

d. **The Solid State Recorder (SSR) capabilities incorporated into the F/A-18C/D aircraft as both a replacement to the existing Cockpit Video Recording System (CVRS) as well as adding capability to capture and store Electro-optical/Infrared (EO/IR) Imagery. Use of SSR technology will overcome numerous obsolescence issues with the existing CVRS, provides greater memory capacity, and allows for future network centric operations such as real-time/near real-time imagery in/out of cockpit.**

e. **The LITENING is a targeting pod integrated and mounted externally to the aircraft. The targeting pod contains a high-resolution, forward-looking infrared sensor (FLIR) that displays an infrared image of the target to the aircrew. It has a wide field of view search capability and a narrow field of view acquisition/targeting capability of battlefield-sized targets. The pod contains a charged coupled device (CCD-TV) camera used to obtain target imagery in the visible portion of the electromagnetic spectrum. An on-gimbal inertial navigation sensor has established line-of-sight and automatic bore sighting capability. The pod is equipped with a laser designator for precise delivery of laser-guided munitions. A laser rangefinder provides information for various avionics systems, for example, navigation updates, weapon deliveries and target updates. It includes an automatic target tracker to provide fully automatic stabilized target tracking at altitudes, airspeeds and slant ranges consistent with tactical weapon delivery maneuvers. These features simplify the functions of target detection and recognition and permit attack of targets with precision-guided weapons on a single pass.**

5. **If a technologically advanced adversary were to obtain knowledge of the specific hardware and software elements, the information could be used to develop countermeasures which might reduce weapon system effectiveness or be used in the development of a system with similar or advanced capabilities.**

[FR Doc. 07-6261 Filed 1-2-08; 8:45 am]

BILLING CODE 5001-06-C

**DEPARTMENT OF DEFENSE**

**Office of the Secretary**

[Transmittal Nos. 08-20]

**36(b)(1) Arms Sales Notification**

**AGENCY:** Department of Defense, Defense Security Cooperation Agency.

**ACTION:** Notice.

**SUMMARY:** The Department of Defense is publishing the unclassified text of a section 36(b)(1) arms sales notification. This is published to fulfill the requirements of section 155 of Public Law 104-164 dated 21 July 1996.

**FOR FURTHER INFORMATION CONTACT:** Ms. B. English, DSCA/DBO/CFM, (703) 601-3740.

The following is a copy of a letter to the Speaker of the House of Representatives, Transmittals 08-20 with attached transmittal, policy justification, and Sensitivity of Technology.

Dated: December 26, 2007.

**L.M. Bynum,**

*OSD Federal Register Liaison Officer,  
Department of Defense.*

BILLING CODE 5001-06-M



**DEFENSE SECURITY COOPERATION AGENCY**  
**WASHINGTON, DC 20301-2800**

**DEC 18 2007**  
**In reply refer to:**  
**I-07/013848-CFM**

**The Honorable Nancy Pelosi**  
**Speaker of the House of Representatives**  
**Washington, DC 20515-6501**

**Dear Madam Speaker:**

**Pursuant to the reporting requirements of Section 36(b)(1) of the Arms Export Control Act, as amended, we are forwarding herewith Transmittal No. 08-20, concerning the Department of the Air Force's proposed Letter(s) of Offer and Acceptance to Morocco for defense articles and services estimated to cost \$2.4 billion. After this letter is delivered to your office, we plan to issue a press statement to notify the public of this proposed sale.**

**Sincerely,**

A handwritten signature in black ink that reads "Richard J. Millies".

**Richard J. Millies**  
**Deputy Director**

**Enclosures:**

- 1. Transmittal**
- 2. Policy Justification**
- 3. Sensitivity of Technology**

**Same ltr to:**

**House**  
**Committee on Foreign Affairs**  
**Committee on Armed Services**  
**Committee on Appropriations**

**Senate**  
**Committee on Foreign Relations**  
**Committee on Armed Services**  
**Committee on Appropriations**

**Transmittal No. 08-20**

**Notice of Proposed Issuance of Letter of Offer  
Pursuant to Section 36(b)(1)  
of the Arms Export Control Act, as amended**

- (i) **Prospective Purchaser:** Morocco
- (ii) **Total Estimated Value:**
- |                          |                        |
|--------------------------|------------------------|
| Major Defense Equipment* | \$1.649 billion        |
| Other                    | <u>\$ .751 billion</u> |
| <b>TOTAL</b>             | <b>\$2.400 billion</b> |
- (iii) **Description and Quantity or Quantities of Articles or Services under Consideration for Purchase:**
- Major Defense Equipment (MDE)**
- 24 F-16C/D Block 50/52 aircraft with either the F100-PW-229 or F110-GE-129 Increased Performance Engines (IPE) and APG 68(V)9 radars
  - 4 F100-PW-229 or F110-GE-129 IPE spare engines
  - 4 APG-68(V)9 spare radar sets
  - 30 AN/ALE-47 Countermeasures Dispensing Systems (CMDS)
  - 30 AN/ALR-56M Radar Warning Receivers (RWR)
  - 60 LAU-129/A Launchers;
  - 30 LAU-117 Launchers
  - 5 Joint Helmet Mounted Cueing Systems
  - 4 AN/ARC-238 Single Channel Ground and Airborne Radio System (SINCGAR) radios with HAVE QUICK I/II
  - 4 Conformal Fuel Tanks (pairs)
  - 4 Link-16 Multifunctional Information Distribution System-Low Volume Terminals;
  - 2 Link-16 Ground Stations
  - 3 Global Positioning Systems (GPS) and Embedded GPS/ Inertial Navigation Systems (INS)
  - 12 AN/AAQ-33 SNIPER or AN/AAQ-28 LITENING Targeting Pods
  - 1 Unit Level Trainer

\* as defined in Section 47(6) of the Arms Export Control Act.

- 5 Tactical Air Reconnaissance Systems or DB-110 Reconnaissance Pods (RECCE)**
- 4 AN/APX-113 Advanced Identification Friend or Foe (AIFF) Systems;**
- 28 AN/ALQ-211 Advanced Integrated Defensive Electronic Warfare Suites (AIDEW); or 28 AN/ALQ-187 Advanced Self-Protection Integrated Suite (ASPIS II); or 28 AN/ALQ-178 Self Protection Electronic Warfare Suites (SPEWS)**

**Associated support equipment, software development/integration, tanker support, ferry services, Cartridge Actuated Devices/Propellant Actuated Devices (CAD/PAD), repair and return, modification kits, spares and repair parts, publications and technical documentation, personnel training and training equipment, U.S. Government and contractor technical, engineering, and logistics support services, and other related elements of logistics support.**

- (iv) Military Department: Air Force (SAY)**
- (v) Prior Related Cases, if any: None.**
- (vi) Sales Commission, Fee, etc., Paid, Offered, or Agreed to be Paid: none**
- (vii) Sensitivity of Technology Contained in the Defense Article or Defense Services Proposed to be Sold: See Annex attached.**
- (viii) Date Report Delivered to Congress: DEC 18 2007**

**POLICY JUSTIFICATION****Morocco - F-16C/D Block 50/52 Aircraft**

The Government of Morocco has requested a possible sale of:

**Major Defense Equipment (MDE)**

- 24 F-16C/D Block 50/52 aircraft with either the F100-PW-229 or F110-GE-129 Increased Performance Engines (IPE) and APG-68(V)9 radars;**
- 5 F100-PW-229 or F110-GE-129 IPE spare engines;**
- 4 APG-68(V)9 spare radar sets;**
- 30 AN/ALE-47 Countermeasures Dispensing Systems (CMDS)**
- 30 AN/ALR-56M Radar Warning Receivers (RWR)**
- 60 LAU-129/A Launchers;**
- 30 LAU-117 Launchers;**
- 6 Joint Helmet Mounted Cueing Systems;**
- 4 AN/ARC-238 Single Channel Ground and Airborne Radio System (SINGAR) radios with HAVE QUICK I/II;**
- 24 Conformal Fuel Tanks (pairs);**
- 4 Link-16 Multifunctional Information Distribution System-Low Volume Terminals;**
- 2 Link-16 Ground Stations;**
- 4 Global Positioning Systems (GPS) and Embedded GPS/ Inertial Navigation Systems (INS);**
- 12 AN/AAQ-33 SNIPER Targeting Pods or AN/AAQ-28 LITENING Targeting Pods**
- 5 Tactical Air Reconnaissance Systems (TARS) or DB-110 Reconnaissance Pods (RECCE);**
- 4 AN/APX-113 Advanced Identification Friend or Foe (AIFF) Systems;**
- 28 AN/ALQ-211 Advanced Integrated Defensive Electronic Warfare Suites (AIDEWS); or 28 AN/ALQ-187 Advanced Self-Protection Integrated Suites (ASPIS II); or 28 AN/ALQ-178 Self Protection Electronic Warfare Suites (SPEWS)**
- 1 Unit Level Trainer**

Associated support equipment, software development/integration, tanker support, ferry services, CAD/PAD, repair and return, modification kits, spares and repair parts, publications and technical documentation, personnel training and training equipment, U.S. Government and contractor technical, engineering, and logistics support services, and other related elements of logistics support. The estimated cost is \$2.4 billion.

**The proposed sale will contribute to the foreign policy and national security objectives of the United States by enhancing Morocco's capacity to support U.S. efforts in the Global War on Terrorism (GWOT), as well as supporting Morocco's legitimate need for its own self-defense. Morocco is one of the most stable and pro-Western of the Arab states, and the U.S. remains committed to a long-term relationship with Morocco. The proposed sale will allow the Moroccan Air Force to modernize its aging fighter inventory, thereby enabling Morocco to support both its own air defense needs and coalition operations. Morocco is a Major Non-NATO ally. Delivery of this weapon system will greatly enhance Morocco's interoperability with the U.S. and other NATO nations, making it a more valuable partner in an increasingly important area of the world. The country will have no difficulty absorbing this new capability into its armed forces.**

**The proposed sale of this weapon system will not affect the basic military balance in the region.**

**The principal contractors will be:**

<b>BAE Advanced Systems</b>	<b>Greenlawn, New York</b>
<b>Boeing Corporation</b>	<b>Seattle, Washington</b>
<b>Boeing Integrated Defense Systems</b>	<b>St Louis, Missouri</b>
<b>(three locations)</b>	<b>Long Beach, California</b>
	<b>San Diego, California</b>
<b>Raytheon Company</b>	<b>Lexington, Massachusetts</b>
<b>(two locations)</b>	<b>Goleta, California</b>
<b>Raytheon Missile Systems</b>	<b>Tucson, Arizona</b>
<b>Lockheed Martin Aeronautics Company</b>	<b>Fort Worth, Texas</b>
<b>Lockheed Martin Missile and Fire Control</b>	<b>Dallas, Texas</b>
<b>Northrop-Grumman Electro-Optical Systems</b>	<b>Garland, Texas</b>
<b>Northrop-Grumman Electronic Systems</b>	<b>Baltimore, Maryland</b>
<b>Pratt &amp; Whitney United Technology Company</b>	<b>East Hartford, Connecticut</b>
<b>General Electric Aircraft Engines</b>	<b>Cincinnati, Ohio</b>
<b>Goodrich ISR Systems</b>	<b>Danbury, Connecticut</b>
<b>L3 Communications</b>	<b>Arlington, Texas</b>

**There are no known offset agreements in connection with this proposed sale.**

**Implementation of this proposed sale will require multiple trips to Morocco involving U.S. Government and contractor representatives for technical reviews/support, program management, and training over a period of 15 years.**

**There will be no adverse impact on U.S. defense readiness as a result of this proposed sale.**

**Transmittal No. 08-20****Notice of Proposed Issuance of Letter of Offer  
Pursuant to Section 36(b)(1)  
of the Arms Export Control Act****Annex  
Item No. vii****(vii) Sensitivity of Technology:**

1. This sale will involve the release of sensitive technology to Morocco. The F-16C/D Block 50/52 weapon system is unclassified, except as noted below. The aircraft utilizes the F-16 airframe and features advanced avionics and systems. It contains the Pratt and Whitney F-100-PW-229 or the General Electric F-110-GE-129 engine, AN/APG-68V(9) radar, digital flight control system, internal and external electronic warfare equipment, Advanced IFF, LINK-16 datalink, operational flight trainer, and software computer programs.

2. Sensitive and/or classified (up to Secret) elements of the proposed F-16C/D include hardware, accessories, components, and associated software: AN/APG-68V(9) Radar, Have Quick I/II Radios, AN/APX-113 Advanced Identification Friend or Foe (AIFF) with Mode IV capability, AN/ALE-47 Countermeasures (Chaff and Flare) set, SNIPER Targeting Pod and/or LITENING Advanced Targeting (AT) Pod Capabilities, TARS and/or DB-110 RECCE Pods, LINK-16 Advanced Data Link Group A provisions only, Embedded Global Positioning System/Inertial Navigation System, Joint Helmet-Mounted Cueing System, AN/ALR-56M Radar Warning Receiver, Advanced Integrated Defensive Electronic Warfare Suite (AIDEWS) or Advanced Self-Protection Integrated Suite (ASPIS II) or Self Protection Electronic Warfare Suite (SPEWS), Modular Mission Computer, Have Glass I/II without Infrared top coat, Digital Flight Control System, F-100 or F-110 engine infrared signature, and Advanced Interference Blanker Unit. Additional sensitive areas include operating manuals and maintenance technical orders containing performance information, operating and test procedures, and other information related to support operations and repair. The hardware, software, and data identified are classified to protect vulnerabilities, design and performance parameters, and other similar critical information.

3. The AN/APG-68(V)9 radar is the latest model of the APG-68 radar and was specifically designed for foreign military sales. This model contains the latest digital technology available for a mechanically scanned antenna, including higher processor power, higher transmission power, more sensitive receiver electronics, and an entirely new capability, Synthetic Aperture Radar (SAR), which creates higher-resolution ground maps from a much greater distance than previous versions of the APG-68. The upgrade features a 30% increase in detection range of air targets, a five-fold increase in processing speed, a ten-fold increase in memory, as well as significant improvements in all modes, jam resistance and false alarm rates. Complete hardware is classified Confidential; major components and subsystems are classified Confidential; software is classified Secret; and technical data and documentation are classified up to Secret.

4. The AN/ARC-238 Single Channel Ground and Airborne Radio System (SINCGAR) radio with HAVE QUICK II is a voice communications radio system. HAVE QUICK II employs cryptographic technology that is classified Secret. Classified elements include operating characteristics, parameters, technical data, and keying material.

5. The SNIPER Targeting System (AN/AAQ-33) is Unclassified but contains state-of-the-art technology. Information on performance and inherent vulnerabilities is classified Secret. The software (object code) is classified Confidential. Sensitive elements include the Forward Looking Infrared (FLIR) sensors, Laser Pulse Interval Modulation (PIM) and doublet coding, the AGM-65 Missile Boresight Correlator (MBC), and ECCM features that increase capability in a jamming environment. The SNIPER system to be released will not include the Laser Pulse Interval Modulation (PIM), laser doublet coding, or the Lockheed Martin (LM)-proprietary XR image processing algorithm (no extended range capability).

6. The LITENING Targeting System (AN/AAQ-28) is Unclassified but contains state-of-the-art technology. Information on performance and inherent vulnerabilities is classified Secret. The software (object code) is classified Confidential. Sensitive elements include the Forward Looking Infrared (FLIR) sensors, the Laser Pulse Interval Modulation (PIM) and doublet coding, and the AGM-65 Missile Boresight Correlator (MBC), and ECCM features that increase capability in a jamming environment. The LITENING AT system to be released will not include laser PIM, or laser doublet coding (no extended range capability).

7. The AN/APX-113 Identification Friend or Foe (IFF) System is Unclassified unless Mode IV operational evaluator parameters are loaded into the equipment. Classified elements of the IFF system include software object code, operating characteristics, parameters, and technical data. Mode IV anti-jam performance specifications/data, software source code, algorithms, and tempest plans or reports will not be offered, released, discussed or demonstrated.

8. The Multifunctional Information Distribution System-Low Volume Terminal (MIDS-LVT) is an advanced Link-16 command, control, communications, and intelligence (C3I) system incorporating high-capacity, jam-resistant, digital communication links for exchange of near real-time tactical information, including both data and voice, among air, ground, and sea elements. MIDS-LVT is intended to support key theater functions such as surveillance, identification, air control, weapons engagement coordination, and direction for all Services and Allied forces. The system will provide jamming-resistant, wide-area communications on a Link-16 network among MIDS and Joint Tactical Information Distribution System (JTIDS) equipped platforms. The MIDS/LVT and MIDS On Ship Terminal hardware, publications, performance specifications, operational capability, parameters, vulnerabilities to countermeasures, and software documentation are classified Confidential. The communication security devices and data exchanged on Link-16 networks are classified Secret. The classified information to be provided consists of that which is necessary for the operation, maintenance, and repair (through intermediate level) of the data link terminal, installed systems, and related software. Only Group A provisions will be initially transferred. Transfer of Link-16 terminals will only take place after completion of the release process for communications security devices and U.S. Secret data.

9. The Joint Helmet Mounted Cueing System (JHMCS) is a modified HGU-55/P helmet that incorporates a visor-projected Heads-Up Display (HUD) to cue weapons and aircraft sensors to air and ground targets. In close combat, a pilot must currently align the aircraft to shoot at a target. JHMCS allows the pilot to simply look at a target to shoot. This system projects visual targeting and aircraft performance information on the back of the helmet's visor, enabling the pilot to monitor this information without interrupting his field of view through the cockpit canopy. The system uses a magnetic transmitter unit fixed to the pilot's seat and a magnetic field probe mounted on the helmet to define helmet pointing positioning. A Helmet Vehicle Interface (HVI) interacts with the aircraft system bus to provide signal generation for



**the helmet display. This provides significant improvement for close combat targeting and engagement. The Hardware is Unclassified; the technical data and documents are classified up to Secret.**

**10. The AN/ALQ-211 Airborne Integrated Defensive Electronic Warfare Suite (AIDEWS) provides passive radar warning, wide spectrum RF jamming, and control and management of the entire Electronic Warfare (EW) system. It is an internally mounted suite. The commercially developed system software and hardware are Unclassified. The system is classified Secret when loaded with a U.S.-derived EW database.**

**11. The AN/ALQ-178 Self-Protection Electronic Warfare Suite (SPEWS) II is an internal system composed of a fully integrated RWR, jammer, and ALE-47 variant chaff and flare dispenser. It incorporates updated digital receivers, provides a wide-variety of advanced jamming techniques, and Digital Radio Frequency Memory (DRFM) capability. The commercially developed system software and hardware are Unclassified. The system is classified Secret when loaded with a U.S.-derived EW database.**

**12. The AN/ALQ-187 Advanced Self-Protection Integrated Suite (ASPIS II) is a fully automatic jammer system integrated with radar warning (AN/ALR-93V) and flare/chaff (AN/ALE-47) systems for tactical aircraft self-protection. It incorporates advanced signal processing including a DRFM capability. The highest classification of the system is Secret.**

**13. The AN/ALE-47 Countermeasures Dispensing System is a software reprogrammable dispenser of chaff and flares. It provides for either automatic (via integrated Missile Warning System input) or aircrew commanded response dispense capabilities. Specific dispense routines are sensitive. The export version uses a country unique "look-up decision tree" for determining dispense routines. This software when loaded in the ALE-47 is classified Confidential. Increased risk of exploitation is significantly reduced given that the software is in executable form only i.e., binary code and the actual dispense routines can be gained through visual observation.**

**14. The ALR-56M Radar Warning Receiver continuously detects and intercepts radio frequency (RF) signals. It provides improved performance in a dense signal environment and improved detection of modern threat signals as compared to the ALR-69. The highest classification for the hardware is Confidential and the software is Secret.**

**15. Software, hardware, and other data/information, which is classified or sensitive, are reviewed prior to release to protect system vulnerabilities, design data, and performance parameters. Some end-item hardware, software, and other data identified above are classified at the Confidential and Secret level. Potential compromise of these systems is controlled through management of the basic software programs of highly sensitive systems and software-controlled weapon systems on a case-by-case basis.**

**16. If a technologically advanced adversary were to obtain knowledge of the specific hardware or software in this proposed sale, the information could be used to develop countermeasures which might reduce weapon system effectiveness or be used in the development of systems with similar or advance capabilities.**

[FR Doc. 07-6262 Filed 1-2-08; 8:45 am]

**BILLING CODE 5001-06-C**

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**DEPARTMENT OF DEFENSE**

**Office of the Secretary**

[Transmittal Nos. 08-21]

**36(b)(1) Arms Sales Notification**

**AGENCY:** Department of Defense, Defense Security Cooperation Agency.

**ACTION:** Notice.

**SUMMARY:** The Department of Defense is publishing the unclassified text of a section 36(b)(1) arms sales notification. This is published to fulfill the requirements of section 155 of Public Law 104-164 dated 21 July 1996.

**FOR FURTHER INFORMATION CONTACT:** Ms. B. English, DSCA/DBO/CFM, (703) 601-3740.

The following is a copy of a letter to the Speaker of the House of Representatives, Transmittal 08-21 with attached transmittal, policy justification, and Sensitivity of Technology.

Dated: December 26, 2007.

**L.M. Bynum,**

*OSD Federal Register Liaison Officer,  
Department of Defense.*

**BILLING CODE 5001-06-M**