWDF initiative.

(S) Unless otherwise prescribed, we envision the USAF's role in the LWDF program as one of oversight and interface with the US prime integration contractor of Taiwan's selection. The Office of the Special Assistant for International Cooperative R&D, HQ USAF/RD-I will serve as the Air Staff focal point and facilitate direction and guidance to subordinate commands needed to properly execute the program. Please advise if we can be of further assistance in this matter.

DECLASSIFIED
NLS F98-054 #51
BY dlh NARA, DATE 6/20/00

2 Atch

1. Executive Summary (U)
2. Supporting Documents (S)

Martin Chen

MARTIN F. CHEN
Principal Deputy Assistant Secretary
Research, Development and Logistics

CLASS BY: *DAI, EAPR*
DECLAS ON: *OADR*

SECRET

~~SECRET~~ ~~NOFORN~~

EXECUTIVE SUMMARY (U)

1. (~~S/AF~~) TASKING: Conduct a quick look comparison of the Westinghouse GD-53 radar versus the APG-63, -66, and -67 radars and LWDF aircraft performance versus F-16A and F-20.
2. (U) DATA SOURCES: To conduct this study, data was obtained from the following sources:
 - a. (U) Partial engine performance data was obtained from Garrett by telephone request.
 - b. (U) F-5, F-16A, F-20 and F-16/J79 performance was generated using existing in-house data.
 - c. (U) Aircraft weights were estimated using configuration data from a variety of classified briefing charts, messages, etc.
 - d. (U) Aerodynamic data was generated for a generic aircraft representing an F-16 type state-of-the-art fighter.
 - e. (U) GD-53 radar performance was estimated based on Westinghouse Proposal (Volume I) for GD-53 Radar System, dated March 1984.
 - f. (U) APG-63, -66, and -67 radar performance data was available in-house.
3. (U) AIRCRAFT CONFIGURATION: The LWDF aircraft evaluated was defined as follows:
 - a. (U) Configuration as described in classified briefing charts.
 - b. (U) Two (2) Garrett TFE 1042-70 engines each rated at 5000 lb-thrust, 8350 lb augmented.
 - c. (U) Estimated aircraft gross weights (lbs)
Empty - 12,860
Basic Mission T.O. weight - 19,830
Max - 27,200
 - d. (U) Armament - 2 AIM-7s, 2 AIM-9s, 7 MK-82s, M61 Gun (500 rounds).
4. (U) MISSION PROFILES: The mission profiles used were extracted from in-country briefing material.
5. (U) FINDINGS:
 - a. (~~FC~~) RADAR - The performance of the GD-53 radar is equivalent to the F-20's APG-67 and is superior to the F-5's APG-159 which does not have a

DECLASSIFIED

P98.054 #52

NLS

BY cls NARA, DATE 6/30/00

~~SECRET~~ ~~NOFORN~~

Classified by: Multiple
Declassify on: NOFORN
Atch 1

~~CONFIDENTIAL~~ ~~NO FORN DISSEM~~

look-down capability. With an increase in antenna size the GD-53 could provide performance similar to the F-16's APG-66. From a technical standpoint, the proposed GD-53 development program is considered low risk.

b. ~~(C)~~ PERFORMANCE - For the mission profiles provided, the performance of the aircraft falls approximately midway between the F-5 and the F-20/F-16.

~~CONFIDENTIAL~~ ~~NO FORN DISSEM~~

~~CONFIDENTIAL~~

GD-53 RADAR REVIEW (U)

NO FORN DISSEM

1. ~~(U)~~ DESCRIPTION:

245 in 2
a. ~~(U)~~ The GD-53 Radar System as defined in the Westinghouse Defense Electronics Center proposal has been reviewed. The GD-53 radar is an outgrowth or derivative of the USAF AN/APG-66 radar utilized in the F-16A aircraft. The GD-53 utilizes a low sidelobe, two channel monopulse, planar array antenna with IFF dipoles. The antenna is 12.36" high by 19.82" wide; and has a gain of 28.5 db. The GD-53 transmitter is a 21.5 KW peak power traveling wave tube (TWT), air cooled transmitter. The transmitter produces higher power than the APG-66 transmitter. The low power radio frequency (LPRF) unit in the GD-53 is similar to the APG-66, but adds a second receiver channel for two channel monopulse operation. The signal and data processing in the GD-53 is provided by the Radar Digital Assembly (RDA). The RDA uses advanced digital technology, such as configurable gate arrays, large scale integration devices, and flat pack packaging. The RDA uses MIL-STD-1750A Instruction Set Architecture Computers and is programmed in MIL-STD-1589 Jovial Higher Order Language.

b. ~~(U)~~ The modes available in the GD-53 are shown in Figure 1 along with the modes of other US radars.

2. ~~(U)~~ FINDINGS: The proposed radar is an X-band low/medium Pulse Repetition Frequency pulse doppler radar, which will provide good look-down detection of airborne targets in the presence of ground clutter. The look-down detection performance of this radar is depicted in Figure 2 and is compared to the detection capability of other US radars. The GD-53 performance is less than the APG-66 radar because of a smaller antenna. With equal antenna

DECLASSIFIED

NLRR 11454 #4

BY CW NARA DATE 8/24/07

~~CONFIDENTIAL~~

Classified by: Multiple Sources
Declassify on: OADR

NO FORN DISSEM

ATCH 2

~~CONFIDENTIAL~~

NO FORN DISSEM

sizes, the GD-53 would provide greater detection range than the APG-66. The comparisons of antenna gains and average output powers are shown in Figure 3.

3. ~~(C)~~ CONCLUSIONS: The GD-53 is a state-of-the-art pulse doppler radar utilizing the latest electronic devices and digital design. The GD-53 has improved air-to-ground modes over the APG-66 radar; such as, a higher doppler beam sharpening ratio (16:1 vs 8:1) and Ground Moving Target Indication (GMTI). The radar provides added capabilities over the F-5/APG-159 radar; such as look-down air-to-air detection capability and provides approximately 40% more look-up detection range than the APG-159. As shown in Figure 1, the GD-53 provides many more air-to-ground modes than the APG-159. The GD-53 is essentially equivalent to the AN/APQ-67 radar which was developed for the F-20 aircraft.

~~CONFIDENTIAL~~

NO FORN DISSEM

~~CHINA~~ / TAIWAN
IDF
~~Military~~

14 March 1985



~~SECRET~~

NOT RELEASABLE TO FOREIGN
NATIONALS (NOFORN) OR CONTRACTORS

1.46

RADAR PERFORMANCE COMPARISON

- TARGET RADAR CROSS-SECTION = 5 m^2
- CLOSURE RATE = 2000 FT/SEC.
- HEAD-ON ATTACK
- 85% CUMULATIVE PROBABILITY OF DETECTION RANGES
- EACH RADAR'S PRIMARY LOOK-DOWN MODE

F-16A/APG-66

F-16C/APG-68

F-15/APG-63

F-20/APG-67

GD-53

DECLASSIFIED IN PART

MLRR M1454 #5

BY AS NARA DATE 8/24/07

APG-69

LOOK-DOWN DETECTION RANGE

NOT RELEASABLE TO FOREIGN
NATIONALS (NOFORN) OR

~~SECRET~~

CLASSIFIED BY MULTIPLE SOURCES
ON OADR

FIGURE 1

AIR-TO-AIR

MODE COMPARISON

UNCLASSIFIED

NO FORM DISSEM

	SEARCH			SINGLE TARGET TRACK	TRACK WHILE SCAN	AIR COMBAT MANEUVERING	IFF
	LOOK-UP	LOOK-DOWN	VELOCITY				
GD-53	✓	✓		✓	✓	✓	✓
APG-63 (F-15)	✓	✓	✓	✓	✓	✓	✓
APG-66 (F-16A)	✓	✓		✓	✓	✓	
APG-68 (F-16C)	✓	✓	✓	✓	✓	✓	
APG-67 (F-20)*	✓	✓	✓	✓	✓	✓	
APG-69	✓	✓		✓		✓	
APG-159 (F-5)	✓			✓			

AIR-TO-SURFACE

	REAL BEAM GND MAP	DOPPLER BEAM SHARPENED MAP	GMTI	SEA SEARCH	AIR-TO- GROUND RANGING	BEACON
GD-53	✓	16:1	✓	✓	✓	✓
APG-63 (F-15)	✓				✓	✓
APG-66 (F-16A)	✓	8:1		✓	✓	✓
APG-68 (F-16C)	✓	64:1	✓	✓	✓	✓
APG-67 (F-20)*	✓	40:1	✓	✓	✓	
APG-69	✓			✓	✓	
APG-159 (F-5)	✓					

* MODES IMPLEMENTED FOR FMS MUST BE APPROVED BY USAF.

DECLASSIFIED/Released

NLS F98-054 #55

BY dlb NARA, DATE 6/30/00

NO FORM DISSEM

ANTENNA / POWER CHARACTERISTICS

ANTENNA:

	<u>DIMENSIONS</u>	<u>IN²</u>	<u>GAIN</u>
• GD-53	12.36" X 19.82"	245	28.5db
• APG-63 (F-15)	36" DIAMETER	1018	36.8db
• APG-66 (F-16A)	19" X 29"	551	32.6db
• APG-68 (F-16C)	19" X 29"	551	32.4db
• APG-67 (F-20)	12.5" X 19.8"	248 (350)	29.8db
• APG-69	11.5" X 19"	219	29.5db
• APG-159 (F-5)	11.5" X 19"	219	29.5db

POWER (AVERAGE)*:

• GD-53	238.6 WATTS
• APG-63 (F-15)	1600 WATTS
• APG-66 (F-16A)	189.6 WATTS
• APG-68 (F-16C)	382 WATTS
• APG-67 (F-20)	200 WATTS
• APG-69	120 WATTS
• APG-159 (F-5)	60 WATTS

DECLASSIFIED

NLRR M454#6

BY GL NARA DATE 8/24/07

NO FORN DISSEM

* LOOK-DOWN MODE

CONFIDENTIAL

FIGURE 3

CLASSIFIED BY: MULTIPLE SOURCES
DECLASSIFY ON: OADR

NLRR

M145447

~~SECRET~~

NO FORM DISSEM

		PERFORMANCE PARAMETER	UNITS	LWDF	F-5E	F-16/ J79	F-20
AIR-TO-AIR	MISSION I STRIP LAUNCHED INTERCEPT 2 AIM-7 2 AIM-9 M61 WITH 500 RND5	A. RADIUS OF ACTION	NM	70	165	140	190
		B. TIME TO CLIMB TO 30,000 FT, MAX POWER	SEC/ MACH	110/.9	90/ .86	75/ .88	50/.86
		C. ACCEL TIME, 0.9M to 1.2M 30,000 FT, 50% INTERNAL FUEL, MAX POWER	SEC	40	75	55	30
		D. MAX SUSTAINED G's M=1.2/30,000 FT, 50% INTERNAL FUEL, MAX POWER	G	3.2	2.1	2.7	3.6
		E. MAX MACH/50% INTERNAL FUEL	M	1.9	1.5	1.7	1.9
		F. Ps 30,000 FT, MAX POWER, 50% INTERNAL FUEL, M=.8/1.4	FT/SEC	240/ 210	180/ 30	190/ 210	310/330
AIR-TO- GROUND	MISSION II COMBAT AIR PATROL 2 AIM-7 2 AIM-9 2 EXT. TANKS M61/500 RND5	LOITER TIME FOR 70NM RADIUS OF ACTION Ps 30,000 FUEL, M=.8	MIN	100	75	115	105
		HI-LO-LO-HI RADIUS OF ACTION	NM	88	38	120	110

*2 AIM-9s Only
See comments on Performance
Estimates

~~SECRET~~

Classified by: Multiple Source
Declassify on: OADR

NO FORM DISSEM

1.42

~~NO FORN DISSEM~~

UNCLASSIFIED

MISSIONS
STANDARD DAY ATMOSPHERE

I BASIC

ARMAMENT: M61A1 20mm gun w/500 rds
2 AIM-7
2 AIM-9

FUEL: Internal

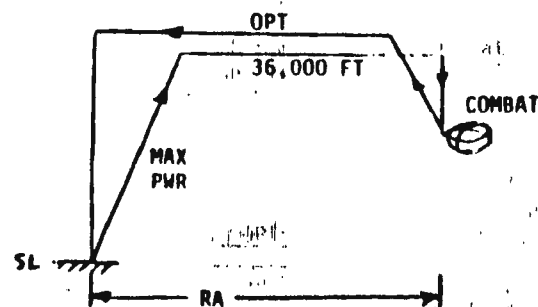
TAKEOFF: Max Power

CLIMB: Max Power

CRUISE: Out at 36,000 ft
ALTITUDE: In at optimum

COMBAT: 15,000 ft/M=0.8
5 minutes at Max Power,
Fire Missiles

FUEL
RESERVES: 10 minutes endurance at
sea level



II CAP

ARMAMENT: M61A1 20mm gun w/500 rds
2 AIM-7
2 AIM-9

FUEL: Internal
2 External Fuel Tanks

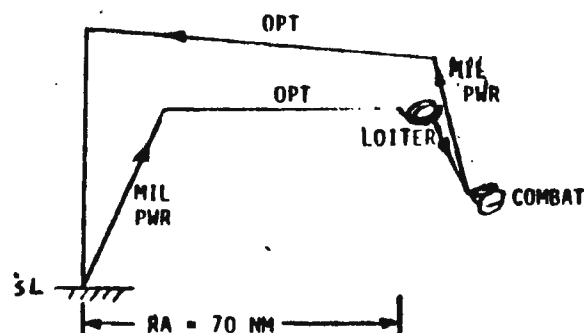
TAKEOFF: Max Power

CLIMB: Mil Power

CRUISE: Optimum
ALTITUDE: Optimum

COMBAT: 15,000 ft/M=0.8
5 minutes at Max Power,
Fire Missiles

FUEL
RESERVES: 10 minutes endurance at
sea level



III AIR-TO-GROUND

ARMAMENT: M61A1 20mm gun w/500 rds
2 AIM-9
7 MK-82 Bombs

FUEL: Internal
2 External Fuel Tanks

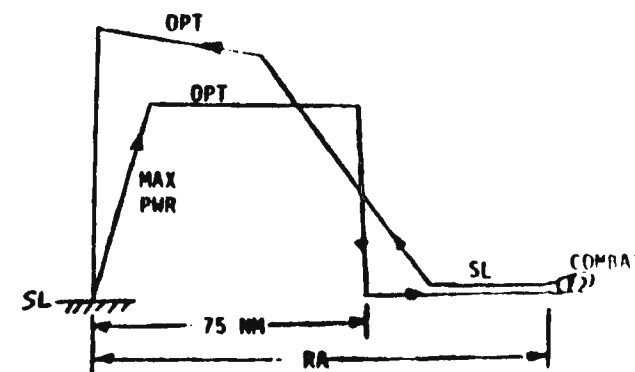
TAKEOFF: Max Power

CLIMB: Max Power

CRUISE: Optimum
ALTITUDE: Optimum

COMBAT: Sea Level/M=0.9
5 minutes at Max Power,
Drop Bombs

FUEL
RESERVES: 10 minutes endurance at
sea level



~~NO FORN DISSEM~~

UNCLASSIFIED

DECLASSIFIED/Released
NLS F98-054 #58
BY dl NARA, DATE 6/30/00

~~NO OFFICIAL USE ONLY~~ ~~NO FORM DISSEM~~

COMMENTS ON PERFORMANCE ESTIMATES

1. Mission profiles developed by the Air Force are normally task oriented to maximize performance with the least amount of fuel. The LWDF Mission Profiles are unique in that they require max use of afterburner for take-off and climb due to the short radius of action requirement and five minutes of afterburner for combat at midpoint. Consequently, the use of these same profiles for the comparative aircraft results in a large expenditure of fuel due to their bigger engines (e.g., for the F-16A, over 50% of the internal fuel is used for the 5 minutes combat time in Mission I). The result is that the performance numbers shown are significantly reduced from the capabilities normally associated with these aircraft.
2. The conditions specified for the performance parameters were selected on the basis of the estimated engine data handcarried to ASD by Garrett. Due to the time constraint, no attempt was made to determine the validity of this data.
3. For the Radius of Action parameter, only two AIM-9s were used for the comparative aircraft, since they are not currently authorized the carriage of AIM-7s.
4. P_g (Excess Specific Power) is defined as a value representing the aircraft's ability to accelerate and/or climb at a specific point in time along the velocity axis.
5. Comparative aircraft data used were representative of current production aircraft configuration and existing flight manual limitations. No attempt was made to optimize the comparative aircraft configuration for the three basic missions.
6. Estimates for the LWDF were based on the in-country briefing data package for weights, wing area and configuration and aerodynamic drag trends based on F-16 drag data.

DECLASSIFIED
NLS F98-054 #59
BY dlk NARA, DATE 6/30/00

~~NO OFFICIAL USE ONLY~~ ~~NO FORM DISSEM~~

⑤

RONALD W. REAGAN LIBRARY

THIS FORM MARKS THE FILE LOCATION OF ITEM NUMBER 13-14 LISTED ON THE
WITHDRAWAL SHEET AT THE FRONT OF THIS FOLDER.

E

DRAFT F

DECLASSIFIED IN PART
NLS F98-054 #62
By CK, NARA, Date 5/5/06

Information Memorandum

To: P - Mr. Armacost
From: EAP - Paul Wolfowitz
Subject: EAP views on the Taiwan aircraft situation
Reference: August Memorandum on Taiwan's Indigenous
Fighter Aircraft (Attached)

Air defense has long been recognized by the U.S. as well as Taiwan as a key aspect of Taiwan's deterrent capability, and for ten years a follow-on aircraft to Taiwan's co-produced F-5E aircraft has been high on the list of Taiwan's arms requests from the U.S. Taiwan's dire predictions about improved PRC capabilities stemming from introduction of the F-8 are not considered valid by the U.S., which concluded in 1982 that a new interceptor aircraft was not needed by Taiwan "at this time". It may be more difficult in the future to make such argumentation convincing, as the U.S. and others assist the PRC in improving its aircraft performance and weaponry. Taiwan has also argued that reductions in its aircraft numbers and capabilities point to a need for additional aircraft fairly soon. Taiwan estimates that, by 1989, it will lose through attrition 43% of its current aircraft inventory. Even before that time, reduced operational readiness of the aging aircraft will make the numbers an exaggerated indicator of capability. Given the increasing problem over time and the long lead time revised for most solutions, we can expect Taiwan to continue to emphasize its air defense problems and to increase pressures for favorable decisions. The following is the status of the various aspects of Taiwan's aircraft situation.

1. F-5E. Taiwan currently has 238 F-5E's and, under a co-production arrangement with Northrop, will add an additional 32 by July 1986. It is possible to extend again the co-production of F-5E's, and Taiwan has tentatively spoken to Northrop about doing so.

(1.40d) Although many countries are reluctant to have any arms relationship with Taiwan, even with the U.S. as intermediary, it is likely that, for some time in the future, Taiwan will be able to purchase F-5E's from some countries which now have them. Additional F-5E's would help solve the numbers problem set forth in attachment A.

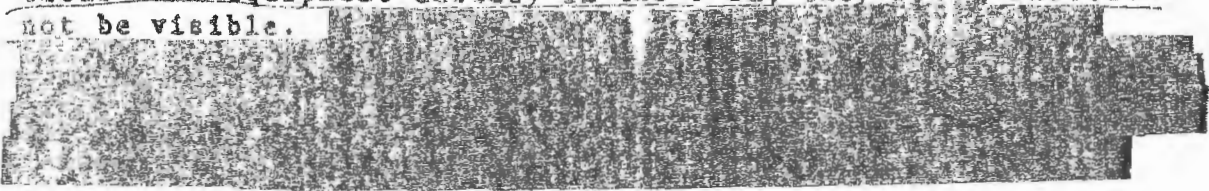
~~CONFIDENTIAL~~
DECL: OADR

~~CONFIDENTIAL~~

-3-

~~Redacted Redacted Redacted Redacted Redacted Redacted Redacted Redacted~~
~~Redacted Redacted Redacted Redacted Redacted Redacted Redacted Redacted Redacted~~

5. F-5E upgrades. Improvements have been regularly incorporated into the F-5 over the years. Northrop and other vendors have recently come up with an avionics package which would improve F-5E performance. These upgrades would not be notifiable and could be considered merely "serial modifications" for equipment already in the F-5E; they would therefore not be visible.



6. Indigenous Lightweight Defensive Fighter (LDF). Taiwan has been working more seriously on the indigenous LDF than we had thought. We had earlier approved a co-design/co-production effort for the Garrett TFE-1042 engine. Taiwan has made a significant investment in this new engine as well as in facilities for the design and production of the LDF. Taiwan's schedule is as follows:

- ✓ -- 31 August 1984, complete conceptual design phase
- ✓ -- August 1984 to March 1985 preliminary aircraft design and development of a coherent program plan
- ✓ -- March 1985 to March 1987, begin detailed design and manufacturing operations
- ✓ -- March 1987 to March 1989, continue testing of 2nd and 3rd prototypes
- ✓ -- 1990, initiation of serial production

U.S. delay in approving the licenses for avionics systems and for systems integration assistance by General Dynamics has set Taiwan's program back six months already; Taiwan will not be able to make up for this delay in what is essentially a very optimistic schedule.

In December 1983, Under Secretary Eagleburger approved the first stage of U.S. licensing for General Dynamics (GD) assistance to Taiwan. That approval, limited Taiwan to developing an aircraft at the F-5E level with growth potential. You subsequently approved a new GD request to do a critique of Taiwan's own designs, and Taiwan and GD were both

CONFIDENTIAL

1.4(d)

~~CONFIDENTIAL~~

-4-

so informed the end of August. GD proceeded with the first step, a critique of the model which Taiwan has tested in its wind tunnel. GD completed the critique in December and in January provided us with a briefing of the aircraft design and its capabilities. The next step would require approval of avionics systems and continued GD assistance in systems integration. We shall now have to make a decision on specific avionics systems in order for Taiwan to continue with detail design work.

7. Delaying decisions on both the F-20 and the indigenous LDF. A more advanced aircraft such as the F-20 and potentially the indigenous LDF would supply what Taiwan's leadership considers a key need in the 1990's. [REDACTED]

Taiwan
Reaction

[REDACTED]

Enclosures:

1. Taiwan Airforce Fighter Aircraft Order of Battle
2. Taiwan's Indigenous Fighter Aircraft Memorandum of August 1984

Drafted by: EAP/RA/TC:MSP
3-7-85 632-7711 #0871F

~~CONFIDENTIAL~~