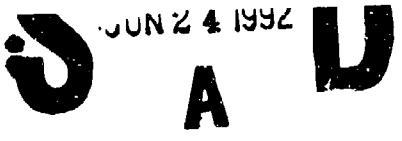
Naval Command,
Control and Ocean
Surveillance Center

TD 2210
February 1992



Sti handbook

A Handbook for Navy Scientists and Engineers on the Use of Scientific and Technical Information

STI HANDBOOK:

Guidelines for Producing, Using, and Managing Scientific and Technical Information in the Department of the Navy

A Handbook for Navy Scientists and Engineers on the Use of Scientific and Technical Information

1 February 1992

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Ocean Surveillance Center
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Prepared for the Office of Navy Technology

NAVAL COMMAND, CONTROL AND OCEAN SURVEILLANCE CENTER

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Commanding Officer

R. T. SHEARER
Executive Director

ADMINISTRATIVE INFORMATION

This document was prepared in response to requests for guidelines by Navy scientists and engineers for preparing, using, and managing scientific and technical information. The document was prepared by the Technical Information Division of the Naval Command, Control and Ocean Surveillance Center's RDT&E Division for the Office of Naval Technology.

Released by
H. M. Blanchard, Head
Technical Information
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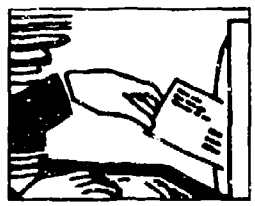
CONTENTS



Appendices

INTRODUCTION

Purpose of Handbook

Numerous and complex regulations govern scientific and technical information (STI). To help you understand these regulations and how they impact your work, the Office of Naval Technology had this handbook prepared. STI regulations—both the Navy's and DoD's—have been explained in the context of how STI is managed within the Department of the Navy.

The information in this handbook is based on the concept that scientific and technical information is part of the entire RDT&E process. You, as a Navy scientist or engineer, are involved with STI from the conceptual phase of your project until its transfer as an operational system.

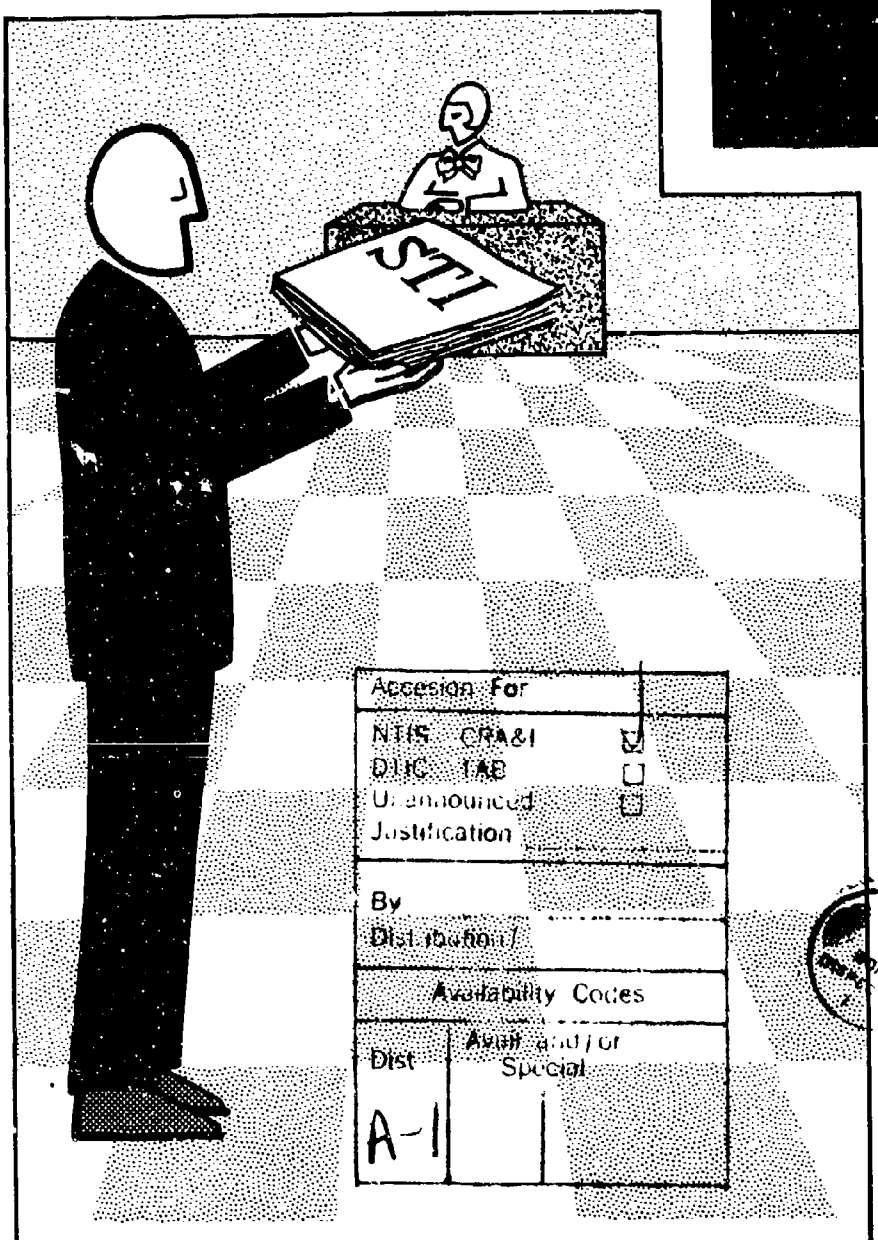
As a scientist or engineer, you must make daily decisions about your work. You are responsible for the quality of your work and for the accuracy of the information you produce. Some of these decisions involve scientific and technical information. This handbook is a reference guide to help you resolve issues concerned with STI.

Overview of the Navy's STI Program

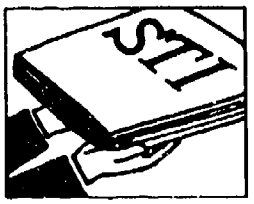
The Navy operates its scientific and technical information program (STIP) to

- Assist Navy scientists and engineers in their work.
- Ensure that scientific and technical information provides the maximum contribution to advancing science and engineering.
- Expeditiously, effectively, and efficiently conduct and manage Navy research, engineering, and studies.
- Eliminate unnecessary duplication of resources and efforts.
- Encourage and expedite the exchange and use of STI.

To accomplish these goals, the Navy has established a variety of STI services, for example, technical libraries, publications groups, and security offices. To obtain maximum benefit from your activity's STI services, contact your activity's STI focal point, who will provide assistance on managing STI at your local activity.



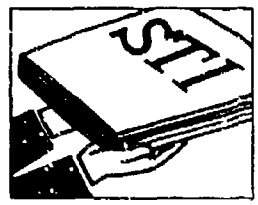
Publishing, Distributing, and Reviewing Scientific and Technical Information



CHAPTER I

Publishing, Distributing, and Reviewing Scientific and Technical Information

Illustrations



PART 1
NAVY REQUIREMENTS CONCERNING PUBLICATIONS

What are the Navy's requirements concerning publications? When is a publication required? What types of publications are acceptable? What types of information belong in a publication?

What Does the Navy Require?

The Navy has four major requirements (figure 1) that concern publishing the results of work funded with research, development, test, and evaluation (RDT&E) funds:

> The results of RDT&E-funded work must be published. This includes both work done by Navy scientists and engineers and work done by Navy contractors (both those in industry and academia). Specifically, Navy scientists and engineers are required to
>
> > Ensure that all significant scientific or technological observations, findings, recommendations, and results derived from DoD endeavors, including those generated under contracts or grants that are pertinent to the DoD mission, contribute to the DoD, or national scientific or technological base are recorded as technical documents.
>
> Both positive and negative results must be published.

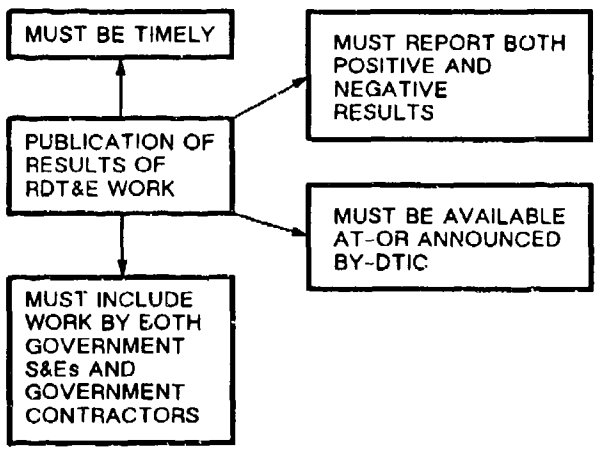


Figure 1. Navy requirements for technical publications.

Publications must be completed in a timely manner, usually within 6 months of the conclusion of the work or within 6 months of a significant scientific or technological observation.

The publication must be retrievable from—or announced in—the Defense Technical Information Center (DTIC).[1] This means that the publication is either available to qualified users through DTIC or its availability has been announced by DTIC.

What Types of Information Should Be Published?

In determining whether you should publish information, the best guideline to follow is to publish any information that can be used outside your activity.

Generally, this includes information that

Increases knowledge of natural phenomena and the environment.

Solves problems in the physical, behavioral, social, and management sciences.

Expands knowledge in scientific areas.

Extends theoretical, practical, and useful applications of basic designs, ideas, and scientific concepts.

Documents the procedures and results of subjecting systems, items, material, personnel, or techniques to simulated or actual operational conditions to determine characteristics, suitability, and compliance with specific requirements.

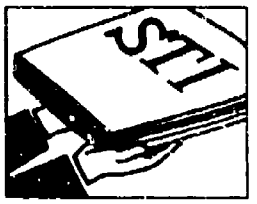
Provides values, appraisals, or results relevant to strengths, weaknesses, feasibility, potential, and military worth of efforts, concepts, or hardware.

Why Are Publications Necessary?

Your publication provides value both to your organization and to the Navy, assists the scientific and engineering community (government, industry, and academia), and increases your stature as a scientist or engineer (figure 2). For example:

One of the main products of Navy RDT&E work is information. The Navy performs basic and applied research, develops software and weapons systems, and tests and evaluates equipment and systems. One of the basic "products" of this work is information—whether it is a research report, a specification, a safety plan, a drawing, or a technical manual. As a product, it must be made available in the form of a

[1] DTIC is DoD's database for results of government-sponsored RDT&E.



publication that is available to organizations and individuals who can use the information.

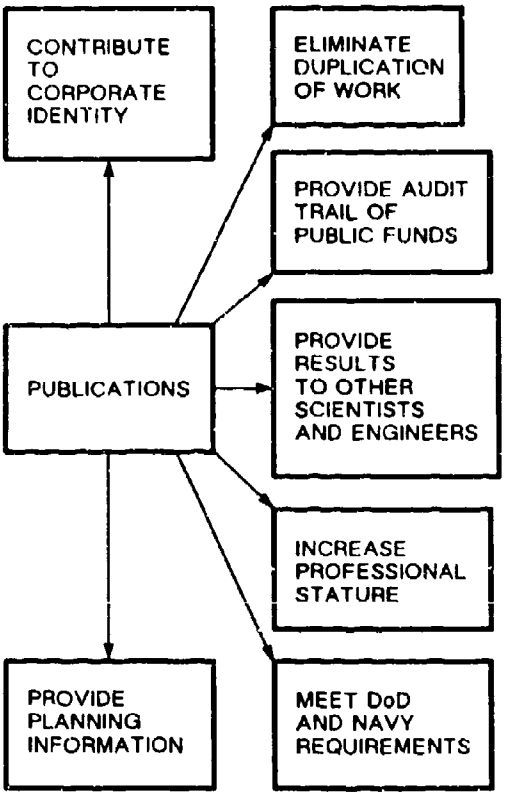


Figure 2. Why publications are necessary.

Duplication of work is eliminated because the results of your scientific and technical work are made known to scientists and engineers in other government agencies, industry, and academia. Duplication of work causes loss of research dollars, and DoD considers this to be a waste of resources and a matter to be investigated by an inspector-general.

An audit trail of how public funds have been spent is provided. Because your publication has been reported to DTIC, a permanent record of the results of the Navy's expenditure of public funds is maintained.

Publications also contribute to the "corporate" identity of your organization. Professional publications that are technically accurate, complete, and timely reflect the image of your organization. In fact,

they are often the only products seen by high-level military personnel and Congressional groups.

Publication of technical work is a fundamental precept in the scientific and engineering profession. As such, it attests to the professionalism of your organization and your professionalism as a scientist or engineer. To advance professionally, you must publish the results of your work so others in your professional area are aware of your work.

The technical information provided in publications helps Congressional committees and DoD activities plan how to allocate funding for research and development and determine what activities should receive funding. As a concomitant, lack of published technical results will decrease available funding.

What Types of Publications Meet Navy Requirements?

As a Navy scientist or engineer or as a Navy contractor, you have several options for preparing your publication. The most common types of publications (figure 3) are

In-house publications

Articles in journals, textbooks, and handbooks

Articles in the published proceedings of a symposium

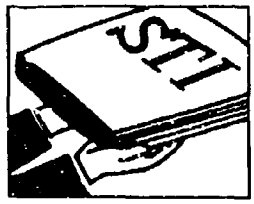
WHAT ARE IN-HOUSE PUBLICATIONS? In the Navy community, there are many types of in-house publications, e.g., technical reports, technical documents, technical notes, technical publications, or technical memoranda. The common denominators of these publications are (1) sequential numbering and (2) submission to DTIC.

WHAT ARE ARTICLES IN JOURNALS, TEXTBOOKS, AND HANDBOOKS? Included in this category are scientific or technical journals or books that are published by commercial sources and are available to the general public. Also included are classified journals.

WHAT ARE PUBLISHED PROCEEDINGS? This category includes the published proceedings of a formal conference, meeting, or symposium. These proceedings, which are usually published by the organization sponsoring the conference, contain the material presented at the conference.

What Publishing Option Should Be Used?

Any type of publication can be used to document your work, if the publication is either sent to—or announced through—DTIC.



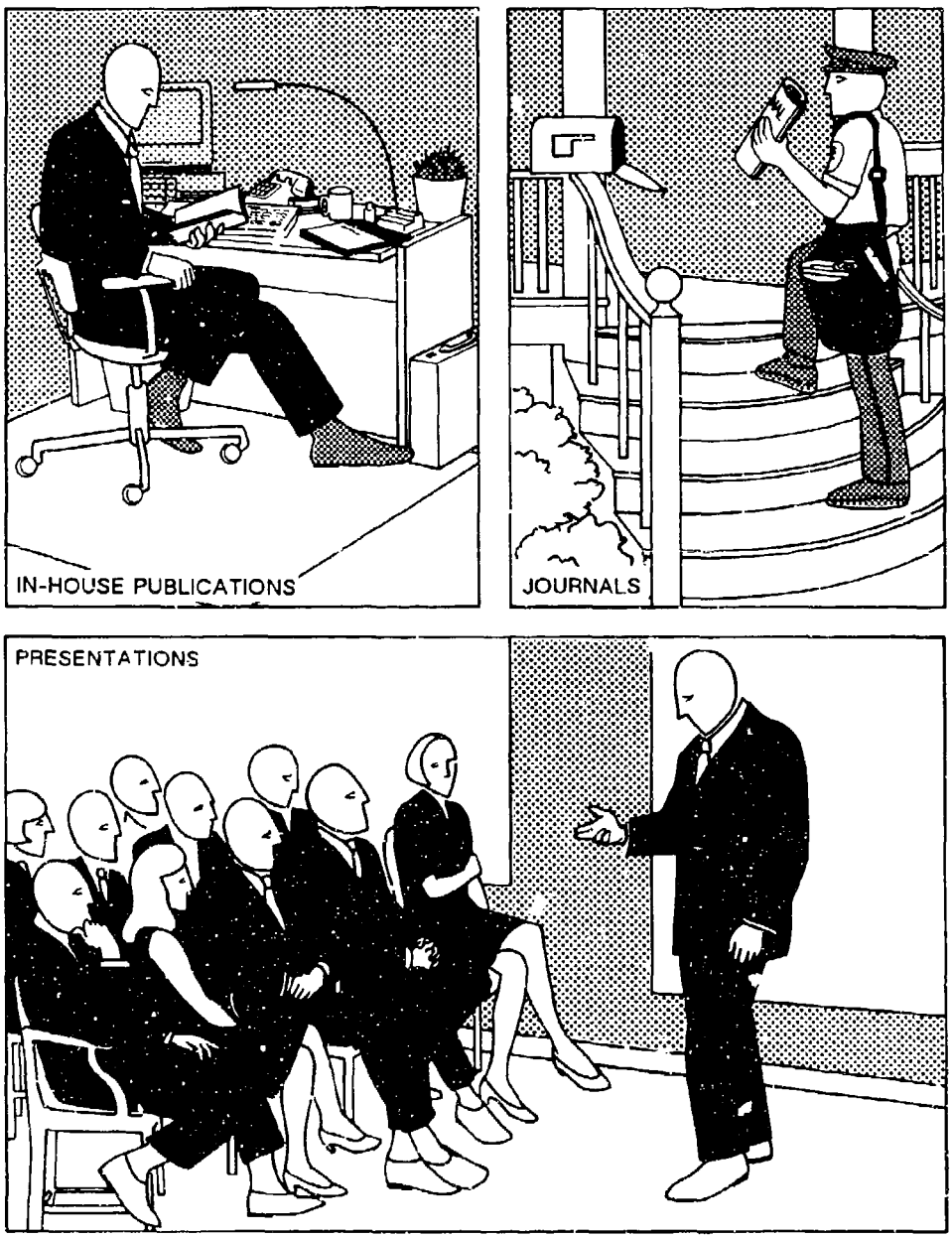


Figure 3. Types of publications.

You can use the following criteria (figure 4) to help you determine which type of publication should be used:

If the work is classified or if the work is unclassified with a limited distribution statement (distribution statements B through F and X),[2] you must publish by using an in-house publication, an article in a classified journal, or a presentation at a meeting, symposium, or conference where attendance is limited to those with a need-to-know.

If the work is unclassified and unlimited in distribution (distribution statement A), you can publish by any method, e.g., a journal, textbook, handbook, in-house publication, or presentation.

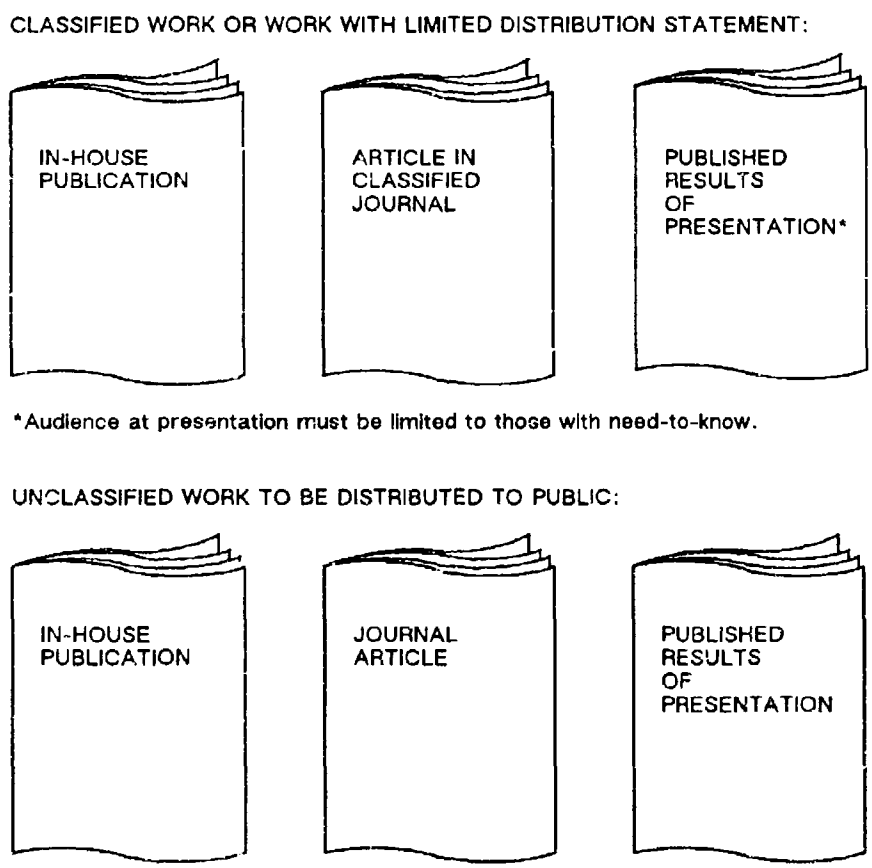
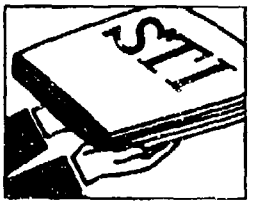


Figure 4. Selection of publishing option.

[2] See appendix A.



What Are My Responsibilities as a Navy Employee?

As a Navy employee, your responsibilities in this area include the following:

As a scientist or engineer:

To publish the results of your work—both positive and negative.

To budget for your publications.

As a contracting officer's technical representative:

To ensure that the results of contract work are published. (Acquisition regulations require that contractors provide publications, consistent with the objectives of the effort involved, as a permanent record of the work accomplished under the contract.)

To review publications delivered by your contractor to determine if the publications should be sent to DTIC.

To include applicable data item descriptions (DIDs) for publications in the contract.

To ensure that contractors are aware of their responsibilities.

As a manager or supervisor:

To ensure that your scientists and engineers publish the results of their work and that of their contractors.

As a project manager:

To ensure that the results of your project are published.

To budget for and fund publications.

To coordinate your project's publications requirements.

PART 2
DISTRIBUTION OF PUBLICATIONS

How are publications distributed? What is primary distribution? How is it performed? Who does the Navy's secondary distribution? How are foreign requests handled? How are publications sent to DTIC? Do publications always have to go to DTIC? How does the public get a copy of a Navy publication?

What Are the Basic Guidelines for Distributing Publications?

Except for those copies of publications that must be sent to the Defense Technical Information Center (DTIC), determining what organizations receive a publication is the responsibility of the preparing or sponsoring office.

When determining who should receive copies of your publication, remember to

Limit recipients of both classified and unclassified, limited-distribution publications to personnel with a "need-to-know" and appropriate security clearances.

Have all publications properly reviewed to assign the correct distribution statement, determine the classification level, and verify the technical adequacy.

What Is Primary Distribution?

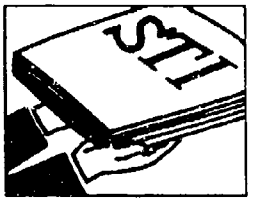
Primary distribution is the initial distribution (both internal and external) of publications, i.e., those copies of publications that are distributed immediately after printing.

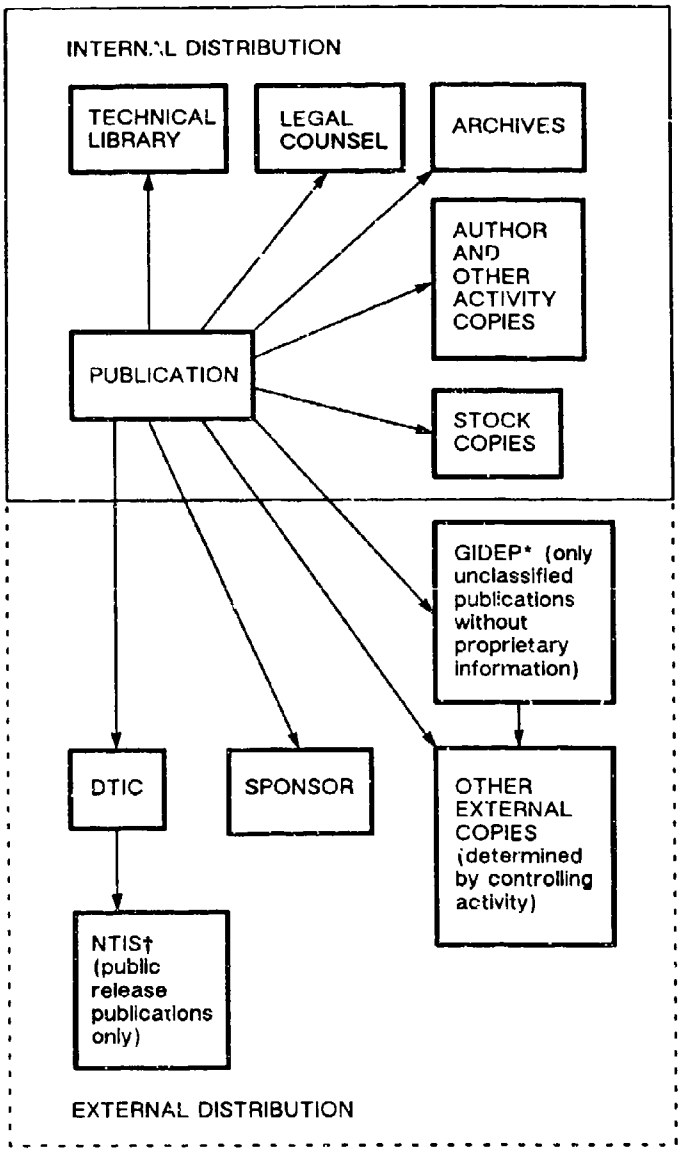
Although the responsibility for determining the recipients of a publication belongs to the preparing or sponsoring office, the actual distribution (label preparation, wrapping, and mailing) is usually done by Navy Publishing and Printing Services (NPPS) as part of the printing process.

WHAT IS INTERNAL DISTRIBUTION? Internal distribution (figure 5) refers to distribution to personnel within your local Navy activity. In addition to copies for your own use, your internal distribution list for in-house publications should include the following:

Technical library—reference use

Legal counsel—patent review





*Government-Industry Data Exchange Program (see Chapter 2, Part 3)
†National Technical Information Service

Figure 5. External and internal primary distribution of publications.

Archives—historical records

Stock copies—secondary distribution

Reprints of journal articles and copies of symposium proceedings should also be sent to this same list.

WHAT IS EXTERNAL DISTRIBUTION? External distribution (figure 5) refers to distribution to organizations outside your local activity, for example, sponsors, other Navy activities, and contractors.

General Guidelines. Guidelines for external distribution include the following:

Provide copies of your publication to DTIC.

Provide copies to Government-Industry Data Exchange Program (GIDEP).[1]

Verify the security clearances of any contractors, if your publication is classified.

Verify the eligibility of any contractors to receive export-controlled data, if your publication contains export-controlled data. (Verification is done through the Defense Logistics Agency (Defense Logistics Service Center, Attn: DLSC–FEB, Federal Center, Battle Creek, Michigan 49017–2084.)

Prepare transmittal letters, if your organization requires transmittal letters for publications sent to other organizations.

Distribution to DTIC. If your publication is unclassified and limited in distribution or if it is classified (up to and including secret), send DTIC two copies. If the publication is cleared for public release (statement A), send DTIC four copies. (The extra two copies are sent by DTIC to the National Technical Information Service (NTIS).)[2] Also remember to provide DTIC with reprints of your journal articles and copies of your symposium proceedings.

If the information is extremely sensitive and you or your sponsor want to control all secondary distribution, you can alternately supply DTIC only with a Standard Form 298 (figure 6) that describes the information in the publication. When you use this procedure, DTIC announces the availability of the information and then forwards all requests to the controlling agency. The controlling agency then either approves or disapproves the request, and, if the request is approved, provides the publication to the requester.

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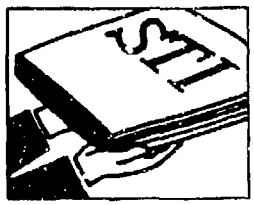
[1] Classified publications and publications that contain proprietary information cannot be sent to GIDEP.

[2] NTIS is the authorized agency for selling government publications to the general public.

1. Publishing, Distributing, and Reviewing Scientific and Technical Information



REPORT DOCUMENTATION PAGE

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Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
4. TITLE AND SUBTITLE		5. FUNDING NUMBERS
6. AUTHOR(S)		
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)		8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)		10. SPONSORING/MONITORING AGENCY REPORT NUMBER
11. SUPPLEMENTARY NOTES		
12a. DISTRIBUTION/AVAILABILITY STATEMENT		12b. DISTRIBUTION CODE
13. ABSTRACT (Maximum 200 words):		
14. SUBJECT TERMS		15. NUMBER OF PAGES
		16. PRICE CODE
17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT

NSN 7540-01-280-5500 Standard Form 298

Figure 6. Standard Form 298 for submitting publications to DTIC.

What Is Secondary Distribution?

Secondary distribution refers to requests received after primary distribution. Most of these requests come either in response to DTIC's announcement of your publication or through the use of your publication as a reference. Although your activity may receive these requests, secondary distribution is the responsibility of DTIC. Requesters, except for members of your activity, should be referred to DTIC or NTIS.

HOW DOES DTIC PERFORM SECONDARY DISTRIBUTION? One of the principal functions of DTIC is to acquire, store, announce, retrieve, and provide secondary distribution for DoD scientific and technical information. DTIC services are available to all components of DoD, DoD contractors, other government agencies and their contractors, grantees, and potential contractors.

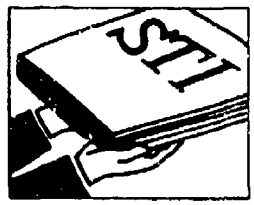
However, before DTIC can release either unclassified, limited-distribution publications or classified publications, it must have the approval of the controlling agency. This approval or disapproval is obtained through the use of DD Form 55 (see figure 7). Before DTIC sends the form to the controlling office, it verifies that the requester has the appropriate clearances, i.e., security and export-control registration. (See figure 8.)

WHAT IS THE ROLE OF NTIS IN SECONDARY DISTRIBUTION? NTIS is the Department of Commerce agency that is the central source for public sale of government-sponsored publications. Publications selected by NTIS for sale and distribution are listed in NTIS semimonthly and annual announcements.

NTIS receives two copies of Navy publications cleared for public release. These copies are provided to NTIS by DTIC. NTIS does not receive copies of classified or unclassified, limited-distribution publications. The Navy does not work with NTIS in the sale of its publications.

What Is the Process For Foreign Distribution?

Distribution of publications to foreign governments is strictly controlled. If you have any questions about whether a publication should be released to a member of any foreign nation, contact your security office for assistance.



DEFENSE TECHNICAL INFORMATION CENTER
REQUEST FOR RELEASE OF LIMITED DOCUMENT

NOTE: This form may be classified if necessary. See instructions on reverse. No carbon paper required in the completion of this form.

DTIC CONTROL NO

USER ROUTING

SECTION I
REQUESTING ORGANIZATION

REQUESTING ORGANIZATION AND ADDRESS

DTIC USER CODE NO

DATE OF REQUEST

TYPE COPY AND QUANTITY

☐ Paper Copy _____ Copy(s) ☐ Microform _____ Copy(s)

REGISTERED CONTRACT NUMBER

CONTRACT CLEARANCE

GOVERNMENT SPONSOR AND ADDRESS

METHOD OF PAYMENT (X ONE)

☐ Charge to NTIS Deposit Account No. _____

☐ Bill My Organization to the Attention of

CONTRACT MONITOR AND TELEPHONE NUMBER

SIGNATURE, TITLE, PHONE NUMBER OF REQUESTING OFFICIAL

SECTION II
REQUESTER JUSTIFICATION

AD NUMBER

NOTE: BIBLIOGRAPHY WILL BE ATTACHED BY DTIC FOR RELEASING AGENCY'S INFORMATION

REQUIRED FOR (Explain need in detail; include applicable contracts)

SECTION III
RELEASING AGENCY DECISION

RELEASING AGENCY (Use Post Office Address Format)

☐ APPROVED FOR RELEASE TO THE ABOVE REQUESTER

☐ APPROVED FOR RELEASE TO ALL REGISTERED DTIC USERS WITH ADEQUATE SECURITY CLEARANCE AND NEED TO KNOW

☐ DISAPPROVED REASON FOR DISAPPROVAL

TYPED NAME AND TITLE OF RELEASING OFFICIAL | TELEPHONE NO. | SIGNATURE | DATE

DTIC FORM 55 | COPY DISTRIBUTION | PREVIOUS EDITIONS MAY BE USED UNTIL STOCK IS EXHAUSTED

WHITE: DTIC YELLOW: RELEASING AGENCY PINK: DTIC SUSPENSE GOLD: REQUESTER

Figure 7. Standard Form 55 for release by DTIC of controlled information.

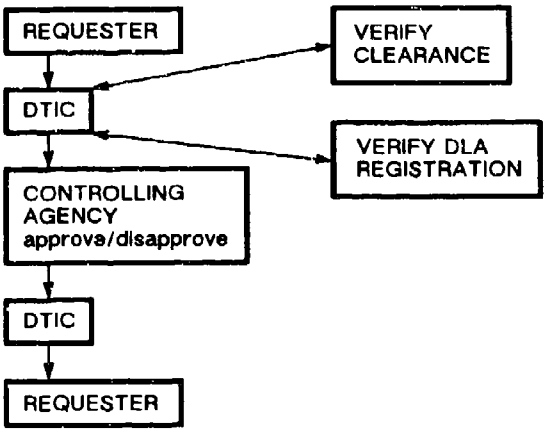


Figure 8. Information flow for secondary distribution process at DTIC when requester is not included within limits of distribution statement.

WHAT IS THE PROCESS FOR FOREIGN DISTRIBUTION OF PUBLIC-RELEASE PUBLICATIONS?

Primary Distribution. As part of the primary distribution process, publications that have been cleared for public release (statement A publications) may be released to foreign recipients after approval by your security office. Those copies that can be released can be mailed either by the Navy Publishing and Printing Services (after security's approval) or by your security office.

Secondary Distribution. If you receive a request after primary distribution of the publication, send the request to your security office. Security personnel will tell you whether you may answer the request directly or whether security must answer the request.[3]

WHAT IS THE PROCESS FOR FOREIGN DISTRIBUTION OF UNCLASSIFIED, LIMITED-DISTRIBUTION PUBLICATIONS AND CLASSIFIED PUBLICATIONS?

Primary Distribution. The release of publications that are limited in distribution or are classified must be cleared by the Navy International Programs Office (NIPO) on a case-by-case basis.

As part of the primary distribution process, your security office will coordinate your request with NIPO.

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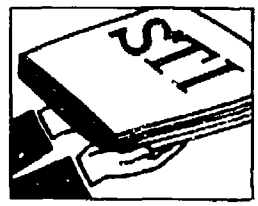
[3] Remember that these guidelines also apply to any requests you receive for journal articles and symposium proceedings, as well as for in-house publications.



Secondary Distribution. All secondary distribution requests can be processed only by your security office. This means that if you receive a request from any foreign country you must forward the request to your security office for processing.[4]

[4] Remember that these guidelines also apply to any requests you receive for journal articles and symposium proceedings, as well as for in-house publications.

PART 3
REVIEW OF NAVY PUBLICATIONS

What information must be reviewed before it can be distributed? What types of reviews are required? How do I technically review a publication? How do I decide what distribution statement to use? How do I determine if export controls are required? What special reviews are required for books, pamphlets, and brochures?

What Publications Should Be Reviewed?

All classified and unclassified publications to be distributed outside your activity should be reviewed. However, all publications that are intended for public release must be reviewed. At a minimum, this means that in-house publications intended for public release and articles submitted for publication in the open literature must be reviewed, e.g., journals and presentations at an open symposium or conference (both those with and without an accompanying article).

What Are the Purposes of the Review Process?

The purposes of the review process (figure 9) are to

Check for technical adequacy and accuracy.

Verify the classification level of the publication and, if the publication is classified, to make sure that all components are properly marked and all warning notices are included.

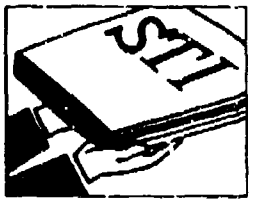
Select the appropriate distribution statement.

Determine if export-controlled information has been included in the publication.

Check for patentable information.

WHAT IS A TECHNICAL REVIEW? This review is usually done by the supervisors in your organizational unit. In addition, either you or your supervisor can also ask for an independent review of the publication by another scientist or engineer who is a subject-matter expert.

The purpose of the technical review is to improve the value of the publication by evaluating the scientific and technical merit of the work. The technical content is evaluated, and ways are suggested to improve communication with the intended audience. The basic concerns of this review are to ensure accurate presentation of the material, reasonable interpretation of data, and logical inferences. (See figure 10.)



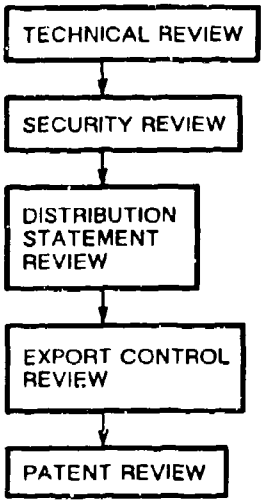


Figure 9. Types of reviews.

WHAT IS A SECURITY REVIEW? As the author, you usually make the initial determination concerning classification, i.e., is the publication unclassified, confidential, or secret. If you are in doubt about the classification level, contact your security office for assistance.

In deciding if the information in your publication is classified, be especially concerned with information related to

Performance and capabilities

Specifications

Vulnerabilities

Procurement and production plans and schedules

Operations

As part of the security review, remember to ensure that all components are properly marked, that the correct classification source is cited, and that the declassification or review information is correct. If you have used multiple sources to classify the publication, include a list of these sources with your publication.

MAJOR CRITERIA FOR EVALUATING TECHNICAL REPORTS:

WHY WAS REPORT WRITTEN? (GOAL)

To record or document information	To inform others in the same field	To report progress	To influence policy or action	Other

WHO IS THE AUDIENCE?

Adminis-trators	Technical Colleagues	Coworkers	Laymen	Other

TECHNICAL ADEQUACY AND CONSISTENCY OF RESEARCH APPROACH?

Inadequate/ Not Relevant	Major Inconsis-tencies	Minor Inconsis-tencies	Adequate/ Consistent	Superior/ Highly Relevant

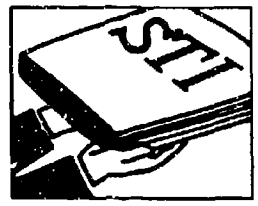
OVERALL WRITING STYLE/CLARITY?

Totally Deficient	Unclear/ Major Problems	Weak/ Minor Problems	Clear Presenta-tion	Superior

SIGNIFICANCE OF CONTRIBUTION TO THE TECHNOLOGY/NAVY?

None	Trivial	Modest	Important	Highly Significant

Figure 10. Checklist for technical reviewers.



WHAT IS A DISTRIBUTION-STATEMENT REVIEW? As the author, you make the initial determination concerning what organizations or activities can have access to the publication. This decision then forms the basis for selecting the correct distribution statement.

In making this decision, you first determine if the information can be released to the public. Public release is the act of making information available to the public without any restrictions. This means the information is removed from control of the Navy; the information is in the public domain, where it can be appropriated by anyone, including foreign nationals or representatives of foreign industries or governments. To help determine if work performed under 6.1 and 6.2 funding categories can be released to the public, remember that basic research can usually be released to the public until the "state of emergence" is evident. This means that the transition has been made from basic research (funding category 6.1) to exploratory development (category 6.2) with specific military applications.

If the information cannot be released to the public, you must determine the extent of its availability without additional approval of the controlling activity. (The controlling activity is usually either the preparing organization or sponsoring office.) Formal distribution statements allow you to limit access to any of the following groups:

U.S. government agencies (distribution statement B)

U.S. government agencies and their contractors (distribution statement C)

Department of Defense and U.S. DoD contractors (distribution statement D)

Department of Defense components (distribution statement E)

In addition, you can completely limit access to the publication and require that all requests for the publication be approved by the controlling office (distribution statement F).

After you have decided on the level of access, you must select a reason for the limitation. Reasons for limiting access to publications are the following:

Foreign government information

Proprietary information

Critical technology

Test and evaluation

Contractor performance evaluation

Premature dissemination

Administrative or operational use

Software documentation

Critical technology

Direct military support

Specific authority

A discussion of these reasons and the corresponding access groups can be found in appendix A.

Your decision on the selected distribution statement should be reviewed by both your supervisors and your activity's office that makes the final determination concerning distribution statements. Remember that those publications intended for public release must often be approved at the headquarters level. Do not release information to the public without approval of either your activity or your headquarters office.

WHAT IS AN EXPORT-CONTROL REVIEW? As part of your determination on distribution availability, you must also make a decision concerning export controls. (See Chapter 3, Part 2, for information on export controls.) When making the decision concerning export controls, remember to use the Militarily Critical Technologies List, the Commodities Control List, the Munitions List, and your knowledge concerning the state-of-the-art of the applicable technology.

WHAT IS A PATENT REVIEW? All publications should be reviewed for inclusion of information that can be patented. This review should be done by your organization's patent counsel.

What Is the Role of a Technical Reviewer?

At times, you will be asked to review a publication to ascertain its technical adequacy. To do so, you must remain aware of the status of the technology. The following guidelines will help you maintain that awareness:

Become a subject-matter expert on the status of technology in the defense community, industry, academia, and the international arena.

Ask your security office for assistance in interpreting security guidelines.

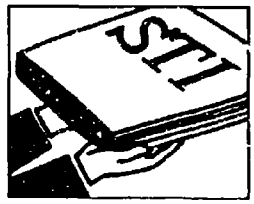
Use your technical library.

Use the resources of DTIC. (Also contribute information to DTIC so that other researchers are aware of the state-of-the-art of specific technological areas.)

Stay aware of industry's independent research and development (IR&D) work.

Use your intelligence office to obtain scientific and technical information on military equipment belonging to allies and adversaries.

Participate in technical professional societies.



Use the Militarily Critical Technologies List, and provide input to DoD to change the list as technology changes.

Figure 10 is a checklist that provides some guidelines to use as part of a technical review.

What Are the Special Procedures For Reviewing Books, Pamphlets, and Brochures?

The Navy requires that books, pamphlets, and brochures be reviewed prior to publication for

> Necessity, current applicability, adequacy, judiciousness of purpose and good taste, and to ensure their consonance with existing law and with national and DN policy.

To show that this review has been made, these publications must include the following certification of review:

Reviewed and approved _____
(Date)

_____
(Signature of reviewing official)

This certification is usually placed on the back cover of the publication.

PART 4
REFERENCES

Chief of Naval Operations Instruction 5510.48H, Manual for Disclosure of Classified Military Information to Foreign Governments and International Organizations, 29 July 1981

Defense Logistics Agency Handbook 4185.8, Defense Technical Information Center, Handbook for Users, May 1988

Defense Technical Information Center Manual 4185.4, Report Selection Criteria, June 1933

Department of Defense Directive 3200.12, DoD Scientific and Technical Information Program, 15 February 1983

Department of Defense Directive 5230.24, Distribution Statements on Technical Documents, 18 March 1987

Department of Defense Directive 5230.9, Clearance of DoD Information for Public Release, 2 April 1982

Department of Defense Instruction 5200.21, Dissemination of DoD Technical Information, 31 July 1980

Department of Defense Instruction 5230.27, Presentation of DoD-Related Papers at Meetings, 6 October 1987

Department of Defense Instruction 7930.2, ADP Exchange and Release, 31 December 1979

Federal Acquisition Regulations, Section 35.010, Scientific and Technical Reports

Joint Directors of Laboratories, AFALC/CCL, Defense Technical Information Center, 4 November 1986

Interlaboratory Committee on Editing and Publishing, West Coast, Monograph 90–1, "Reviewing the Technical Report," by Carmen Fendelman and Linda L. Oestreich, September 1991 (draft)

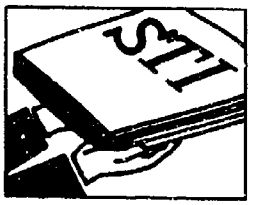
National Security Decision Directive 189, National Policy on Transfer of Science, Technology, and Engineering Information, 21 September 1985

Naval Material Command Instruction 5720.4C, Procedures for Clearing Industry Produced Information, 15 April 1974

Naval Material Command Instruction 5720.7B, Security Review, Procedures for, 2 March 1982

Office of Management and Budget, Bulletin 81–16, Elimination of Wasteful Spending on Government Periodicals, Pamphlets, and Audiovisual Products, April 1981

I. Publishing, Distributing, and Reviewing Scientific and Technical Information



Secretary of Navy Instruction 3900.35C, Dissemination of Department of Defense Technical Information, 31 July 1980

Secretary of Navy Instruction 3900.43, Navy Scientific and Technical Information Program (STIP), 29 December 1983

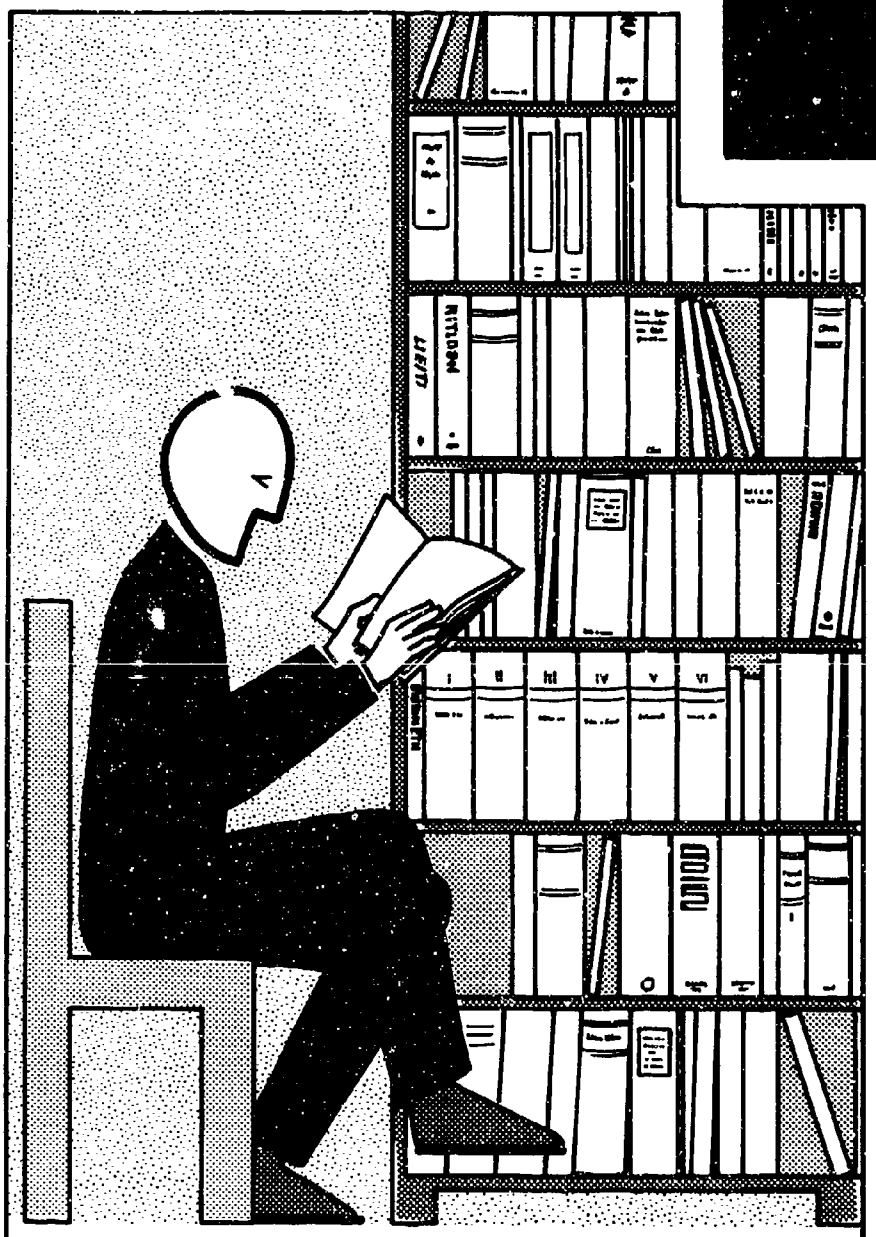
Secretary of Navy Instruction 5237.2, Automatic Data Processing (ADP) Software Exchange and Release, 17 February 1981

Secretary of Navy Instruction 5600.16A, Review of Department of Navy Publications, 24 January 1979

Secretary of Navy Instruction 5600.19A, Review, Evaluation, and Approval of Navy Periodicals, 7 February 1978

Secretary of Navy Instruction 5720.42C, Department of Navy Freedom of Information Act Program, 1 October 1982

II

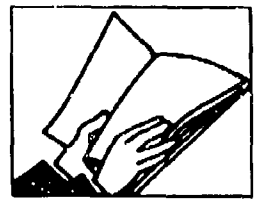


STI and Database Requirements

CHAPTER II
STI and Database Requirements

Illustrations

Tables



PART 1
DEFENSE TECHNICAL INFORMATION CENTER

What is DTIC? What databases are at DTIC? What is the TR database? What is the WUIS database? What types of publications and information should be sent to DTIC? What information should be excluded? How does DTIC protect information? What is a DTIC Form 1498? When is a DD Form 1498 required for contract work? How are DTIC's databases accessed?

What Is DTIC?

The Defense Technical Information Center (DTIC) is the central point within the Department of Defense for acquiring, retrieving, and disseminating scientific and technical information. DTIC contributes to the management and conduct of DoD research and development efforts by providing a method to access and transfer scientific and technical information.

DTIC is an organizational component of the Deputy Director for Acquisition, Policy, and Program Integration. Its main facility is at Cameron Station in Alexandria, Virginia. Other facilities are in Boston and Los Angeles.

What Databases Are at DTIC?

The major databases (figure 11) at DTIC include the

Technical Report (TR) Database: Publications prepared by DoD employees, DoD contractors, and colleges and universities under DoD contract.

Work Unit Information System (WUIS) Database: Information that describes all ongoing and completed research and technology work performed or sponsored by DoD.

Independent Research and Development (IR&D) Database: Research projects currently in progress in industry. These projects may have future applications to—and compete for—DoD contracts. This database contains proprietary information and is exempt from the disclosure provisions of the Freedom of Information Act.

Manpower and Training Research Information System (MATRIS) Database: Information on planned, ongoing, and completed research dealing with manpower and personnel, human factors, education and training, and simulation and training devices.

The TR and WUIS databases are the two databases at DTIC that most directly affect the performance of Navy RDT&E work.

1. **Defense Technical Information Center**

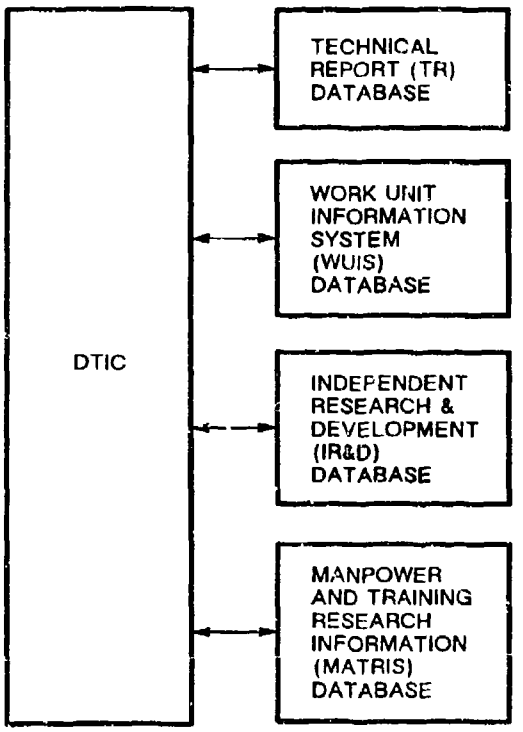


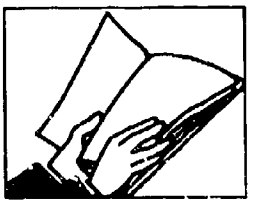
Figure 11. DTIC's databases.

How Does DTIC's TR Database Affect My Work?

WHAT IS THE NAVY'S POLICY TOWARD DTIC'S TR DATABASE? Navy policy requires that Navy scientists and engineers submit the published results of their work to DTIC; the Navy also requires that the results of work performed under Navy contract be published and submitted. Specifically:

> The publication must be completed within 6 months after the work has been completed or within 6 months after a significant scientific or technological finding or observation has been made.
>
> Both positive and negative results must be published.
>
> A report must be submitted upon completion or termination of every RDT&E project.

WHAT INFORMATION SHOULD BE INCLUDED IN THE TR DATABASE? When you are deciding whether information (figure 12) should be sent to DTIC, consider the following questions. A positive



response to any of them indicates that the publication should be included in the DTIC TR database:

Is the information of immediate interest?

Is the information timely?

Does the information document the approach, results, and recommendations of a single project, task, work unit, contract, grant, or closely related effort?

Would the information be beneficial to DoD laboratories, contractors, and academic institutions?

Is the information of historical significance? For example, does it provide data concerning why significant decisions concerning weapon systems were made?

Should the information be put in the archives where it can be retrieved for later use?

Is this information for which no preceding references can be found?

Is this statistical or management information that has an audience beyond your local activity?

Is this a study or analysis? For example, does it include military scenarios, assessments made using operational research techniques, systems analysis techniques, or similar technology?

Was the information published as a thesis, bibliography, or dissertation sponsored with DoD funding?

If the information has been published in a journal or presented at a conference, was your effort in developing the information sponsored with DoD funding?

Is this information that documents the results of DoD-funded research, development, test, and evaluation efforts?

Is this logistics data that would benefit a similar project? For example, test plans, test results, reliability-and-maintainability plans, safety plans, integrated logistics support plans, and specifications.

Is this software documentation that another project that is doing similar research or development can use?

Is this information that DoD contractors developed?

Is this information that college and university personnel developed working under DoD contract?

1. **Dofense Technical Information Center**

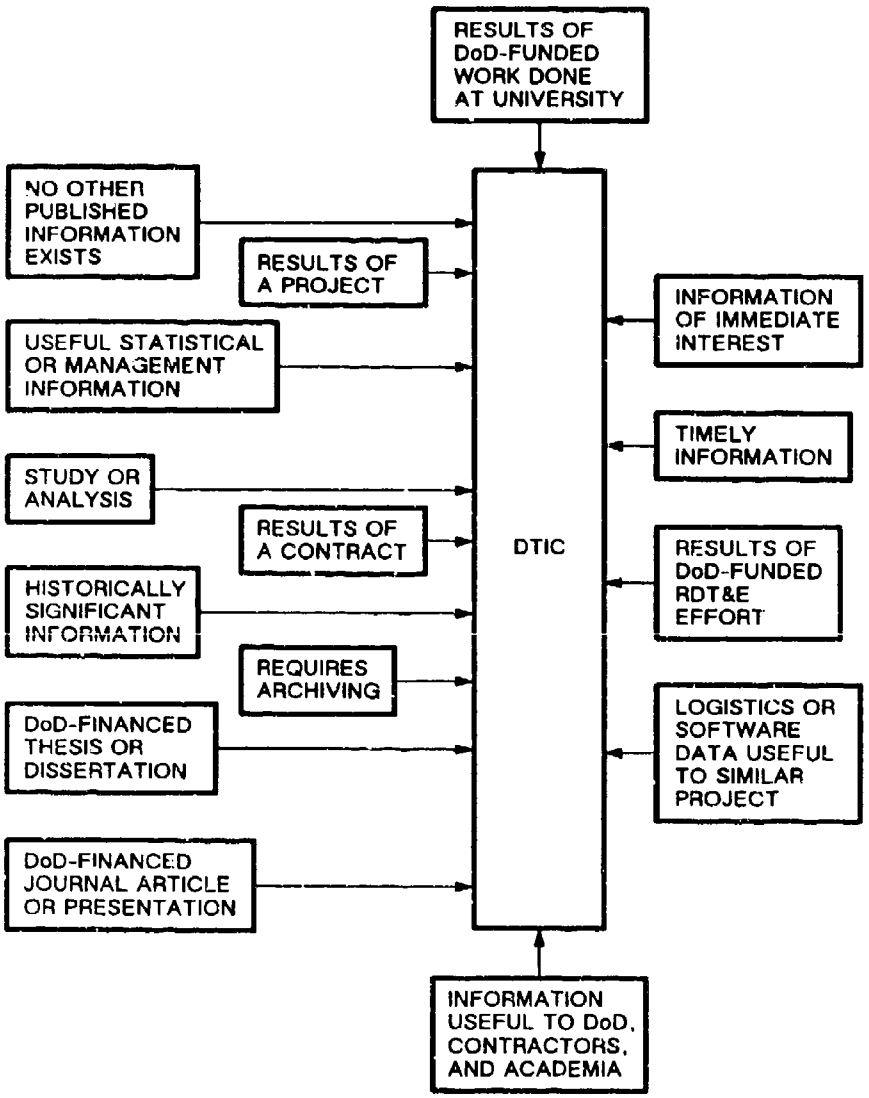


Figure 12. Types of information that must be sent to DTIC.

The following types of information cannot be included in DTIC's TR database:

Information for which the classification guidelines exclude submission to DTIC, e.g., certain types of intelligence and surveillance information.

Technical manuals that are stocked at the Navy Publications and Forms Center.

Administrative papers.

Nontechnical memoranda.

Engineering drawings.

Nontechnical correspondence.

Financial reports.

Contract administration documents.

Regulations.

Commercially published books.

WHAT TYPES OF MEDIA CAN BE USED TO SUBMIT INFORMATION TO THE TR DATABASE? DTIC accepts several types of media. These include paper copies of publications, master microfiche, software (tapes and disks), and videotapes.

When submitting paper copies or microfiche masters, use Standard Form 298 (figure 13); for videotapes, use DTIC Form 503 (figure 14); for computer diskettes, use DTIC Form 504 (figure 15); and for magnetic tape, use DTIC Form 505 (figure 16).

HOW IS INFORMATION IN THE TR DATABASE PROTECTED? DTIC's distribution of classified and unclassified publications is controlled by several elements:

Security clearance and need-to-know of the requester.

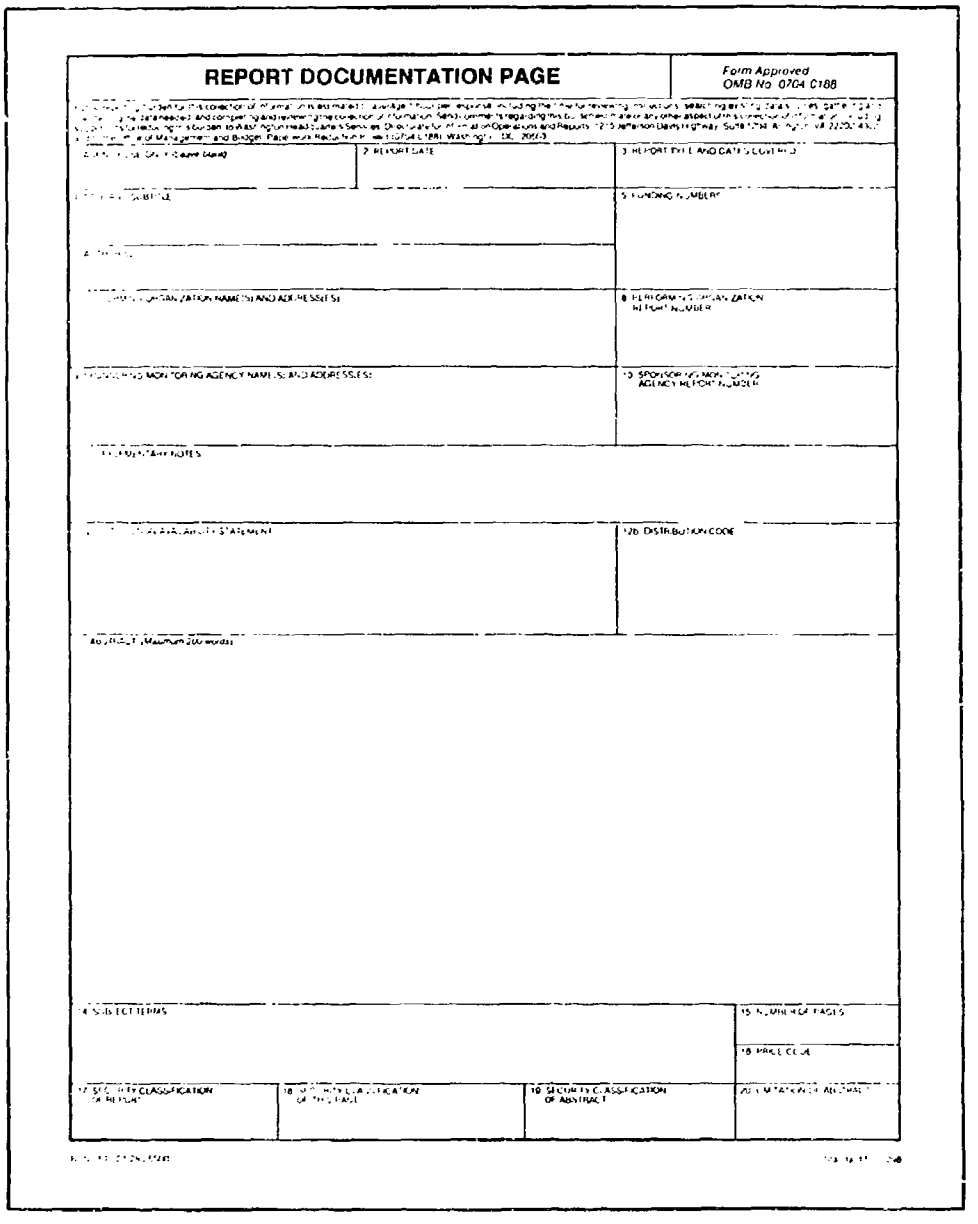
Security classification and the distribution statement of the publication.

The distribution statement denotes the availability of the publication for distribution, release, and disclosure without additional authorization by the controlling agency. (A distribution statement is separate from the security classification and distinctly specifies those authorized to receive the publication.) The distribution statement is determined by the controlling agency; DTIC does not assign distribution statements.

Publications (both classified and unclassified) submitted to DTIC must have a formal distribution statement (A through F or X). (See appendix A.) This statement, together with the requester's need-to-know, is then used by DTIC to determine if a requester is authorized to receive the publication.

DTIC distributes publications only to those agencies authorized by the distribution statement. For example, if the publication is limited to DoD agencies, then requests from all contractors and non-DoD government agencies must be approved by the controlling agency. DTIC requires written approval of the controlling agency before the distribution can be made.

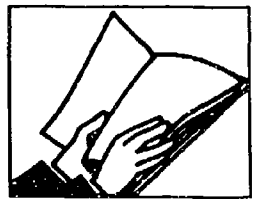
1. **Defense Technical Information Center**



REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Figure 13. Standard Form 298 used to submit paper copies and master microfiche to DTIC.



Security Classification of this Page

VIDEORECORDING REPORT DOCUMENTATION PAGE

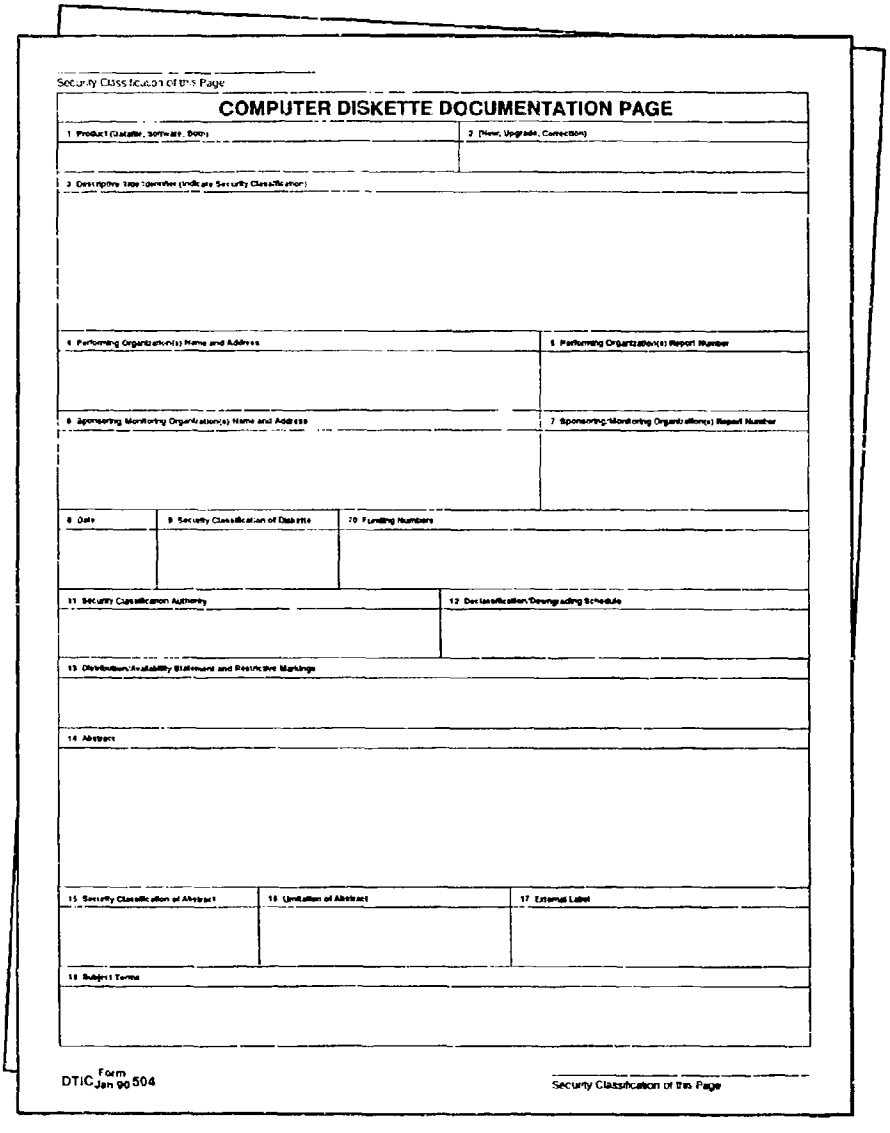
1 Title and Subtitle (Include Security Classification)			2 Funding Numbers
3 Credits			
4 Performing Organization(s) Name and Address			5 Performing Organization(s) Report Number
6 Sponsoring/Monitoring Organization(s) Name and Address			7 Sponsoring/Monitoring Organization(s) Report Number
8 Report Type and Dates Covered		9 Date	10 Report Security Classification
11 Distribution Availability Statement			
12 Recording System			13 Playback Speed
14 Color	15 Sound	16 Size	17 Playing Time (Minutes)
18 Other Formats	19 Special Projection Requirements		20 Number of Physical Units
21 Accompanying Material			

DTIC Form Jan 90 5v3

Security Classification of this Page

Figure 14. DTIC Form 503 used to submit videotapes to DTIC.

1. **Defense Technical Information Center**



Security Classification of this Page

COMPUTER DISKETTE DOCUMENTATION PAGE

1 Product (Datafile, Software, Both)	2 (New, Upgrade, Correction)

3 Description (Type Identifier (Indicate Security Classification))

4 Performing Organization(s) Name and Address	5 Performing Organization(s) Report Number

6 Sponsoring Monitoring Organization(s) Name and Address	7 Sponsoring/Monitoring Organization(s) Report Number

8 Date	9 Security Classification of Data File	10 Funding Numbers

11 Security Classification Authority	12 Declassification/Downgrading Schedule

13 Distribution/Availability Statement and Restrictive Markings

14 Abstract

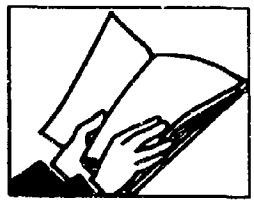
15 Security Classification of Abstract	16 Limitation of Abstract	17 External Label

18 Subject Terms

DTIC Form Jan 90 504

Security Classification of this Page

Figure 15. DTIC Form 504 used to submit computer diskettes to DTIC.



Security Classification of this Page

MAGNETIC TAPE DOCUMENTATION PAGE

1 Product (Data/file, Software, Both)	2 (New, Upgrade, Correction)	3 External Label

4 Descriptive Title File Identifier (Indicate Security Classification)

5 Performing Organization(s) Name and Address	6 Performing Organization(s) Report Number

7 Sponsoring/Monitoring Organization(s) Name and Address	8 Sponsoring/Monitoring Organization(s) Report Number

9 Date	10 Security Classification of Tape	11 Funding Numbers

12 Security Classification Authority	13 Declassification/Downgrading Schedule

14 Distribution/Availability Statement and Restrictive Markings

15 Abstract

16 Security Classification of Abstract	18 Subject Terms
17 Limitation of Abstract	

DTIC Form Jan 90 505

Security Classification of this Page

Figure 16. DTIC Form 505 used to submit magnetic tape to DTIC.

How Does DTIC's WUIS Database Affect My Work?

WHAT IS THE NAVY'S POLICY TOWARD DTIC'S WUIS DATABASE? The WUIS database, used to control and report technical and management data, summarizes ongoing research and technology efforts being accomplished within the RDT&E community. The Navy requires that DTIC's WUIS database be used to report both classified and unclassified work performed in-house and by contract. The Navy also requires that the WUIS database be searched before initiating new work.

WHAT ARE THE OBJECTIVES OF THE WUIS DATABASE? By providing a comprehensive summary of the technical content, performers, monitors, and funding sources of DoD research and technical efforts, this database increases the effectiveness of both Navy and DoD RDT&E (see figure 17). The basic objectives of the WUIS database are to

Help R&D managers identify RDT&E efforts in a broad range of scientific disciplines and technologies.

Permit managers to easily coordinate programs with other DoD components and with other agencies and branches of the federal government to eliminate overlap of effort.

Help scientists and engineers determine current and past efforts related to their own work.

Permit scientists, engineers, and managers to identify individuals working in technical areas of interest who can be contacted for further technical information.

Allow scientists and engineers to stay aware of ongoing work in their areas of interest.

Enhance the efficiency and cost effectiveness of the defense contractor community by providing knowledge of ongoing DoD work so their R&D efforts can be focused toward national defense and military requirements.

HOW IS WORK REPORTED TO THE WUIS DATABASE? DoD employees use the DD Form 1498, or Work Unit Information System Data Sheet (figure 18), to report work to the WUIS database. Information is reported in work units. A work unit is the smallest segment into which an RDT&E effort can be divided for local administrative control. Work units are usually divided into the following three categories:

Technologically distinct efforts performed by Navy scientists and engineers.

Contracts or grants used to perform Navy work.

Efforts performed by a non-DoD agency through an interagency fund transfer.

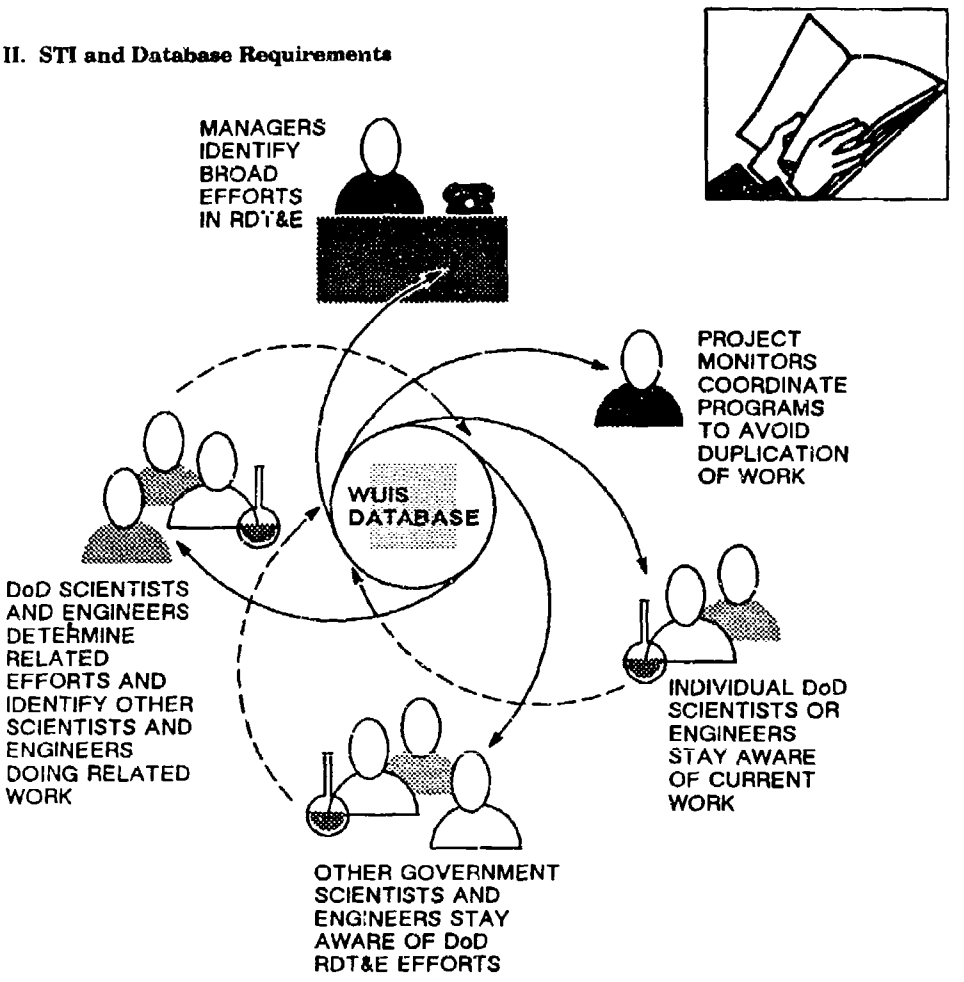
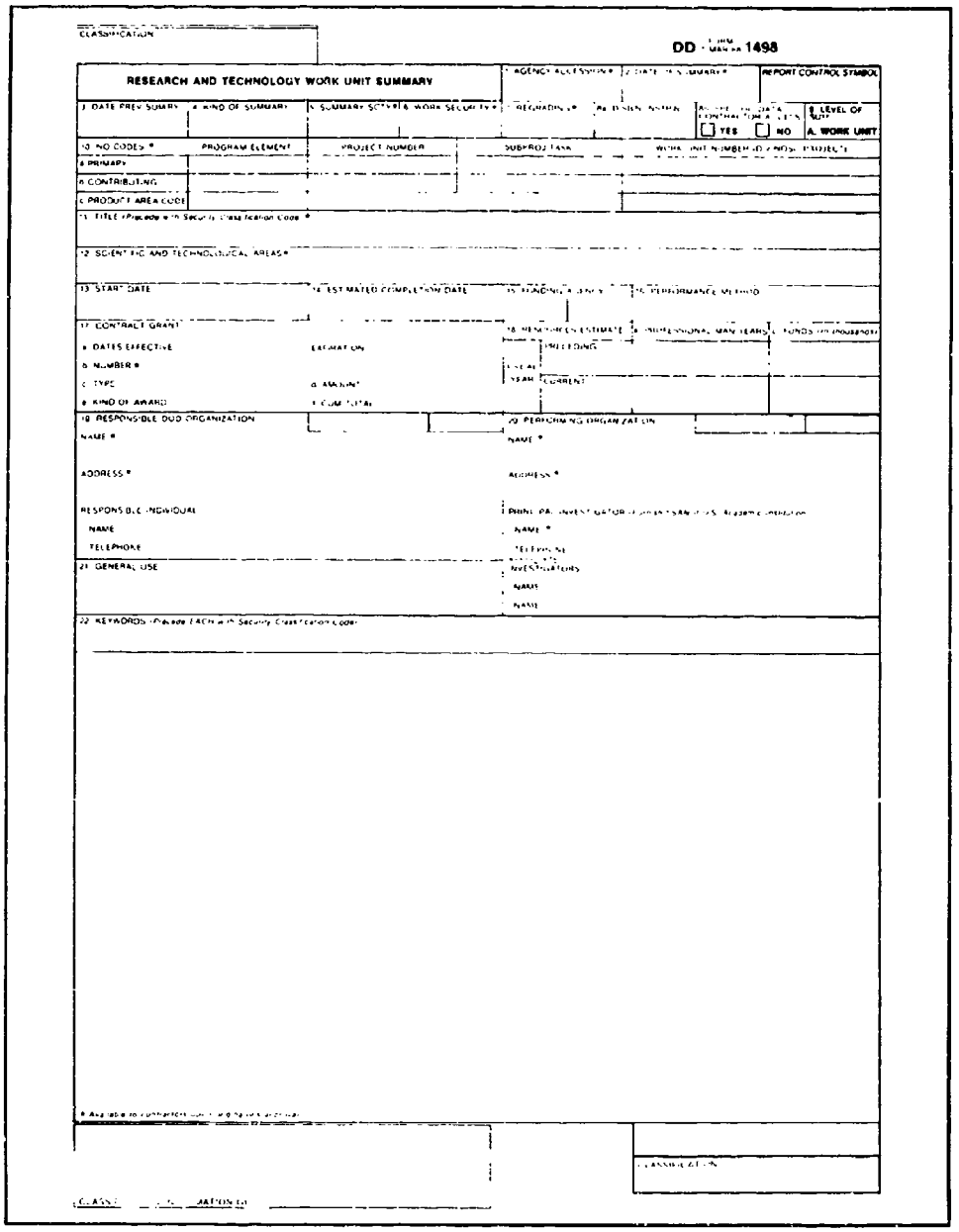


Figure 17. How the WUIS database increases effectiveness of DoD RDT&E.

Each work unit has a specific objective and a finite duration, and must result in an end product or conclusion. It is technically distinct in scope, objective, and duration from other RDT&E efforts with which it may be combined for financial, administrative, or contracting purposes.

Although each Navy activity has different procedures for preparing the records, or DD Form 1498s, for submission to the WUIS database, some general principles concerning generation of WUIS records can be found in appendix E. However, to determine how your activity prepares WUIS records, you need to contact your local STI officer.

1. Defense Technical Information Center


CLASSIFICATION

DD 1498

RESEARCH AND TECHNOLOGY WORK UNIT SUMMARY

REPORT CONTROL SYMBOL

1. DATE PREV SUMRY | 4. KIND OF SUMMARY | 5. SUMMARY SCTY | 6. WORK SECURITY | 7. REGRADING | 8. RELEASABILITY | 9. LEVEL OF EFFORT

☐ YES ☐ NO

10. NO CODES * | PROGRAM ELEMENT | PROJECT NUMBER | SUBPROJ TASK | WORK UNIT NUMBER (AND PROJECT)

a. PRIMARY

b. CONTRIBUTING

c. PRODUCT AREA CODE

11. TITLE (Include with Security Classification Code) *

12. SCIENTIFIC AND TECHNOLOGICAL AREAS *

13. START DATE | 14. EST MATED COMPLETION DATE | 15. FUNDING AGENCY | 16. PERFORMANCE METHOD

17. CONTRACT GRANT

a. DATES EFFECTIVE | EXPIRATION

b. NUMBER *

c. TYPE | d. AMOUNT

e. KIND OF AWARD | f. CUMULATIVE

18. MANPOWER ESTIMATE | a. PROFESSIONAL MAN YEARS | b. FUNDS (In Thousands)

PRECEDING

FISCAL YEAR | CURRENT

19. RESPONSIBLE DOD ORGANIZATION

NAME *

ADDRESS *

RESPONSIBLE INDIVIDUAL

NAME

TELEPHONE

20. PERFORMING ORGANIZATION

NAME *

ADDRESS *

PRINCIPAL INVESTIGATOR (If different than 19) Responsible Individual

NAME *

TELEPHONE

OTHER INVESTIGATORS

NAME

NAME

21. GENERAL USE

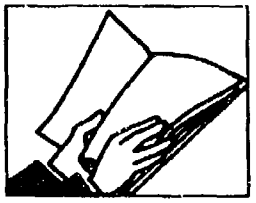
22. KEYWORDS (Include EACH with Security Classification Code)

* Applicable to Component Work Unit Summaries only

CLASSIFICATION

CLASSIFICATION

Figure 18. DD Form 1498, the Work Unit Information System data sheet.



WHAT TYPES OF WORK MUST BE REPORTED TO THE WUIS DATABASE? Each technically distinct effort performed by or in an RDT&E activity, each uniquely numbered contract or grant,[1] and each research-and-technology effort performed by a non-DoD agency must be included in the WUIS database. (See table 1.)

Table 1. Summary of work requiring WUIS records.

Performing Agency	WUIS Record Required?				
	Funding Category		Research and Technology	Study and Analysis	Sponsored by DUSDR&AT
	6.1, 6.2, 6.3A	All Others			
Navy activity	Required	Varies, depends on work performed	Required	Required	Required
Contractor	Required	Varies, depends on work performed	Required	Required	Required
Academic institution	Required	Required	Required	Required	Required
Non-DoD government agency	Required	Required	Required	Required	Required

To determine if your work must be reported in the WUIS database, you need to answer the following questions (figure 19). A positive response to any question means that the work must be reported:

Is the effort research or technology?[2] A record is required, regardless of program, program category, or appropriation. Dollar values or performing agencies are not reasons for exclusion.

Is the work funded wholly or in part from program categories 6.1, 6.2, and 6.3A? Again, dollar values or performing agencies are not reasons for exclusions.

Is the work under the control of the Deputy Undersecretary of Defense (Research and Advanced Technology) (DUSDR&AT)?

---

[1] To identify technically distinguishable efforts, some large contracts or grants may need to be divided into several records.

[2] Research is defined as all efforts directed toward increased knowledge of natural phenomena and environment and efforts directed toward solving long-term defense problems in the physical, engineering, life, behavioral, and social sciences. Technology is defined as scientific or engineering efforts directed toward eliminating technical barriers and providing solutions to technical problems (excluding routine engineering) encountered in RDT&E programs.

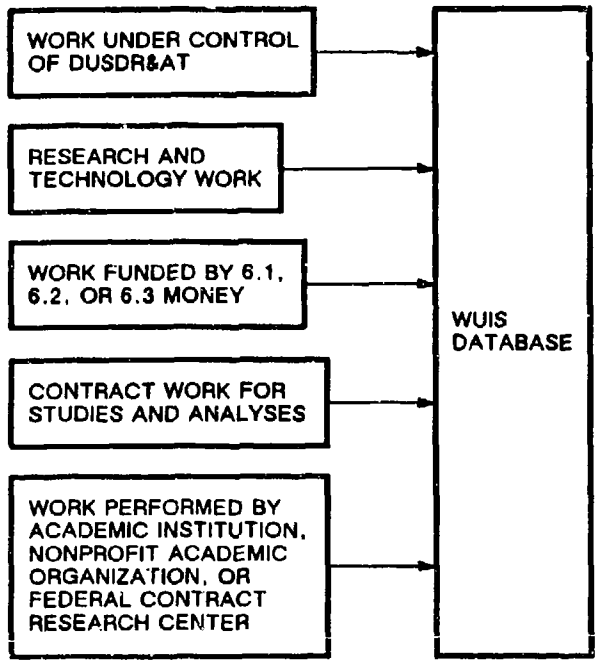


Figure 19. Work that must be reported in the WUIS database.

Is the work being funded from RDT&E money (categories 6.1 through 6.7) and being performed by a U.S. academic institution, nonprofit academic organization, or federal contract research center? WUIS records are required for all work, including services, supplies, or equipment.

Is the work a contract for studies and analyses?[3]

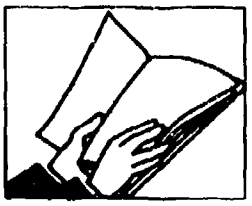
Records are not required for contracts for services, supplies, or equipment used in support of research and technology efforts (except for work being performed by a U.S. academic institution, nonprofit academic organization, or federal contract research center). Examples of such exclusions are as follows:

Purchases of equipment, components, or devices where research or technology efforts are not involved.

Routine data taking, data analysis, and data reduction services.

Field services, fabrication, installation, calibration, or modification of equipment or components.

[3] Note that records for studies and analyses reflect work performed in support of decision-making efforts, not RDT&E efforts.



Technical services such as programming or computational support or translation services.

Other maintenance and support services.

If your contract is a delivery-order type and requires a WUIS record, the record must be prepared for the major contract. However, if you wish, you may also prepare individual records for individual delivery orders.

WHEN MUST WORK BE REPORTED TO THE WUIS DATABASE? In all cases, i.e., in-house work, contract efforts, and efforts by non-DoD government agencies, the WUIS record must be prepared within 30 days for any of the following events:

In-House Work: The acceptance or approval to initiate a new RDT&E effort. Changing, completing, or terminating an RDT&E effort.

Contract Work: The award of a contract or grant. A change to a contract or grant that affects the description of the work, level of funding, identity of a principal investigator, or duration of the effort. Completion or termination of a contract or grant.

Non-DoD Agencies: The transfer of funds, changes, completion, or termination of work by a non-DoD government agency.

In addition, each record must be reviewed, revised, and changes or corrections submitted at least once a year. The purpose of this review is to keep the database current in terms of progress, current fiscal year funding, and use of personnel.

WHO HAS ACCESS TO THE WUIS DATABASE? Information in the database is available to all DoD scientists, engineers, and managers; DoD contractors, including both industry and academia; other government agencies and their contractors; and other qualified organizations. However, the release of the individual WUIS records follows the security requirements and distribution limitations imposed by the submitting activity for each individual record, i.e., work unit or DD Form 1498.

HOW IS THE WUIS DATABASE USED? Before starting any new work, the Navy requires that the WUIS database be queried. The purpose of this query is to identify related work and to ensure that work being done by other DoD components will not be duplicated.

Project managers and principal investigators must request the DTIC search on all aspects of their proposed program, including planned contract work. Queries are required for the following types of work:

All 6.1-, 6.2-, and 6.3A-funded work.

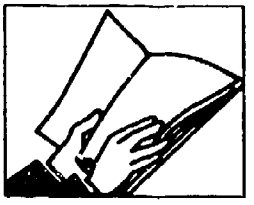
All work that falls within the definition of research and technology.

All work that is a study or analysis.[4]

How Can DTIC's Databases Be Accessed?

Each Navy activity has different procedures for providing access to DTIC's various databases. In most R&D organizations, access is provided by the activity's technical library. To determine how access is provided at your activity, contact your local STI officer.

[4] A study or analysis examines a subject to provide a greater understanding of relevant issues and alternatives that lead to conclusions and recommendations. Areas subject to such examination include planning, programming, budgeting, decision-making, and policy concerned with organizations, tactics, doctrine, policies, force plans, strategies, procedures, intelligence, weapons selection and mix, systems programs, or resources. Also included is the research and development of related database structures and models for supporting studies and analyses.



PART 2
INFORMATION ANALYSIS CENTERS

What is an information analysis center (IAC)? What technical areas are covered by the IACs? What products do they produce? Who has access to the IACs? Is information in an IAC protected? How does an IAC gather information? How can I use the services of an IAC?

What Are Information Analysis Centers?

Information analysis centers (IACs) collect, review, analyze, evaluate, summarize, and store information in clearly defined, highly specialized technical areas. The IACs' collections are expanded on a continuing basis to incorporate the most current international research information. Information is then distributed according to expressed or anticipated needs of users.

There are presently 23 IACs. Of these, 14 are funded and administratively managed by the Defense Technical Information Center (DTIC); the remaining nine are administratively managed by other DoD activities. Technical management is provided by DoD laboratories and agencies that have expertise in the IAC's specific subject area. When needed, additional technical expertise is provided by scientists and engineers associated with the host facility.

The IACs also review and coordinate R&D efforts concerning interservice compatibility of technology programs and promote the exchange of technical information.

What Subject Areas Are Covered by the IACs?

The individual IACs and their technical areas of expertise (figure 20) are as follows:

Chemical Warfare/Chemical and Biological Defense Information Analysis Center (CBIAC): Technical areas include physical and chemical properties of agents and simulants; agent/simulant persistence on vegetation, terrain, materiel, and equipment; and performance degradation of individuals in a chemical warfare environment.

Coastal Engineering Information Analysis Center (CEIAC): Included is information on coastal engineering, coast regions, beaches, shore erosion, coastal environments, oceanography, ocean waves, tides, inlets, and hydrodynamics.

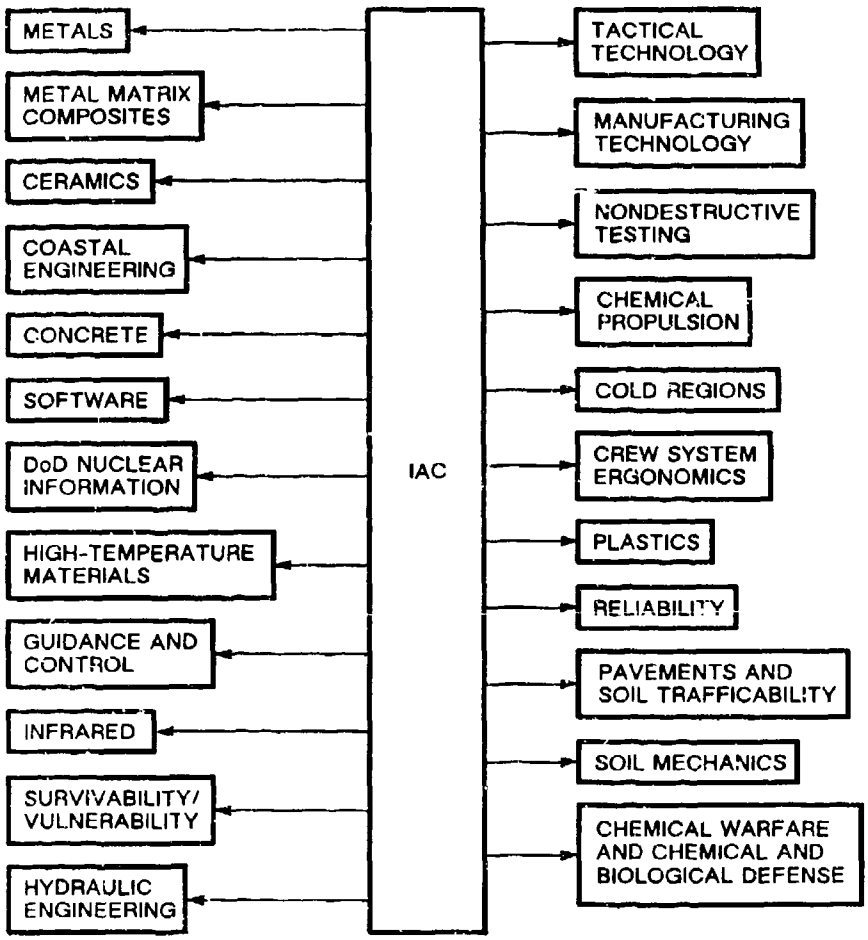


Figure 20. IACs' areas of expertise.

Ceramics Information Analysis Center (CIAC): This is DoD's central source of information on monolithic ceramics, ceramic composites, hybrids, laminates, coatings, reinforcing fibers, composite joints, nonstructural composites such as piezoelectric ceramics, and optical materials used in defense systems and hardware.

Chemical Propulsion Information Agency (CPIA): Subject coverage includes ramjet and solid, liquid, hybrid, and electric rocket propulsion systems; fuels and ingredients; gun propellants; energetic and inert components; and gas generators.

Cold-Regions Science and Technology Information Analysis Center (CRSTIAC): This IAC specializes in cold-regions science and technology; included are the design, construction, and maintenance of military facilities in cold regions and investigations into snow, ice, and frozen ground.

Crew System Ergonomics Information Analysis Center (CSERIAC): Information covered includes human characteristics, abilities, limitations, physiological needs, performance, body dimensions, biomechanical dynamics, strength, and tolerances. The IAC also includes engineering and design data on equipment and weapon systems to be used, operated, or controlled by military crews.

Concrete Technology Information Analysis Center (CTIAC): Subject areas are concrete, reinforced concrete, reinforcing materials, cements, mixtures, loads (force), fracture (mechanics), deformation, degradation, chemical analysis, repair, evaluation, maintenance, and rehabilitation.

Data and Analysis Center for Software (DACS): The DACS mission includes modern programming practices, acquisition management, programming techniques and methods, and the software development cycle.

DoD Nuclear Information Analysis Center (DASIAC): Information includes the phenomena of nuclear weapon explosions; the effects of nuclear weapons on military strategic and tactical systems and components; survivability, vulnerability, and hardening; nuclear weapons' safety and physical security; military doctrine and operations; the effects of nuclear weapons' testing; and hardening and lethality of advanced weapons systems.

Guidance and Control Information Analysis Center (GACIAC): Subject areas include the guidance and control of tactical weapons, including missiles, rockets, bombs, submunitions, projectiles, and munition-dispensing canisters.

Hydraulic Engineering Information Analysis Center (HEIAC): Areas of expertise are river, harbor, and tidal hydraulics; flow through pipes, conduits, channels, and spillways as related to flood control and navigation; hydraulic design and performance of dams, locks, channels, and other structures; and underwater shock effects.

High-Temperature Materials-Mechanical, Electronic, and Thermophysical Properties Information Analysis Center (HTMIAC): Covered are mechanical, thermophysical, and electronic properties of high-temperature materials of particular interest to DoD. Emphasized are numerical engineering data related to the properties of aerospace structural composites and metals, infrared

detector/sensor materials, and high-energy laser structural and detector vulnerability, survivability, and hardening.

Infrared Information Analysis Center (IRIA): Coverage extends to radiation sources emitting in the ultraviolet through far infrared spectral regions; radiation characteristics of targets; optical properties of materials, elements, and arrays; masers and lasers; image tubes, imaging systems, scanners, and staring systems and sensors; optical systems and components; detector coolers and electronics; atmospheric propagation; and search, homing, tracking, ranging, countermeasures, reconnaissance, and other military infrared and laser systems.

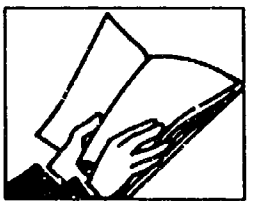
Metals Information Analysis Center (MIAC): MIAC is DoD's central source of information on monolithic metals, metal alloys, intermetallic compounds, coating, metal joints, and welds used in DoD systems and hardware. Emphasis is placed on those metals, alloys, intermetallic compounds, and coatings used in structural applications and in stringent environments.

Metal Matrix Composites Information Analysis Center (MMCIAC): Included is information on matrix materials, continuous and discontinuous reinforcements, reinforcement or fiber materials and metal matrix composite properties. Technical areas of expertise include fabrication and manufacturing processes, defense and industrial applications, test and evaluation techniques and methods, properties data, operational serviceability and repair, environmental protection, and performance computations.

Manufacturing Technology Information Center (MTIAC): MTIAC is responsible for information related to machine tools and manufacturing equipment, robots and special machines, computer-aided design, computer-aided manufacturing, and material handling equipment.

Nondestructive Testing Information Analysis Center (NTIAC): This IAC is concerned with all nondestructive testing, inspection, evaluation techniques, and processes that involve material-energy interaction phenomena.

Plastics Technical Evaluation Center (PLASTEC): PLASTEC is responsible for information related to plastics, adhesives, and organic matrix composites. Subject areas include structural, electrical, electronic, and packaging applications. Included are molded, formed, foamed, and laminated materials. PLASTEC also maintains computerized files on adhesives technology, compatibility of polymers with propellants and explosives, and materials deterioration data.



Pavements and Soil Trafficability Information Analysis Center (PSTIAC): Subject coverage includes pavements, trafficability, vehicle mobility, and terrain as relevant to military needs. Specific areas of concern are road vehicle mobility, soil trafficability, ground flotation, and terrain evaluation.

Reliability Analysis Center (RAC): The RAC's expertise is in reliability and failure-mode analysis of microcircuits, discrete semiconductors, nonelectronic devices, and standardized electronic modules. Its database on systems and equipment reliability and maintainability includes information on planned and operational systems and equipment, life-cycle R&M costs, and data for prediction techniques.

Soil Mechanics Information and Analysis Center (SMIAC): Included is information on soil mechanics; engineering geology; rock mechanics; soil dynamics; earthquake engineering; earth and rockfill dams, levees, earth-retaining structures, and building foundations; and laboratory testing of soils and rocks.

Survivability/Vulnerability Information Analysis Center (SURVIAC): Subject coverage extends to all aspects of nonnuclear survivability, vulnerability, and lethality for both U.S. and foreign aeronautical and surface targets. SURVIAC's scope extends both to the survival of friendly systems to threat weapons and the effectiveness of U.S. weapons against foreign systems.

Tactical Technology Center (TACTEC): TACTEC specializes in the technologies associated with tactical warfare from low-intensity conflict through tactical nuclear warfare. Representative technologies include surveillance and detection; target acquisition and engagement; guidance systems; position location; communications and electronics' countermeasures and countercountermeasures; camouflage, concealment, and deception; weapons and munitions; armor and antiarmor; electromagnetic launch; mobility and logistics; aircraft and air operations analysis; training; and military operations and operations analysis.

Locations and phone numbers of the IACs are in table 2.

Table 2. Locations and Phone Numbers of IACs.

IAC	Location	Phone Number
Chemical Warfare/ Chemical and Biological Defense	Battelle Edgewood Operations ATTN: CBIAC 2113 Emmorton Park Road Suite 200 Edgewood, MD 21040	(301) 676-9030
Coastal Engineering	U.S. Army Engineer Waterways Experimental Station ATTN: CEWES/CV-I 3909 Halls Ferry Road Vicksburg, MS 39180-6199	(601) 634-2012
Ceramics	Purdue University ATTN: CIAC/CINDAS 2595 Yeager Road West Lafeyette, IN 47906-1398	(317) 494-9393
Chemical Propulsion	John Hopkins University Whiting School of Engineering ATTN: CPIA 10630 Little Patuxent Parkway Columbia, MD 21044-3200	(410) 992-7300
Cold Regions	U.S. Army Cold Regions Research and Engineering Laboratory 72 Lyme Road Hanover, NH 03755-1290	(603) 646-4221
Crew System Ergonomics	Wright-Patterson Air Force Base ATTN: AL/CFM/SERIAC Dayton, OH 45433-6573	(513) 255-4842
Concrete	U.S. Army Engineer Waterways Experiment Station ATTN: CEWES/SV-Z 3909 Halls Ferry Road Vicksburg, MS 39180-6199	(601) 634-3264
Data and Analysis Center for Software	Kaman Sciences Corporation Data and Analysis Center for Software PO Box 120 Utica, NY 13503	(315) 734-3696
DoD Nuclear Information	DASIAC 2560 Huntington Ave. Suite 500 Alexandria, VA 22303-1490	(703) 960-4774
Guidance and Control	IIT Research Institute ATTN: GACIAC 10 West 35th Street Chicago, IL 60616-3799	(312) 567-4519
Hydraulic Engineering	U.S. Army Engineer Waterways Experiment Station ATTN: CEWES/HV-Z 3909 Halls Ferry Road Vicksburg, MS 39180-6199	(601) 634-2608

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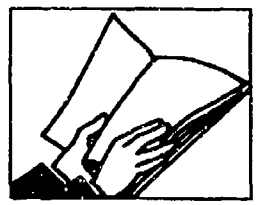


Table 2. Locations and Phone Numbers of IACs. (cont'd)

IAC	Location	Phone Number
High-Temperature Materials	Purdue University ATTN: HTMIAC/CINDAS 2595 Yeager Road West Lafeyette, IN 47906-1398	(317) 494-9393
Infrared	Environmental Research Institute of Michigan ATTN: IRIA PO Box 134001 Ann Arbor, MI 48113-4001	(313) 994-1200
Metals	Purdue University ATTN: MIAC/CINDAS 2595 Yeager Road West Lafeyette, IN 47906-1398	(317) 494-9393
Metal Matrix Composites	Kaman Science Corporation ATTN: MMCIAC 816 State Street PO Box 1479 Santa Barbara, CA 93102-1479	(805) 963-6455
Manufacturing Technology	IIT Research Institute ATTN: MTIAC 10 West 35th Street Chicago, IL 60616	(312) 567-4733
Nondestructive Testing	Texas Research Institute Austin 415A Crystal Creek Drive Austin, TX 78746-6201	(512) 263-2106
Plastics	Plastics Technical Evaluation Center U.S. Army Marament, Munitions and Chemicals Command Picatinny Arsenal, 07806-5000	(201) 724-4222
Pavements and Soil Trafficability	U.S. Army Engineer Waterways Experiment Station ATTN: CEWES/GM-L 3909 Halls Ferry Road Vicksburg, MS 39180-6199	(601) 634-2734
Reliability	IIT Research Institute ATTN: RAC PO Box 4700 Rome, NY 13440-8200	(315) 337-0900
Soil Mechanics	U.S. Army Engineer Waterways Experiment Station ATTN: CEWES/GV-Z 3909 Halls Ferry Road Vicksburg, MS 39180-6199	(601) 634-3376

(cont'd)

Table 2. Locations and Phone Numbers of IACs. (cont'd)

IAC	Location	Phone Number
Survivability/ Vulnerability	Booz-Allen & Hamilton ATTN: WL/FIVS/SURVIAC Wright-Patterson Air Force Base Dayton, OH 45433	(513) 255-4840
Tactical Technology	Battelle ATTN: TACTEC 505 King Avenue Columbus, OH 43201-2693	(614) 424-5047

What Are the Products of the IACs?

The IACs offer the following types of products (figure 21):

Abstracts and Indexes: Announcements in the form of abstracts and indexes of pertinent reports in the IAC's technology field.

Technical Inquiry Services: Advice in response to technical questions of IAC users.

Bibliographic Inquiry Service: Reference to the newest and most relevant reports covering a user's inquiry.

Scientific and Engineering Reference Works: Information applicable to ongoing work through design, preparation, and maintenance of handbooks and databooks.

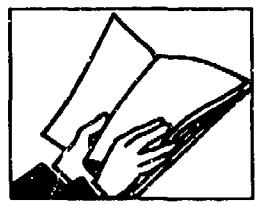
State-of-the-Art Reports: Summaries of the status of technology that are pertinent to current RDT&E decision making for scientists, engineers, and managers.

Critical Reviews and Technology Assessments: Comparative analyses of technologies based on technical, national, or application considerations.

Current Awareness: Newsletters and reviews to keep users aware of the most significant developments within the IAC's technical area.

Technical Area Tasks: Detailed problem solution provided in response to a user's requirements.

Technical Conference and Interagency Committee Organization and Administration: Administrative and technical support to DoD technical conferences and joint committee meetings. The purposes of these committees are to solve problems, coordinate technology programs, and promote the exchange of technical information.



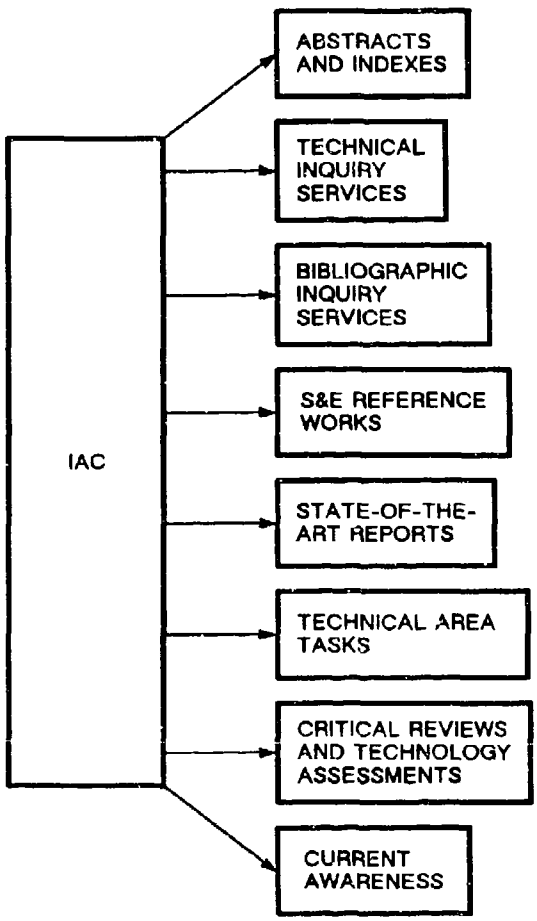


Figure 21. Typical IAC products.

What Source Materials Do the IACs Use?

Information sources (figure 22) for IAC publications include

- Technical reports from DoD, other government agencies, industry, academic institutions, and foreign sources
- Open literature
- Unpublished papers
- Meetings
- Conference proceedings

In addition, searches are continually conducted to find additional sources of information.

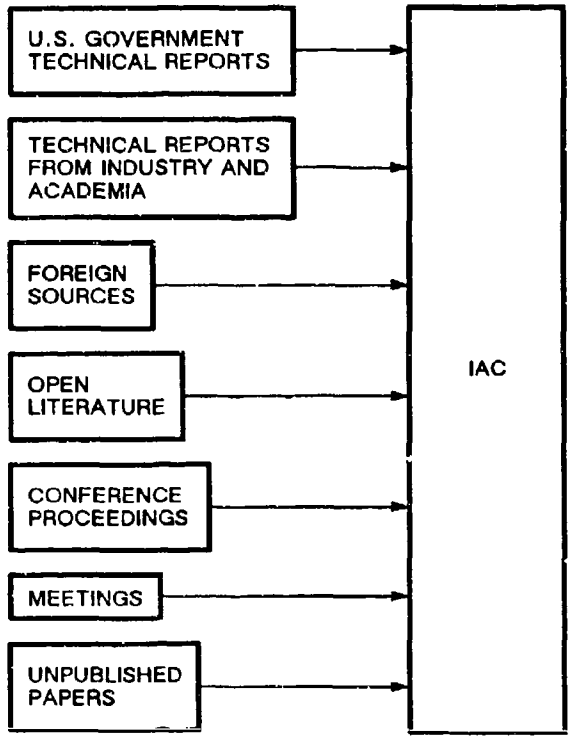


Figure 22. Source materials for IACs.

Who Is Eligible for IAC Services?

The following groups have access to IAC research information:

All U.S. government agencies

U.S. government contractors and grantees

Private sector

Please note that the private sector has access to the IACs, only if the request does not impair service to DoD. Also, access is consistent with security requirements and other limitations, e.g., distribution statements and export control notices on the requested information.

Is There a Cost for IAC Services?

Most IAC services are free or have a minimal charge. However, to offset costs incurred in preparing materials or responses to inquiries, service charges are sometimes imposed on products and services. Such costs are

established according to guidance provided by the sponsoring DoD component. At no time are charges incurred without the agreement of the user.

Examples of free services include abstracts, indexes, current awareness products, and technical inquiry services. Scientific and engineering reference work (on a continuing or subscription basis), state-of-the-art reports, technology assessments, and analytical and technical area tasks are separately priced by a cost proposal submitted to the requiring activity.

How Are the IACs Accessed?

Each Navy activity has different procedures for providing access to IACs. In most R&D organizations, access is provided by the activity's technical library. To determine how access is provided at your activity, you should contact your activity's STI officer.

Additionally, information is available from DTIC at the following address:

Defense Technical Information Center
ATTN: DTIC-AI, IAC Program Manager
Bldg. 5, Cameron Station
Alexandria, VA 22304

PART 3
GOVERNMENT-INDUSTRY DATA EXCHANGE PROGRAM

What is GIDEP? What information is included in GIDEP? Who has access to GIDEP information? Is GIDEP accessible to foreign governments? What is the Navy's policy regarding use of GIDEP?

What Is GIDEP?

The Government-Industry Data Exchange Program (GIDEP) is a cooperative activity between the federal government and industry. Sponsored by the Joint Logistics Command, the program allows participants to exchange technical data related to parts, components, and materials used in commercial and industrial military, energy, and space systems and equipment. By sharing information, expenditures of time and money are reduced or eliminated.

What Types of Information Are Included in GIDEP?

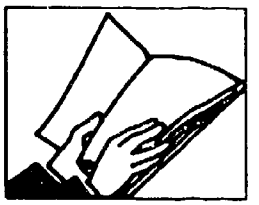
There are four main databases at GIDEP.

Engineering Data Interchange Database: This database is concerned with engineering and quality data. Included are engineering reports on energy, computer software, mathematics, materials, mechanics, and metallurgy; engineering and quality assurance reports on materials, mechanical, and electronic components and parts; and technical reports from the Department of Energy. Specifications are included for nonstandard and military drawing parts and materials, as well source control specifications from original equipment manufacturers.

Failure Experience Data Interchange Database: This database contains objective failure information generated when significant problems are identified with parts, components, processes, equipment, materials, specifications, or safety hazards. Also included are ALERTs, SAFE-ALERTs, failure analysis and problem information data, and diminishing manufacturing source data.[1]

Reliability-Maintainability Data Interchange Database: Included are failure rate/mode and replacement rate data and mean-time-to-repair data on parts, components, equipment, systems, and

[1] An ALERT, a report on failure information, is generated when significant problems are identified on parts and materials. A SAFE-ALERT is similar to an ALERT, but the failure information is related to a safety problem for personnel or risk of damage to facilities or equipment. Diminishing manufacturing sources data provides information on items being discontinued from production or on companies going out of business.



materials based on field performance and reliability demonstration tests. Also included are reports on theories, methods, techniques, and procedures related to reliability and maintainability practices.

Metrology Data Interchange Database: This database contains metrology-related engineering data on test systems, calibration systems, measurement technology, test equipment calibration procedures, and technical manuals.

Publications that are either classified or contain propriety data cannot be included in the GIDEP database. In addition, any publication with a limited distribution statement (statements B through F and X)[2] is not put in GIDEP. Only an unclassified, unlimited abstract (statement A) is included.

What Agencies Belong to GIDEP?

Members of GIDEP are agencies that use or generate the types of data included in the GIDEP databases. Basically, membership consists of

Prime and major subcontractors

Government acquisition and support activities

Original equipment manufacturers

Commercial-industrial companies

Consultant firms that support government and industry

Educational institutions with reliability–maintainability curricula, including engineering curricula

Public and private utilities

Canadian Department of National Defence and members of Canadian industry

How Is Information in GIDEP Protected?

GIDEP is not an open database. It can be accessed only by U.S. government agencies, contractors, and universities that are members. Information is also available to the Canadian government and Canadian contractors who have contracts with either the U.S. or Canada.

Requests for publications that carry limited-distribution statements are referred by GIDEP to the controlling agency.

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[2] See appendix A.

What Is the Navy's Policy Toward GIDEP?

WHAT IS THE POLICY FOR NAVY EMPLOYEES? The Navy requires that all unclassified publications that contain information relevant to GIDEP's mission areas be sent to the GIDEP database. This is usually done through each Navy activity's GIDEP representative, who reviews each publication and decides if the information is applicable to GIDEP. If this decision is positive and the publication is unlimited, i.e., approved for public release, the representative fills-out DD Form 2000 (General Document Summary Sheet, figure 23), and sends both the form and the publication to GIDEP. If the decision is positive and the publication is limited, i.e., distribution statement B-F or X, the GIDEP representative writes an unlimited abstract and sends only the DD Form 2000 to GIDEP. Publications that contain either proprietary or classified information cannot be sent to GIDEP.

The Navy also suggests that you have your technical library search the GIDEP database before you start work that involves testing parts and components and preparing calibration procedures.

WHAT IS THE POLICY FOR CONTRACTORS? All Navy-funded contracts for $500,000 or more for research, design, development, testing, production, procurement, or support of mission-related material[3] are to be reviewed to determine if contractor participation in GIDEP would be beneficial. If the decision is positive, the following GIDEP clauses are to be included in the contract:

a. The contractor shall participate in the appropriate interchange of the Government-Industry Data Exchange Program (GIDEP) under the latest revision of MIL–STD–1556. This program is an invaluable tool in the government's war against inefficiency, and is limited to participating activities. Data entered are retained by the program and provided on a privileged basis. Compliance with this clause shall not relieve the contractor from complying with any other provision of the contract.

b. The contractor agrees to insert paragraph "A" of this clause in any subcontract hereunder exceeding $500,000. When so inserted, the word "contractor" shall be changed to "subcontractor."

These clauses can be tailored to meet specific requirements.

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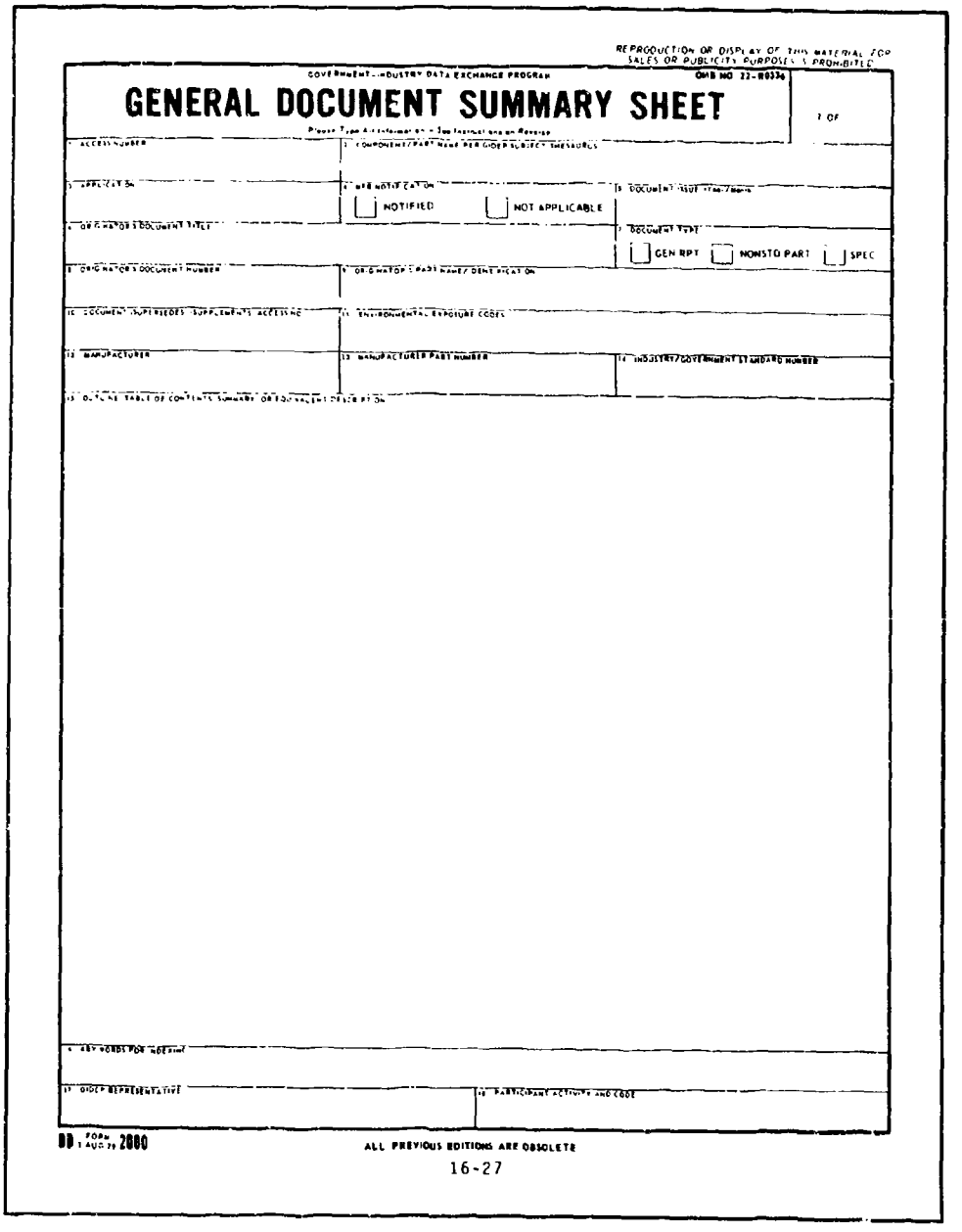
[3] Mission-related material is that material that must operate to accomplish the specific mission of a system, subsystem, or piece of equipment developed or procured for the use and support of the Navy or Marine Corps.



REPRODUCTION OR DISPLAY OF THIS MATERIAL FOR SALES OR PUBLICITY PURPOSES IS PROHIBITED

GOVERNMENT-INDUSTRY DATA EXCHANGE PROGRAM

OMB NO 22-R0336

GENERAL DOCUMENT SUMMARY SHEET

1 OF

1 ACCESS NUMBER

2 COMPONENT/PART NAME PER GIDEP SUBJECT THESAURUS

3 APPLICABILITY

4 NOTIFICATION

☐ NOTIFIED ☐ NOT APPLICABLE

5 DOCUMENT ISSUE (YEAR/MONTH)

6 ORIGINATOR'S DOCUMENT TITLE

7 DOCUMENT TYPE

☐ GEN RPT ☐ NONSTD PART ☐ SPEC

8 ORIGINATOR'S DOCUMENT NUMBER

9 ORIGINATOR'S NAME/IDENTIFICATION

10 DOCUMENT SUPERSEDES/SUPPLEMENTS ACCESS NO

11 ENVIRONMENTAL EXPOSURE CODES

12 MANUFACTURER

13 MANUFACTURER PART NUMBER

14 INDUSTRY/GOVERNMENT STANDARD NUMBER

15 OPTIONAL TABLE OF CONTENTS, SUMMARY OR EQUIVALENT DESCRIPTION

16 KEY WORDS FOR INDEXING

17 GIDEP REPRESENTATIVE

18 PARTICIPANT ACTIVITY AND CODE

DD FORM 1 AUG 79 2000

ALL PREVIOUS EDITIONS ARE OBSOLETE

16-27

Figure 23. DD Form 2000 used for sending information to GIDEP database.

How Is Information Obtained from GIDEP?

WHAT ARE THE PROCEDURES FOR NAVY EMPLOYEES? Most technical libraries maintain copies of GIDEP microfilm files; abstracts of reports; summaries of failure data rate, replacement rate data, ALERTs, and SAFE-ALERTs; and other data related to your organization's work. These should be available for your use in the technical library. If necessary, your library will also query the database for copies of material. Contact your activity's STI officer for specific practices at your activity.

WHAT ARE THE PROCEDURES FOR CONTRACTORS? When GIDEP receives material, it is reviewed for program applicability, indexed for computer retrieval, processed for microfilming, and automatically distributed to contractors, as well as government agencies, that are GIDEP members. Contractors are also able to query the database for copies of material.

PART 4
REFERENCES

Chief of Naval Operations Instruction 5200.29, Participation in Government-Industry Data Exchange Program, 24 February 1987

Defense Logistics Agency Handbook 4185.4, Research and Technology Work Unit Information System Data Base, June 1986

Defense Logistics Agency Handbook 4185.8, Defense Technical Information Center, Handbook for Users, May 1988

Defense Technical Information Center Manual 4185.4, Report Selection Criteria, June 1983

Department of Defense, Information Analysis Center Directory, April 1985

Department of Defense Instruction 7720.13, Research and Technology Work Unit Information System, 16 April 1968

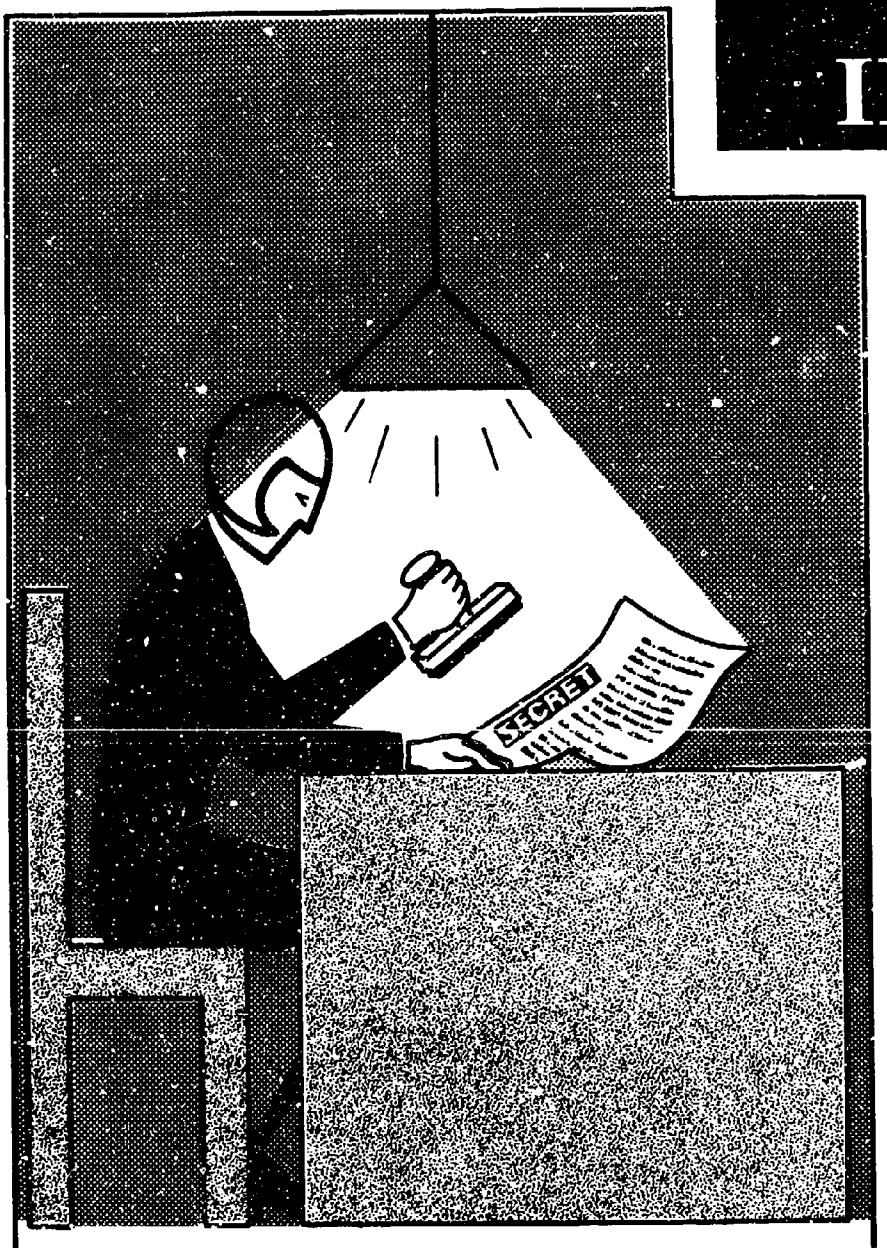
Department of Defense Regulation 3200.12-R-1, Research and Technology Work Unit Information System Regulation, August 1983

Naval Material Command Instruction 5200.35B, Government-Industry Data Exchange Program, 21 April 1982

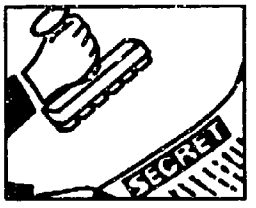
Secretary of Navy Instruction 3900.32B, Policy and Requirements for Reporting Work Unit Level Information (DD Form 1498), 17 July 1974

Secretary of Navy Instruction 5237.2, Automatic Data Processing (ADP) Software Exchange and Release, 17 February 1981

III



Controlling Scientific and Technical Information

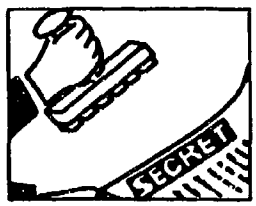


CHAPTER III

Controlling Scientific and Technical Information

Illustrations

Tables



PART 1
DISTRIBUTION STATEMENTS

What is a distribution statement? Does it always have to be used? How are statements assigned? What types of material require distribution statements? What is the relationship of the distribution statement to the export-control notice? Are distribution statements required for both classified and unclassified material?

What Are the Navy's Basic Requirements Concerning Distribution Statements?

All Navy activities that either generate or are responsible for scientific and technical information must use the following guidelines concerning distribution statements:

The distribution statement for scientific and technical information must be determined before primary distribution is made. If the information is to be presented orally, the determination must be made before the presentation.

Distribution statements are required on both classified and unclassified information.

All forms of information must be marked with a distribution statement. Such information includes printed or written material, aperture cards, magnetic media, viewgraphs, slides, drawings, videotapes, and microfilm.

All types of information must be marked with a distribution statement. This includes reports, drawings, blueprints, standards, specifications, technical manuals, plans, and computer software.

Technical information in preliminary or working draft form cannot be distributed without a security classification review and assignment of a distribution statement.

When required, the export-control notice must be used in addition to the distribution statement.

Existing unclassified technical information must be assigned a distribution statement—if it has not already been released to the public and if it is likely that the information will be distributed outside DoD.

Classified information cannot be approved for public release, i.e., assigned distribution statement A.

The distribution statement assigned to classified information is retained after declassification or until the controlling agency removes or changes the statement.

What Is the Purpose of the Distribution Statement?

A distribution statement does not prevent you from providing information to those organizations and people with a "need-to-know." The distribution statement is not intended to limit distribution to agencies and individuals with legitimate requirements for the information. Rather, its purpose is to regulate the material's secondary distribution by showing who can have access to the material without approval by the controlling agency. For example, if the distribution statement limits the information to only DoD organizations, then the controlling agency must approve distribution to contractors and non-DoD government agencies.

In addition, some Navy activities or security classification guidelines may require additional caveats that further limit distribution of the information. For example, some security guidelines prohibit distribution to DoD databases, and other guidelines do not allow distribution to foreign nationals.

What Distribution Statements Are Available?

Seven distribution statements are used by DoD (table 3). These distribution statements show whether the material is to be released to the public or whether the material is to be controlled by an agency of the Department of Defense.

The seven distribution statements can be summarized as follows:

Approved for public release (statement A).

Limited to U.S. government agencies (statement B).

Limited to U.S. government agencies and their contractors (statement C).

Limited to DoD and U.S. DoD contractors (statement D).

Limited to DoD components (statement E).

All distribution controlled by the controlling agency (statement F).

Limited to U.S. government agencies and private individuals or enterprises eligible to obtain export-controlled data (statement X).

Reasons for limiting distribution include the following:

Proprietary information

Foreign government information

Evaluation of a contractor's performance

Technical or operational information used solely for official administrative or operational purposes

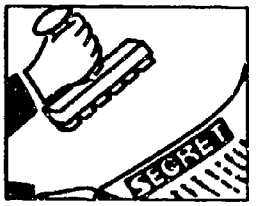


Table 3. Distribution statements and the reasons for imposing them.

Reasons for imposing distribution statements	Distribution Statements						
	A	B	C	D	E	F	X
Foreign government information		X	X	X	X		
Proprietary information		X			X		
Critical technology		X	X	X	X		
Test and evaluation		X			X		
Contractor performance evaluation		X			X		
Premature dissemination		X			X		
Administrative/operational use		X	X	X	X		
Software documentation		X	X	X	X		
Specific authority (identify)		X	X	X	X		
Direct military support					X		
Public & foreign release	X						
Paragraph 4-505 of DoD 5200.1-R or other specific authority						X	
Export control of unclass. documents (private individuals)							X

A = Unlimited distribution
B = U.S. Govt agencies only
C = U.S. Govt agencies and their contractors
D = DoD and DoD contractors only
E = DoD components only
F = Further dissemination only as directed
X = Agencies, individuals, or enterprises authorized by 10 U.S.C. 140c.

Critical technology

Patentable information that pertains to systems or hardware in the development or conceptual stage

Test and evaluation data

Software data

Direct military support

Specific authority (The information needs to be limited for reasons other than those listed above, and a specific written guideline exists to cover this contingency.)

These statements and explanations concerning their use are in appendix A. However, two special requirements that concern the use of distribution statement A need to be emphasized:

The use of statement A requires the approval of either your agency or your headquarters office.

Classified publications cannot (1) be referenced in a statement A publication or (2) be listed in the bibliography of a statement A publication.

What Is the Export Control Notice?

All technical material to be distributed must also be reviewed for export controls; this includes militarily critical technology. If the material contains information that cannot be exported without an export license, the following statement, in addition to any distribution statement, must be used:

WARNING—This document contains technical data whose export is restricted by the Arms Export Control Act (Title 22, U.S.C., Sec. 2751, et seq.) or the Export Administration Act of 1979, as amended, Title 50 U.S.C., App. 2401 et seq. Violations of these export laws are subject to severe criminal penalties. Disseminate in accordance with provisions of DoD Directive 5230.25.

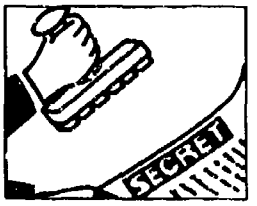
Can a Distribution Statement Be Changed?

A distribution statement may be changed after technical material has been released. In fact, the Navy requires that scientific and technical information be reviewed to determine if the distribution availability of the information can be increased, e.g., changed from U.S. government agencies only to U.S. government agencies and their contractors.

How Is Technical Material Marked with a Distribution Statement?

HOW IS STANDARD PRINTED OR WRITTEN MATERIAL MARKED? Standard printed or written material includes all publications and correspondence that discuss technical information.

Material With a Cover or Title Page. Print, type, or stamp the distribution statement and export-control notice (if required) on the front cover or title page (figure 24).



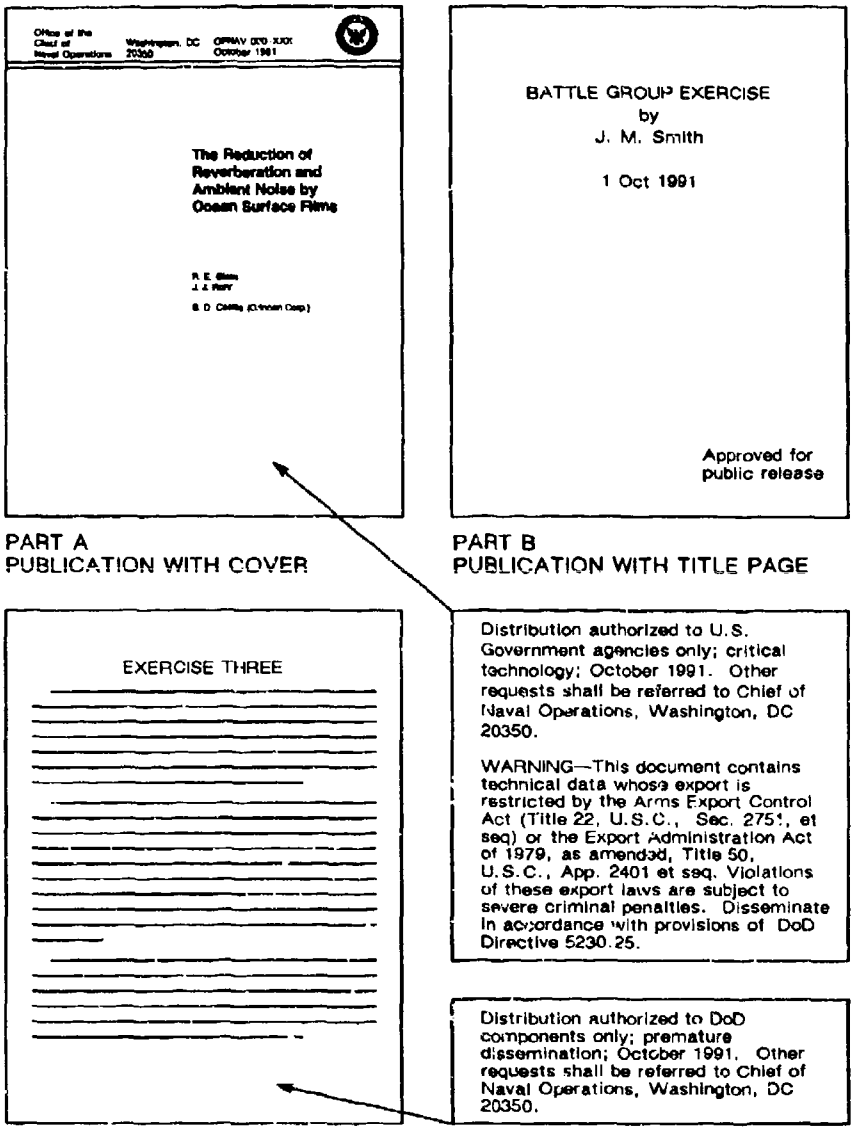


Figure 24. Placement of distribution statement and export-control notice on standard printed or written material.

Material Without a Cover or Title Page. Print, type, or stamp the distribution statement and export-control notice (if required) on the first page (figure 24).

HOW IS A DECK OF ADP PUNCHED CARDS MARKED? When marking a deck of ADP punched cards (figure 25), print, type, or stamp the distribution statement and export-control notice (if required) on the face of the first and last cards and on the container holding the deck.

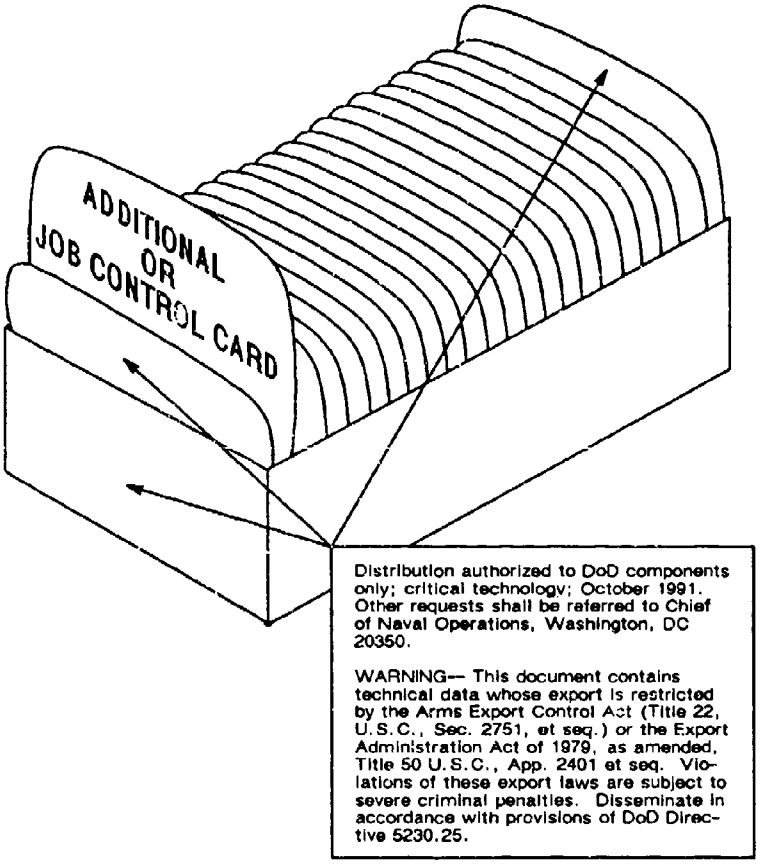
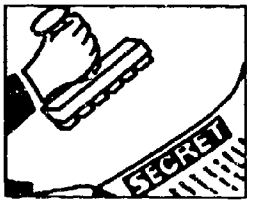
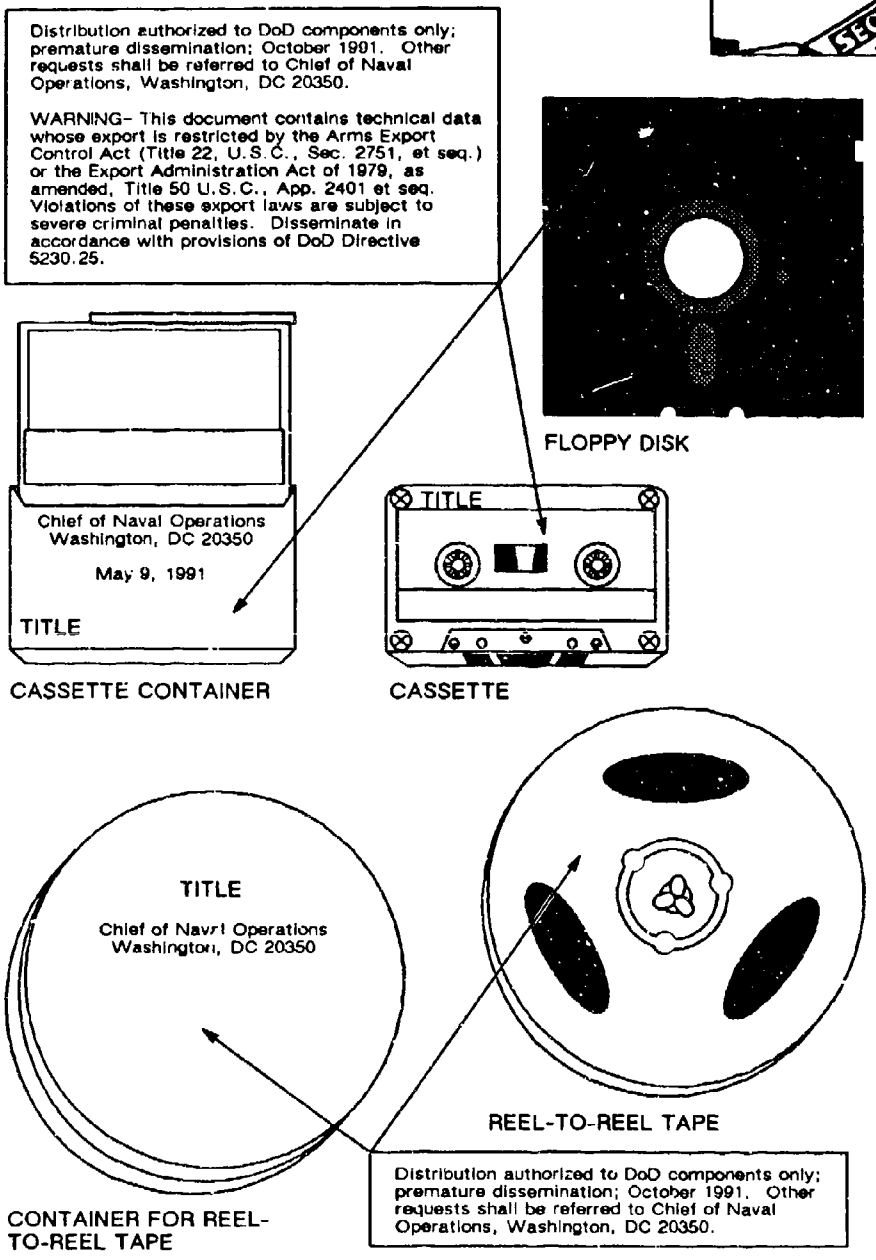


Figure 25. Placement of distribution statement and export-control notice on deck of ADP punched cards.

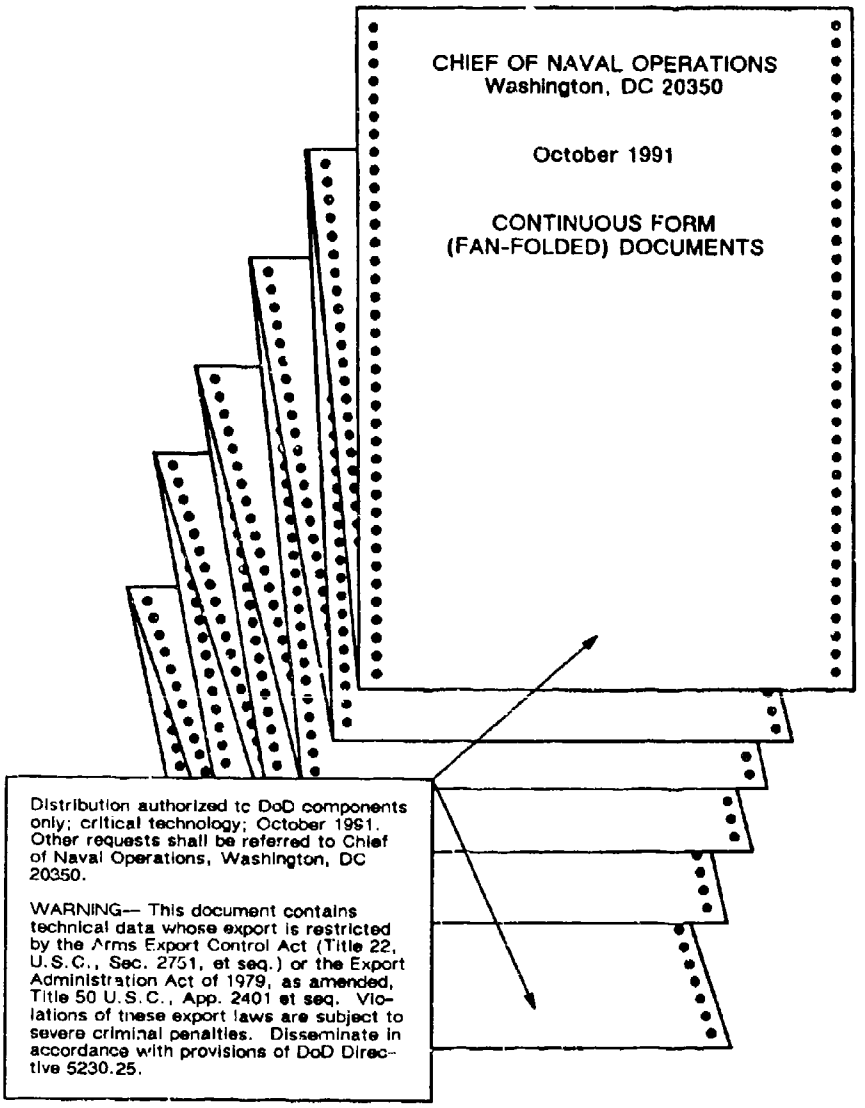
HOW ARE MAGNETIC MEDIA MARKED? Print, type, or stamp the distribution statement and export-control notice (if required) on a label applied to the outside of the magnetic media and on the container housing the media (figure 26A). The first and last pages of the resulting hard-copy document or computer printout must also be marked with the applicable statements (figure 26B). Included in this media are magnetic tapes, cassettes, and disks.





Part A. Examples of media types.

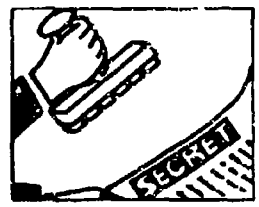
Figure 26. Placement of distribution statement and export-control notice on magnetic media.



Part B. Resulting computer printout.

Figure 26. Placement of distribution statement and export-control notice on magnetic media.

HOW IS MICROFICHE MARKED? Print, type, or stamp the distribution statement and export-control notice (if required) on the outside of the jacket housing the microfiche (figure 27). The first and last pages of the resulting hard-copy document and first and last frame of the film are also to be marked with the statements. The headers for microfiche must carry abbreviated versions of the statements.



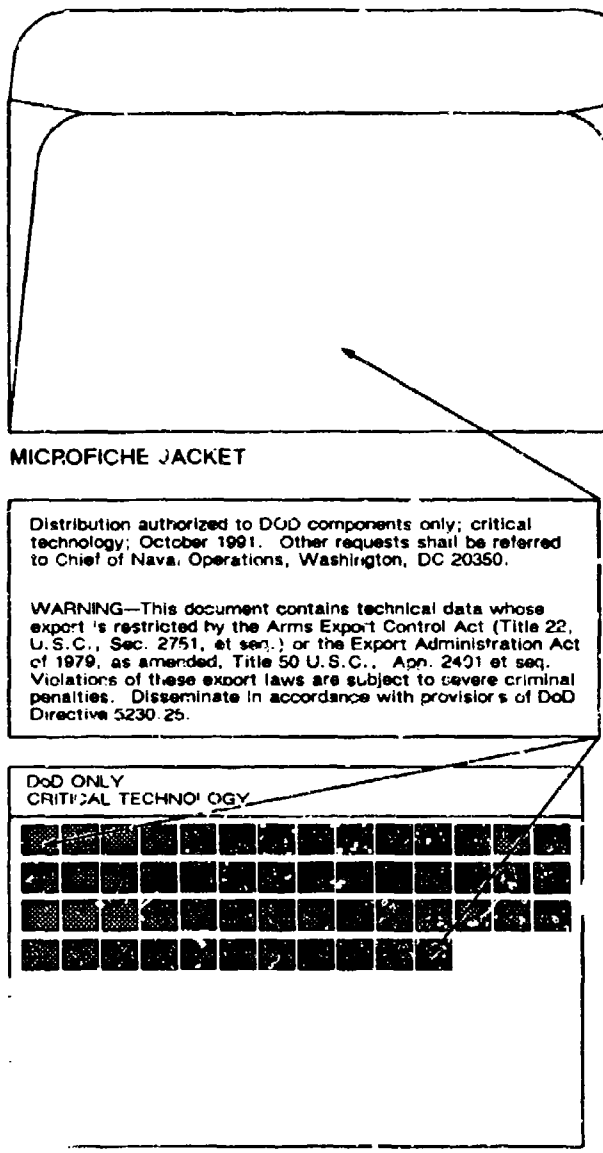
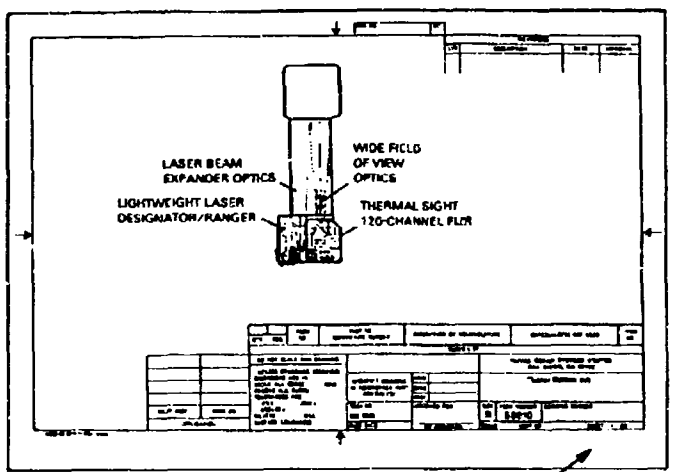


Figure 27. Placement of distribution statement and export-control notice on microfiche.

HOW ARE DRAWINGS MARKED? Print, type, or stamp the distribution statement and export-control notice (if required) near the title block of drawings (figure 28).



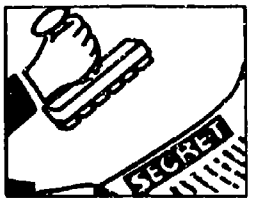
Distribution authorized to DoD components only; critical technology; October 1991. Other requests shall be referred to Chief of Naval Operations, Washington, DC 20350.

WARNING— This document contains technical data whose export is restricted by the Arms Export Control Act (Title 22, U.S.C., Sec. 2751, et seq.) or the Export Administration Act of 1979, as amended, Title 50 U.S.C., App. 2401 et seq. Violations of these export laws are subject to severe criminal penalties. Disseminate in accordance with provisions of DoD Directive 5230.25.

Figure 28. Placement of distribution statement and export-control notice on drawing.

HOW ARE PHOTOGRAPHS MARKED? Place the distribution statement and the export-control notice (if required) on both negatives and positives. If possible, place the statements on the face side o all prints and reproductions; if this is not possible, either stamp or affix the statements on the reverse side (figure 29). Mark roll negatives and positives at the beginning and end of the strip.

HOW ARE PRESENTATIONS USING VIEWGRAPHS OR SLIDES MARKED? When marking presentations, include a viewgraph or slide with the appropriate distribution statement and export-control notice (if required). These viewgraphs and slides should eit include the presentation's title or be followed by a viewgraph or slide sh ing the presentation's title (figure 30). It is not necessary to place the distr bution statement on individual presentation aids, unless you remove a presentation aid from the set. If these markings are visible only when projected, you must repeat the statements on the frame or holder of the presentation aid.



Distribution authorized to DoD components only; critical technology; October 1991. Other requests shall be referred to Chief of Naval Operations, Washington, DC 20350.

WARNING— This document contains technical data whose export is restricted by the Arms Export Control Act (Title 22, U.S.C., Sec. 2751, et seq.) or the Export Administration Act of 1979, as amended, Title 50 U.S.C., App. 2401 et seq. Violations of these export laws are subject to severe criminal penalties. Disseminate in accordance with provisions of DoD Directive 5230.25.

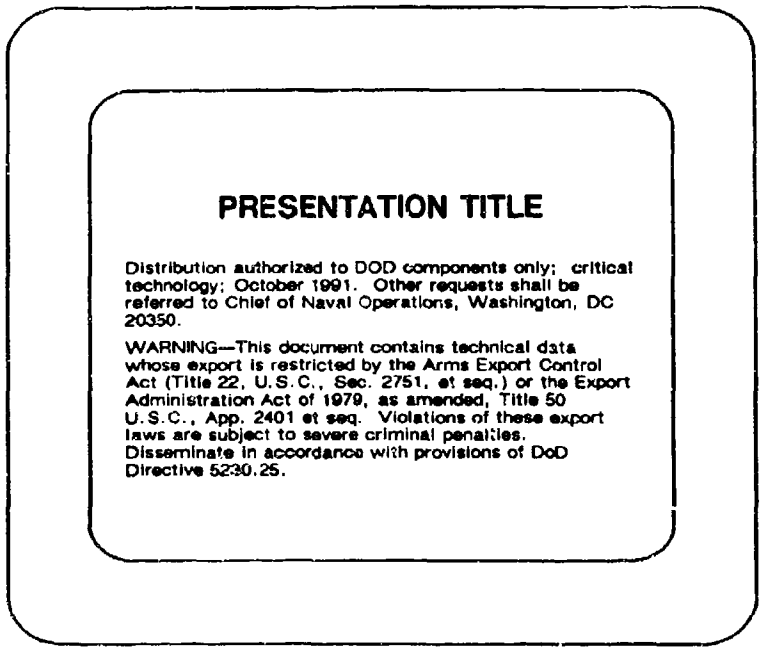
APRIL 18, 1991
CNO
Washington, DC 20350

OR

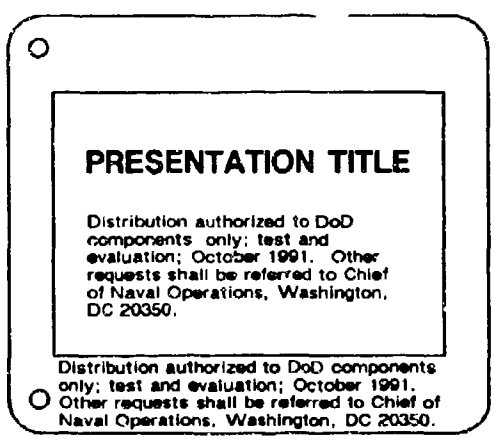
(BACK OF PHOTO)

Figure 29. Placement of distribution statement and export-control notice on photograph.

1. **Distribution Statements**



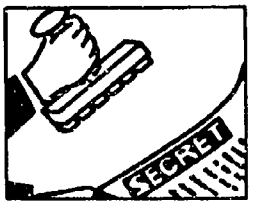
VIEWGRAPH



SLIDE

Figure 30. Placement of distribution statement and export-control notice on slides and viewgraphs.

HOW ARE PRESENTATIONS WITHOUT VIEWGRAPHS OR SLIDES MARKED? When making an oral presentation, verbally state the dissemination of the material being discussed, including its export restrictions (if required), at the beginning of the presentation.



HOW ARE AUDIOVISUAL PRODUCTIONS MARKED? Place the distribution statement and the export-control notice (if required) on the opening and closing frames of your production. All markings must be visible when projected. Mark reels and cassettes with the statements. (See figure 51.)

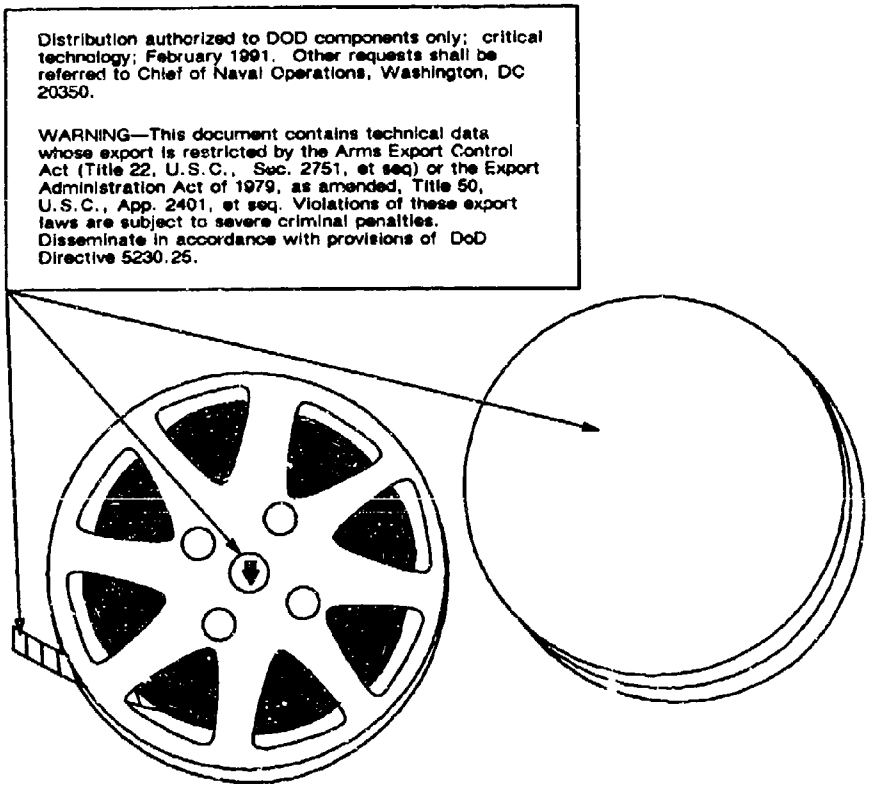


Figure 31. Placement of distribution statement and export-control notice on audiovisual production.

PART 2
EXPORT CONTROLS ON TECHNICAL INFORMATION

Why do I need to be concerned with export controls? How do I determine if my information must be protected from export? How do I protect it? How is basic research affected? What is critical technology and how is it related to export controls?

What Are Export Controls and Why Do They Exist?

Technical information that can be withheld from public disclosure under the provisions of Section 1217 of Public Law 98-94 is considered as export-controlled. Public Law 98-94, the Defense Authorization Act of 1984, authorized the Secretary of Defense to withhold from public disclosure technical information with military or space applications. As a result, DoD implemented procedures that control the export of some scientific and technical information.

Export controls, including the control of critical technology, are used to protect U.S. technology with military applications from inadvertent disclosure to foreign nations and foreign nationals. These controls are imposed because acquisition of the militarily critical technology by potential adversaries can significantly reduce the adversaries' risks when designing new weapons and defensive systems and can also shorten their research-and-development cycle. Acquisition of militarily critical technology can also severely undermine our national security by allowing our adversaries to develop countermeasures to our existing and anticipated defense systems.

How Do I Determine if My Material Should Be Controlled?

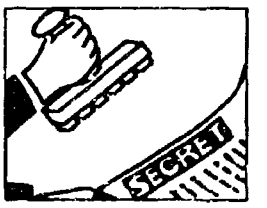
WHAT ARE THE MAJOR CRITERIA? For our purposes, export controls (or withholding information from public disclosure) apply to both classified and unclassified information that meets all of the following four criteria (figure 32):

The information is in the possession of or is controlled by the Navy (criterion 1).

The information has a military or space application (criterion 2).

The information may be exported only with approval, authorization, or license under U.S. export-control laws (criterion 3).

The information discloses critical technology (criterion 4).



Criterion 1. Possession or Control by Navy. Information the Navy controls or possesses means (1) information created by Navy personnel or (2) information developed and produced for the Navy under contracts or other agreements.

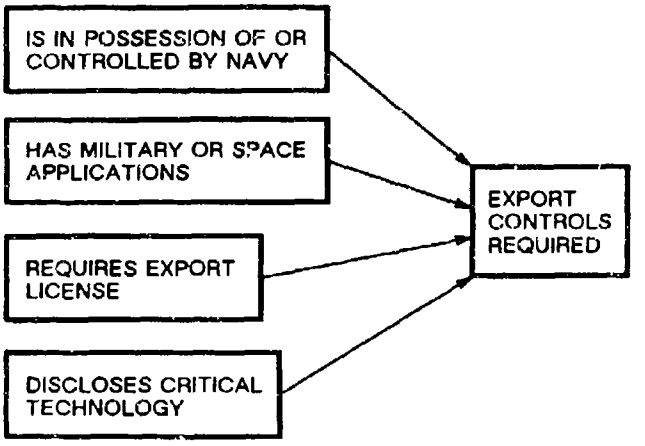


Figure 52. Four criteria that must be met for export controls to be required.

Criterion 2. Military or Space Applications. The information can be used, or adapted for use, to design, engineer, produce, manufacture, operate, repair, overhaul, or reproduce military or space equipment or related technology.

Technical information with military or space applications can be recorded in a variety of media (figure 33). Examples include the following:

Blueprints	Drawings	Plans
Instructions	Software	Reports
Computer Documents	Films	Viewgraphs
Manuals	Videotapes	Specifications

Criterion 3. U.S. Export Laws. Implementing regulations for export-control laws describe technical information that must have approval before its legal export. Generally, technical information related to items on the State Department's Munitions List and the Commerce Department's Commodities Control List requires licensing or approval (figure 34).

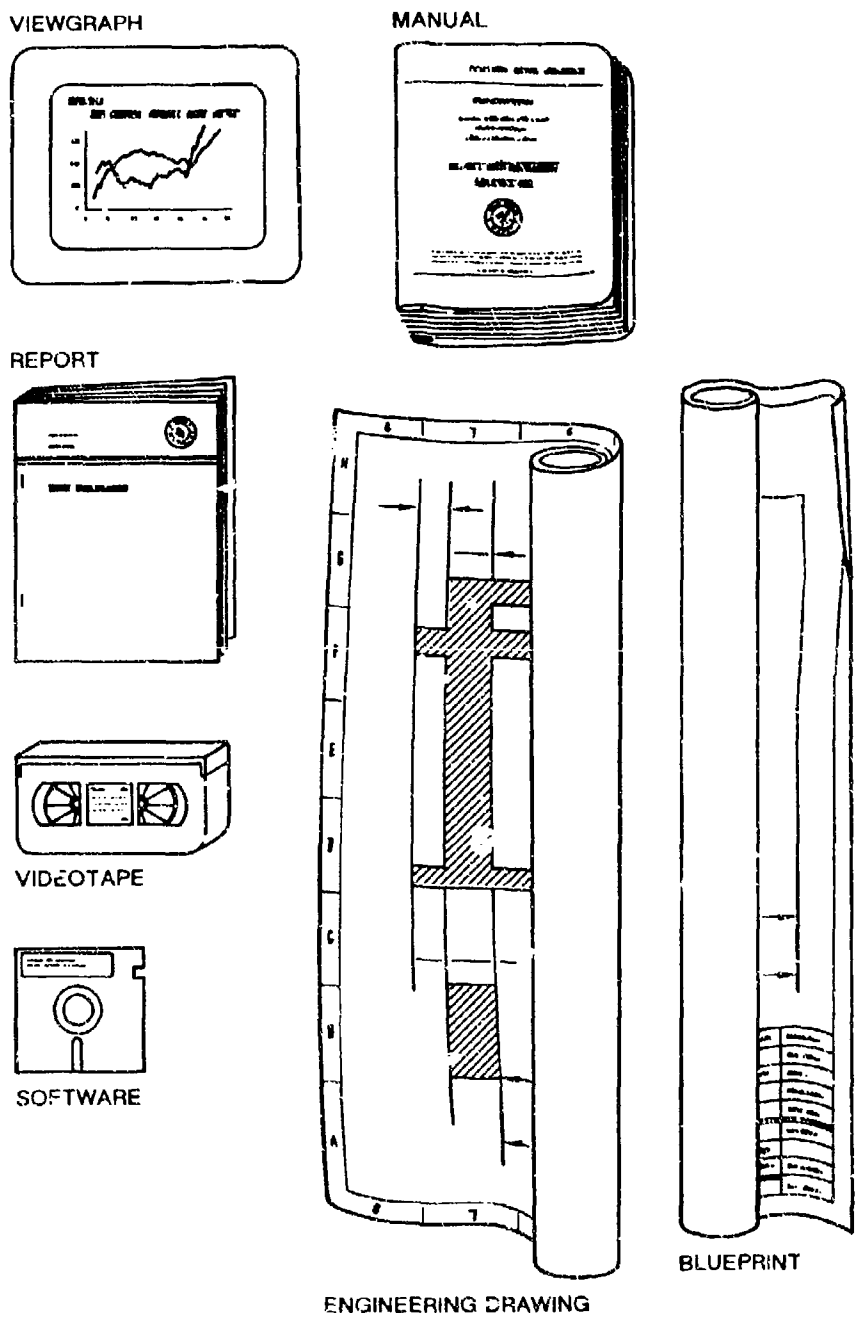
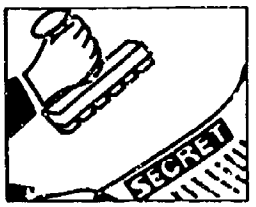


Figure 33. Examples of technical information that can disclose export-controlled information.



WEAPONS AND WEAPON TECHNOLOGY	STRATEGIC TECHNOLOGY
Basic Statute: Arms Export Control Act of 1976	Basic Statute: Export Administration Act of 1979 (currently extended by Executive Order)
Implementing Regulation: International Traffic in Arms Regulation (ITAR)	Implementing Regulation: Export Administration Regulation (EAR)
Product List: Munitions List	Product List: Commodity Control List (CCL)
Implementing Office: State Department, Office of Munitions Control	Implementing Office: Commerce Department, Office of Export Administration

Figure 34. U.S. export laws.

Criterion 4. Critical Technology. Critical technology is essentially information that reveals production "know-how" that would significantly contribute to a country's military potential and possibly prove detrimental to the security of the United States. Such information usually occurs in the following areas:

> **Arrays of Design and Manufacturing Know-How:** The know-how and related technical information required to achieve a significant development, production, or utilization purpose. Included are services, processes, procedures, specifications, design data and criteria, and testing techniques.
>
> **Keystone Equipment:** Manufacturing, inspection, or test equipment specifically necessary for the effective application of a significant array of technical information and know-how.

Keystone Materials: Materials specifically necessary for the effective application of a significant array of technical information and know-how.

Products Accompanied by Sophisticated Know-How: Use of the products requires providing (disclosing) a significant amount of technical information and know-how (including operation, application, or maintenance know-how). Also included are products for which the embedded know-how can be derived by reverse engineering or is revealed by use of the products.

WHAT SOURCE MATERIAL EXISTS? When reviewing your material, you should use several references to determine if your material requires export controls. These include the classified and unclassified versions of the Militarily Critical Technologies List (MCTL), the Munitions List, the Commodities Control List, the Arms Export Control Act, the Export Administration Act, the International Traffic in Arms Regulation, and the Export Administration Regulation. These references should be available in your technical library and your legal counsel's office.

Other sources that can help you determine if export controls are required include information from the intelligence and security communities, work in industry and academia, and technology developments by allied nations.

WHAT ARE THE EXCEPTIONS TO EXPORT CONTROLS? Even if you determine that your technical material meets the four criteria previously discussed, your material may be exempted from export controls if one of the following conditions applies:

It is authorized for export under a general, unrestricted license.

It is exempted under regulations implementing the export-control laws.

What Information Should Be Controlled?

The following types of material, whether prepared by Navy personnel or Navy contractors, must be reviewed to determine if export controls are required:

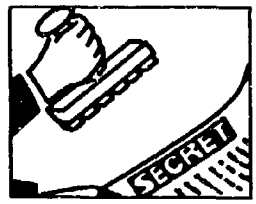
Technical publications

Technical manuals

Presentations

Journal articles

Documents used in procurements, e.g., statements-of-work and specifications



Any other information, regardless of its medium, that will be sent outside your Navy activity.

If export controls are required, you must mark the document with the following statement:

> WARNING—This document contains technical data whose export is restricted by the Arms Export Control Act (Title 22, U.S.C., Sec. 2751, et seq.) or the Export Administration Act of 1979, as amended, Title 50, U.S.C., App. 2401 et seq. Violations of these export laws are subject to severe criminal penalties. Disseminate in accordance with provisions of DoD Directive 5230.25.

What Is the Militarily Critical Technologies List?

Published in both a classified and unclassified form, the Militarily Critical Technologies List (MCTL) is a detailed discussion of the development, production, and utilization technologies that DoD has determined to be crucial to our military capability and of significant value to potential adversaries.

When DoD produces the MCTL, technical specialists from DoD, the military services, service laboratories, other government agencies, and industry are used to determine what technologies should be included.

Criteria for selecting candidate technologies for inclusion on the list include the following:

Technology not already possessed by a potential adversary.

Technology providing advantages to the U.S. in terms of performance, reliability, maintenance, and cost over systems currently in use by an adversary.

Technology included in the CIA's projection of Soviet acquisition targets.

Technology related to emerging technologies with high potential for having an impact on advanced military applications.

What Distribution Statements Are Used with Export-Controlled Information?

To restrict material because of export controls, use distribution statement B (U.S. government agencies only), C (U.S. government agencies and their contractors), D (DoD and U.S. DoD contractors), or E (DoD components). Cite as the reason "critical technology." Statement F (limited to the controlling agency) can also be used. (See table 4.)

If you need to further emphasize the significance of the restriction, use distribution statement E and cite as the reason "direct military support."

Using this statement means that the export-controlled information is of such military significance that release for purposes other than direct support of DoD-approved activities could jeopardize an important technological or operational advantage of the United States.

Table 4. Distribution statements to be used with export-controlled material.

Desired Audience	Distribution Statement
U.S. G erniment only	B
U.S. Government and its contractors	C
DoD and U.S. DoD contractors	D
DoD only	E
Controlling agency only	F
Individuals or enterprises not associated with U.S. Government	X

If you need to release the information to individuals who are not associated with an agency or company, use statement X (U.S. government agencies and private individuals eligible to receive export-controlled data).

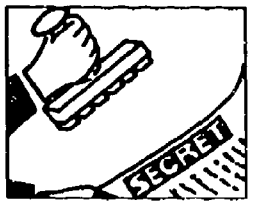
The selected distribution statement and warning notice must be used together. Part 1 of this chapter, "Distribution Statements," provides guidelines for placement of the statement and notice on the controlled material.

Remember, as previously discussed, the purpose of the distribution statement and export-control notice is not to limit the distribution of your information, but to protect it during the secondary distribution process. You can still distribute your material to agencies that have a valid need for the information, but the notice and distribution statement will provide the recipient with guidance on additional distribution.

What Is the Relationship of Fundamental Research to Export Controls?

Many discussions have been held concerning basic rese rch (category 6.1) and exploratory development (category 6.2) and their relationships to export controls. Different guidelines exist for work done under contract and work done by government scientists and engineers.

Technical information that results from contracted basic research is normally assigned distribution statement A (public release); the performing



agency can be a university or a contractor. Technical information that results from contracted exploratory development, when the work is performed on campus by a university, is also normally assigned distribution statement A. Exceptions exist only if the results of the work may be classified or if there is a probability of disclosing the performance characteristics of military systems or of manufacturing technologies that are unique and critical to defense. If the research results are to be classified or limited, this agreement must be recorded in the contract or grant.

Basic research and exploratory development performed by government employees in a government laboratory must be reviewed before being released to the public. These results are usually released to the public, but sometimes their distribution must be limited, for example, if the information is closely related to military operations or systems.

What Are the Responsibilities of Navy Personnel Concerning Export-Controlled Information?

Your first responsibility concerning export controls is to determine if your material meets the four criteria discussed earlier. If it does, then mark it with the warning notice cited in this part under "What Information Should Be Controlled."

Another area of responsibility is distribution of your export-controlled information. Only contractors who are considered as "qualified" contractors can receive export-controlled material.[1] To determine if a contractor is qualified, you can check with the Defense Logistics Service Center (DLSC).

You should also inform your activity's contact for export-controlled information of any changes you feel are necessary in the MCTL. If you feel that information should be removed, provide that office with supporting information; for example, cite where the controlled information has appeared in the open literature. Your activity's contact will then work with DoD to see if the MCTL can be changed.

How Do I Release Export-Controlled Information to Contractors?

All contractors or individuals who need access to export-controlled information must be registered with the Defense Logistics Service Center (DLSC) in Battle Creek, Michigan. Interested contractors fill out a DD Form 2345 (Export-Controlled DoD Technical Data Agreement), which

[1] To be considered as "qualified," a contractor must have a DD Form 2345 on file with the Defense Logistics Service Center in Battle Creek, Michigan. The DD Form 2345 will state what types of export-controlled information the contractor can access.

permits them to receive certain categories of export-controlled data. The form is a self-certification declaring that the contractor or individual will use the data only in ways that will maintain the protection afforded by U.S. export-control laws.

DLSC collects the certifications and maintains them in a database. They also distribute a list of contractors eligible for access to export-controlled information. If you need to write to DLSC, its address is Defense Logistics Service Center, ATTN: DLSCFBA, Federal Center, Battle Creek, MI 49017-3086.

How Are Export Controls Used in Relation to the Contracting Process?

At times, export-controlled information must be part of a procurement package. When this occurs, you can use one of two suggested procedures. In the first procedure,

Write the statement-of-work so that it can be released to the public.

Make your export-controlled information an addendum to the statement-of-work or place it in another document, such as a specification or a test plan. Mark these documents with the warning notice and the proper distribution statement.

Reference the export-controlled information in the statement-of-work, and state that this information is available from your activity.

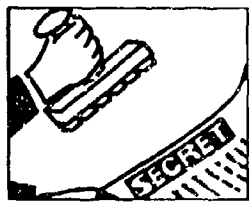
Inform your contract negotiator of this situation so that the applicable clauses and forms can be included in your contract.

Establish procedures to provide this information to potential contractors.

Alternatively, you can mark your entire statement-of-work as subject to export controls. In this case, place the appropriate distribution statement and the export-control notice on your statement-of-work. Also inform your contract negotiator of this situation so that the applicable clauses and forms can be included in your contract.

In addition, the Naval Supply Command now requires that the solicitation synopsis for the Commerce Business Daily carry the following statement:

> The solicitation document contains information that has a military or space application. Only businesses that have been certified by the Department of Defense and have a valid need to know may have a copy of the solicitation document. All requests for copies of the solicitation document must include a certified copy of DD Form 2345. To request this certification, write to the Commander, Defense Logistics Service



Center, Attn: DLSC-FEB, Federal Center, Battle Creek, Michigan 49017-2084 and request a copy of Department of Defense Form 2345 or call the Defense Logistics Service Center at 800/352-3572.

You must also decide if your contract will result in deliverables that contain information that must be export-controlled. If it will, inform your contract negotiator so that the appropriate clauses can be incorporated in the contract.

PART 3
GENERAL GUIDELINES FOR CLASSIFIED MATERIAL

Why must classified information be marked? What types of information must be marked? Can a Navy activity originally classify material? What are warning notices and intelligence control notices? How do I know when to use these notices?

What Is the Navy's Policy Concerning Classified Material?

Consistent with the need for national security, the Navy's policy is to make as much information as possible available to the public. This means that only information needed to protect national security is to be classified.

In the interest of national security, information that requires protection against unauthorized disclosure may be classified as

Top Secret: Applied to information which, if disclosed to unauthorized persons, could reasonably be expected to cause exceptionally grave damage to national security.

Secret: Applied to information which, if disclosed to unauthorized persons, could reasonably be expected to cause serious damage to national security.

Confidential: Applied to information which, if disclosed to unauthorized persons, could reasonably be expected to cause damage to national security.

These classification levels serve two purposes:

They let the user know the degree of protection required for your material.

They help when your material is extracted, paraphrased, downgraded, or declassified.

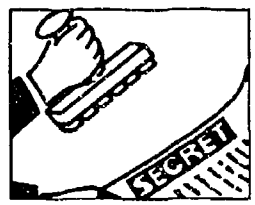
What Are Your Responsibilities as an Originator of Classified Material?

As the originator of classified material (figure 35), you are responsible for

Marking the material so that no doubt exists about its level of classification.

Identifying parts that contain or reveal classified information.

Determining how long the material must remain classified.



Identifying any additional measures necessary to protect the material.

Identifying the origin of the material (usually your activity).

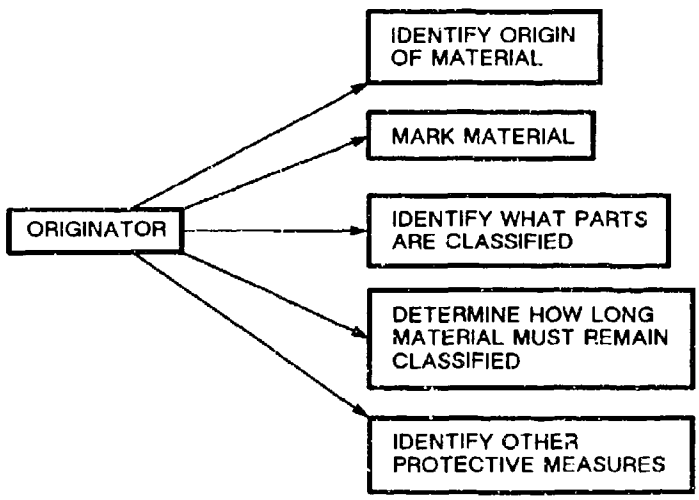


Figure 35. Responsibilities of originators of classified material.

What Are Original Classification and Derivative Classification?

Original classification involves determining that the material requires protection from unauthorized disclosure and the level of protection required. These original classification determinations are issued as program security classification guides. Subsequently, any time this material is used in any form, it is derivatively classified based on the original classification determination. Those Navy officials who have authority to originally classify material are listed in OPNAV Instruction 5510.1H.

Derivative classification is done by any person who incorporates, paraphrases, restates, or generates in new form material that is already classified. Derivative classification is most commonly done by marking material according to the program security classification guide. An estimated 90 percent of the classified material produced by Navy activities is derivatively classified.

What Are the Navy's Requirements for Basic Marking of Classified Material?

Your marking requirements and your applications of these markings will vary, depending upon your material. However, the following basic guidelines apply to all classified material generated by Navy scientists and engineers. (See table 5.)

Table 5. Basic marking requirements for classified material.

Markings for Classified Material	Use on Classified Material
Overall classification marking (top secret, secret, confidential)	Required
Classification source of material	Required
Declassification date of material	Required
Date of origin of material	Required
Office that originated the material	Required
Distribution statement	Required
Downgrading date of material	If available from source document
Warning notice	If required by source document
Intelligence control marking	If required by source document
Export-control notice	If required by export documents

WHAT IS THE OVERALL CLASSIFICATION MARKING? All classified material must be marked with the overall classification level of the material. Overall classification is the highest classification level of your material, i.e., confidential, secret, or top secret.

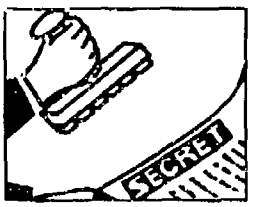
Only in special circumstances is unclassified material marked as unclassified (see page 3-31).

WHAT ARE ASSOCIATED CLASSIFICATION MARKINGS?

Derivatively Classified Material. The following information, called associated classification markings, must be provided for classified material:

Classification Source: The source you used to determine your material's overall classification level; this is usually a source document or a classification guide.

Declassification Date: The date when your material will be reviewed for declassification or the date when your material will be



declassified. If there is no date, use the notation, "originating agency's determination required (OADR)."

Date of Origin: The date you created the material.

Office of Origin: The agency that created the classified material. This is usually your Navy activity.

Downgrading Information: The date when the overall classification level will be changed to a lower classification level. This is not always used; it depends upon information provided in your source document.

Originally Classified Material. Associated classification markings must be provided that identify the source of the original classification, the office of origin, the declassification date or OADR, and downgrading information (if any).

WHAT SPECIAL MARKINGS ARE REQUIRED? Some material may also require a warning notice or an intelligence control marking (these markings are discussed later in this part). Remember that derivatively classified material must be marked with these notices, if required by your source document.

ARE DISTRIBUTION STATEMENTS AND EXPORT-CONTROL NOTICES REQUIRED? All classified material must have a distribution statement and, if required, an export-control notice.

Is Unclassified Material Marked?

In most instances, you do not mark unclassified material as unclassified. However, if you must convey to the user that the material has been examined specifically for classification purposes, mark the material as unclassified.

What Are the Procedures for Using Downgrading and Declassification Markings?

HOW IS THE STANDARD MARKING USED? Mark all classified material with the following standard marking:

Classified by_____
Declassify on_____
Downgrade to_____ (only when required)

"Classified by" Line. If original classification, use the original classification authority, e.g, COMNAVSEA.

If derivative classification, use the security classification guide or source document. Include the date o your guide or source document if necessary for positive identification.

If you used more than one source, use the term "multiple sources." When using multiple sources, you must list all source documents or classification guides in the material.

"Declassify by" Line. Use the specific date when declassification will occur or the event that will cause declassification to occur.

If a specific date or event cannot be determined, use the notation "originating agency's determination required (OADR)."

When you have used multiple sources to derive your classification, use the latest declassification date applicable to your material. If you cannot determine a specific date or event or if any source document is marked "review for declassification," use the notation "OADR."

"Downgrade to" Line. Use this marking only when downgrading is applicable. Insert "secret" or "confidential" and the specific date or event. For example, "Downgrade to confidential on 5 August 1999."

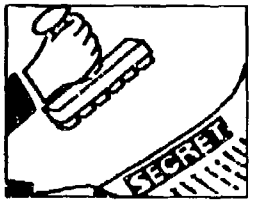
HOW ARE RESTRICTED DATA AND FORMERLY RESTRICTED DATA MARKED? Mark all classified material that contains restricted data (RD) and formerly restricted data (FRD), as defined in the Atomic Energy Act of 1954 as amended, with one of the following markings:

> Classified by _____
>
> RESTRICTED DATA—This material contains Restricted Data as defined in the Atomic Energy Act of 1954. Unauthorized disclosure subject to administrative and criminal sanctions.
>
> or
>
> Classified by _____
>
> FORMERLY RESTRICTED DATA—Unauthorized disclosure subject to administrative and criminal sanctions. Handle as Restricted Data in foreign dissemination. Section 144.b, Atomic Energy Act, 1954.

As the markings RD and FRD denote extended classification, only the "classified by" line is used; it is placed above the RD or FRD warning notice. The "declassify on" and "downgrade to" lines are not used.

When Are Warning Notices Required?

A warning notice (table 6) advises users t at your classified material requires additional protective measures in addition to those imposed by the classification level. Your classification source document usually



provides information about which notice, if any, must be used. The following notices are those commonly used with Navy material.

Table 6. Warning notices used on classified material.

Entire Notice	Short Form	Abbreviated Form
Reproduction requires approval of originator or higher DoD authority	Not Used	Not Used
Further dissemination only as directed by (insert appropriate command or official) or higher DoD authority	Not Used	Not Used
RESTRICTED DATA—This material contains Restricted Data as defined in the Atomic Energy Act of 1954. Unauthorized disclosure is subject to administrative and criminal sanction.	Restricted Data	RD
FORMERLY RESTRICTED DATA—Unauthorized disclosure subject to administrative and criminal sanctions. Handle as Restricted Data in foreign dissemination. Section 144.b, Atomic Energy Act, 1954.	Formerly Restricted Data	FRD
Special Handling Required—Not releasable to foreign nationals	Not used (see NAVSEAINST C5511.3 A)	Not used (see NAVSEAINST C5511.32A)
This document (or material) is subject to special export controls and each transmittal to foreign governments or foreign nationals may be made only with prior approval of (originating command)	Not used (see NAVSEAINST C5511.32A)	Not used (see NAVSEAINST C5511.32A)
Critical Nuclear Weapons Design Information. DoD Directive 5210.2 applies.	CNWDI	N
COMSEC Material—Access by contractor personnel restricted to U.S. citizens holding final government clearance	Not Used	Not Used

Distribution and Duplication Notice: If you have classified information that is subject to special distribution and duplication limitations, use one of the following notices:

> Reproduction requires approval of originator or higher DoD authority.
>
> Further dissemination only as directed by (insert appropriate command or official) or higher DoD authority.

Restricted Data and Formerly Restricted Data Notices: If you have classified material that contains restricted data or formerly restricted data, use one of the following notices:

> RESTRICTED DATA—This material contains Restricted Data as defined in the Atomic Energy Act of 1954. Unauthorized disclosure subject to administrative and criminal sanctions.

FORMERLY RESTRICTED DATA—Unauthorized disclosure subject to administrative and criminal sanctions. Handle as Restricted Data in foreign dissemination. Section 144.b, Atomic Energy Act, 1954.

Naval Nuclear Propulsion Information:[1] Use one of the following notices on classified material containing naval nuclear propulsion information (NNPI):

Special Handling Required—Not Releasable to Foreign Nationals.

This document (or material) is subject to special export controls and each transmittal to foreign governments or foreign nationals may be made only with prior approval of (originating command).

Critical Nuclear Weapons Design Information: Use the following statement on classified material containing critical nuclear weapons design information (CNWDI):

Critical Nuclear Weapons Design Information. DoD Directive 5210.2 applies.

Communications Security Material: Before release to contractors, mark classified communications security (COMSEC) material with the following statement:

COMSEC material—Access by contractor personnel restricted to U.S. citizens holding final government clearance.

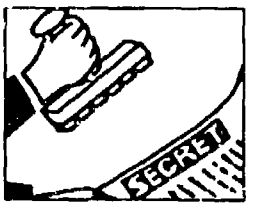
When Are Intelligence Markings Required?

The following intelligence control markings (table 7) are those commonly used on Navy material:

Warning Notice—Intelligence Sources and Methods Involved: This notice identifies information whose further distribution and use must be restricted. Use this marking only on classified intelligence information that clearly identifies or would permit ready identification of an intelligence source or method that is susceptible to countermeasures that could nullify or measurably reduce its effectiveness.

Dissemination and Extraction of Information Controlled by Originator: This marking is used so the originator can continually supervise use of the information. Use this marking only on classified intelligence information that clearly identifies or would permit ready identification of an intelligence source or method that is susceptible to countermeasures that could nullify or measurably reduce its effectiveness. Do not use this marking when the information can be reasonably

[1] Can also be used on unclassified NNPI material.



protected by using other markings or by using the "need-to-know" principle of the security classification system.

Not Releasable to Contractors/Consultants: This marking prohibits the release of classified material to contractors and consultants without the permission of the originator. Use this marking when release of the information to a contractor or consultant would provide a competitive advantage that could conflict with the contractor's or consultant's obligation to maintain the security of the information. Also use this notice on material provided by a source with the condition that it not be made available to contractors or consultants.

Caution—Proprietary Information Involved: This marking identifies classified information provided by a commercial firm or private source with the understanding that the information will be protected as a trade secret or proprietary data.

Not Releasable to Foreign Nationals: This marking identifies classified intelligence information that may not be released in any form to foreign governments, foreign nationals, or non-U.S. citizens without permission of the originator. Use this marking on intelligence information that could jeopardize intelligence sources or methods if released to a foreign government or national. Also use it on information that should not be released because of U.S. policy.

Authorized for Release to (name of country or international organization): Use this marking on classified material that an originator has determined can be released to the indicated foreign countries or organizations through established foreign disclosure procedures and channels.

Table 7. Intelligence control markings used on classified material.

Entire Notice	Short Form	Abbreviated Form
Warning Notice – Intelligence sources or methods involved	WNINTEL	WN
Dissemination and extraction of information controlled by originator	ORCON	OC
Not releasable to contractors/consultants	NOCONTRACT	NC
Caution - Proprietary information involved	PROPIN	PR
Not releasable to foreign nationals	NOFORN	NF
Authorized for release to _____	REL TO	REL TO

How Are NATO Information and Foreign-Government Information Marked?

HOW IS THE FACE OF THE PUBLICATION MARKED? Unless the markings would reveal intelligence information, NATO information or foreign-government information that is incorporated in U.S. Navy publications must be identified in a manner to ensure the information is not prematurely declassified or made accessible to a national of a third country without the consent of the originator. The face of the publication is marked as follows:

FOREIGN GOVERNMENT INFORMATION

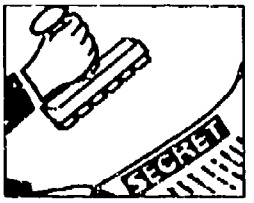
Or, if the publication incorporates or contains extracts of NATO-classified information, the publication is marked with this caveat:

THIS DOCUMENT CONTAINS NATO CLASSIFIED INFORMATION

ARE ASSOCIATED CLASSIFICATION MARKINGS USED? When marking NATO and foreign-government information, include the appropriate identification of the classification source in the portion markings, for example (NATOS), (U.K.C), or (FRG-Restricted).

You still must use the "classified by" line and the notation "Originating Agency's Determination Required."

If "Restricted" or "NATO Restricted" information is included in an otherwise unclassified publication, the publication is marked as "confidential." All requirements for portion marking apply, and you should include on the face of the publication one of the caveats discussed in the preceding paragraph.



PART 4
HOW TO MARK CLASSIFIED INFORMATION

How do I mark the inside pages of a publication? How are viewgraphs and slides marked? Where do you mark a photograph? What about compilations of information? How are warning notices and intelligence control markings used?

How Are Technical Publications Marked?

WHAT ARE THE OVERALL MARKINGS? Table 8 summarizes the overall classification level, associated classification markings, warning notices, and intelligence control markings required on classified publications. The remainder of this section discusses the specific marking details for a classified publication.

Table 8. Marking guide for classified publications.

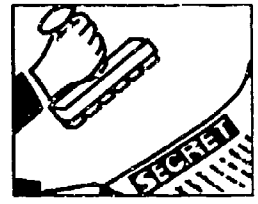
Markings	Placement
Overall classification level	Stamp or print, top and bottom center, in letters larger than text on front cover (if used), title page (if used), first page, and outside of back cover (if used). If back cover is not used, do not place classified text on the back of the last page. Mark all interior pages either with the overall classification level or with the classification of the individual page. When using the latter option and printing front and back, mark both sides of the page with the higher classification of either side. Mark the side with the lower classification with the statement "This page is unclassified" or appropriate classification.
Classified by _____ Insert original classification authority or derivative classification source. If more than one source used, use "Multiple Sources."	On the first page (cover, title page, or text page).
Declassify on _____ Insert declassification date or event. If date cannot be determined, use "Originating Agency's Determination Required" or "OADR."	On the first page (cover, title page, or text page) following the "classified by" line.

(cont'd)

Table 8. Marking guide for classified publications. (cont'd)

Markings	Placement
Downgrade to _____ (Insert classification level and date or event)	On the first page (cover, title page, or text page) following "declassify line."
Agency and office of origin	On the first page (cover, title page, or text page).
Date of origin	On the first page (cover, title page, or text page).
Portion marking: Required for paragraphs, subparagraphs, captions, table headings, titles, text headings, illustrations, and tables	Before each paragraph, subparagraph, caption, table heading; after titles and text headings; near each table and illustration.
Warning notices	
Distribution and duplication notice	Full notice on first page (cover, title page, or text page).
Restricted Data and Formerly Restricted Data	Full notice on first page (cover, title page, or text page) following "classified by" line. Short form used to identify tables and illustrations. Abbreviated form used for portion marking.
Naval Nuclear Propulsion Information	Full notice on first page (cover, title page, or text page). Do not portion mark. (See NAVSEA Instruction C5511.32A of February 1986.)
Critical Nuclear Weapons Design Information	Full notice on first page (cover, title page, or text page). Short form used to identify tables and illustrations. Abbreviated form used for portion marking.
Communications Security Material	Full notice on first page (cover, title page, or text page).
Intelligence control markings (all variations)*	Full notice above classification marking on front cover (if used), title page (if used), and first page. Short form at top or bottom of applicable pages and near illustrations and tables. Abbreviated form used for portion marking.

*Variations of intelligence control markings can be found in part 3 of this chapter.



Face of Publication. Place the basic markings, i.e., the overall classification level and all associated classification markings, on the face of the publication. The face is the front cover, title page, or first page, whichever is the first outside page of the publication.

Use the following guidelines when marking the overall classification level (confidential, secret, or top secret) on the face of the publication:

Center the classification level at the top and bottom of the page.

Make the point size (type size) larger than any other point size on the page.

Use all capital letters.

Figure 36 shows examples of overall classification level markings.

Downgrading/declassification instructions, warning notices, and intelligence control markings must also be placed on the face of the publication. The intelligence control markings are repeated on the title page (if used) and on the first inside page of the publication. In all cases (front cover, title page, and first inside page), these notices must be "spelled out"; the abbreviated or short forms cannot be used. (See figures 37 and 38.)

Back of Publication. The marking for the overall classification level must appear on the back of the publication. The back of the publication can be a separate cover or the back of a text page. The only marking required on this page is the overall classification marking. The marking must be centered (top and bottom) on the page, in a large point size, and in all capital letters.

Although Navy and DoD regulations do not require the associated markings, warning notices, and intelligence control markings on the back cover, it is a good practice to place this information on the back cover to improve security.

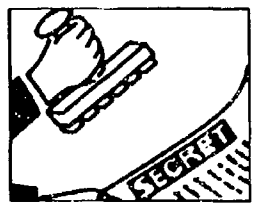
HOW ARE PAGES MARKED?

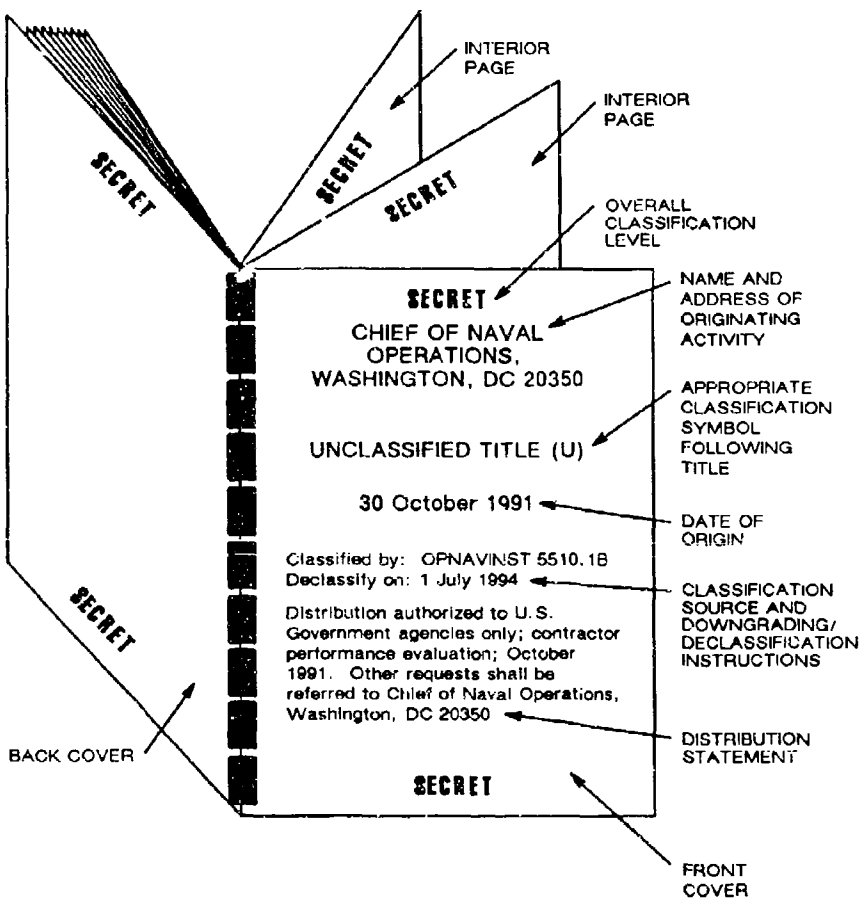
Page Classification. The classification level of each interior page of a publication must be marked. The marking must be centered (top and bottom) on the page, in a point size larger than any other used on the page, and in all capital letters.

The general Navy practice is to mark each page with the overall classification level of the publication. This means that each interior page of a secret publication is marked "secret," and all interior pages of a confidential publication are marked "confidential." This procedure is recommended because of its simplicity and efficiency. (See figure 39.)

These examples are acceptable for marking the overall classification level of classified information. The size, type, and color of the markings do not make the markings conspicuous. What is conspicuous on one publication or type of material may not be conspicuous on another. A marking is conspicuous when it will be noticed and recognized by the holder as separate or different from other information or material; it will thus warn of the special requirements necessary for protection of the information. Every effort should be made to make the markings as conspicuous as possible consistent with the production methods being used when creating classified publications or material. Remember also that the marking must be in all capital letters and in a type size larger than any other type size used on the page.

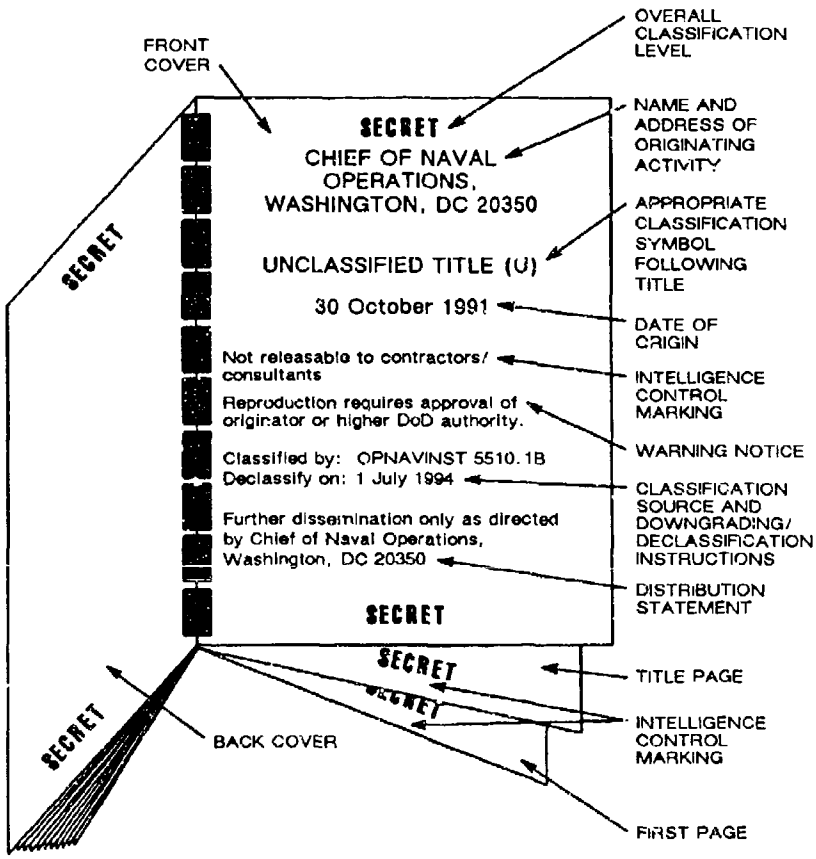
Figure 36. Examples of classification markings.





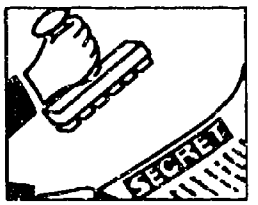
(CLASSIFIED FOR TRAINING PURPOSES ONLY; OTHERWISE, UNCLASSIFIED)

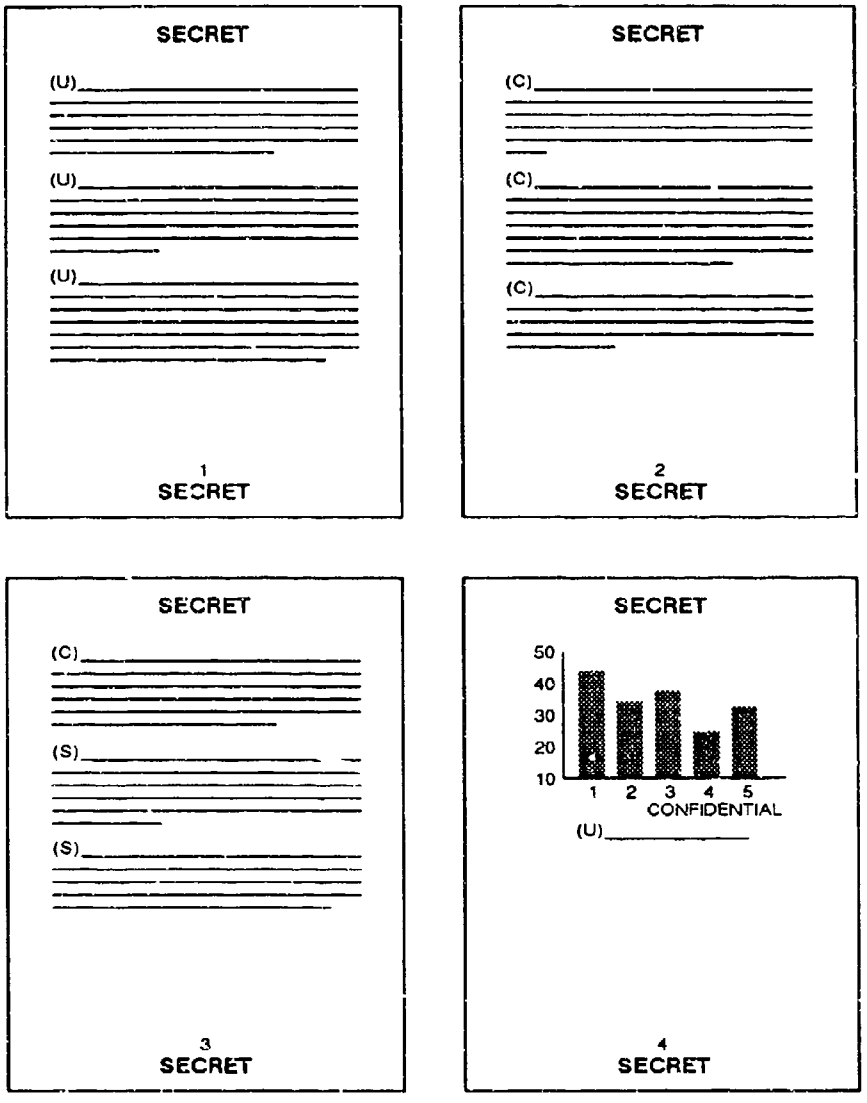
Figure 37. Front cover, interior pages, and back cover of classified publication.



(CLASSIFIED FOR TRAINING PURPOSES ONLY; OTHERWISE, UNCLASSIFIED)

Figure 38. Front cover, title page, first page, and back cover, including warning notices and intelligence control markings, of classified publication.





All interior pages carry same overall classification marking as the publication.
(CLASSIFIED FOR TRAINING PURPOSES ONLY; OTHERWISE, UNCLASSIFIED)

Figure 39. Preferred method of marking interior pages in a classified publication.

You do have the option, however, of marking each interior page with the highest classification of the material on the page. If you use this option, and the page is printed on the front and back sides, both sides of the page must be marked with the higher classification of either side. When one side contains information of a lower classification than the marking applied, include the statement "This page is (insert classification level)." (See figure 40.)

Associated Classification Markings. You do not have to put the downgrading/declassification instructions or warning notices on the interior pages of a publication. However, you do have to use the short form of the intelligence control markings, if the page contains intelligence information. Place the short form of the intelligence control marking at either the top or bottom of the page after the classification marking. Remember, however, that the intelligence control marking must be spelled out, not abbreviated, on your publication's title page (if used) and or its first inside page. (See figure 41.)

Change Pages. When a change is issued to an existing classified publication, mark the change pages as if they were already in the basic publication. If any change is an interior page, mark the page in the same way as the interior pages of the basic publication.

HOW ARE PORTIONS MARKED? Mark each portion (heading, paragraph, subparagraph, table, illustration, caption, heading, and footnote) of a classified publication to show its level of classification (top secret, secret, confidential, or unclassified). This requirement eliminates any doubt as to which portions of a publication contain or reveal information requiring protection. When determining these classification levels, consider each portion on the basis of its content and its association with other information.

The symbols to be used for portion marking are

Unclassified: (U)

Confidential: (C)

Secret: (S)

Top Secret: (TS)

Add to the classification symbols, as appropriate, the abbreviated forms shown below for warning notices[1] and intelligence control markings:

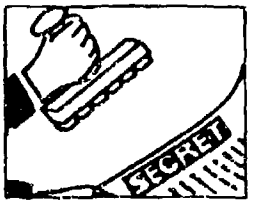
Restricted Data: (RD)

Formerly Restricted Data: (FRD)

Critical Nuclear Weapon Design Information: (N)

Warning Notice—Intelligence Sources or Methods Involved: (WN)

[1] Not all warning notices have short and abbreviated forms. For more information, contact your activity's security office.



CONFIDENTIAL

(U)

(U)

(U)

1
CONFIDENTIAL
(This page is Unclassified)

CONFIDENTIAL

(C)

(C)

(C)

2
CONFIDENTIAL

SECRET

(C)

(S)

(S)

3
SECRET

SECRET

500
400
300
200
100
1 2 3 4 5
CONFIDENTIAL

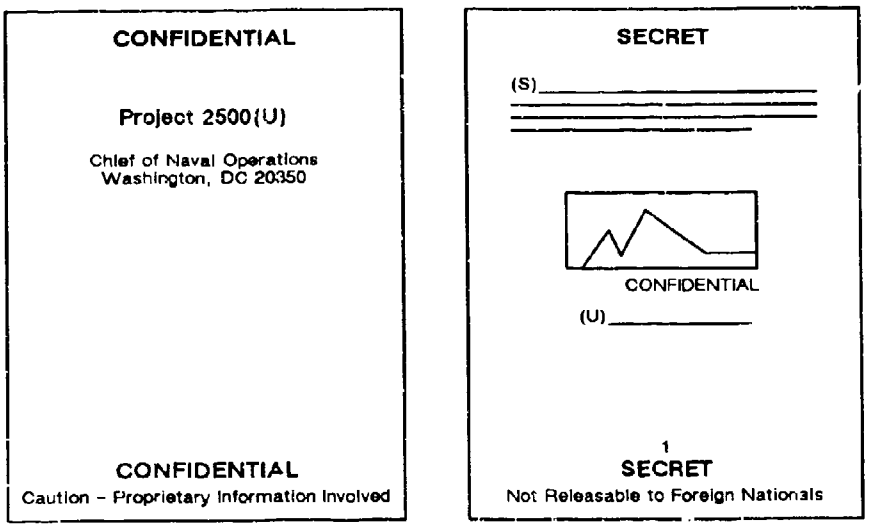
(U)

4
SECRET
(This page is Confidential)

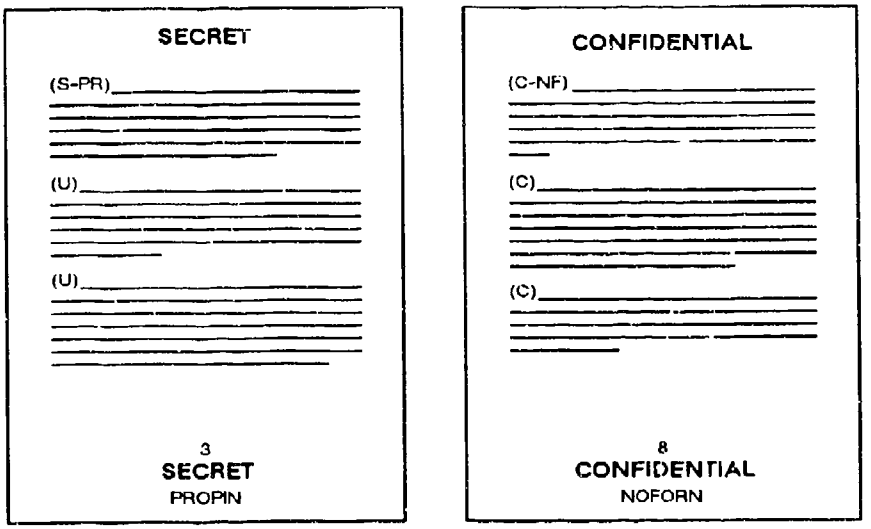
Interior pages are marked according to classification level of information on that page. When printed back-to-back, as in this example, both sides must be marked with the same classification level.

(CLASSIFIED FOR TRAINING PURPOSES ONLY; OTHERWISE, UNCLASSIFIED)

Figure 40. Alternate method of marking interior pages in a classified publication.



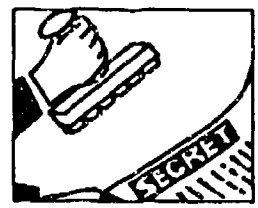
Title page and first inside page. Note use of full text of intelligence control marking.



All interior pages (except title page and first page). Note use of short form of intelligence control marking.

(CLASSIFIED FOR TRAINING PURPOSES ONLY; OTHERWISE, UNCLASSIFIED)

Figure 41. Intelligence control markings on interior pages of a classified publication.



Dissemination and Extraction of Information Controlled by Originator: (OC)

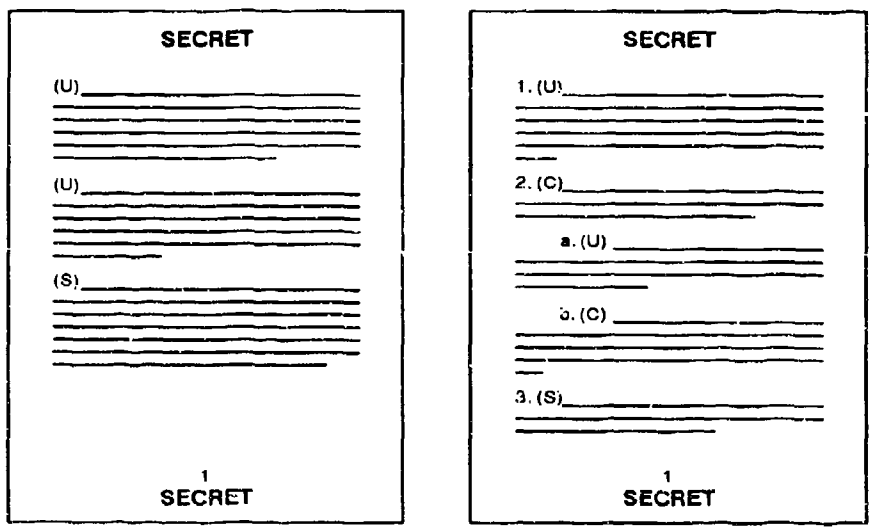
Not Releasable to Contractors/Consultants: (NC)

Caution—Proprietary Information Involved: (PR)

Not Releasable to Foreign Nationals: (NF)

Authorized for Release to (name of country or international organization): (REL TO [name of country or international organization])

Paragraphs and Subparagraphs. If a paragraph is not numbered, place the appropriate classification symbol in front of the text of the paragraph. If the paragraph is numbered or lettered, place the classification symbol immediately following the letter or number. (See figure 42.)



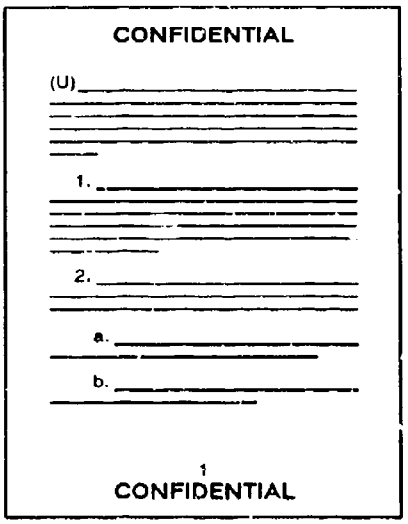
Paragraphs not numbered or lettered. Numbered or lettered paragraphs.

(CLASSIFIED FOR TRAINING PURPOSES ONLY; OTHERWISE, UNCLASSIFIED)

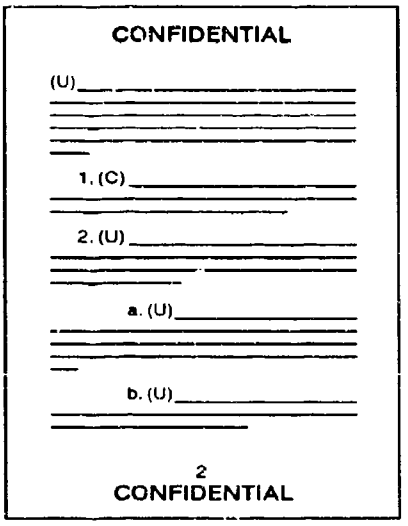
Figure 42. Paragraph marking in a classified publication.

If a paragraph has subparagraphs (figure 43), the following rules apply:

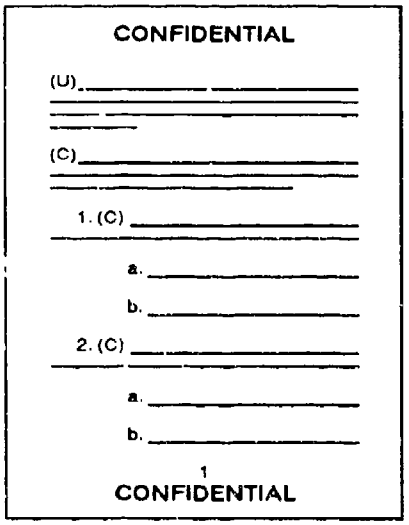
If the paragraph and the subparagraphs are all unclassified, you do not need to mark the subparagraphs. The unclassified symbol (U) preceding the lead-in paragraph is sufficient.



If all information in the paragraph and subparagraphs is unclassified, mark only the lead-in paragraph.



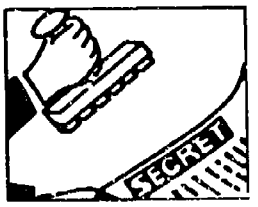
If any paragraph or subparagraph is classified and if the subparagraphs express complete thoughts, mark the lead-in paragraph and all subparagraphs.



If the subparagraphs do not express complete thoughts, mark only the lead-in paragraphs.

(CLASSIFIED FOR TRAINING PURPOSES ONLY; OTHERWISE, UNCLASSIFIED)

Figure 43. Marking subparagraphs in a classified publication.



If the paragraph and the subparagraphs are different classification levels, the paragraphs and subparagraphs must be marked to show individual classification level. The only exception is subparagraphs that are listings expressed as phrases, not as complete sentences; in this instance, marking the lead-in paragraph is sufficient.

As shown before in figure 41, mark paragraphs and subparagraphs containing information subject to warning notices or intelligence control markings with the abbreviated form of the appropriate statement.

Illustrations and Tables. Spell out the classification level of tables and illustrations (both line art and photographs). (See figures 44 and 45.) You can center the classification above or below the table or illustration, place it within the table or illustration, or place it to either side above or below the table or illustration. What you must do is ensure that the reader understands the classification of the table or illustration.

SECRET

Table 4. (C) _____

ATLANTIC DATA	
Distance, nmi	Depth, m
122	4
342	6
63	10
214	16

SECRET

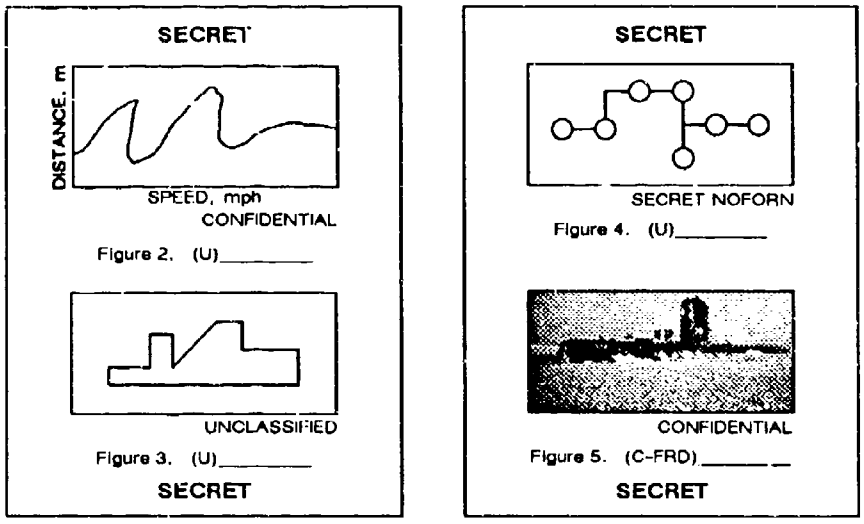
1

SECRET

The classification symbol following the table number refers to the heading. The classification marking beneath the table refers to the table itself.

(CLASSIFIED FOR TRAINING PURPOSES ONLY; OTHERWISE, UNCLASSIFIED)

Figure 44. Marking tables in a classified publication.



The classification symbol following the figure number refers to the caption.
The classification marking beneath the illustration refers to the illustration itself.
(CLASSIFIED FOR TRAINING PURPOSES ONLY; OTHERWISE, UNCLASSIFIED)

Figure 45. Marking illustrations (line art and photographs) in a classified publication.

If a caption (illustration) or heading (table) is used, you must also indicate the classification of the caption or heading. This is done by placing the classification symbol preceding the caption or heading. If figure or table numbers are used, the classification symbol is placed between the number and the title.

If your illustration or table is longer than one page, repeat the markings on each succeeding page, i.e., markings for the caption or heading and for the illustration or table.

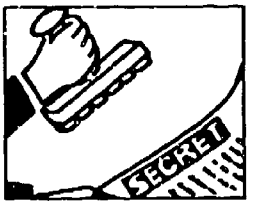
Mark illustrations and tables containing information subject to warning notices and intelligence control markings with the short form of the appropriate statement. Mark the caption or heading with the abbreviated form of the statement.

Headings. Headings are marked according to their own classification and do not reflect the overall classification of the material that follows. Consider the heading as a paragraph for marking purposes.

Use the following guidelines (figure 46) for marking headings:

Place the classification symbol for unnumbered or unlettered headings immediately after the heading.

Follow the number or letter of numbered or lettered headings with the appropriate classification symbol for that heading.



Precede run–in headings with the appropriate classification symbol. For run–in headings, the classification symbol applies both to the heading and to the following text.

Use the abbreviated form of the warning notice or intelligence control markings, if required. The abbreviation follows the classification symbol, e.g. (SRD).

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- Follow unnumbered, unlettered heads with appropriate classification symbol:

INTRODUCTION (U)

BACKGROUND (U)

- Follow number or letter of numbered or lettered heading with appropriate classification symbol:

1.0 (U) INTRODUCTION

1.1 (U) BACKGROUND

- Precede run-in heads with appropriate classification symbol; symbol applies both to the heading and to the following text:

(U) BACKGROUND. _____

1.1.1 (C) TRAINING PURPOSES. _____

1

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Figure 46. Marking headings in a classified publication.

Publication Titles. When possible, titles of publications should be unclassified. This makes it easier to reference the publication in unclassified documents or indices, e.g., bibliographies.

If a classified title is necessary to convey meaning, add an unclassified short title for reference purposes.

Mark titles with the appropriate classification symbol, immediately following the title.

Use the abbreviated form of the warning notice or intelligence control marking, if required. The abbreviation follows the classification symbol, e.g. (CPR).

Table Of Contents. If all items in the listings on the table of contents are unclassified, you need to mark only the heading. However, if any item in the listing is classified, all items must be marked (figure 47). Remember, the classification noted on the contents page is that of the paragraph, table, or figure title, not the paragraph, table, or figure itself.

Reference Page. When using a reference page, mark the heading, "References," as unclassified. Then mark each reference title and reference separately. The overall classification of individual publications used as references is placed in capital letters at the end of the reference citation (figure 48).

WHAT ABOUT SPECIAL SITUATIONS?

Compilations of Information. When classification is required to protect a compilation of unclassified information, mark each interior page with the overall classification level. Portion marking is not necessary. You also need to place a statement on the front of the publication explaining the reason for the classification. The statement must include the following elements:

The fact that the individual parts of the publication are unclassified.

The reason why the unclassified compilation requires classification.

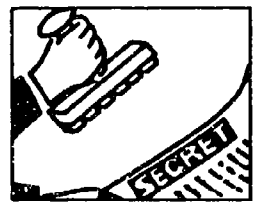
The authority for the classification.

When you work with classified information, an overall classification level higher than the individual classified parts is sometimes required. For example, individual confidential parts may add up to a secret overall classification level. When this occurs, mark each interior page with the highest classification of information on—or revealed by—the page, and mark each portion with the appropriate classification marking. You also need to include a statement with the following information either on the front cover of the publication or on the affected pages:

The fact that the individual parts are of a lower classification level than the publication as a whole.

The reason why the compilation requires a higher classification level than its individual parts.

The authority for the classification.



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CONTENTS (U)
Introduction 1
Discussion 4
Conclusion 9

FIGURES (U)
1. Submarine 2
2. Carrier 3
3. Transport 3

TABLES (U)
1. Range of Submarine 2
2. Weight Ratio 3
3. Tolerance 5

1
CONFIDENTIAL

Mark only the heading if all items in the listing are unclassified.

SECRET

CONTENTS (U)
Introduction (U) 1
Discussion (C) 4
Conclusion (U) 9

FIGURES (U)
1. (S) Submarine 2
2. (U) Carrier 3
3. (S) Transport 3

TABLES (U)
1. (U) Tolerance 2
2. (U) Weight Ratio 3
3. (C) Range of Submarine 5

1
SECRET

CLASSIFICATION SYMBOL FOLLOWS A TITLE IF IT IS UNNUMBERED

CLASSIFICATION SYMBOL FALLS BETWEEN THE NUMBER AND THE TITLE IF IT IS NUMBERED

Classification letters in table of contents note that the listed *title* itself is classified, not that the paragraph, table, or figure is classified.
Mark *all* items in a listing if any one item is classified.

(CLASSIFIED FOR TRAINING PURPOSES ONLY; OTHERWISE, UNCLASSIFIED)

Figure 47. Marking contents page of a classified publication.

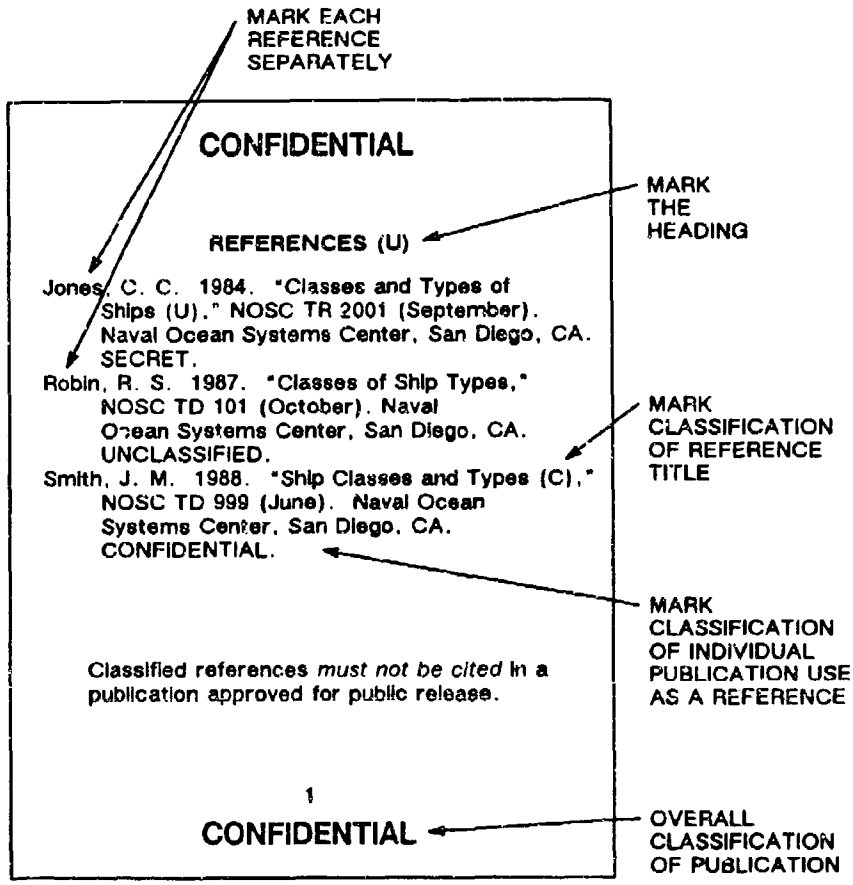
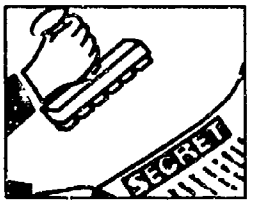


Figure 48. Marking a reference page in a classified publication.

Marking by Parts. In some complex publications, the major parts, e.g., appendices, might be used as separate publications. If these parts are entirely unclassified, you can mark the page "unclassified" and include the statement "All portions of this _____ are unclassified." When this practice is used, no further markings are required on the unclassified component.

Page Numbers and Blank Pages. If you are printing a publication back-to-back (both sides of the page) and you have a blank right- or left-hand page, place no information on the page, i.e., classification level or page number. However, do number the preceding page with two page numbers, e.g., 3/4 or 22/23.



Naval Nuclear Propulsion Information. The requirements for portion marking do not apply to NNPI. Instead, the following guidelines apply:

For publications containing only classified NNPI, do not mark any portion.

For publications containing both classified NNPI and other classified information, mark those portions containing classified information other than NNPI and do not mark those portions that contain classified NNPI. Include the following statement in the body of the publication to explain the absence of markings:

> Those paragraphs which are not marked for classification contain naval nuclear propulsion information (NNPI) which is exempt from the requirement for portion marking set forth in the Department of Navy Information and Personnel Security Program Regulation.

Use the following guidelines to determine source and downgrading/declassification marking:

For publications containing classified NNPI which is also "restricted data" or "formerly restricted data," use only the "classified line" which is placed above the RD or FRD warning notice.

For publications containing classified NNPI which is not "restricted data" or "formerly restricted data," use the following notice:

> Classified by DoE–DoD Classification Guide CGRN1 dated January 1977.
>
> Declassify on: Originating Agency's Determination Required. This document shall not be used as a basis for derivative classification.

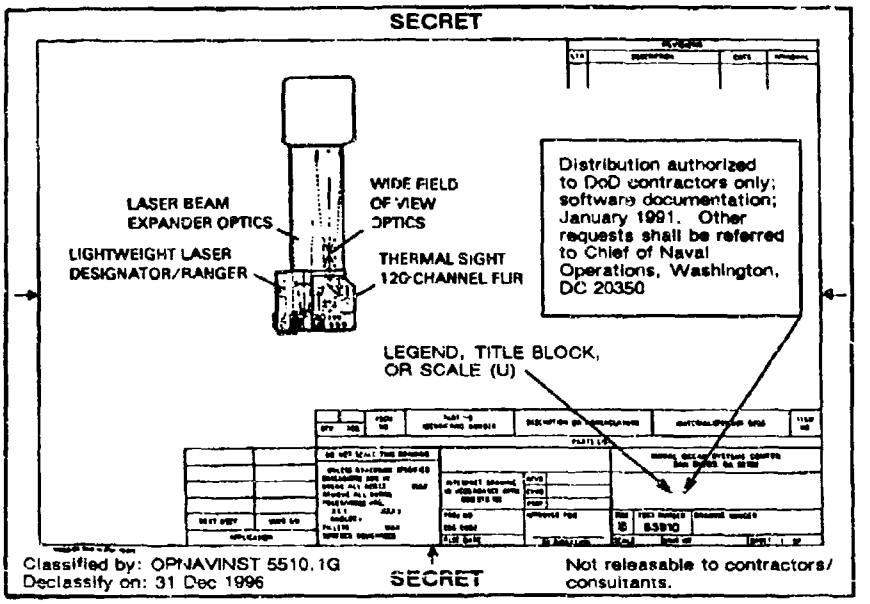
How Are Charts, Maps, and Drawings Marked?

Charts, maps, and drawings that are not part of a publication are marked differently than those bound in a classified publication (figure 49).

Spell out the overall classification at the top and bottom of the chart, map, or drawing. Place the classification symbol of the legend, title block, or scale under the legend, title block, or scale.

Spell out the associated markings, i.e., classification source, downgrading/declassification instructions, warning notices, and intelligence control markings, on the chart, map, or drawing. Locate these markings near the legend, title block, or scale.

If the markings might be covered by the customary method of folding or rolling a chart, map, or drawing, add additional markings that are clearly visible when the chart, map, or drawing is folded or rolled.



Mark a chart, map, or drawing to show its overall classification level. Spell out the associated classification markings, and mark the classification level of the legend, title block, or scale.

If a chart, map, or drawing is folded or rolled, add overall classification markings that are visible when the material is folded or rolled.

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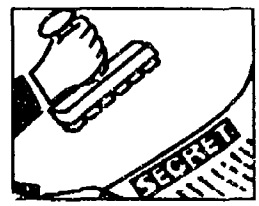
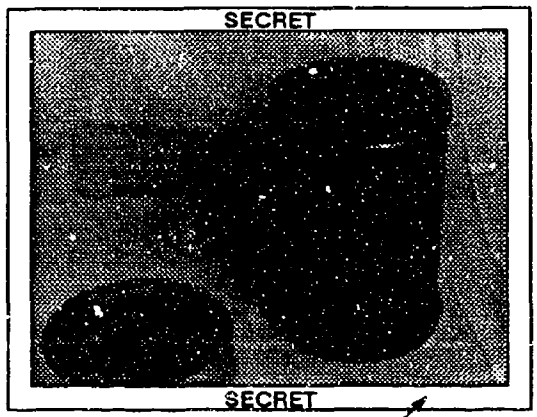
Figure 49. Marking classified charts, maps, and drawings.

How Are Photographs Marked?

When practical, mark photographic negatives and positives (prints) with the overall classification level and all associated markings (figure 50). Place the negatives and positives in containers with conspicuous classification markings. Mark roll negatives and positives at the beginning and end of each strip.





Distribution authorized to DoD components only; software documentation; January 1991. Other requests shall be referred to Chief of Naval Operations, Washington, DC 20350

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BACK OF PHOTOGRAPH

CLASSIFIED BY: OPNAVINST 5510.1G
DECLASSIFY ON: 31 Dec 1992

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Mark front and back of photograph with the overall classification level. The associated markings can be on the front or back of the photograph. Markings may be stamped, written, or affixed by pressure tape-label.

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Figure 50. Marking classified photographs.

Mark all prints that are 8 by 10 inches or larger with the overall classification at the top and bottom on the face side; if possible, place the associated classification markings at the bottom. When it is not practical to place the associated classification markings on the face of the print, place the

markings on the reverse side by using a pressure-tape label, if stamping or writing is not practical. Note that the classification marking needs to be applied only once on smaller prints.

All reproductions of a photograph must clearly show the classification and associated markings.

How Are Transparencies, Slides, And Viewgraphs Marked as a Document?

If you decide to mark your presentation similarly to a bound publication, use the following guidelines:

Opening Presentation Aid. Your first presentation aid (figure 51A), e.g., the opening viewgraph, is similar to a cover or title page of a publication and shows the following information:

Overall classification level of the entire presentation

Title of presentation

Office of origin

Date of origin

Warning notices or intelligence control markings (if required)

Classification source

Declassification date

Downgrading information (if used)

Distribution statement

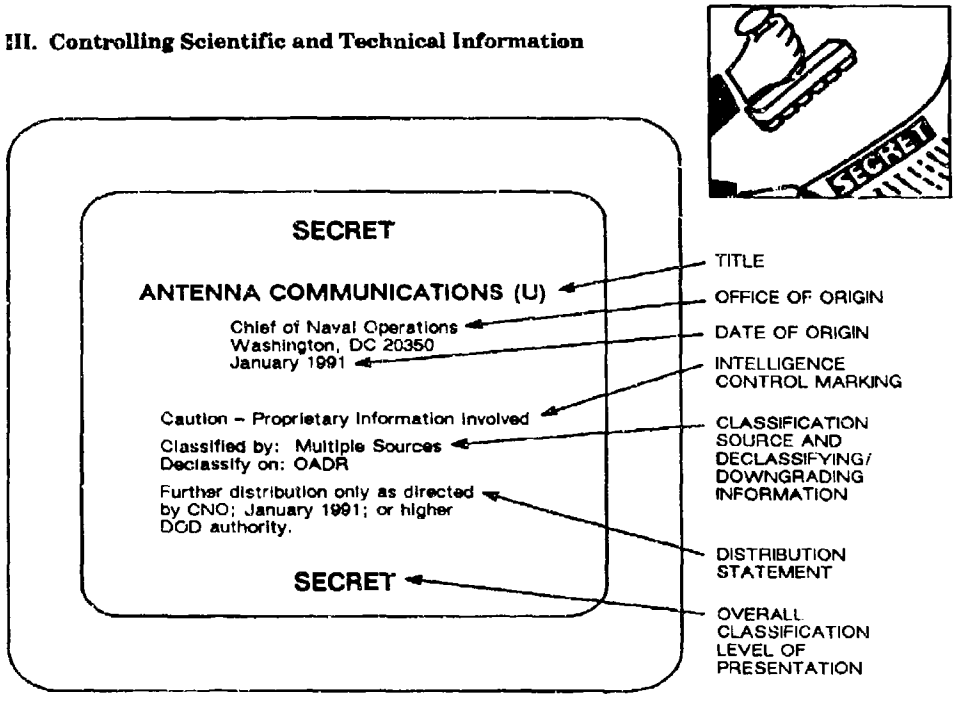
Image Area. The image area of individual presentation aids contains the following information:

The classification level of the individual presentation aid, i.e., secret, confidential, or unclassified.

The applicable portion markings if you have included more than one image on a presentation aid, e.g., four charts on one viewgraph.

Short forms of intelligence control markings or warning notices, if required.

Frames and Holders. If the marking for the classification level on the image area is too small to be seen unless the image is projected, you must also place the classification level on your frame or holder. (Use the classification of the individual presentation aid, not the overall classification level.)



Part A. Opening presentation aid for classified presentation.

Figure 51. Marking classified transparency, viewgraph, or slide.

How Are Individual Transparencies, Slides, and Viewgraphs Marked?

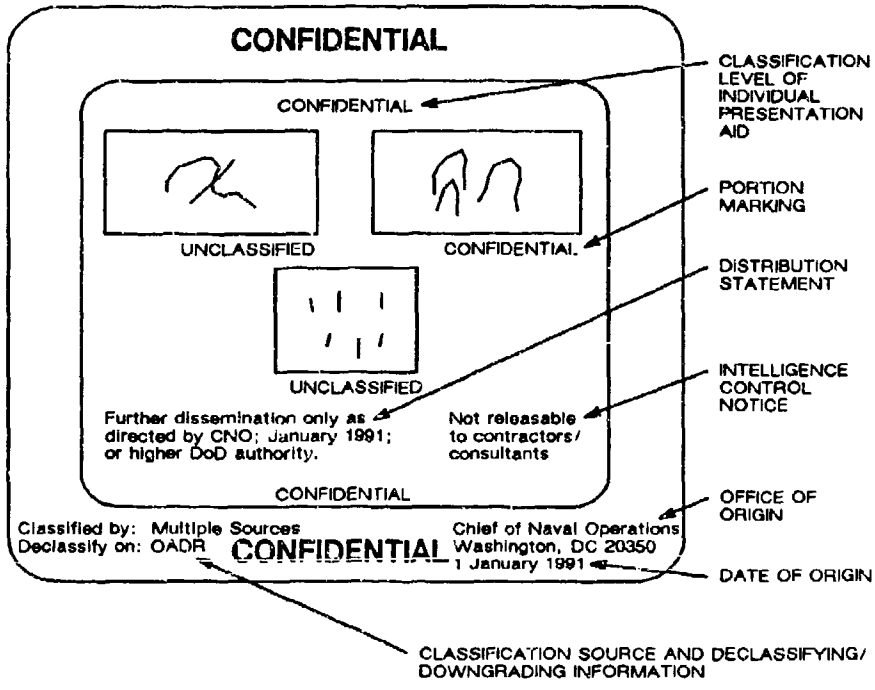
If you mark each presentation aid as a single component (figure 51B), use the following guidelines.

Image Area. Include the overall classification level in the image area of the classified presentation aid. Center this marking (in capital letters) at the top and bottom of the image. If required, the applicable portion markings, intelligence control markings, and warning notices must also be included in the image area. The associated classification markings[1] should be placed in the image area; however, if this is not possible, place these markings on the frame or holder of the presentation aid or in the accompanying documentation.[2] (Also include the distribution statement in the image area.)

[1] Associated classification markings include the classification source, declassification date, date of origin, office of origin, and downgrading information.

[2] For example, because slides are small the associated classification markings can be placed on an envelope that houses the slide.

Frame or Holder. If the marking for the classification level of the image area is too small to be seen unless the image is projected, place the classification level on the frame or holder of the presentation aid.



(CLASSIFIED FOR TRAINING PURPOSES; OTHERWISE, UNCLASSIFIED)

Part B. Image area and frame of an individually classified presentation aid.

Figure 51. Marking classified transparency, viewgraph, or slide.

How Are Classified Films And Videotapes Marked?

The opening frames of a classified film or videotape must be marked with the following information:

Overall classification level of the production

Title of production

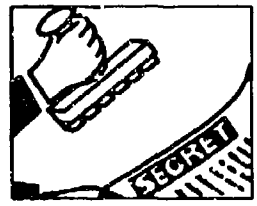
Office of origin

Date of origin

Warning notices or intelligence control markings (if required)

Classification source

Declassification date



Downgrading information (if used)

Distribution statement

The closing frames carry only the classification level of the production. The canister is marked with the classification level of the production, warning notices (if required), and the distribution statement. (See figure 52.)

How Is Microform Marked?

Since microform images are too small to be read by the unaided eye, the overall classification level and associated markings must be marked on the microform medium and its container in a size that can be read by the unaided eye. These markings must also appear on the microform image so they will be readable when the image is enlarged and displayed or printed.

The ways the markings are applied depends on the microform medium in use. For example, roll film microform can usually be marked in the same manner as film. (See figure 53 for procedures on marking microfiche.)

How Is a Deck of ADP Punched Cards Marked?

When a deck of classified ADP punched cards is handled and controlled as a single unit, only the first and last cards require classification markings. Add an additional card (or modify the job control card) to identify the contents of the deck, the highest classification level, and associated classification markings. Cards removed for separate processing or use and not immediately returned to the deck must be marked individually (figure 54).

How Are Removable ADP and Word-Processing Media Marked?

Mark externally the removable information storage media and devices used with ADP and word-processing systems. Include the overall classification level and associated classification markings. These media and devices include magnetic tape reels, cartridges, and cassettes; removable disks, disk cartridges, disk packs, and diskettes; paper reels; and magnetic cards.

Internally mark the media and devices with the overall classification level and the associated classification markings. This practice will protect the material when it is duplicated or read.

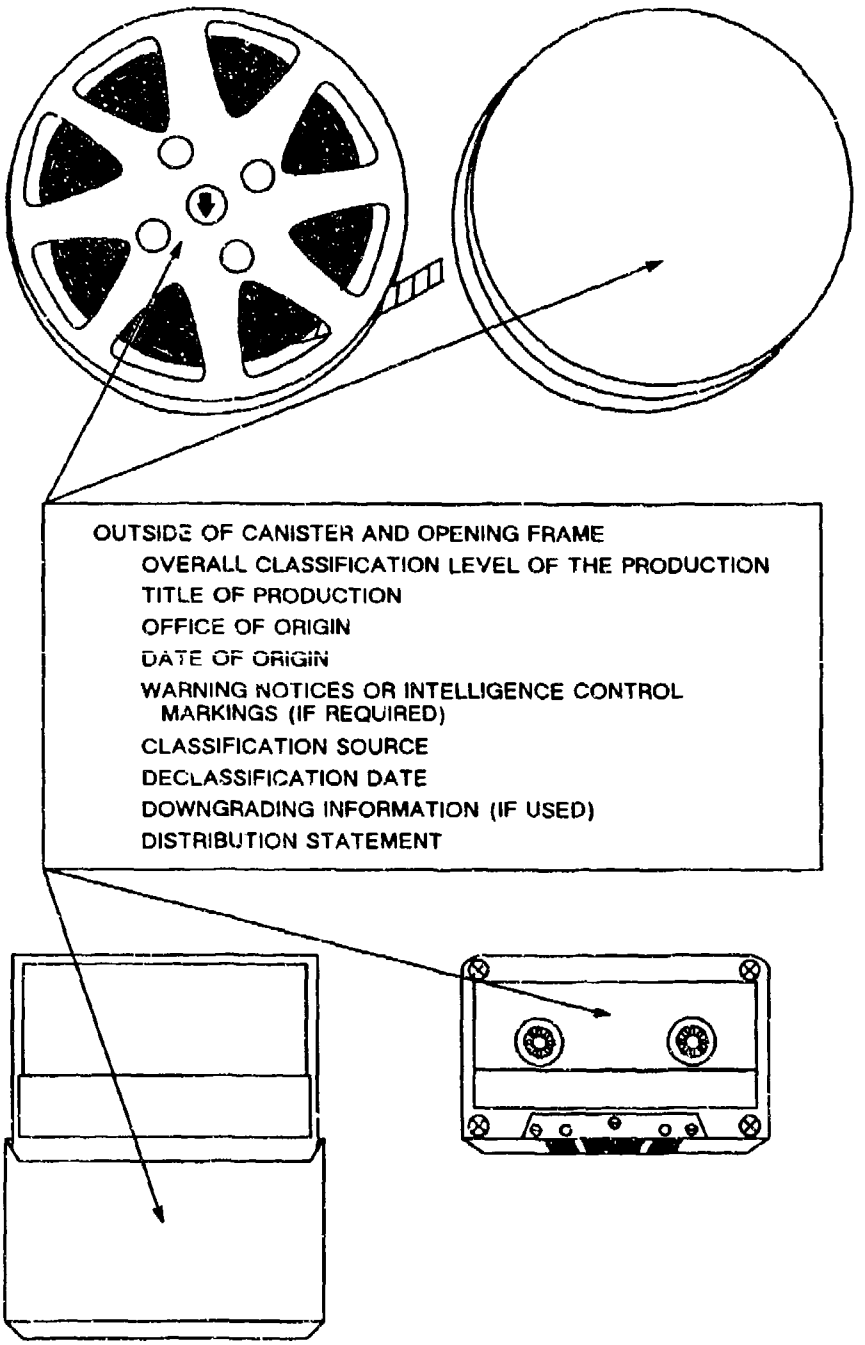
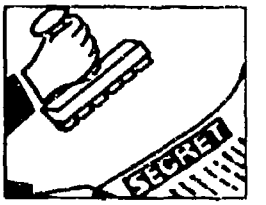


Figure 52. Marking classified films and videotapes.



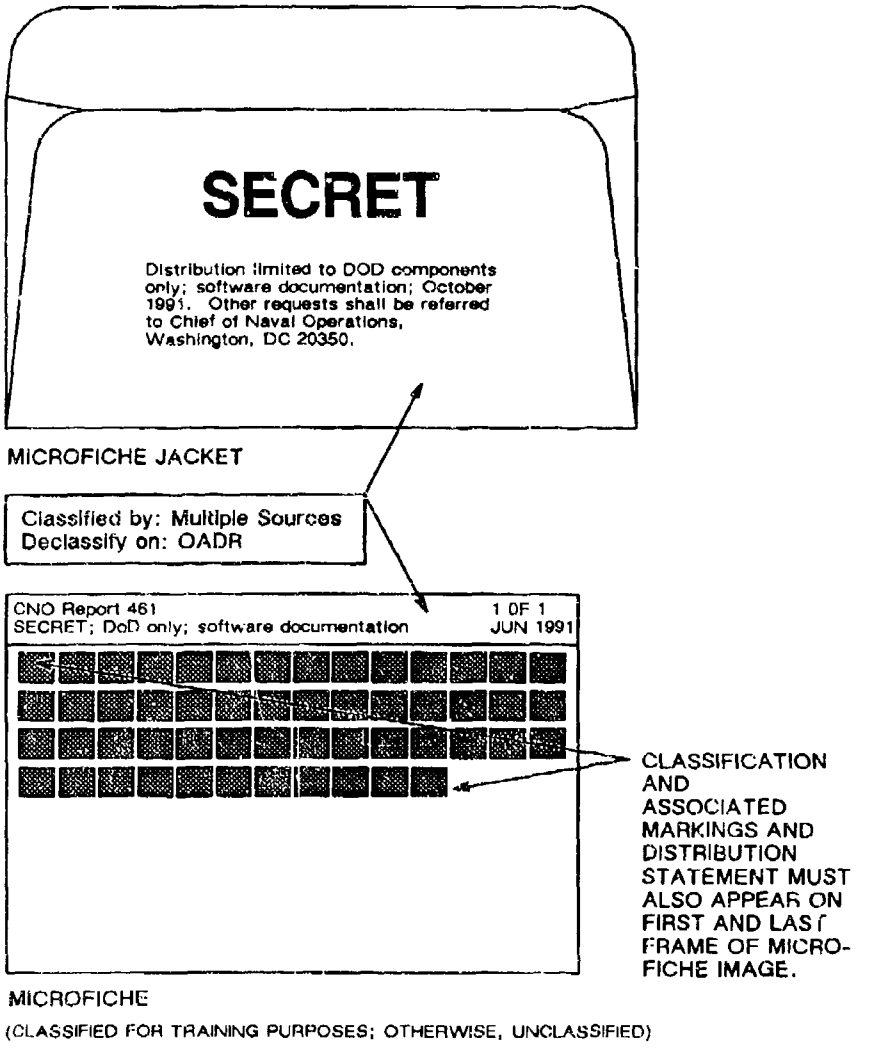
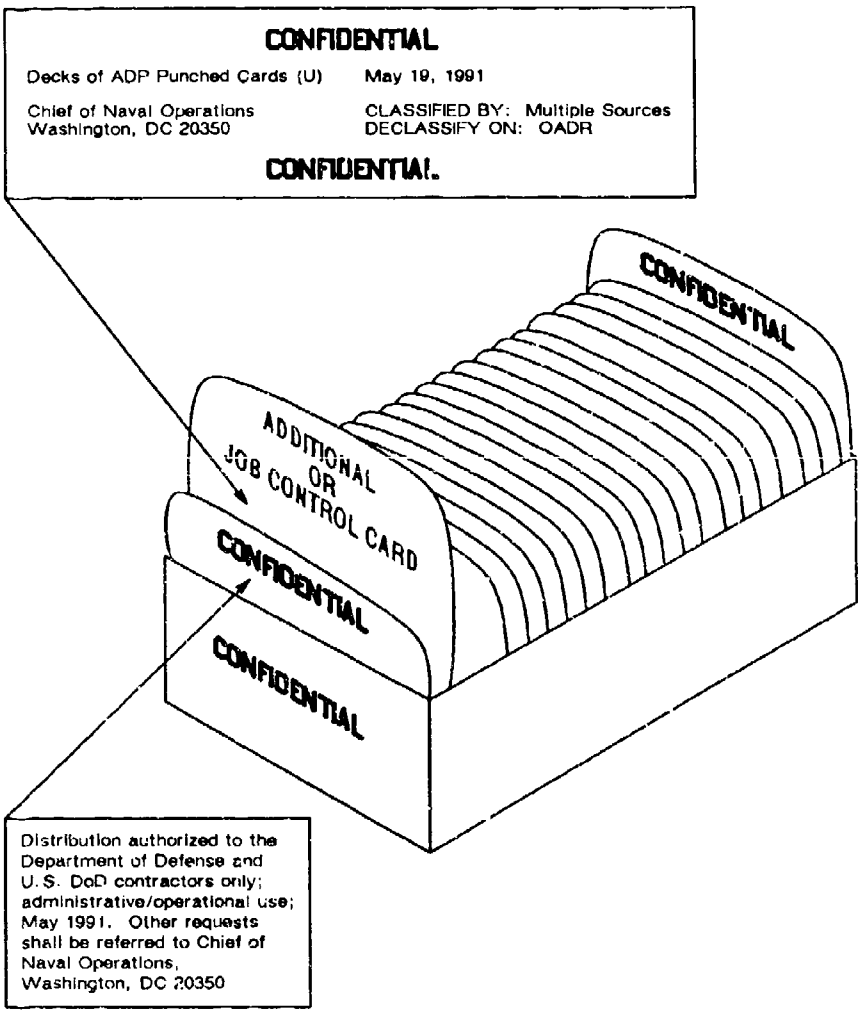


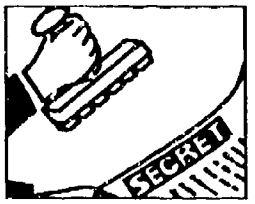
Figure 53. Marking classified microfiche.



When the deck is handled and controlled as a single document, only the first and last cards in the deck require the overall classification markings. An additional card is added (or the job control card modified) to show the other required markings.

(CLASSIFIED FOR TRAINING PURPOSES; OTHERWISE, UNCLASSIFIED)

Figure 54. Marking a classified deck of ADP punched cards.



PART 5
REFERENCES

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Arms Export Control Act as amended (P.L. 94-329) 22 U.S.C. 2751 et seq

Chief of Naval Operations Instruction 5510.1H, Department of the Navy Information and Personnel Security Program Regulation, 29 April 1988

Chief of Naval Operations Instruction 5510.156, Department of Navy Control of Technology Transfer, 1 May 1978

Chief of Naval Operations Instruction 5510.161, Withholding of Unclassified Technical Data from Public Disclosure, 29 July 1985

Chief of Naval Operations Instruction 5510.48H, Manual for Disclosure of Classified Military Information to Foreign Governments and International Organizations, 29 July 1981

Congressional Research Service, National Security Controls and Scientific Information, Issue Brief IB82083, 7 March 1983

Department of Defense Directive 2040.2, International Transfers of Technology, Goods, Services, and Munitions, 29 December 1983

Department of Defense Directive 5230.24, Distribution Statements on Technical Documents, 18 March 1987

Department of Defense Directive 5230.25, Withholding of Unclassified Technical Data from Public Disclosure, 6 November 1984

Department of Defense Directive 5230.9, Clearance of DoD Information for Public Release, 2 April 1982

Department of Defense Instruction 5200.21, Dissemination of DoD Technical Information, 31 July 1980

Department of Defense Instruction 5230.27, Presentation of DoD-Related Papers at Meetings, 6 October 1987

Department of Defense Instruction 7930.2, ADP Exchange and Release, 31 December 1979

Department of Defense Policy Handbook 5230.25-PH, Control of Unclassified Technical Data with Military or Space Applications, Office of the Deputy Undersecretary of Defense for Policy, May 1985

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5. **References**

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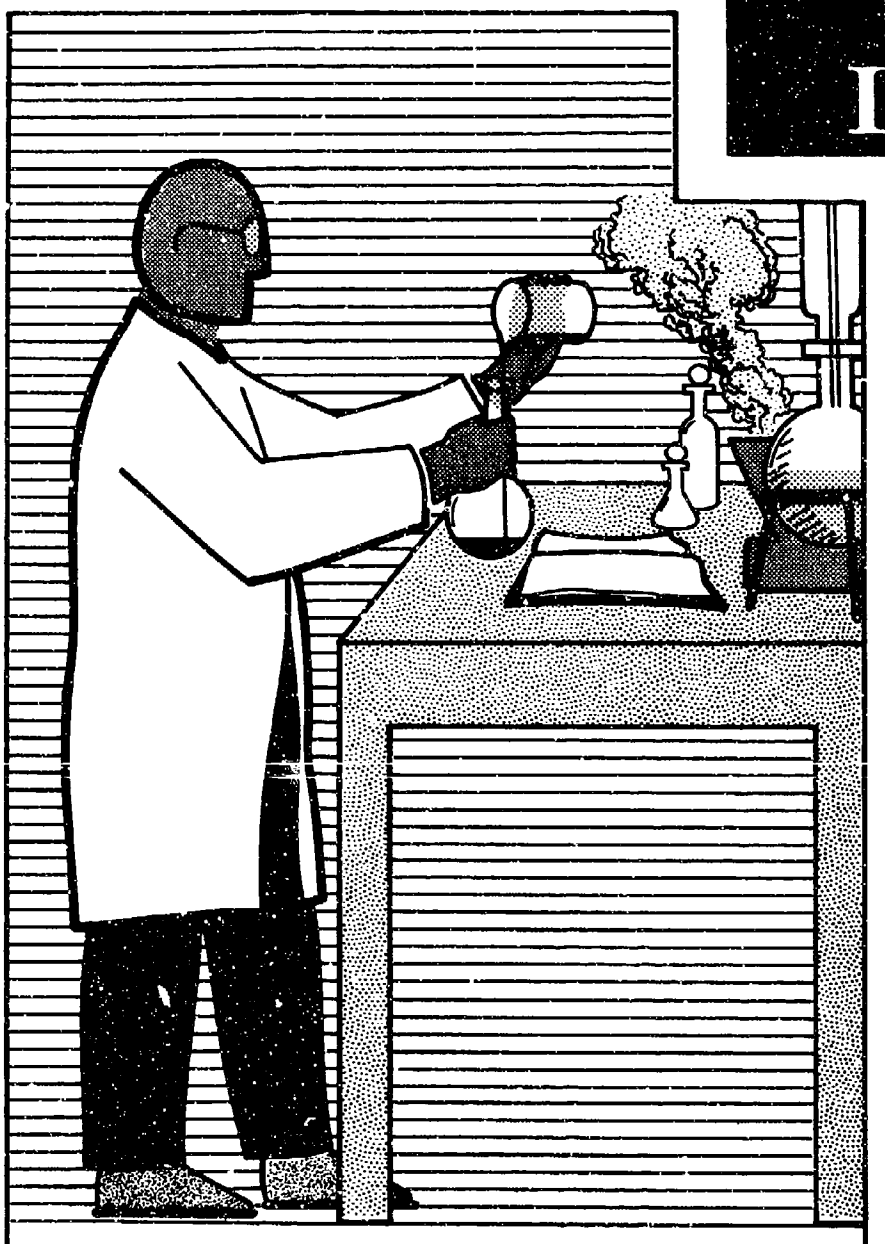
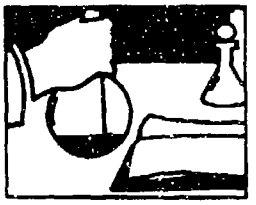
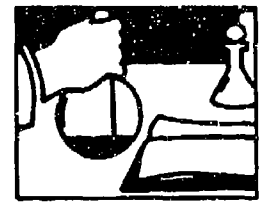
IV



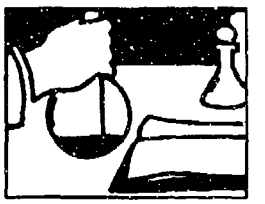
Intellectual Property

CHAPTER IV
Intellectual Property





Illustrations



PART 1
INVENTIONS AND PATENTS

What is a patent? Can Navy employees receive patents? What are the benefits of obtaining a patent for an invention? How are patent applications processed? What if my invention is classified or on the MCTL?

What Is a Patent?

A patent is a grant made by the U.S. government to an inventor in return for a complete description or disclosure of an invention. This grant entitles the inventor to exclude others from making, using, or selling the invention in the United States for 17 years. After 17 years, the patent expires and the invention becomes public property.

Patent laws are enacted under the authority of Article I, Section 8, of the U.S. Constitution, which gives Congress the power to make laws concerning inventions and literary property.

Who Can Obtain a Patent?

A patent may be obtained by any person who has created (invented) any new, useful, and nonobvious (1) process, (2) machine, (3) manufacture, (4) composition of matter, or any new, useful, and nonobvious improvement of the above four items. Such a patent is referred to as a utility patent. The law also provides that certain plants and ornamental designs can be patented. Such patents are referred to as plant patents and design patents, respectively.

To obtain a patent, the applicant must assert that the invention was not

Known or used by others in the U.S. before the applicant's invention.

Described in any printed publication in the U.S. or in any foreign country before the applicant's invention or more than 1 year prior to the patent application.

Patented in a foreign country (prior to application in this country) on a foreign application filed by the inventor more than 1 year before the inventor's U.S. application.

In public use or on sale in the U.S. for more than 1 year prior to the inventor's application.

What Can Be Patented?

To be patentable, an invention must fall within at least one of the following classes:

First Class—Any New Useful, and Nonobvious Process: Any process, art, or method of achieving a change in character or condition of the subject matter to be transformed.

Second Class—Any New and Useful Machine: An apparatus or mechanical device, the interrelated parts of which function in conjunction with each other. This class covers the majority of patents issued and includes electrical circuitry.

Third Class—Any New and Useful Manufacture: All articles that are manufactured or made.

Fourth Class—Any New and Useful Composition of Matter: Chemical compounds or mixtures of substances having properties different from those of the individual ingredients.

The emphasis on patents within the Navy is directed toward utility rather than design or plant patents. (See figure 55 for examples of patented inventions.)

What Is Navy Policy Concerning Patents?

As a Navy employee, you must report all inventions if any of the following conditions apply:

The invention was made during working hours.

The invention was made with the contribution of Navy facilities, equipment, materials, funds, or information.

The invention was made using the time or services of other Navy employees on official duty.

The invention has a direct relation to your official duties or was made in consequence of them.

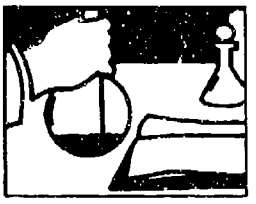
By reporting inventions, you ensure that

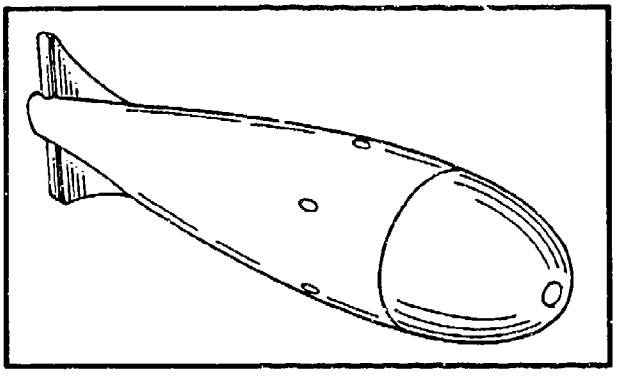
The research accomplishment is not lost.

The inventor receives credit.

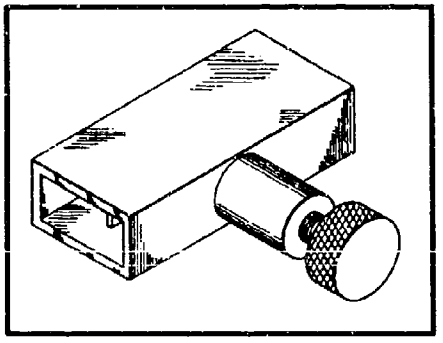
Others profit from the experience.

The invention advances the national welfare.

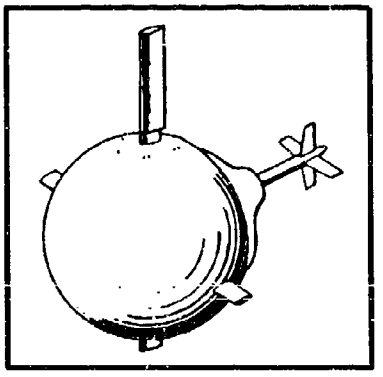




BIOLUMINESCENT DETECTOR
PATENT NUMBER: 4,978,854



VARIABLE PRINTED CIRCUIT
WAVELENGTH FILTER
PATENT NUMBER: 4,990,871



SUBMARINE DRONE FOR
CARRYING A BARREL
STOVE-TYPE TRANSDUCER
ARRAY
PATENT NUMBER: 4,992,999

Figure 55. Examples of inventions that have received patents.

What Are the Benefits in Obtaining Patents?

Both the Navy and you, as an inventor, benefit when patents are granted for Navy inventions (see figure 56.)

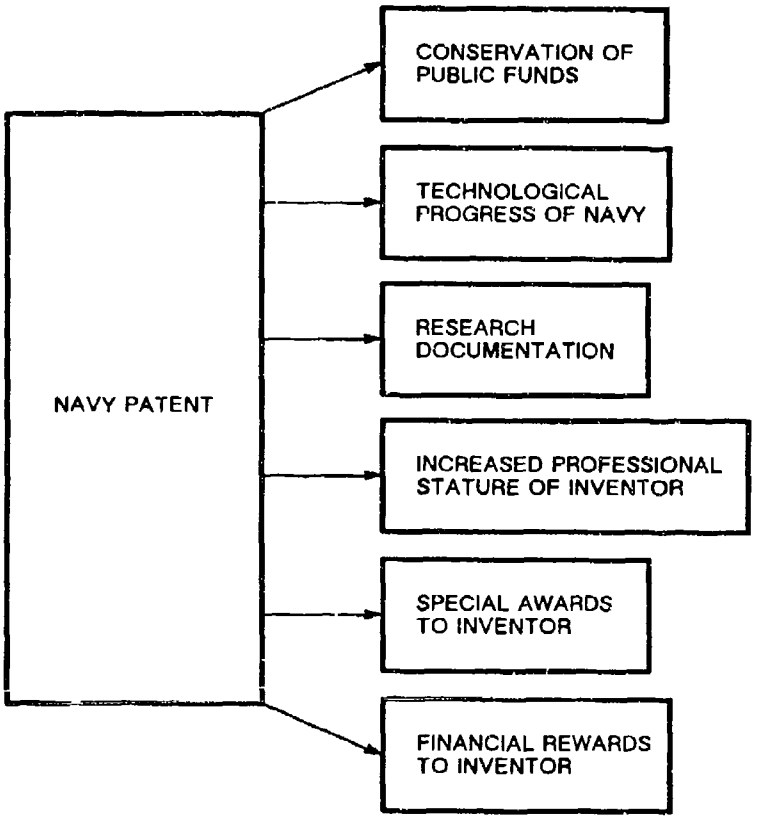
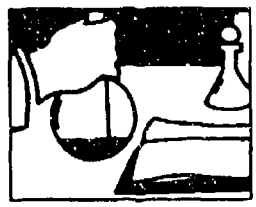


Figure 56. Benefits resulting from Navy patents.

WHAT ARE THE BENEFITS TO THE NAVY? The Navy's primary purpose in obtaining patent rights is to ensure that the government does not pay to use an invention that was first made by either a Navy employee or by someone working on Navy-financed projects. Patents may also be licensed to bring royalty income into the Navy.

The Navy also emphasizes the use of patents because patents provide research documentation for Navy information-retrieval purposes and thus support the technological progress of the Navy.



WHAT ARE THE BENEFITS TO NAVY INVENTORS?

Increase in Professional Stature. Because a patent always carries its inventor's name and date of issue, the patent is tangible evidence of your creativity. Patents are also publicized in patent journals and in technical literature, and those of outstanding interest are often noted in trade journals and in the press.

Financial Benefits. You receive monetary awards both through an awards program at your local activity and through commercial licensing of your invention. The cash value of local awards is a decision of each Navy activity.

Public 99-502, known as the Technology Transfer Act of 1986, was written to improve the transfer of commercially useful technologies from the federal laboratories to the private sector, i.e., to allow the government to license its patents commercially. This act simplified the process of granting exclusive commercial licenses to private sector firms and, more importantly, established a system of royalty sharing for Navy inventors.

Under the act, as implemented by the Navy, an inventor is entitled to the first $1000 of any royalties received from patent licensing, even though the Navy owns the title and interest in the patent. Further, the inventor is entitled to 20 percent of the royalties in excess of $1000 up to a maximum of $100,000 per year. (To receive more than $100,000 in 1 year requires permission of the President.) The balance of the royalties is distributed among the Navy's laboratories (a substantial percentage is returned to your activity).

Special Awards. Presidential awards can also be given to inventors in unlimited amounts of money. These awards are authorized under Title 5 U.S. Code, Section 4504.

How Are Patents Obtained?

HOW DO I DOCUMENT MY INVENTION? The first step (figures 57 and 58) in protecting your idea and insuring it against loss is to put it in writing. The date your invention was conceived is of particular importance. It is also important to make a sketch and a written description of the drawing as soon as possible. Although your invention will evolve, these records, which must be witnessed and dated, must be retained. The availability of these records is often invaluable while prosecuting the patent, especially if another inventor has filed for a similar invention.

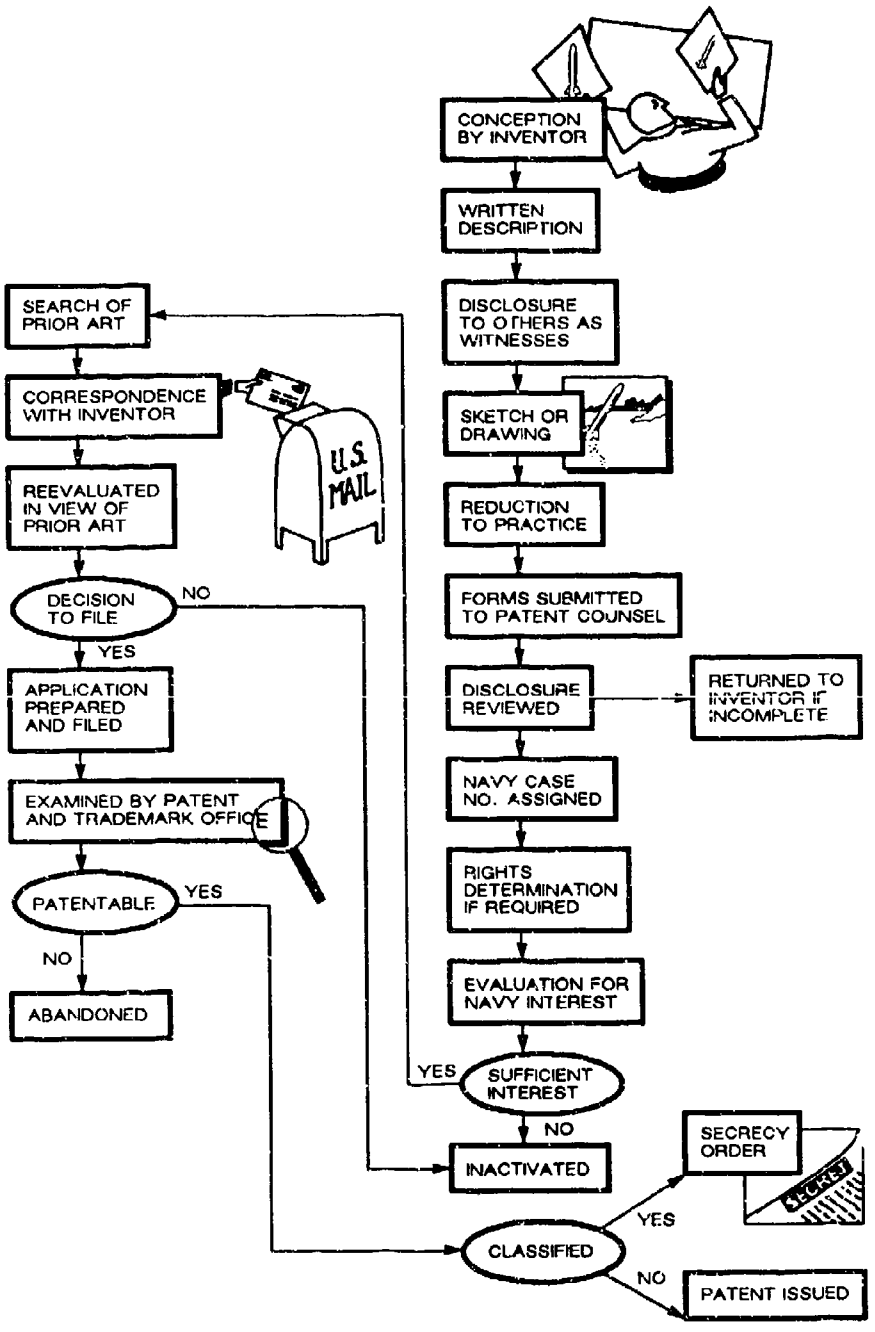
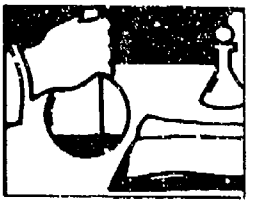


Figure 57. Steps in the patent process.

IV. **Intellectual Property**



HAVE YOU ...?

- ☐ Provided a thorough description of the invention?
- ☐ Provided a drawing that adequately describes the invention?
- ☐ Stated the advantages and features of the invention?
- ☐ Considered commercial uses for the invention?
- ☐ Compared the invention with previous ways of doing the same or similar function?
- ☐ Presented results of any actual tests of an embodiment of the invention?
- ☐ Provided copies of available reports or other documents that describe the invention?
- ☐ Informed the patent counsel of any prior publication or lecture where the invention was discussed in the presence of nongovernment employees?
- ☐ Identified any closely related patents, publications, or devices in public use, which are known to you?
- ☐ Stated the best method contemplated by you for carrying out (i.e., manufacturing or practicing) the invention?
- ☐ Had your disclosure witnessed by two persons who understand the invention?
- ☐ Provided classification authority for classified inventions?

Figure 58. A patent checklist for inventors.

Your invention should also be disclosed to others, who should sign a statement that the invention was disclosed to and understood by them. The witnessing of your invention is very important in patent litigation in "proving

that the invention was made," i.e., the patent was reduced to practice, before the filing date of the patent application with the Patent Office.[1]

Since laboratory notebooks are one of the logical repositories that Navy personnel use to find critical facts, each Navy scientist and engineer should keep a laboratory notebook that is signed, dated, and witnessed. (See part 2 of this chapter for information on laboratory notebooks.)

HOW DO I REPORT MY INVENTION? When you develop something you believe may be patentable, report your work to your supervisor and discuss the work with your activity's patent counsel. On confirmation that the subject may be patentable, submit the required invention disclosure forms to your patent counsel:

Record and Disclosure of Invention, NAVONR Form 5870/35: Identifies the invention, the inventors, and the location of records that document the time of conception of the invention and its reduction to practice. (See figure 59.)

Patent Rights Questionnaire, NAVONR Form 5870/3: Provides basic information necessary for a rights determination. (See figure 60.)

Invention Evaluation Record, NAVONR Form 5870/30: Provides facts relevant to determining Navy interest, i.e., making a decision about using Navy funds to protect the invention. (See figure 61.)

Copies of these forms and directions for completing and submitting them are available from your activity's patent counsel. You can use existing reports and drawings to simplify the completion of these forms.

HOW IS A PATENT APPLICATION PROCESSED?

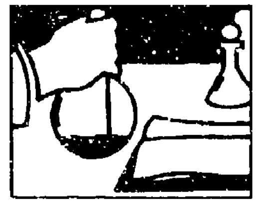
Assignment of a Navy Case Number. After your forms are filed, your activity's patent counsel reviews the forms and determines if the invention is of an appropriate statutory class and if sufficient information is presented to understand the invention. A Navy case number is then assigned. These numbers, which are unique throughout the Navy, are assigned by the Office of Naval Research.

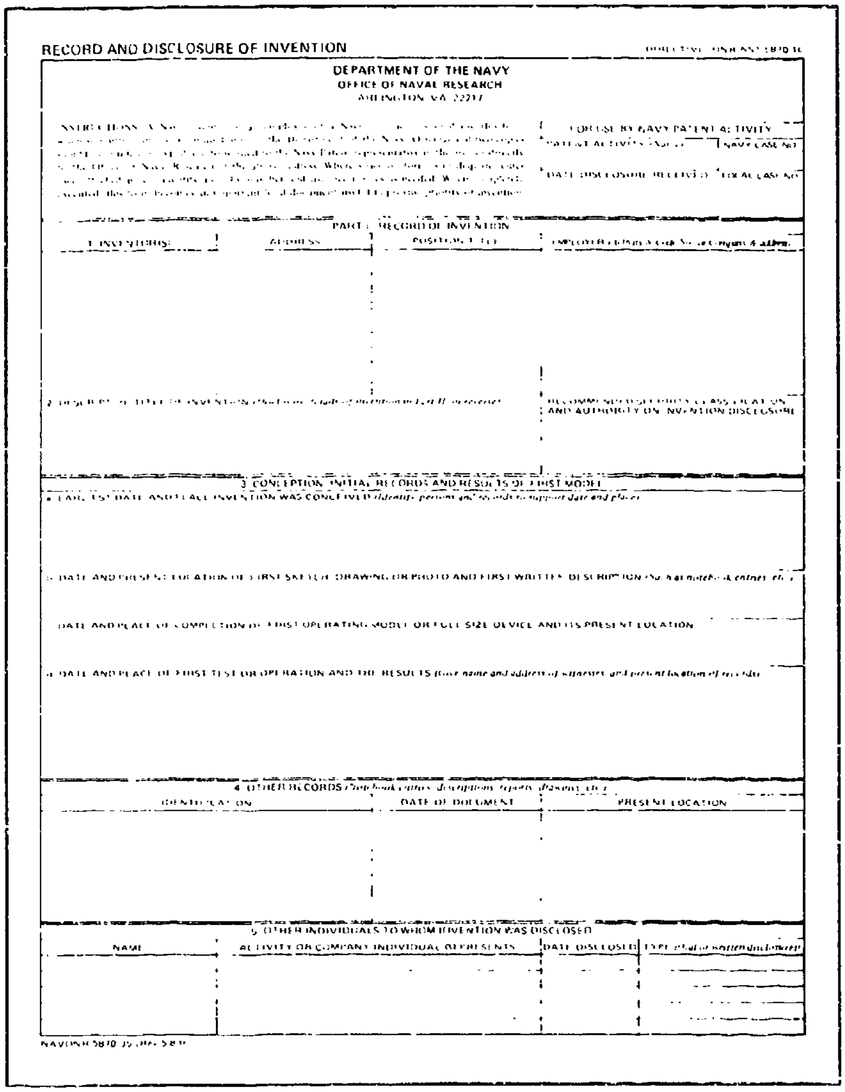
Determination of Patent Rights. If necessary, a rights determination is made.[2] A rights determination is not necessary if you have signed the "assignment of invention" block on the patent rights questionnaire. By signing this block, you have acknowledged assignment of rights to the Navy.

---

[1] A process is reduced to practice when all steps are performed in proper sequence with successful results: a machine when it has been constructed and actually used for its intendned purpose; an article of manufacture when it has been made and used for its intended purpose; and a new composition or a new chemical when it has been produced and used for its intended purpose with some degree of success.

[2] Executive Orders 10096 and 10930 and Public Law 99-502 require determination of the respective rights of the inventor and the government.





RECORD AND DISCLOSURE OF INVENTION

DEPARTMENT OF THE NAVY
OFFICE OF NAVAL RESEARCH

FOR USE BY NAVY PATENT ACTIVITY

PART I. RECORD OF INVENTION

1. INVENTOR(S)	ADDRESS	POSITION/TITLE	EMPLOYER

2. DESCRIPTIVE TITLE OF INVENTION

RECOMMENDED SECURITY CLASSIFICATION AND AUTHORITY ON INVENTION DISCLOSURE

3. CONCEPTION, INITIAL RECORDS AND RESULTS OF FIRST MODEL

a. EARLIEST DATE AND PLACE INVENTION WAS CONCEIVED

b. DATE AND PRESENT LOCATION OF FIRST SKETCH OR DRAWING OR PHOTO AND FIRST WRITTEN DESCRIPTION

c. DATE AND PLACE OF COMPLETION OF FIRST OPERATING MODEL OR FULL SIZE DEVICE AND ITS PRESENT LOCATION

d. DATE AND PLACE OF FIRST TEST OR OPERATION AND THE RESULTS

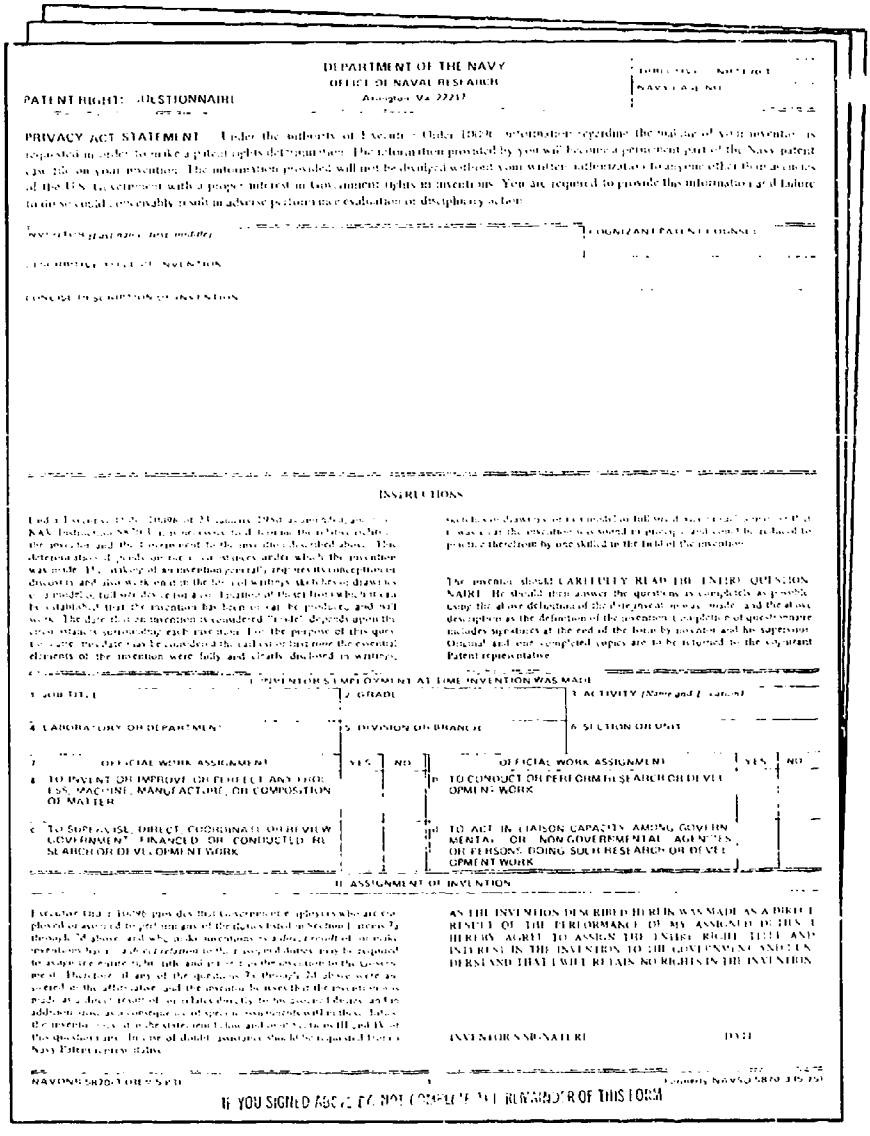
4. OTHER RECORDS

IDENTIFICATION	DATE OF DOCUMENT	PRESENT LOCATION

5. OTHER INDIVIDUALS TO WHOM INVENTION WAS DISCLOSED

NAME	ACTIVITY OR COMPANY INDIVIDUAL REPRESENTS	DATE DISCLOSED	TYPE

Figure 59. Record and disclosure of invention, NAVONR Form 5870/35.



DEPARTMENT OF THE NAVY
OFFICE OF NAVAL RESEARCH
Arlington VA 22217

PATENT RIGHTS QUESTIONNAIRE

PRIVACY ACT STATEMENT

INSTRUCTIONS

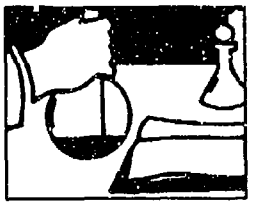
1. INVENTOR'S EMPLOYMENT AT TIME INVENTION WAS MADE

2. ASSIGNMENT OF INVENTION

IF YOU SIGNED ABOVE, DO NOT COMPLETE THE REMAINDER OF THIS FORM

Figure 60. Patent rights questionnaire, NAVONR Form 5870/3.

IV. Intellectual Property



INVENTION EVALUATION RECORD
NAVONR 5870/30 (Rev. 5-82)

DEPARTMENT OF THE NAVY

SECURITY CLASSIFICATION
(WHEN THIS FORM IS FILLED IN)

OFFICE OF PATENT COUNSEL SUBMITTING EVALUATION | DATE OF EVALUATION | NAVY CASE NO

INVENTION TITLE

INVENTOR(S)

INVENTION SOURCE
NAVAL ACTIVITY AND PROJECT IDENTIFICATION
CONTRACTOR AND CONTRACT NO

1 NAVY PROCUREMENT AND USE OF INVENTION

PROCUREMENT ESTIMATES	PAST		OBLIGATED		PLANNED
	NO. UNITS	COST/UNIT	NO. UNITS	COST/UNIT	
A. INVENTION PER SE					
B. SYSTEM IN WHICH INVENTION IS USED					

7 NAVY INTEREST *(Size, how invention solves current Navy problem, provides basis for future Navy development or is suitable for Navy use)*

3 TECHNOLOGICAL ADVANCEMENT INVENTION PROVIDES THE NAVY *(Check only one)* — EXPLAIN

- A. NEW AREA OF TECHNOLOGY
- B. MAJOR BREAKTHROUGH IN ART
- C. SOLUTION TO CURRENT PROBLEM
- D. IMPORTANT IMPROVEMENT
- E. TECHNOLOGY IN USE

4 R AND D INVESTMENT	PAST	OBLIGATED	PLANNED
A. INVENTION PER SE			
B. SYSTEM IN WHICH INVENTION IS USED			

5 PUBLIC BENEFIT VALUE *(Explain if useful in commerce, Naval, safety, welfare, anti pollution, etc.)*

6 SECURITY CLASSIFICATION OF INVENTION DISCLOSURE

7 RECOMMEND FURTHER EVALUATION BY *(Sponsor or potential sponsor)*	*(Name)*	*(Code)*	*(Agency)/Activity)*	*(Telephone)*
8 SOURCE OF INFORMATION	*(Name)*	*(Code)*	*(Agency)/Activity)*	*(Telephone)*

9 COMMENTS *(Task number, work request, project order, or other designation identifying sponsored work)*

(Signature)

10 FOR DEPARTMENTAL USE ONLY

RECOMMENDATION ☐ FILE ☐ PUBLISH ☐ INACTIVATE

PATENT ADVISER *(Signature)* | PATENT COUNSEL *(Signature)*

SECURITY CLASSIFICATION AND AUTHORITY
(When this document contains classified information)

Figure 61. Invention evaluation record, NAVONR Form 5870/30.

If a determination of rights is necessary, the following guidelines apply:

The Navy keeps title to patents on inventions that are directly related to your official duties as a Navy employee. However, as the inventor, you share directly in the royalties that may accrue from your invention.

You keep title (including commercial rights) and the Navy obtains a nonexclusive, irrevocable, and royalty-free license to use the invention for government purposes, if the invention is not related to your official duties and if the use of Navy time, facilities, and funds makes it equitable to limit the government to such a license.

You keep title, if the invention is not related to your official duties and if the use of Navy time, facilities, and funds is not a factor requiring the granting of a license to the government.

If you disagree with your patent counsel's determination, you can appeal to the Undersecretary for Technology, U.S. Department of Commerce, Herbert C. Hoover Building, Washington, DC 20230.

Determination of Interest. This is the decision to determine whether your invention is of sufficient interest to the Navy to justify preparing a patent application. The decision is usually made by your activity through an invention evaluation board.

If your activity decides not to file a patent application for your invention, i.e., recommends inactivation, you can then file for a patent independently. However, if you file an independent patent application, you must submit a copy of the application to your patent counsel. It will be used to determine if the government, under applicable regulations, is entitled to a royalty-free license to the rights of the invention.

Preparation of the Patent Application. Authorized patent applications are prepared by your activity's patent counsel and forwarded directly to the U.S. Patent and Trademark Office for filing. The principal parts of the application are

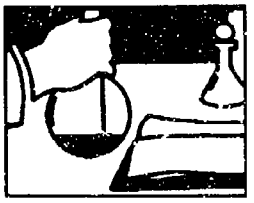
Specification: A detailed description of the invention and one or more claims on the scope of the invention.

Declaration: Attests to the inventor's compliance with patent laws.

Drawing: Drawing of the invention, if possible.

Patent Prosecution. After your patent application has been filed with the U.S. Patent and Trademark Office, a patent office examiner will examine and respond to the application. In the response, called an "office action," the examiner will cite any prior art[3] that precedes the invention claimed in your application. (The examiner can reject your application

[3] Prior art is defined as the total of the world's published information about the subject-matter related to the invention. The examiner uses this information to determine the patentability of the invention.



based on a single prior-art reference showing the entire invention disclosed in your application; or the examiner may reject your application based on a combination of references.)

When the office action is received by your patent counsel, a copy of the action, together with any copies of prior art cited, will be sent to you. At this time, you can supply the patent office examiner with comments on the advantages and distinctions inherent in your invention over the prior art.

In a response to the office action (called an amendment), your patent counsel can cancel or amend the rejected claims in the application or argue that the claims are allowable. This exchange of office actions and amendments is known as "patent prosecution." It usually lasts approximately 2 years or until the invention is either acknowledged by the patent office as patentable or until the invention is determined to be unpatentable and the application is abandoned.

Allowance. When a patent application is allowed and no claims are under dispute, the examiner will issue a "notice of allowance." Then, upon payment of the issue fee and correction of informalities such as drawing quality, a patent will be issued, unless the application is under a secrecy order.

What Are the Procedures for Classified and MCT Inventions?

The patent application for an invention involving classified subject matter or material on the Militarily Critical Technologies List (MCTL) is placed under a secrecy order. If the invention is found to be patentable, the patent office issues a "notice of allowability" indicating that the patent would have been issued except for the secrecy order. When the secrecy order is removed, the patent will be issued and will be in effect for 17 years from the issue date.

The inventor initially determines the classification of an invention and/or its inclusion on the MCTL. Assistance in making this decision can be provided by your activity's security office and contact point for militarily critical technology.

Classified patent applications are required by law to be reviewed annually to determine whether they can be declassified. However, if at any time you determine that your pending application no longer has to be classified, inform your patent counsel. Also, if your invention is on the MCTL, you must review each revision of the MCTL to determine if your invention is still listed. When it is no longer on the MCTL, you must inform your patent counsel.

What Procedures Exist for Inventions of Limited Commercial Use?

Statutory Invention Registration. If your invention is determined to have extremely limited potential application or limited commercial value, your patent counsel may recommend a statutory invention registration (SIR).

SIRs, which were especially created for government inventions under public law 98-62, have the same monetary value for Navy inventors as do patents. If an SIR is granted, the inventor will receive the same local awards as if a patent had been granted. However, no potential exists for licensing income from an SIR.

The SIR takes less time to receive than a patent and is also potentially less costly. The SIR provides the government with the same protection against potential patent infringement lawsuits as does a patent. The SIR, however, differs from the patent in one significant way—the SIR does not permit the holder to exclude others from making, using, or selling the invention.

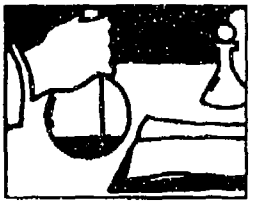
Navy Technical Publication Bulletin. Your patent counsel may also decide that your invention should be published in the Chief of Naval Research's *Navy Technical Publication Bulletin*. Publication in this journal protects the government's right to your ideas. You may receive an award for publication, as determined by your local activity; however, your invention must be unclassified and releasable to the general public.

What Are Joint Inventions?

A patent is invalid unless it is in the name of the "true" inventor or inventors. Do not include anyone as a joint inventor merely as a matter of courtesy or recognition. If a person has been included improperly as a joint inventor, his or her name can be removed during prosecution of the application. Similarly, a person excluded improperly can be added as a joint inventor during prosecution. It is best, however, to ensure that the true inventors are named at the time of filing the application.

What Are Patent Interferences?

Occasionally two or more persons may claim substantially the same patentable invention; however, a patent can be granted to only one of them. If the U.S. Patent Office discovers this duplication while both applications are pending or when one application is pending and the other has been issued as a patent for less than 1 year, an "interference" proceeding can be made. This proceeding will determine who is the first inventor and thus entitled to the patent.



To decide the conflict, each inventor must submit evidence that proves when the invention was made. In these proceedings, the information supplied on the record and disclosure of invention (NAVONR Form 5870/35) can prove to be exceedingly important. If an inventor cannot produce evidence establishing the actual date of the invention, it is assumed that the invention was made on the filing date of the application.

What Is Patent Infringement?

The unauthorized making, using, or selling of a patented invention during the life of the patent is called "infringement." When infringement occurs, the patent owner can sue for relief. If the government infringes on a patent, the patent owner can sue for damages. Although the government may not be prohibited from using any patented invention without permission, the patent owner is entitled to obtain compensation for such use.

If patent infringement seems likely, you must bring the matter to the attention of your patent counsel.

What Patent Literature Is Available?

Complete copies of issued patents, both domestic and foreign, are available. When copies of patents are needed, single copies can be ordered from the U.S. Patent Office. To obtain a copy of a domestic patent, you need only the patent number; to obtain a copy of a foreign patent, you need the country, date, and patent number. Check with your local patent counsel for procedures on ordering patents.

The U.S. Patent Office also issues the *Official Gazette*, which is a weekly abstract of issued U.S. patents; the abstracts are arranged by subject classes. Copies of the *Official Gazette* are usually maintained by your patent counsel.

What Is the Navy's Policy on Patents and Contracts?

The Federal Acquisition Regulation (FAR) and Navy procurement directives require that Navy procuring activities have a system to protect the government's rights to inventions developed under contract. This system ensures that inventions in which the government may have an interest are identified and that formal agreements are obtained to protect the government's rights.

This plan requires that all procurements that involve research, development, or experimental work are reviewed. This review ensures that the appropriate patent and data clauses, which specify invention reporting and patent rights, are included in the contract.

During the course of the contract, the contracting officer's technical representative (COTR) must also work with the patent counsel to ensure continuing protection of the government's interest.

What Are the Navy's Patent Counsel Services?

The Navy has a staff of patent attorneys to support you in your invention requirements. Specifically these attorneys

File patent applications for inventions by Navy employees.

Determine rights between the Navy and inventors, and secure licenses and assignments in their inventions.

Review proposed procurements to ensure the rights of the Navy are protected.

Consider claims of patent infringement.

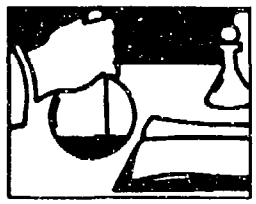
Negotiate license agreements for commercial use of Navy inventions under the Technology Transfer Act.

Evaluate suggestions and inventions submitted by persons outside the Navy to determine the extent of Navy interest.

Provide advice on other aspects of inventions that affect Navy employees.

Screen Navy publications and presentations by Navy employees and Navy contractors for possible patents.

The Navy's patent counsels also perform, or have performed, state-of-the-art searches of patent literature. These searches are used to (1) gain background information, (2) plan future research and development, (3) obtain design approaches for solving a particular problem, and (4) identify other people and activities who have worked in the same field of development. On request, your patent counsel will also conduct searches on a specific subject to provide literature that can support research-and-development efforts.



PART 2
TYPES, PRESERVATION, AND USE OF RECORDS

What types of information result from RDT&E work? How do I store this information? Can records be maintained on my computer? How is this information used? How are laboratory notebooks used? What information belongs in a laboratory notebook?

What Types of Records Need to Be Preserved?

Records resulting from RDT&E work generally fall into one of the following categories (figure 62):

Statistical Data: Handwritten numerical data, usually readings of instruments and equipment, that are maintained in tabular form. This category also includes calculations and rearrangements of data to reflect different factors.

Machine Data: Information recorded on tapes, disks, films, and other media for mechanical or electronic interpretation or preservation.

Sketches and Drawings: All forms of mechanical drawings, wiring diagrams, curves, sketches, photographs, and other forms of illustration.

Administrative Data and Reports: Project authorizations and assignments, allocations of funds, technical correspondence, progress reports, and contract deliverables.

Narrative Data: Handwritten notes expressing novel concepts, test conditions, approaches to problems, observations, modifications, formulae, unusual or significant phenomena, findings, results, and other items of interest expressed in narrative form.

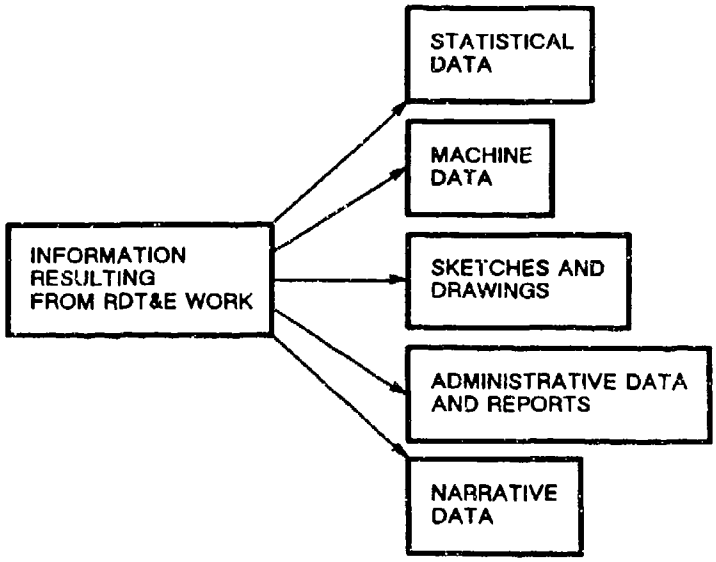


Figure 62. Types of information resulting from RDT&E work.

How Are These Records Used?

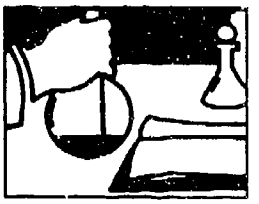
Properly kept, accurate records of scientific and engineering work preserve both your ideas and your experimental data (see figure 63). They also are used to (1) inform other R&D personnel of your activity's work, (2) evaluate accomplishments, (3) ensure recognition for successful investigators, and (4) defend the Navy's rights in the event of patent litigation. Specifically,

Records serve as a permanent record of technical progress.

Records protect the Navy's interest in what may become valuable patent rights. In cases where contractors are undertaking a portion of developmental work, the records assist in defining the proprietary rights of the contractor and the rights of the Navy.

Records protect your interest, as an inventor, in what may become valuable patent rights, since records, in particular laboratory notebooks, can be used as evidence of the invention's development and its adaptation and perfection. (The Technology Transfer Act of 1986 ensures inventors the opportunity to retain commercial rights to which they are justifiably entitled.)

Records minimize duplication of effort by recording both successful and unsuccessful avenues of work.



Record-keeping develops a clear understanding of your work in relationship to work in similar areas.

Record-keeping helps develop the ability to communicate technical information. One of the principal factors in qualifying a professional scientist or engineer is the ability to present technical information so it can be understood and applied.

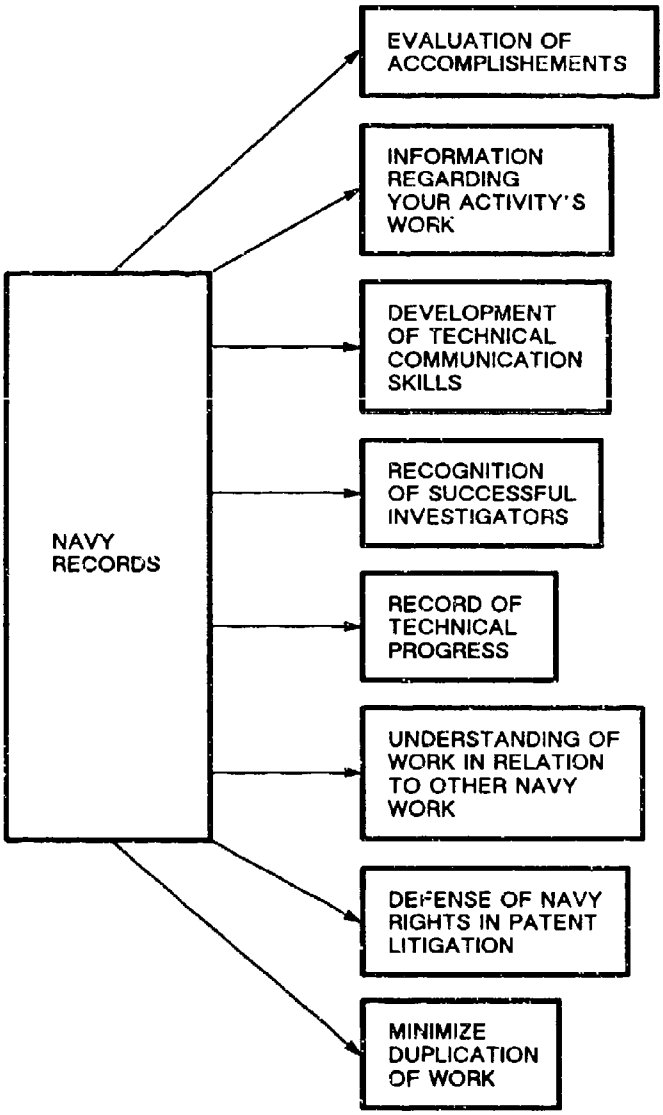


Figure 63. How Navy records can be used.

What Are the Navy's Methods for Preserving Records?

Project files, laboratory notebooks, and computers can all be used to preserve scientific and engineering records. (See figure 64.)

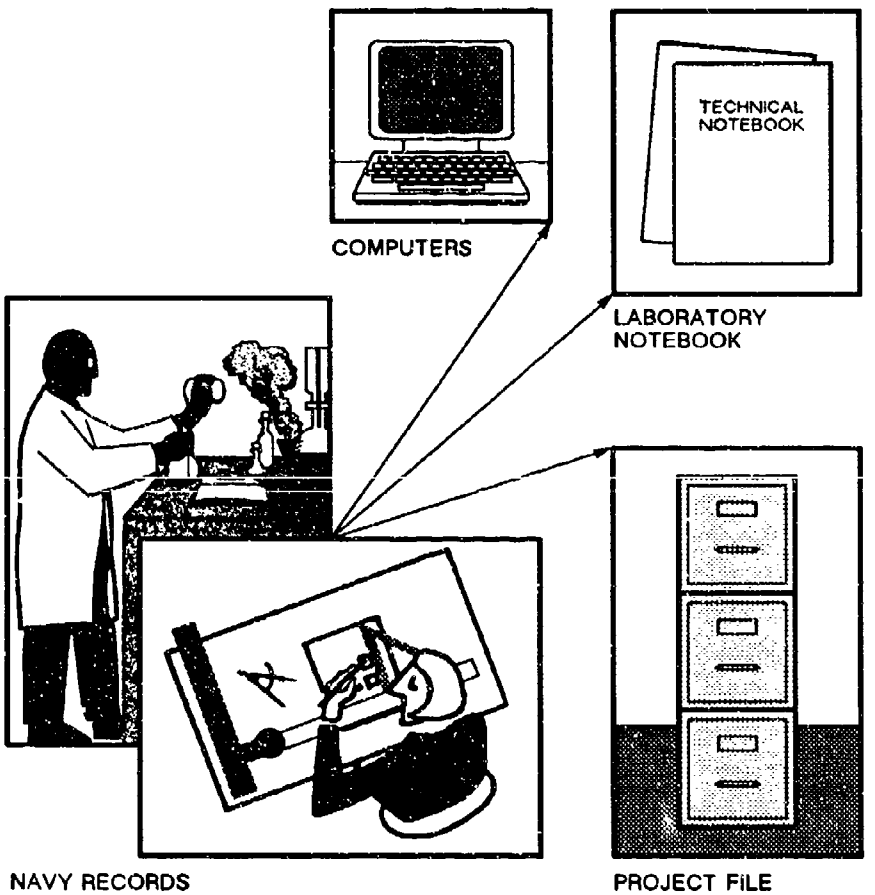
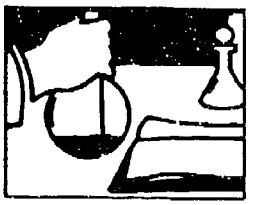


Figure 64. How Navy records are preserved.

WHAT ARE THE PROCEDURES FOR USING PROJECT FILES TO RETAIN RECORDS? Project files are used to retain statistical and administrative data, sketches, drawings, and reports. Machine data may also be retained in project folders; however, the special form of such data, e.g., tapes, disks, and films, may require another type of storage files. In this case, the project files should reference where the machine data are located.



WHAT ARE THE PROCEDURES FOR USING COMPUTERS TO RETAIN RECORDS? Personal computers may be used to document work. However, new computer entries to project files should be printed out as paper copies at the end of each day. This will protect the data from the dangers of head crashes and accidental degaussing and will provide a traceable and sequential path of development. The paper copies should be dated and signed (or initialed) by the author. At significant points in development, the computer printouts should also be witnessed as similarly described for laboratory notebooks.

WHAT ARE THE PROCEDURES FOR USING LABORATORY NOTEBOOKS TO RETAIN RECORDS? The primary purpose of laboratory notebooks (figure 65) is to provide a convenient means to record the development of ideas that are potentially profitable and patentable to both you and the Navy. Since notebooks contain the earliest and most detailed records of your work, notebook entries are used in establishing the dates of your inventions and for evidence in patent litigation against the Navy.

Types of Information To Enter. The dates when you conceived your idea, drew your sketches, made your models, and conducted your tests must be recorded. A statement of final results should also be included with sufficient detail to subsequently analyze the causes of failure or success and to provide proof of invention.

The type of information you enter in your notebook is usually considered "narrative data." Examples of narrative data (figure 66) include

Novel concepts

Conditions of tests

Approaches to problems

Observations

Modifications

Formulae

Unusual or significant phenomena

In addition, rough sketches, curves, and diagrams illustrating your ideas should be included in the notebook. Notations should also be made referencing pertinent material maintained in separate locations.

Since the notebooks are not diaries, they do not include administrative information.

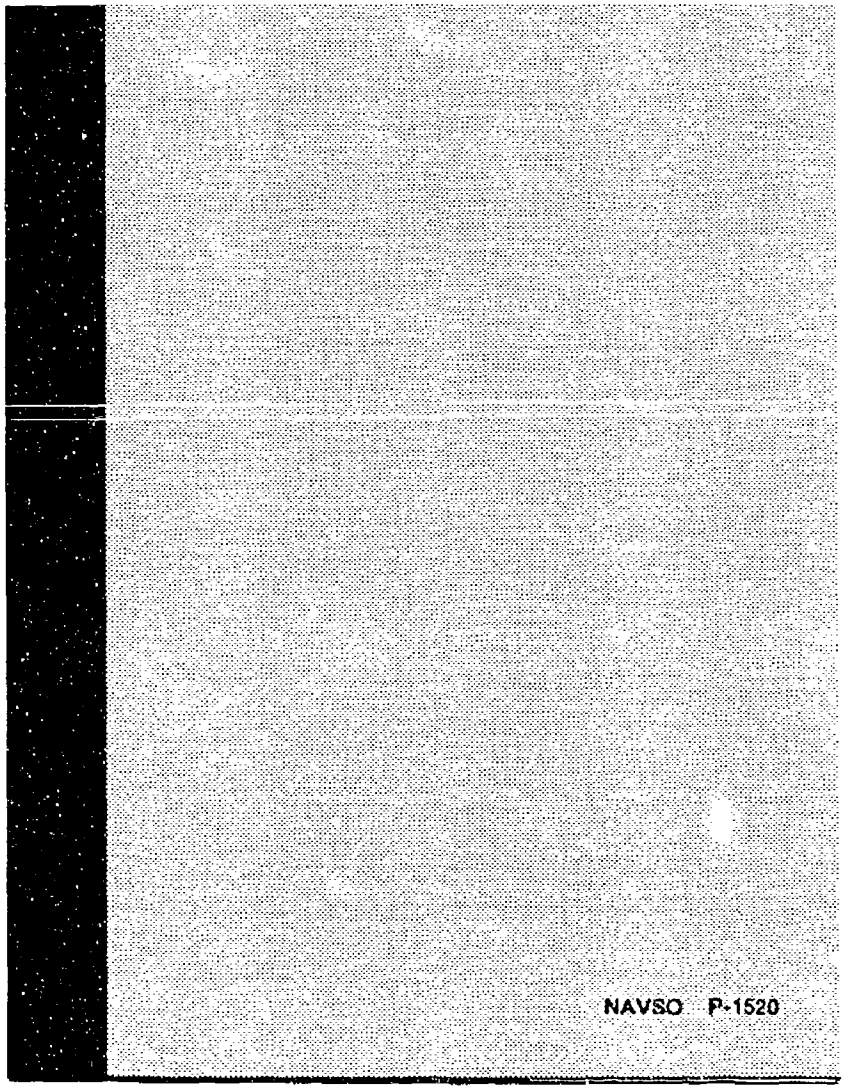
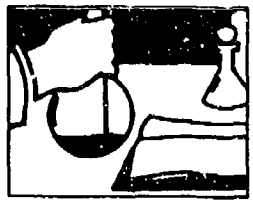


Figure 65. Navy laboratory notebook.



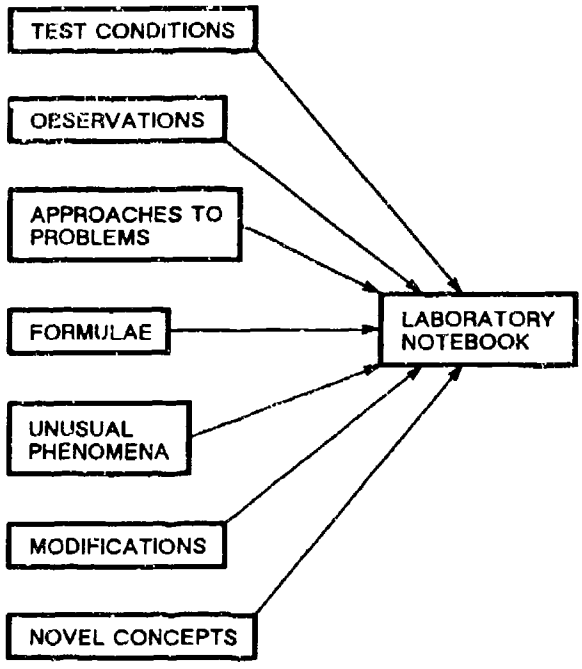


Figure 66. Types of information to include in laboratory notebooks.

A typical pattern of notebook entries is as follows:

Short Definition of Problem: If the problem is related to a previous development, clearly state the relationship of the new apparatus or method to what has previously been done.

Delineation of What is Being Done to Solve Problem: Most of these entries describe the device and methods used and the results. Charts and diagrams simplify the description.

Results Obtained: This includes any new and useful results obtained after each phase of experimentation.

Next Phase of Projected Investigation: This is a short statement, after each phase of experimentation, of the next projected phase of investigation. You need to include a brief summary of the results expected and the reasons for your expectation. This procedure is especially important if negative results were obtained in an earlier phase. In this case, if the stated expected results are obtained later, the date of the recorded proposal of such a "next step" becomes the date of "conception of the invention" and the date of the successful test or experiment becomes the date of "reduction to practice."

When to Enter Information. The narrative data to be recorded in your notebook should be entered at the same time you perform your work or make an observation. Delays in recording the information may result in incorrect or missing data.

Your work governs the amount of information written in notebooks and the length of time between entries. Some projects will require almost daily entries, while others will require only monthly entries. Remember that the notebook is not a diary in which daily entries are required.

How to Enter Information. Since your notebook entry is a primary record in rough form, you are not required to follow an established format. Use either ink or indelible pencil to make your entries.

Enter the information on consecutive pages and use both sides. Do not attempt to use separate portions of the book for different projects. (Using consecutive pages helps to establish chronological order independent of dates on individual pages.)

Directly record all original computations and data in the notebook. If you must rearrange and clarify the data, use additional pages. Sufficient explanatory material should accompany each set of notes to ensure correct interpretations at a later date. Notations should be made in the notebooks to reference other special equipment or other pertinent material maintained in case files. Also, remember to identify pertinent references.

Sample pages of a notebook are shown in figure 67.

Completeness of Entries. Proper notebook records contain the full chronological history of what was attempted and accomplished in connection with your creative ideas.

All facts should be recorded, and too much is preferable to too little. Lengthy and disconnected entries should be avoided by making entries as the event is recorded or as soon afterwards as practicable.

Every fact you feel is pertinent to your work belongs in your notebook. Include such entries as calculations, experimental records and results, technical considerations, statements, recommendations and conclusions, diagrams and sketches, and records of technical conferences with associates or representatives of outside agencies.

Pertinent reference data should also be included. Information (for example, photographs and wiring diagrams) that cannot be included in the notebook should be specifically referenced. (Photographs should be taken of any new device, particularly during the development of the prototype model. The photograph should show all significant elements of the device and should be referenced in the notebook.)

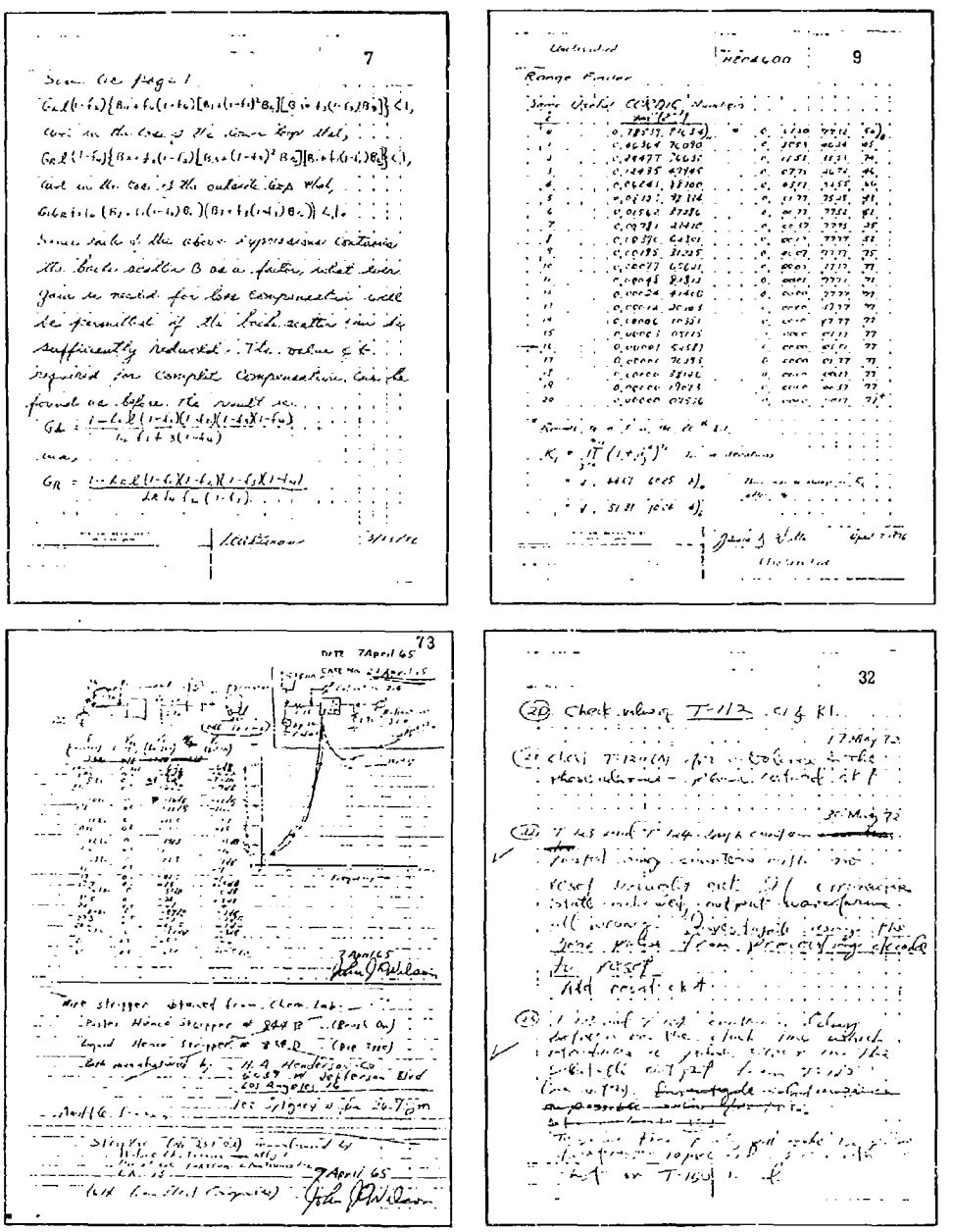


Figure 67. Sample pages in a laboratory notebook.

Alteration of Entries. Entries must not be altered. Each page having an entry should be substantially filled. Entries should be arranged in chronological order, and no pages may be detached nor erasures made. Interlinear corrections or additions are not permitted, but may be entered at the next available open line with reference to the deleted phrase in the sentence that is being amplified.

Marking Entries. Date and sign all entries in your notebook (initials are acceptable). Place the signatures and dates at the end of each entry. In addition, where a single notebook is being used to record information on more than one subject, prefacing entries with the subject of the entry is good practice. Signatures and dates are then placed at the end of the entry. (See figure 67.)

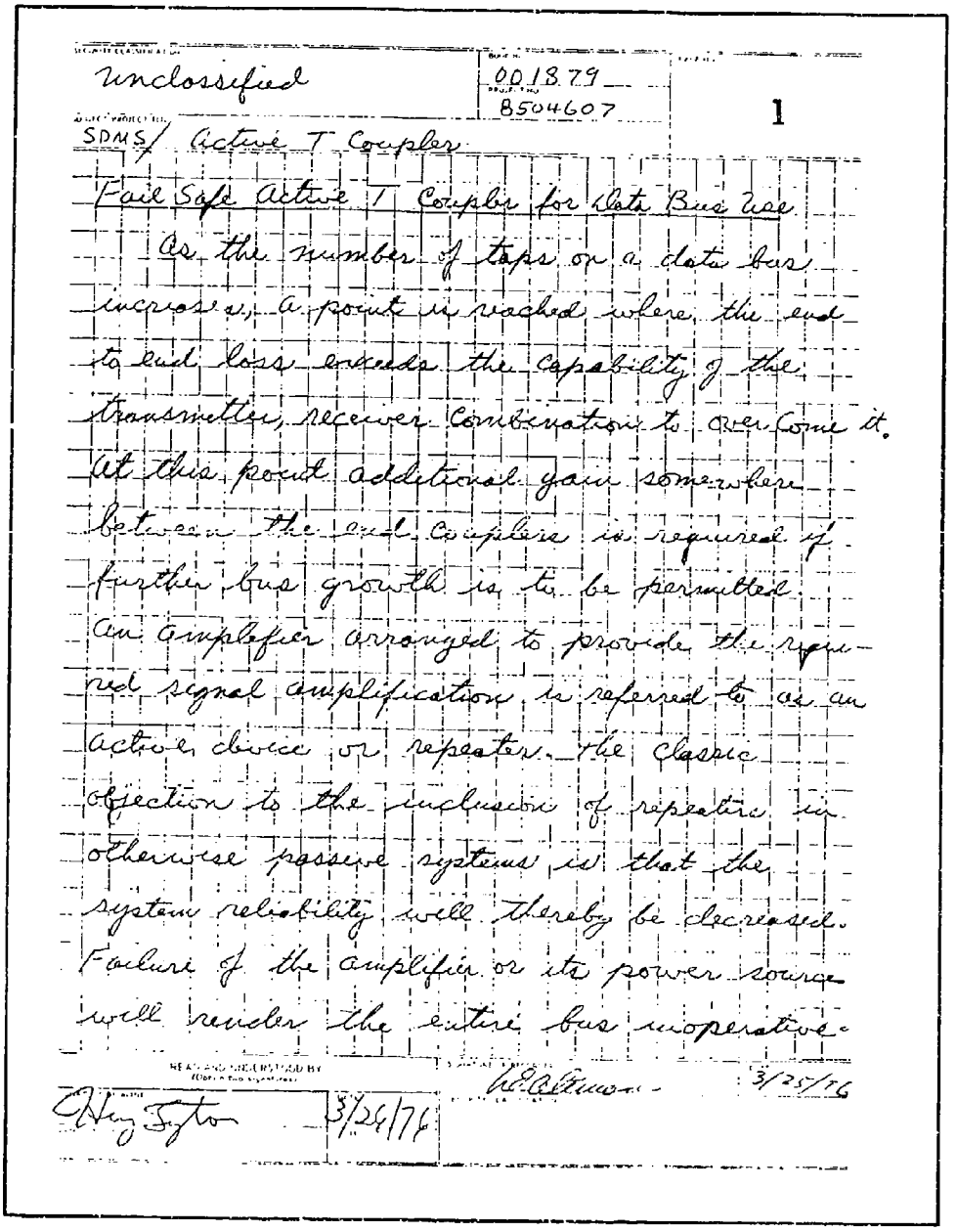
Classified Entries. If you are working on a classified project, the entries in your notebook will probably be classified. In this case, mark your notebook with the appropriate classification level (confidential or secret). When recording your entries in the notebook, portion mark the paragraphs, tables, and figures, and stamp the pages with the appropriate classification level.

If you have only a few classified entries, you can record them in a separate notebook that contains only classified entries. When using this procedure, make chronological notations in your main notebook that classified entries have been entered in a separate classified notebook.

Witnessing of Entries. Entries in the notebooks are useful as evidence only when they have been witnessed by an individual other than the person making the entry or a person directly involved with performing the documented work. When patent disputes arise, the personal testimony of witnesses is desirable for verifying the claims of the parties to the dispute. Thus, the signature and date of witnesses on notebook entries not only serve to authenticate the entry itself, but also serve as a record of who may be called to testify on the matter. (See figure 68.)

Thus, all concepts and sketches that relate to creative ideas should be witnessed. The entry, "witnessed and understood," should be made below the last entry on each page. The witness should write in the earliest date or dates on which he or she witnessed the disclosure, successful operation, or test of the device or model.

Once a record has been witnessed, no changes, erasures, or additions may be made. If changes have been made on a page before disclosing it to a witness, either provide a new sketch and description on a following page or have the witness note that the changes were made. The witness can identify these changes by initialing the side of the page opposite the changes.



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SDMS/ Active T Coupler

Fail Safe Active T Coupler for Data Bus Use

As the number of taps on a data bus increases, a point is reached where the end to end loss exceeds the capability of the transmitter receiver combination to overcome it. At this point additional gain somewhere between the end couplers is required if further bus growth is to be permitted. An amplifier arranged to provide the required signal amplification is referred to as an active device or repeater. The classic objection to the inclusion of repeaters in otherwise passive systems is that the system reliability will thereby be decreased. Failure of the amplifier or its power source will render the entire bus inoperative.

3/24/76

3/25/76

Figure 68. Witnessing of entry in laboratory notebook.

Notebook entries that record the successful operation of models should be signed by at least two corroborating witnesses who are familiar with the details of the demonstration. Corroborating witnesses are much more convincing in establishing "reduction to practice" than are witnesses to only notebook entries.

Joint Work. In the case of joint work, the records must show which inventor proposed what and when the proposal was made. By doing this, one notebook may be used as the sole repository for the work. Entries must be signed and dated by all joint participants. Related work, but not work done jointly, should be recorded in separate notebooks.

General Guidelines. Although each Navy activity has procedures for notebooks, the following guidelines apply in all cases:

Ownership: Laboratory notebooks are the property of the Navy and not the individuals who maintain them.

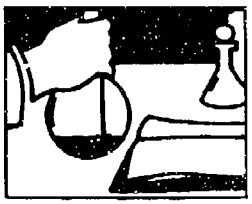
Custody: You are responsible for the proper care and custody of your notebook, as long as you are employed at your activity.

Use: Individual notebooks may be obtained and organized by specific project, subject matter, security classification, or guides that facilitate a workable division of your material.

Rights of Navy Personnel: Although notebooks are returned to your activity when you leave, your rights to the inventions in the notebook are not affected. You may also be given a photostatic copy of your notebook, if your security office and patent counsel approve.

Access: The right to examine and extract information from notebooks is limited to the author and authorized reviewers. Access by other persons is allowed only upon proof of the right and the need-to-know of the contents of the notebook.

How to Obtain a Notebook. Each Navy activity has different procedures concerning notebooks. The Navy form numbers for notebooks are NAVSO-P-1521 0515-LP-079-0000 and NAVSO-P-1520 0515-LP-077-0000. Consult your local STI officer for specific procedures for your activity.



PART 3
COPYRIGHTED MATERIAL

What is a copyright? Can Navy employees copyright their work? What is fair use? What copyrighted material can be used in a Navy publication? What happens if a contractor includes copyrighted material as part of a contract deliverable?

What Is a Copyright?

The copyright law, which is based on Article I, Section 8, of the U.S. Constitution, is Title 17 of the U.S. Code. Under this law, original or creative thoughts or work (published or unpublished) are automatically copyrighted when fixed in any tangible medium of expression, e.g., a handwritten manuscript. Included are literary works (expressed in words, numbers, or other verbal or numerical symbols, including computer programs and documentation); musical works; dramatic works; pantomimes and choreographic works; pictorial, graphic, and sculptural works; motion pictures and other audiovisual work; and sound recordings.

Common works of authorship, which might impact your work as a Navy employee, include the following:

catalogs	photographs	charts
bibliographies	technical drawings	maps
editorial notes	translations	indexes
pamphlets	computer programs	textbooks
journal articles	computer databases	forewords
videotapes	motion pictures	graphics

You can usually identify most copyrighted work by the word "copyright," the abbreviation "copr," or the symbol ©. However, when Congress amended the copyright law in 1989, copyright protection was automatically extended to any work published on or after 1 March 1989, even if the work was published without a copyright notice.

Copyright protection for unpublished works applies to any work, regardless of nationality or residence of the author. Copyright protection for published works, however, is limited to U.S. citizens and to citizens of countries that are members of copyright treaties of which the United States is a party, for example, the Universal Copyright Convention (UCC).

HOW LONG DOES A COPYRIGHT LAST? The rules concerning the length of a copyright vary. For works created on or after 1 January 1978, copyright normally lasts for the life of the author plus 50 years. If the author cannot be identified, the copyright lasts 75 years from first publication or 100 years from the work's creation. For works copyrighted before 1 January 1978, the copyright period covers 28 years from the time of publication or registration; an additional period of 47 years is also available.

WHAT ARE THE RIGHTS OF A COPYRIGHT OWNER? The copyright owner is entitled to control certain uses of his or her copyrighted material (figure 69). These include the rights to

Reproduce the copyrighted work.

Prepare derivative works based on the copyrighted work.

Distribute copies of the copyrighted work.

Perform or display the copyrighted work.

Copyright, however, protects only the manner of expressing ideas. The rights of the copyright owner do not extend to the use of ideas, processes, procedures, systems, methods of operation, discoveries, concepts, or principles expressed in the copyrighted work.

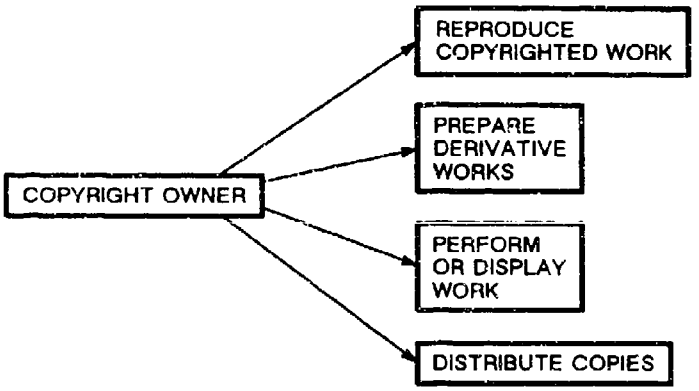


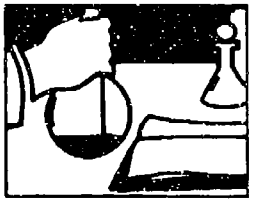
Figure 69. Rights of copyright owner.

What Is the Navy's Policy on Copyright?

WHAT ARE THE RIGHTS OF NAVY EMPLOYEES? You cannot copyright material that you prepare as part of your work for the Navy. Section 105 of the copyright statute denies copyright protection to "any work of the United States Government," which is "a work prepared by an officer or employee of the United States Government as part of that person's official duties." Such material is considered a "work of the United States Government" whether it is published by the government or by a commercial publisher. The rationale for this is that government work is financed with tax funds and should be available for use by the public.

To determine if a particular work belongs to the Navy or to you, answer the following questions:

Was preparation of the work within your position or job description, including work you properly assigned to yourself?



> Was preparation of the work properly assigned by your supervisor?

A positive response indicates the work belongs to the Navy; a negative response indicates that the work belongs to you. In addition, the fact that there was a Navy contribution to your work does not by itself determine whether the work was prepared as part of your official duties. (Examples of Navy contributions include use of Navy time, facilities, equipment, materials, funds, or the services of other Navy employees.) If you have questions, your legal counsel will provide advice.

You may, however, hold a copyright if the work (for example, a novel or a textbook) was not prepared as part of your official duties. In fact, the Navy encourages its employees to write privately and obtain copyright protection on their own behalf.

ARE NAVY PUBLICATIONS COPYRIGHTED? Navy publications are not copyrighted because they are a "work of the United States Government," i.e., a Navy scientist or engineer prepared the material as part of his or her work. This means that Navy publications can be copied and used by recipients. Thus, if a Navy report is approved for public release and sold by the National Technical Information Service to a member of the public, then that person can copy and use the material as required.

ARE JOURNAL AND SYMPOSIA ARTICLES AND SECTIONS OF BOOKS COPYRIGHTED? Articles submitted to journals and symposia and chapters or sections of handbooks or textbooks cannot be copyrighted by the publisher, if you have prepared them as part of your work for the Navy.

When you submit your manuscript to the publisher, you must inform the publisher that your material cannot be copyrighted. The best way to do this is to include the following statement on your manuscript:

> This is the work of a U.S. government employee and may not be copyrighted (17 USC 105). No copyright notice may be placed on this work.

The publisher must include this statement with your article or chapter when it is published. This will allow users of the publication to know that they can freely reproduce your article or portions of it.

How Is Copyrighted Material Used in Navy Publications?

If you find it necessary to include copyrighted material in a Navy publication, you must obtain permission from the copyright owner to reproduce the material.

The most common way to obtain copyright permission is to prepare a letter to the copyright owner. You can use the letter in figure 70 as an example.

3. Copyrighted Material

The Navy prefers that copyright permission be given without charge to the Navy; however, if necessary, your activity can pay a copyright fee, if the fee is warranted. You should always consult your activity's legal counsel if a fee is requested.

(LETTERHEAD)

(Date)

(Name of copyright owner or agent)
(Address)

(Salutation)

(Name of activity) requests your permission as copyright owner, or agent for the copyright owner, to make the following use(s) for Department of Defense purposes of the identified material.

(Complete identification of the copyrighted material. Include the title of the work, name of the author(s), exact copyright notice appearing on the work, and the editor and edition.)

(Designation of the exact portion of the work to be used, for example, page numbers and chapters. Blanket permission to use excerpts "as later determined" may not be requested.)

(Statement of the intended use of the material. Include the number of copies to be made, type of reproduction (photocopy, typeset, offset, tape, or disk), intended distribution, whether the material will be sold and contemplated fees or charges, and length of time the material will be used.)

(Contemplated modification of work, if any.)

If the requested permission is granted, please sign below and return this original letter in the enclosed self-addressed envelope. A copy of this letter is included for your records.

_____
(Signature of requestor)

_____
(Title)

PERMISSION

The above requested permission is granted royalty-free. A notice of copyright and credit line is desired as follows:

(Leave at least 8 lines for credit line)

_____
(Name of copyright owner or authorized agent)

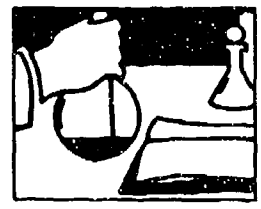
Date:_____

By_____

_____
(Title)

Figure 70. Sample format for requesting copyright permissions.

IV. Intellectual Property



When you receive correspondence granting copyright permission, you need to keep one copy for your files and provide one copy to the Navy Publishing and Printing Service.

If you experience any of the following problems in obtaining copyright permission, contact your legal counsel for assistance:

You cannot locate the copyright owner.

The copyright owner refuses to reply or grant the requested permission.

You do not believe that the permission offered by the copyright owner is of sufficient scope to cover your intended use of the copyrighted material.

A copyright fee has been requested.

WHAT IS COPYRIGHT INFRINGEMENT? If you do not obtain the copyright permission and still use the copyrighted material in a Navy publication, you will have committed copyright infringement. An infringing user is liable for monetary damages, and the U.S. government has no exemption from copyright infringement liability. Government employees are generally not, however, personally liable for copyright infringement occurring in the performance of their official duties.

You must remember that it is a criminal offense to remove or alter any notice of copyright appearing on a copy of a copyrighted work and that your activity may have to pay monetary damages for the copyright infringement.

WHAT IS A COPYRIGHT NOTICE? Copyrighted material appearing in Navy publications must be marked with the required copyright information (figure 71). Included are the following three elements:

The letter "cee" in a circle, or the word "copyright," or the abbreviation "copr."

The year of the first publication.

An identification of the owner.

For example: Copyright © 1986 by J. M. Smith

This statement must appear in a prominent place near the copyrighted material.

- Copyright © 1976 by J. M. Smith
- Copyright 1955, © 1961 Charles Jones
- Copyright © Frank James, 1986
- Copyright © 1974 by Barnum Press Second Edition, copyright © 1987 by Barnum Press

Figure 71. Examples of copyright notices.

What Are the Procedures Concerning Copyright and Navy Contracts?

Unless written approval of the contracting officer has been obtained, Navy contractors cannot deliver data, e.g., reports, software, or drawings, containing copyrighted data unless the contractor has obtained approval of the copyright owner for the Navy to use the copyrighted material.

Any work done under a Navy contract may be copyrighted by the contractor in the name of the contractor, if the correct contract clauses were included in the contract. However, the contractor must place the following notice on the contract deliverable:

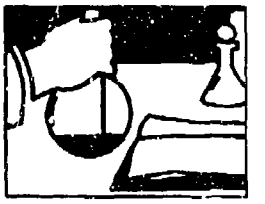
> This material may be reproduced by or for the United States government pursuant to the copyright license under clause 52.227-7013 (date).

What Is Fair Use of Copyrighted Material?

In certain situations, copyrighted material may be reproduced without permission of the copyright owner (figure 72). This is called "fair use." Included is reproduction of copies for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research.

To determine if your intended use falls under the fair use concept, consider the following factors:

> The purpose and character of your use of the material, i.e., is the material is to be used for an educational purpose or for a commercial purpose.
>
> The nature of the copyrighted work.
>
> The amount and importance of the portion used in relation to the entire copyrighted work as a whole.



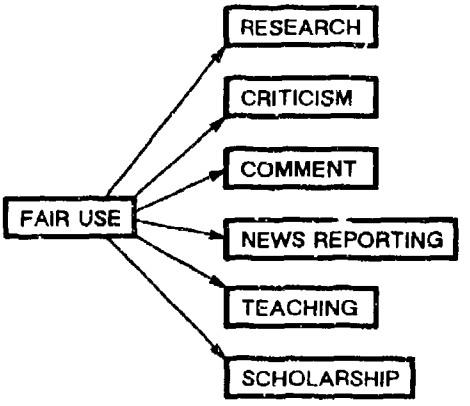


Figure 72. Uses of copyrighted material that do not require permission of copyright owner.

The effect of the use upon the potential market for or value of the copyrighted work.

Examples of fair use include "quotation of excerpts in a review or criticism for purposes of illustration or comment; quotation of short passages in a scholarly or technical work, for illustration or clarification of the author's observation...." (House of Representatives Report 94–1476, September 3, 1976).

If you believe that the inclusion of copyrighted material in a Navy publication falls within the fair use doctrine, contact your legal counsel before you request copyright permission from the owner.

PART 4
PROPRIETARY INFORMATION

What is proprietary information? How can I recognize proprietary information? How is it protected? Can I make additional copies? When can contractors mark contract deliverables as proprietary information?

What Is Proprietary Information?

Proprietary information is any kind of information that a private party owns and protects as secret to maintain an advantage over competitors. Generally, proprietary information must be identified as such by a proprietary legend accompanying the information.

Proprietary information may include written materials, drawings, and computer software. Examples are specifications, reports describing manufacturing processes, engineering drawings, and database programs (figure 73).

Proprietary information is not owned by the U.S. government and its use is limited.

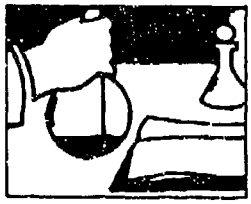
How Can Proprietary Information Be Recognized?

When a company wants to protect intellectual property, the information is marked with a proprietary legend. The DFARS-recognized proprietary legend reads, in part, as follows:

> Those portions of this technical data indicated as limited rights data shall not, without the written permission of the above contractor, be either (a) used, released or disclosed in whole or in part by the Government for manufacture....

Contractors use many versions of this legend, for example, "Proprietary Data," "Disclosure Restricted," "Limited Rights Data," "Do Not Copy," or "Trade Secret." Attention must be given to all versions of this legend (figure 74). Refer any information marked with this legend to your activity's legal counsel for review and investigation.

On publications the proprietary legend normally appears on the cover or title page and on individual pages that contain the proprietary information. On drawings the proprietary legend is usually found in the lower right corner, and on software it normally appears on the screen. However, other locations are sometimes used, and it is your responsibility to be alert for the legend.



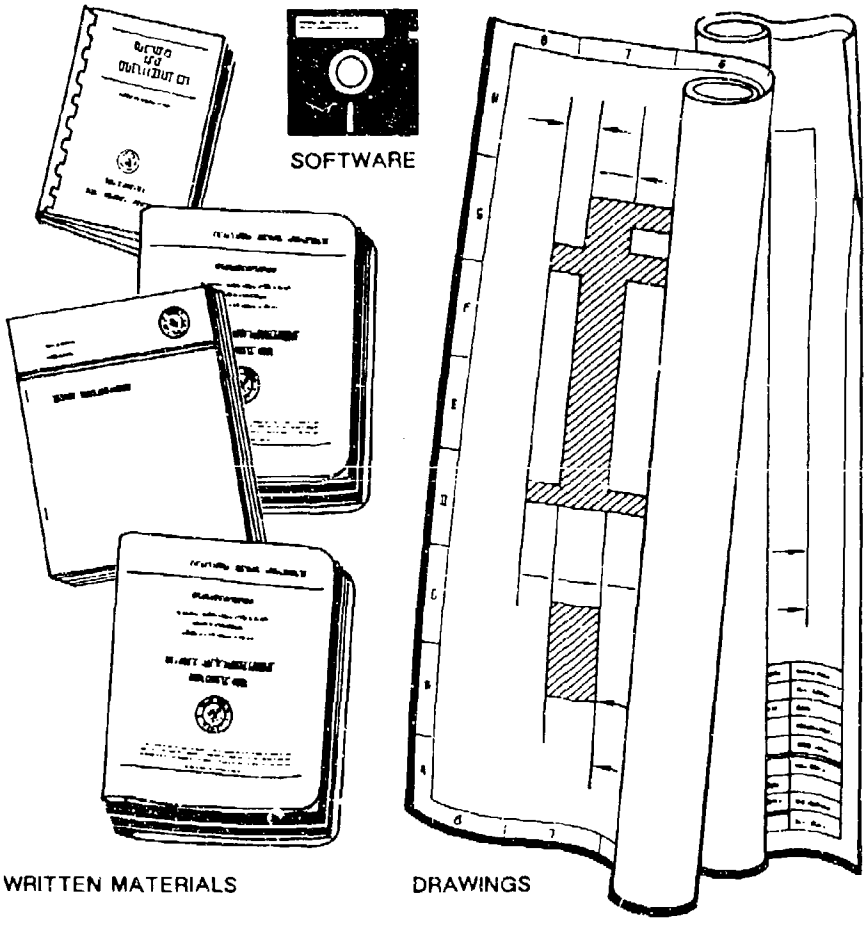


Figure 73. Types of information that can contain proprietary information.

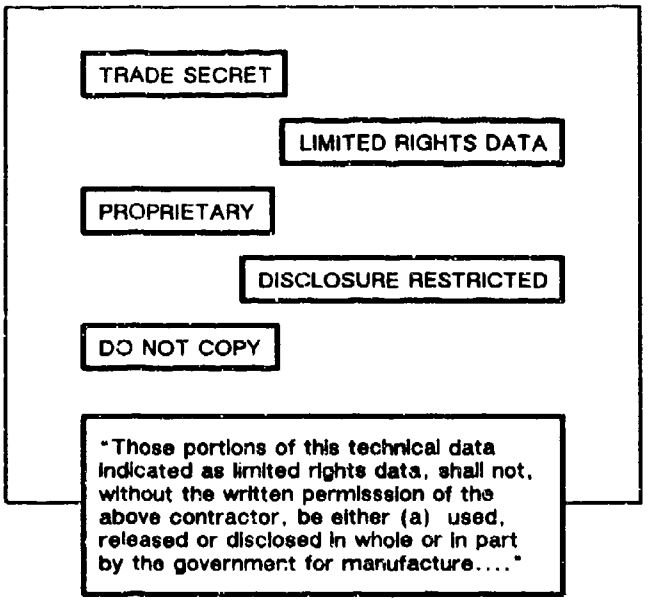


Figure 74. Examples of versions of proprietary legend.

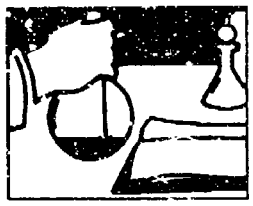
How Is Proprietary Information Obtained?

Proprietary information may be obtained by a Navy employee in several ways. Some of the more common ones (figure 75) include:

Unsolicited and Solicited Proposals: Unsolicited proposals are written offers to perform a proposed task or effort. They are initiated and submitted to the Navy by a company, without prior solicitation by the Navy with the objective of obtaining a contract. Solicited proposals are company responses to a Navy procurement action.

Briefings and Demonstrations: Disclosure may occur while prospective contractors are demonstrating equipment or during the preproposal stage of a technical briefing.

Requests Concerning Companies: Information submitted to you in response to a request for information about a company may contain proprietary information; examples include the company's activities, capabilities, performance data, or research plans.



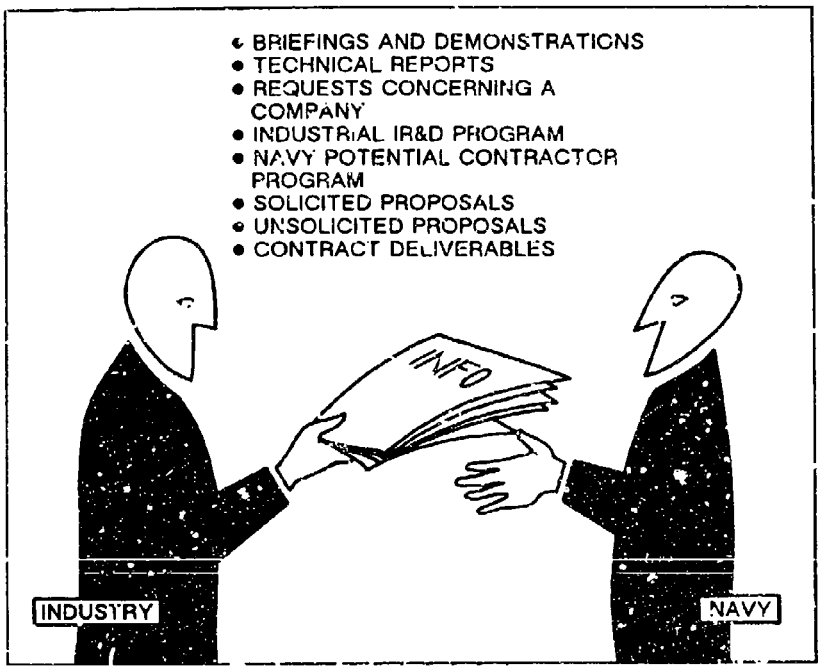


Figure 75. Common situations in which proprietary material may be encountered.

Independent Research and Development Program: Information generated under the industrial independent research and development (IR&D) program is often marked as proprietary. Note that the industrial IR&D program is performed at the contractor's own initiative and direction. Do not confuse it with the Navy's independent research and independent exploratory development (IR/IED) program.

Navy Potential Contractor Program (NPCP): Information generated under the Navy potential contractor program (NPCP) may be marked as proprietary information. (NPCP is the Navy's program for potential contractors and for contractors who are qualified in scientific and technical areas not covered by current contracts.)

Contract Deliverables: Information received as contract deliverables, including software, may be marked with a proprietary legend. (A contractor deliverable is information delivered according to a contract's DD Form 1423.)

Technical Reports: Proprietary information may be contained in reports or data sent to you by employees of companies for your use as background or reference material.

What Are the Procedures for Handling Proprietary Information?

The Navy's policy is to honor proprietary information and to comply with the terms of the proprietary legend. As a Navy employee, you are responsible for protecting proprietary information. Remember that wrongful disclosure of proprietary information can be punished as a criminal offense, and the violation can lead to a jail sentence of 1 year and/or a fine and removal from office (18 USC, section 1905).

As a Navy employee, you should not sign any personal agreement to keep proffered information confidential. Such an agreement could create a personal contract that makes you personally liable for any damages resulting from improper disclosures of such information. Contact your legal counsel for advice if you are asked to sign such an agreement.

WHO CAN HAVE ACCESS TO PROPRIETARY INFORMATION? Unclassified proprietary information is generally available to U.S. government employees. However, at times access may be more restrictive, even to the extent that you cannot disclose the information to other employees within your activity. Disclosure to anyone other than yourself may require written permission from the originating company.

The same rules apply for access to government-classified proprietary information, except that you must also verify the security clearance and need-to-know of the requester before disclosing the proprietary information.

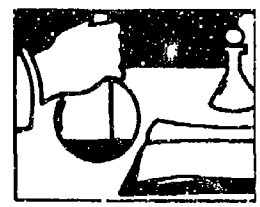
Contact your activity's legal counsel for procedures on obtaining this permission, if you have a question about disclosing proprietary information.

CAN PROPRIETARY INFORMATION BE DUPLICATED? In certain instances, proprietary information may not be duplicated by government employees. In these cases, written requests must be made to the originating company for permission to duplicate the material. Contact your activity's legal counsel for advice, if you want to duplicate proprietary information.

HOW IS PROPRIETARY INFORMATION PROTECTED? Unclassified proprietary information should be protected in the following manner:

During working hours, do not leave the information unattended in work areas accessible to those who are not authorized access to the information.

After working hours, place the material in locked containers, such as file cabinets and desk drawers.



Classified proprietary information should be protected by placing it in approved containers for confidential and secret material.

HOW CAN PROPRIETARY INFORMATION BE USED? Proprietary information may be used as a source of information by Navy scientists and engineers to keep up with current activities in their fields of expertise and to identify which companies are doing various types of technical work. However, this information cannot be used in proposals, publications, or presentations that will have wider disclosure than that allowed by the proprietary legend. For example, if the legend restricts the information to government employees, you cannot use it in a presentation that will include contractors.

CAN PROPRIETARY INFORMATION BE USED IN NAVY PUBLICATIONS? To include proprietary information in a Navy publication, you must obtain written permission from the owner. If you do obtain permission to use the information, both the primary and secondary distribution of the publication must be limited according to DoD policy. The primary method of control is through use of the appropriate distribution statement. Publications containing proprietary information must be marked with statement B (U.S. government agencies only), statement E (DoD components only), or statement F (further distribution only with approval of the controlling office), as well as the appropriate proprietary legend. (More information about these distribution statements appears in appendix A.)

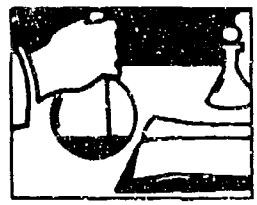
HOW IS PROPRIETARY INFORMATION IN A CONTRACT DELIVERABLE HANDLED? Your contractor might deliver a report, an engineering drawing, or a piece of software that is marked with a proprietary legend. As a Navy employee, part of your job is to bring this proprietary legend to the attention of your activity's legal counsel so that the proprietary claim can be investigated.

Contractors frequently mark information as proprietary when it is not actually proprietary. If the proprietary legend is not removed, the Navy is precluded from disclosing the information to other contractors and may find itself in a future sole-source procurement. Your legal counsel will investigate whether the intellectual property is truly proprietary. The contractor will be required to provide proof that the property was developed at private expense. If the proof is not satisfactory, the proprietary legend will be removed and you will be able to freely disclose the information.

If your legal counsel determines that the contractor developed this property at private expense, the Navy cannot disclose the property to anyone outside the government. As a Navy employee who has received the information, you are obligated to honor the proprietary claim and to protect the information from disclosure outside the government.

HOW IS PROPRIETARY INFORMATION IN SOLICITED AND UNSOLICITED PROPOSALS HANDLED? In a "request for proposal," the offerer may be required to submit a design or plan that the offerer does not want disclosed to the public or used by the Navy for any purpose other than evaluation. Navy employees cannot refuse to consider the proposal because the information submitted is marked with a proprietary legend. Navy policy is that those portions of the proposal marked as proprietary will only be used for evaluation and will not be disclosed outside the Navy without the written permission of the offerer.

Proprietary information contained in unsolicited proposals can be used for evaluation purposes only.



PART 5
REFERENCES

Code of Federal Regulations, Title 37, Patents, Trademarks, and Copyrights

"Copyright Basics and Consequences: What You Need to Know," Datapro Research Corporation, Datapro Reports on Electronic Publishing Systems, EP10-020-301, February 1987

Copyright Handbook, Second Edition, by Donald F. Johnston, R.R. Bowker Co., NY, 1982

Copyright Revision Act of 1976 (P. L. 94-553)

"Copyrights and Wrongs," by Diane Divoky, Publish!, pages 33-65, September/October 1986

"Fair Use and Copyright: An Unanswered Question," Editorial Experts, The Editorial Eye, Issue 80, October 1982

Federal Acquisition Regulations, Section 27, Patents, Data, and Copyrights, 1984 edition (as amended)

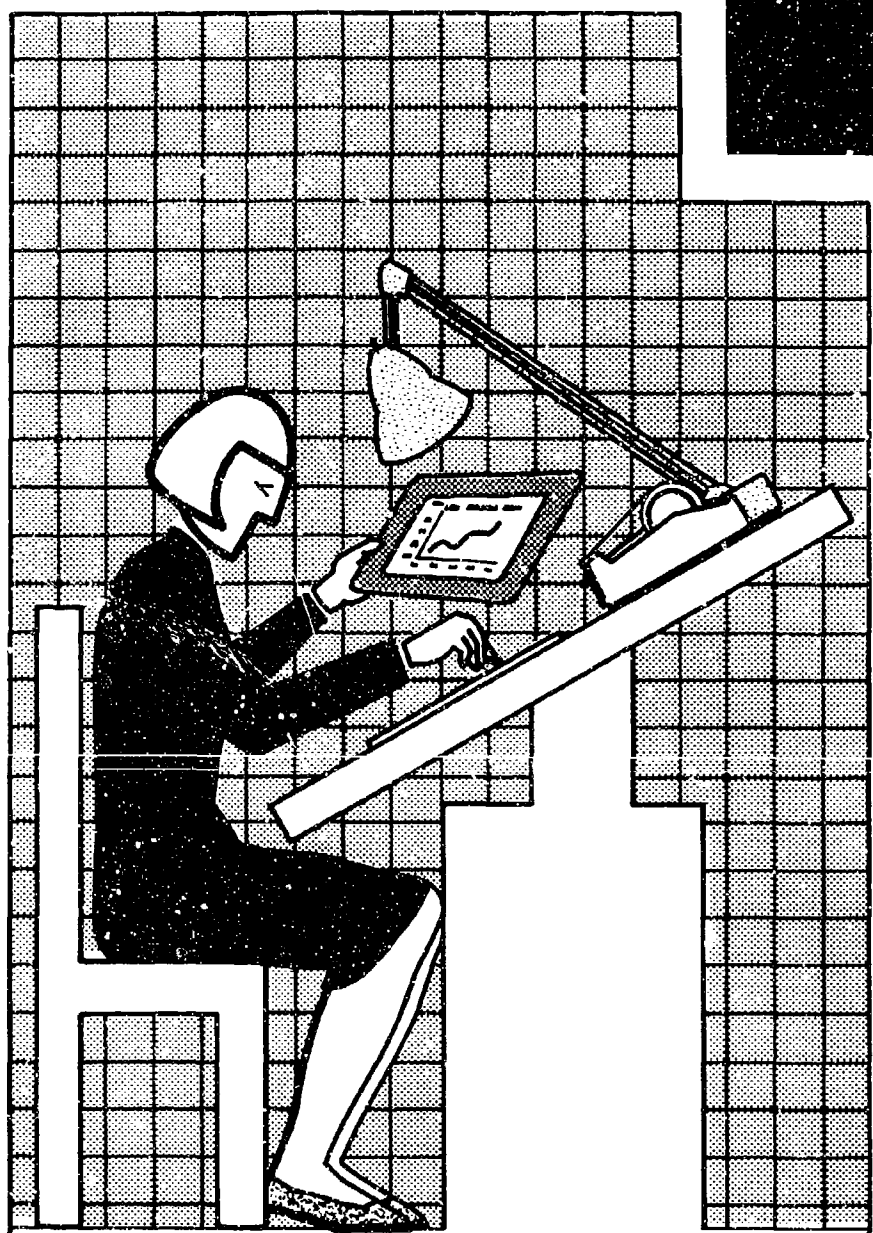
Navy Publishing and Printing Service Instruction 5870.1, Copyrighted Materials Used in DN Publications, 25 September 1979

Office of Naval Research Instruction 5210.2B, Research, Development, and Testing Work; Documentation Of, 20 August 1979

Office of Naval Research Instruction 5870.5, Permission to Use Copyrighted Materials in the Department of the Navy, 24 August 1979

Secretary of Navy Instruction 5870.6, Copyright in Wo ks of Authorship Prepared by Department of Navy Employees, 8 Sep ember 1988

V



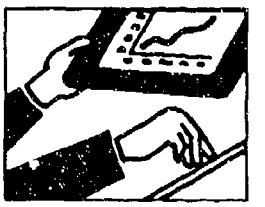
Navy Requirements and Procedures for Visual Information

CHAPTER V

Navy Requirements and Procedures for Visual Information

Illustrations

Table



PART 1
GENERAL GUIDELINES FOR CONTROL OF VISUAL INFORMATION

How does the Navy control visual information products and processes? What is the Navy's policy on presentations, audiovisual productions, and still photography? Can I do my own audiovisual and photographic work?

How Does the Navy Control Visual Information Products and Processes?

The Navy controls visual information through its Naval Imaging Program (NAVIMP). This information includes still and motion imagery, audio, graphic arts, visual aids, models, displays, visual presentation services, and supporting processes and resources. The purpose of NAVIMP is to centralize the management, functions, and support of the Navy's visual information audiovisual activities, as directed by Presidential management initiatives. Through central management at all levels, emphasis is placed on controlling the growth of facilities, equipment, manpower, products, productions, and services.

What Is the Navy's Management Structure for Visual Information?

The office of the Chief of Naval Operations has overall responsibility for visual information. The Assistant Vice Chief of Naval Operations (OP-09B) is the senior Navy representative for matters concerning visual information, and the Assistant for Visual Information (OP-09BG) provides advice and assistance for implementing plans and policies and for evaluating the effectiveness of the Navy's visual information program.

Each major Navy command has a visual information management office (VIMO) that is responsible for all visual information matters; it implements all visual information policy and procedures issued by the Chief of Naval Operations. This office also ensures that subordinate commands and activities have a VIMO to administer and manage visual information within the command.

To determine how your local organization manages visual information, contact your STI focal point, who will give you the name of your audiovisual manager.

How Does RDT&E Fit into the Navy's Program?

The NAVIMP exempts some support resources from many requirements. These exemptions include equipment, products, and services funded by RDT&E that are used solely to support programmed research mission activities. However, only your activity's audiovisual manager can determine whether your requirements fall under the RDT&E exemption. Be sure and contact your audiovisual manager for guidance when you require visual information products and services.

Who Can Perform Visual Information Services in the Navy?

NAVIMP allows professional production equipment for photographic, video, and sound-recording work to be used only by personnel who work in the visual information profession, e.g., photographers and visual information specialists. However, other Navy personnel can use specific nonprofessional equipment, e.g., 35-mm cameras with nondetachable lenses costing less than $500, if the equipment is used to support in-house functions whose end product is of short duration.

Because of this restriction and the Navy's restrictions on photographing and videotaping facilities and activities, most Navy activities require special badges to perform any photographic or audiovisual work.

If you want to perform any photographic or audiovisual work yourself, check with your activity's STI focal point or audiovisual manager who will then advise you of the required local procedures.

PART 2
PRESENTATIONS

What is the Navy's policy on presentations? Are distribution statements used with presentations? What about classification markings? Can a presentation be made into a publication and be sent to DTIC? What reviews are required for a presentation?

What Is the Navy's Policy Concerning Presentations?

The Navy encourages its employees to make professional presentations relating to their technical area of expertise, just as it encourages them to write reports and journal articles. For example, the Navy supports its scientists and engineers when they are asked to make presentations at professional symposia, project meetings, and local universities. These presentations not only increase your professional reputation as a scientist or engineer, but they also allow you to communicate directly with other scientists and engineers working in similar subject areas and, thus, help avoid duplication of work.

What Are the Navy's Requirements Concerning Presentations?

Presentations containing technical information are subject to many of the same requirements as publications. Examples of such presentations are those made at a symposium or at a meeting called by your sponsor or at a local university. These presentations can include the use of viewgraphs (overhead transparencies), slides, and posters (see figure 76).

HOW ARE DISTRIBUTION STATEMENTS AND WARNING NOTICES USED? Because technical information will be discussed during your presentation, you must use a distribution statement with both classified and unclassified presentations. The distribution statement will let your audience know if the information in your presentation is either available to the public or restricted, e.g., limited to DoD employees.

Formal distribution statements, which are discussed in detail in appendix A, are summarized below:

Approved for public release.

Limited to U.S. government agencies.

Limited to U.S. government agencies and U.S. contractors.

Limited to DoD components.

Limited to DoD components and DoD contractors.

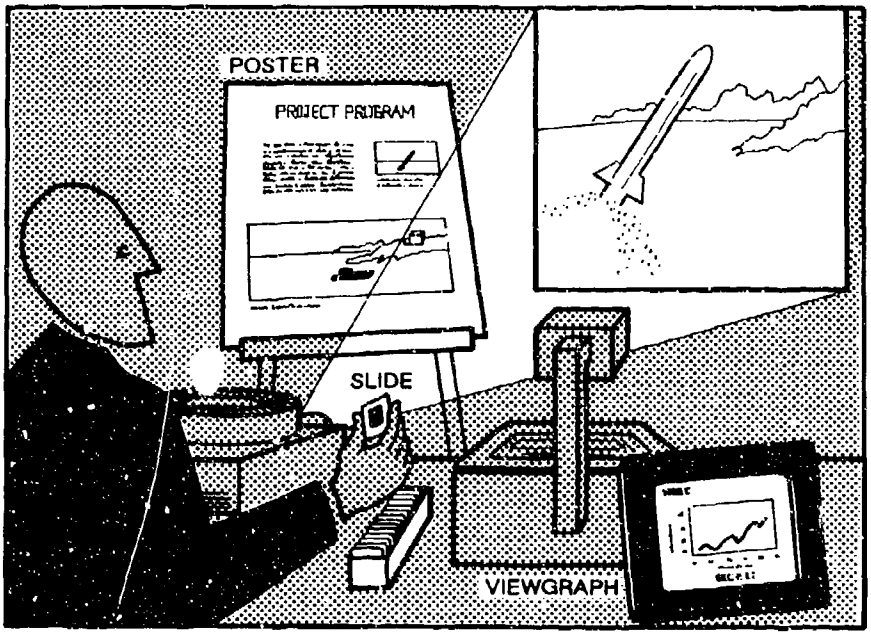


Figure 76. Examples of presentation aids.

Further dissemination only with approval of (controlling office).

Limited to U.S. government and private individuals or enterprises eligible to receive export-controlled information.

To determine which distribution statement applies to your presentation, consider the presentation as a whole. The distribution statement is placed on the first presentation aid (figure 77). Placing the distribution statement on individual presentation aids is not necessary, unless you remove a presentation aid from the set. In addition to the distribution statement, you must determine if the presentation includes information that has other distribution restrictions, for example, militarily critical technology. These warning notices must also be shown on your first presentation aid and, if required, on the individual presentation aid. If these markings are visible only when projected, you must repeat the distribution statement and warning notice on the frame or holder of the presentation aid.

If you are not using presentation aids, simply tell the audience what distribution restrictions, if any, apply to the material about to be discussed.

INTRODUCTION
TO SUPPORT
SERVICES

Approved for public release; distribution is unlimited.

Distribution authorized to DOD components only; critical technology; September 1991. Other requests must be referred to Chief of Naval Operations, Washington, DC 20350.

WARNING—This document contains technical data whose export is restricted by the Arms Export Control Act (Title 22, U.S.C., Sec. 2751, et seq.) or the Export Administration Act of 1979, as amended, Title 50 U.S.C., App. 2401 et seq. Violations of these export laws are subject to severe criminal penalties. Disseminate in accordance with provisions of DoD Directive 5230.25.

Figure 77. Opening presentation aids (viewgraphs) showing use of distribution statements.

HOW ARE CLASSIFIED PRESENTATIONS MARKED?

Presentations Marked as Publications. If you mark your presentation similarly to a bound publication, use the following guidelines:

Opening Presentation Aid: Your first presentation aid, e.g., the opening viewgraph (figure 78), is similar to a cover or title page of a publication and shows the following information:

Overall classification level of the entire presentation

Title of presentation

Office of origin

Date of origin

Warning notices or intelligence control markings (if required)

Classification source

Declassification date

Downgrading information (if used)

Distribution statement

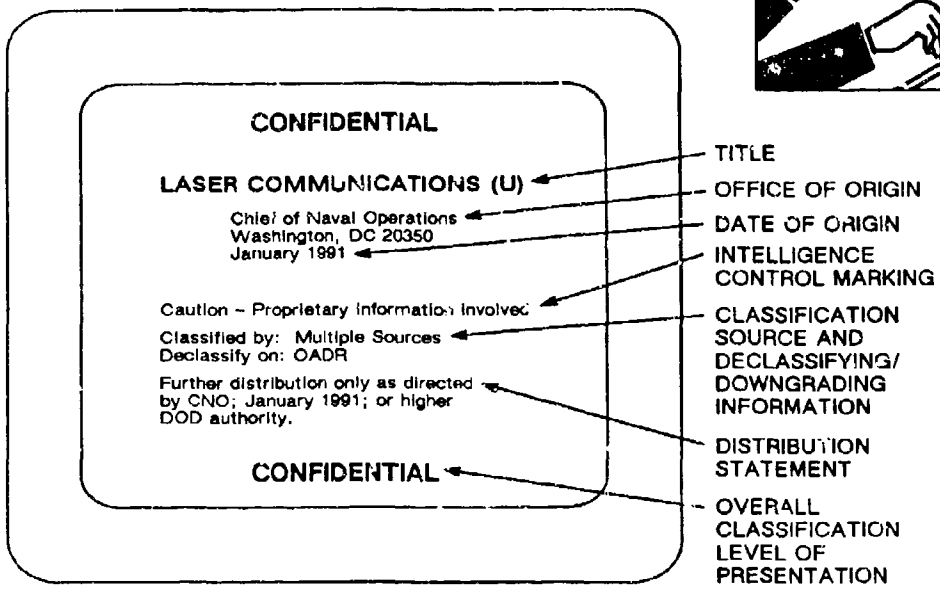
Image Area: The image area of individual presentation aids contains the following information:

The classification level of the individual presentation aid, i.e., secret, confidential, or unclassified.

The applicable portion markings, if you have included more than one image on a presentation aid, e.g., four charts on one viewgraph. (Portions of an unclassified presentation aid need not be marked.)

Short forms of intelligence control markings or warning notices, if required.

Frames and Holders: If the classification-level marking on the image area is too small to be seen unless the image is projected, you must also place the classification level on your frame or holder. (Use the classification of the individual presentation aid, not the overall classification level.)



(CLASSIFIED FOR TRAINING PURPOSES; OTHERWISE, UNCLASSIFIED)

Figure 78. Opening presentation aid for a classified presentation.

Individual Presentation Aids. If you mark each presentation aid as a single component (figure 79), use the following guidelines:

Image Area: Include the classification level of the presentation aid; applicable portion markings; intelligence control markings or warning notices, if required; and the distribution statement. The associated classification markings[1] should also be placed on the image area. However, if this is not possible, place the associated markings on the frame or holder of the presentation aid or in accompanying documentation.[2]

Frame or Holder: If the marking for the classification level on the image area is too small to be seen unless the image is projected, you must also place the classification level on the frame or holder of the presentation aid.

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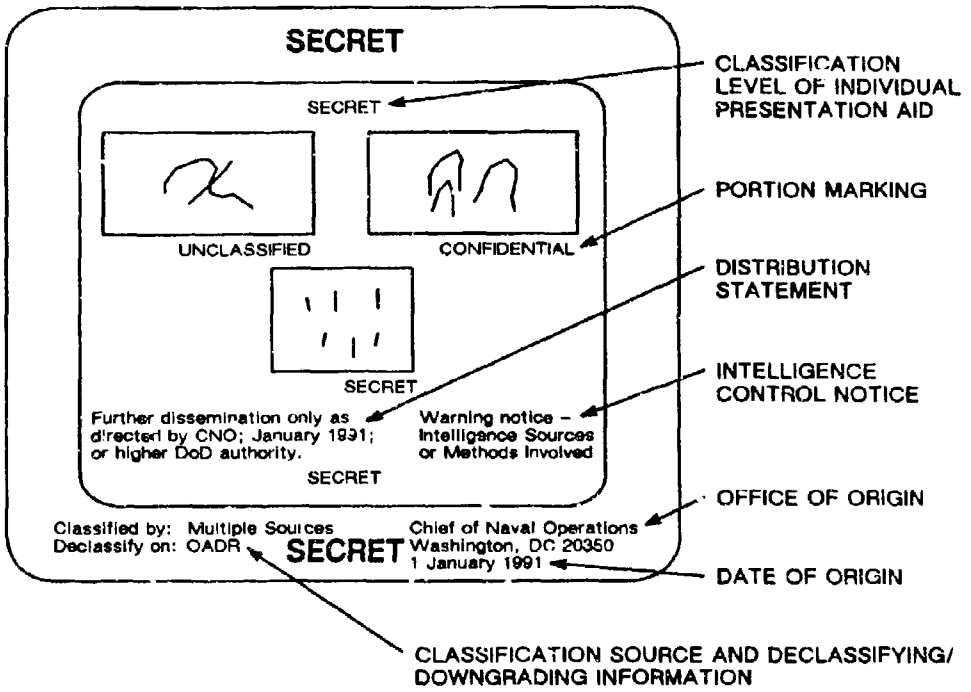
[1] Associated classification markings include the classification source, declassification date, date of origin, office of origin, and downgrading information.

[2] For example, because slides are small, the associated classification markings can be placed on an envelope that houses the slide.



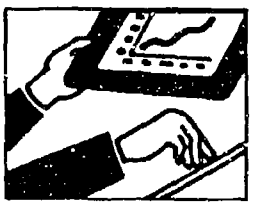
(CLASSIFIED FOR TRAINING PURPOSES; OTHERWISE, UNCLASSIFIED)

Figure 79. Image area and frame of an individual classified presentation aid.

WHAT REVIEW PROCEDURES ARE REQUIRED? Each activity has different procedures for reviewing presentations, e.g., who must review them and when they must be reviewed. However, all presentations that will be made to the public must be approved either by an office within your activity that has the authority to release information to the public or by your headquarters office.

CAN PRESENTATION AIDS BE PURCHASED ON CONTRACTS? The purchase of presentation aids, i.e., viewgraphs, slides, and posters, is subject to restrictions imposed by the Chief of Naval Operations through the Naval Imaging Program (NAVIMP). All approval requests for purchasing presentation aids must be brought to your audiovisual manager or STI focal point.

If permission is granted to purchase the presentation aids, be sure to specify in the contract that you want all electronic and photographic media and camera-ready art as a deliverable.



Can a Presentation Be Converted into a Publication?

To ensure that the information in your presentation is available to qualified requesters, you need to convert your presentation into a publication that is sent to the Defense Technical Information Center. This conversion is needed if the information in your presentation would be useful to someone who was not at your presentation or if you want the presentation to be officially recorded and documented.

To make this conversion, perform the following steps:

Compile hard copies of all presentation aids, for example, the viewgraphs.

Add any explanatory text that is required.

Follow your local activity's procedures for reviewing and processing publications.

PART 3
AUDIOVISUAL SERVICES[1]

When should audiovisual products be used? Can an audiovisual report substitute for a written publication? Are distribution statements and classification markings used? What is the approval process? How are audiovisual services and equipment ordered on contract?

What Are the Approval Procedures for Audiovisual Work?

WHAT APPROVALS ARE REQUIRED FOR VISUAL INFORMATION TECHNICAL REPORTS? A visual information technical report (VITR) is defined as "...the assembly of medical, reconnaissance, surveillance, RDT&E or other technical documentation imagery to report on a mission-related event." A VITR requires approval only by your activity's audiovisual manager. (See table 9.)

VITRs have specific guidelines concerning their production and use. For example,

The production techniques are restricted.

Distribution is limited to five copies.

The production life expectancy is usually less than 12 months.

Voice-over narration can be used to describe the events taking place.

Simple titles, without the addition of effects, can be used.

The addition of other imagery, sound, or optical effects or other production values classifies the VITR as an audiovisual production (category 1, 2, or 3, depending upon the intended use).

WHAT APPROVALS ARE REQUIRED FOR AN AUDIOVISUAL PRODUCTION? Category 1 productions, which support the needs of your headquarters office or your local activity, require the approval of your headquarters office. Category 2 productions, which support Navy-wide requirements, require the approval of the Chief of Naval Operations. Category 3 productions, which support DoD and joint interest programs, require DoD approval. (See table 9.)

Form 1995-1 (figure 80) is used to obtain these approvals. Your activity's STI focal point or audiovisual manager will either prepare, or assist you in preparing, the paperwork necessary to obtain these approvals.

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[1] The term "audiovisual," as used in this handbook, defines a stand-alone presentation that combines sound with visual media. It should not be confused with the current definition in use by DoD to designate a specialized subject-matter category.

Table 9. Approvals required for audiovisual work.

AV Work	Approving Office			
	Local AV Manager	Headquarters Office	CNO	DoD
Visual Information Technical Report	X			
Category 1 AV Production	X	X		
Category 2 AV Production	X	X	X	
Category 3 AV Production	X	X	X	X

When Should VITRs and Audiovisual Productions Be Used?

VITRs and audiovisual productions can be used to document the work, concepts, and facilities of your organization (figure 81). For example, they can be used to

Demonstrate in-situ testing of equipment and weapon systems.

Present proposed programs and systems concepts.

Show the results of computer simulations.

Provide a substitute for a facility tour.

Demonstrate the conceptual use of hardware, e.g., the destruction of mines by a piece of fleet equipment.

Provide technical lectures.

Function as RDT&E development and progress reports.

Can a VITR or Audiovisual Production Be Used in Place of a Publication?

VITRs and audiovisual productions can be used as substitutes for publications or in conjunction with them. The VITR or production and a DTIC Form 503 (figure 82) are sent to the Defense Technical Information Center (DTIC). These two items—the VITR report or production and the form—thus satisfy the Navy's requirements for reporting results of Navy-sponsored work to DTIC.

To send a VITR or audiovisual production to DTIC, contact your activity's STI focal point.

VISUAL INFORMATION PRODUCTION REQUEST, EVALUATION AND APPROVAL

REPORT CONTROL SYMBOL DD-PA(AR)1381

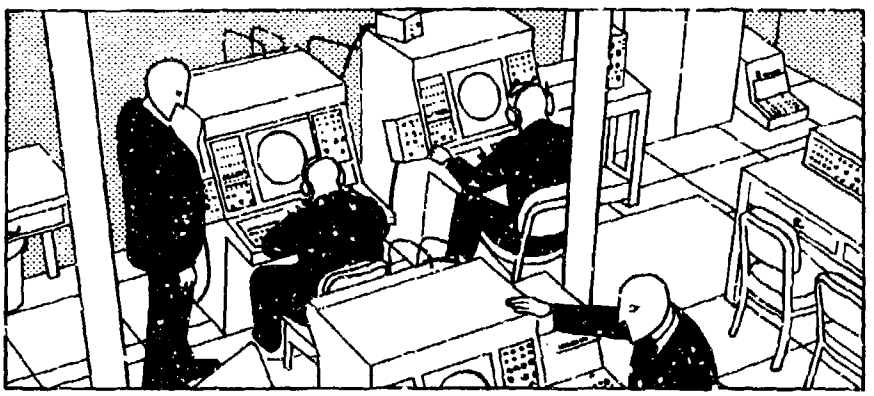
SECTION A. ORIGINAL CUSTOMER REQUEST FOR VISUAL INFORMATION (VI)

1. DATE OF REQUEST *(YYMMDD)*
2. DATE REQUIRED *(YYMMDD)*
3. TYPE OF REQUEST *(X a, b, or c, and complete as applicable)*
   - a. NEW OR REVISED PRODUCTION
     - (1) Script Attached *(X one)* ☐ Yes ☐ No
     - (2) Suggested Location
       - (a) Script
       - (b) Photography
     - (3) Revision of PIN/PAN
   - b. ADOPTION OF GOVERNMENT PRODUCTION
     - (1) Source *(Name, Address, & Phone Number)*
     - (2) Location of Master Materials
     - (3) PIN/PAN or Other Product Number
   - c. COMMERCIAL ACQUISITION *(Existing off the shelf productions only)*
     - (1) Vendor's Mailing Address & Phone Number
     - (2) Sole Source Justification Attached *(X one)* ☐ Yes ☐ No
     - (3) Copyright Release Attached *(X one)* ☐ Yes ☐ No
     - (4) Estimated Cost Per Copy $
     - (5) Commercial Identification Number
4. TITLE
5. SERIES TITLE AND PART IDENTIFICATION
6. PROPOSED SECURITY CLASSIFICATION *(X one)*
   ☐ a. Unclassified ☐ b. Confidential ☐ c. Secret ☐ d. Top Secret
7. PRODUCTION OBJECTIVE *(X one)*
   ☐ a. Education and Training ☐ b. Internal Information ☐ c. Public Information ☐ d. Recruiting ☐ e. Research, Development, Test and Evaluation ☐ f. Intelligence, Reconnaissance, Criminal Investigation and Communications Security ☐ g. Combat Readiness ☐ h. Installation Support ☐ i. Medical and Dental
8. OBJECTIVE AND KEY POINTS
9. JUSTIFICATION
10. TARGET AUDIENCE
11. DISTRIBUTION PLAN
12. FUNDING
    ☐ a. Unfunded ☐ b. Funded, amount available $________
    c. Program Element(s) *(List)*
13. ESTIMATED YEAR OF OBSOLESCENCE
14. ESTIMATED RUNNING TIME
15. REQUESTER
    - a. TYPED NAME *(Last, First, MI)*
    - b. RANK/GRADE
    - c. ORG NAME OR SYMBOL
    - d. TITLE
    - e. PHONE NUMBERS *(Autovon & Commercial)*

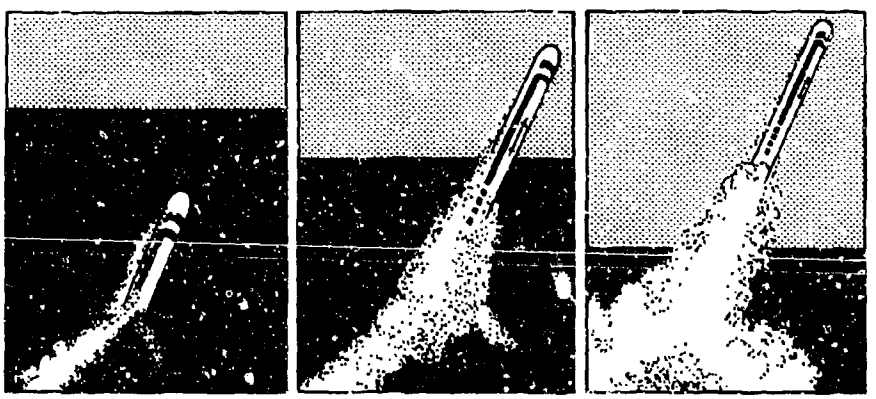
DD Form 1995-1, AUG 87 — *Previous editions are obsolete* [illegible] — Page 1 of 2 Pages

Figure 80. DD Form 1995-1 used to obtain approval for audiovisual production.

FACILITY TOUR



AT-SEA TESTING



COMPUTER SIMULATION

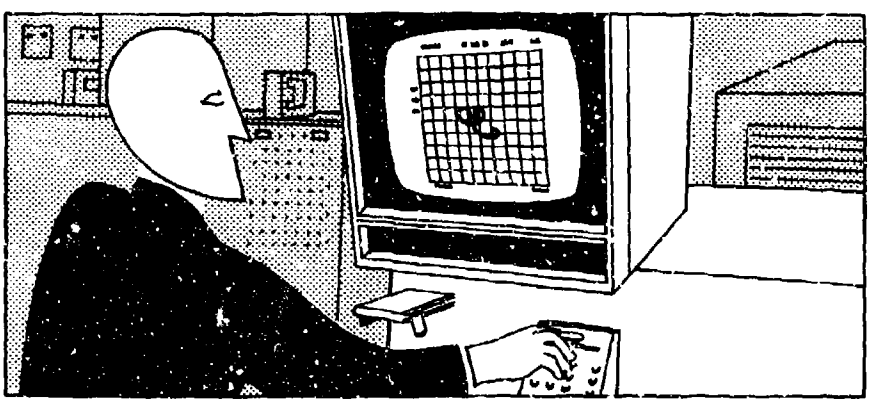
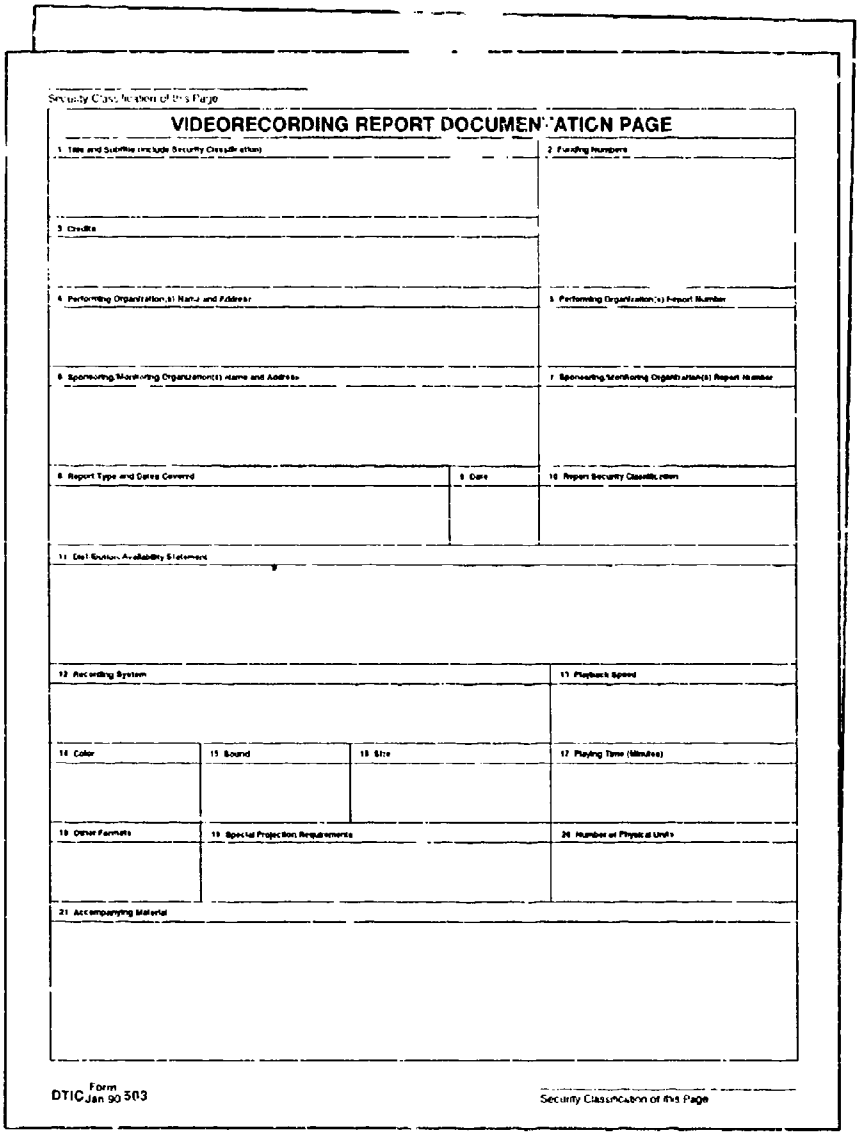


Figure 81. Uses of audiovisual documentation.

3. Audiovisual Services



Security Classification of this Page

VIDEORECORDING REPORT DOCUMENTATION PAGE

1 Title and Subtitle (include Security Classification)

2 Funding Numbers

3 Credits

4 Performing Organization(s) Name and Address

5 Performing Organization(s) Report Number

6 Sponsoring/Monitoring Organization(s) Name and Address

7 Sponsoring/Monitoring Organization(s) Report Number

8 Report Type and Dates Covered

9 Date

10 Report Security Classification

11 Distribution Availability Statement

12 Recording System

13 Playback Speed

14 Color

15 Sound

16 Size

17 Playing Time (Minutes)

18 Other Formats

19 Special Projection Requirements

20 Number of Physical Units

21 Accompanying Material

DTIC Form Jan 90 503

Security Classification of this Page

Figure 82. DTIC Form 503.

Are Distribution Statements and Warning Notices Used with VITRs and Audiovisual Productions?

All VITRs and audiovisual productions (classified and unclassified) that involve technical information must be marked with a distribution statement and, if required, warning notices, e.g., the caveat for militarily critical technology.

The correct distribution statement depends upon the intended use of the product as well as upon the technical information conveyed. The following statements can be used:

Approved for public release.

Limited to U.S. government agencies.

Limited to U.S. government agencies and U.S. contractors.

Limited to DoD components.

Limited to DoD components and DoD contractors.

Further dissemination only with approval of (controlling office).

Limited to U.S. government and private individuals or enterprises eligible to receive export-controlled information.

See appendix A for details on the use of these statements.

In addition to the distribution statement, you must determine if you have included information that has other distribution restrictions, for example, militarily critical technology or proprietary data. These warning notices and the distribution statement must be shown on the opening and closing frames of your production. All markings must be visible when projected. Reels and cassettes also must be marked with the appropriate distribution statements and warning notices and kept in containers that are also marked. (See figure 83.)

Remember that all VITRs or audiovisual productions that will be made available to the public must be approved either by an office within your activity that has the authority to release information to the public or by your headquarters office.

How Are Classified VITRs and Audiovisual Productions Marked?

The opening frame must be marked with the following information:

Overall classification level of the production

Title of production

Office of origin

Date of origin

Warning notices or intelligence control markings (if required)

Classification source

Declassification date

Downgrading information (if used)

Distribution statement

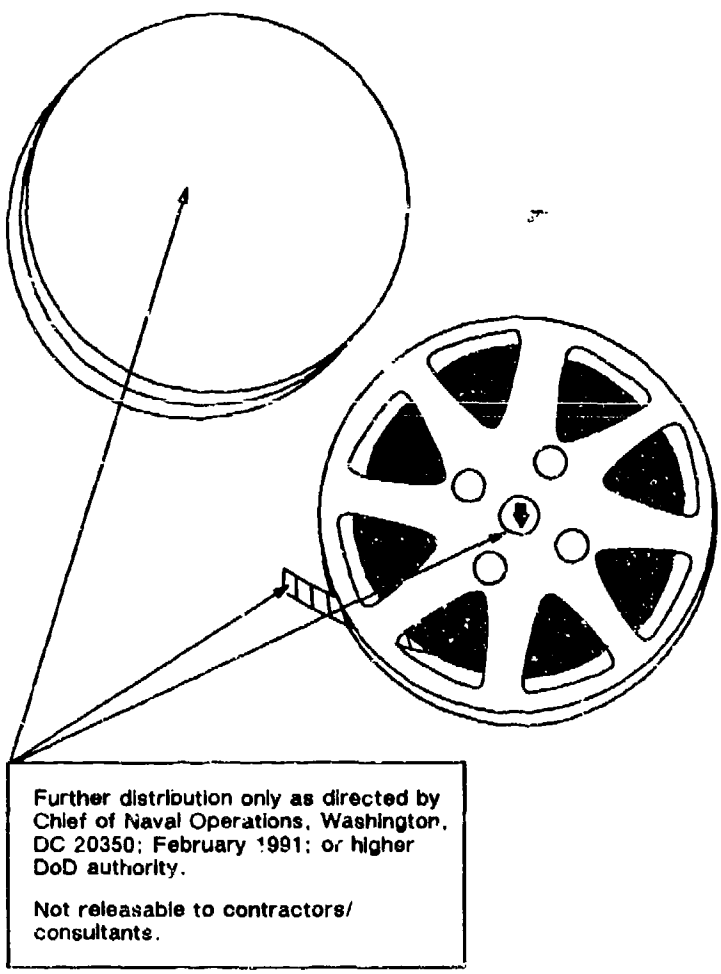
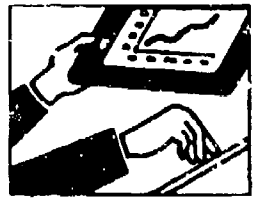


Figure 83. Distribution statement and warning notice on audiovisual product.



The closing frames carry the classification level of the production, the warning notices, and the distribution statement. The canister is marked with the classification level of the production, warning notices (if required), and the distribution statement. (See figure 84.)

Can Audiovisual Services or Equipment Be Ordered on Contract?

Because services and equipment used in audiovisual work are controlled under NAVIMP, most Navy activities require that any stub requisition or statement-of-work that orders audiovisual services and equipment, e.g., film or videotape equipment, be reviewed and approved by your audiovisual manager.

The purposes of this review are to

- Ensure compliance with DoD and Navy requirements concerning audiovisual productions and equipment.
- Ensure that the equipment does not already exist at your activity.
- Determine the best method of providing the requested service, i.e., negotiate a new contract, use an existing service contract, or use existing Navy capabilities

If you are allowed to order an audiovisual production on contract, be sure to specify the delivery of all production elements needed to reproduce the audiovisual production, e.g., negatives, positives, video tapes, and magnetic sound tracks.

Your STI focal point and audiovisual manager will provide information on your local review process.

Can Commercial Off-the-Shelf Visual Information Productions Be Rented or Purchased?

Commanding officers and civilian heads of local activities may approve the rental or lease of a commercial off-the-shelf production to support a specific and temporary local requirement. However, the procurement action cannot

- Exceed $300 in fees.
- Exceed 90 days of usage.
- Contain an "option to buy" clause.

Requests that exceed these thresholds must be approved by your headquarters visual information management office.

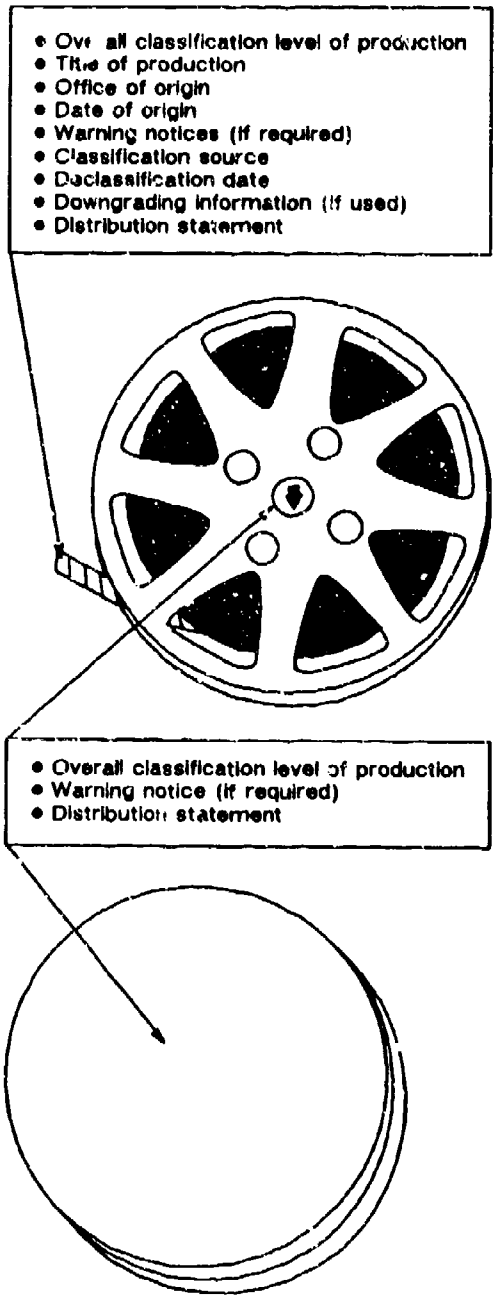
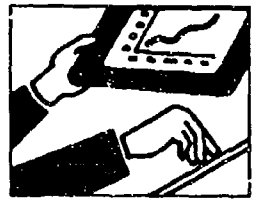


Figure 84. Classification markings on an audiovisual product.



The authority for purchase of off-the-shelf visual information productions from commercial sources is as follows:

Your headquarters visual information management office for category 1 productions, if the request does not exceed 15 copies per title or cost more than $5000 per title or have joint-interest applications.[2]

The Chief of Naval Operations (OP-09BG) for all other purchases.

[2] Visual information management offices may approve the local purchase of one copy of any category 1, 2, or 3 commercial production and concurrently submit the title for joint-interest review.

PART 4
PHOTOGRAPHIC SERVICES

What photographic services are available to Navy scientists and engineers? How are photographs marked to show classification? What are the Navy's policies for distribution statements on photographs? Can I buy my own photographic equipment?

What Photographic Services Are Available?

Many Navy activities provide complete black-and-white and color photographic services through a centralized photographic facility. Typical services include the following:

Field photography (air, surface, underwater, laboratory, and test facilities).

Stop-action, microphotography, and macrophotography.

Studio and *in situ* photography of hardware.

Photographic support for audiovisual and graphic presentations.

Portrait and passport photography.

Most facilities also develop photographic systems and technology to meet any unique requirements generated by RDT&E work.

When Should Photography Be Used?

Photography may be used to meet many of the requirements for visual documentation of scientific and technical work. For example:

Graphics in publications.

Camera-ready prints for journal articles or symposium proceedings.

Historical documentation of a project's evolution, e.g., conceptual illustrations, prototype hardware, first test event, and group employees.

How Do I Obtain Photographic Services?

Contact your activity's STI focal point for information on how your activity provides photographic services.

What Distribution Statements Are Used with Photographs?

All Navy photographs are stamped with the following statement:

> Official U.S. Navy photograph. Not for publication unless officially released. (Name and address of controlling organization)

If you want to release a photograph that portrays scientific or technical subjects or use it in a publication or as part of a presentation, you must use one of the following distribution statements (see appendix A):

> Approved for public release.
>
> Limited to U.S. government agencies.
>
> Limited to U.S. government agencies and U.S. contractors.
>
> Limited to DoD components.
>
> Limited to DoD components and DoD contractors.
>
> Further dissemination only with approval of (controlling office).
>
> Limited to U.S. government and private individuals or enterprises eligible to receive export-controlled information.

In addition to the distribution statement, you must determine if the photograph portrays information that has other distribution restrictions, for example, militarily critical technology or proprietary data.

The distribution statement and the warning notice must be placed on both negatives and positives. If possible, the statements are placed on the face side of all prints and reproductions; if this is not possible, the statements can be either stamped or affixed on the reverse side of the photograph (see figure 85). Roll negatives and positives are marked at the beginning and end of the strip.

Distribution authorized to DoD components only; critical technology; October 1991. Other requests shall be referred to Chief of Naval Operations, Washington, DC 20350

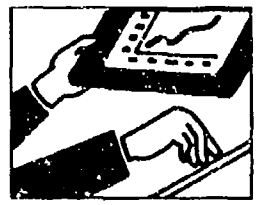
WARNING— This document contains technical data whose export is restricted by the Arms Export Control Act (Title 22, U.S.C., Sec. 2751, et seq.) or the Export Administration Act of 1979, as amended, Title 50 U.S.C., App. 2401 et seq. Violations of these export laws are subject to severe criminal penalties. Disseminate in accordance with provisions of DoD Directive 5230.25.

APRIL 18, 1991
CNO
Washington, DC 20350

OR

(BACK OF PHOTO)

Figure 85. Placement of distribution statement and export-control notice on photograph.



How Are Classified Photographs Marked?

The front of all prints (top and bottom) is marked with the overall classification level of the photograph. If possible, also place the associated classification markings, i.e.,

Classification source

Declassification information

Downgrading information (if used)

Warning notices (if used)

Intelligence control markings (if used)

on the front of the print, i.e., at the bottom of the print. When it is not practical to place the associated classification markings on the front of the photograph, place them on the back of the photograph. (See figure 86.)

Can Photographic Services or Equipment Be Bought on Contract?

Services and equipment used in photographic work are controlled under NAVIMP. Because of this, most Navy activities require that your audiovisual manager review and approve any stub requisition or statement-of-work that orders photographic services and equipment.

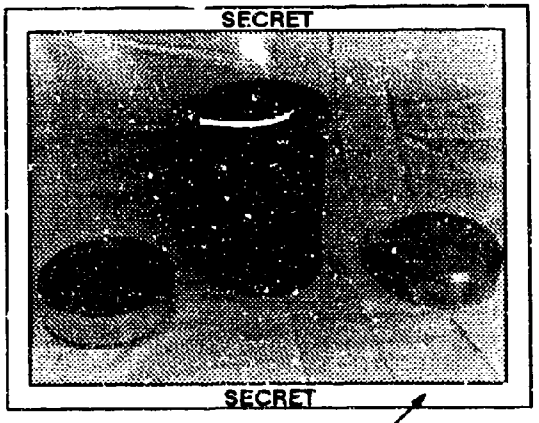
The purposes of this review are to

Ensure compliance with DoD and Navy requirements concerning photographic work.

Ensure that the equipment does not already exist at your activity.

Determine the best method of providing the required service, i.e., negotiate a new contract, use an existing service contract, or use existing Navy capabilities.

If you are allowed to order photographic services or equipment, be sure to specify that the negatives as well as the prints be delivered.



Distribution authorized to DoD components only; direct military support; January 1991. Other requests shall be referred to Chief of Naval Operations, Washington, DC 20350

SECRET

BACK OF PHOTOGRAPH

CLASSIFIED BY: OPNAVINST 5510.1G
DECLASSIFY ON: 31 Dec 1998

SECRET

Mark front and back of photograph with the overall classification level. The associated markings can be on the front or back of the photograph. Markings may be stamped, written, or affixed by pressure tape-label.

(CLASSIFIED FOR TRAINING PURPOSES; OTHERWISE, UNCLASSIFIED)

Figure 86. Marking classified photographs.

PART 5
REFERENCES

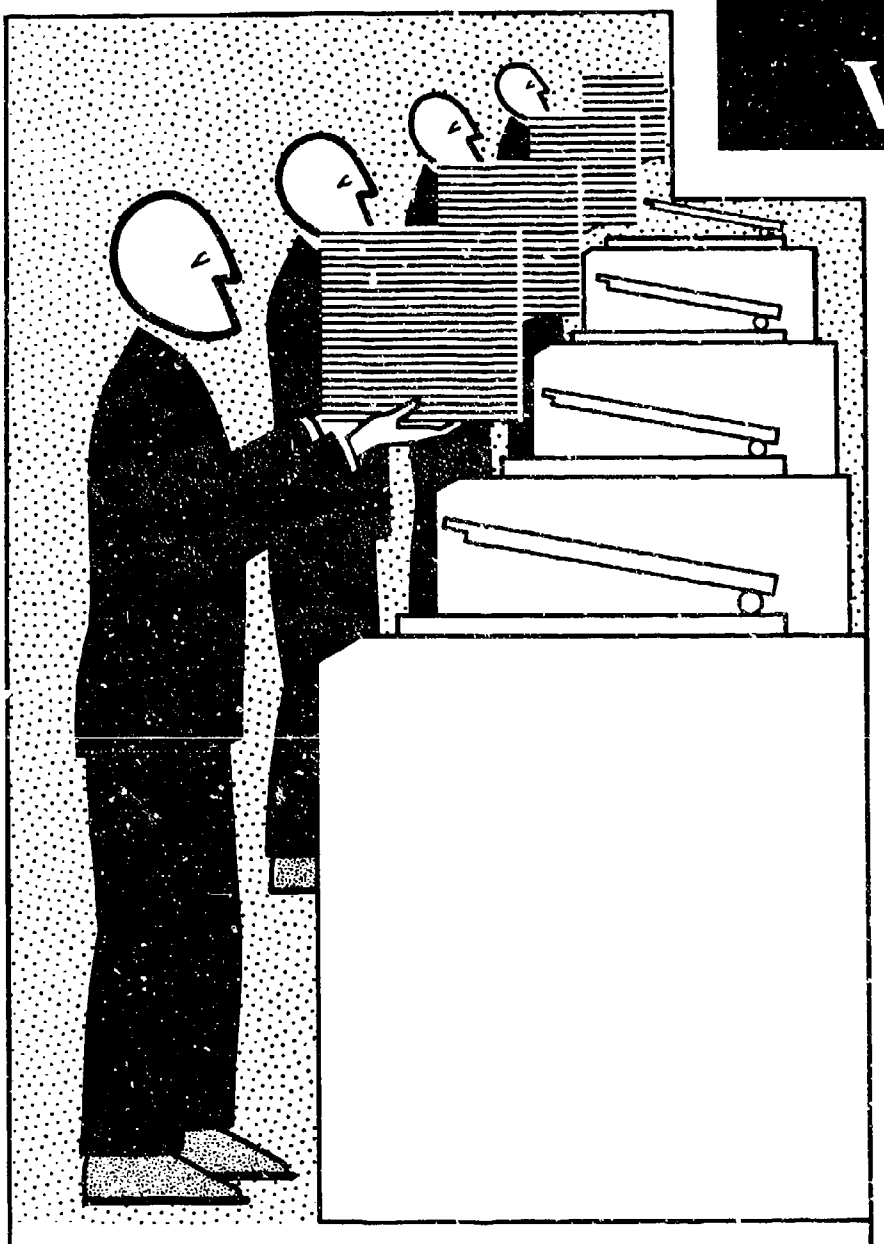
Chief of Naval Operations Instruction 5290.1A, Naval Imaging Program (NAVIMP) Policy and Responsibilities, 24 February 1987

National Archives and Records Administration Bulletin 88–5, Data Created or Maintained for the Government by Contractors, 20 May 1988

Office of Management and Budget, Bulletin 81–16, Elimination of Wasteful Spending on Government Periodicals, Pamphlets, and Audiovisual Products, April 1981

Secretary of Navy Instruction 5600.20, Graphic Design Standards, 13 January 1984

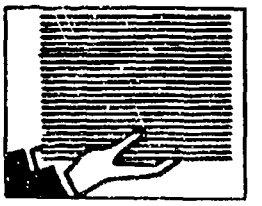
VI



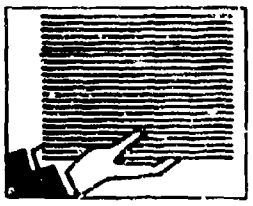
The Navy's Printing Program

CHAPTER VI

The Navy's Printing Program



Illustrations



PART 1

PRINTING, DUPLICATING, AND MICROPUBLISHING SERVICES

Who provides the Navy's printing services? How do I get printing done? What is duplicating and when is it used? What are the procedures for micrographics work for archival work? Are office copiers controlled? How do I pay for printing services?

How Does the Navy Provide Printing Services?

All printing, duplicating, and micropublishing services are provided to Navy employees through the Navy Publishing and Printing Service (NPPS). Except in cases involving archival work and review copies of publications, Navy activities are not authorized to procure printing, duplicating, and micropublishing services.

What Types of Services Does NPPS Provide?

WHAT PRINTING AND DUPLICATION SERVICES ARE AVAILABLE? NPPS provides Navy personnel with the following printing and duplication (reprographic) services:

> **Printing:** Composition,[1] platemaking, presswork, binding, and electronic page printing (laser printing[2]). The printing process is used when a publication is printed in large quantities and/or requires high quality reproduction.
>
> **Duplication (Reprographics):** Duplicating (offset, spirit, electrostatic, etc.), copying, reproduction (diazo, large-sheet capability electrostatic process for engineering drawings, etc.), and similar types of photocopying processes. Duplicating is generally limited to no more than 5000 production units of one page or 25,000 production units in the aggregate.

If NPPS cannot provide the required printing or duplicating service, NPPS contracts for these services. NPPS buys all services, except printing, directly from the contractor. Any printing that NPPS cannot provide is sent by NPPS to a branch office of the Government Printing Office (GPO) for purchase. When planning your publications, remember that any unusual printing requirements that NPPS must purchase through GPO will increase your costs and turnaround time.

---

[1] Composition is the setting of type by hot-metal casting, strike-on, phototypesetting, or electronic character generating devices for the purpose of producing camera-ready copy, negatives, plates, or images to be used in the production of printing, reprographics, or microform.

[2] Electronic laser printing service is the conversion of magnetic data to paper copies.

WHAT MICROPUBLISHING SERVICES ARE AVAILABLE? Micropublishing includes all production aspects of microfilm, microfiche, and aperture cards (both roll and sheet format) that are produced by any filming method, including computer-output microfilm (COM) units.

Microform production for general distribution is considered as "micropublishing" and requires the approval of NPPS. However, microfilming of administrative records, accounting reports, or project files is categorized as administrative or archival microform and does not require NPPS approval.

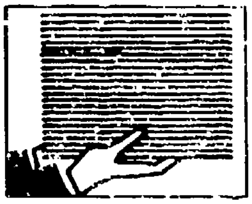
How Are Office Copiers Ordered?

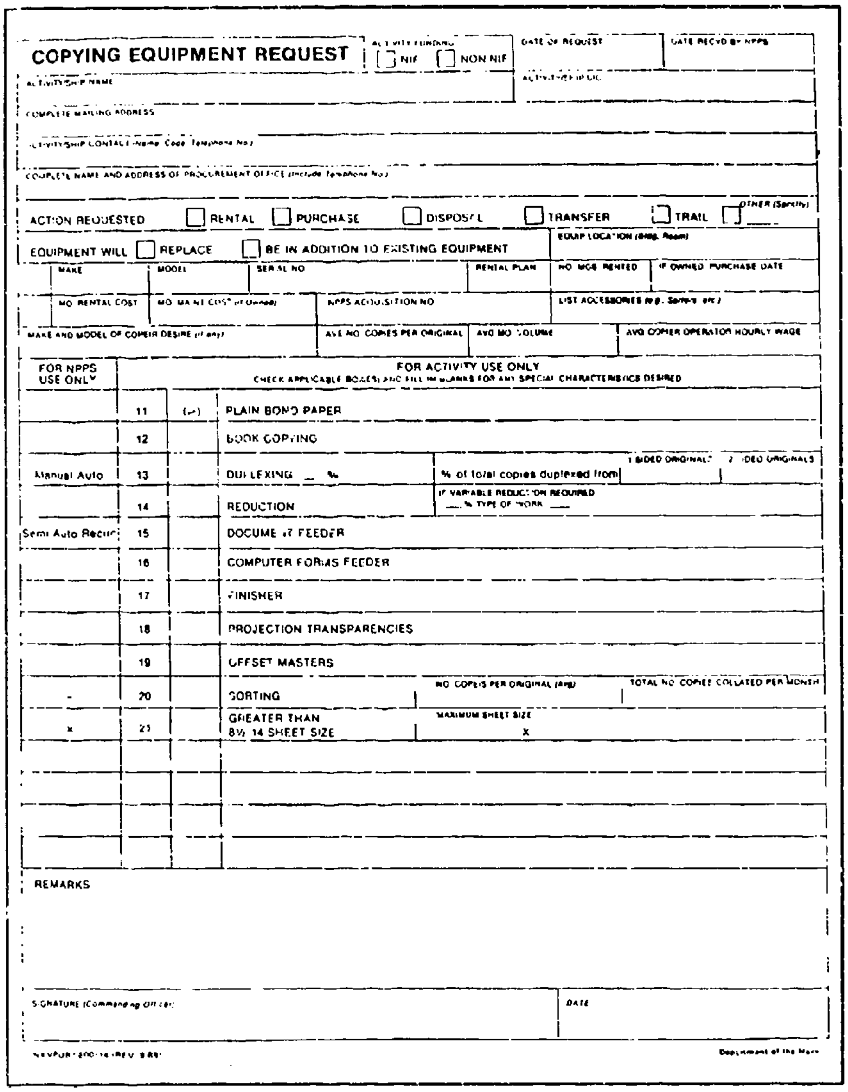
Since office, or self-service, copiers are considered duplicating equipment, all requests for office copiers must be approved by NPPS. This approval is obtained by submitting an appropriate form to NPPS, i.e., either NAVPUB Form 5600/14 for copying equipment (figure 87) or NAVPUB Form 5600/15 for duplicating and support equipment (figure 88). Your local STI focal point will help you obtain this approval.

Rather than obtain approval for individual copiers, many Navy activities have started using GSA contracts for ordering office copiers. NPPS administers these contracts for the Navy. If your activity is using such a contract, your STI focal point will provide procedures on its use.

How Do I Obtain NPPS' Services?

Your local STI focal point will provide you with information on your activity's procedures for obtaining NPPS' services. However, since NPPS operates on a cost-reimbursable basis, you must pay for all NPPS services, e.g., printing, duplicating, micropublishing, and binding. NPPS is reimbursed for services through use of a DD Form 282 (figure 89). In addition, your local NPPS facility will have a local form for ordering services. The type of form used depends on the work to be completed. Generally, as most work requires duplicating rather than printing services, NPPS' local form is usually used. All work that requires printing or contracting is usually done with the DD Form 282. (Contact your STI focal point for information on how your activity reimburses NPPS.)





COPYING EQUIPMENT REQUEST

ACTIVITY FUNDING: [ ] NIF [ ] NON NIF | DATE OF REQUEST | DATE RECVD BY NPPS

ACTIVITY/SHIP NAME | ACTIVITY/SHIP UIC

COMPLETE MAILING ADDRESS

ACTIVITY/SHIP CONTACT (Name, Code, Telephone No.)

COMPLETE NAME AND ADDRESS OF PROCUREMENT OFFICE (Include Telephone No.)

ACTION REQUESTED [ ] RENTAL [ ] PURCHASE [ ] DISPOSAL [ ] TRANSFER [ ] TRAIL [ ] OTHER (Specify) ____

EQUIPMENT WILL [ ] REPLACE [ ] BE IN ADDITION TO EXISTING EQUIPMENT | EQUIP LOCATION (Bldg. Room)

MAKE | MODEL | SERIAL NO | RENTAL PLAN | NO MOS RENTED | IF OWNED, PURCHASE DATE

MO RENTAL COST | MO MAINT COST (If Owned) | NPPS ACQUISITION NO | LIST ACCESSORIES (e.g. Sorters, etc.)

MAKE AND MODEL OF COPIER DESIRED (If any) | AVE NO COPIES PER ORIGINAL | AVG MO VOLUME | AVG COPIER OPERATOR HOURLY WAGE

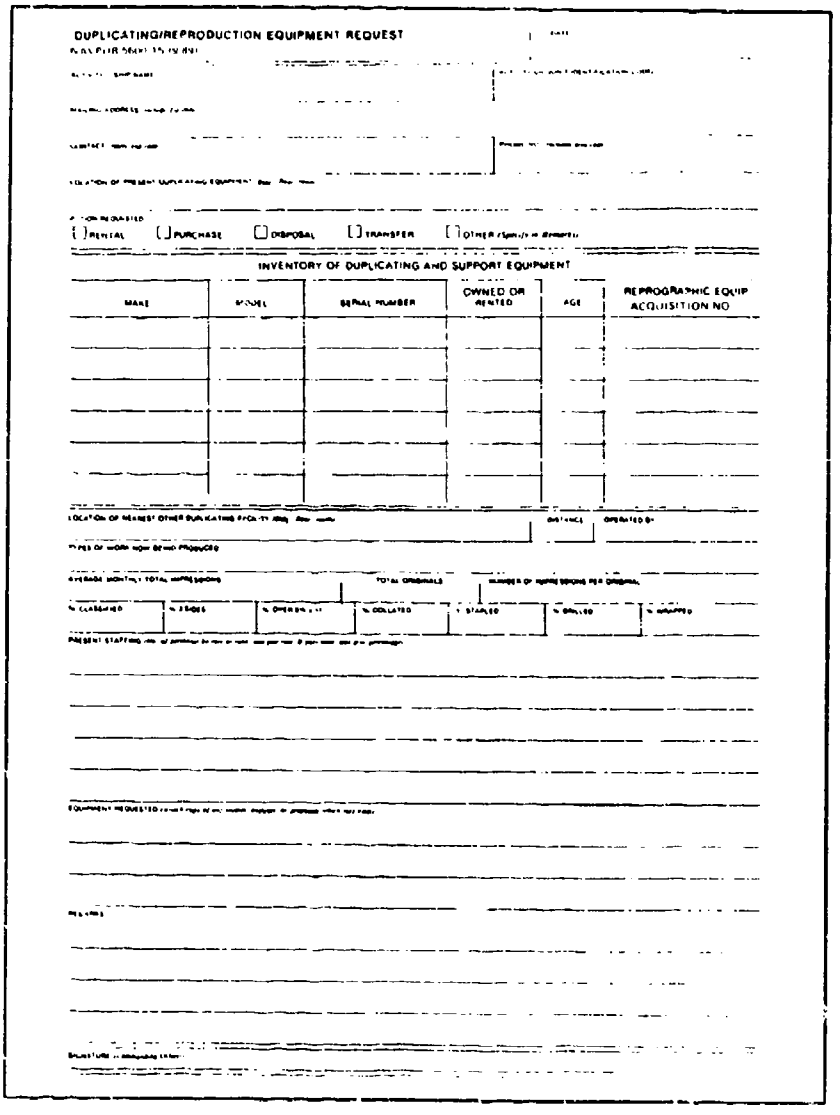
FOR NPPS USE ONLY	FOR ACTIVITY USE ONLY CHECK APPLICABLE BOX(ES) AND FILL IN BLANKS FOR ANY SPECIAL CHARACTERISTICS DESIRED			
	11	(✓)	PLAIN BOND PAPER	
	12		BOOK COPYING	
Manual Auto	13		DUPLEXING __ %	% of total copies duplexed from: 1 SIDED ORIGINALS / 2 SIDED ORIGINALS
	14		REDUCTION	IF VARIABLE REDUCTION REQUIRED __ % TYPE OF WORK __
Semi Auto Recirc	15		DOCUMENT FEEDER	
	16		COMPUTER FORMS FEEDER	
	17		FINISHER	
	18		PROJECTION TRANSPARENCIES	
	19		OFFSET MASTERS	
-	20		SORTING	NO COPIES PER ORIGINAL (Avg) / TOTAL NO COPIES COLLATED PER MONTH
x	21		GREATER THAN 8½ 14 SHEET SIZE	MAXIMUM SHEET SIZE x

REMARKS

SIGNATURE (Commanding Officer) | DATE

NAVPUB 5600/14 (REV. 9-83) | Department of the Navy

Figure 87. NAVPUB Form 5600/14 for approval of copying equipment.



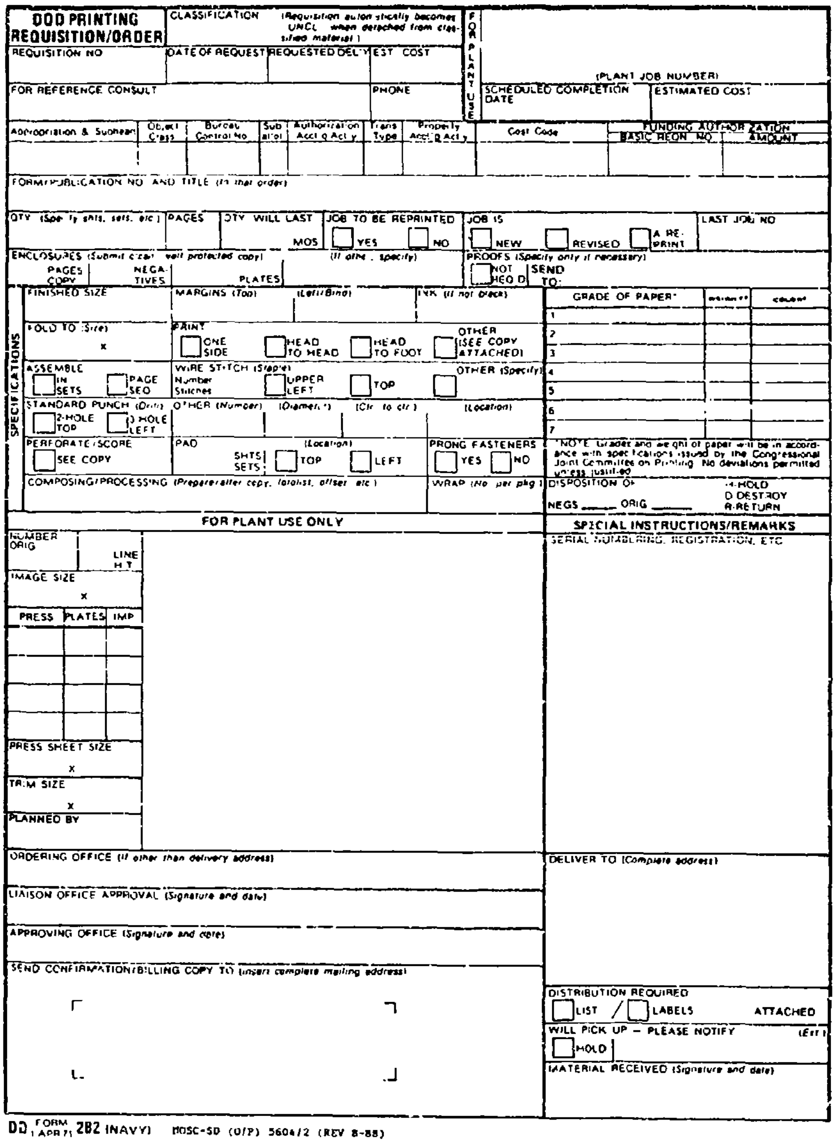
DUPLICATING/REPRODUCTION EQUIPMENT REQUEST

[ ] RENTAL [ ] PURCHASE [ ] DISPOSAL [ ] TRANSFER [ ] OTHER

INVENTORY OF DUPLICATING AND SUPPORT EQUIPMENT

MAKE	MODEL	SERIAL NUMBER	OWNED OR RENTED	AGE	REPROGRAPHIC EQUIP ACQUISITION NO

Figure 88. NAVPUB Form 5600/15 for approval of duplicating and support equipment.


DOD PRINTING REQUISITION/ORDER

CLASSIFICATION (Requisition automatically becomes UNCL when detached from classified material)

FOR PLANT USE

REQUISITION NO | DATE OF REQUEST | REQUESTED DEL'Y | EST COST

(PLANT JOB NUMBER)

FOR REFERENCE CONSULT | PHONE | SCHEDULED COMPLETION DATE | ESTIMATED COST

Appropriation & Subhead | Object Class | Bureau Control No | Sub allot | Authorization Acctg Act'y | Trans Type | Property Acctg Act'y | Cost Code | FUNDING AUTHORIZATION BASIC REQN NO | AMOUNT

FORM/PUBLICATION NO AND TITLE (In that order)

QTY (Specify shts, sets, etc) | PAGES | QTY WILL LAST MOS | JOB TO BE REPRINTED YES NO | JOB IS NEW REVISED A REPRINT | LAST JOB NO

ENCLOSURES (Submit clean well protected copy) PAGES COPY | NEGATIVES | PLATES | (If other, specify) | PROOFS (Specify only if necessary) NOT NEEDED | SEND TO:

SPECIFICATIONS

FINISHED SIZE | MARGINS (Top) | (Left/Bind) | INK (If not black) | GRADE OF PAPER | WEIGHT | COLOR

FOLD TO (Size) x | PRINT ONE SIDE | HEAD TO HEAD | HEAD TO FOOT | OTHER (SEE COPY ATTACHED)

ASSEMBLE IN SETS | PAGE SEQ | WIRE STITCH (Staple) Number Stitches | UPPER LEFT | TOP | OTHER (Specify)

STANDARD PUNCH (Drill) 2-HOLE TOP | 3 HOLE LEFT | OTHER (Number) | (Diameter) | (Ctr to ctr) | (Location)

PERFORATE/SCORE SEE COPY | PAD SHTS/SETS | (Location) TOP | LEFT | PRONG FASTENERS YES NO

NOTE: Grades and weight of paper will be in accordance with specifications issued by the Congressional Joint Committee on Printing. No deviations permitted unless justified.

COMPOSING/PROCESSING (Prepare/alter copy, forms, offset, etc) | WRAP (No. per pkg) | DISPOSITION OF NEGS ___ ORIG ___ H-HOLD D-DESTROY R-RETURN

FOR PLANT USE ONLY

NUMBER ORIG | LINE HT

IMAGE SIZE x

PRESS | PLATES | IMP

PRESS SHEET SIZE x

TRIM SIZE x

PLANNED BY

SPECIAL INSTRUCTIONS/REMARKS

SERIAL NUMBERING, REGISTRATION, ETC

ORDERING OFFICE (If other than delivery address)

DELIVER TO (Complete address)

LIAISON OFFICE APPROVAL (Signature and date)

APPROVING OFFICE (Signature and date)

SEND CONFIRMATION/BILLING COPY TO (Insert complete mailing address)

DISTRIBUTION REQUIRED LIST / LABELS ATTACHED

WILL PICK UP – PLEASE NOTIFY (Ext) HOLD

MATERIAL RECEIVED (Signature and date)

DD FORM 1 APR 71 282 (NAVY) HOSC-SD (O/P) 5604/2 (REV 8-88)

Figure 89. DD Form 282 used to procure NPPS services.

PART 2

NAVY REQUIREMENTS CONCERNING PRINTING, DUPLICATING, AND MICROPUBLISHING

When can color printing be used? How can my publication be bound? Can I have a brochure produced? What is a flyer? Can I order printing on contract? When can the Navy emblem be used? When can copyrighted material be included in a Navy publication?

What Is the Basis for the Navy's Printing Program?

Navy requirements concerning printing, duplicating, and micropublishing are based on regulations issued by Congress, i.e., the Joint Committee on Printing (JCP). Many regulations exist concerning what can and cannot be printed or duplicated by Navy components. Some of the more important regulations are summarized in this section; additional information is available from either your activity's STI focal point or your local NPPS office.

When Can Color Printing Be Used?

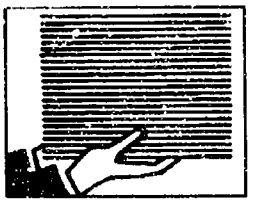
Multicolor printing, i.e., the use of more than one color of ink, is permitted for recruitment purposes, ceremonial programs, safety, awards, object identification, and technical clarity. Object identification refers to the use of color when the color is necessary for identifying certain objects; examples include flags, uniforms, plants, and medical specimens. Technical clarity refers to the use of color when the color is necessary for a technical understanding of the concept presented. Examples include geological or hydrographic maps, electrical flow lines, and illustrations in which color (such as a cloud of orange smoke) is a critical factor. For Navy scientists and engineers, object identification and technical clarity are the most common reasons for requiring color printing.

Multicolor printing cannot be done when color is only for decorative purposes or when color is a substitute for effective layout and design.

If you require the use of a color in a Navy publication, contact either your activity's STI focal point or your local NPPS office for assistance in preparing the justification.

What Types of Bindings Are Available for Navy Publications?

Types of bindings available through NPPS include metal prongs, Chicago screws, comb binding, saddle stitching (limited to publications of 100 pages or less), perfect binding, and side stitching with staples (figure 90).



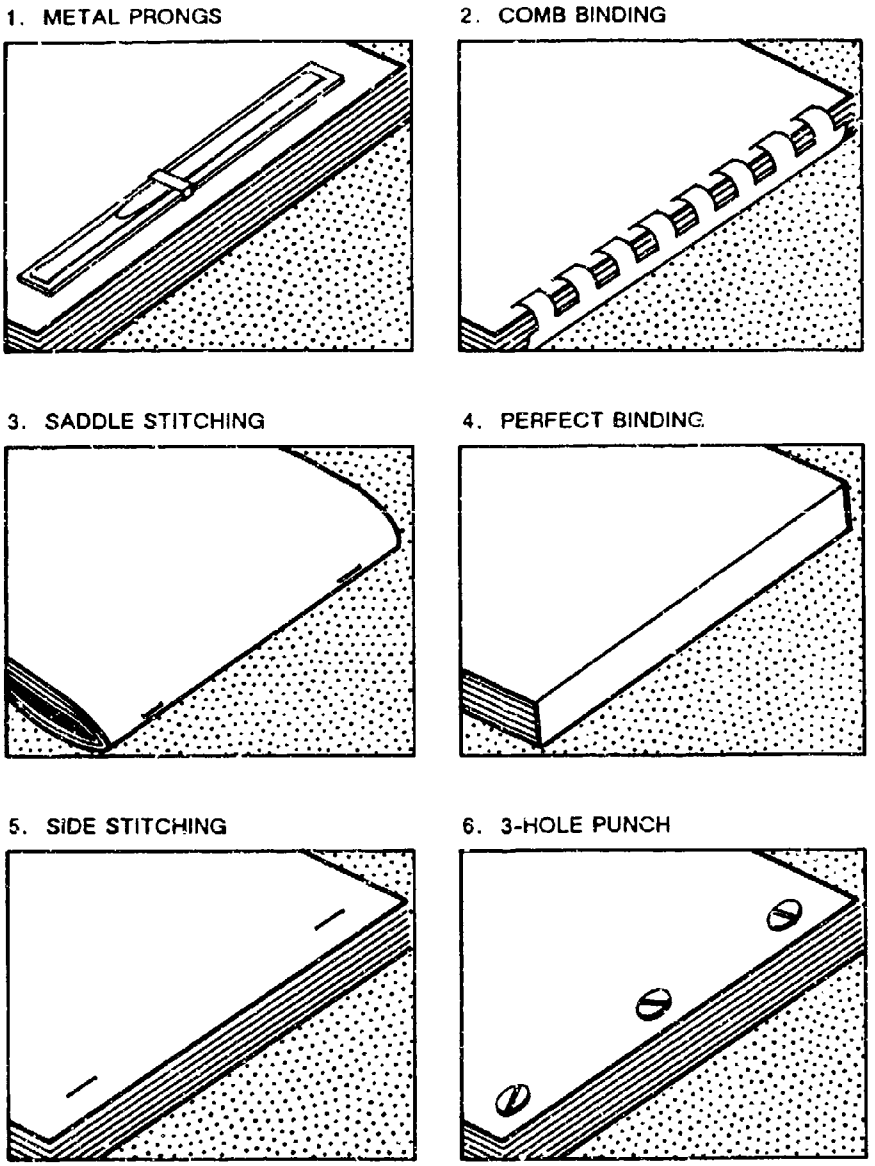


Figure 90. Types of bindings.

Publications can also be bound in loose-leaf binders, but you must provide funds and time to procure the binders before the publication goes to print. Contact either your STI focal point or local NPPS office to determine procedures for ordering binders.

What Are the Restrictions on Pamphlets, Brochures, and Administrative Publications?

WHAT IS THE POLICY FOR BROCHURES AND PAMPHLETS? In 1981, President Reagan issued a memorandum directing the heads of executive agencies to "eliminate wasteful spending on government periodicals, pamphlets, and audiovisual products." As a result of this memorandum, the Navy requires that the production of brochures and pamphlets be approved by the Navy Publications and Printing Policy Committee in Washington, DC. This approval is required before printing. All approved brochures and pamphlets carry the following statement:

> The Secretary of Navy has determined that this publication is necessary in the transaction of business required by law of the Department of the Navy. Use of funds for printing this publication has been approved by the Navy Publications and Printing Policy Committee.

To be considered a brochure or pamphlet, a publication must be

Printed on a one-time basis.

Published to inform, motivate, increase knowledge, and improve performance.

Nondirective in nature.

Less than 80 pages long.

Issued for regulatory, administrative, indoctrination, or recruitment purposes.

Designed according to the Navy's Graphic Design Standard (SECNAVINST 5600.20).

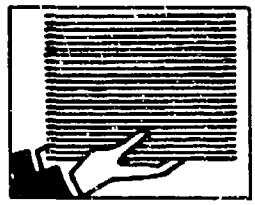
Excluded from this definition are manuals, memoranda, directives, instructions, regulations, official histories, proceedings, reports, internal information bulletins, programs for ceremonies, primarily statistical material, and single-sheet flyers.

WHAT IS THE POLICY FOR FLYERS? The publication of single-sheet flyers is not restricted:

Flyers can be printed in two colors (remember that black is a color).

They can be folded in any way (fan-folding is the usual method used).

The design is not restricted.



WHEN IS CERTIFICATION REQUIRED? In addition, certain publications, such as books, pamphlets, and brochures, must be officially reviewed prior to publication. These publications are reviewed for "necessity, accuracy, current applicability, adequacy, judiciousness of purpose and good taste, and to insure consonance with existing law and with national and DN policy." This review is conducted at the highest level of your activity that has cognizance of the subject matter of the publication. The review must be completed before NPPS will accept the publication for printing.

This certification of review must be included with the publication, except for edition-bound publications, on the inside bottom of the first printed page. The review is indicated as follows:

Reviewed and approved _____
(date)

_____
(signature, reviewing official)

Edition-bound publications are certified by memoranda that are maintained by the originating activity.

What Are the Procedures for Including Copyrighted Material in Navy Publications?

If your material contains copyrighted information, NPPS cannot duplicate or print the material until you give NPPS a copy of the letter granting the Navy permission to use the copyrighted material.

Can Printing, Duplicating, and Micropublishing Services Be Included in Contracts?

Your local NPPS office is responsible for the procurement of printing and duplicating services. This means that you cannot order printing and duplicating services under contract, unless you have received authorization from NPPS. You may, however, contract for micropublishing services, if the requirement is for archival purposes. NPPS must either approve or procure contracts for micropublishing for general distribution.

In addition, publications and printing cannot be procured as part of a contract for preparing artwork or for writing and editing services. However, you may order a small quantity of draft publications for review prior to final preparation; your local STI focal point should be able to tell you the maximum number of copies that you can have your contractor provide.

It is also prohibited, unless authorized by NPPS, to include publications and printing requirements within contracts and grants for the manufacture or operation of equipment and for architectural, engineering, and research services.

When Can the Navy Emblem Be Used?

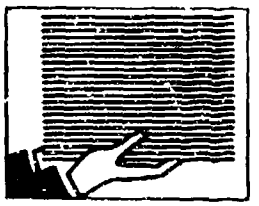
All official publications intended for general use within the Department of the Navy, e.g., Navy publications sent to DTIC, must include the Navy emblem on the front cover. (See figure 91.) If the emblem is not included, the publication cannot be printed by NPPS.

Figure 91. Navy emblem.

In addition, if you want to use your activity's logo on any type of publication or presentation aid, you must also use the Navy emblem. (See figure 92 for examples of logos.)

If you require a copy of the Navy emblem, contact your STI focal point.

Figure 92. Examples of different logos.



PART 3
REFERENCES

Chief of Naval Operations Instruction 5600.20, Department of Navy Reprographics Management Program, 14 February 1979

Government Printing and Binding Regulations, published by the Joint Committee on Printing, Congress of the United States, April 1977

Navy Procurement Directives, Section V, Part 6, Procurement of Printing and Related Supplies, 30 April 1974

Navy Publishing and Printing Service Instruction 5600.44A, Department of Navy Reprographics Management Program, 9 November 1981

Navy Publishing and Printing Service Instruction 5600.49A, Official Use of Self-Service Copying Equipment, 22 December 1987

Navy Publishing and Printing Service Instruction 5870.1, Copyrighted Materials Used in DN Publications, 25 September 1979

Secretary of Navy Instruction 5030.4A, Official Establishment of Department of Navy Seal, 17 March 1986

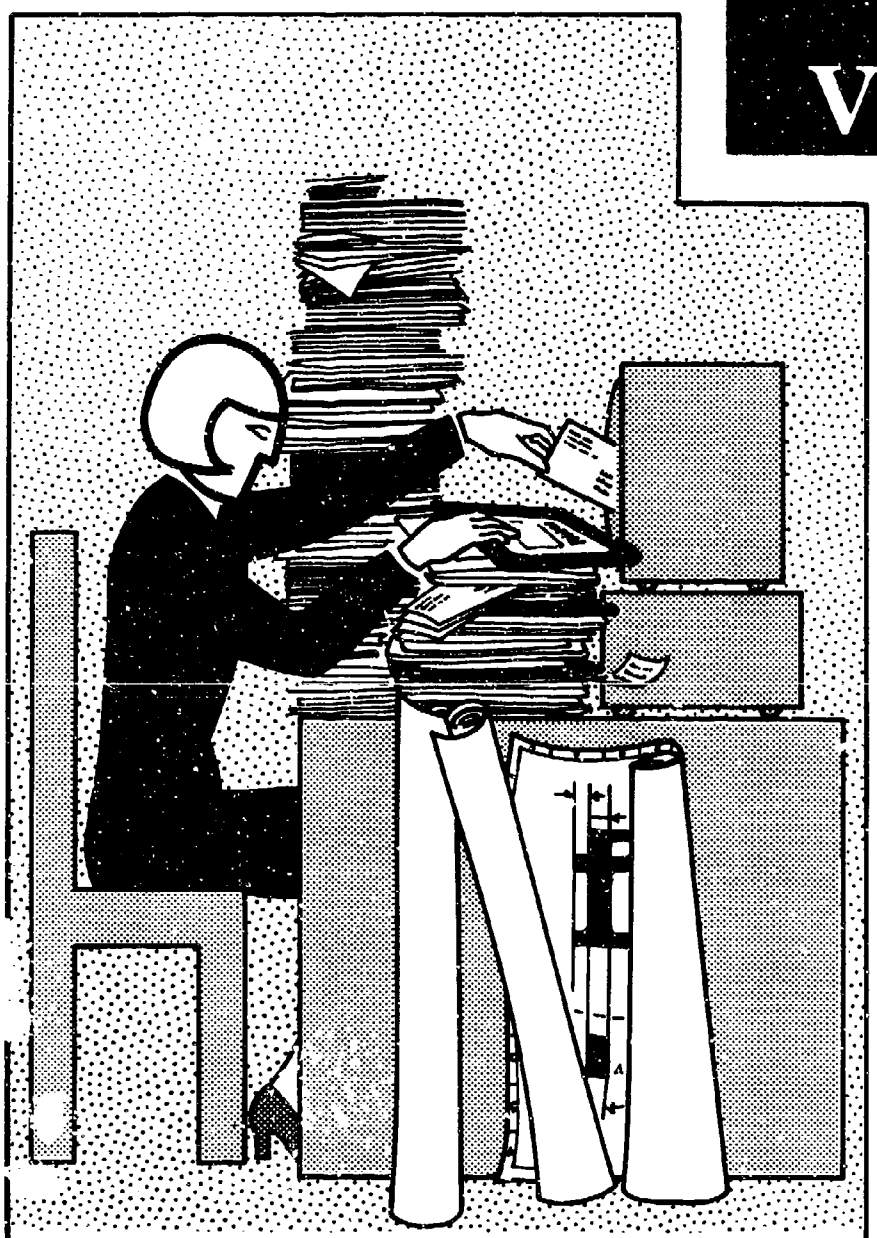
Secretary of Navy Instruction 5210.12C, Micrographics Management, 18 December 1981

Secretary of Navy Instruction 5600.16A, Review of Department of Navy Publications, 24 January 1979

Secretary of Navy Instruction 5600.19A, Review, Evaluation, and Approval of Navy Periodicals, 7 February 1978

Secretary of Navy Instruction 5600.20, Graphic Design Standards, 13 January 1984

VII



STI and Domestic Technology Transfer

CHAPTER VII

STI and Domestic Technology Transfer

Illustrations

PART 1
THE NAVY'S DOMESTIC TECHNOLOGY TRANSFER PROGRAM[1]

What is domestic technology transfer? Why does the Navy support it? How does the Navy transfer technology? Who is eligible to receive Navy technology? Can classified or export-controlled technology be transferred? What is an ORTA? What is a CRDA? What is the FLC?

What Is Domestic Technology Transfer?

The Navy's domestic technology transfer (DTT) program transfers technology that has been developed by the Navy for military applications to private and public sectors where it can be used in nonmilitary applications. DTT includes not only the transfer of technology, but it also includes those programs that allow the private and public sectors access to the Navy's science and technology. All constraints that govern control of classified material, information disclosure, and export controls apply to the DTT program.

The Navy transfers technology to other federal agencies; state and local governments; small and large U.S. businesses; nonprofit organizations; and public service organizations, such as universities, hospitals, and foundations (figure 93).

Because this transfer process is bilateral, Navy scientists and engineers are provided with new ideas, techniques, and information from outside sources.

Why Does the Navy Support Technology Transfer?

The Navy has several reasons (figure 94) for supporting technology transfer. For example, technology transfer

Encourages the U.S.'s technical growth and economic development.

Enhances the U.S.'s economic competitiveness.

Enhances return on the federal government's investment in research and development.

Maximizes returns from technological investments so that available resources can be used as effectively as possible.

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[1] The information in this chapter pertains only to domestic technology transfer; it does not apply to international technical information disclosures, releases, sales, or exchanges.

Promotes joint cooperative development programs that address problems of mutual concern to the Navy and other agencies and organizations.

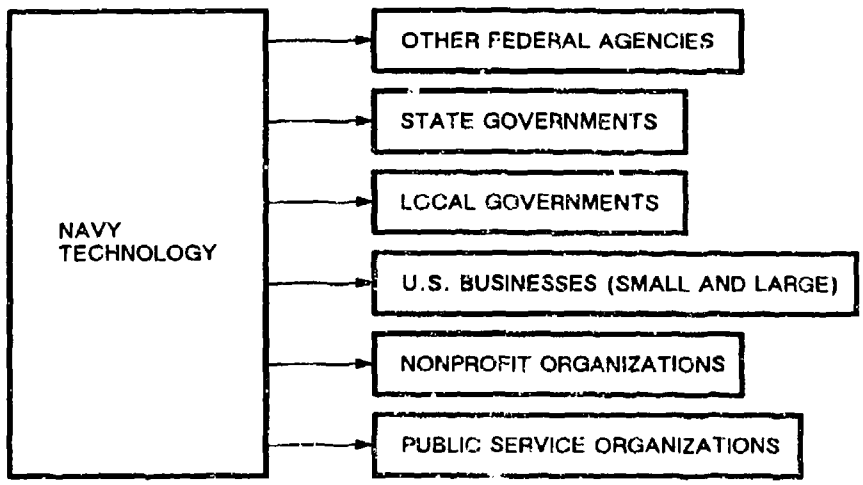


Figure 93. Recipients of Navy technology.

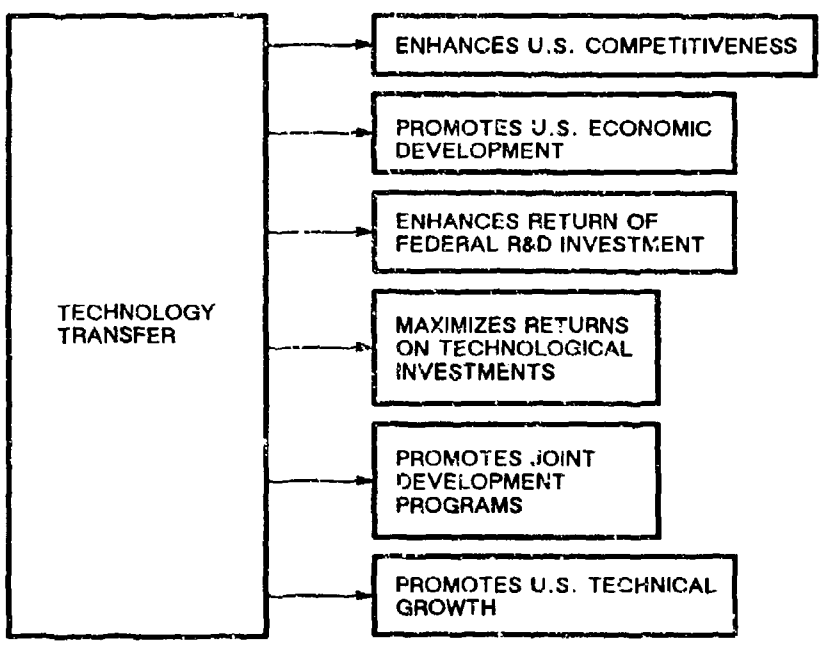


Figure 94. Benefits of technology transfer.

How Does the Navy Accomplish the Transfer of Technology?

The Navy accomplishes DTT through

The exchange of scientific and technical personnel between Navy activities and academic, industrial, nonprofit, and state organizations.

Cooperative research and development agreements with the public and private sectors.

Participation in regional, state, and local programs that facilitate or stimulate DTT.

Membership and participation in the Federal Laboratory Consortium for Technology Transfer.

The establishment of Offices of Research and Technology Applications (ORTAs) in Navy activities.

Providing Navy Technology Applications Assessments (NTAAs) to the National Technical Information Service (NTIS) and other appropriate information media.

(See figure 95.)

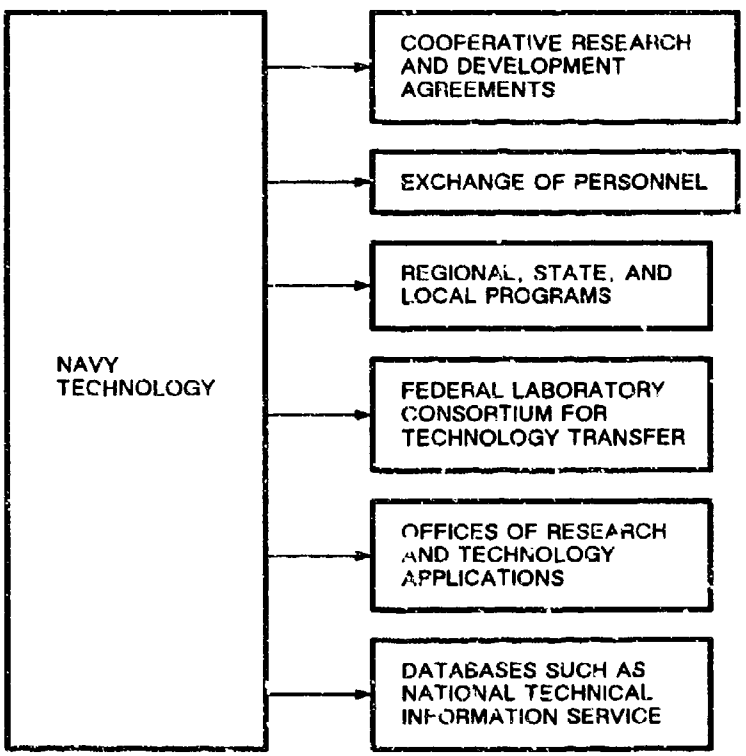


Figure 95. How the Navy transfers technology.

WHAT IS A COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENT? Public Law 96-480, as amended by Public Law 99-502, allows the Navy to enter into a cooperative research and development agreement (CRDA) with one or more nonfederal parties to perform cooperative research and development. Under the CRDA, the Navy may provide personnel, services, facilities, equipment, and other resources either with or without reimbursement. The Navy, however, cannot provide funding to a nonfederal party. The nonfederal party may provide funds, personnel, services, facilities, equipment, or other resources that are needed to perform the research and development. (CRDAs are not the same as a Navy procurement contract, grant, or cooperative agreement.)

CRDAs are often used by Navy activities as a method to license or assign rights to intellectual property developed by Navy scientists and engineers (retaining a royalty-free license for the government).

To the maximum extent possible, small business firms and consortia of small businesses are given special consideration in awarding of CRDAs. Preference is also given to businesses located within the U.S. that agree to manufacture within the U.S. any products that either embody inventions made under the CRDA or are produced through the use of such inventions. CRDAs are permitted with foreign-owned, -controlled, or -influenced U.S. organizations under certain conditions.

A DD Form 1498, Work Unit Information Summary, must be completed and forwarded to the Defense Technical Information Center (DTIC) for each completed CRDA. This form must be submitted to DTIC within 30 days after initiating the agreement.

Any Navy activity that performs RDT&E efforts at a minimum level of 10 workyears of in-house effort can enter into CRDAs.

WHAT IS AN OFFICE OF RESEARCH AND TECHNOLOGY APPLICATIONS? Offices of Research and Technology Applications (ORTAs) are found in those Navy activities whose primary purpose is to perform in-house RDT&E efforts. (These efforts are funded by a combination of 6.1, 6.2, 6.3, and 6.4 appropriations.)

The functions of an ORTA (figure 96) are to manage and coordinate an activity's DTT. For example, ORTAs

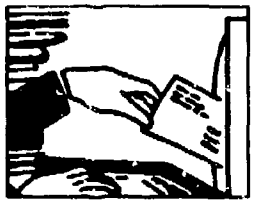
Prepare Navy technology application assessments.

Provide and distribute information on Navy-owned or Navy-originated products, processes, and services with potential application to state and local governments and private industry.

Assist NTIS, the Federal Laboratory Consortium, and similar organizations.

Assist technical personnel in identifying technologies suitable for transfer.

Prepare DD Form 1498s on CRDAs.



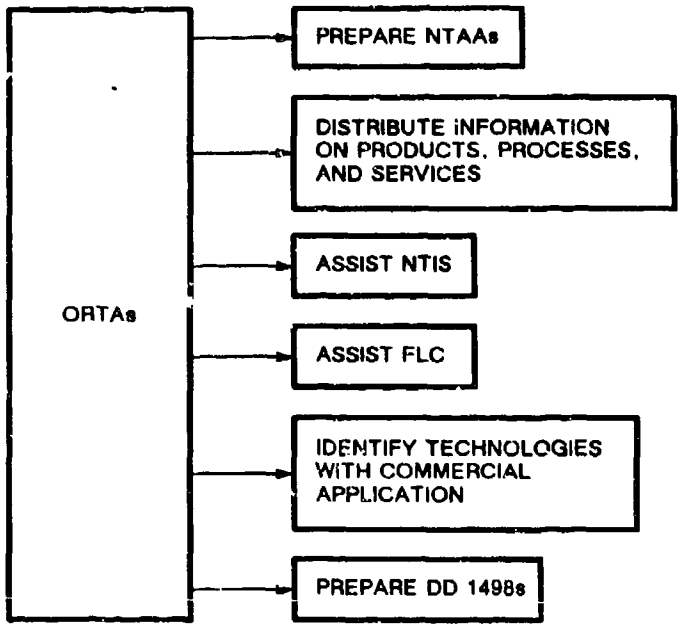


Figure 96. Typical duties of an ORTA.

WHAT IS THE FEDERAL LABORATORY CONSORTIUM FOR TECHNOLOGY TRANSFER? The Federal Laboratory Consortium (FLC) for Technology Transfer is composed of 400 federal laboratories and research centers representing 12 federal agencies. It is chartered under Public Law 96-480, as amended by Public Law 99-502. The purposes of the FLC are to identify and mobilize the environment, organization, and technology-transfer mechanisms that provide the most complete use of federally sponsored R&D. In essence, FLC is a service organization, or brokerage service, that matches a user's technical request with the appropriate federal laboratory or research center. Once this match is made, the arrangements for the technical exchange are between the user and the laboratory. This exchange can consist of readily available material, technical advice, or collaborative research.

WHAT IS A NAVY TECHNOLOGY APPLICATION ASSESSMENT? A Navy technology application assessment (NTAA) describes the potential application of a technological development for use by state or local governments or the U.S. private sector. NTAAs are released to NTIS and other appropriate information media where they are accessed by public and private sectors. (NTIS provides services such as on-line databases, documents, and directories.) NTAAs are usually prepared by your ORTA representative.

PART 2
BENEFITS AND RESPONSIBILITIES OF NAVY EMPLOYEES

What are my responsibilities in regard to technology transfer? Who can help me meet my responsibilities? What are the benefits of technology transfer? Are there awards? What contributions qualify for awards?

What Are the Responsibilities of Navy Scientists and Engineers in Regard to DTT?[1]

The Navy requires that its scientists and engineers actively participate in its domestic technology transfer (DTT) program. In many activities, your Office of Research and Technology Applications (ORTA) will help meet your Navy requirements. If your activity does not have an ORTA, contact your local STI focal point for assistance.

Some of your DDT responsibilities are to

Work with your activity in developing an effective marketing strategy designed to further DTT.

Provide scientific and technical information, data, and know-how to your ORTA. In this way, state and local governments, universities, and the private sector are provided information on Navy technology, expertise, and facilities.

Participate in regional, state, and local programs that facilitate or stimulate DTT.

Remember that technology transfer efforts are considered in promotions and performance evaluations.

Act as a conduit between yourself and your Navy activity, universities, and the private sector for effecting technology transfer.

If your project has commercial applications, indicate this in block 21 of the DD Form 1498, Work Unit Information Summary.

See figure 97.

[1] The information in this chapter pertains only to domestic technology transfer; it does not apply to international technical information disclosures, releases, sales, or exchanges.

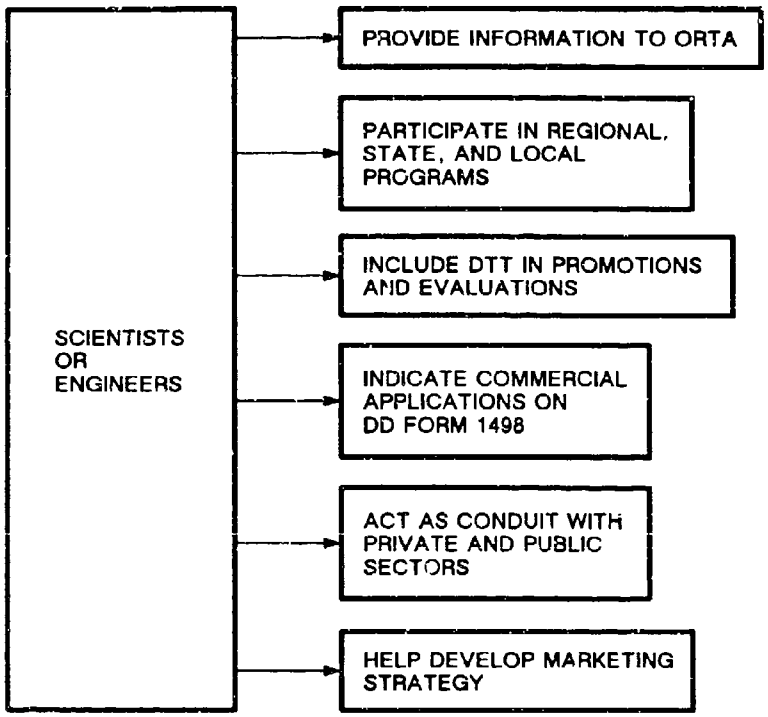


Figure 97. Responsibilities of Navy scientists and enginers in regard to DTT.

What Are the Benefits of DTT to Navy Scientists and Engineers?

Navy employees who contribute materially to the objectives of DTT programs can receive financial and professional awards. These contributions can be inventions, innovations, computer software, training technology, or other scientific or technological contributions with commercial applications. Also included are contributions to Navy missions and exemplary activities that promote DTT and result in the use of science and technology by nonfederal parties.

As an inventor, you can receive 20 percent of the income generated by your invention; the annual maximum payment is $100,000. All other income received from licensing or assigning your invention is used by your Navy activity to encourage the growth and development of Navy DTT. Examples

of such activities include rewards to scientists and engineers, promotion of scientific exchange, and education and training.

Receipt of royalties for patent licenses does not preclude your eligibility for awards under this program.

PART 3
REFERENCES

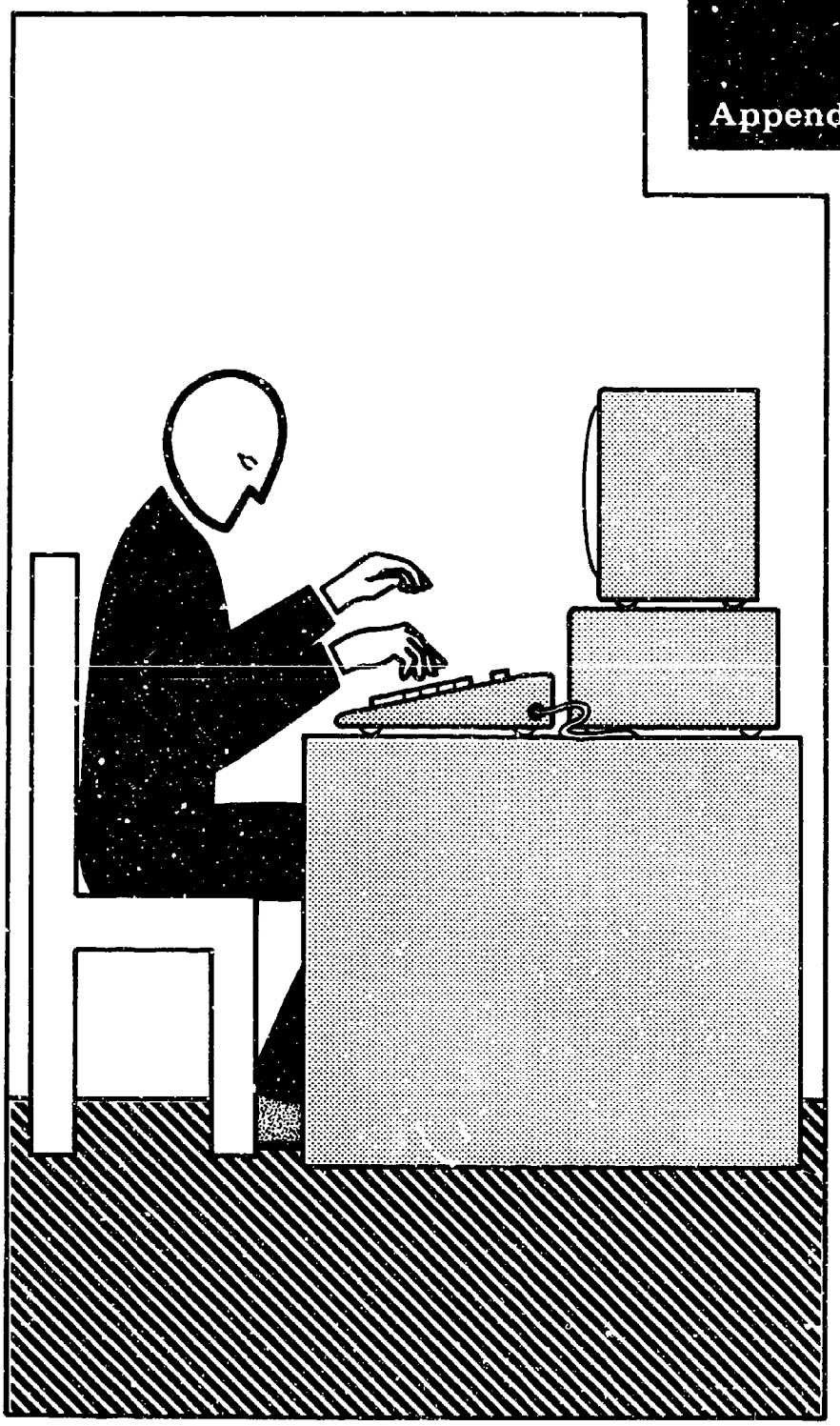
Chief of Naval Research Instruction 5700.1, Navy Domestic Technology Transfer Program, 24 July 1991

Department of Defense Regulation 3200.12-R-4, Domestic Technology Transfer Program, December 1988

Howarth Press, Inc., "American Libraries and Domestic Technology Transfer," by David L. Woods, 1991

Secretary of Navy Instruction 5700.16, Domestic Technology Transfer, 27 October 1989

Appendices



APPENDIX A
DISTRIBUTION STATEMENTS

The following distribution statements are authorized for use on Navy documents.

Distribution Statement A: Approved for public release; distribution is unlimited.

This statement is used only on unclassified technical documents that have been cleared for public release.

This statement cannot be used on technical documents that were formerly classified unless these documents have been cleared for public release.

This statement cannot be used on technical documents containing export-controlled technical data.

This statement cannot be used on classified technical documents.

This statement cannot be used on technical documents with classified references.

Technical documents resulting from contracted fundamental research efforts are normally assigned this statement. Exceptions exist when there is a high probability of disclosing performance characteristics of military systems or of manufacturing technologies that are unique and critical to defense. These exceptions must be recorded in the contract or grant.

Technical documents with this statement can be exported. They are sold to the U.S. public and to foreign nationals, foreign companies, and foreign governments, including those governments considered as adversaries of the U.S.

Distribution Statement B: Distribution authorized to U.S. government agencies only (fill in reason); (date of determination). Other requests for this document shall be referred to (insert controlling DoD office).

This statement is used on classified and unclassified technical documents.

It is used on classified technical documents to provide distribution limitations in addition to need-to-know requirements and to serve as a controlling statement if the document is declassified.

Reasons for assigning distribution statement B include:

Foreign Government Information. To protect and limit distribution in accordance with the desires of the foreign government that furnished the technical information. Information of this type is normally classified at the confidential or higher level.

Proprietary Information. To protect information not owned by the U.S. government and protected by a contractor's limited rights statement or received with the understanding that it not be routinely transmitted outside the U.S. government.

Critical Technology. To protect information and technical data that advance current technology, describe new technology in an area of significant or potentially significant military application, or relate to a specific military deficiency of a potential adversary. Information of this type may be classified or unclassified; when unclassified, it is controlled by the export laws and is subject to the provisions of DoD Directive 5230.25.

Test and Evaluation. To protect the results of test and evaluation of commercial products or military hardware when such disclosure may cause unfair advantage or disadvantage to the manufacturer of the product.

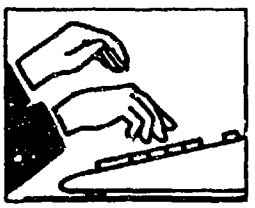
Contractor Performance Evaluation. To protect information in management reviews, records of contract performance evaluation, or other advisory documents that evaluate programs of contractors.

Premature Dissemination. To protect patentable information from premature dissemination on systems or processes in the developmental or conceptual stage.

Administrative or Operational Use. To protect technical or operational data or information from automatic dissemination under the International Exchange Program or by other means. This protection covers publications required solely for official use or strictly for administrative or operational purposes. This statement can be applied to manuals, pamphlets, technical orders, technical reports, and other publications containing valuable technical or operational data.

Software Documentation. To be released only in accordance with the provisions of DoD Instruction 7930.2.

Specific Authority. To protect information not specifically included above, but which requires protection in accordance with valid documented authority such as executive orders, classification guidelines, or DoD or DoD component regulatory documents. When filling in the reason, cite "specific authority (identification of valid documented authority)."



Distribution Statement C: Distribution authorized to U.S. government agencies and their contractors (fill in reason); (date of determination). Other requests shall be referred to (insert controlling DoD office).

This statement is used on classified and unclassified technical documents.

It is used on classified technical documents to provide distribution limitations in addition to need-to-know requirements and to serve as a controlling statement if the document is declassified.

Reasons for assigning distribution statement C include

Foreign Government Information. Same as distribution statement B.

Critical Technology. Same as distribution statement B.

Software Documentation. Same as distribution statement B.

Administrative or Operational Use. Same as distribution statement B.

Specific Authority. Same as distribution statement B.

Distribution Statement D: Distribution authorized to the Department of Defense and U.S. DoD contractors only (fill in reason); (date of determination). Other requests shall be referred to (insert controlling DoD office).

This statement is used on classified and unclassified documents.

It is used on classified technical documents to ensure distribution limitations in addition to need-to-know requirements and to serve as a controlling statement if the document is declassified.

Reasons for assigning distribution statement D include

Foreign Government Information. Same as distribution statement B.

Administrative or Operational Use. Same as distribution statement B.

Software Documentation. Same as distribution statement B.

Critical Technology. Same as distribution statement B.

Specific Authority. Same as distribution statement B.

Distribution Statement E: Distribution authorized to DoD components only (fill in reason); (date of determination). Other requests shall be referred to (insert controlling DoD office).

This statement is used on classified and unclassified documents.

It is used on classified technical documents to provide distribution limitations in addition to need-to-know requirements and to serve as a controlling statement if the document is declassified.

Reasons for assigning distribution statement E include:

Direct Military Support. To protect documents containing export-controlled technical data of such military significance that release for purposes other than direct support of DoD-approved activities may jeopardize an important technological or operational military advantage of the United States. Designation of such data is made by competent authority in accordance with DoD Directive 5230.35.

Foreign Government Information. Same as distribution statement B.

Proprietary Information. Same as distribution statement B.

Premature Dissemination. Same as distribution statement B.

Test and Evaluation. Same as distribution statement B.

Software Documentation. Same as distribution statement B.

Contractor Performance Evaluation. Same as distribution statement B.

Critical Technology. Same as distribution statement B.

Administrative/Operational Use. Same as distribution statement B.

Specific Authority. Same as distribution statement B.

Distribution Statement F: Further dissemination only as directed by (insert controlling DoD office); (date of determination); or higher DoD authority.

This is normally used only on classified technical documents, but may be used on unclassified technical documents when specific authority exists, e.g., designation as direct military support as in statement E.

Distribution statement F is used when the DoD originator determines that the information is subject to special dissemination limitations specified by paragraph 4-505, DoD 5200.1-R.

Distribution Statement X: Distribution authorized to U.S. government agencies and private individuals or enterprises eligible to obtain export-controlled technical data in accordance with DoD Directive 5230.25 (date of determination). Controlling office is (insert controlling office).

This statement is used on unclassified documents when distribution statements B, C, D, E, or F are not applicable, but the document does contain technical data as explained in DoD Directive 5230.25.

This statement cannot be used on classified technical documents; however, it may be assigned to technical documents that formerly were classified.

APPENDIX B
FILLING OUT A DD FORM 1498

The information in this appendix explains the different blocks on the DD Form 1498 (figure B1). When you are ready to create or alter a DD Form 1498, contact your STI focal point for assistance.

Block 1: Agency Accession Number

A two-part identification number that consists of two alphabetic characters indicating the reporting agency and a 6-digit serial number unique to each work unit summary.

Block 2: Date Of Summary

Date the DD Form 1498 is created or changed.

Block 3: Date Of Previous Summary

Date DD Form 1498 was originally created or the last date the form was changed.

Block 4: Kind Of Summary

The type of transaction being reported on the DD Form 1498:

Code	Kind of Summary	Explanation
A	New	Initial 1498 on approved work unit
R	Change	Revision to existing 1498 or reactivation of work unit previously reported as terminated or completed
H	Termination	1498 on an incomplete work unit effort that has been cancelled, suspended, or otherwise discontinued
K	Completion	Final 1498 on a completed work unit
P	Planned	Work generally agreed to with sponsor but not started
T	Proposed	Proposal submitted, but not yet accepted by sponsor

Block 5: Summary Security

A code that indicates the security classification of the DD Form 1498. Use the codes U (unclassified), C (confidential), S (secret), and TS (top secret).

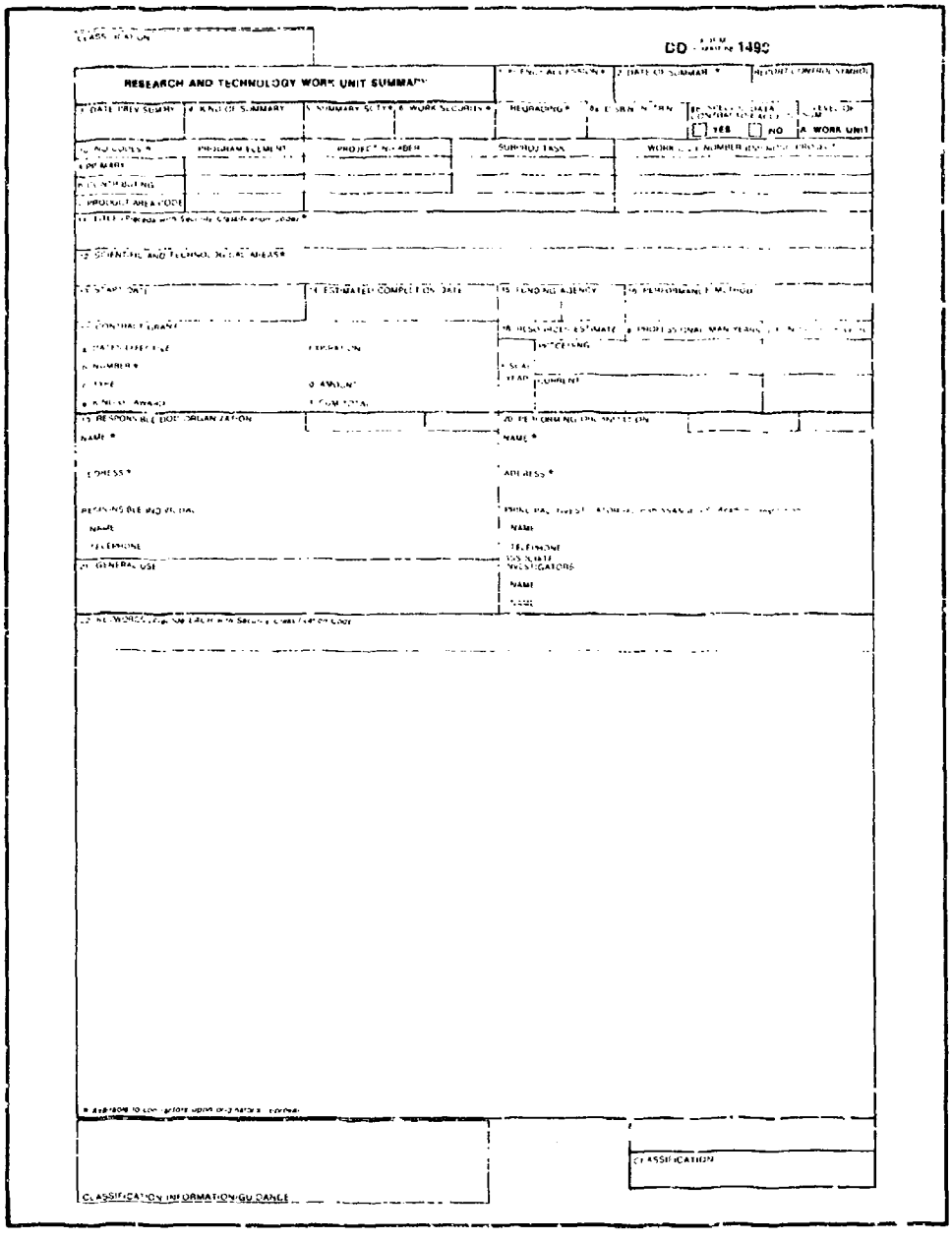


Figure B1. DD Form 1498, the Work Unit Summary Worksheet.

Block 6: Work Security

A code (U, C, S, or TS) that indicates the security classification of the work the DD Form 1498 describes. This is not the classification of the DD Form 1498 itself.

Block 7: Regrading (Classification Guidance)

Information used to classify the work unit described on the DD Form 1498:

If work security (block 6) is unclassified, enter "No CG applies."

If work security (block 6) is higher than unclassified, enter the classification authority, i.e., your source document, used in association with the work being performed. Also include either the date or event your work will be downgraded or declassified.

Block 8a: Distribution Instruction

Code that indicates the distribution limitations to be placed on the DD Form 1498 itself:

Code	Explanation
DX	Distribution limited to DoD components and their contractors and grantees
CX	Distribution extended to other U.S. government agencies and their contractors and grantees
NN	Used on proposed or planned summaries
BF	Information furnished by a foreign government with provision that it not be released outside the U.S. government
BP	Discloses proprietary information received with understanding that it not be distributed outside the U.S. government
BT	Test or evaluation of commercial or military systems or hardware; disclosure of information could be detrimental to either U.S. government or contractor
BU	Contains preliminary or planning studies or analyses or internal information on the development or evaluation of programs or technologies that could be detrimental if disclosed outside the U.S.
EE	Evaluation of contractor or other government agency problems
EP	Preliminary or internally controlled information on planning, funding, or evaluating DoD programs, systems, studies, or technologies that need protection from premature disclosure
ES	Discloses trade secrets or other proprietary information

Block 8b: Contractor Access

Decision whether the following information can be released to U.S. contractors and grantees, regardless of the distribution limitation entered in block 8A.

Control Data

- Agency accession number
- Date of summary
- Summary security
- Regrading information

Technical Information

- Title
- Scientific and technological area
- Technical objective

General Information

- Work security
- Program element, project, task area numbers
- Contract numbers
- Name and address of responsible government organization
- Name and address of performing organization
- Name of principal investigator

Block 9: Level Of Summary

A code indicating that the summary represents a work unit.

Block 10: Program Element, Project Number, Subproject/Task, Work Unit Number

Program(s) that provide funding for work unit.

Block 11: Title

Brief, unclassified, descriptive title for work unit.

Block 12: Scientific And Technological Areas

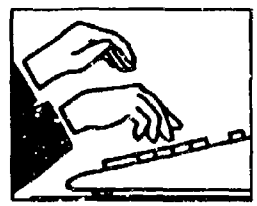
Descriptions of scientific or technological areas related to work unit.

Block 13: Start Date

Date (month and year) when work has started or will start on work unit described on DD Form 1498.

Block 14: Estimated Completion Date

Date (month and year) when you estimate work described on DD Form 1498 will be completed. For completed or terminated work, enter the month and year when work actually stopped. Do not enter "cont."



Block 15: Funding Agency

Agency or agencies that provided or will provide funding to perform work unit.

Block 16: Performance Method

How the work will be performed:

Code	Performer	Explanation
A	Grant	Work to be performd is funded by a grant
B	Contract	Work to be performed is funded by a contract
C	In-house	Work is to be performed within NOSC
D	Other government	Work to be performed by U.S. government agency other than DoD

Block 17: Contract Grant

Includes complete contract identification:

Effective date (month and year) of contract (for contract extension, use date of extension)

Expiration date (month and year) when contract or extension will end

Complete contract number

Type of contract (contract pricing information that is basis for payment)

Contract amount (portion of amount applicable to work unit reported on DD Form 1498)

Contract cumulative amount (total amount provided to year on contract listed for work unit)

Type of award (identifies current kind of award) with codes:

Code	Explanation
NEW	Initial award
SUP	Provision of additional funds without extending contract
EXT	Provision of additional funds with an extension of contract
CON	Continuance of contract in time without additional funds

Block 18: Resources Estimate

Funding (both monetary and workyears) for the current and preceding fiscal years.

Block 19: Responsible DoD Organization

Identification of sponsor (agency and address) and responsible individual (name and phone number).

Block 20: Performing Organization

Identification of performing agency (name and address), principal investigator (name and phone number), and associate investigators (names).

Block 21: General Use

Used to indicate information related to proposals and technology transfer.

PROPOSAL NUMBER: Include the proposal number if the work unit is for a previous proposal. Also if this is work that has transitioned from another work unit effort, enter that information.

TECHNOLOGY TRANSFER: Indicate whether the work unit consists of results that may be applicable to solving technology problems in the civilian sector. Use the following codes:

Code	Explanation
M	Military application only
H	High potential for civilian application
L	Limited potential for civilian application

Block 22: Key Words

Single word or group of words that express major concepts of technical effort being described. Key words are used in conjunction with other terms to retrieve DD Form 1498s by subject.

GENERAL TEXT

Describes the objective, approach, and progress of the work unit being described:

Objective: The goal or purpose of the work unit.

Approach: What methods will be used to accomplish that goal.

Progress: What has been done during a specified period to accomplish the stated goal.

APPENDIX C
WRITING PRACTICES

Style

All types of written information must be clear, concise, coherent, and accurate.

To help achieve these goals, use the following writing principles:

Talk directly to the reader. Use active verbs and concrete words to explain facts and procedures in terms the reader will understand.

Use sentences that are short and straightforward, but do not sacrifice clarity for brevity. Do not invert the word order of a sentence without good reason.

Avoid the passive voice.

Do not stack modifiers. Normal word order is conversational word order. For example, no one would use an expression "convergence-zone-propagation-measurement results" in speech.

Use hyphens for clarity, but avoid excessive hyphenation. Reword to avoid the need for hyphens, if necessary. Do not use hyphens after prefixes such as "non," "sub," "micro," and "semi."

Avoid excessive capitalization. Do not capitalize the name of every project, program, system module, component, or part.

Avoid redundancy unless you have a compelling need for emphasis.

Use the technical words of your discipline, but not the jargon of your laboratory.

Make the purpose and relevance of every sentence clear and apparent.

Be clear, brief, and honest. Be forthright about omissions, inaccuracies, and errors.

Consider the needs of your audience. Tailor your information to the appropriate audience, for example, scientists, engineers, technicians, or Congressional representatives.

Do not use unnecessary adjectives or adverbs. Write with nouns and verbs to strengthen meaning.

Do not use nouns or adjectives as verbs, for example, to optimize, to finalize.

Use the precise word or phrase, for example,

Criterion (singular), criteria (plural)

Medium (singular), media (plural)

Datum (singular), data (plural)

Do not use affected or imprecise words.

WRITING STYLE. The federal government's movement towards plain English was implemented under President Carter's Executive Order 12044, "Improving Government Regulations." This executive order was replaced with President Reagan's Executive Order 12291.

In support of these goals, the Department of Navy issued "Just Plain English." Although this publication is directed toward correspondence practices, some of the general writing principles regarding conciseness, style, organization, voice, and simplicity also apply to technical writing. The remainder of this section is excerpted from "Just Plain English," September 1981, Office of the Chief of Naval Operations (OP-09BR), Washington, DC.

COMPACT WRITING. Suspect wordiness in everything you write. Quarrel with the need for every paragraph, sentence, and word. The longer you take to say things, the more you blur your ideas. When deadlines permit, let your writing rest for a day and then rewrite it. To help you hunt for wordiness, here are some common sources that are easy to find and correct.

Doublings. Avoid writing about a project's importance and significance when importance will do. Pairs of words with similar meanings add needless bulk to writing.

It Is. No two words hurt writing more than the innocent-looking "it is." They stretch sentences, delay your point, encourage passive verbs, and hide responsibility. Unless "it is" refers to something mentioned earlier, write around "it is." For example,

> "It is necessary that you revise ruthlessly" becomes "You need to revise ruthlessly."
>
> "It is realized" becomes "We realize" or "I realize."

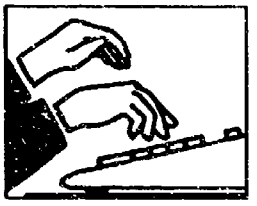
Less common but no less wordy are "there is" and "there are." For example,

> "There are two alternatives mentioned in the report" becomes "The report mentions two alternatives."
>
> "There is a helicopter pad on the ship" becomes "A helicopter pad is on the ship."

You can avoid most of these beginnings with just a little rewriting.

Smothered Verbs. Weak writing relies on general verbs, which take extra words to complete their meaning. When you write a general verb, see if a nearby word will make a more specific verb. Here are some common smothered (and unsmothered) verbs:

> "...held a meeting to give consideration to (consider)..."



"...made the decision (decided) to give consideration (consider)..."

"...made the decision (decided) to give their approval to (approve)..."

That And Which. Eliminate "that" and "which" from your writing. These words often do not help meaning or flow. Sometimes you can just drop either word:

"We believe 'that' the changes will help."

Sometimes you will have to rewrite slightly:

"A system 'which' is reliable" becomes "A reliable system."

The _____ion Of. Shorten words ending in "ion" when the context permits. For example,

"I recommend adoption of the plan" becomes "I recommend adopting the plan."

"We want the participation of the command" becomes "We want the command to participate."

Words ending in "ion" are verbs turned into nouns. Writing is shorter when verb (action) forms are favored over noun (static) forms.

Wordy Expressions. Wordy expressions do not give writing impressive bulk; they litter it by getting in the way of the words that carry the meaning. Verbs and nouns do the real work; long linking phrases do not deserve the attention they receive. So simplify forms of the following four common wordy expressions:

"In order to" becomes "to"

"For the purpose of" becomes "to"

"In the near future" becomes "soon"

"In the event that" becomes "if"

These wordy expressions and others appear in the section, "Simpler Words and Writing."

Hut 2-3-4 Phrases. Although you should cut needless words, sometimes you can go too far. Avoid building hut 2-3-4 phrases, i.e., long clusters of nouns and modifiers. Readers cannot easily tell what modifies what or when such clusters will end. You may have to use official hut 2-3-4 phrases like "air traffic control radar beacon system," but you can avoid creating unofficial ones. For example,

"Computer programs advance information" becomes "Advance information on computer programs."

"Rapid operational equipment distribution" becomes "Rapid distribution of operational equipment."

Specialized Terms. The overuse of specialized terms is false economy. Avoid your job's shorthand with outsiders, and use it no more than you must with the insiders. Spell out uncommon abbreviations and acronyms the first time they appear. If they will appear only twice, a good rule is to spell them out both times. The goal is to keep readers from pausing to decide your shorthand. Of course, spelling a strange abbreviation may not help much. Are you any closer to understanding SDI by knowing it means systemized dynamic interface? You will avoid using terms others do not understand by testing everything you write as if you were the reader.

Natural Writing

To avoid a bureaucratic style, make your writing like speaking. Because readers "hear" writing, the most readable writing sounds like people talking to people.

Begin by imagining your reader is in front of you. If you are writing to many different people and none in particular, picture one typical reader.

Once you have written a draft, read it aloud. Take the time to revise. For most of us, good writing really means good rewriting. It is worth the effort and will help the many who must read your writing.

RESPECT PLAIN WORDS. Use small words. "Issue" directives, do not "promulgate" them. "Start" things, do not "initiate" them. Readers may know "utilize" means "use" and "optimum" means "best," but why force them to translate? You sell yourself in your writing. Come across as a sensible person, someone who knows that good English is plain English.

USE SHORT TRANSITIONS. Prefer short, spoken transitions over long, bookish ones. Use

"But" rather than "however"

"Also" rather than "in addition"

"Still" rather than "nevertheless"

"So" more than "consequently" or "therefore"

The shorter transitions help set the right tone, a natural one, for the rest of what you say. Save the longer transitions for variety.

ASK MORE QUESTIONS. Reach out to your readers by asking questions. A request gains emphasis when it ends with a question mark (?). In a long report, a question can be a welcome change.

KEEP SENTENCES SHORT. For variety, mix long sentences and short ones, but average 20 words or less. Although short sentences will not guarantee clarity, they are usually less confusing than long ones.

Appendix C

To-the-Point Writing

Much writing follows a pattern of organization that is easy on writers but hard on readers. Most of us write the way we think, by leading up to our conclusions. From a reader's perspective, this is the clue-by-clue pattern of mystery stories. A more helpful pattern is that of newspaper articles, that open with the most important information and taper off to the least important.

OPEN WITH YOUR MAIN POINT. What is the one sentence you would keep if you could keep only one? That sentence is your main point. Whenever you can, start with that sentence.

Give commands before reasons, requests before justifications, answers before explanations, and conclusions before details. Readers need to know your main point early so they can appreciate the relevance of whatever else you say.

If no single sentence stands out, you may need to create one to keep from wandering aimlessly. Occasionally, as in a set of instructions or a reply to various questions, all your points may be equally important. In this case, start with a sentence that tells your readers what to expect: "These are the training quotas for FY 82."

USE SHORT PARAGRAPHS. Important ideas are swamped in long paragraphs. Cover one topic completely before starting another, and let a topic take several paragraphs if necessary. Keep paragraphs short, down to roughly four or five sentences. Long paragraphs will divide where your thinking takes a turn. By adding white space, you make reading easier.

Call attention to lists of items or instructions by displaying them in sub-paragraphs. When topics vary widely, use headings to catch your reader's eye.

WRITE STRONG SENTENCES. Write emphatic sentences. For example,

> Not: Reference (a) proposed double coding 21 Navy billets. The rationale was that these billets then would have more candidates. This proposal is supported.
>
> But: We support double coding 21 Navy billets, which reference (a) proposed.
>
> Or: We support the proposal in reference (a) to double code 21 Navy billets.
>
> Or: We support the referenced proposal to double code 21 Navy billets.

The "not" example wrongly gives the reference a major role as the subject of an independent clause. The remaining examples give the reference its proper minor roles first in a dependent clause, then in a phrase, and finally

in a single adjective. As emphasis on the reference decreases, emphasis on important ideas increases.

Emphasis also increases on words that begin and end sentences. For example, the following sentence stresses "soon":

"The course will be given to middle and senior managers soon."

"Soon" would receive less emphasis if placed in the middle of the sentence. If "soon" were the opening word, its emphasis would be compounded by its placement and the reversal of normal work order. Begin and end sentences with any words you like, but keep in mind that you can make important ideas stand out by positioning them strategically.

KEEP LISTS PARALLEL. In lists, stay with one pattern. By avoiding interruptions, you set up expectations that make reading easy. Violations of parallelism occur most often when writers mix the following:

Things and actions

Statements and questions

Active instructions and passive ones

The headings in this section form a list of active instructions. The idea is to be consistent. Make ideas of equal importance look equal.

After you have mastered this kind of parallelism, go on to subtle forms that involve balancing words with words, phrases with phrases, and clauses with clauses. You will find them discussed in any grammar text.

Active Writing

Write actively most of the time. Over 75 percent of the verbs in magazines and newspapers are active. Many writers, however, make 75 percent of their verbs passive. As a result, much writing is wordy, roundabout, and sometimes confusing.

PUT 'DOERS' BEFORE VERBS. To spot passive verbs, look for any form of "to be" plus the past participle of a main verb (a verb usually ending in "-en" or "-ed"). For example

Was inspected

Has been left

Is being anchored

May be chosen

Sentences written with passive verbs are wordy and roundabout. They reverse the natural, active order of English sentences. In the passive example below, notice how the receiver of the verb's action comes before the verb and the doer comes after:

Active: The skipper *inspected* the ship.

(doer) (verb) (receiver)

Passive: The ship *was inspected* by the skipper.
(receiver) (verb) (doer)

Besides lengthening and twisting sentences, passive verbs often muddy them. Whereas active sentences must have doers, passive ones are complete without them:

Nominations must be approved beforehand. By whom?

Plans are being made. By whom?

You will be notified. By whom?

To avoid most passive verbs, find the doer of the verb's action and put it before the verb. By leading with the doer, you automatically will follow with an active verb:

Supervisors must approve the nomination beforehand.

We are making plans.

I will notify you.

You can sometimes avoid a passive verb without rearranging the sentence. Simply change the verb or drop part of it:

arrived.
Your request ~~has been received~~.

Annapolis is ~~located~~ in Maryland.

Write passively now and then—when you have a good reason not to say who or what does the action; readers understand the passive voice faster than the active voice, when passives are appropriately used.

WRITE DIRECT INSTRUCTIONS. Instructions deserve special attention because we write so many of them, often with so many passives. When describing how to do something, talk directly to your readers by leading with verbs. Imagine someone has just walked up to you and asked what to do.

All safes will be checked. ——➤ Check all safes.

Each dial must be spun. ——➤ Spin each dial.

To improve instructions further, apply these next techniques:

State rules before exceptions.

Stress important points.

Choose exact words.

Say who does what.

Give examples for difficult ideas.

Divide processes into small steps.

Use headings, subparagraphs, parallel lists.

Answer likely questions.

Test your material.

Rewrite to avoid ambiguity.

Avoidance of Sexually Biased Language

Use the following guidelines to avoid language that is sexually oriented:

Avoid the use of sex references in job titles. For example: crew member vs. crewman or employee vs. workman.

Avoid the use of male and female gender word forms: For example, aviator vs. aviatrix.

Include both sexes by using terms that refer to people as a whole. For example, human beings vs. mankind.

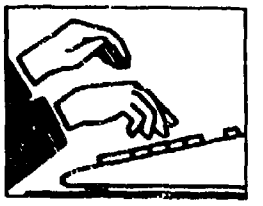
Avoid the use of masculine and feminine pronouns and adjectives in referring to a hypothetical person or persons. For example, "The average American worker spends 20 years of his life in the work force" can be changed to "The average American spends 20 years in the work force," or "Most Americans spend 20 years of their lives in the work force," or "An average American spends 20 years of his or her life in the work force." In the first example, the sentence has been reworded to eliminate unnecessary gender pronouns and adjectives; in the second, the sentence is recast in the plural form; and in the third, masculine or feminine pronouns are replaced.

Refer to both men and women in such generic terms as economist, doctor, or lawyer. Identify sex through pronouns. For example, "The lawyer made her final summation."

Avoid the use of stereotyped terms or expressions such as man-sized job; use employee-hour versus manhours or manyears.

Avoid the generic he (this is usually used after terms such as reader or employee). Avoid this by pluralizing the antecedent, pluralizing pronouns while leaving antecedents singular, using both he and she, or recasting the sentence.

Appendix C



Simpler Words and Writing

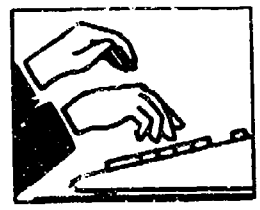
Writing does not demand big words or fancy phrases. Write naturally—in words you speak with. Those words are usually small. The basis of English is in its small, often one-syllable words. Not only do they save typing and reading time, they make writing livelier and ideas clearer.

Word	Alternative
accompany	go with
accomplish	carry out, do
accomplish (a form)	fill out
accordingly	so
accrue	add, gain
accurate	correct, exact, right
achieve	do, make
actual	real
additional	added, more, other
address	discuss
adjacent to	next to
advantageous	helpful
advise	recommend, tell
afford an opportunity	allow, let
aircraft	plane
anticipate	expect
a number of	some
apparent	clear, plain
appear	seem
appreciable	many
appropriate	proper, right
approximately	about
as a means of	to
ascertain	find out, learn
as prescribed by	under
assist, assistance	aid, help
attached herewith is	here is
attempt	try
at the present time	now
be responsible for	handle
benefit	help
by means of	by, with
capability	ability, can
category	class, group

Word	Alternative
caveat	warning
close proximity	near
cognizant	aware, responsible
combined	joint
comply with	follow
component	part
comprise	form, include, make up
concerning	about, on
conclude	close, end
concur	agree
confront	face, meet
consequently	so
consolidate	combine
constitute	merge, join, combine
construct	build
contains	has
continue	keep on
contribute	give
deem	think
delete	cut, drop
demonstrate	prove, show
depart	leave
designate	appoint, choose, name
desire	wish
determine	decide, figure, find
develop	grow, make
disclose	show
discontinue	drop, stop
disseminate	issue, send out
due to the fact that	due to, since, as
echelon	level
effect	make
elect	choose, pick
eliminate	cut, drop, end
employ	use
encounter	meet
encourage	urge
endeavor	try
ensure	make sure
enumerate	count
equitable	fair

Word	Alternative
equivalent	equal
establish	set up, prove, show
evaluate	check, rate, test
evidence	show
evident	clear
examine	check, look at
exhibit	show
expedite	hurry, rush, speed up
expeditious	fast, quick
expend	pay out, spend
expense	cost, fee, price
expertise	ability, skill
explain	show, tell
facilitate	ease, help
factor	reason, cause
failed to	did not
feasible	can be done, workable
females	women
final	last
finalize	complete, finish
for a period of	for
for example	such as
forfeit	give up, lose
for the purpose of	for, to
forward	send
function	act, role, work
furnish	give, send
herein	here
however	but
identical	same
identify	find, name, show
immediately	at once
impacted	affected, changed, hit
implement	carry out, do
in accordance with	by, following, under, according to
in addition	also, besides, too
in an effort to	to
inasmuch as	since
in a timely manner	on time
inception	start
in conjunction with	with

Word	Alternative
in consonance with	agree with
incorporate	blend, join, merge
incumbent upon	must
indicate	show, write down
indication	sign
initial	first
initiate	start
in lieu of	instead of
in order that	for, so
in order to	to
in regards to	about, concerning,
in spite of the fact that	despite
interface with	deal with
interpose no objection	do not object
in the amount of	for
in the event that	if
in the near future	soon
in view of	since
in view of the above	so
justify	prove
legislative	law
liaise with	coordinate, talk with
limited number	few
limitation	limits
locate	find
location	place, scene, site
magnitude	size
maintain	keep, support
majority	greatest, longest
males	men
methodology	method
minimize	decrease, lessen, reduce
modify	change
monitor	check, watch
nebulous	vague
necessitate	cause, need
nonconcur	disagree
notify	let know, tell



Word	Alternative
not later than	by
numerous	many, most
objective	aim, goal
obligate	bind, compel
observe	see
obtain	get
operate	run, work
operational	working
optimum	best, greatest, most
option	choice, way
parameters	limits
participate	take part
perform	do
permit	let
personnel	people, staff
pertaining to	about, of, on
point in time	point, time
portion	part
position	place, put
possess	have, own
practicably	practical
preclude	prevent
prepared	ready
previous	earlier, past
prioritize	rank
prior to	before
probability	chance
procedures	rules, ways
proceed	do, go on, try
proficiency	skill
programmed	planned
promulgate	announce, issue
provide	give, say, supply
provided that	if
provides guidance for	guides
purchase	buy
pursuant to	by, following, under
reason for	why
recapitulate	sum up
reduce	cut
reflect	say, show

Word	Alternative
regarding	about, of, on
relating to	about, on
relocation	move
remain	stay
remainder	rest
remuneration	pay, payment
render	give, make
request	ask
require	must need
requirement	need
reside	live
retain	keep
review	check over
selection	choice
shortfall	shortage
similar to	like
solicit	ask for
state	say
state-of-the-art	latest
subject	the, this, your
submit	give, send
subsequent	later, next
subsequently	after, later, then
substantial	large, real, strong
sufficient	enough
task	ask
terminate	end, stop
therefore	so
therein	there
there is	exist
thereof	either
timely	prompt
time period	(either one)
transmit	send
transpire	happen, occur
until such time as	until
(the) use of	use
utilize, utilization	use

Appendix C

Word	Alternative
validate	confirm
value	cost, worth
verbatim	exact
viable	practical
vice	instead of, versus
warrant	call for, permit
whenever	when
whereas	since
with reference to	about
with the exception of	except for
witnessed	saw

APPENDIX D
GUIDELINES FOR PREPARING PRESENTATIONS

Introduction

Presentations are valuable tools for communicating scientific and technical information. As a Navy scientist or engineer, you will often be required to give presentations to a variety of audiences. These audiences can include your colleagues at a professional meeting or symposium, your sponsors, your activity's managers, or university students. The purpose of these presentations will be to inform others of your work, influence decisions or actions, or inspire others.

The following guidelines will help you with your presentation.

How To Plan And Organize Your Presentation

Use the following guidelines to plan and organize your presentation:

Determine the Purpose of Your Presentation: Be able to state in one concise sentence why you are making the presentation.

Analyze Your Audience: How many people will attend? What is their background? What is their attitude toward the material you will be presenting?

Prepare a Plan: What is the main idea or concept you want to present? What supporting material is required?

Select Your Resource Material: Submit all material to the "why" test, i.e., why am I including this material in my presentation?

Organize Your Presentation: Organize your presentation into opening (introduction), body (main ideas you want to present), and closing (conclusion). Allocate approximately 15 percent of your time to the opening; 75 percent to the body; and 10 percent to the summary (closing).

Practice: Rehearse your presentation many times.

How to Analyze Your Audience

When planning your presentation, you must first analyze your audience. Without an audience analysis, you cannot make the correct decision about

what material should be included in your presentation. Use the following questions as guidelines in your analysis:

How much does the audience know about the subject-matter you will be discussing?

Is the audience at the decision-making level?

What language does the audience best understand: technical, business, financial, everyday English?

Are there leaders in the audience who could sway the entire audience?

Should you address the whole group or only certain members of the group?

What are their reasons for attending your presentation?

What information or technique is likely to gain their attention?

What information or technique is likely to cause negative reactions?

What is the audience's attitude: friendly, unfriendly, or neutral?

Will they be in a hurry to leave?

Is opposition or debate anticipated?

Is bias, either pro or con, anticipated?

How to Select Resource Material

Use the following guidelines to select the resource material to include in your presentation:

Why are you giving this presentation? What is its purpose?

How do you want your audience to respond? What do you want them to do?

What information and what amount of detail are necessary for you to meet your objectives?

How will you present your information? What presentation method will you use?

What material will you withhold for your question-and-answer period?

Also remember to submit all resource material to the "why" test, i.e., question the reason for including the material in your presentation.

Appendix D

How to Use Presentation Visual Aids

Data show that audiences retain verbal information accompanied by presentation visual aids much better than they retain either visual data alone or verbal data alone (figure D1). In addition, other data on how humans absorb information (figure D2) show that 82 percent of information is absorbed visually, while 11 percent is absorbed through hearing. Smell, taste, and touch account for the remaining 7 percent. Visualization also encourages organization and decreases misunderstandings.

Your presentation aids should illustrate, focus attention, and clarify. General rules to follow when creating these aids include

Keep them simple.

Make them readable.

Use key words.

Use a consistent style.

Place only one major point on each presentation aid. You can, however, include up to seven subpoints.

Always remember your audience. The basic requirement for a presentation aid is that the information presented can be read by everyone in the audience. The message must be conveyed simply and quickly.

Translate complex ideas into a simple form, e.g., a pie chart.

Work toward using the fewest and shortest words possible. The fewer the words, the better your idea will be understood. For example—

Eliminate all unnecessary qualifiers (words or phrases that modify, qualify, or limit other words or phrases).

Reduce connectives (and, or, for, but, yet, not). Use commas and ampersands.

Limit your total word count to 25 or less on each presentation aid. (This does not include the title.)

Keep your titles short and meaningful. Long, rambling titles tend to introduce long, rambling messages.

Round off figures.

Break your presentation aids into sections. If your message must exceed 25 words, put each section on a separate presentation aid.

Limit the number of diagrams or pictures. If you have a specific diagram or illustration, as well as text material, limit the presentation aid to one diagram or illustration.

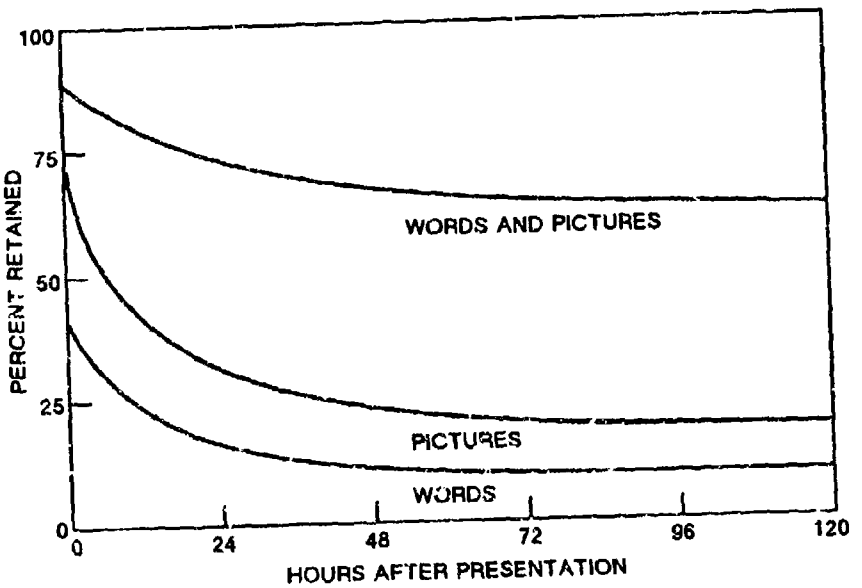


Figure D1. Retention of information by audience.

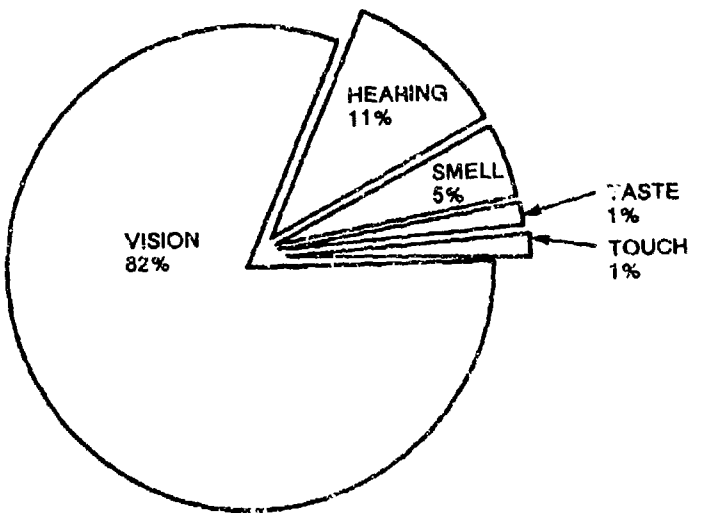
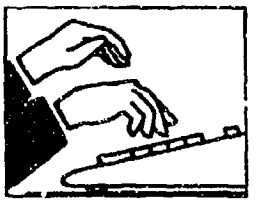


Figure D2. How humans absorb information.



The types of presentation aids you can use include

- Boards
- Pictorials
- Charts
- Models or mockups
- Projections—slides or viewgraphs
- Handout materials
- Auditory aids
- Flipcharts
- Chalkboards
- Videotapes

How to Develop Your Presentation

Almost all presentations consist of three main parts:

1. An opening or introduction that states your main idea.
2. A body that develops the idea.
3. A summary that restates the idea.

Each of these major parts serves a very specific purpose and requires a distinct approach (figure D3).

OPENING OR INTRODUCTION. The introduction convinces the audience to listen to your presentation and states your main idea. This can be accomplished with one of the following approaches:

An important statistic related to the subject. The statistic should gain the immediate interest and attention of the audience.

A direct statement that states the subject and tells the audience why it is important.

A relevant story that will capture the interest of your audience.

A quotation that relates to the subject (one that is meaningful to the audience and will establish rapport between them and you).

A comparison or example that leads directly to the subject.

An indirect statement, i.e., an indirect opening on some interest of the audience that is connected to your purpose in making the presentation.

Guidelines for Preparing Presentations

TITLE or SUBJECT: _____

PURPOSE (State in one clear, concise sentence) _____

_____

_____

OPENING: _____

_____

_____

BODY:

Main Ideas or Concepts:

1. _____

_____

2. _____

_____

3. _____

_____

Information necessary to support the main idea or concept:

Idea 1 _____

_____

_____

_____

Idea 2 _____

_____

_____

_____

Idea 3 _____

_____

_____

_____

CLOSING: SUMMARY — The points made:

1. _____

2. _____

3. _____

The RECOMMENDATIONS: _____

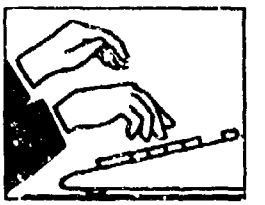
OR the CONCLUSIONS: _____

Therefore, the action I want from you: _____

_____

_____

Figure D3. Presentation outline.



BODY. Here your major ideas or topics must be expanded upon, enlarged, and developed as required to accomplish the objective of the briefing. Again, this must be done in a logically motivated sequence or progression.

Support Your Main Points. There are seven forms of support you can use to reinforce the main idea or concept of your presentation:

Explain your ideas.

Use analogies or comparisons.

Illustrate your points by using detailed examples that support statements or ideas, stories to emphasize an idea, a narrative, or hypothetical or factual illustrations.

Use specific instances. These can either be condensed forms of factual examples or undetailed examples. You can use more than a single instance to support each point.

Use statistics to show proportions of certain instances, or use data relating to how many, how few, or how small.

Use the testimony of a known expert to support an important point or points.

Restate your ideas. This provides strength from the power of repetition.

Arrange Your Ideas in Sequential Patterns. Choose one of the following patterns to organize the major ideas of your presentation:

Time sequence (effective for a presentation that is intended to inform)

Space sequence

Cause-effect sequence (effective for a presentation that is intended to influence action)

Theory or plan of action sequence

Special topical sequence: financial (assets and liabilities) and policy (advantages and objections)

Remember to use only one pattern for the major ideas of your presentation. You can use other sequences for subordinate points, but you cannot mix the patterns for the main points.

Connect Your Ideas. Connectives can be used to make your ideas move ahead smoothly. For example:

Internal summaries are breathing spaces between complicated main points. For example, "let's pause..." or "let's look back..."

Transitions show where you have been or where you are going. For instance, "in addition," "so much for," "what about?".

An internal preview introduces what will be the next topic of discussion. For example, "next we will..."

SUMMARY OR CLOSING. The summary is the third and final part of your presentation. At this point in the presentation, it is very important to inform your audience that you are starting to summarize or conclude the briefing. Indicate this strongly with such statements as

"Reviewing now what we have discussed ..."

"Now, let's summarize what we've discussed ..."

"Our objective today has been ..."

"Let us now review the main points that we have covered ..."

Any of these concluding statements places the progress of the speech in perspective and focuses the audience's attention on your closing statements. It is important that your closing be strong because the conclusion sums up and stresses the main idea that you want the audience to remember. The closing also integrates and ties together the major points in the presentation, and suggests agreement and asks the audience to take the appropriate action.

The conclusion can consist of a

Prediction—predicting the result of accepting your proposal or predicting what could result if your proposal is not accepted.

Illustration—describing the benefits of accepting your proposal by illustrating its advantages.

Quotation—using an appropriate quotation to gain acceptance of your objective.

Appeal for action—asking your audience to actively aid you in obtaining your goal.

How to Practice Your Presentation

The preparation of a presentation is definitely not complete until you have actually rehearsed the presentation in a practice session. There are three methods for doing this:

1. Use a tape recorder or audiovisual camera. This technique will allow you to objectively record and critique yourself.

2. Give a trial presentation to knowledgeable coworkers. This is more difficuilt than making the actual presentation, but it will give you the opportunity to test your presentation techniques and determine if your ideas have been received.

3. Give the presentation out loud to yourself. Be sure and use your notes and visual aids.

Appendix D

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APPENDIX E
DEFINITIONS

Case File: Project files that are used to retain other than narrative data, e.g., statistical data, sketches and drawings, administrative data, reports, and magnetic data.

Contractor: An individual or organization outside the U.S. government who has accepted any type of agreement or order to provide research, supplies, or services to a U.S. government agency. Includes both prime and subcontractors.

Contracted Fundamental Research: Research performed under grants or contracts funded by (1) budget category 6.1 (research) and performed by universities or industry or (2) budget category 6.2 (exploratory development) and performed on campus at a university.

Controlling DoD Office: The DoD activity that sponsored the work that generated the technical information or received the technical information on behalf of DoD and, therefore, has responsibility for determining the distribution availability of that information. For joint sponsorship, the controlling office is determined by advance agreement and may be either a party, group, or committee representing the interested activities or DoD components.

Critical Technology: Technology that consists of

> Arrays of design and manufacturing know-how (including technical data).
>
> Keystone manufacturing, inspection, and test equipment.
>
> Keystone materials.
>
> Goods accompanied by sophisticated operation, application, or maintenance know-how that would make a significant contribution to the military potential of any country or combination of countries and that could be detrimental to the security of the United States.

(Keystone equipment (including manufacturing, inspection, or test equipment) is the equipment specifically necessary for the effective application of a significant array of technical information and know-how. Keystone materials are materials specifically necessary for the effective application of a significant array of technical information and know-how.)

Defense Printing Service: DoD organization that provides printing, reprographics (duplicating), and micropublishing services to multiple customers on a cost-reimbursable basis.

Defense Technical Information Center: DoD's central repository for RDT&E information in all fields of science and technology.

Definitions

Distribution Statement: A statement used to mark a technical document to denote the extent of its availability for distribution, release, and disclosure. A distribution statement is in addition to a security marking and distinct from it.

Document: Any recorded information regardless of its medium, physical form, or characteristics.

Duplication: All work produced by offset, mimeograph, hectograph, high-speed electrostatic copying, or similar processes and all work produced by diazo, photostat, quick copy types of photocopying.

GIDEP: Government-Industry Data Exchange Program established to eliminate duplicate work in engineering, reliability and maintainability, failure experience, and metrology.

Information Repository: Databases, such as the Defense Technical Center, Navy Publications and Forms Center, and Defense Logistics Center, that perform a secondary distribution function.

Laboratory Notebook: Stock notebooks designed with technical and legal effectiveness in mind. Used by personnel engaged in RDT&E work to record narrative data resulting from their work. Subsequently used by the government in patent litigation.

Micropublishing: Production in microimage format of publications designated for conventionally printed material or for general distribution of such material. Does not include micropublishing of administrative records, accounting reports, or similar items for archival purposes.

Narrative Data: Handwritten notes that express novel concepts, conditions, tests, or plans of approach to problems, observations, modifications, formulae, unusual or significant phenomena, findings, results, and other items of interest expressed in narrative form. (Refers to information to be recorded in laboratory notebooks.)

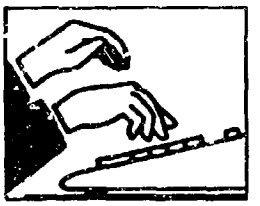
Presentation: Transmission of technical information by verbal and visual methods. Includes slides and viewgraphs used to amplify or outline the material under discussion.

Primary Distribution: Initial targeted distribution of—or access to—technical documents authorized by the controlling DoD office.

Printing: The processes of platemaking, presswork, binding, and items produced by such processes.

Proprietary Data: Intellectual property that a company has developed at its own expense and that it wants to control.

Public Release: Making technical data available without restricting its dissemination or use. This is equivalent to foreign disclosure, since no means are provided to restrict access or further dissemination.



Reprographics: All work produced by offset, mimeograph, hectograph, high-speed electrostatic copying, or similar processes and all work produced by diazo, photostat, or other types of quick photocopying.

Research: All efforts directed toward increased knowledge of natural phenomena and environment and efforts directed toward the solution of long-term defense problems in the physical, engineering, life, behavioral, and social sciences.

Research and Technology Work Unit Information System R&T(WUIS): A reporting system established by the Office of the Undersecretary of Defense for Research and Engineering to provide rapid exchange of technical and management data at the work unit level on DoD RDT&E efforts.

Scientific and Technical Information: Communicable knowledge or information resulting from--or pertaining to—the conduct and management of RDT&E efforts.

Scientific and Technical Information Program: A coordinated structure of STI functions. The objective of the program is to ensure that STI makes the best possible contribution toward the advancement of science and technology by (1) permitting the timely, effective, and efficient conduct of DoD RDT&E programs; (2) providing information to support management of RDT&E-related programs; and (3) eliminating unnecessary duplication of effort and resources by encouraging and expediting the interchange and use of STI.

Secondary Distribution: Release of technical documents after primary distribution. Included are loaning a document, allowing it to be read, or releasing it (in whole or in part).

Self-Service Copiers: Convenience copying equipment located in a readily accessible, uncontrolled environment.

Studies and Analyses: Recurring examinations of a subject undertaken to provide greater understanding of relevant issues and alternatives regarding organizations, tactics, doctrine, policies, force plans, strategies, systems, intelligence, weapons selection and mix, systems, programs, or projects. Such increased understanding leads to conclusions and recommendations contributing to planning, programming, budgeting, decision-making, and policy development, including those studies initiated by the program management office or for it. Also included are research and development of related database structures and models for the support of studies and analyses.

Technical Data: Recorded information related to experimental, developmental, or engineering work that can be used to define an engineering or manufacturing practice or to design, procure, produce, support, maintain, operate, repair, or overhaul material. The data may be graphic or pictorial

delineations in media such as drawings or photographs; text in specifications or related performance or design-type documents; or computer printouts. Examples of technical data include research and engineering data, engineering drawings and associated lists, specifications, standards, process sheets, manuals, technical reports, catalog-item identifications, and related information and computer software documentation.

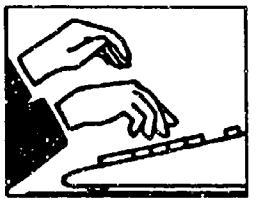
Technical Document: Any recorded information—regardless of physical medium—that conveys scientific or technical information.

Technical Information: Information, including scientific information, that relates to research, development, engineering, test, evaluation, production, operation, use, and maintenance of hardware, software, and/or technology that advances the state-of-the-art or establishes a new art in an area of significant military application. Included is information related to munitions and other military supplies and equipment.

Technology: Scientific or engineering efforts directed toward eliminating technical barriers and providing solutions to technical problems (excluding routine engineering) encountered in RDT&E programs.

Work Unit: The smallest segment into which research or technology efforts are divided for local administrative control. Each work unit has a specific objective, finite duration, and results in an end product.

APPENDIX F
REFERENCES



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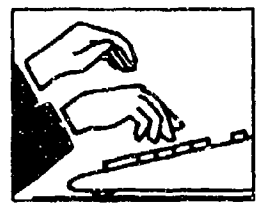

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