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Report 05-INTEL-03 December 15, 2004 Audit Report

# OFFICE OF THE INSPECTOR GENERAL OF THE DEPARTMENT OF DEFENSE



DEPUTY INSPECTOR GENERAL FOR INTELLIGENCE

Requirements for the TRAILBLAZER
And THINTHREAD Systems (U//FOUO)

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Acronym (U)

(U) NSA/CSS

National Security Agency/Central Security Service



INSPECTOR GENERAL DEPARTMENT OF DEFENSE 400 ARMY NAVY DRIVE ARLINGTON, VIRGINIA 22202-2884

December 15, 2004

# MEMORANDUM FOR DIRECTOR, NATIONAL SECURITY AGENCY / CHIEF, CENTRAL SECURITY SERVICE (U)

SUBJECT: Audit of the Requirements for the TRAILBLAZER and THINTHREAD

Systems (Report No. 05-INTEL-03) (Project No. D2003AL-0100) (U/FOUC)

- (U) We are providing this report for review and comment. This audit was initiated from a Hotline complaint. We considered management comments on a draft of this report in preparing the final report. Management conducted a security classification review of the draft report.
- (U) DoD Directive 7650.3 requires that all recommendations be resolved promptly. Management nonconcurred with Recommendations A.1. and A.2. Management partially concurred with Recommendations A.3., B.1., B.2., and B.3. As a result of management comments, we revised Recommendations A.2. and B.1. We request that the Director, National Security Agency/Central Security Service provide additional comments on all recommendations by January 15, 2005.
- (U) We appreciate the courtesies extended to the staff. Questions should be directed to DoD OlG (b)(6), (b)(7)(C) at (703) 604 (b)(6), (b)(7)(C) at (410) 854 (b)(G). See Appendix K for the report distribution. The team members are listed inside (ties) back cover

Thomas F. Gimble Deputy Inspector General for Intelligence

DATED 23 November 2004 DECLASSIFY ON 1000000000

# Special Warning

of information Act. This specification exempt from mandatory disclosure under the feeders of information Act. This specification certain unclassified information relating to the organization and function of the National Security Act of 1959, as amended 400 cuited States Code § 402 (note). Reproduction or removal of pages is prohibited. Safeguards must be taken to prevent publication or improper disclosure of the later mation in this report.

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# Office of the Inspector General of the Department of Defense

Report No. 05-INTEL-03 (Project No. D2003AL-0100) December 15, 2005

# Requirements for the TRAILBLAZER and THINTHREAD Systems (U)

# Executive Summary (U)

(U) Who Should Read This Report and Why? Acquisition decision makers at the National Security Agency (NSA); the designated NSA Milestone Decision Authority for the Under Secretary of Defense for Acquisition, Technology, and Logistics; and personnel in the Office of the Assistant Secretary of Defense (Networks and Information Integration) should read this report because it discusses a better technological and more affordable solution for digital network exploitation than the solution being developed by the NSA.

(U//FOEO) Background. We performed this audit in response to a Defense Hotline complaint, which alleged that NSA actions in the development of THINTHREAD and TRAILBLAZER resulted in fraud, waste, and abuse. The specific allegations were: (1) TRAILBLAZER development wasted hundreds of millions of dollars; (2) NSA disregarded solutions to urgent U.S. national security needs; (3) NSA modified or suppressed studies and comparisons that favored THINTHREAD over TRAILBLAZER; and (4) NSA did not address FY 2002 congressional requirements to deploy and further develop THINTHREAD.

is//SD THINTHREAD. THINTHREAD was developed as a traffic analysis and discovery tool to streamline and improve computer-based exploitation of digital network communications.

I HINTHREAD was initially deployed to a pilot site in November 2000 and has been deployed to additional sites. However, NSA management does not encourage analysts to use THINTHREAD. See Appendix E for further details.

(U//FOUQ) TRAILBLAZER. TRAILBLAZER is an Acquisition Category-IA program to acquire, through a series of spiral developments, an integrated system to provide the much-needed mission capability against the Global Network.

[TRAILBLAZER is being developed. See Appendix B for further details.

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[NSA(b)(1) 1.4(c), (b)(3) 50 USC 3605

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(U) the interim digital network exploitation system. We request that the Director, NSA/Chief, Central Security Service provide additional comments to this report by January 15, 2005. See the Findings section of the report for a discussion of management comments and audit responses, Appendix J for a detailed audit response to the management comments, and the management comments section of the report for the complete text of the comments

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7	(U) Background
]	Inspector General of the Department of Defense Hotline requested that the Inspector General of the Department of Defense audit and investigate the acquisition of the TRAILBLAZER and THINTHREAD programs. The complain charged the NSA with fraud, waste, abuse, and a disregard for a solution to urgent
]	security needs because the TRAILBLAZER Program did not consider that THINTHREAD was already developed to perform the same mission. Also, the NSA ignored or modified the recommendations of two technology studies that favored the THINTHREAD Program. Finally, the NSA did not deploy
1	THINTHREAD to additional collection sites as directed by Congress.
]	(U) National Security Agency Mission and Planning Guidance. The mission of the National Security Agency/Central Security Service (NSA/CSS) is to provide actionable Signals Intelligence to U.S. decisionmakers, from the national
	to the tactical level, while protecting the nation's vital information from attacks. The urgency of the NSA/CSS mission is greater than ever since the September 11th attacks and the Global War on Terrorism.
]	(U//FOGO). In addition, defense planning guidance and the Director of Central Intelligence guidance stipulate the need for "a globally vigilant intelligence system that can provide early strategic warning of crisis and detect threats" that is
1	supported by capabilities such as an "information superiority backbone."
ı	(5//SI) TRAILBLAZER is a major acquisition program, which started in FY 2000 and is scheduled for initial operating capability in FY 2009, to
	acquire an integrated system that is composed largely of commercial technology to provide the much-needed mission capability against the global network through a series of spiral developments. The TRAILBLAZER system will deliver hardware and software, system integration, and program integration services to include:
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NSA (b)(3) 50 US	C 3605
	(C) The TRAILBLAZER Program includes the Technical Demonstration
	Program, the Objective Program, the The acquisition strategy consists of
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NSA (b)(3) 50 USC 3605

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The

TRAILBLAZER Program has not been stable since its infancy and is undergoing its third revision.

THINTHREAD. The Signals Intelligence Automation Research Center started a computer network defense project in 1996 that became known as this project eventually led to THINTHREAD.

THINTHREAD is a low cost, low maintenance, high capacity, and high precision digital network exploitation system. It was developed by a small team of engineers in the Signals Intelligence Automation Research Center as a traffic analysis and discovery tool. Because THINTHREAD was considered to be a research and development project, the developers were told to discover a different approach to digital network exploitation. Therefore, NSA did not approve some of the concepts and resources used. THINTHREAD was initially deployed in November 2000 for developmental evaluation at one pilot site, using a high profile target as the prototype scenario. The system was declared operational, and has been used by some NSA analysts since November 2000.

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

(U//FOUG). Congressional Interest in THINTHREAD. Soon after work began on TRAILBLAZER, staff members from the House of Representatives Permanent Select Committee on Intelligence who were briefed on THINTHREAD capabilities noted that there were overlaps between THINTHREAD and TRAILBLAZER. They asked why THINTHREAD did not constitute at least part of the TRAILBLAZER effort. The House of Representatives Permanent Select Committee on Intelligence verbally requested NSA to conduct a technical review to compare the existing and planned capabilities of THINTHREAD and TRAILBLAZER and requested that NSA provide the committee with the results. NSA did not complete the verbal request, which resulted in the Congressional Directed NSA Modernization Study in the FY 2001 Intelligence Authorization Bill (CMS 1-25-2001).

- (U) Policy Governing Signals Intelligence Systems Acquisition. Guidance for Signals Intelligence system acquisition is provided in DoD Directive 5000.1. DoD Instruction 5000.2, and the Clinger Cohen Act of 1996. Specifically, these regulations provide the framework for the acquisition of major automated information systems.
- (U) DoD Directive 5000.1, "The Defense Acquisition System," May 12, 2003. DoD Directive 5000.1 establishes the management process by which the DoD provides effective, affordable, and timely systems to the users. DoD Directive 5000.1 states that all acquisition professionals shall continuously develop and implement initiatives to streamline and improve the Defense Acquisition System. Specifically, this directive states that military decision authorities and program managers shall examine and, as appropriate, adopt innovative practices that reduce cycle time and cost and encourage teamwork.

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- (U) DoD Instruction 5000.2, "Operation of the Defense Acquisition System," May 12, 2003. DoD Instruction 5000.2 establishes a management framework for translating mission requirements into stable, affordable, and well managed acquisition programs that include weapon systems and automated information systems, and highly sensitive classified, cryptologic, and intelligence projects and programs. Instruction 5000.2 states that, during the initial concept design, DoD Components should examine multiple concepts and material approaches to optimize the way that DoD provides these capabilities. That approach shall include robust analyses that consider affordability, technology maturity, and responsiveness.
- (U) Clinger-Cohen (Information Technology Management Reform) Act of 1996. This act requires that heads of executive agencies develop and use best practices in the acquisition of information technology. The process of an executive agency shall include minimum criteria to be applied in considering whether to undertake a particular investment in information systems, including criteria related to the quantitatively expressed projected net, risk-adjusted return on investment and specific quantitative and qualitative criteria for comparing and prioritizing alternative information systems investment projects.
- (U) NSA/CSS Circular 5000R, "Acquisition Management," January 9, 2001. The circular implements the principles of DoD Directive 5000.1 and DoD Regulation 5000.2-R within the NSA/CSS. It establishes basic objectives, policies, procedures, and responsibilities for acquisition management. The circular states that for acquisition management within the Defense Cryptologic Program, NSA should address interoperability between existing and future Service tactical Signals Intelligence systems, connectivity between tactical and national systems, consider applicable technology that may satisfy the requirement, and possible duplication of ongoing effort.

# (U) Objectives

(U/FOGO) The overall audit objective was to evaluate whether THINTHREAD should have been considered the best source for digital network exploitation. We did not review the management control program. See Appendix A for a discussion of the scope and methodology.

NSA (b)(3) 50 USC 3605	A. The NSA Interim Solution to Urgent
1	National Security Needs (U)
4.4	although requirements could have been satisfied better with an existing and more capable and less costly system. THINTHREAD. Those conditions occurred because NSA:
	<ul> <li>(U//POUQ) did not consider THINTHREAD as an alternative solution to a quick reaction capability requirement for an interim digital network exploitation system after the September 11, 2001, terrorist attacks; and</li> </ul>
	<ul> <li>(U//POUQ) did not follow the recommendations of internal and external technical reviews completed in 2001 that recommended:</li> </ul>
	<ol> <li>(U//FOUO) deploying THINTHREAD as the interim solution for digital network exploitation; and</li> </ol>
	<ol> <li>(U//FOUO) extending and enhancing the capabilities of THINTHREAD;</li> </ol>
	<ul> <li>(TSASI) delayed deployment of THINTHREAD to collection sites as directed by Congress in FY 2002; and</li> </ul>
	As a result, NSA initiated and used digital network exploitation solution, which NSA plans to use until FY 2009. is not capable of fully exploiting the digital network intelligence available to analysts from the global information network and costs significantly more to develop, field, and maintain than THINTHREAD.
(U)	Urgent National Security Needs
	(PS/WSD) NSA documented problems with the existing NSA/CSS Signals Intelligence systems. In particular, the NSA/CSS intelligence system is not capable of handling the volume of communications on the Global Network, and the amount of intelligence that is transferred to and stored in NSA databases is unmanageable. The NSA/CSS Signals Intelligence systems, developed in response to the Cold War, were proficient at intercepting, processing, and producing intelligence from analog signals and, to some extent, digital communications on predominantly radio frequency carriers. While analog communications matured and spread at a rate that signals intelligence technology

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

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volume of communications worldwide is growing rapidly, the variety of communications modes and media are practically innumerable, and the velocity at which the changes are occurring left the Signals Intelligence system far behind.

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# (U) Alternative Solution for a Quick Reaction Capability Requirement

3) 50 USC 3605	operational and designed to expl	t the existing threat. THINTHREAD was	
	me existing regacy systems and of the determined determined to meet all of the operational regard Modernization Study stated that and engine most, if not all the operational redocumented reason, NSA managements.	subsequent enhancements made to them as a pevelopment nor THINTHREAD had the capabilities. At the time, neith subsequent enhancements made to them as a pevelopment nor THINTHREAD had the capabilities are subsequirements identified by NSA. The NSA with additional funding of approximately eers, THINTHREAD could be enhanced to ful equirements identified. However, for no germent did not consider THINTHREAD as a quick reaction capability requirement.	art
-	U//FOUO) Ability of	and	
,		eet Quick Reaction Capability	
	Requirements		
		/	
		overlap among the THINTHREAD and	
	moved from the Signals Intellige	March 2002, the THINTHREAD Program was ence Automation Research Center to the	
	Directorate for Data Acquisition	-Cryptanalysis and Exploitation Services'	
o)(1) 1.4(c), (b)(3) 50 USC 3	505, (b)(3) 50 USC		

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	(Unrese) The THINT Table I before September support and the decision development team was development. THINTHRE solution for the quick research.	HREAD system had in er 2001. However, due to enhance legacy syst lispersed, and the AD could have provide action capability require	ost of the capabilitie to the lack of managems, the original The do d a highly effective, ement.	s shown in gement INTHREAD evelopment low-cost
			4.	A (b)(3) 50 USC 3605

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(	U//FOUO) Ma	ior Difference	s Between THINTH	READ and
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(U/FOUG) Flexibility and Modularity. In June 2002, the THINTHREAD Project Manager stated that the THINTHREAD system was very flexible, scalable, and adaptable to a wide range of data ingest environments. THINTHREAD code was designed to be reusable and could quickly be programmed to process new signal types. THINTHREAD used commercial-off-the-shelf hardware products listed on the NSA Enterprise Solutions baseline.

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	(U//FOLIQ) Technical Review Studies. A number of internal and ex review studies were conducted to determine whether a duplication of	effort existed
	between applications within the THINTHREAD and TRAILBLAZER technical review studies concentrated on the	in segments of
) 50 USC 3605	those two systems, not the full capabilities of unc system. See Appendent details on technical reviews conducted on the THINTHREAD and TRepgrams.	AILBLAZER
30 USC 3003	(U//FOUO) Existing State of	at NSA
	(U//FOSCILEARING State of	
	NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3)	
	NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)	

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	The same of the sa
	(Userona) Recommendation:
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	· (E//FOUO)
)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 3024 (i)	
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	(SUSU/REb) Recommendation:
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fo Ti O te str Pr as th	AUSIANSA Modernization Studies. The first "NSA Modernization Study," aly 2001, was conducted by The National Technology Alliance, National Center of Applied Technology after a thorough review of ongoing activities within the RAILBLAZER Program Management Office, the THINTHREAD Program ffice, and interviews with key program personnel. The Modernization Study am observed that, during the TRAILBLAZER's Concept Development Phase addies and before conducting an analysis of alternatives, the TRAILBLAZER rogram Management Office continued to develon an interim capability, known the TRAILBLAZER The TRAILBLAZER The TRAILBLAZER To a potential browaway" system, depending on the results of the Concept Development Phase at the Analysis of Alternatives. In addition, the team observed that NSA sitated to deploy THINTHREAD, a low-cost, readily fieldable, interim
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NSA (b)(1) 50 USC 30		USC 3605, (b)(3)
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DU USC 30	124 (1)	

	were not allowed to assist the THINTHREAD developers. After the THINTHREAD team developed the taxonomies, THINTHREAD did not initially generate a significant amount of reportable data. However, after one dedicated analyst, frustrated with the quality and quantity of the intelligence data he received from conventional means, wrote his own taxonomies for THINTHREAD, both the quality and quantity of intelligence data received from THINTHREAD dramatically improved. The analyst received intelligence data that he was not able to receive before using THINTHREAD. The analyst received messages in the same context as they were sent.
	(U/Pe 10) Intelligence analysts used THINTHREAD at their own discretion because THINTHREAD was not considered the corporate solution for digital network exploitation. Intelligence analysts taught themselves how to use THINTHREAD because NSA did not provide users with system training. Intelligence analysts who used THINTHREAD stated that THINTHREAD:  • (U) had an easier query function;  • (U) was a faster and more efficient collection capability;
	(U) had easier viewing capabilities because it was Web based;
) 1.4(c), (b)(3) 50 USC 3605	

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<ul> <li>(U//POUS)-made a major contribution by challenging the way NSA prioritizes and forwards traffic to the NSA workforce.</li> </ul>

<sup>(</sup>U) A complete system that solves all the processing problems itself. It has its own input, control, status, monitoring, user interfaces, and data formats. Even though other systems have exactly the same problems to solve, stove-piped systems will implement their own solutions to each.

) Congressional Directed Action	NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)
THINTHREAD Deployment	•
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L II) 6385099	NSA (b)(1) 1.4(c), (b)(3) 50 USC 360 50 USC 3024 (i)
	TOP SECRET//COMINT//20291123
	(U) Rationale for Delayed Deployment of THINTHREAD
	(U) U.S. Signals Intelligence Directive 18 (Directive 18). Directive 18 states
	that the policy of the U.S. Signals Intelligence System is to target or collect only foreign communications. The Signals Intelligence System will not intentionally
	collect communications to, from or about U.S. persons or persons or entities in the United States except as set forth in the Directive 18. If the Signals Intelligence System inadvertently collects such communications, it will process, retain, and disseminate them only in accordance with Directive 18.
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	NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

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before	determining wh	nether	were protec		
irective 18.		1			
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02 the Office	of General Coun	sel informer	Signals Intel	Un M	ay 18,
at the office had	no legal conce	ms with THI	NTHREAD	The THINT	HREAD
ogram Manage	r also stated that	the Office of	F General Co.	uppel never f	ormally
ogram Manage	A D with nonco	me Office (	Direction 18	unsei never i	ormany
ed THINTHKE	AD with nonco	mphance of	Directive 18	since it was o	epioyed.

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7	C. System Documentation. Signals Intelligence management also claimed that the lack of system documentation delayed the deployment of THINTHREAD. The THINTHREAD system began as a prototype when only limited software documentation was required.
7	
NSA (b)(1) 1.4(c), (b)(3) 50 USC 360 (b)(3) 50 USC 3024 (i)	5.
7	The THINTHREAD Program Manager stated that the documentation of THINTHREAD software was completed in July 2003.  Although Signals Intelligence management claimed that lack of documentation
7	prevented the deployment of THINTHREAD to NSA collection sites, the contractor program manager stated that THINTHREAD could have been deployed to fulfill a Quick Response Canability need. THINTHREAD was also successfully deployed to sites, and NSA personnel
7	stated that
T	(FS//SI) Studies. Prior to THINTHREAD deployment, the Technology Test and Evaluation Assessment, March 25, 2002, advised that the following risk mitigation and preparation actions be addressed:
NSA (b)(3) 50 USC 3605	(U//Fobb) Provide training to site support personnel, implement a THINTHREAD systemwide configuration management process, and develop a process by which site personnel can identify and resolve problems with the system as they arise to minimize the operational risk of deploying THINTHREAD to sites;
	<ul> <li>(U) Generate user, system, technical, and programmatic documentation;</li> </ul>
1	<ul> <li>(U) Accelerate deployment planning; develop necessary partnerships with recipient sites and deployment support organizations; and</li> </ul>
	<ul> <li>(U) Acquire sufficient numbers of appropriately skilled personnel to develop documentation, perform deployment planning, support deployments to</li></ul>
	(SUSI) The Technology Test and Evaluation did not find any technical reasons not to deploy THINTHREAD. The NSA Modernization Study, July 13, 2001, conducted by the National Technical Alliance stated that the TRAILBLAZER acquisition strategy did not accommodate all of the concepts, approaches, and techniques being pursued within the TRAILBLAZER Program. In particular, the
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(1) 1.4(c), (b)(3) 50 USC 3605	deploying a low-cost, field-ready capability such as THINTHREAD, especially since THINTHREAD had been-deployed to before the Concept Development Phase studies and the Analysis of Alternatives were completed, and the TRAILBLAZER Objective Program Phase B and C
	End-to-End prototype was deployed.
(U)	(SUSI) Analysts at NSA were not adequately trained to fully operate the THINTHREAD system. NSA did not develop formal classroom training to
	instruct THINTHREAD system users how to set up and operate THINTHREAD to enhance users' ability to collect, process, and exploit digital network intelligence from communications channels. A rew analysis taught memserves and informatry provided user training to other analysis. The On-the-Job Handbook enables THINTHREAD operations personnel to learn about the system in a self-paced instructional format. The goal of the Handbook is to lead trainees to a skill
	(S/SI) Although many analysts stated that THINTHREAD is user friendly, a formal training course would provide users with a full overview of the THINTHREAD capabilities and operational procedures. Educating users in how to create simple and

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NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605			NSA (b)(1) 1.4(c), (b)(3	3) 50 US
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COVI	Becaning, analysts were reluctant	use NSA did not provide	formal classroom	
tran	ing, analysis were reluctant	to use I HIM I HKEAD.	1	
(U) Sum	mary	and the same of th	1	
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-(6/4	The THINTHREAD sys	tem has the capability to	provide a cost-effective	
high	capacity, high precision di	gital network exploitatio	n system that should be	
	ediately deployed to perform ion. Studies completed by			in.
team	of experts concluded that I	the THINTHREAD syste	em, its technologies, and	D.
its a	pproach to digital network	exploitation were better t	han NSA's current	1
	Prop		iuii system also scores	ı
Territorio de la constitución de				
the s	ystems capability that NSA	needs to keep pace with	IINTHREAD provides the Global Information	
the s Envi	ystems capability that NSA ronment. THINTHREAD oner needs in a timely, cost ustomers; and that is flexible and to the changing needs of	needs to keep pace with produces valued, unique effective manner, that is e, adaptable, and agile en	INTHREAD provides the Global Information intelligence that meets driven by the needs of nough to anticipate and	
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# (U) Management Comments on the Finding and Audit Response

(U/FOUO) Management Comments. The NSA management stated that the draft report did not include significant information or included wrong or misleading information. The complete list of management comments is in the Management Comments section of this report.

(U//FOBQ) Audit Response. We obtained, reviewed, and analyzed many documents and we interviewed several NSA and contractor personnel to form the conclusions in this report. We included all information relevant to support the report findings and recommendations. Many people we interviewed asked not to be identified for fear of management reprisal. We gathered information from many sources to support the finding. Paragraphs frequently contain information from several sources to reinforce conclusions. Based on management comments, we made various editorial changes to the draft report. See Appendix J for a completed audit response to each management comment.

# (U) Recommendations, Management Comments, and Audit Response

revised Recommendation A.2 to	on. As a result of management comments, we request that THINTHREAD be fully enhanced the necessary services as well as
(U) A. We recommend that the Central Security Service:	Director, National Security Agency/Chief,
1. (9#91) Deploy THINI network exploitation system.	HREAD as the interim capability digital
Central Security Service nonconce management integrated THINTH NSA management stated it would capabilities from the existing digit National Security Agency has concexisting capabilities and developing as the over Annex A of the management comparison with THINTHREAD services with THINTHREAD services.	be detrimental to remove non-THINTHREAD tal network exploitation architecture. The insolidated processing activities by improving ing new capabilities to create crarching digital network exploitation program.
deployed within the National Secu and production programs as a resu systems engineering practices, and	ppt that THINTHREAD capabilities are already unity Agency's analysis alt of previous congressional direction, sound domain sense. However, even though the lessons learned were integrated into some 3 years after the start of initial
	THINTHREAD systems were deployed

NSA (b)(3) 50 USC 3605

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

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the systems' full capabilities can be properly used and tested.

but the National Security Agency did not emphasize the use of those systems, analysts were not formally trained to use it, and it was not deployed to sites where

Ce	7/ST) Management Comments. The Director, National Security Agency/Contral Security Service nonconcurred because the National Security Agency anagement believes that migration from
THeni	HINTHREAD. Management did not understand what was meant by "fully hanced and extended THINTHREAD" in the draft version of this report.
rec	Audit Response. Based on management comments, we revised the commendation to explain more clearly the meaning of "fully enhanced and tended THINTHREAD." We recognize that the National Security Agency
ove	reased its digital network exploitation capability or the past few years; however, the existing system,
N.	

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

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(TS//SI) that the National Security Agency management reconsider its position and provide additional comments on using a complementary approach with and THINTHREAD in the collection sites, where required, until THINTHREAD is fully enhanced and extended to

3. (6) Develop formal classroom training for the entire THINTHREAD system to include the function of each component

(U//FOGO) Management Comments. The Director, National Security Agency/Chief, Central Security Service concurred. In April 2003, NSA provided 350 pages of guided courseware in Data Item DI-ALSS-81523A.

(C) Audit Response. Management comments were partially responsive.

Although the National Security Agency integrated THINTHREAD components into the Signals Intelligence System, it still needs to develop a formal training course for the THINTHREAD end-to-end system. We request that management reconsider its position towards providing formal classroom training and submit additional comments by January 15, 2005.

NSA	(b)(3) 5	50 USC	3605	

### TOD CECDET//COMINT//20201122

# B. The NSA Transformation (U)

NSA management excluded THINTHREAD and its technologies as a viable long-term solution for digital network exploitation for the TRAILBLAZER Initial Transformation Activities, Technology Demonstration Platform, and Objective Program. This condition occurred because NSA management did not consider independent and internal analyses recommending that NSA use THINTHREAD and its technologies as a risk-reduction test bed for the TRAILBLAZER Program and should include THINTHREAD in the TRAILBLAZER Analysis of Alternatives. As a result, the NSA

That will eventually be integrated with the TRAILBLAZER
Objective Program. In addition, NSA may be developing parts of
TRAILBLAZER Technology Demonstration Platform unnecessarily.
Finally, the NSA Transformation may be developing a less capable, longterm digital network exploitation solution that will take longer and cost
significantly more to develop.

# (U) Congressional Concerns on Digital Network Exploitation

(U) The National Defense Authorization Act for FY 2002 stated that:

(FS//61) The NSA has clearly made great strides in seeking to transform itself in many areas. However, the NSA appears to have made only modest progress in the area most important to its future: acquiring the technical ability to operate effectively against the emerging global network. The NSA has long known that

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

# (U) TRAILBLAZER

(6//EI) On March 24, 2000, the Director, NSA signed the TRAILBLAZER I charter to create a new Signals Intelligence enterprise to exploit the global network. TRAILBLAZER I, with an estimated development cost of approximately \_\_\_\_\_\_, was to respond to the opportunities and challenges provided by emerging technologies to design new operational practices for on-time delivery of products and services in the manner that best met customer

NSA (b)(3) 50 USC 3605

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NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

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(S//SI) needs—unrestrained by past practices or past technologies.
TRAILBLAZER 1 had the following key responsibilities

- (U//FOOO) Ensure the execution of a new NSA program transforming the U.S. Cryptologic System exploitation of the global network. Map detailed digital network exploitation mission requirements to a cryptologic architecture and implement them; and
- (U//FCUO) Act as the catalyst for transforming customer interaction and operational practices. Begin the retooling of NSA programmatically, technologically, and culturally to provide mission services and capabilities that are responsive to the emerging technology and customer needs.

# (U) An Alternative Proposal to TRAILBLAZER

(SASD) In January 2001, the TRAILBLAZER Alternative Proposal identified the capabilities of the newly developed THINTHREAD system, as well as future development efforts that would meet most of the requirements in the TRAILBLAZER Statement of Objectives and its Addendum. The proposal demonstrated that the THINTHREAD Program had achieved most of the requirements in the TRAILBLAZER Statement of Objectives during site testing. The proposal contended that THINTHREAD achieved those requirements in less than 120 days and at a cost of

(6//9i) The proposal stated that THINTHREAD was already processing a significant percentage of the digital network intelligence for the

(U//FQUQ) Because of NSA management's perceptions of required architectural features, the proposal faced a number of challenges because:

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NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i) NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

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 (U//POUC) The implied development and deployment costs of THINTHREAD were dramatically lower, and the development schedules to satisfy TRAILBLAZER requirements were dramatically shorter than previously estimated, bringing into question the completeness of other proposals.

the technical approach and breakthrough concepts developed by the THINTHREAD team were used as a risk-reduction test bed and lesson learned for TRAILBLAZER, a substantial reduction in TRAILBLAZER development costs may have resulted.

# (U) NSA Modernization Studies

(S) First NSA Modernization Study. The House Permanent Select Committee on Intelligence directed the first "NSA Modernization Study," July 2001, which was conducted by The National Technology Alliance, National Center for Applied Technology. After a thorough review of ongoing activities within the TRAILBLAZER Program Management Office and the THINTHREAD Program Office and interviews with key program personnel, the National Center for Applied Technology team observed that the TRAILBLAZER was poorly executed and had an overly expensive system.

The NSA Modernization Study recommended that:

- (C) FHINTHREAD be used as a risk-reduction test bed and provide TRAILBLAZER with lesson learned; and
- THINTHREAD be considered as an alternative
   ystem in the TRAILBLAZER Analysis of Alternatives.

-(6//ST) Second NSA Modernization Study. A second National Center for Applied Technology report, a "quick-look" follow-on report, was completed in December 2001. The Chief, Signals Intelligence Programs invited the original study team to conduct a follow-on study to evaluate progress within the TRAILBLAZER Program Management Office. Despite noting some changes made in NSA management and the TRAILBLAZER Program acquisition strategy that promised to address the conflicts and issues noted in the first report, the study team found that:

- (U//FOGO) Signals Intelligence programs did not deploy THINTHREAD
  as a risk-reduction test bed and provide lessons-learned for
  TRAILBLAZER. In addition, Signals Intelligence management had
  directed that THINTHREAD resources be provided to TRAILBLAZER to
  support the integration of THINTHREAD technology into the
  TRAILBLAZER architecture; and
- (U/FOLO) The study also recommended that THINTHREAD be considered as an alternative system in the TRAILBLAZER Analysis of Alternatives.

(U//FOLIG) The study also stated that Signals Intelligence programs would not consider THINTHREAD as an alternative framework for TRAILBLAZER and ruled out THINTHREAD as an alternative solution because it was viewed as a mission application.

# (U) NSA Technical Reviews

	identified overlaps between the
	subsystem architecture that was being developed and
	the THINTHREAD Program. The subsystem was to
	be included in the TRAILBLAZER
	and the TRAILBLAZER Objective Program. Both reviews
	concluded that THINTHREAD and its technologies should be adopted into the
	NSA solution to digital network exploitation. The
	THINTHREAD Technical Review stated that the requested resources in
SA (b)(1) 1.4(c), (b)(3) 50 USC 3605	FY 2001 for the and
	of programmers. The requested resources for THINTHREAD were
	and handpicked programmers to satisfy the full request for proposal. The echnical review also recommended that NSA provide the
	requested resources, dollars, and people to the THINTHREAD team.
(U)	TRAILBLAZER Acquisition
	(\$481) After spending years and more than 1 on development and
	(\$\times_{\text{SI}}\) After spending years and more than on development and changes to the TRAILBLAZER acquisition strategy, NSA was unsuccessful in
	delivering a capability to fully exploit the global network.
	delivering a capacitity to taily exploit one group harmons.
	(U/FQUQ) TRAILBLAZER Initial Transformation Activities. The
	objective of the TRAILBLAZER Initial Transformation Activities was to provide
	a global network learning environment that would feed information, lessons
	learned, new analytic processes, and refined requirements into the
	TRAILBLAZER Objective Program Activities.
	During FY 2001, the NSA Modernization Studies identified overlaps
	between the TRAILBLAZER
	and the THINTHREAD Program. The studies concluded
	that NSA was potentially developing a throwaway system by developing the
	TRAILBLAZER   before the TRAILBLAZER
	Concept Definition Phase Study Program was complete. The overall objective of
	the Study Program was to identify potential solutions for the global network
	challenge and to position the TRAILBLAZER Program for the next phase of the program acquisition. The decision by NSA management not to follow the
	Modernization Studies' recommendations to stop the development of the
	resulted in an expenditure of approximately for
	a nonoperational prototype. As stated in finding A, the Modernization Studies
	recommended adopting THINTHREAD as the interim solution for digital
	network exploitation and including THINTHREAD in the Analysis of
	Alternatives for TRAILBLAZER

(U//POUS) Refining the Scope of the TRAILBLAZER Program. The terrorist attacks against the United States on September 11, 2001, established an

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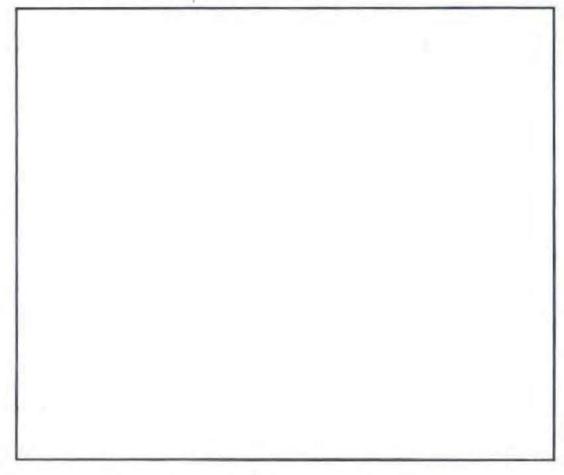
NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

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(U/FQLIC) urgent mission statement for NSA to rapidly develop and field a capability for digital network exploitation. As documented in a memorandum from the Chief, Operations Requirements (Signals Intelligence) to the NSA Senior Acquisition Executive, "Urgency Statement for Global Capabilities," dated November 9, 2001, such a capability was deemed critical to effectively process, analyze, and report information from the global network. The cited memorandum documented two key decisions:

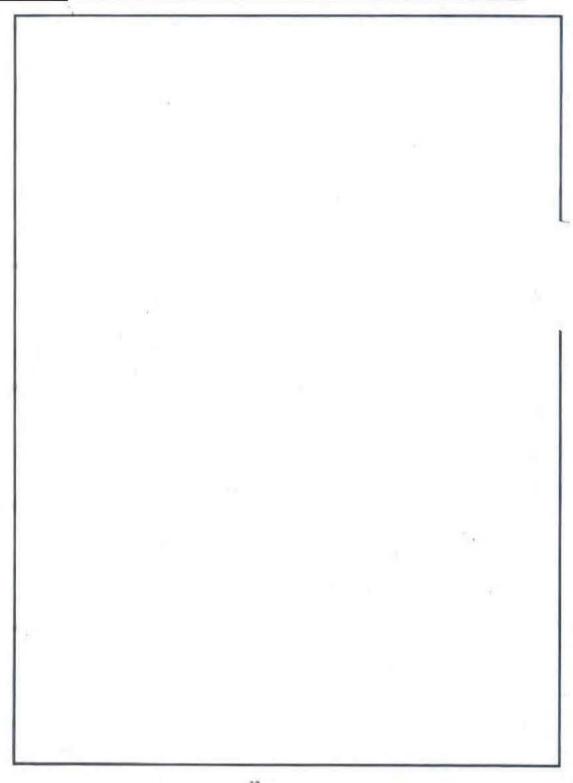
- (S) NSA must refocus the initial acquisition activities for TRAILBLAZER to counter terrorism; and
- (C) NSA must move the TRAILBLAZER Program forward swiftly to deliver the capability needed to extract information from the global network by the second quarter of FY 2003 to ensure that the United States has the advantage in the war on terrorism.

(U//FOSS) The mission statement was a key driver in the formation of the Technology Demonstration Platform. The Acquisition Review Board approved the revised acquisition strategy on November 30, 2001.



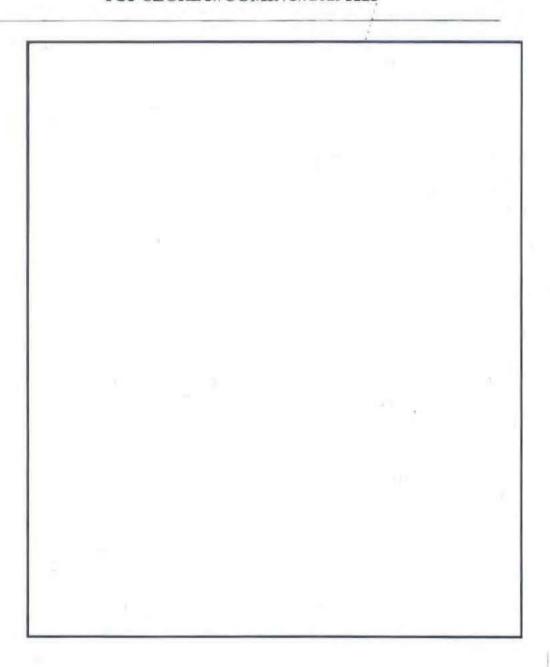
NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

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NSA (b)(1) 1.4 USC 3024 (i)	4(c), (b)(3) 5	0 USC 3605, (b)(3)

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	Ŷ.
(U) Conclusion	
(S//SI) TRAILBLAZER was developed to create a new Signals enterprise to exploit the global network. The TRAILBLAZER	Intelligence Fechnology

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	NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

NSA (b)(3) 50 USC 3605

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	The studies recommended that THINTHREAD be considered as
an alternative	system in the TRAILBLAZER
viable long-tern Alternatives A THINTHREAL	ternatives, but because NSA did not consider THINTHREAD as a m solution, it did not include THINTHREAD in the Analysis of a good business practice, the NSA should reevaluate as the long-term solution to exploit the global network, because
and parts of or management sh	all of TRAILBLAZER Technology Demonstration Platform. NSA hould consider implementing the following recommendations and the development of the Technology Demonstration Platform.

# (U) Summary of Management Comments on the Audit Finding and Audit Response

(U//FOUG) Management Comments. NSA management referred to several statements in the report that did not include all referenced documents and that some paragraphs contained wrong or misleading information. The complete list of management comments is located in the Management Comments section of this report.

(U//FODO) Audit Response. We obtained, reviewed, and analyzed many documents to form the basis for the conclusions in this report. We also interviewed several NSA and contractor personnel, many of whom asked not to be identified for fear of management reprisal. We gathered information from many sources to support the finding. Paragraphs frequently contain information from several sources to reinforce conclusions. See Appendix J for a complete audit response to each management comment.

# (U) Recommendations, Management Comments, and Audit Response

(6) Revised Recommendation.	As a result of management comments, we
revised Recommendations B.1 ar	nd B.3 to clarify the intended use of
THINTHREAD as a	ystem.

- 1. (U//FOUO) We recommend that the Director, National Security Agency/Chief, Central Security Service:
  - (S) Designate a team to assess the ability of THINTHREAD or its technologies as a long-term solution to meet the requirements for the TRAILBLAZER Technology Demonstration Platform.

(U//FOUO) Management Comments. The Director, National Security Agency/Chief, Central Security Service partially concurred with the intent of the recommendation but was waiting for the results of a cost and schedule impact study before fully concurring. The Program Executive Office is establishing an

NSA (b)(3) 50 USC 3605	(U//FOWO) independent review team to complete the study before Milestone B, scheduled for December 2004, because the study will have an effect on both the cost and schedule for Milestone B.
	(SASI) Management stated that there were significant differences between THINTHREAD and TRAILBLAZER. THINTHREAD is a digital network information processor and will provide capabilities to support analysts' activities TRAILBLAZER will provide the enterprise wide set of digital network requirements. The information technology framework will host and integrate mission applications.
	(G) Audit Response. Based on management comments, we revised this recommendation. The Director, National Security Agency/Chief, Central Security Service comments were responsive and the proposed actions meet the intent of the recommendation. The immediate actions taken to designate an independent review team to perform the assessment are commendable. Milestone B has slipped to February 2005 at the earliest; therefore, NSA will have time to complete the assessment of THINTHREAD or its technologies as a long-term solution to meet the
	2. (U//FOUO) Provide the results of the external assessment to the TRAILBLAZER Technology Demonstration Platform Milestone Decision Authority for use in making the Milestone B decision.
	(U//FOLIO) Management Comments. The Director, National Security Agency/Chief, Central Security Service concurred. The completion of the independent assessment is currently scheduled for December 2004.
	(U//FOGO) Audit Response. Although the Director, National Security Agency/Chief, Central Security Service concurred, the concurrence is based on completing the assessment requested in Recommendation B.1. We request that the National Security Agency management provide additional comments in response to the final report identifying NSA plans to eliminate the cost and schedule risks for completing the assessment.
	3.76 Include THINTHREAD as an alternate system in the TRAILBLAZER Analysis of Alternatives required for Milestone B.
	(U//FOUG) Management Comments. The Director, National Security Agency/Chief, Central Security Service concurred, and stated that the assessment required in Recommendation B. I will be included in the Analysis of Alternatives for Milestone B, scheduled for December 2004.
	(S//SI) Audit Response. Although the Director, National Security Agency/Chief, Central Security Service concurred, the concurrence is based on completing the assessment requested in Recommendation B.1. Based on management comments to Recommendation B.2., this recommendation was revised to include THINTHREAD as an alternate digital network information

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# Appendix A. Scope and Methodology (U)

(U//FOUG): We reviewed documentation dating from November 2000 through October 2003 including background information, mission and operational need statements, concepts and operational requirements, and contracting and budget documents. Also, we conducted interviews with program managers, analysts, and technicians responsible for the acquisition and deployment process of the THINTHREAD and TRAILBLAZER programs. Specifically, we reviewed the extent to which the NSA considered the use and deployment of the THINTHREAD system to satisfy an urgent security requirements need.

(U) We performed this audit from April 2003 through May 2004 in accordance with generally accepted government auditing standards.

LAILBLAZER	and THIN	THREAD	relating to to programs, we		
inagement cor	ntrol program	n.			

(U) Use of Computer-Processed Data. We did not use computer-processed data to perform this audit.

(U//FOUO) Use of Technical Assistance. Audit Follow-up and Technical Support Personnel assisted us during the audit. The Technical Assessment Division assisted in the analysis of NSA acquisition and deployment of Signals Intelligence systems.

(U) General Accounting Office High-Risk Area. The General Accounting Office has identified several high-risk areas in DoD. This report provides coverage of the Infrastructure Inefficiencies and Information Technology Investments high-risk areas.

# (U) Prior Coverage

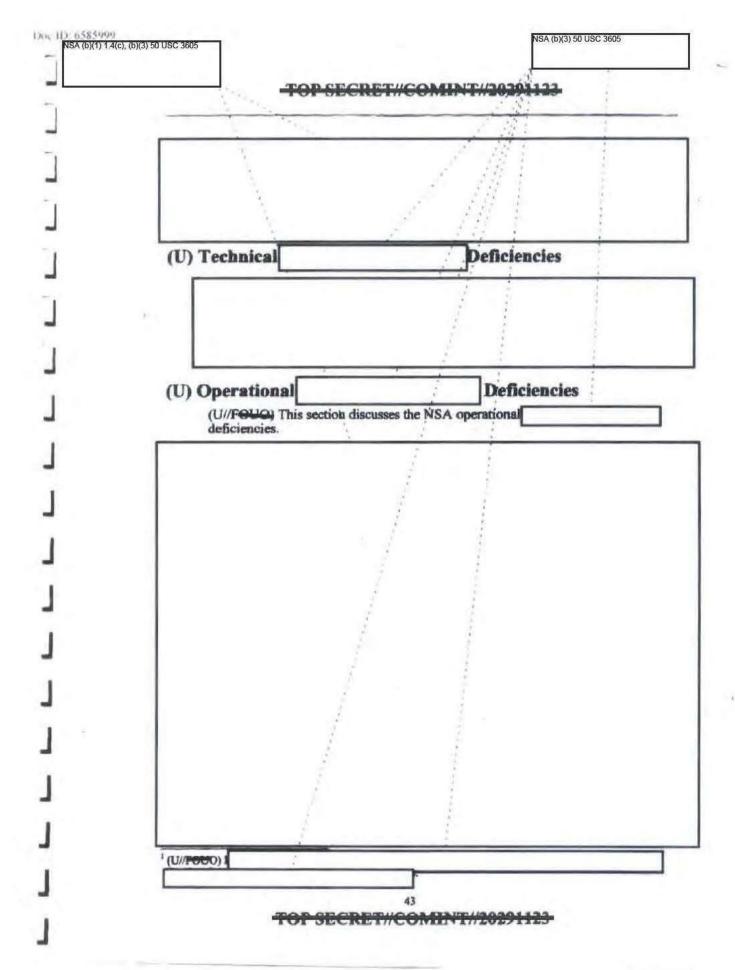
(U//FOGQ) During the last 5 years, the Inspector General of the NSA issued one report on TRAILBLAZER that discussed improperly based contract cost increases, non-conformance in the management of the Statement of Work, and excessive labor rates for contractor personnel. No prior coverage has been conducted on the NSA THINTHREAD Program during the last 5 years.

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# (U) Inspector General, NSA

(U//FOGO), Report No. ST-03-0014, "TRAILBLAZER 1/SIGINT Programs Systems Engineering and Technical Assistance Contract," September 30, 2004

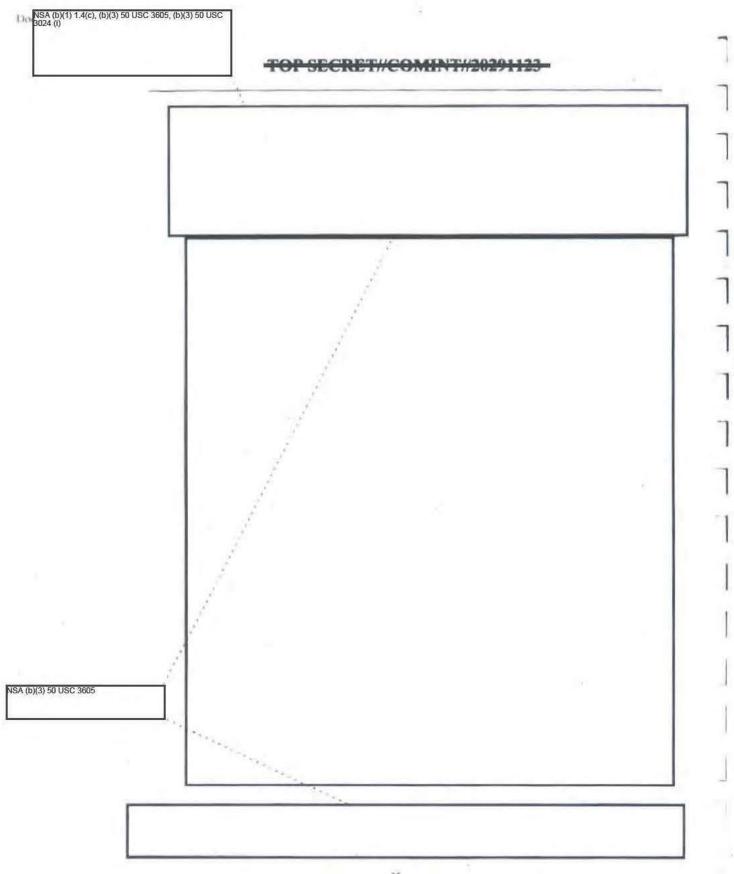
pendix B. TRAILBLAZER (U)	NSA (b)(1) 1.4(c), (b)(3) 50 USC
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Objectives of TRAILBLAZER and the Te	chnical
Demonstration Platform	
(U//FOLO) The following is a list of new capabilities to I	pe provided by the
TRAILBLAZER Technical Demonstration Platform.	
1	
(U//PSWS) The use of a scalable, integrated, plug-and-plathe Signals Intelligence System to operate with the speed of	y framework will allow
to follow NSA targets in today's modern, global network	environment.
(S4SI) Specifically, the TRAILBLAZER framework must	leverage the best
commercial technology and practices. It also must be stan accommodate mission applications as defined by the missi	dards based to on managers and
scalable to meet future challenges that were not well-defin	



NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

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Deficiencies in	Developmental
Efforts	14,
(II/DOLIO) This section discusses	deficiencies in the development of
systems and those fur	deficiencies in the development of nctional gaps where
resources or energy are insufficient	
	NSA (b)(3) 50 USC 3605

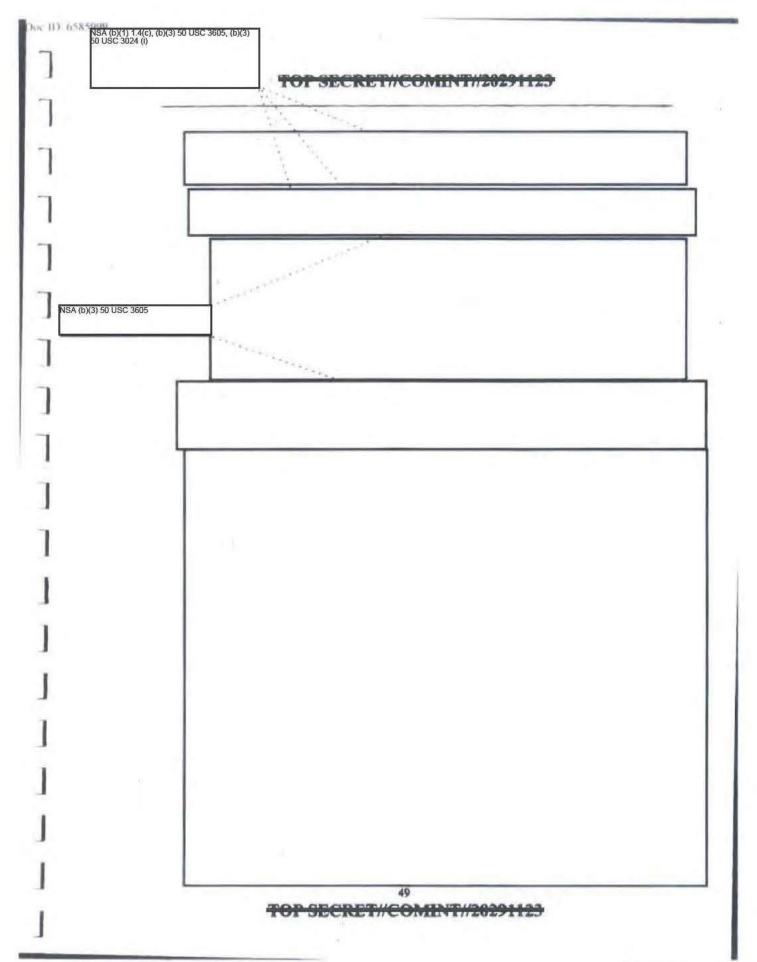
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(1) 1.4(c), (b)(3) 50 USC 3605	
	c. (C) Oversight and compliance approval process. A common, consistent, and cohesive oversight and compliance approval process from a U.S. Signals Intelligence Directorate 18 perspective must exist throughout the entire signals intelligence system, for the tasking of all
	throughout the entire signals intelligence system, for the tasking of all
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) Vision for		Systems	NSA (b)(3) 50 USC 3605	
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		<i>f</i>		
Technical Recommend	dations	1	NSA (b)(1) 1.4(c), (b)(3) 50 USC 50 USC 3024 (i)	3605, (
(U) The Tiger Team made the		commendation.		
(O) The Tigo, Team mate the	e tollowing for	outino noncon.		
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ISA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 ISC 3024 (i)	TOP SECRET//COMINT//20291123		
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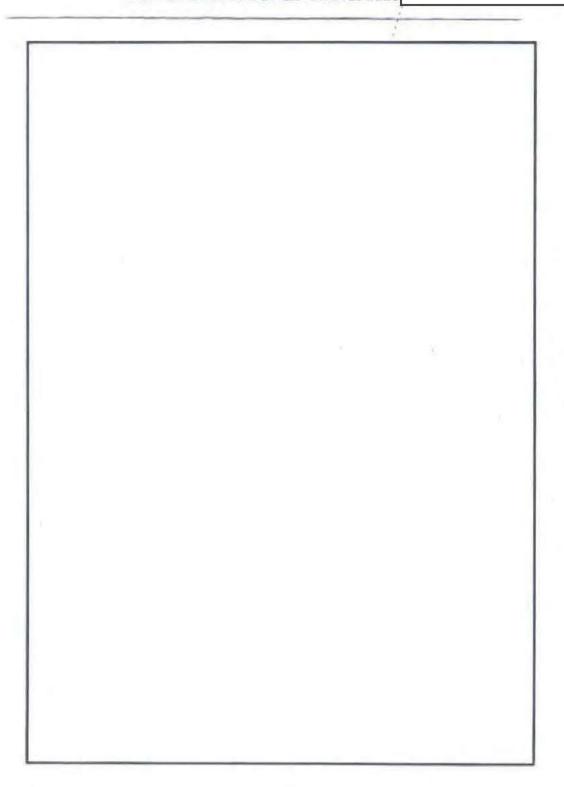


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# Appendix E. THINTHREAD (U)

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į.
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(U) Processing Elements. Five processing elements are needed in the architecture:
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(b)(3) 50 USC 3605	
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	/ THIN	THREAD
24.		
w-up for D/DIR," M in TRAILBLAZER is assessed were per- lity to meet mission overlaps in effort be gor boundaries were	arch 2001, was to formance, resource requirements. The cause both program similar, but the ap	h and s, maintainability, e study showed that ns were solving the pproach and
	ebruary 2001 and the w-up for D/DIR," M on TRAILBLAZER is assessed were per- lity to meet mission overlaps in effort be gor boundaries were	

NSA (b)(3) 50 USC 3605

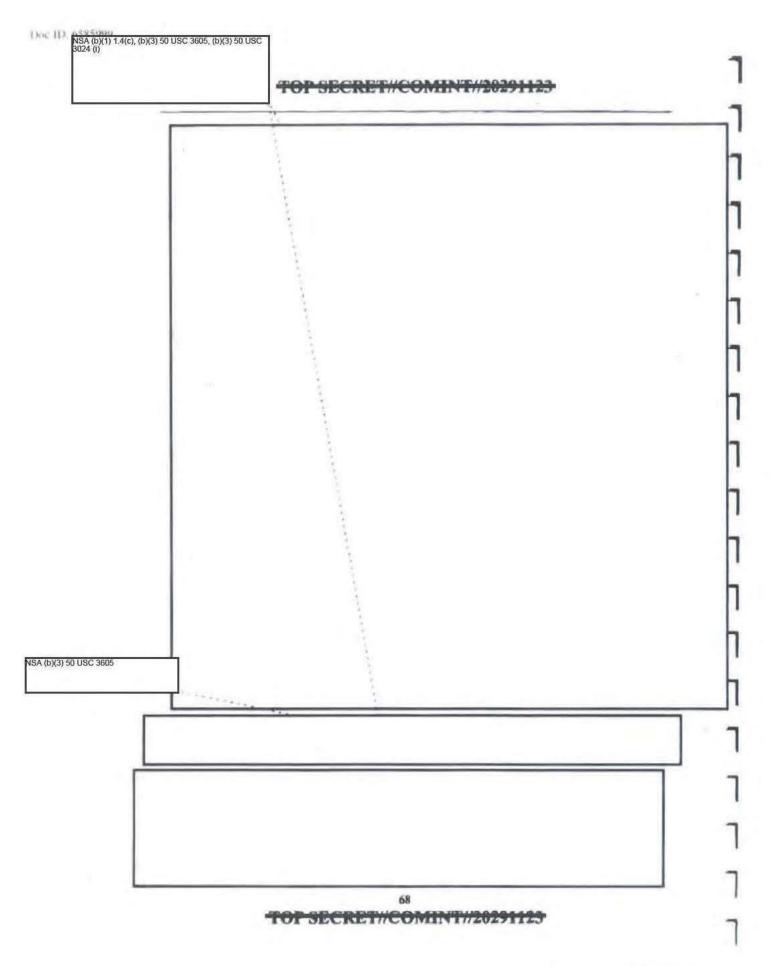
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	the training
	(U/POUS) Summary of Study Recommendations. The following is complete
	list of recommendations of the THINTHREAD
	Technical Review
	(U//F000) Provide requested resources to the THINTHREAD team
	(dollars and people)
	(U//PSGG Provide THINTHREAD proper management support
	• (U//POGG) In light of this, not all of the
	system is required
	(8/61) THINTHREAD has the capability to perform the digital network
	exploitation mission. The digital network exploitation operational mission could
	be completed entirely with
	AND THE PARTY OF T
	(U) NSA Modernization Follow-Up Study
NSA (b)(1) 1.4(c), (b)	50 USC 3605   (S//SI) The "NSA Modernization Study," July 13, 2001, and the "NSA
	Modernization Follow Up Study," December 2001, stated that THINTHREAD,

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H	(SWGL) The study stated that the most interesting development in the THINTHREAD story that occurred between the two studies was the success achieved by one dedicated analyst and analyst team, exploiting and analyzing dates.
	In retrospect, if THINTHREAD had been
	given additional resources and access to the analytic community, the "who, what, why" equation may have been refined earlier.

4 (i)	-TOP SECRET//COMINT//20291123	
A (b)(3) 50 USC 3605		
	(U/ <del>/FOUO)</del> ProjectTrial.	

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	(6) Although the was unsuitable, it is only a minor
1.4(c), (b)(3) 50 USC 36	Was unsuitable, it is only a minor part of the system and would not be used in a future system. Similar functionality would be provided through the However, despite this, was not competent at and had some reliability issues.
	and had some reliability issues.
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14.	MHNT//20291123	

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	The main advantage of is that NSA is developing, testing and deploying it; it would be reasonably cheap to procure requiring only bardware and no development costs; it integrates well
	development costs; it integrates well
(b)(3) 50 USC 3605	
	Adopting would give sn opportunity to
1	would give an opportunity to stop digital network intelligence development work and benefit from the savings that would be provided.
	(U//POLIO) not recommended. The
	report stated that although
	option, it is that recommended for three main reasons.
1	
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	- Table 1
	(U//POWS) is not flexible. In addition, it is a complete
	(U//POWS) is not flexible. In addition, it is a complete system that is inflexible and forces users to interact, task and use it in a certain way. This means that would be extremely difficult for
	system that is inflexible and forces users to interact, task and use it in a certain

	_
(ID Preliminary denlayment. If required the following components are	
(U) Preliminary deployment. If required, the following components are recommended for a preliminary deployment:	_
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	*** *** *** *** *** *** *** *** *** **
	Appendix G. Deployment Studies (U)
7	(U) THINTHREAD: A Deployment Suitability Assessment
7	(SUSI) The purpose of the Deployment Suitability Report and the assessment it describes was to provide information, analysis, and recommendations for planning THINTHREAD deployments to the sites identified by Signal
7	Intelligence Programs in the assessment charter. Once deployed, THINTHREAD would be an interim capability that would operate at designated sites for 1 to 2 years
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7	(U) Preliminary research on THINTHREAD was performed by the Test, Technology and Evaluation team in February 2002, but the formal evaluation was executed from March 1, 2002, through March 18, 2002.
1	
7	(U) Summary of THINTHREAD Deployment Suitability
1	(U777 CMC) THINTHREAD was successfully deployed for developmental evaluation to a single pilot site with approximately a dozen analysts using the
	prototype. Since then, the Signals Intelligence Directorate identified THINTHREAD as an operational prototype that merits further assessment as an
1	analytic tool that may improve analysts' ability to deliver quality Signals Intelligence to their respective customers. In preparing for the next step of deploying THINTHREAD to a diversity of sites, the THINTHREAD Program team has made progress in identifying and executing the planning and
1	coordinating activities that are necessary for future deployments. However, those activities had not been executed to the level needed for future, efficient and successful multiple deployments. Prior to deploying THINTHREAD any further,
1	the Test, Technology and Evaluation Team advised that the following risk mitigation and preparation activities be addressed.
1	NSA (b)(3) 50 USC 3605

1	TOT SECRET//COMINT//20291123	
(U) G	eneral Recommendations.	
	U//FOTO) The Deployment Suitability Assessment Study made the following ecommendations:	
	<ul> <li>(U) minimize operational risk of deploying THINTHREAD to multiple         sites by providing training to site support personnel, implementing a         THINTHREAD systemwide configuration management process, and         developing a process by which site personnel can identify and resolve         problems with the system as they arise;</li> </ul>	
(b)(3) 50 USC 3605	<ul> <li>(U) generate user, system, technical, and programmatic documentation.</li> <li>Existing documentation is insufficient to sustain the prototype for the planned length of deployments;</li> </ul>	
	(U) accelerate deployment planning; it has been slow to occur. Develop necessary partnerships with recipient sites and deployment support organizations; and	
	<ul> <li>(U/FOUO) acquire sufficient numbers of appropriately skilled personnel to develop documentation, perform deployment planning, support deployments to sites, automate user support processes, and develop controlling and measuring activities for multiple deployments of THINTHREAD.</li> </ul>	
	J) For further details, listed below are the seven key findings and related scussions in the THINTHREAD Deployment Suitability Report.	
(U) Fin	nding 1 Discussion.	
(L) fin	om being deployed as an operational prototype.	
_ L	<ul> <li>(U) Current THINTHREAD system development procedures were effective, and a cooperative development effort was proceeding smoothly with the pilot site.</li> </ul>	

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(U//FOUO) Recommendations. The issues previously mentioned would not prevent the deployment of THINTHREAD, however, it was recommended that investigation in to those areas be performed in order to improve the operational value of THINTHREAD.

## (U) Finding 3 Discussion

- (U) There was minimal user, system, technical, or programmatic documentation. The existing documentation was insufficient to support the planned deployments.
  - (U) There was no user documentation on how to use the tool. That was inefficient and could lead to a significant increase in user error.
     Difficulties using the tool can also lead to an increase in support calls that drained project resources.
  - (U) THINTHREAD did not have a clearly stated, documented set of mission goals or objectives. There was no program plan, making it difficult to communicate information about THINTHREAD at a programmatic level.
  - (U) A detailed schedule including all activities related to the system and deliverables before, during, and after deployment was not available. A high-level schedule containing the chronology of deployment was developed, but a detailed schedule was essential for proper resource management, costing, and prediction.
  - (U) No installation and maintenance documentation was completed for site support personnel, although the team was working with the pilot site to develop installation documentation. Lack of installation and maintenance documentation endangered the continuity of operations at the deployment sites.
  - (U) There was no operational support documentation for site personnel.
     Lack of support documentation could adversely affect timely correction of problems and could lead to loss of collection, loss of processing, or loss of data and metadata.
- (U) The effects of minimal documentation could be overcome if an integrated team accomplished the development and deployment of THINTHREAD.

relationships between work roles throughout the system's life cycle were not defined. The authorities for each work role had not been identified. The organizational structure set forth by the THINTHREAD Program Team focused on system development, and did not address system

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(U//FOSO) deployment or operation in a environment. The THINTHREAD Program Team was defining the additional work roles necessary for deployment activities.

- (U/FOLIO) No formally recognized prioritization procedures existed to address the variety of requirements that would come to the program office from the numerous sites when THINTHREAD is deployed.
- (U) THINTHREAD did not identify all the organizations requiring coordination through the various stages of deployment.

(U//FOGO) Recommendations. The findings presented a serious risk to successful deployment of THINTHREAD. To mitigate those risks, the following recommendations were suggested.

 (U) Develop deployment plans in partnership with specified recipient sites.

 (U) Coordinate and plan deployment activities with deployment support organizations.

- (IJ) Develop and establish organizational processes that could support multiple deployment activities, such as a requirements management process to assist in prioritizing program activities.
- (U) Continue addressing the work roles needed to plan and carry out deployment and support activities by producing a Staffing Support Plan.

# (U) Finding 5 Discussion

(U//FOUO) The customer service and user support processes for THINTHREAD were manually intensive and directly involved the technical staff.

- (U//FOUC) The quality of service and support received by analysts using THINTHREAD was inconsistent. Some of the analysts interviewed by Test, Technology and Evaluation Team viewed the THINTHREAD Program Team to be unresponsive in general customer support, while other analysts experienced good responsiveness to their requests for additions or modifications
- (U//FOUG) There was no formal trouble ticket mechanism in place. If a user or operator had a problem with THINTHREAD, he contacted someone on the THINTHREAD Program Team. This contact depends on personal acquaintance, because no list of THINTHREAD personnel was readily available, and there was no mechanism to locate the proper THINTHREAD contact. Similarly, the status of the response to a request could only be learned by personal contact.
- (U//FOUO) There was no formal mechanism for managing externally generated requirements, to include submitting a new requirement to THINTHREAD or for following the progress of the work.

- (U) Develop a process to address. Web interface functional enhancements
- (U//FOOO) Address the lack of personnel depth in the THINTHREAD as THINTHREAD is scaled to Program Team for maintaining handle more users and multiple site deployments.

# (U) Finding 6 Discussion

(U//POUO) There was no process for controlling and measuring operational, programmatic, and technical performance effectiveness of THINTHREAD, once deployed.

(U//FOUO) THINTHREAD did not have a clearly stated set of system specifications or a method to validate the THINTHREAD concept or performance results. Thus, there was no way to determine if the system

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(EU//FOUO) was successful or if it failed, which may lead to confusion in stakeholders' understanding of the success of THINTHREAD.

- (U//POSO) THINTHREAD had mechanisms for assessing progress and status within the system development phase. However, there were no systematic, consistent mechanisms for overall program measurement, which included identifying test criteria, establishing program schedules, and documenting a system baseline to address progress. No feedback mechanisms had been identified such as risk management or contingency planning.
- (U//POUO) Aside from schedule control, there were no tools to measure progress towards program objectives because there were no formalized program objectives.
- (U//<del>POUO</del>) THINTHREAD did not have Standards of Performance established for personnel developing THINTHREAD. If future THINTHREAD development crosses organizational groups, a common set of Standards of Performance for personnel may become necessary.
- (U//FOUQ) There was no configuration management process, which could
  pose a risk when reporting system problems and correcting them at a site.
  In addition, the lack of a configuration management process could cause
  difficulty when upgrading or deploying versions, and also make rollback
  extremely risky.
- (U//POBO) The fault or warning detection was automated but the necessary reactions and responses were not. software provided a simple way to check status of various system parameters through a Web interface. However, when an operator recognizes a problem, he must actively initiate corrective measures. Sometimes that action is a simple matter, such as restarting a process. At other times, physical hardware must be changed. No corrective action could be executed if an operator was not present to initiate a corrective action.

(U//FOUC) THINTHREAD had no established process for managing requirements.

(U//FOUC) Recommendations. The findings that led to the recommendations would not have prevented the successful deployment of THINTHREAD to sites. The recommendations were made to improve the onerational efficiency of THINTHREAD after it was deployed sites. The following is a list of recommendations.

 (U//FQEC) Develop processes and acquire automated tools based on clearly stated specifications for controlling and measuring the programmatic, operational, and technical performance of THINTHREAD deployment sites.

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NSA (b)(3) 50 USC 3605

 (U//FOUO) Acquire a commercially available configuration control system to enable versioning, rollback, and configuration management.
 The system should interface with the trouble ticketing system and the requirements management system to provide full traceability.

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- (U//FOUO) Develop Standards of Performance (if future THINTHREAD development crosses organizational groups).
- (U//FOUG) Automate reactions and responses to the existing fault and warning detection system to improve successful deployment.
- (U//FOUO) Establish a requirements management process for THINTHREAD that is linked to the SID requirements management process.

## (U) Finding 7 Discussion

(U//FOUO) The number and skill mix of THINTHREAD personnel was inadequate to support the proposed number of deployments; however, personnel resources for supporting future multiple deployments were being identified. There were shortfalls with the numbers and skills of personnel required for planning and executing installations at candidate sites. Also, there was a lack of documentation, providing the necessary maintenance and help desk support, configuration management, and planning and scheduling. Collectively, those shortcomings created a serious risk to successful completion of multiple deployments.

(U//FOUG) Recommendations. The finding presented strious risk to successful deployment of THINTHREAD. It was recommended to continue to identify and acquire the number and types of skilled personnel resources required for documentation, deployment planning, actual deployment to sites, and an automation of user support processes and controls that measures THINTHREAD activities to reduce that risk.

(b)(1) 1.4(c), (b)(3) 50 USC	ppendix Hand THINTHREAD – a Complementary Approach (U//FOUO)
a.	(U) This appendix presents excerpts from the and THINTHREAD white paper.
) 1.4(c), (b)(3) 50 USC 3605	CUSD The purpose of the and THINTHREAD white paper was to suggest a complementary solution using.
(U	) Needs Analysis Revisited
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(U) System Capabilities Overv	ione	
X.		its
current, as-advertised, single instant published on June 25, 2002.	outlines the strengths of each system in ce configuration at the time the paper w	as
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<sup>3</sup> (U) THINTHREAD Briefing; 23 May 2002, Microsoft PowerPoint, Slide 28.

	3024 (i)	), (D)(3) 50 USC 3605, (D)(3) :
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(U) Optimal System		
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	(U) Optimal System	(U) Optimal System

J)	J) Cost Analysis	
	(U) The following hypothetical scenarios illustrated how a combinal systems may produce a more effective result in terms of both compl A few assumptions apply:	tion of both exity and cos

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	(U) Conclusion
	(U) Conclusion  (ews) Theand THINTHREAD systems each possessed unique strengths that could be applied to digital network exploitation transformation.
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	(U) Conclusion  (e//SI) The
	and THINTHREAD systems each possessed unique strengths that could be applied to digital network exploitation transformation.
	(C) Conclusion  (C) The and THINTHREAD systems each possessed unique strengths that could be applied to digital network exploitation transformation.  That approach had the potential to produce a significantly more cost-efficient collection system.
	and THINTHREAD systems each possessed unique strengths that could be applied to digital network exploitation transformation.
	and THINTHREAD systems each possessed unique strengths that could be applied to digital network exploitation transformation.  That approach had the potential to produce a significantly more cost-efficient collection system.
	and THINTHREAD systems each possessed unique strengths that could be applied to digital network exploitation transformation.  That approach had the potential to produce a significantly more cost-efficient collection system.

# TOP SECRET//COMINT//20291123 NSA (b)(3) 50 USC 3605 Appendix I. Glossary (U) (U) Consultative Committee for International Telegraph and Telephone (CCITT). Consultative Committee for International Telegraph and Telephone is the International organization responsible for the development of communications standards. Now called the International Telecommunication Union Telecommunication Standardization Sector. (U)

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# TOP SECRET//COMINT//20291123 NSA (b)(3) 50 USC 3605 (U) International Telecommunication Union Telecommunication Standardization Sector (ITU-T). International body that develops worldwide standards for telecommunications technologies. The International Telecommunication Union Telecommunication Standardization Sector carries out the functions of the former Consultative Committee for International Telegraph and Telephone. International Organization for Standardization (ISO). International organization that is responsible for a wide range of standards, including those relevant to networking. The International Organization for Standardization developed the Open System Interconnection reference model, a popular networking reference model.

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	Comments (U)
	Comments (C)
	Inspector General Report assertions and NSA understanding, reflected within NSA's responses below, concerns the validity of using THINTHREAD as the Agency's Digital Network Exploitation system. NSA understands that THINTHREAD does not contain the functionality or capability maturity to be the Intelligence Community's digital network exploitation system—and it does not need to be
	(E#SI) Audit Response. Two recent Joint Inspection Team evaluations of NSA sites and mission support equipment stated that, does not have the technical capability to to fully meet NSA mission requirements. THINTHREAD has been able to successfully since November 2000. Also, THINTHREAD can be scared to meet to resease data requirements. THINTHREAD originally concentrated on land could have been
	enhanced to provides for a
	FAILBLAZER learning opportunities were shut down and alternative THINTHREAD approaches to the digital network exploitation mission were terminated.
	(C) Management Comments. Although NSA will agree to conduct an independent assessment of TRAILBLAZER and THINTHREAD; we believe that it will validate all of the assertions made in our responses to the Office of Inspector General recommendations. Furthermore, we do not agree with the original Hot Line complaint that fraud, waste, and abuse occurred during the THINTHREAD TRAILBLAZER decision process, which was conducted in an open jastion to provide the best benefit for Agency mission and customers. More importantly, there has been no evidence documented during this Office of Inspector General investigation that supports that complaint.
	to develop the TRAILBLAZER Initial Transformation Activities even though internal and external reports recommended using THINTHREAD and THINTHEAD Technologies as the interim solution for digital network exploitation. The report also
NSA (b)(1) 1.4(c), (b	V33 50 USC 3605
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Management Comments. The world's most advanced	cryptologic expe	rts, who aire
resident at NSA, have assessed THINTHREAD and		ind are
confident in the approach taken. With mission experience a		
hese experts are best suited to make an assessment of the pa	ation's cryptologic	c needs.; ;
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EUCH Audit Response. The report accurately documents		
nformation received during this audit including interviews		
from NSA cryptologic experts and current and former NSA		
on THINTHREAD and Based on a Based on a SA performed, we believe that NSA management is gware	studies and evalua	Hous that
loes not meet the mission requirement	- unaq	and
hat THINTHREAD could be more cost-effective solution to	nah sahiharis'aur	
pursued. However, NSA management has refused to consid		
viable solution to the Intelligence Community's digital netw		terretty to at .
requirements. It is our opinion that THINTHREAD could be		tive solution
han solutions currently being pursued. An external and ind		
conducted to compare THINTHREAD and	to validate	
apabilities of both systems.	1111	2
	1 1 117	**
Management Comments. THINTHREAD capabilities		
VSA's processing, exploitation, analysis and production pro		
Congressional direction, sound systems engineering practice	s, and common se	ense. It
would be detrimental to NSA's mission to remove non-THI	NTHREAD capeb	ilities; from ;
he current digital network exploitation architecture.		45 5
COOR Andle Deserved TURITISHEAD AND AND AND AND	as had a few land	and the
SASD Audit Response. THINTHREAD capabilities are no	READ is the only	within the
existing NSA ystem. THINTH	We recommende	
	THINTHREAD;	
THINTHREAD is enhanced to	Time time time to the	11
S//SI) Management Comments. The "	and THIN	THREAD
echnical Review," written by Im February 2	001, recommende	d adopting
HINTHREAD'S Ind TH	INTHREAD'S	
NSA agreed and leveraged TRAILBLA	AZER activity to T	megrate
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The state of the s	A returnity and	ST. Carrie
S//St) Audit Response. The	nd THINTHREAL	) Technical
Review," only reviewed the areas of performance, resources, and the ability to meet mission requirements. The study reco		
nd the ability to meet mission requirements. The study reco	Municipal adopti	ng land
lowever, the adoption	was not necessary	TO GENIOV
HINTHREAD. In addition, the review stated that Digital Y		
perational mission could be completed entirely with THINT	CHREAD if the	was
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eview also stated that THINTHREAD could not be integrate	ed into the	
	echnical design w	ere not
system because the fundamental approach and it	make of which off, if \$ 700 A	attempt to
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in system because the fundamental approach and to compatible. The "NSA Modernization Follow-Up Study" structure the service was not successful and was not technical service was not successful and was not technical service.	d on the	se when
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(3//Si) THINTHRE	AD capabilities a bility to handle a			NTHREAD	may not
guickly and cheaply  SUSI) Management  [HINTHREAD to	nt Comments. In	n FY 2002, Co	ngress direct	ed NSA to d	eploy
THINTHREAD De	ployments)[				
9/9P) Audit Resp 001 Intelligence A louse Permanent S be contra	onse. NSA delay uthorization Bill elect Committee acted immediately	ed the deployn (CMS 1-25-20 on Intelligence for THINTHI	nent of THIN 01), Decemb stated the co READ deploy	THREAD er 17, 2001, onferees dire yments at sit	The FY by the cted that es selected
he conterees stron	gly recommended	the deployme	nt of THINT	HREAD car	pabilities at
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begins a briefed leploy THINTHRE modified this to the lites, with the lites are lecame the Program HINTHREAD. A HINTHREAD as deriod. We also deturned. THINTHREAD as deriod. We also deturned.	AD to sites, besites. Despite cor of March 2004, No deployments occur office and the Manager respond though NSA had birected by Congrermined that	ut the THINTH ngressional diff NSA had deplo arring since No was transferror sible for the op a contract ava tess, NSA spre	perational designation of the deployment of the	eet Managen nediately dep IREAD to put in March gram Manage ployment of nediately dep	er also loy 2002, the er also loy 2 year- to the
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ites.  NSA did not HINTHREAD and rovided inaccurate ersonnel were at coollection capabilities at NSA provided a	plan to adequate did not encourage information to the election sites to re- es of	y test or maxing analysts to ue audit team we rovide information and INTHREAD s	se THINTHI hen it stated ition about the THINTHR ystem	READ. In acthat no analyste operational EAD. We de	sts or
HINTHREAD soft ntelligence stated th	study, but we we ware was provide at NSA did not p	ed. In addition	, the NSA Cl	nief of Signa	is eployment

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(SUST) of THINT		
that	was stove-piped and did not recommend it as a solution for	
its digital exploits	ition system.	
(S//SI) Managem	ent Comments. In November 2002 NSA briefed Congressional staffs	
on the NSA plan i	for THINTHREAD and The staffs concurred	
with NSA's propo	osals. This concurrence was substantiated in the FY 2003 House bill	
containing an incr	rease of for signals intelligence processing, and in the attorn for an additional to develop and support a long-term	
signals processing	strategy across the signal intelligence enterprise.	
organia processing	and the same of th	
(U//POUQ) Audi	t Response. NSA was unable to provide documentation of these briefs	
to the audit team,	documentation of subsequent guidance or direction from congress, or	
any other informa	tion that documents congressional dissatisfaction with THINTHREAD.	
4646D Managem	ent Comments. In FY2003 and FY2004, during budget authorization	
and appropriation:	s briefings to the House Permanent Select Committee on Intelligence	
and the Senate Se	lect Committee on Intelligence, the Congressional staffs recommended	
consolidating all p	processing activities into a single, cohesive, horizontally integrated,	
responded by elev	elopment processing digital network exploitation program. NSA	
exploitation progr	ant, consolidating processing activities within one organization,	
consolidating syst	ems engineering and systems engineering management and control, and	
strengthening acqu	uisition management capabilities.	
(CUCD A sadie Des	manus Tir un sembralla term for all district	
(SUSI) Audit Res	ponse. is an umbrella term for all digital	
network exploitati	ponse. is an umbrella term for all digital on programs, including legacy systems and new development.  was not able to process the digital network exploitation	
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nad a negative erie	ct on THINTHREAD	performance.	the free day of the therger
PURB Managemen			a sauto relati
(6/61) Manageme		ag capabilities, develop	m engineering
plan for anticipated	requirements. Additi	onally,	new capabilities, and
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	1	. A cursory companie	on hanveen the nuc
systems reveals the	depth and breadth of		activity and implies the
impact of Office of	Inspector General Rec	commendation A.1 is de	vastating to Intelligence
Community analyst	needs.		
Audit Respons	e. NSA management	continues to enhance	100
capabilities, even th	rough its systems are b	ased on other legacy sy	stems and legacy
approaches that hav	e not kept up with tod	ay's technology. All	
capabilities shown	in Annex A can be add	led to the existing THIN	THREAD architecture.
(U/FOOOT Manag	ement Comments. N	SA recommended that	the audit report
emphasis NSA's co	operation and respons	iveness to Congress.	
and the Dane	Tofo motion in		ten that NOA JUL
evolvin to congress	who THINTHREAD	ongressional records no did not constitute at leas	tes that NSA did not
TRAILBLAZER. I	nstead, NSA delayed	deploying THINTHREA	AD. Although the
THINTHREAD dep	ployment study showe	deploying THINTHREA d that not being fully do	cumented would not
have a negative effe	ct on mission capabili	ity, NSA chose to docum	nent THINTHREAD
before completing i	is deployment. Most of	of THINTHREAD deployment	ent plan was inadequate,
occi completed pri	A 10 One mouth Title 11	mental de deployment	Jan Plan Was Interespenses
(U//FOUO)-Manag	ement Comments. N	SA recommended that	the audit report
	HINTHREAD capabil		THE STREET STATE S
con a dia D	NCA	4: 4	1
		did not support the deve	perts and engineers that
		were viable tools for de	
network exploitation			Traysum and anger
ect 84	NEA		annual annual and all as
		mmended that the audit ithin the NSA processin	
	mount is unoficient w	name are 14074 processin	D HART TOWNS
		lessons learned have be	
the NSA processing and its capabilities.	services; however, N.	SA does not adequately	use THINTHREAD
and its capatimites.			

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	(c), (b)	(c), (b)(3) 50 (	(c), (b)(3) 50 USC 36(

NSA (b)(1) 1.4(c),	(b)(3) 50 USC 3605

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(C) Management Comments	. THINTHREAD does not possess the breadth and depth
of services required by the Inte	elligence Community because its overarching program.
	Subordinating to THINTHREAD
would be actimental to intelli	gence Community requirements.
	and the table of tabl
(3/154) Audit Response. If N	SA added the services to THINTHREAD required by the
Intelligence Community, THII	NTHREAD would have the breadth and depth of services
required by intelligence agenc	ies'and could exploit today's
required by intelligence agence in the fore	seeable future.
The state of the s	
SUSD NSA continues to spen	d millions of dollars enhancing legacy system based on
egacy approaches instead of u	d millions of dollars enhancing legacy system based on sing the THINTHREAD interim capability that can be
wad immediately NSA mana	igement should consider THINTHREAD as an option for
be fitting doubles and after	baseline digital network exploitation system. It is widely
mown at NSA; and the digital	itelwork exploitation community that
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	The State of the S
SWED Management Comme	nts. NSA strategy for collection site processing is based
in using the best available test	hnology which allows for rapid assimilation of evolving
n using the pest available tech	anology which allows for rapid assimilation of evolving
echnologies; is dedicated to w	orld-class systems engineering, and is committed to the
SA corporate vision. Migrat	
iolate this strategy.	1
The state of the s	
SASD Audit Response. The	most recent evaluations of by an
VSA Joint Inspection Team str	
Vary Joint Inspection Team St	d that I can delta ill and
an	d that planned enhancements will not provide the technical
apabilities to keep up with tec	chnical advancements. The evaluations also state that the
	is flawed; therefore, we believe that this condition
hows that NSA is not using th	ie best available technology or world-class systems
ngineering.	
	In addition, NSA comments do not illustrate how
nigrating to THINTHREAD w	
	The state of the s
C) Management Comments	NCA assessed the Condition that
Management Comments.	NSA accepted the and studies, the
echnology Test and Evaluation	
	gy (TRAILBLAZER), advancing program and acquisition
ianagement, advancing system	ns engineering and systems engineering management,
corporating the hest of evicting	ng processing systems - including THINTHREAD - and
edicating itself to continual in	nprovement. NSA's program
who dies that are its and I	is bound on state of the art trabealous which makes
noodies that communent. It	is based on state-of-the-art technology, which maximally
ses commonty-based hardwa	re and industry standard engineering and development

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(S) method service char	plogies, to allow rapid assimilation of new technologies and rapid adoption of the while at the same time preserving a stable processing environment.
from the THINTHE	AD be deployed immediately because it could provide the needed
of the team	services. The seam was instructed to find a way to incorporate the system rather than incorporate the Zone Operating System into the When several members stated that technical and philosophical differences would not allow the two nerge, NSA officials insisted that they try.
(3//91) Man information within engineering intelligence	asgement Comments. NSA stated that the draft report omitted critical about new developments and improvements of THINTHREAD services  R. NSA also stated that any attempt to migrate services to THINTHREAD would require a comprehensive reof the THINTHREAD framework to take advantage of updates to signals technology and to make it useable within the existing signals intelligence cost to migrate current and evolving capabilities while maintaining mission
been applied team did not D, the report can be added THINTHRE addition, the eliminating THINTHRE	systems, but NSA did not document and the audit see evidence of continuing development of THINTHREAD. In Appendix t shows that all of the services being performed by to the THINTHREAD system and that the estimated cost for AD is a fraction of the development cost for In see costs do not include the substantial savings NSA would gain from the operation and maintenance cost for Also, AD has its own databases, provides its own graphics interface for analysts, t use the NSA traditional approach.
or the effects the mission. systems, wo mission at ri	agement Comments, NSA stated that the draft report did not indicate the risis that performing any level of change would have on the existing capability of NSA also stated that imitations of many collection sites prohibit additional uld exacerbate problems with parallel support and migration, and would put thisk. The total risk of migrating capabilities while maintaining mission support seen quantified.
THINTHRE THINTHRE on the existing changing existing	Response. The DoD IG recommendations that NSA deploy AD as an interim solution and use a complementary approach, until AD is fully enhanced, took into account the risks and effect that might have ng capabilities. Of course, NSA must identify the risks and effects that sting capability might have on the mission. Collection sites limitations was sues considered by the original THINTHREAD developers. NSA cannot
	NSA management does not recognize that
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NSA (b)(1) 1.4(c),	(b)(3) 50	USC 3605

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(SWEL) spending millions of dollars to add new capabilities to systems that are already operating far below current mission requirements and based on outdated approaches will not fix the problems of the NSA digital network exploitation.

Management Comments. NSA stated that the audit report does not define the meaning of "fully enhanced and extended THINTHREAD." NSA believes that a "fully enhanced and extended THINTHREAD" engineered in concert with the NSA corporate strategy will be remarkably similar to, or the same as, Alternatively, if this "fully enhanced and extended THINTHREAD" were not engineered according to the NSA corporate strategy, potentially significant changes to the strategy would cause changes to subsystems throughout the signal intelligence system and would interrupt analysts performing their national security duties. NSA also stated that the report did not indicate how THINTHREAD would be engineered into the signal intelligence system or its effects on the system. The NSA and the Department of Defense Office of the Inspector General did not quantify the total scope and impact of migrating current capabilities while maintaining mission capabilities.

(C) NSA management believes that THINTHREAD does not have the potential to be the sole digital network exploitation processing system. THINTHREAD provides the greatest value to the signal intelligence system and to the analysts by remaining integrated within Further, NSA believes that the scope, cost and risk of migrating from to THINTHREAD are not characterized well enough to supplant existing, corporate signal intelligence strategy.

( Management Comments. The cost to produce "fully enhanced and extended" THINTHREAD, particularly in terms of level-of-effort and skill availability, is not known but is certainly not trivial.

- (6) Audit Response. A small team of NSA engineers developed THINTHREAD in less than I year. The team used readily available commercial-off-the-shelf software for 80 percent of the system and the remaining 20 percent was developed. Our review of an NSA employee and contractor database showed that several members of the original THINTHREAD team, still work in some capacity at the NSA and are available to start the enhancement of THINTHREAD.
- (e) Management Comments. The cost of modifying the rest of the signal intelligence system, as well as impact on other parties' systems, to conform to THINTHREAD operations is not known but is certainly not trivial.

(E) Audit Response. To continue and win the United States' fight against terrorism, it is imperative that NSA deploys the best technology to meet mission requirements

NSA (b)(1	) 1.4(c), (	b)(3) 50	USC 36	05

proven capability. NSA must determine and then implement the right solution with proven capability. The failure to implement the right solution could result in loss of intelligence, which could lead to the loss of American lives like that of September 11, 2001.
Management Comments. The cost to support multiple platforms with a migration without affecting the mission to THINTHREAD is not known, but is certainly not trivia
determine which systems may be eliminated. Some systems and development may be eliminated now, based on the appropriate analysis and review. Eliminating unnecessary systems would result in a substantial reduction in operations ar maintenance cost for NSA digital network exploitation systems.
Management Comments. The achievability, cost and effect of retraining the Intelligence Community's analysts to use THINTHREAD while the maintaining mission is not known, but is certainly not trivial.
Audit Response. Several NSA Intelligence analysts learned to use THINTHREAD without NSA support; they stated that the system is easy to learn and easy to use. A structured training course could only enhance the analyst training.
Management Comments. The resultant THINTHREAD, once built using NSA's corporate strategy, is not likely to be significantly different from the current capability, which is embodied within
(6//SI) Audit Response. THINTHREAD provides significant capabilities that
network intenigence
. Such capabilities are very important in
identifying intelligence data.
Management Comments. NSA stated that the THINTHREAD concept of operation is different from that used by today's Intelligence Community, however, NSA supports THINTHREAD components successfully integrated into the signal intelligence system, complete with comprehensive training. In addition, NSA stated that it started to create

is different from that used by today's Intelligence Community; however, NSA supports THINTHREAD components successfully integrated into the signal intelligence system, complete with comprehensive training. In addition, NSA stated that it started to create training and operation materials for THINTHREAD components in November 2002 when integration activities started. By April 2003, NSA had completed courseware for analyst and operator training, which is continually updated and relied on.

Audit Response. THINTHREAD and its approach is a radical shift from NSA's current approach to digital network exploitation; however, it presents the best approach available to meet existing mission requirements and should be considered as an option to meet future requirements. NSA management has not accepted the THINTHREAD system and its approach as the solution for digital network exploitation and subsequently does not advocate its use. As a result, THINTHREAD is not widely used within NSA. Analysts who do use THINTHREAD either trained themselves or were trained by other analysts familiar with the system. None of the analyst we interviewed used the courseware; therefore, we are not commenting on the adequacy of the courseware itself but on the lack of knowledge that the courseware exists.

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

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(E) Management Comments. TRAILBLAZER welcomes an open review of THINTHREAD's 2001 end-to-end architecture to meet the requirements of the TRAILBLAZER Technology Demonstration Platform (Technology Demonstration Platform) because we believe that NSA's current strategy is valid and will be revalidated. The Program Executive Office (PEO) is taking the lead in establishing an independent review team for performing this assessment, with the intention that its results will be completed in time for inclusion into the Analysis of Alternatives and other Milestone B documentation. However, the performance of this additional study will have an impact on both the cost and schedule for Milestone B. PEO and TRAILBLAZER will estimate the cost/schedule impacts after receiving estimates from the review team and will decide at that time whether to respond with a Final Concurrence to these recommendations.

(C) Audit Response. The recommendation was revised to reflect that THINTHREAD is an option for the digital network exploitation portion of the Technology Demonstration Platform.

(S//SI) Management Comments. NSA management does not agree with the DoD Office of Inspector General's assessment that THINTHREAD is "a better technological and more affordable solution for digital network exploitation than the solution being developed by NSA." In fact, there are significant differences between THINTHREAD and TRAILBLAZER's missions.

(6//SI) Audit Response. We acknowledge the fact that the current scope of the TRAILBLAZER is to provide the information technology framework for the entire

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focused; howe because the co 1 - 3 of the	mpleted studies	EAD can be easily upg compared only the fro system. NS.	IREAD development was raded. NSA is being dist nt-end of THINTHREAD A needs to conduct a stud- tital network exploitation	ngenuous and Zone ly to
focused; howe because the co 1 - 3 of the compare entire (C//SI) Mana- designed to ad	e THINTHREAL gement Commeders specific pr	EAD can be easily upg compared only the fro system. NS. D system to current dig ents. The Technology rogram risks and to sati	raded. NSA is being disi nt-end of THINTHREAL A needs to conduct a stud- ital network exploitation Demonstration Platform isfy congressional direction	ngenuous D and Zone ly to systems.
focused; howe because the co 1 - 3 of the compare entire (C//SI) Mana- designed to ad	e THINTHREAL gement Commeders specific pr	EAD can be easily upg compared only the fro system. NS. D system to current dig ents. The Technology rogram risks and to sati	raded. NSA is being disint-end of THINTHREAL A needs to conduct a studied network exploitation.  Demonstration Platform	ngenuous D and Zone ly to systems.
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	Demonstration Platform should be able to to support a much broader set of Digital performed by THINTHREAD.	o integrate  I Network Information requirements than
experimental exterior designation of the control of	Audit Response. This is an inaccurate state ily available commercial off-the-shelf technomed, should not be difficult to integrate with the however, it is our understanding the Technologies are considered as an alternative to the mologies are considered as an alternative to the considered as an alternative to the statement and the free considered as an alternative to the statement and the free considered as an alternative to the statement and the free considered as an alternative to the statement and the free considered as an alternative to the statement and the free considered as an alternative to the statement and the free considered as an alternative to the considered as an alt	alor concern. An external learn of the Technology Demonstration Platform is being alor concern. An external learn of the Technology Demonstration IINTHREAD and its approach and he system being developed by the Technology Demonstration Platform ce-based "plug and play" framework mercial-off-the-shelf development a lower level; overall, THINTHREAD using seadily available commercial off-veloped framework that is inexpensive, nove, the THINTHREAD framework is
	des major development efforts to transform	
majo	stormation of NSA databases was not a THI r difference between Technology Demonstra	ation Platform and THINTHREAD
devel	D Audit Response. These statements are in lopment started in early 1999 and was opera id revolutionary in design. THINTHREAD	tional in late 1999, it is still state-of-the-
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(S//S datab	NSA documented its problems with its cur ases hold large amounts of data with little or	rrent assortment of databases. These r no intelligence value.

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by THINT	HREAD was still	I up and runn	ing and he dire	cted that it
nmediately be stoppe	ed and personnel			44
stem take over the r	equirement.			2
Management Cor	mments NSA	stated that the	Technology D	emonstration Platforn
s a significant infor	nation Assurance	ce effort, to	4	95"
				oes not address
formation assurance ployed and certified		its the extent	to which THIN	THREAD could be
pioyed and certified	100		/ 3	
Audit Response.	Original THENT	HREAD dev	elopers maintai	ned that information
surance could be har	ndled by another	software app	lication; this is	routinely done
roughout the Federal	Government at	nd DoD.	100	
Management Cor	mments NSA	nanagement s	tated that the T	echnology
emonstration Platfor	m will begin	management s	tatter time time:	COMMONEY
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THINTS	READ does no	andress		
HINTHREAD also d				
signed into Technolo	ogy Demonstrati	ion Platform.	1	
Audit Response.	NSA statements	are inaccurat	e Anvinecess	ary commercial off.
e-shelf tools and legs	ev tool could be	e integrated w	ith THINTHRI	EAD. The signal
telligence data produ	ced by THINTI	IREAD is mu	ch easier for an	alysts to retrieve and
alvze than existing t				magement. Although
	. has been	completed to	THINTHREA	AD, we believe that
e number of enterpri mpanies will avoid a	se integration ex	me The TH	NTHREAD de	vitnin local area
nsiders information	ily major proose	ones. The tra	MITTING ALL	sign and approach
		AND THE RESIDENCE AND THE		
	aments. NSA r			ILBLAZER and the
chnology Demonstr		nave impresented .	commission and the second	found to be brilled a minus of

ines of DoD Directive 5000.2, and the program exhibited shortcomings that constituted a serious risk to successful deployment, according to the March 25, 2002, Technology, Test, and Evaluation Assessment mentioned on pages 20-21 of the Office of Inspector General Report and quoted extensively in the Office of Inspector General's Appendix G. This is especially critical documentation, given the emphasis on Horizontal Integration and the DoD Global Grid evolution.

(C) Audit Response. NSA comments are inaccurate. The THINTHREAD architecture is open and scaleable. Information that we reviewed and previous Inspector General reports show that the NSA acquisition processes is not always consistent with the

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Technology,	es of DoD Directive 5000.2. The program shortcomings referenced in the Test, and Evaluation Assessment dealt mainly with program documentation port noted did not present a significant deployment risk.
Summary's a	agement Comments. NSA management comments stated that the Executive assertion that NSA "disregarded solutions to urbent national security needs" te. THINTHREAD was deployed to
	P A
management THINTHREA 2001), Decem	Response. NSA comments are inaccurate. Major issues raised in the comments are addressed in the report, specifically the issue of AD scalability. In the FY2001 Intelligence Authorization Bill (CMS 1-25-17, 2001, the House Permanent Select Committee on Intelligence
management THINTHREA 2001), Decen directed that THINTHREA	AD scalability. In the FY2001 Intelligence Authorization Bill (CMS 1-25- ber 17, 2001, the House Permanent Select Committee on Intelligence of the NSA budget be used to immediately deploy to sites selected for optimal response to  The NSA briefed the House Permanent Select
management THINTHREA 2001), Decen directed that THINTHREA Committee or THINTHREA services that	AD scalability. In the FY2001 Intelligence Authorization Bill (CMS 1-25- aber 17, 2001, the House Permanent Select Committee on Intelligence of the NSA budget be used to immediately deploy to sites selected for optimal response to
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management THINTHREA 2001), Decen directed that THINTHREA Committee of THINTHREA services that a For example,	Comments are addressed in the report, specifically the issue of AD scalability. In the FY2001 Intelligence Authorization Bill (CMS 1-25- aber 17, 2001, the House Permanent Select Committee on Intelligence of the NSA budget be used to immediately deploy to sites selected for optimal response to  The NSA briefed the House Permanent Select The NSA briefed the House Perm

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(C) Management Comments. NSA management stated that the DoD Inspector General Report's citation of the NTA Study's recommendation to support adoption of THINTHREAD also needs clarification. The Study did not recommend THINTHREAD as a long-term solution, but rather as an interim capability prototype alternative to the

Audit Response. NSA comments are inaccurate. The NSA Modernization Study recommended that THINTHREAD be included as an alternative solution to TRAILBLAZER.

(C) Audit Response. The Director, Signal Intelligence Directorate, stated that information about THINTHREAD technologies and approach was placed in the bidder's library. Placing files about THINTHREAD in a huge repository of other files and making those files accessible to contractors does not adequately support the NSA Modernization Study recommendation to include THINTHREAD in the alternative-of-analysis process for TRAILBLAZER. In addition, information provided to the contractors for the Concept Development Phase by NSA directed them to ensure their proposals for system met the current NSA architecture and framework, to include ervices, and other legacy constraints, which THINTHREAD approach does not comply.

(U//FOUO) Management Comments. NSA management comments stated that the TRAILBLAZER has long-established plans for external assessment of the Technology Demonstration Platform for preparation for Milestone B. The Independent Verification and Validation (IV&V) of 29 Evaluation Criteria is being conducted by NSA's independent Office of Corporate Assessments' Test and Technical Evaluation element (TTE). The Early Operational Assessment and Operational Assessment will be performed by JITC, which had established a presence in TRAILBLAZER spaces by November 2003. Results of both activities will be provided to the Milestone Decision Authority before Milestone B.

(U//FOSQ) Audit Response. TRAILBLAZER postponed Milestone B scheduled for December 2004 because of technical issues with the Technology Demonstration Platform. February 2005 is the earliest date that TRAILBLAZER will be ready for MILESTONE B.

(U7FOUQ) Management Comments. NSA management comments stated that the results of the independent assessment of THINTHREAD and TRAILBLAZER Technology Demonstration Platform will be provided to the MDA by Milestone B, currently scheduled for December 2004.

(3//31) Management Comments. NSA management comments stated that the Executive Summary's statement that TRAILBLAZER development "wasted hundreds of millions

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evelopmental phase, in the second security of the security of	e. The NSA manages not claim that T	gement comments RAILBLAZER de e is only used to a	are inaccurate. The velopment "waste ccurately describe	d hundreds

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(S//SI) Management Comments. NSA management comments stated that the total costs for the prototype were closer to
Audit Response. The total costs of the Initial Transformation Activities and accurately reflect information received from the NSA ougget ornice and go not include cost for NSA employees.
(S) Management Comments. NSA management comments also questions the Executive Summary's statement that "NSA modified or suppressed studies and comparisons that favored THINTHREAD over TRAILBLAZER," and stated that the audit report did not identify where the information was obtained.
(S) Audit Response. We have documented information to support this statement; however, because of fear of reprisal, we agreed to keep the sources anonymous.
Management Comments. The Office of Inspector General Report's citations of the ITHINTHREAD Technical Review (February 2001) and ITHINTHREAD Follow-up for D/DIR (March 2001) were also incomplete and contained inaccuracies. The presentation of the results of the February review on page 13 of the Office of Inspector General Report was only a subset of the total recommendations and findings. For example, although this study (commissioned by the Chief of the Mission Applications Group, not the D/DIR as stated

- (SUED) Provide requested resources to the THINTHREAD team (dollars and people).
- 5. (SASE) Provide THINTHREAD proper management support.

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# Appendix K. Report Distribution (U)

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# Office of the Secretary of Defense

Under Secretary of Defense for Acquisition, Technology, and Logistics Under Secretary of Defense (Comptroller) Under Secretary of Defense for Intelligence Assistant Secretary of Defense for Networks and Information Integration

# Other Defense Organization

Director, National Security Agency Inspector General, National Security Agency Inspector General, Defense Intelligence Agency Inspector General, National Geospatial-Intelligence Agency Inspector General, National Reconnaissance Office

# Congressional Committees and Subcommittees, Chairman and Ranking Minority Member

Senate Subcommittee on Defense, Committee on Appropriations Senate Committee on Armed Services Senate Select Committee on Intelligence House Subcommittee on Defense, Committee on Appropriations House Committee on Armed Services House Permanent Select Committee on Intelligence

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# National Security Agency/Central Security Service Comments (U)



NATIONAL SECURITY AGENCY CENTRAL SECURITY BERVICE

13 August 2004

MEMORANDUM FOR INSPECTOR GENERAL, DEPARTMENT OF DEFENSE ATTN: Deputy Assistant Inspector General for Intelligence Audita

SUBJECT: (U) Audit of the Requirements for the TRAILBLAZER and THINTHREAD Systems, dated June 18, 2004 (Project No. D2003AL-0100)

(UIBGSO) Thuck you for the opportunity to review and comment on the referenced draft report. Consolidated management comments from our Signals Intelligence Directorate (SE), Acquisition Organization (DA) and Information Technology Infrastructure Services Organization (ITIS) are exclosed. In addition, per your request, a security classification review of the draft report is exclosed. If you have any questions or seed additional information, please context.

NSA (b)(3) 50 USC 3605

Deputy Chief of Staff

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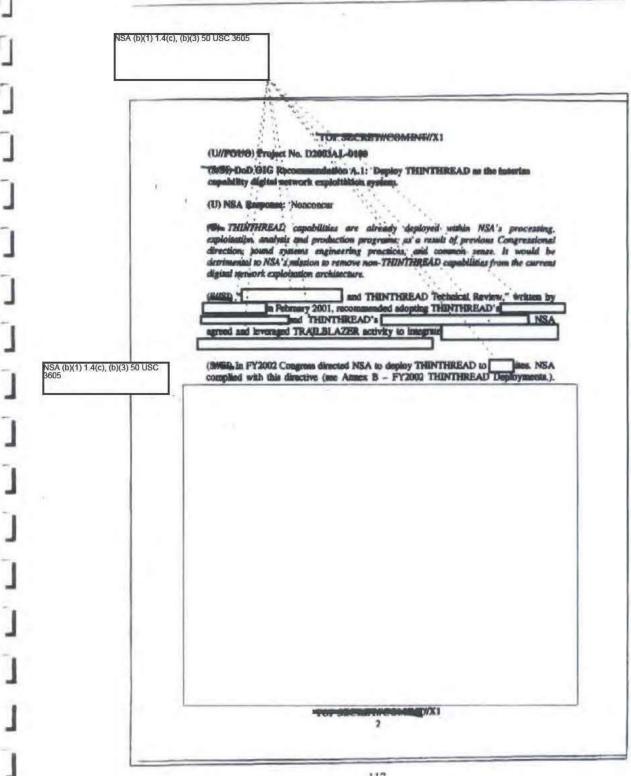
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DOP CHEMITICONUNT/XX
(U) Audit of the Regulrescents for the TRAILSLAZER and THINTHREAD
Systems
(U//F04/9)-Project No. D2003AL-0100
4C) This paper contains responses to recommendations made by the DoD Oil Audit of the Requirements for the TRAILBLAZER and THINTHREAD Systems (Project No.
D2003AL-0100). It also includes discussion of key comments from the Old report that
NSA ficela obligated to address.
-65/997-A algorificant point of dipersure among Old Report assertions and NSA
understanding, reflected within NSA's responses below, concerns the validity of using
THINTHEAD as the Agenty's Digital Network Exploitation (DNE) systems. NSA
understands that THINTHREAD does not contain the functionality or capability materity to be the 'inselligence Community's DNE system - and it does not need to be.
is the Community's DNE system: it contains the depth and
breadth of expabilities to exploit all known DNE targets (see Annex A), it uses state-
of-the-spt technologies (birth in hardware' and software), and it supports itself with program management and systems engineering. THINTHREAD's bost-
of-breed capabilities are integrated into
THINTHREAD's contribution to DNE and capitalizing on
programmatic and systems engineering maturity. Any assertion that THINTHREAD might be used to "replace" exposes a significant
might be used to repaid a segmentary
(C)-Although NSA will agree to conduct an independent assessment of TRAILBLAZER and THINTHREAD, we believe that it will validate all of the assertions made in our
responses to the OIG recommendations. Purthermore, we do not agree with the original
Hot Line complaint that frand, waste, and abuse occurred during the
THINTHREADY TRAILBLAZER decision process, which was conducted in an open fashion to provide the best benefit for Agency mission and
customers. More importantly, there has been no evidence documented during this ORG
investigation that improve that complaint,
(C) The world's most advanced cryptologic saners, who are resident at NSA, have
assessed THINTNIREAD and are confident in the approach
taken. With mission experience and training unique to NSA, them experts are best suited to make an assessment of the nation's cryptologic needs.
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	(U/FORG) Project No. D2003AL-4100
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	ACT NSA recommends that the following items be highlighted within the OIG Project Report:
	<ul> <li>NSA cooperates with and responds to Congress;</li> <li>THINTHREAD capability is valued by NSA;</li> <li>THINTHREAD capability is integrated within NSA's processing assvices;</li> </ul>
14	<ul> <li>THINTHREAD capability is integrated within NSA's processing services;</li> <li>THINTHREAD does not possess the breadth and depth of services required by</li> </ul>
	the Intelligence Community
	<ul> <li>THINTHREAD does not need to possess the breadth and doubt of services required by the Intelligence Community because its overarching program, does; and,</li> </ul>
1	<ul> <li>Subordinating i</li></ul>
D	Intelligence Community requirements.
	(U) Target Date of Completion: Complete.
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(C)-The Old Report omits at	other critical element: "fully enhance 1. NSA believes that a "fully cubance	ed and extended	
THINTHREAD" is not defined THINTHREAD" that is engine	<ol> <li>NSA believes that a "fally calance ared in concert with NSA's corporate</li> </ol>	ed and exemped amalogy will be	
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	A serial series and has a supplemental series and the series of the seri
	NSA is convinced that THINTHREAD does not have the potential to be its sole DNE
	processing system. THINTHREAD provides the greatest value to the SIGINT system and
	to the Analyst by remaining integrated within
	believes that the scope, cost and risk of migrating from
	THINTHREAD are not characterized well-enough to supplant existing, corporate
	SIGINT strategy. In abort:
	Market State of the Control of the C
	. (E) The cost to produce "fully enhanced and extended" THINTHREAD, particularly
	in terms of level-of-effort and skill availability, is not known but certainly not privial:
	<ul> <li>(6) The cost of modifying the rest of the SIGINT System, as well as impact to other</li> </ul>
	parties' systems, to conform to THINTHREAD operations is not known but certainly
	not crivial;
	<ul> <li>The cost to support multiple platforms without impacting mission throughout a</li> </ul>
	migration to THINTHREAD is not known but certainly not trivial;
	<ul> <li>(6). The achievability, cost and impact of retraining the entire latelligence</li> </ul>
	Community's analysts to use THINTHREAD while maintaining mission is not
	known but certainly not trivial; and,
	<ul> <li>(6) The resultant THINTHREAD, once built using NSA's corporate atmaggy, is not</li> </ul>
	likely to be algorificantly different from the current capability, which is embedded within
	WALLE .
	(U) Turpet Date of Completion: Complete.
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# TUP SECRETACOMINES

(LI//POSS) Project No. D2003AL-0100

7C7 DoD OIG Recommendation A.3: Develop a formal classystem training course for the entire THINTHREAD system,

#### (U) NSA Rasposse: Concur

(84 NSA agrees with an underlying report thems: that THINTHREAD's concept of operation represents a divergent method from that used by today's intelligence Community, THINTHREAD components successfully integrated into the SIGINT System, however, are supported just like all others, complete with comprehensive training.

(CLNSA understands the critical role training plays in successfully achieving its misaton and is committed to producing training materials for each of its subsystems. NSA started creating training and operation materials for THINTHREAD components when integration activities started in November 2002. By April 2003, NSA had Data Item Description DI-ALSS-81523A-guided courseware for THINTHREAD that is continually updated and relied on for analyst and operator training to this day, (Current courseware is more than 350 pages and is not included within this document. However, copy will be presented if requested.)

(U) Target Date of Completion: Complete.

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	Final
TOF SECRET//COMINT//X1	
(UMPOHO) Project No. D2003AL-0100  -(G)-DoD ORG Recommendation B.1: Designate a team to name the ability of THINTHREAD or its technologies as a long-term estation to must the operational requirement of the TRAILBLAZER Technology Demonstration Pasiform.	Revise p.35
(U) NSA Response: Concur, with comments	
represents to most the requirements of the TRAILBLAZER Technology Domonstration Platform (TDP) because we believe that NSA's current arrategy is valid and will be revalidated. The Program Executive Office (PEO) is taking the lead in establishing an independent review eean for performing this assessment, with the insection that its results will be completed in time for inclusion into the Analysis of Alternatives and other Milestone B documentation. However, the performance of this additional study will have an impact on both the cost and schedule for Milestone B. PEO and TRAILBLAZER will estimate the cost/achedule impacts after receiving estimates from the review tram and will decide at that time whether to respond with a Pinal Concurrence to these recommendations.  (U//PCMS) At this time, it is necessary to address some misconceptions in the DoD ORG's Executive Summary and Draft Report, as follows:  1. 46MSS) First. NSA does not agree with the DoD ORG's assessment that THINTHERAD represents 's better technological and more affordable solution for digital asswork exploitation than the solution being developed by NSA." In fact, there are significant	
differences between THINTHREAD and TRAILBLAZER's missions.	
ECON-GRACIMATENCHOMAINT//X)	

	TOP SICRETWOOMBKI//X1  (LWFODG)-Project No. D2003AL-0100
6	
	'(E) THINTHREAD's end-to-end architecture does not adequately meet the operational requirements for TRAILBLAZER's TDP, with major mismatches or deficits in all key areas:
	GIMEN-Scope of DNE mission requirements addressed: White THINTHREAD is a focused operational implementation, the TDP effort is focused on a more reunable.
	industry standard frumework. Thus, the TDP framework can extend operational capabilities beyond the implementation of THENTHREAD. In the long run, the TDP should be able to integrate services to support a much broader set of DNI requirements than those performed by THENTHREAD.
	<ul> <li>(C) End-to-End Framework hand on industry mandands: The TDP will provide a commercial, extensible, and arrvice-based "plug and play", framework. Though</li> </ul>
	THINTHREAD does comploy itome COTS development products and technologies, that employment is at a lower level; overall, THINTHREAD resides on a contem-developed framework.
	Knowledge Management and Discovery: TDP includes major development efforts to transform NSA's databases and provide a state-of-the-art

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1	THINTHREAD and the TRAILBLAZER
	3. *(E)-The Old Report's citation of the NTA Study's recommendation to support adoption of THINTHREAD also must be clarified. This Study did not recommend THINTHREAD as a long-term solution, but rather as an interior capability protocype alternative to the
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Final Report Reference

#### TOP SECRETAGORALISMAN

# (U//PG60) Project No. D2803AL-0180

(U//FOUG) DeD OIG Recommendation B.2: Provide the results of the external assessment to the TRALLBLAZER Technology Demonstration Finthern Mileston Decision Authority for one in making the Milestone E decision.

#### (U) NSA Response: Concur

(UNFORIGE. As mentioned in the response to Recommendation B.1, the PEO and TRAILBLAZER intend to provide the results of the independent assessment to the TRAILBLAZER Milestone Decision Authority (MDA) for use in making the Milestone B decision. These results will also be sent to the DoD IG, the NSA IG, and NSA's Office of General Counsel.

(UMPGMG) It should also be noted that TRAILBLAZER has long-established plans for external astronomers of the TDP for preparation for Milestone B. The Independent Verification and Validation (IV&V) of 29 Evaluation Criteria is being conducted by NSA's independent Office of Corporate Assessments' Test and Technical Evaluation element (TTE). The Early Operational Assessment and Operational Assessment will be performed by JITC, which had established a presence in TRAILBLAZER spaces by November 2003. Results of both activities will be provided to the Millamous Decision Authority before Milestone B.

(G) Target Date of completion: Results of the independent assessment of THINTHREAD and TRAILBLAZER TOP will be provided to the MDA by Milestone B, currently scheduled for December 2004.

—(G) DoD OIG Recommendation B.3: Include THINTHREAD in the TRAILBLAZER Analysis of Alternatives required for Milestone B.

# (U) NBA Rasponse: Concur

TRAILBLAZER plans to include the smalls of the independent assessment of THINTHREAD is the Assignia of Akernatives required for Milestone B.

(UITPOSS). Turget Date of completion: This action will be completed by the Milestone B target date, currently actediated for December 2004.

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		Project No. D2803AI	-0100	
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	the subject Project Rep	port.		
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# TOT SECRET//COMINT//20201123 NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605 TOT SMCRETWOOMDAD/IKA (U//POHO) Project No. D2803AL-0100 2.-(6)-TRAILBLAZER also questions the Executive Summary's statement that "NSA modified or suppressed studies and comparisons that favored THINTHREAD over TRAILBLAZER " TRAILBLAZER has seen no evidence of either modification or suppression. It is not clear where this statement originaled. 3. (20737) The OfG Report's citations of the Technical Review (February 2001) and the Foliow-up for D/DIR (March 2001) were also strompere and commend inaccuracies. The presentation of the results of the February review on page 13 of the OfG Report was only a subset of the total recommendations and findings. For example, although this study (commissioned by the Chief of the Mission Applications Group, not the D/DIR as stated in the OfG Report) recommended adoption of THINTHREAD's POP GEORETICOMENT//SIL

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	in the body of the Report.	<i></i>		
Objective l	90) It should be noted that, Program is FY2006, rather	than FY2009 (as stated	i in page 1 of the Druft O	OG.
manage E	finally, the NSA IG coace set contract mentioned in	Appendix A did not	coster on TRAILBLAZE	R-
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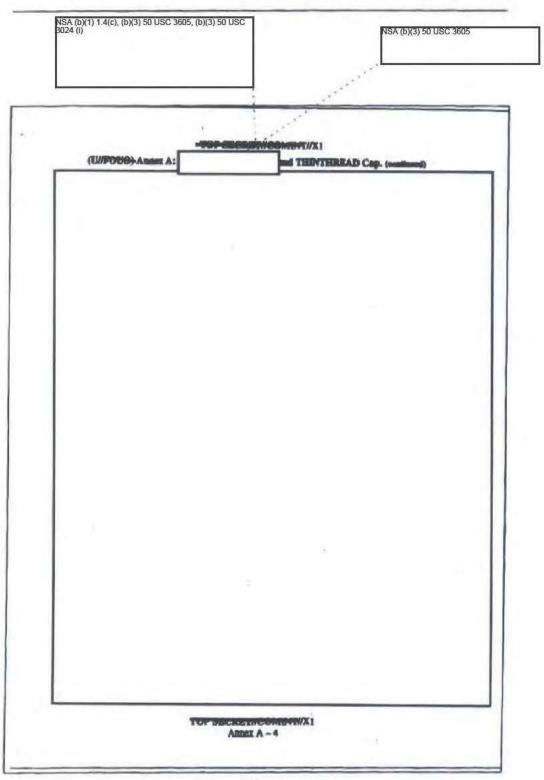
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#### TOP SECRET/COMPT//20201122

TUP SECRETWOOMD AT //X1 ANNEX (U/FORQ) ANNEX B: THENTHREAD DEPLOYMENTS

(U//F04Q) Access B: THINTHREAD Deployments (U//F04Q) The following table lists THINTHREAD deployments.
NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)
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SECURITY CLASSIFICATION

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## NSA STAFF PROCESSING FORM

*UBJECT TOD SECRET//GOMINT) Office of the IG of the Department of Defense Report on TRAILBLAZER and THINTHREAD Systems INFORMATION EXREG SUSPENSE ELEMENT SUSPENSE	CoS	EXREG CONTROL NUMBER		DC09-017-0			
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PURPOSE: WONFIDENTIAL/20291128) Attached for your review and signature is the NSA consolidated response to the report from the DoD OIG on requirements for TRAILBLAZER and THINTHREAD systems

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## NATIONAL SECURITY AGENCY FORT SEONSE IS MEADE, MARYLAND 20755-6000

11 February 2005

# MEMORANDUM FOR DEPUTY ASSISTANT INSPECTOR GENERAL FOR INTELLIGENCE AUDITS

SUBJECT: (U//FOUG)-DoD OIG Audit Report Requirements for the TRAILBLAZER and THINTHREAD Systems, dated December 15, 2004 (Report 05-INTEL-03, Project No. D2003AL-0100) - INFORMATION MEMORANDUM

(U//FOSO): In response to the DoD OIG request for additional information on the TRAILBLAZER and THINTHREAD report, NSA/CSS provides consolidated corporate comments from our Signals Intelligence Directorate, Acquisition Organization, and Information Technology Infrastructure Services Organization (now the Information Technology Directorate).

NSA/CSS Response: The Program Executive Officer (PEO) for NSA Transformational Programs is committed to funding the timely completion of the requested assessment of THINTHREAD applicability to the TRAILBLAZER Technology Demonstration Platform and ensuring the results of the assessment are considered in the preparation and conduct of TRAILBLAZER Milestone B (MS B). Consistent with duties and responsibilities of the PEO, the independence of the assessment is assured. The andropriateness of incorporating THINTHREAD as an option for meeting the requirements for TRAILBLAZER TDP and subsequent incorporation into the TRAILBLAZER Analysis of Alternatives will be determined by the PEO at the completion of the assessment \*\*Subsequent to the DoD OIG report, the TRAILBLAZER Milestone has been scheduled for late in the fourth quarter of FY05 from the previously scheduled earlier MS B. Accordingly, this now allows sufficient time for the conduct of the assessment recommended by the DoD OIG. As costs for the assessment will be covered by the PEO. and due to the revised schedule, risk to the TRAILBLAZER program is minimal. Therefore, a Risk Mitigation Plan is not appropriate. The assessment will be finalized by May 2005. If you have any questions or need additional information, please contact Maria D. O Connor SA (b)(3) 50 USC 3605 MARIA N O'CONNOR

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

Derived From NSA/CSSM 1-52 Dated 23 November 2004 Declaratify On 2000 April 2007

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Chief of Staff

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#### SUMMARY

DISTRIBUTION

#### PURPOSE

(U//FOUO) To provide the recommended PEO input to the consolidated NSA response regarding actions requested by the "final" Department of Defense (DoD) Office of Inspector General (OIG) report 05-INTEL-03. Requirements for TRAILBLAZER and THINTHREAD Systems of 15 December 2004.

#### BACKGROUND / DISCUSSION:

(U//FOCO) In their June '04 Draft of the Audit Report, the DoD OIG made the following recommendation, "Designate a team to assess the ability of THINTHREAD or its technologies as a long-term solution to meet the operational requirements of the TRAILBLAZER Technology Demonstration Platform."

467 In response to this draft, in August, the Agency concurred "with comments." The following is an excerpt from those comments; "The Program Executive Office (PEO) is taking the lead in establishing an independent review team for performing this assessment, with the intention that its results will be completed in time for inclusion into the Analysis of Alternatives and other Milestone B documentation."

\*CTAt the time of this statement (Aug '04), the TRAILBLAZER Milestone B (MSB) was scheduled for December '04. When the final report was published, the PEO Assessment had not yet begun. Concerned that the assessment could not be completed in time to support a December milestone, the DoD OIG requested via the final report, that they be provided; "NSA plans to eliminate the cost and schedule risks for completing the assessment."

-(C) Since release of the final Audit Report, a DIRNSA-Chartered Transformational Advisory Panel (TAP) recommended TRAILBLAZER be rebaselined. The MSB is now planned for late Fourth Quarter FY05.

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(U//FOCO). The development of this response has been coordinated with the TRAILBLAZER Program Management Office
RECOMMENDATION  1. (U//FOLIO) A formal Risk Mitigation Plan is not recommended. The PEO is committed to conducting the assessment. The team is currently being formed a
NLT May 31st. The cost and schedule impact of conducting the assessment pose very low risk to the Transformational Programs.

NSA (b)(2) 50 USC 3605

 (U//FOUC) Recommend the response, provided as an attachment, be forwarded to the DoD OIG as part of the Agency's consolidated response to the Final Report.

# Team Members (U)

(U) The Office of the Deputy Inspector General for Intelligence of the Department of Defense, Intelligence-Audit prepared this report. Personnel of the Office of the Inspector General of the Department of Defense who contributed to the report are listed below.

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