Audit Report

OFFICE OF THE INSPECTOR GENERAL

QUALITY ASSURANCE ON NAVY CONTRACTS FOR UNDERSEA CABLE SYSTEMS

Report No. 96-115 May 10, 1996

Department of Defense

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Acronyms

DCMC	Defense Contract Management Command
FAR	Federal Acquisition Regulation
SOSUS	Sound Surveillance System
SPAWAR	Space and Naval Warfare Systems Command

INSPECTOR GENERAL
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May 10, 1996

MEMORANDUM FOR ASSISTANT SECRETARY OF THE NAVY (FINANCIAL MANAGEMENT AND COMPTROLLER)

SUBJECT: Audit Report on Quality Assurance on Navy Contracts for Undersea Cable Systems (Report No. 96-115)

We are providing this audit report for review and comment. Navy comments on a draft of this report were considered in preparing the final report.

DoD Directive 7650.3 requires that all recommendations and monetary benefits be resolved promptly. The Navy comments on the estimated $1.9 million of monetary benefits identified in the draft report were not responsive. However, we reduced the monetary benefits in the final report by $40,000 in response to the Navy decision to retain 1/2-staff year of contract quality assurance services for FY 1996. We request that the Navy provide comments on the unresolved monetary benefits by July 10, 1996.

We appreciate the courtesies extended to the audit staff. Questions on the audit should be directed to Mr. Joseph P. Doyle, Audit Program Director, at (703) 604-9348 (DSN 664-9348) or Mr. Charles M. Hanshaw, Audit Project Manager, at (703) 604-9256 (DSN 664-9256). See Appendix E for the report distribution. The audit team members are listed inside the back cover.

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Report No. 96-115 **May 10, 1996**
(Project No. 5CF-0018.01)

Quality Assurance on Navy Contracts for Undersea Cable Systems

Executive Summary

Introduction. The Navy awarded eight contracts, valued at $30.1 million, from FYs 1990 through 1995 for the repair, refurbishment, loading, and handling of undersea cable systems in the Sound Surveillance System portion of its Integrated Undersea Surveillance System program. The Navy also awarded two contracts, valued at $10.2 million, during that period for associated cable management services that included quality assurance oversight. Such quality assurance oversight services are normally performed by the Defense Contract Management Command.

Audit Objectives. The audit objectives were to determine whether the Defense Contract Management Command is effectively managing quality assurance requirements in selected Navy contracts for undersea cable systems and to evaluate management control programs applicable to the overall audit objective.

Audit Results. The Defense Contract Management Command was effectively managing quality assurance requirements in selected Navy contracts for undersea cable systems. However, the Space and Naval Warfare Systems Command unnecessarily procured about $2.5 million of duplicate quality assurance services from FYs 1990 through 1995 for undersea cable systems in its Sound Surveillance System program. About $1.85 million could be put to better use for FYs 1996 through 2001 if redundant quality assurance services were eliminated. Appendix C summarizes the potential benefits of the audit. Management controls applicable to the overall audit objective were adequate.

Summary of Recommendations. We recommend that contract N00039-94-C-0004 for cable management be modified to eliminate the duplicative quality assurance services. We also recommend that the Navy discontinue procuring duplicate quality assurance services on contracts for the refurbishment of Sound Surveillance System undersea cables.

Navy Comments. The Navy concurred with the recommendations and reduced the quality assurance efforts on contract N00039-94-C-0004 from 3 and 1/2-staff years to 1/2-staff year for the remainder of FY 1996. The Navy also agreed to not contract for the quality assurance services after the completion of the FY 1996 effort. The Navy disagreed with the monetary benefits stating that the budget does not include $1.9 million in the outyears for the contract quality assurance effort. See Part I for a summary of management comments and Part III for the complete text of management comments.

Audit Response. We consider the Navy comments to be responsive to the recommendations. The Navy budget does not include separate identification of the contract quality assurance costs in question. Thus, the Navy comments on the budget obscure the monetary benefits issue. The Navy acquisition plan shows that Navy will continue to contract for the Sound Surveillance System. If future contract costs are reduced then there is a benefit to the DoD. We reduced the monetary benefits by $40,000 for FY 1996 to reflect the 1/2-staff year of quality assurance service that the Navy retained. We request that the Navy reconsider its position on the monetary benefits and provide additional comments on the monetary benefits by July 10, 1996.

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Part I - Audit Results

Audit Background

Navy Undersea Cable Program. The Sound Surveillance System (SOSUS) is a portion of the Navy Integrated Undersea Surveillance System, which gathers surveillance data through underwater and land installations. The SOSUS program, managed by the Space and Naval Warfare Systems Command (SPAWAR), provides processing and analysis of acoustic data transmitted from underwater low-frequency surveillance systems. For more than 35 years, SOSUS logistics support was provided by AT&T, who developed, manufactured, deployed, and supported the system under noncompetitive contracts. Simplex Technologies, Incorporated (Simplex), formerly Simplex Wire and Cable Company, is the only company that manufactures and refurbishes the older type of cable used in the SOSUS system.

Cable Systems Acquisition. The SPAWAR 1993 Acquisition Plan reflects that the majority of the contracts for existing hardware, systems, and supporting services for the SOSUS program will remain sole source indefinitely to AT&T and Simplex. The acquisition strategy for the SOSUS program was to procure cable refurbishment from Simplex and procure cable management and system engineering and integration from AT&T. The cable management procurements included quality assurance and engineering services.

Contractor Quality Assurance Responsibilities. Federal Acquisition Regulation (FAR) part 46, "Quality Assurance," provides policies to ensure that acquired supplies conform to Government quality requirements. The responsibility for quality is divided between the contractor and the Government. The contractor is responsible for controlling the quality of supplies during production and for providing the Government with supplies that conform to contract requirements. The FAR also requires a contractor to have the necessary production control procedures and quality assurance measures applicable to the services to be performed. The contractor must provide and maintain an inspection system acceptable to the Government. Appendix B discusses the criteria applicable to procurement offices, prime contractors, and contract administration offices.

Government Quality Assurance Responsibilities. Government agencies are responsible for ensuring that supplies provided by contractors meet contract requirements. Contract provisions and the FAR require the contract administration office to develop and apply efficient procedures for performing Government contract quality assurance services. The Government personnel must perform quality assurance services and product acceptance.

The Defense Contract Management Command (DCMC), a subordinate command of the Defense Logistics Agency, has a mission to perform contract administration on assigned DoD contracts. Specific functions of the DCMC mission include:

- ensuring contractor compliance with cost, delivery, technical requirements, quality, and other contract terms;
- accepting products on behalf of the Government; and
- providing engineering and technical program management support to the program offices.

Audit Objectives

The overall audit objective was to determine whether DCMC is effectively managing quality assurance requirements in selected Navy contracts for undersea cable systems. The audit also reviewed DCMC and SPAWAR management control programs applicable to the overall audit objective. See Appendix A for the audit scope and methodology, review of the management control programs, and a summary of prior coverage related to the audit objectives.

Procurement of Quality Assurance Services

SPAWAR procured duplicate quality assurance services from AT&T for the refurbishment of SOSUS undersea cables. The AT&T services duplicated the services that Simplex and DCMC were already providing. The duplication of quality assurance services occurred because SPAWAR could not support its reasons for procuring the quality assurance services from AT&T. Specifically, SPAWAR:

- believed that SPAWAR needed AT&T quality assurance services as insurance against costly undersea cable failures;

- believed that the Government did not have access to the AT&T proprietary specifications that the Government needed to perform the quality assurance services;

- did not recognize, in its acquisition strategy, the quality assurance capabilities of Simplex as the prime contractor and DCMC as the Government contract administrator; and

- did not perform adequate preaward analyses to prevent the procurement of duplicate quality assurance services.

As a result, SPAWAR unnecessarily spent $2.5 million from FYs 1990 through 1995 and may spend an additional $1.85 million from FYs 1996 through 2001 for duplicate quality assurance services that do not add to the quality or performance of the undersea cables.

Contracts for Quality Assurance Services

The DCMC was effectively managing quality assurance requirements in selected Navy contracts for undersea cable systems. However, SPAWAR procured duplicate quality assurance services for the refurbishment of SOSUS undersea cables. The quality assurance services performed by Simplex, the prime contractor, and DCMC, the Government contract administrator, were duplicated when SPAWAR procured quality assurance services from AT&T for the refurbishment of SOSUS undersea cables.

Simplex Quality Assurance Services. Simplex performed the quality assurance services required on its contracts with DoD for the refurbishment of SOSUS undersea cables. From FYs 1990 through 1995, SPAWAR awarded eight contracts, totaling $30.1 million, to Simplex for SOSUS refurbishment efforts, including cable loading and handling. On each contract, Simplex performed quality assurance inspections of raw materials; Government-furnished equipment; and manufacturing, testing, and handling processes.

DCMC Quality Assurance Services. The DCMC performed the required quality assurance services on the SPAWAR contracts with Simplex for the refurbishment of SOSUS undersea cables. SPAWAR delegated contract administration, including Government contract quality assurance, to DCMC on each contract awarded to Simplex. The DCMC assigned quality assurance personnel to the Simplex facility located in New Hampshire to perform Government contract quality assurance. The DCMC quality assurance personnel performed inspections of:

- raw materials;
- Government-furnished equipment; and
- manufacturing, testing, and handling processes.

AT&T Quality Assurance Services. The AT&T quality assurance services duplicated the quality assurance services that Simplex and DCMC performed. SPAWAR awarded two contracts, valued at $10.2 million, to AT&T from FYs 1990 through 1995 for cable management, including quality assurance services. The contracts required AT&T to perform the quality assurance services on-site at the Simplex facility located in New Hampshire. The current cable management contract, N00039-94-C-0004, valued at $5.2 million, for FYs 1994 through 1996, included $1.1 million for the quality assurance services. The FY 1996 portion of the quality assurance services is estimated to cost about $476,000. The contract statement of work required AT&T to inspect:

- raw materials;
- Government-furnished equipment; and
- manufacturing, testing, and handling processes.

AT&T performed quality assurance services at the Simplex facility, as required by the contract statement of work, that duplicated the quality assurance services that Simplex and DCMC performed.

Reasons for Procuring AT&T Quality Assurance Services

SPAWAR could not support the reasons for procuring quality assurance services from AT&T. SPAWAR did not provide justification for procuring the quality assurance services as insurance against possible future SOSUS cable failures. Additionally, SPAWAR could not support its assertion that the Government was not permitted access to the AT&T proprietary specifications necessary to perform quality assurance services. Further, SPAWAR did not recognize, in its acquisition strategy, Simplex and DCMC quality assurance capabilities and did not perform adequate analyses before contract award.

Quality Assurance Services as Insurance. SPAWAR believed in but could not substantiate the need for AT&T quality assurance services as insurance against costly failures. The cost of repairing SOSUS cable failures at sea are expensive and, until the cables are repaired, critical surveillance intelligence is lost. SPAWAR maintained that the quality assurance services procured from AT&T provided:

- immediate, on-site engineering services to correct or address deficiencies identified and to minimize downtime and

- a quality assurance inspection backup that further reduced the risk of a failure going unnoticed.

On-Site Engineering Services. AT&T did not provide immediate, on-site engineering services. AT&T did not have engineers assigned to the Simplex facility in Portsmouth, New Hampshire. The engineers were stationed at AT&T in North Carolina. The AT&T personnel assigned to the Simplex facility were product quality consultants performing normal quality assurance services. The services duplicated the quality assurance services that Simplex and DCMC performed.

Quality Assurance Backup. SPAWAR could not support the need for AT&T quality assurance services as a backup to reduce unnoticed failures in the SOSUS cable system. SPAWAR Acquisition Plan 93-02, "Integrated Undersea Surveillance System-Sound Surveillance System Consolidation," August 31, 1993, states that Simplex is the only firm in the United States with the facilities, experience, and expertise for SOSUS undersea cables that meet Government specifications. Additionally, during the audit, SPAWAR program officials provided a written statement to the auditors that Simplex has a long and outstanding record in the field of manufacturing quality cable products for both Government and commercial applications. Simplex has manufactured cables since 1860 and has produced undersea cables for electronic applications since 1955. The SOSUS undersea cables have performed virtually failure-free for more than 30 years. SPAWAR documentation of Simplex quality cable products, and the quality history of Simplex manufactured cables, does not support the need for SPAWAR procurement of quality assurance services from AT&T.

SPAWAR asserted that AT&T quality assurance services reduced the risk of cable manufacturing failures going unnoticed and preventing costly at-sea repairs, but it did not substantiate that assertion. SPAWAR could not provide documentation of SOSUS cable defects, which AT&T identified at the Simplex facility, that justified the procurement of the AT&T quality assurance services. We requested that SPAWAR identify SOSUS cable manufacturing defects detected by AT&T but not detected by Simplex and DCMC that would have led to the malfunction of the SOSUS system or expensive at-sea repairs. SPAWAR identified only one defect. The defect led to a malfunction of SOSUS in late 1986 after the cable was deployed. However, documentation provided by Simplex showed that the defect was in a cable component design and had nothing to do with Simplex manufacturing processes. Further, at the time of the malfunction, AT&T was performing quality assurance services as it has

done since at least the early 1980s and continued to do at the time of the audit, but AT&T did not detect the defect that led to the malfunction. The quality assurance services do not add to the quality or performance of the SOSUS undersea cables. The SPAWAR practice of continuing contracts for unnecessary, duplicate quality assurance services as insurance against costly failures is not prudent.

Access to Contractor Specifications. SPAWAR believed in but was unable to support its position that the Government was not allowed access to the AT&T proprietary specifications necessary to perform quality assurance services. Simplex repaired and refurbished the SOSUS cable according to proprietary specifications developed and owned by AT&T. FAR Part 52.246, "Quality Assurance Provisions and Clauses," prescribing contractor quality assurance inspection requirements, is clear that the Government has the right to inspect and test all supplies and services that the contract calls for. The Government in-plant representative is not precluded from reviewing contractor proprietary specifications in performing such inspections and tests. During the audit, SPAWAR issued a statement reversing its original position regarding Government access to contractor specifications and agreed that the Government does have access to the proprietary specifications to perform necessary quality assurance inspections.

Acquisition Strategy. The SPAWAR acquisition strategy for the SOSUS program does not recognize the Simplex and DCMC capabilities to perform the required quality assurance services. While Simplex and DCMC were required to perform quality assurance, SPAWAR continued to plan procurements of the duplicate quality assurance services from AT&T. The SPAWAR contracts for refurbishment of the SOSUS cables required Simplex, as the prime contractor, to establish and maintain a quality assurance inspection system acceptable to the Government. SPAWAR delegated contract administration, including quality assurance, to DCMC. Continuation of the SPAWAR acquisition strategy of duplicative contracting is not consistent with recent DoD guidance that discourages duplicative activities and excessive oversight of contractors.

Simplex Quality Assurance Capabilities. Simplex established and had maintained a quality assurance system acceptable to the Government. The Simplex quality assurance system included comprehensive applied engineering, installation, and testing. The Simplex quality assurance system was certified to the International Organization for Standards 9000 series. The certification is the international standard for ensuring systematic quality control at every process of the manufacturing environment. Simplex applied quality control procedures to every step of the manufacturing process, including incoming materials inspection, in-process testing, control of measuring instruments, and final inspection. The Under Secretary of Defense for Acquisition and Technology authorized the use of the International Organization for Standards 9000 series as an alternative to MIL-Q-9858A, "Military Specification Quality Program Requirements."

DCMC Quality Assurance Capabilities. SPAWAR delegated contract administration, including quality assurance, to DCMC on contracts awarded to Simplex. The DCMC, as the Government contract administrator, ensured

contractor compliance with technical and quality requirements in assigned contracts. DCMC appropriately assigned qualified personnel to the Simplex facility to perform Government contract quality assurance. At our request, the cognizant DCMC office reviewed the AT&T quality assurance services in contract N00039-94-C-0004, the current cable management contract, to determine DCMC capabilities and identified all those services as normal quality assurance services. The on-site DCMC quality assurance personnel perform those quality assurance services as part of their delegated contract administration duties on Simplex contracts for SOSUS undersea cable refurbishment.

Acquisition Guidance. The SPAWAR acquisition strategy of procuring duplicative quality assurance services from AT&T contrasts with recent DoD guidance regarding duplicative activities and excessive oversight of contractors. Recent acquisition guidance stems from DoD contract administration reform and systems acquisition review and oversight processes. The guidance strengthens the decision to use the DCMC quality assurance oversight responsibilities. The Under Secretary of Defense for Acquisition and Technology issued a memorandum August 9, 1995, concerning technical representatives at contractor facilities. The memorandum discusses a finding of the process action teams chartered to examine contract administration reform and systems acquisition review and oversight processes. The teams reported an overlap between the duties performed by program office technical representatives at contractor facilities and personnel assigned to DCMC local offices. The teams attributed the reported overlap to:

- the perceived lack of a sufficiently trained and experienced cadre of technical experts within DCMC who can serve as the program managers' eyes and ears and

- the reluctance of program managers to rely on people over whom they have no control, who may not be accountable, and who may have other priorities.

The Under Secretary stressed that, if such overlap exists, it represents unnecessary duplicative activities, excessive oversight of contractors, and increased personnel costs. Further, whenever possible, program managers should make maximum use of DCMC personnel at contractor facilities. The assignment of technical representatives in contractor facilities will occur only as necessary and will be based on the mutual agreement of the respective manager and the Commander, DCMC. In those cases, technical representatives will not perform contract administration duties as outlined in FAR 42.302(a), "Contract Administration Functions." The SPAWAR acquisition strategy of contracting with AT&T for quality assurance services performed at the Simplex facility contrasts with the guidance that the Under Secretary issued.

Preaward Analyses. SPAWAR did not perform adequate preaward analyses of the need to procure AT&T quality assurance services. SPAWAR did not perform a risk analysis of the Simplex quality assurance program and the DCMC quality assurance oversight responsibilities. Before contract award, SPAWAR should have performed a structured and documented risk analysis to determine the need for AT&T quality assurance services and to identify any benefits of risk reduction, as prescribed by DoD Instruction 5000.2, "Defense Acquisition Management Policies and Procedures," February 23, 1991. If SPAWAR found no risks, it should have canceled the AT&T quality assurance services at Simplex. SPAWAR used an inadequate preaward market analysis to support the need for AT&T quality assurance services at the Simplex facility. Additionally, the Defense Contract Audit Agency questioned the SPAWAR practice of procuring quality assurance services from AT&T for SOSUS cable refurbishment at the Simplex facility.

Market Analysis. The market analysis that SPAWAR performed was not effective to determine whether sources within the Government were capable of performing the quality assurance services at the Simplex facility. SPAWAR Acquisition Plan 93-02, Section 5, "Business Considerations," subsection 5.2., "Interagency Cooperation," August 31, 1993, states that SPAWAR conducted a market analysis to consider capabilities of other Government agencies that have the potential to satisfy SOSUS operational needs. According to the Acquisition Plan, the market analysis included a survey of marketplace activities, technologies, and products available from other sources, including the Defense Logistics Agency. The Acquisition Plan stated that SPAWAR did not find capabilities within the Government that could meet SOSUS requirements procured from AT&T. SPAWAR also did not determine whether DCMC had the capability to perform the quality assurance services. SPAWAR was unable to provide documentation or reports to support its market analysis conclusions.

Defense Contract Audit Agency Report. The Defense Contract Audit Agency issued Audit Report No. 1281-6F 210 006/7, "Audit Report on Evaluation of Price Proposal No. 55007 CPFF RFP N00039-85-R-0334 (S) Case No. 002-5-a-40/197 Submitted by AT&T Technologies, Incorporated, Greensboro, North Carolina," July 31, 1985. The report questioned the SPAWAR practice of procuring quality assurance services from AT&T on the grounds of duplication, citing the Simplex obligation to provide the services as a prime contractor with the Government. SPAWAR provided no explanation or opinion regarding the report findings and no documentation to demonstrate that it considered the finding.

Quality Assurance Costs

SPAWAR identified the cost of the duplicate quality assurance services as $2.5 million from FYs 1990 through 1995 under the cable management contracts with AT&T. We estimate that SPAWAR will unnecessarily spend about $436,000 in FY 1996 for duplicate quality assurance services, based

on the current cable management contract N00039-94-C-0004. We reduced the FY 1996 amount by $40,000 to reflect the Navy comments on the draft report. Additionally, based on SPAWAR Acquisition Plan No. 93-02, August 31, 1993, we estimate that SPAWAR will unnecessarily spend an additional $1.41 million for duplicate quality assurance services from FYs 1997 through 2001. Appendix C summarizes the potential benefits of the audit.

Summary

SPAWAR did not support its reasons for the procurement of quality assurance services from AT&T for the SOSUS program. Simplex, as the prime contractor, and DCMC were already performing the quality assurance services. The SPAWAR practice of contracting for duplicate quality assurance as insurance against costly repairs did not prevent any documented SOSUS cable failures. Management should consider the costs, benefits, and low risks of failure based on historical performance of the SOSUS system before awarding a contract for Government quality assurance services. Management should consider the capabilities of the prime contractor and DCMC before contract award and should perform effective preaward analyses to prevent the procurement of duplicate quality assurance services. SPAWAR should cancel the quality assurance services procured from AT&T to avoid continuing the unnecessary expenditure of DoD appropriations.

Recommendations, Management Comments, and Audit Response

We recommend that the Commander, Space and Naval Warfare Systems Command:

1. Modify contract N00039-94-C-0004 to delete the quality assurance services performed by AT&T applicable to the refurbishment of Sound Surveillance System undersea cables.

Navy Comments. The Navy concurred, stating that it reduced the quality assurance effort on contract N00039-94-C-0004 to 1/2-staff year, about $40,000, for the remainder of FY 1996. The Navy indicated that the reduction reflects the minimum acceptable level of risk. The complete text of management comments is in Part III.

Audit Response. The Navy action meets the intent of the recommendation.

2. Discontinue the strategy of procuring additional quality assurance services from AT&T on contracts awarded to Simplex Technologies, Incorporated, for the refurbishment of Sound Surveillance System undersea cables.

Navy Comments. The Navy concurred, stating that it will not contract for quality assurance services after the completion of the FY 1996 effort.

Management Comments on the Monetary Benefits and Audit Response

Navy Comments. The Navy disagreed with the monetary benefits identified in the draft report. The Navy indicated that no monetary benefits would result because the FSS [Fixed Surveillance System] budget does not include $1.9 million for the contract quality assurance effort.

Audit Response. The Navy comments on the monetary benefits are nonresponsive. The SPAWAR Fixed Surveillance System budget is not relevant to the issue of the monetary benefits. The Fixed Surveillance System budget is a document used for program- and division-level planning. The appropriations budgeted for contract N00039-94-C-0004 are in the SPAWAR overall budget. The overall budget does not reflect a separate line item for the contract costs. However, the underlying documentation supporting the SPAWAR budget for FYs 1996 through 2001 reflect such costs.

The Navy actions in response to the draft report to reduce the duplicate quality assurance services from 3 and 1/2-staff years to 1/2-staff year for the balance of FY 1996 and the decision to not contract for the quality assurance services after FY 1996 will result in reduced contract costs to the DoD. We believe that the methodology we used to determine the estimated monetary benefits is still valid. However, we reduced the monetary benefits by $40,000 for FY 1996 to reflect the 1/2-staff year of quality assurance services that the Navy retained for the balance of FY 1996. We request that the Navy reconsider its position on the monetary benefits and provide additional comments on the monetary benefits in response to the final report.

Part II - Additional Information

Appendix A. Scope and Methodology

Scope and Methodology

Scope and Methodology. We reviewed the quality assurance requirements in 10 contracts, valued at $152 million, that SPAWAR awarded for the SOSUS program from calendar year 1985 through 1994. We also reviewed the SPAWAR acquisition strategy; cost proposals; preaward and postaward documentation; technical evaluations; statement of work requirements; data packages for the SOSUS program; and personnel documentation on the education, training, and experience of SPAWAR SOSUS program and contracting employees. We interviewed Navy, DCMC, and Defense Contract Audit Agency officials on procurement and contracting aspects of the SOSUS program. We evaluated Simplex, DCMC, and AT&T quality assurance efforts at the Simplex facility, Portsmouth, New Hampshire. Additionally, we interviewed AT&T and DCMC officials in Greensboro, North Carolina.

Audit Period, Standards, and Locations. We performed this economy and efficiency audit from January through December 1995 in accordance with auditing standards issued by the Comptroller General of the United States, as implemented by the Inspector General, DoD. Accordingly, we included tests of management controls considered necessary. We did not use computer-processed data or statistical sampling procedures for this audit. Appendix D lists the organizations we visited or contacted.

Management Control Program

DoD Directive 5010.38, "Internal Management Control Program," April 14, 1987, requires DoD organizations to implement a comprehensive system of management controls that provides reasonable assurance that programs are operating as intended and to evaluate the adequacy of the controls.

Scope of Review of Management Control Program. Our evaluation of management controls regarding DCMC allocation of quality assurance resources is discussed in Report No. 95-166, "Defense Contract Management Command Management of Quality Assurance Resources," April 11, 1995. Therefore, we limited the review of DCMC management controls for this audit to determining whether DCMC had contract administration authority and adequate resources to

perform quality assurance inspections on-site at the Simplex facility. We also reviewed SPAWAR management controls for procurement and contracting operations for the SOSUS program and SPAWAR self-evaluation of those management controls.

Adequacy of Management Controls. Management controls were deemed to be adequate in that we identified no material management control weakness as identified by DoD Directive 5010.38 relating to DCMC contract administration at Simplex or to the SPAWAR procurement and contracting functions. SPAWAR assigned contract administration to DCMC, and DCMC assigned adequate resources to perform Government contract quality assurance at the Simplex facility.

Summary of Prior Audits and Other Reviews

Since 1990, no prior audits or other reviews were made that discussed duplicate quality assurance services in contracts awarded by SPAWAR.

Inspector General, DoD, Report No. 95-166, "Defense Contract Management Command Management of Quality Assurance Resources," April 11, 1995, states that DCMC did not effectively manage quality assurance specialists to adequately implement the in-plant quality evaluation program. As a result, DCMC lacked the evaluation and supervisory processes needed to establish accountability for implementing quality assurance actions under the in-plant quality evaluation and the process-oriented contract administration services programs. Also, DCMC cannot ensure that the accepted products were produced under reliable processes that would consistently produce a conforming product without detailed examination of the manufacturing processes. The report recommended that the Defense Logistics Agency establish a system of accountability and measurement over implementation of process-oriented quality assurance. The Defense Logistics Agency did not agree with the recommendations. However, the Defense Logistics Agency implemented adequate alternative corrective actions.

Appendix B. Criteria Applicable to Procurement Offices, Prime Contractors, and Contract Administration Offices

The following criteria provide requirements that procurement offices are to follow when selecting a prime contractor. The criteria also identify the responsibilities of prime contractors and cognizant contract administration offices.

- FAR Part 9, "Contractor Qualifications," subpart 9.103(a), "Policy," states that purchases shall be made from, and contracts awarded to, responsible contractors. Subpart 9.104-1(e) and (f), "General Standards," defines a responsible prospective contractor as having, among other attributes, the necessary quality assurance measures and the necessary production, construction, and technical equipment applicable to materials to be produced or services to be performed. Additionally, FAR subpart 9.105-2(a), "Determinations," states that the contracting officer signature on a contract constitutes a determination that the prospective contractor is responsible with respect to that contract.

- FAR Part 42.302, "Contract Administration Functions," provides for the normal contract administration functions to be performed by the cognizant contract administration office. Subpart 42.302(a)(38) states that the cognizant contract administration office will ensure contractor compliance with contractual quality assurance requirements.

- FAR Part 46, "Quality Assurance," prescribes policies and procedures to ensure that supplies and services acquired under Government contract conform to the contract quality and quantity requirements. Contract quality requirements are the technical requirements in the contract relating to the quality of the product or service and those contract clauses prescribing inspection and other quality controls incumbent on the contractor. Subpart 46.102(c), "Policy," states that Government contract quality assurance is to be conducted before acceptance by or under the direction of Government personnel. Subpart 46.105, "Contractor Responsibilities," states that the contractor is responsible for carrying out its obligations under the contract. The contractor is also responsible for controlling the quality of supplies or services and providing to the Government only those supplies or services that conform to contract requirements. Additionally, the contractor is responsible for ensuring that vendors or suppliers of raw materials, parts, components, subassemblies, etc., have an acceptable quality control system.

- FAR Part 52.246, "Quality Assurance Provisions and Clauses," prescribes contractor quality assurance inspection requirements. That subpart requires the contractor to provide and maintain an inspection system acceptable to the Government. Further, the inspection clauses provide for the Government right to inspect and test all supplies and services called for by the contract, to the extent practicable, at all places and times, including the period of manufacture, and in any event before acceptance.

- Defense Federal Acquisition Regulation Supplement Subpart 242.74, "Technical Representation at Contractor Facilities," provides criteria for assigning a contracting officer's technical representative to contractor facilities. A contracting officer's technical representative is a representative of a DoD program, project, or system office performing noncontract-administration services technical duties at or near a contractor facility. That subpart states that contract administration offices are the designated representatives of DoD for the administration of contracts. DoD activities shall use contract administration offices to perform contract administration service functions at or near contractor facilities.

- SPAWAR Instruction 4200.26A, section 2.2.7., "Consulting Services," prescribes policy and procedures for acquiring consulting services. That instruction states that consulting services include services that provide management and professional support services; studies, analyses, and evaluations; and engineering and technical services. The services shall be obtained only on an intermittent or temporary basis; repeated or extended arrangements shall not be entered into except under extraordinary circumstances. Additionally, the instruction states that long-term reliance on contractor management and technical support may place the Command in the position of having unintentionally abrogated its management responsibilities.

- Defense Management Review Decision 916 directed that the contract administration services structure within DoD be reorganized and that virtually all DoD contract administration services be consolidated into a single organization. As a result, DoD established DCMC, a subordinate command within the Defense Logistics Agency, in February 1990. The DCMC provides worldwide contract administration services in support of the DoD Components, the National Aeronautics and Space Administration, and other designated Federal and international organizations.

Appendix C. Summary of Potential Benefits Resulting From Audit

Recommendation Reference	Description of Benefit	Amount and Type of Benefit
1.	Economy and Efficiency. Discontinues the unnecessary expenditure of DoD appropriations for contract N00039-94-C-0004.	$436,000 could be put to better use during FY 1996 to appropriation "Other Procurement, Navy."
2.	Economy and Efficiency. Prevents the expenditure of resources for unnecessary quality assurance services on future procurements.	$1.41 million put to better use during FYs 1997 through 2001 to appropriation "Other Procurement, Navy."

Appendix D. Organizations Visited or Contacted

Department of the Navy

Office of the Assistant Secretary of the Navy, Research, Development and Acquisition, Arlington, VA
Naval Sea Systems Command, Arlington, VA
Space and Naval Warfare Systems Command, Arlington, VA

Other Defense Organizations

Defense Contract Audit Agency, Fort Belvoir, VA
- Defense Contract Audit Agency, North Carolina Branch Office, AT&T Suboffice, Greensboro, NC
- Defense Contract Audit Agency, Mountainside Branch Office, Mountainside, NJ

Defense Logistics Agency, Fort Belvoir, VA
- Defense Contract Management Command Headquarters, Fort Belvoir, VA
  - Defense Contract Management District Northeast, Boston, MA
    - Defense Contract Management Area Operations Boston, MA
    - Defense Contract Management Office Manchester, NH
  - Defense Contract Management District South, Atlanta, GA
    - Defense Plant Representative Office AT&T, Greensboro, NC

Non-Government Organizations

AT&T, Greensboro, NC
Simplex Technologies, Incorporated, Portsmouth, NH

Appendix E. Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition and Technology
  Principal Deputy Under Secretary of Defense for Acquisition and Technology
    Director, Defense Logistics Studies Information Exchange
Under Secretary of Defense (Comptroller)
  Deputy Chief Financial Officer
  Deputy Comptroller (Program/Budget)
Deputy Under Secretary of Defense (Acquisition Reform)
Assistant to the Secretary of Defense (Public Affairs)

Department of the Army

Auditor General, Department of the Army

Department of the Navy

Assistant Secretary of the Navy (Financial Management and Comptroller)
Assistant Secretary of the Navy (Research, Development, and Acquisition)
Commander, Space and Naval Warfare Systems Command
Auditor General, Department of the Navy

Department of the Air Force

Assistant Secretary of the Air Force (Financial Management and Comptroller)
Auditor General, Department of the Air Force

Other Defense Organizations

Director, Defense Contract Audit Agency
Director, Defense Logistics Agency
  Commander, Defense Contract Management Command
Director, National Security Agency
  Inspector General, National Security Agency

Non-Defense Federal Organizations

Office of Management and Budget
Technical Information Center, National Security and International Affairs Division, General Accounting Office

Chairman and ranking minority member of each of the following congressional committees and subcommittees:

Senate Committee on Appropriations
Senate Subcommittee on Defense, Committee on Appropriations
Senate Committee on Armed Services
Senate Committee on Governmental Affairs
House Committee on Appropriations
House Subcommittee on National Security, Committee on Appropriations
House Committee on Government Reform and Oversight
House Subcommittee on National Security, International Affairs, and Criminal Justice, Committee on Government Reform and Oversight
House Committee on National Security

Part III - Management Comments

Department of the Navy Comments

DEPARTMENT OF THE NAVY
OFFICE OF THE ASSISTANT SECRETARY
(Research, Development and Acquisition)
WASHINGTON, D.C. 20350-1000

MAR 19 1996

MEMORANDUM FOR DEPARTMENT OF DEFENSE INSPECTOR GENERAL

Subj: DRAFT REPORT ON THE AUDIT OF QUALITY ASSURANCE ON NAVY CONTRACTS FOR UNDERSEA CABLE SYSTEMS (PROJECT NO. 5CF-0018.01)

Ref: (a) DoDIG memo of Draft of 25 January 1996

Encl: (1) Department of the Navy Comments

We have reviewed the draft audit report results and recommendations provided by reference (a).

Now that Defense Contract Management Command (DCMC) will be responsible for on-site quality assurance inspections at the Simplex facility the quality assurance effort provided by AT&T has been reduced to one half staff year. The Space and Naval Warfare Command (SPAWAR) will not contract for these services after the completion of the FY-96 effort.

SPAWAR is currently negotiating a Memorandum of Understanding (MOU) with DCMC to transition the quality assurance oversight responsibility by FY-97.

Detailed response to the recommendations and additional comments are provided in enclosure (1).

W. C. BOWES
Vice Admiral, U.S. Navy
Principal Deputy

Copy to:
SPAWAR

Final Report Reference

DEPARTMENT OF THE NAVY RESPONSE
to
DODIG DRAFT REPORT OF 25 JANUARY 1996
on

Quality Assurance on Navy Contracts for
Undersea Cable Systems
Project No. 5CF-0018.01

Recommendation A.1:

Recommend the Commander, Space and Naval Warfare Systems Command modify contract N00039-94-C-0004 to delete the quality assurance services performed by AT&T applicable to the repair and refurbishment of Sound Surveillance Systems undersea cables.

Department of the Navy Response:

Concur in principle. Repair of the SOSUS underseas cable is completed under contract with AT&T while refurbishment of the cables is completed under contract with Simplex. Revised

In order to preserve the integrity of the SOSUS program, SPAWAR contracted with AT&T for quality assurance services at Simplex. Now that DCMC is developing qualified personnel to perform the function, the AT&T effort has been reduced to one half staff year through FY-96. The Navy believes that the expenditure of $40,000 for the FY-96 quality assurance efforts was necessary to cover the minimum acceptable level of risk. When DCMC assumes full quality assurance responsibility commencing in FY-97, no additional quality assurance services will be acquired from AT&T.

Recommendation A.2:

Recommend the Commander, Space and Naval Warfare Systems Command discontinue the strategy of procuring additional quality assurance services from AT&T on contracts awarded to Simplex Technologies, Incorporated, for the repair and refurbishment of Sound Surveillance System undersea cables.

Department of the Navy Response:

The Navy concurs. The Navy does not intend to procure these services from AT&T once DCMC assumes full quality assurance responsibility.

Final Report Reference

DEPARTMENT OF THE NAVY ADDITIONAL COMMENTS
on
DODIG DRAFT REPORT OF 25 JANUARY 1996
on
Quality Assurance on Navy Contracts for
Undersea Cable Systems
Project No. 5CF-0018.01

Finding (page 4, para 1, sentence 3): SPAWAR "could not support its reasons for procuring the duplicative services from AT&T."

Department of the Navy Response:

Revised

The Navy did not procure duplicate quality assurance services for the "repair" of SOSUS undersea cables. The undersea cable repair effort that supports the sea operations of the Fixed Surveillance System (FSS) Program is not contracted to Simplex. The Navy did however procure quality assurance services for the "refurbishment" of SOSUS undersea cables.

The Navy's rationale for procuring quality assurance services from AT&T was discussed at length with the audit team at every meeting and further addressed in SPAWAR Memo of 6 July 1995 (**Attachment A**). In that memorandum we elaborated that additional checks and balances were prudent to meet the Integrated Undersea Surveillance System (IUSS) high level of product quality that supports the program's twenty year reliability objective.

The success of the SOSUS program is a testimony to the effectiveness of these additional checks and balances. The Navy can ill afford the risk or exceptionally high repair bill of even one undetected fault once the cable is deployed. Repairing faults at sea is expensive and until faults are repaired, critical national surveillance intelligence is lost.

The criteria for selecting AT&T to perform quality assurance function was twofold; (1) to provide engineering service, and (2) to provide an additional quality check in addition to those defined in Simplex's contract. AT&T has been an essential element of the team, whose success is measured by one single fact: manufacturing and system integration non-conformities have been virtually eliminated as a cause of faults for installed systems.

The quality assurance oversight provided by AT&T at Simplex is not restricted to cable production. AT&T engineering sevices include all aspects of cable production, system assembly, refurbishment, and handling and loading as required in paragraph 3.6 of the Statement of Work in the Undersea Cable Systems Engineering Contract:

> The Contractor shall provide resident undersea cable inspectors at the Simplex ... Plant to

Final Report Reference

perform audit inspection of raw materials, Government furnished equipment, and manufacturing, testing and handling processes throughout manufacture and cable ship loading of production cable.

DCMC was unable to adequately oversee the required quality assurance oversight function at Simplex in the past. As noted by AT&T, prior to June 30, 1995, DCMAO had no involvement in the particular process addressed, and "relied solely on AT&T USQA expertise and knowledge."

Also, as stated in your reference to DoDIG Report No. 95-166, "...DCMC did not effectively manage quality assurance specialists to adequately implement the In-Plant Quality Evaluation Program. As a result, DCMC lacked the evaluation and supervisory processes needed to establish accountability for implementing quality assurance actions under the in-plant quality evaluation and the process-oriented contract administration services programs."

Although corrective measures have since been implemented, your report corroborates that DCMC was not prepared to adequately oversee this function at that time.

Finding (Page 4, para 1, subpara 1): SPAWAR "believed that they needed AT&T quality assurance services as insurance against costly undersea cable failures;" and **Finding (Page 6, para 2, sentence 1:** SPAWAR "believed in but could not substantiate the need for AT&T quality assurance services as insurance against costly failures.." Page 6, para 1.

Department of the Navy Response:

The quality assurance services provided by AT&T were required as insurance against costly undersea cable failures. The Navy has reviewed the qulaity assurance procedures and determined the approach taken was optimal under the circumstances at the time. Quality policies and procedures were established over 30 years ago and were appropriately procured to ensure successful program execution, many years prior to DCMC assuming the quality assurance oversight responsibility.

Due to the age of the cable technology and the non-availability of government personnel on site at Simplex until Fixed Distributed Systems (FDS) fiber optic cable production began in the early 1990s, oversight by knowledgeable AT&T personnel during that period minimized costly undersea cable repairs.

The program office has reduced the effort from three and one half staff years to the current one half staff year.

Finding (Page 4, paragraph 1, subpara 2): SPAWAR "believed that

Final Report Reference

the Government did not have access to the AT&T proprietary specifications that the Government needed to perform the quality assurance services;"

Department of the Navy Response:

Attachment A clarified the Navy's position with regard to Government's access to AT&T proprietary data. AT&T letter dated 19 January 1996, **Attachment B**, clarifies the Government does have access to the AT&T proprietary data "for review but not for copying and retention." As a result, the government's ability to perform all quality assurance oversight functions is curtailed.

One of the functions impacted by the handling of proprietary data is source inspection. This requirement has historically been performed by AT&T because of the need to have immediate access to the proprietary data on site at suppliers' locations.

Finding (Page 4, para 1, subpara 3): SPAWAR "did not perform adequate pre-award analyses to prevent procurement of duplicate quality assurance services;"

Department of the Navy Response:

The proper time for requirements analysis is prior to or concurrent with statement of work preparation.

The cable technology under review is over 30 years old. Based on the synopsis published in the Commerce Business Daily (CBD) and other market analysis, Simplex was the only source interested in providing the cable and the only one with the facilities and experience required. Given those considerations, the Government's only alternative was to augment Simplex processes that were identified as being less than optimal. AT&T personnel used were those with expertise gained during the cable development period and with access to AT&T corporate personnel, capable of addressing all aspects of the procured cable production and technology.

Revised

Finding (Page 4, para 2): "...SPAWAR unnecessarily spent $2.5 million from FYs 1990 through 1995, and may spend an additional $1.9 million from FYs 1996 through 2001 for duplicate quality assurance services..."

Department of the Navy Response:

Preventing cable faults is impossible to prove; however, if the $2.5M investment in FYs 1990 through 1995 prevented even one faulty cable from being installed during the six year period, the decision was a wise one. The nominal cost to repair one cable fault can range between $1-3M as stated in Attachment A. In Attachment C we provided a specific example of costs amounting to $4M to recover, repair/refurbish and re-install an array that

suffered a casualty in 1986.

Out year financial information related to this effort was neither requested of the Navy nor provided by the Navy prior to the Draft DoDIG report being finalized. The FSS budget does not include $1.9M for this effort.

DEPARTMENT OF THE NAVY
SPACE AND NAVAL WARFARE SYSTEMS COMMAND
ARLINGTON VA 22245-5200

IN REPLY REFER TO

6 July 1995

MEMORANDUM FOR INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
PROGRAM MANAGER
Mr. CHARLES HANSHAW

SUBJECT: AUDIT OF QUALITY ASSURANCE ON NAVY CONTRACTS FOR UNDERSEA CABLE SYSTEMS (PROJECT NO. 5CF-0018)

Ref: (a) DOD Inspector General Memo of 20 June 1995

1. This memorandum responds to reference (a).

Background

2. The current cable management contract (N00039-94-C-0004) is for the procurement of undersea cable systems engineering services. The contractor is to provide engineering efforts that include project planning, project management, system configuration and transmission engineering, manufacturing engineering, advance engineering planning, source inspection and feasibility studies for undersea cable systems. This contract was awarded in accordance with SPAWAR Acquisition Plan 93-02 prepared IAW applicable provisions of the FAR, DFAR, and NAPS. The following is confirmation and amplifying remarks on the four "reasons" listed in the referenced memorandum:

Discussion

3 Clarification of reasons for procuring quality assurance from AT&T:

Statement: Simplex Technologies, Inc. ability to produce a quality product without AT&T quality assurance oversight is doubtful.

Clarification: SIMPLEX Technologies, Inc. has a long and outstanding record in the field of manufacturing quality cable products for both Government and commercial applications. The point that we have previously tried to convey is that SIMPLEX is not perfect, and in order to meet the IUSS high level of product quality that supports the program's twenty year reliability objective, additional checks and balances are prudent. Even one fault gone undetected could result in a nominally $1-3M repair bill once the cable is deployed. The success of the SOSUS program is a testimony to the effectiveness of these additional checks and balances.

ATTACHMENT A 1 OF 4

SUBJECT: AUDIT OF QUALITY ASSURANCE ON NAVY CONTRACTS FOR UNDERSEA CABLE SYSTEMS (PROJECT NO. 5CF-0018)

Statement: Defense Contract Management Command (DCMC) quality assurance personnel are not qualified and cannot perform the quality assurance functions that SPAWAR contracted to AT&T.

Clarification: DCMC personnel are qualified to perform quality assurance functions, specifically, product inspection for contract compliance, for which they are contracted. The AT&T representative provides immediate, on-site engineering services to correct/address deficiencies identified and minimize production/load-line impact and downtime. In addition, due to his extensive experience in cable production, the on-site representative also provides additional QA inspection backup which further reduces the risk of a fault going unnoticed. As mentioned in paragraph one, we cannot afford the exceptionally high repair bill for a fault which is not detected until the cable is deployed. Although our level of effort is approximately one staff year, that effort includes pieces of all of the AT&T staff along with their open and direct interface with AT&T corporate R&D and Manufacturing.

Statement: DCMC never communicated to SPAWAR that DCMC quality assurance personnel are capable of performing quality assurance functions at the Simplex plant to protect the government's interests.

Clarification. We appreciate that the DCMC quality assurance personnel perform excellent quality assurance functions at the SIMPLEX plant to protect the Government's interests. We also feel that we have a very good relationship with the DCMC personnel at SIMPLEX and that both the DCMC and AT&T team work well together in ensuring that a perfect product leaves SIMPLEX. As a result there has been no reason to question DCMC's quality assurance functions or capability and thus no communication.

Statement: DCMC quality assurance personnel do not have the authority to review or have access to AT&T proprietary specifications to adequately perform necessary quality assurance functions

Clarification: We should have expanded the thought in our written response of 19 June 1995 that dealt with the issue of proprietary specifications. SPAWAR contracts reference AT&T "FE" Specifications that were developed at Government expense, and in the "flow down" of referenced documents, reference is made to the AT&T "KS" material specifications. By definition, the DCMC personnel should be

SUBJECT: AUDIT OF QUALITY ASSURANCE ON NAVY CONTRACTS FOR UNDERSEA CABLE SYSTEMS (PROJECT NO. 5CF-0018)

provided access to these documents. Further checking has revealed that, when requested, the "KS" material specifications are made available for review but not for copying and retention. We have no reason to believe that this arrangement has not proven to be workable over the years. Accessibility to material specifications is a very small part of the overall manufacturing process. SIMPLEX, AT&T and DCMC have over the years developed a routine that satisfies the AT&T concerns of protecting proprietary specifications and at the same time have worked together to deliver a quality product.

4. The criteria for selecting AT&T to perform a Quality Assurance function is two fold; (1) to provide engineering service, (2) to provide an additional quality check in addition to those defined in the contract with Simplex. Repairing faults at-sea are not only expensive, but until they are repaired critical national surveillance intelligence is lost. Depending on the fault location, information for a significant portion of an ocean basin may be lost. It is critical to eliminate production nonconformities as a possible source of faults. AT&T brings a unique perspective to the quality assurance team. As the prime contractor for IUSS nodes and repeaters and installer of undersea systems, they bring an over-arching view of the process. Nodes, repeaters and cable must all integrate together smoothly to function as an installed system. The AT&T representative provides immediate, on-site engineering services to correct/address deficiencies identified and minimize production/load-line impact and downtime. In addition, due to his extensive experience in cable production, the on-site representative also provides additional QA inspection backup which further reduces the risk of a fault going unnoticed. AT&T is a critical element of the team, whose success is measured by the fact that manufacturing and system integration nonconformities have been virtually eliminated as a cause of faults for installed systems.

Conclusion

5. We have attempted, in writing, to confirm the accuracy of the above listed "reasons"; tried to expand our rationale and provide clarification where appropriate; and have provided the acquisition authority for the current contract. We have examples of various SIMPLEX manufacturing discrepancies that have occurred over the years; however, these discrepancies are part of each individual contract execution and are a matter of record at SIMPLEX.

A 3 OF 4

SUBJECT: AUDIT OF QUALITY ASSURANCE ON NAVY CONTRACTS FOR UNDERSEA CABLE SYSTEMS (PROJECT NO. 5CF-0018)

6. AT&T provides an invaluable engineering service that does not exist anywhere within the Government. Their services are but a small piece of the overall effort that is required to deploy and maintain underwater systems. We believe that the combination of AT&T's engineering expertise and DCMC's quality services provide the best possible resource to support the requirements of the SOSUS Program Office.

D. R. ANDERSON
By direction

AT&T

Gerald W. Hyatt
Program Manager
Integrated Undersea Surveillance Systems
Advanced Technology Systems

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P. O. Box 26124
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910 279-6222
FAX: 910 279-6060

January 19, 1996

COMMANDER
SPACE AND NAVAL WARFARE SYSTEMS COMMAND
2451 CRYSTAL DRIVE
ARLINGTON, VA 22245-5200

Attention: CAPT D. Anderson, PMW 181

Subject: Use of AT&T "KS" Specifications for U.S. Navy Programs

A number of questions have been asked regarding the use of AT&T proprietary specifications for the manufacture of undersea cable systems for the government. I would like to clarify AT&T's position regarding the use of these specifications.

To a large extent, previous generations of SOSUS undersea technologies have capitalized on development efforts paid for at private expense within the commercial telecommunications industry. For example, the coaxial cables used in the SB, SD-C, and LUSC systems were originally developed for commercial use. Those designs, and the material specifications that were a part of the design, were captured in AT&T drawings typically referred to as "KS-Specs" or "MS-Specs." AT&T allowed the use of these specifications for the procurement of Government systems for a nominal fee to the supplier or free of charge. This represented a significant cost saving for the government.

Most recently, UWS cables were designed by AT&T at government expense. Although the cable designs themselves were funded by the government, the development and production did capitalize on AT&T's privately funded development of materials for undersea applications. In doing so, the government avoided the expense of developing and qualifying materials on their own. AT&T licensed the use of "KS Specs" to the government's suppliers at no cost.

It is AT&T's opinion that all specifications developed at our private expense are the sole property of AT&T. While we have allowed use of these specifications for procurement of undersea systems by the government, AT&T has retained full ownership of and rights to this proprietary intellectual property. These technical specifications were developed within another business unit at AT&T. We have their consent to allow use of the specifications by the government's supplier provided that the specifications are not delivered to any government agency.

ATTACHMENT B 1 OF 2

CAPT D. ANDERSON 2.

I have attached a copy of a letter sent to our AT&T source inspection supervisor at Simplex Technologies in September 1993. The letter helps clarify our position and demonstrates the guidance that we have disseminated to appropriate people within AT&T that use AT&T proprietary information on our government projects. Over the years we have developed and maintained a good working relationship with SPAWAR personnel, DCMAO personnel, and Simplex Technologies. To my knowledge the position that we have taken regarding these proprietary specifications has never inhibited the execution of our projects at any of your cable suppliers. We have and will continue to work through any issues on a case by case basis to ensure that the government's lack of access to these specifications does not impede your ability to execute your programs.

If you have any questions regarding the content of this letter or its attachments, please contact me at (910) 279-6222.

Sincerely,

G. W. HYATT
Program Manager
Integrated Undersea Surveillance Systems

Attachment

Copy to:
C. Knight - PMW 181C
D. Taylor - PMW 181-3
M. Thompson - PMW 181-32

DEPARTMENT C
SPACE AND NAVAL WARFAI
ARLINGTON VA

FAX TRANSMITTAL

To Charles Hanshaw, Jeffrey Lynch, Taylor McCutcheon	From David Taylor
Dept./Agency DoD IG	Phone # 602 8994
604-9204	Fax # 602 1545

NSN 7540-01-317-7368 5099-101 GENERAL SERVICES ADMINS

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MEMORANDUM FOR INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
PROGRAM MANAGER
Mr. CHARLES HANSHAW

Subj: AUDIT OF QUALITY ASSURANCE ON NAVY CONTRACTS FOR UNDERSEA CABLE SYSTEMS (PROJECT NO. 5CF-0018)

Ref: (a) Meeting btwn Mr. Hanshaw and Mr. Lynch, Inspector General and Mr. Taylor, SPAWAR PMW 181 of 6 July 1995

1. This memorandum responds to an issue raised during reference (a) regarding the costs of underwater repairs.

2. In late 1986, array 7116 suffered a casualty. Upon recovery and inspection at the factory, the cause of the fault was determined to be the result of the manufacturing process and not caused by any external factor effecting the array after installation.

3. This array provides critical intelligence locating data on targets of interest. The information was lost for approximately three months, the time it took to retrieve, repair/refurbish and re-install the array.

4. Listed below are the costs to recover, repair/refurbish and re-install the array. Two costs are reflected, the costs incurred in FY-87 dollars and the adjusted costs for FY-95 dollars (inflation rate of 3% per annum was used for AT&T and Simplex costs, the current USNS ZEUS per diem rate was used for FY-95 USNS ZEUS costs).

	FY-87 Dollars ($K)	FY-95 Dollars ($K)
AT&T Labor costs	$689	$873
Simplex Costs	$26	$32
Ship Per Diem costs	$2,045	$3,096
Total	$2,760	$4,001

5. Obviously, repairing manufacturing discrepancies which cause faults in installed systems is an expensive process, not only in terms of dollar costs but also in terms of the loss of vital intelligence data. Therefore the program office has put a premium on layered quality assurance to eliminate the manufacturing process as the source of faults on installed systems.

D. Taylor
PMW 181-3
By direction

ATTACHMENT C

Audit Team Members

This report was prepared by the Contract Management Directorate, Office of the Assistant Inspector General for Auditing, DoD.

Paul J. Granetto
Joseph P. Doyle
Charles M. Hanshaw
Jeffrey L. Lynch
Joyce S. McCutcheon
Robin A. Hysmith