FY 2000 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1999

BUDGET ACTIVITY: 3

PROGRAM ELEMENT: 0603270N
PROGRAM ELEMENT TITLE: Advanced Electronic Warfare Technology

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1998 ACTUAL	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	FY 2004 ESTIMATE	FY 2005 ESTIMATE	TO COMPLETE	TOTAL COMPLETE
E2194 Electronic Warfare Advanced Technology	9,188	10,211	10,359	9,551	9,725	9,952	10,201	10,455	CONT.	CONT.
R2090 Functional Recognition & Response	9,164	7,882	8,625	8,878	9,106	9,356	9,587	9,829	CONT.	CONT.
TOTAL	18,352	18,093	18,984	18,429	18,831	19,308	19,788	20,284	CONT.	CONT.

(U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: Advanced Electronic Warfare Technology (AEWT) is the Navy's continuing, core Advanced Technology Development program for Electronic Warfare (EW) and is oriented to demonstrate and transition EW technology in cooperation with the other Services, placing special emphasis on Naval EW applications of Command and Control Warfare. This program continues to develop technologies which support the effective employment of naval force capabilities in the conduct of the Navy's Joint Mission Areas as defined by the Chief of Naval Operations (CNO) (i.e., Strike, Littoral Warfare, Intelligence, Surveillance and Reconnaissance, Strategic Mobility, Readiness and Training). The program is managed at the Office of Naval Research (ONR) by the same office that directs P.E. 0602270N (Navy EW Technology) and provides the vast majority of projects to this program for demonstration and potential transition to full scale development. The ONR program manager is also a principal of the Director of Defense Research and Engineering (DDR&E) Technology Panel for EW that oversees and coordinates Tri-Service 6.2 & 6.3 EW programs. Consequently, this program is planned jointly in accordance with Defense Science and Technology Reliance agreements that allocate various EW disciplines and their attendant technology development responsibilities between the Army, Air Force and the Navy. As part of the Integrated Science and Technology EW Program, it is subject to the review and execution oversight of the DDR&E. AEWT is responsive to CNO guidance and the Systems Commands, warfighting requirements and needs. It develops EW technologies to

counter a broad range of electromagnetic threats and is linked to future joint warfighting capabilities of "maintaining near perfect real-time knowledge of the enemy..." and "to counter the threat of...cruise missiles to the Continental United States and deployed forces."

(U) The program transitions new technologies to tactical aircraft (TACAIR), low observable aircraft, surface EW platforms, and Pre-planned Product Improvement programs (P3I) to address the modern threat (including multi-spectral/multi-modal sensors and seekers). This is accomplished by improving threat detection, identification, location and response through developmental upgrades and direct, advanced technology insertions. Currently, AEWT consists of two projects:

(U) E2194 - Electronic Warfare Advanced Technology: This project is a core continuing effort that transitions high-payoff EW technologies to the Fleet and reduces the integration risk of advanced EW systems. Primary focus is on providing threat warning and countermeasures, particularly infrared countermeasures (IRCM) to TACAIR platforms.

(U) R2090 - Functional Recognition & Response: Develops algorithms and techniques to recognize emitters by measuring and analyzing their observable, radar function parameters and develops generic countermeasures techniques to provide protection against any hostile emitter. Uses non-developmental items or develops hardware (as required) to implement Functional Recognition demonstrations and assess overall operational improvement to extant capabilities.

(U) The Navy Science and Technology (S&T) program includes projects that focus on or have attributes that enhance the affordability of warfighting systems.

(U) JUSTIFICATION FOR BUDGET ACTIVITY: This program is budgeted within the ADVANCED TECHNOLOGY DEVELOPMENT Budget Activity because it encompasses design, development, simulation, or experimental testing or prototype hardware to validate technological feasibility and concept of operations and reduce technological risk prior to initiation of a new acquisition program or transition to an ongoing acquisition program.

B. (U) PROGRAM CHANGE SUMMARY:

	FY 1998	FY 1999	FY 2000

FY 2000 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1999

BUDGET ACTIVITY: 3

PROGRAM ELEMENT: 0603270N
PROGRAM ELEMENT TITLE: Advanced Electronic Warfare Technology

(U) FY 1999 President's Budget	16,635	17,169	18,909
(U) Appropriated Value		17,169	
(U) Adjustments from FY 1999 PRESBUDG	+1,717	+924	+75
(U) FY 2000 President's Budget	18,352	18,093	18,984

(U) CHANGE SUMMARY EXPLANATION:

(U) Funding: FY 1998 reflects a Small Business Innovation Research reduction (-162) and an actual update adjustment (+1,879). FY 1999 reflects an actual update adjustment (+$1,000) and a Congressional Undistributed Reduction adjustment (-76). FY 2000 reflects a Navy Working Capital Fund rate adjustment (+243), a Civilian Pay adjustment (+107), and a Non-Pay Inflation adjustment (-275).

(U) Schedule: Not applicable.

(U) Technical: Not applicable.

FY 2000 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1999

BUDGET ACTIVITY: 3

PROGRAM ELEMENT: 0603270N
PROGRAM ELEMENT TITLE: Advanced Electronic Warfare Technology

(U) COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1998 ACTUAL	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	FY 2004 ESTIMATE	FY 2005 ESTIMATE	TO ESTIMATE	TOTAL ESTIMATE
E2194 Electronic Warfare Advanced Technology	9,188	10,211	10,359	9,551	9,725	9,952	10,201	10,455	CONT.	CONT.

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The program transitions new technologies to Tactical Air (TACAIR), low observable aircraft, surface Electronic Warfare (EW) platforms, and Pre-planned Product Improvement programs, with emphasis on TACAIR, to address the modern threat (including multi-spectral/multi-modal sensors and seekers) by improving threat detection, identification, location and response through developmental upgrades and direct, advanced technology insertions.

(U) This project is a core continuing effort that transitions high-payoff EW technologies to the Fleet and reduces the integration risk of advanced EW systems. Primary focus is on providing threat warning and countermeasures, particularly infrared countermeasures (IRCM) to TACAIR platforms.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1998 ACCOMPLISHMENTS: A significant portion of the FY98 Electronic Warfare Advanced Technology (EWAT) project was directed toward aircraft IRCM. The onboard IRCM work was planned and executed through the Tactical Aircraft Directed Infrared Countermeasures (TADIRCM) Integrated Product Team (IPT). The IRCM IPT develops advanced expendables for those Navy aircraft that use the AN/ALE-39 countermeasures (CM) Dispenser and will not receive the Advanced Strategic & Tactical Expendables (ASTE) expendables designed for the new AN/ALE-47 CM Dispensing System. In addition, other EWAT IPTs focused on laser warning and countermeasures, radio frequency (RF) self-protection, improving cockpit situational awareness and providing an EW and live fire demonstration test bed. The project also

sponsored symposia and academic research at the Naval Postgraduate School into countermeasure, warning, and tactical issues of importance to the naval aviation community.

- (U) ($760) Advanced Tactical Aircraft Sensor (ATAS) was flight tested and transitioned to the AN/AAR-47 missile warning system program to integrate laser warning into the existing ultra violet (UV) sensor.
- (U) ($1,578) Advanced IR expendables for the AN/ALE-39 Countermeasure Dispenser were designed, modeled and laboratory tested. Best designs were downselected for flight demonstration in FY99.
- (U) ($464) Advanced Technology Expendables and Dispenser Systems (ATEDS) Symposium was convened to show the fleet a multi-service perspective of current and advanced technologies for aircraft self-protection against existing and future threats.
- (U) ($1,164) Wavelet processor was flight tested to enhance the AN/ALR-67 Radar Warning Receiver sensitivity and resulted in a three decibel improvement in system sensitivity.
- (U) ($754) The Symptom Ares surface to air, shoulder fired, IR missile threat analysis was completed and a final report delivered on the optimal countermeasures solution to the threat.
- (U) ($257) Advanced Graphical Display concept man-in-the-loop simulation tests were completed thereby defining designs for improved aircrew situational awareness.
- (U) ($366) Situational Awareness (SA) Symposium was conducted to bring multi-service perspective to SA functional and performance design objectives.
- (U) ($833) Began the configuration of the QF-4S airframe as an EW aircraft test bed to replace the aging QF-4N. The QF-4S will have a multi-configurable EW Suite that can support electro-optical/infrared/radio frequency (EO)/IR/RF)) warning and countermeasure functions.
- (U) ($2,467) Two color missile warning system was completed for the TADIRCM system. Flight test instrumentation assets were procured.
- (U) ($545) Conducted advanced electronic warfare technical research at the Naval Postgraduate School into EO/IR/RF warning and countermeasures for naval aviation.

2. (U) FY 1999 PLAN: The focus of EWAT for FY99 will continue to be enhancing survivability of tactical aircraft against threats operating in the IR region of the spectrum. Advancements in threat counter-countermeasure techniques drive research in IR countermeasure and warning technologies. Developing solutions for the EW suite

requires exploitation of a variety of technologies resulting in multiple tasks within the EWAT Project. Although EWAT's primary focus lies in IR warning and response, enhancements to RF warning and self-protection are also being investigated. Projects currently ongoing that support the technology demonstrations that the EWAT team addresses are: Advanced IR Threat Countermeasures, Advanced Threat Analyses, Tactical Aircraft Directed IR Countermeasures, Integrated Laser and IR Threat Warning Concepts, Integration and Live Fire Demonstration, Advanced Graphical Display and Electronic Warfare Sensor Fusion, Advanced RF Threat Warning and Self-Protection, and Advanced Electronic Warfare Technical Research.

- (U) ($1,805) ADVANCED IR THREAT COUNTERMEASURES: Conduct flight testing of advanced IRCM flare technologies for tactical fixed wing and rotary aircraft not scheduled to receive ASTE decoys.
- (U) ($854) ADVANCED THREAT ANALYSES: Begin the analysis of the advanced Sensor Pantry air-to-air threat through hardware-in-the-loop testing of the threat system. Analyses from this focus area provide a defined and traceable specification of cruise missile (CM) requirements.
- (U) ($1,995) TACTICAL AIRCRAFT DIRECTED IR COUNTERMEASURES (TADIRCM): Perform laboratory, ground, and flight testing of the TADIRCM System in a pod on the EWAT QF-4 in preparation for a live fire demonstration.
- (U) ($2,119) INTEGRATED LASER AND IR THREAT WARNING CONCEPTS: Develop a co-located two color mid-wave IR focal plane array missile warning sensor and integrate a laser warning capability into the same form factor.
- (U) ($638) INTEGRATION AND LIVE FIRE DEMONSTRATION: Complete conversion of QF-4S to an EW aircraft test bed. Integrate pod version of TADIRCM into the QF-4S aircraft.
- (U) ($732) ADVANCED GRAPHIC DISPLAY AND ELECTRONIC WARFARE SENSON FUSION: Integrate the Advanced Graphical Display concept of the enemy's Launch Acceptability Region (LAR) into the F/A-18's head-up-display. Investigate advanced graphical presentations for development of a concept of sensor fusion hardware for TACAIR EW Systems.
- (U) ($1,026) ADVANCED RF THREAT WARNING AND SELF-PROTECTION: Conduct laboratory, ground, and flight tests of the wavelet transforms and Navy Integrated Antenna Down-converter (NIAD) antenna element and transition them to the AN/ALR-67 (V)2 Upgrade program.
- (U) ($542) ADVANCED ELECTRONIC WARFARE TECHNICAL RESEARCH: Conduct advanced EW technical research at the Naval Postgraduate School for next-generation EW warning and response for naval aviation.

FY 2000 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1999

BUDGET ACTIVITY: 3 PROGRAM ELEMENT: 0603270N PROJECT NUMVER: E2194
PROGRAM ELEMENT TITLE: Advanced Electronic Warfare Technology PROJECT NUMBER: Electric Warfare Advance Technology

- (U) ($431) INVESTIGATION OF OPTIMUM LOGIC AND ALGORITHMS FOR AIRBORNE USE OF INSTANTANEOUS FREQUENCY MEASUREMENT RECEIVERS IN THE LOOK-THROUGH MODE. Upgrade algorithms of radar warning receiver (RWR) systems for sensitivity improvements, prototype hardware in the loop and conduct laboratory demonstration.
- (U) ($69) Portion of extramural program reserved for Small Business Innovation Research assessment in accordance with 15 USC 638.

3. (U) FY 2000 PLAN: The EWAT project will continue a strong focus in EO/IR countermeasure technologies, however, the RF self-protection area will receive increased emphasis. Advancements in threat counter-countermeasure techniques will continue to drive research in IR countermeasure and warning technologies. Although EWAT's main concentration is expect to remain in infrared EW technologies, advancements in RF wavelet processing for sensitivity improvements are projected to mature. EWAT will also demonstrate advanced graphical cockpit displays based on prior years research establishing situational awareness guidelines. Projected focus areas that support the technology demonstrations that the EWAT team addresses are: Advanced IR Threat Countermeasures, Advanced Threat Analyses, Tactical Aircraft Directed IR Countermeasures, Integrated Laser and IR Threat Warning Concepts, Integration and Live Fire Demonstration, Advanced Graphic Display and EW Sensor Fusion, Advanced RF Threat Warning and Self-Protection, and Advanced EW Technical Research.

- (U) ($1,916) ADVANCED IR THREAT COUNTERMEASURES: Complete flight testing of advanced IRCM flare technologies for tactical and rotary wing aircraft not scheduled to receive ASTE expendables.
- (U) ($1,097) ADVANCED THREAT ANALYSES: Complete the analysis of the advanced Sensor Pantry air-to-air threat. Initiate a Sensor Pantry follow-on threat analysis. Execution of the analysis requires seeker acquisition so that hardware-in-the loop simulations can be performed.
- (U) ($1,881) TACTICAL AIRCRAFT DIRECTED INFRARED COUNTERMEASURES (TADIRCM): Perform a live fire missile flight test of the TADIRCM System using an unmanned QF-4 aircraft with the TADIRCM pod installed.
- (U) ($2,399) INTEGRATED LASER AND IR THREAT WARNING CONCEPTS: Perform laboratory, ground, and flight testing of the integrated electro-optical/infrared missile warning concept.
- (U) ($518) INTEGRATION AND LIVE FIRE DEMONSTRATION: Support EO/IR/RF threat warning and countermeasures demonstrations through flight tests of advanced systems on the QF-4 EW test bed aircraft.

FY 2000 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1999

BUDGET ACTIVITY: 3 PROGRAM ELEMENT: 0603270N PROJECT NUMVER: E2194
PROGRAM ELEMENT TITLE: Advanced Electronic Warfare Technology PROJECT NUMBER: Electric Warfare Advance Technology

- (U) ($727) ADVANCED GRAPHIC DISPLAY AND ELECTRONIC WARFARE SENSON FUSION: Use man-in-the-loop simulations to demonstrate the sensor fusion system in a laboratory environment.
  (U) ($1,280) ADVANCED RF THREAT WARNING AND SELF-PROTECTION: Continue research into RF self-protection for tactical aircraft including techniques to reduce radar warning receiver ambiguities and enhance angle-of-arrival determination.
- (U) ($541) ADVANCED ELECTRONIC WARFARE TECHNICAL RESEARCH: Conduct advanced EW technical research at the Naval Postgraduate School for next-generation EW warning and response for naval aviation.

B. (U) PROGRAM CHANGE SUMMARY: See total program change summary for Program Element.

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.

(U) RELATED RDT&E: This Program Element (PE) adheres to Defense Reliance Agreements on EW with oversight and coordination provided by the DDR&E and is associated with efforts that are being pursued under the following Army and Air Force PEs:

(U) PE 0601153N (Defense Research Sciences)
(U) PE 0602204F (Aerospace Avionics)
(U) PE 0602234N (Materials, Electronics and Computer Technology)
(U) PE 0602270N (Electronic Warfare Technology)
(U) PE 0602270A (Electronic Warfare Technology)
(U) PE 0603217N (Air Systems and Weapons Advanced Technology)
(U) PE 0603270A (Advanced Electronic Warfare Technology)
(U) PE 0603270F (Advanced Electronic Technology)
(U) PE 0603792N (Advanced Technology Transition)
(U) PE 0604270N (EW Development)

D. SCHEDULE PROFILE: Not applicable.

FY 2000 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1999

BUDGET ACTIVITY: 3 PROGRAM ELEMENT: 0603270N
PROGRAM ELEMENT TITLE: Advanced Electronic Warfare Technology

(U COST: (Dollars in Thousands)

PROJECT NUMBER & TITLE	FY 1998 ACTUAL	FY 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	FY 2004 ESTIMATE	FY 2005 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
R2090 Functional Recognition & Response	9,164	7,882	8,625	8,878	9,106	9,356	9,587	9,829	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project develops and demonstrates countermeasures to previously unknown threat systems which may be encountered for the first time during hostilities. Threat systems include anti-ship missile seekers, surface-to-air guidance systems, aircraft intercept radars, and ship surveillance and targeting systems. The Specific Emitter Identification (SEI) technology developed in this program significantly enhances the ability to quickly and accurately perform Combat Identification (ID) and support the Joint Mission Areas as defined by the Chief of Naval Operations (i.e., Joint Strike, Intelligence, Surveillance and Reconnaissance, etc.). Existing Electronic Warfare (EW) warning and countermeasure systems will be modified with techniques demonstrated under this program that do not rely on specific parameters. The approach will demonstrate related technology developed in the EW technology base through field trials and at-sea demonstrations.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1998 ACCOMPLISHMENTS:

- (U) ($2,329) Demonstrated optimal Functional ID system architecture.
- (U) ($2,215) Demonstrated combined Functional ID and SEI systems.
- (U) ($2,332) Flight tested optimized chaff, expert system and integrated towed decoy.
- (U) ($2,288) Developed Functional ID, SEI and generic countermeasures to support development of Advanced Integrated Electronic Warfare System (AIEWS).

FY 2000 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET DATE: February 1999

BUDGET ACTIVITY: 3 PROGRAM ELEMENT: 0603270N PROJECT NUMBER: R2090
PROGRAM ELEMENT TITLE: Advanced Electronic Warfare Technology PROJECT TITLE: Functional Recognition/ Response

2. (U) FY 1999 PLAN: This objective is focused on developing and demonstrating detection, identification and electronic attack of previously unknown threat systems that may be encountered for the first time during hostilities. Threat systems include anti-ship missile seekers, surface-to-air guidance systems, aircraft intercept radars, and ship surveillance and targeting systems. After detection and classification, the project is focused on generating generic responses that rapidly and effectively counter the threat. Existing EW warning systems will be modified with techniques demonstrated under this program that do not rely on previously known parameters. The approach will demonstrate related technology developed in the EW technology base through field trials and at-sea demonstrations.

- (U) ($2,468) Demonstrate and transition optimal Functional ID architecture into the Navy’s AIEWS.
- (U) ($2,525) Demonstrate and transition optimal Functional ID architecture into the Navy’s EA-6B and follow-on aircraft.
- (U) ($2,851) Demonstrate Functional ID, SEI and generic countermeasures to support development of AIEWS.
- (U) ($38) Portion of extramural program reserved for Small Business Innovation Research assessment in accordance with USC 638.

3. (U) FY 2000 PLAN:

- (U) ($3,137) FUNCTIONAL RECOGNITION -The SEI technology developed in this program significantly enhances the ability to quickly and accurately perform Combat ID and support the Joint Mission Areas as defined by the Chief of Naval Operations (i.e., Joint Strike, Intelligence, Surveillance and Reconnaissance, etc.).
  - (U) Provide system integration of the AN/UYX-3 (SEI Processor) into Increment 1 of the AIEWS, finalize improvements to existing Digital Signal Processing (DSP) code, continue software partitioning and finalize re-hosting and integration with new DSPs, presenting Increment 1 with a capability of identifying specific emitters by radar signature, thus greatly enhancing the Combat ID of the system.
  - (U) Apply technologies developed by Canada (CANEWS 2) and the United Kingdom (PALANTIR) to address improvements to the complex pulse train de-interleaving requirements of AIEWS, allowing for transition of these technologies coupled with the SEI processing capability providing enhanced pulse train analysis.
  - (U) Design and fabricate high speed digital receiver and refine algorithms for application of the Double Delta precision Direction Finding (DF) system addressing the requirement of precise Angle of Arrival (AOA)

information in support of de-interleaving of multiple emitters, situational awareness, and directional countermeasures.

- (U) ($2,811) GENERIC RESPONSE -Existing Electronic Warfare countermeasures systems will be modified with techniques demonstrated under this program that do not rely on specific parameters.
  - (U) Modify existing Synthetic Aperture Radar (SAR) countermeasures development hardware by providing multiple transmit antennas and controls to address the problem posed by the advanced interferometric SAR radars and denying these systems surveillance and targeting capabilities against US forces.
  - (U) Develop techniques capable of being generated by present airborne EW systems and demonstrate their effectiveness against Surface-to-Air threat simulations, providing the present on board EW systems with a capability to handle the modern coherent threat systems with minimal cost impact.
  - (U) Fabricate a Millimeter Wave (MMW) Fiber Optic Towed Decoy (FOTD), integrate with an onboard techniques generator, and flight test against threat simulators demonstrating a capability in the MMW frequency range for application to tactical aircraft in addressing the MMW threat.
  - (U) Develop self-adaptive Electronic Attack (EA) techniques employing Artificial Intelligence (AI) against the counter-surveillance and counter-targeting threats for introduction into Increment 2 (EA) of the AIEWS program.

- (U) ($2,677) EW EFFECTIVENESS -This objective is focused on developing hardware and software models/simulations which allows one to evaluate EW concepts, hardware, techniques and software. Representative scenarios in part or in total must be available. The type of tools required must be representative of the threat, which may include Low Probability of Intercept, selectable radar parameters, and sophisticated signal processing. These tools will be available for both laboratory and field tests.
  - (U) Model ownship monostatic clutter effects, bistatic clutter and assess the environmental effects on the SEI technology, thus providing an analysis of the expected real world performance of a sensitive, high precision DF, SEI capable Electronic Support (ES) sensor in the detection and identification of threats.
  - (U) Develop display graphics and interfaces to provide a visual playback of field tests and digital modeling for users to evaluate the tests results providing a better understanding of system effectiveness, in particular when unknown threats are encountered for the first time.

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PROGRAM ELEMENT: 0603270N
PROGRAM ELEMENT TITLE: Advanced Electronic Warfare Technology

PROJECT NUMBER: R2090
PROJECT TITLE: Functional Recognition/ Response

B. (U) PROGRAM CHANGE SUMMARY: See total program change summary for Program Element.

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.

(U) RELATED RDT&E PROGRAMS: This PE adheres to Defense Reliance Agreements on EW with oversight and coordination provided by the DDR&E and is associated with efforts that are being pursued under the following Army and Air Force PEs:

(U) PE 0601153N (Defense Research Sciences)
(U) PE 0602204F (Aerospace Avionics)
(U) PE 0602234N (Materials, Electronics and Computer Technology)
(U) PE 0602270A (Electronic Warfare Technology)
(U) PE 0602270N (Electronic Warfare Technology)
(U) PE 0603270A (Electronic Warfare Technology)
(U) PE 0603270F (Electronic Combat Technology)
(U) PE 0603792N (Advanced Technology Transition)

D. SCHEDULE PROFILE: Not applicable.