



**AIR FORCE RESEARCH LABORATORY
WRIGHT SITE
TECHNICAL INFORMATION DIVISION
AFRL WRIGHT SITE TECHNICAL EDITING GUIDE**

**Air Force Research Laboratory
Wright Site Guide to Technical Publishing**

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1. Introduction

This guide is prepared by the Air Force Research Laboratory (AFRL) Wright Site Technical Editing Office at Wright-Patterson Air Force Base (WPAFB), Ohio. The guide explains the process of editing and publishing scientific and technical reports and other documents. Instructions and examples of required forms and/or letters help in-house AFRL scientists, in-house engineers, and contractors to the Department of Defense (DoD) in the preparation of technical publications.

The primary goal of this guide is to provide information that aids in the creation of high quality publications. An effort is not complete until it is documented and the results distributed to the appropriate people.

More detailed information on technical publications can be obtained through the STINFO website, <http://www.wrs.afrl.af.mil/library/stinfo.htm> or by calling the Technical Editing office at DSN 785-5197, (937) 255-5197.

1.1 Editing Services

The technical editors and support staff provide guidance about completing and submitting forms that accompany technical reports (TRs), technical memos (TMs), and technical papers (TPs). The editing staff also reviews and provides various types of edits for technical documents to ensure that they are in full compliance with all AFRL requirements. They also assist in the archival, reproduction, and distribution of documents (paper and/or CD versions).

1.1.1 Types of Edit

Technical editors perform **compliance edits**, **compliance/print edits**, **full edits**, and **camera-ready edits**, as requested by document authors, contributing engineers, and/or project monitors.

1.1.1.1 Compliance Edit

Compliance edits seek to bring documents in line with basic AFRL requirements. No reproductive service is requested for documents that are edited for compliance only. After compliance is assured, one copy of the document is mailed to the Defense Technical Information Center (DTIC), where personnel make the documents available for requests. Another copy is routed to the AFRL vault, where it is archived, and one copy is mailed to the monitor for his/her case file.

Requests for this type of edit are indicated on the WL Form 79 (being revised) by checking the NO PRINTING (DTIC & Archive Only) box (see section 3.1 of this guide for more information).

Compliance edits ensure the presence and correctness of the following items:

- Cover/title page, SF 298, and Notice Page (as described in the ANSI/NISO Z39.18-1995 manual for scientific and technical reports)
- Table of Contents, List of Figures, List of Tables, and other front matter items
- Document distribution and warning statements, and reason codes for distribution
- Pagination (for example, the Table of Contents starts on page iii, and the main body starts on page 1).

1.1.1.2 Compliance/Print Edit

For compliance/print edits, editors not only check that documents are in compliance with AFRL formatting and information requirements, but also honor requests to print/reproduce multiple copies (monitors should note the number of copies needed, whether or not color is required, and the IMPAC POC name and phone number). In a compliance/print edit, the tech editor will send one copy to DTIC and place a copy in the AFRL archive vault, and they will also send one copy to the monitor.

Requests for compliance/print edits are indicated on the WL Form 79 by checking the COMPLIANCE CHECK & PRINT box.

1.1.1.3 Full Edit

Requests for full edits are indicated on the WL Form 79 by checking the EDIT, RETURN FOR CAMERA READY box. Full edits include all compliance edit checks, **plus** checks for the following:

- Front matter and cross reference integrity
- Spelling, grammar, and sentence construction
- Typographic clarity
- Format
- Mechanics.

After documents receive full edits, they are returned to the document monitor, along with a Letter of Transmittal. When recommended editorial changes have been made, the document is then considered camera ready.

1.1.1.4 Camera-Ready Edit

For camera-ready edits, a compliance edit is performed to ensure that all pages are sequenced and numbered correctly, that all referenced figures/photographs are present and correctly cross-referenced by number and title in the document's Table of Contents, and that all sections identified in the Table of Contents are included. Editors also ensure that the accompanying Letter of Transmittal is present and correctly indicates requirements for processing of pages in printed reproductions (see Appendix F for samples). If a major element is absent or incorrect, an editor will contact the monitor or author and make inquiries before proceeding.

Camera-ready material is assumed to be ready for printing and distribution, since all recommended editorial changes have been made. Camera-ready reports should follow specifications in the Contract Data Requirements List (DD Form 1423-1). They should be submitted unbound and suitable for offset reproduction (i.e., high quality originals with legible, clear lettering, and sharp line drawings and graphs/illustrations).

1.1.2 Types of Documents and Reports that are Edited

a. The most common type of document that is received by the Technical Editing Office is the technical report (TR). TRs are generated as a result of research and development conducted at WPAFB or sponsored by AFRL. A TR, per DoDI 3200.14, is any preliminary, interim, or final technical document (regardless of media) prepared to document detailed empirical findings and to publish the results of research. TRs are also a resource for making recommendations related to DoD-sponsored or cosponsored scientific, technical studies, or analytical work.

All research and development (R&D) sponsored in whole or in part by DoD activities must be documented and the documentation disseminated whether or not efforts resulted in a successful outcome. This includes in-house and contractual efforts.

b. The Technical Editing Office also accepts technical memos (TMs). Technical memos should be published to preserve or control information that is deemed unsuitable for publication as a TR. Materials published as TMs include (but are not limited to) the following: bibliographies, documented efforts of less than 15 pages, or working papers having permanent value.

c. The third type of report is technical papers (TPs). TPs include journal articles, conference or symposium proceedings, or lecture series books or a single chapter in a book. The decision on how and where to publish is made by the monitor/author within the established policy of DoD, USAF, AFRL, and respective organizations.

TRs and TMs may fall into several classes and distribution limitation levels (see section 1.1.3 of this guide for a description of the levels) and are accordingly afforded the appropriate security.

Editors do not evaluate or edit software **code**, though they do edit software user, programmer, and reference documentation. Guidance on release of software is provided in AFI 33-114, *Command, Control, Communications, and Computer (C4) Software Management*. Only the software developer or office of primary responsibility may release source code; secondary distribution is limited to the application software (the object code).

1.1.3 Security and Privacy Procedures

The editors comply with all security procedures indicated by the classification of documents submitted. Documents can be classified or unclassified. Classified documents can be either Confidential or Secret (Top Secret documents are not accepted at this time).

Only editors who have security clearance and have been trained in document security measures are permitted to edit classified documents. Proprietary documents are edited only by U.S. Government personnel.

1.1.4 Materials Used in Editing

The editors rely on several key reference materials when editing documents:

- *AFRL Wright Site Guide to Technical Publishing*
- *United States Government Printing Office Style Manual* (1984 and 2000 versions)
- ANSI/NISO Z39.18-1995 (ISSN: 1041-5653) *Scientific and Technical Reports—Elements, Organization, and Design* manual (and a version modified for documents generated for AFRL)
- *Merriam-Webster's Collegiate Dictionary* (Ninth and Tenth editions)
- *DoD Dictionary of Military and Associated Terms* (Internet version)
- *AP Dictionary of Science and Technology* (Internet version)
- DoDD 3200.12, *DoD Scientific and Technical Information (STI) Program (STIP)*
- DoDI 3200.14, *Principles and Operational Parameters of the DoD Scientific and Technical Information Program*
- AFI 61-202, *US Air Force Technical Publications Program*
- AFI 61-204, *Dissemination of Scientific and Technical Information*

2. Publication Cycle

The following table is the publication cycle, including the days allotted to each phase:

Table 1. Time Allotted to Phases in the Technical Report Publishing Cycle

Phase	Days Allotted
Report is written within 30 days following completion of technical effort.	30
Technical editor edits draft and returns to monitor.	60
Within 30 days, author incorporates editing changes into draft, and obtains signatures (monitor, supervisor, and 3-letter chief) on the Notice page.	30
Monitor submits camera-ready document to Tech Editing Office with a completed Letter of Transmittal, and editors proof the camera-ready copy for compliance, prepares a printing order, and submits the document to the Document Automation and Production Service (DAPS).	15
DAPS prints the required number of copies and returns all copies to the Technical Editing Office. The editor checks the printed copies and then returns the requested number of copies to the monitor.	30
Project monitor announces the availability of the report.	variable
The report is distributed; one copy is routed into the Det 1 AFRL/WSCL archives, and one is forwarded to the DTIC.	variable
Obsolete reports are retired.	<u>variable</u>
AFI 61-202 requires TR publishing to be completed within 180 days.	<u>180</u>

3. Submitting Document Drafts

The editors accept paper and electronic versions of documents for editing, printing, and distribution. Our equipment can read electronic media in the following formats: PDF, Microsoft Office Suite, CD-ROM, and diskettes. Editors can also reproduce (burn) CDs from supplied electronic media, and return original media to requestors.

Cost savings are a consideration in selecting electronic distribution over paper. Electronic media can also be distributed in a more timely fashion and eliminate the need to stockpile reports for anticipated requests. The editors prefer to have both paper and electronic versions of the same document (a paper copy is required for the AFRL archive vault).

Contact DAPS (DSN: 787-2838 or (937) 287-2838) for cost comparisons between electronic media and traditional paper publication of final documents, and for pricing information and quotes for specific printing jobs.

3.1 Forms and Major Elements Required for Submissions

For documents submitted to the Technical Editing Office, a variety of forms must be completed and attached to the submission. These forms, which are described later, include the following, based on the submission and the requested service:

- WL Form 79, Request for Editing and Publishing Support (mandatory for all documents submitted for the first time)
- Cover/Title Page (mandatory for all documents)
- Signed Notice Page (mandatory for all TRs)
- SF 298, Report Documentation Page (mandatory for all documents)
- Secret Report Receipt and Destruction Certificate (AF Form 310), which is mandatory for documents that are classified as Secret
- Public Affairs Release Letter (applicable to all documents with unlimited, unclassified distribution, and to Small Business Innovation Research (SBIR) Program Phase I TRs for which print requests are made)
- Printing Request (SF 843), which is completed for DAPS and supplied by the editors
- General permission letters required to be on file with monitors:
 - For SBIR TRs, which are presumed to contain proprietary information, a letter of permission from the TR contractor is required that waives proprietary rights if the contractor requests that the TR be generally distributed. The monitor must submit this waiver letter to the PA Office before a PA case number will be assigned.
 - For TRs in which copyrighted material appears, a letter of request for permission to use the material must be signed by the copyright holder.

3.1.1 WL Form 79

The WL Form 79 (Request for Editing and Publishing Support) lets authors, monitors, and other engineering contractors identify the TR and the type of edit required. It also identifies the security classification of material contained in the TR, and distribution limitations.

See Appendix C for an annotated sample of the WL Form 79 and instructions for completing it.

3.1.2 Cover/Title Page

The standardized cover/title page (see Appendix A for samples) is the reader's initial introduction to the document. Text concerning the security limitations of the material appears on the cover page and aids in preventing unsecured handling of the document. The following information should appear on the cover page:

- Report number (assigned by the editors)
- AFRL shield
- Title and subtitle
- Name or names of authors contributing to the document
- Performing agency: Contractor's complete address, including the zip code
- If in-house, the complete branch address
- Report date: Month and year of the document's desired publication
- Completion status of the TR: Interim or final
- Report period covered: The beginning through ending day, month and year of the project
- Distribution statements: Options range from unlimited distribution to no secondary distribution without specific approval of the originator. All reports that have not been approved by the Public Affairs (PA) Office for unlimited distribution must carry a limited distribution statement (see Appendix E, Distribution Statements and Reason Codes)
- Export control warning notice: All technical documents that contain export-controlled technical data must be marked as follows (for unclassified documents):

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 the provisions of DoD Directive 5230.25. (*Include this statement with any reproduced portions.*)

- Destruction notice: Documents containing export-controlled data must also bear either one or the other of the following statements:

For classified documents,

“DESTRUCTION NOTICE - Follow the procedures in DoD 5220.22-M, *National Industrial Security Program Operating Manual* (NISPOM), section 5-705 or DoD 5200. 1-R, Information Security Program Regulation, Chapter VI, Section 7.”

For unclassified, limited documents,

“DESTRUCTION NOTICE - Destroy by any method that will prevent disclosure of contents or reconstruction of the document.”

- Security classification: On classified reports, the security classification must appear centered in the header and footer of the cover page. Other security information should include classification authority, declassification schedule, and downgrading instructions unless the report contains Restricted Data (RD) or Formerly Restricted Data (FRD).

3.1.3 Notice Page

The notice page should include the text of special notices, such as SBIR rights, reproduction limitations, legal information, safety precautions, disclaimers, compliance with special regulations, or disposition instructions. If appropriate, include a review and approval statement, with appropriate signatures (monitor, supervisor, and three-letter chief). The notice page is not numbered. Appendix B contains sample notice pages, which can be used as templates.

3.1.4 Report Documentation Page

The Standard Form (SF) 298 (Report Documentation Page) is mandatory and should be numbered with a lowercase Roman i. Do not number the back of the SF 298 unless the abstract continues to the back. The SF 298 contains valuable bibliographic, accounting, and distribution statement information. The form also contains an area for writing an abstract, which is a concise, informative statement (maximum of 200 words) of the purpose, scope, methods, and major findings of the report, including results, conclusions, and recommendations. See Appendix D for an annotated sample of the SF 298.

3.2 Checklist for Submitting Documents to Technical Editing Office

Use one of the checklists shown in Table 2 when submitting work to the Technical Editing Office to ensure that all required forms are provided with document submissions.

Table 2. Technical Editing Checklists for Submitting Reports

Type of Edit	Step 1	Step 2	Step 3	Step 4
No Printing (DTIC) & Archive Only	Submit 2 copies of the document to DET 1 AFRL/WSCL (Technical Editing).	Ensure that the following forms and elements are completed correctly and included with the document: --WL Form 79 (new revised WRS Form 79 in progress) --Cover/Title Page --Signed notice page -- SF 298		
Compliance Check & Print	Submit 1 paper copy and 1 electronic copy (if available) of the document to DET 1 AFRL/WSCL (Technical Editing).	Ensure that the following forms and elements are completed correctly and included with the draft document: --WL Form 79 (new revised WRS Form 79 in progress) --Cover/Title Page --Signed notice page --SF 298	Indicate the following on the WL Form 79: --quantity of copies required for printing (CD and paper) --if color is required on paper --IMPAC cardholder point of contact (name and phone number)	
Full Edit	Follow the ANSI/NISO Z39.18-1995 standard when writing the draft of the document. Submit single-sided, double-spaced draft copy of the document to DET 1 AFRL/WSCL (Technical Editing).	Ensure that the following forms and elements are completed correctly and included with the draft document: --WL Form 79 (new revised WRS Form 79 in progress) --Cover/Title Page --Signed notice page (optional at this stage) --SF 298	Make changes within 30 days and return camera-ready copy to the Technical Editing Office, after indicating the following on the letter of transmittal sheet: --quantity of copies required for printing (CD and paper) --if color is required on paper --IMPAC cardholder point of contact (name and phone number)	
Camera-Ready	Ensure that the document has received a full edit. Submit single-sided, single-spaced camera-ready copy of the document with electronic copy (if available) to DET 1 AFRL/WSCL (Technical Editing).	Ensure that the following forms and elements are completed correctly and included with the camera-ready copy: --signed letter of transmittal --Cover/Title Page --Signed notice page --SF 298 --original graphics/halftones	Indicate the following on the letter of transmittal sheet: --quantity of copies required for printing (CD and paper) --if color is required on paper --IMPAC cardholder point of contact (name and phone number)	Get approval of PA case number and date on public release documents (other than 6.1-funded)

3.2.1 DOCUMENT SUBMISSION DECISION TOOL

Use this decision tool when preparing draft final reports for submission to the WRS STINFO Office for editing and publishing. Questions are asked, and the relevant block number on the WL 79, *Request for Editing and Publishing Support*, is listed if the answer needs to be recorded on the form. For editing and publishing guidance, visit <http://www.wrs.afrl.af.mil/library/sti-pubh.htm>.

QUESTION	Y	N	79	COMMENTS
Format and Related Considerations				
1. Is the format IAW with ANSI/NISO Z39.18, <i>Scientific and Technical Reports – Elements, Organization and Design</i> ?				The WRS CDRL for a final report requires that the standard be followed. The only exception is SBIR Phase 1 reports. For a copy of the standard, visit http://www.niso.org/standards/index.html . PowerPoint (PPT) slides are acceptable if placed in an appendix.
2. Is a compliance edit required?			7	Check either NO PRINT or COMPLIANCE CHECK & PRINT. A compliance edit is a review of a document for needed corrections and compliance with publishing policies and procedures.
3. Is a full edit required?			7, 22	Check EDIT; RETURN FOR CAMERA READY. A full edit is a comprehensive, word-by-word, line-by-line literary and mechanical edit of a document IAW with ANSI/NISO Z39.18, the <i>GPO Style Manual</i> , and the <i>WRS Guide to Technical Publishing</i> . Classified documents should receive a full edit. Indicate in block 22 if a light edit is only needed or an electronic edit is required.
4. Is printing required?			22	For a compliance edit, enter in block 22 the IMPAC POC and phone number, the quantity of CD and paper copies, and if color is required. For a full edit, include printing instructions when the camera ready is returned.
5. Are there any missing pages, sections, paragraphs, figures, etc.?				The document should be complete.
6. Is a digital copy included?				Digital retains color that is necessary to understanding the technical content of a document. It also allows ease of submission electronically through a DTIC secure web site.
7. Do all of the files on the digital copy open with a Microsoft or Adobe software application?			22	MS WORD is preferred for the body of the document. Indicate in block 22 if an accompanying file needs a particular software to open it.
8. Does the paper copy contain color?				Since color is integral to understanding technical content, submit a color copy for a compliance edit. It will be used as one of the distribution copies. A color copy is not needed for a full edit.
9. Is the contractor's document cover included?				An accurate contractor-generated cover is important because it displays any intellectual property notices, such as copyright and Govt. license rights. A regenerated cover is not necessary. See also section entitled Intellectual Property Considerations.

QUESTION	Y	N	79	COMMENTS
Format and Related Considerations				
10. Is the contract number or in-house effort entered?			1	
11. Is the program element number for the effort entered?			2	
12. Is the JON number for the effort entered?			3, 22	The JON is an alphanumeric code defined by the TD to best manage funds tracking of their R&D efforts and work units. It was commonly understood to be comprised of project, task, and work unit numbers. If the project and task numbers are no longer part of a TD JON number, please enter the numbers in block 22.
13. Is the contract monitor or in-house author, office symbol, and phone number entered?			4-6	
14. Is the title and subtitle, if applicable, entered?			8-9	If a DO contract, the basic contract title is the title and the DO title and number are the subtitle.
15. Are volume numbers, if applicable, entered?			9	Generally, the volumes in a set are assigned separate report numbers. The volume number is part of the subtitle.
16. Is the contractor's name or the office symbol for an in-house effort entered?			10	Enter the name of the performing contractor(s). If an in-house effort, enter the office symbol.
17. Is the type of report entered?			11, 22	Indicate in block 22 if the effort was terminated.
18. Is the report date entered?			22	Enter report date in block 22.
19. Are the inclusive dates entered?			12	Enter the period of performance for a technical effort, not the contract dates.
20. Is a completed SF 298, <i>Report Documentation Page</i> , included?			18	The SF 298 is an official record of the bibliographic information that identifies a particular document and forms the basis of the DTIC citation. The abstract and subject terms are two of the most important fields that should be completed by the performing organization.
21. Is the correct notice page included?			18	There are currently six standard notice pages. A notice page always includes the TD signatures, indicating publication approval, and may include a Govt. rights legend. For a full edit, submit the notice page when the camera ready is returned. For forms and guidance, visit http://www.wrs.afrl.af.mil/library/stinfo.htm .
22. Does the notice page include the appropriate signatures?				Signatures of the monitor or in-house author, supervisor, and 3-ltr chief should be included.

QUESTION	Y	N	79	COMMENTS
Intellectual Property Considerations				
23. Does the document contain proprietary information?				If Yes, proceed to Question 24. If No, proceed to Question 30.
24. Does the document contain proprietary information that the Govt. has SBIR or STTR data rights to use?			18, 22	If Yes, check either SBIR PHASE 1 or SBIR PHASE 2. If a STTR effort, enter STTR and phase number in block 22.
25. Does the document contain proprietary information that the Govt. has limited rights to use?			18	If Yes, check CONTAINS PROPRIETARY (<i>Limited Rights</i>).
26. Does the document contain information that the Govt. has Government Purpose Rights to use?			22	If Yes, enter in block 22.
27. Are all owners of proprietary information indicated?			22	A document may contain information owned by other than the performing contractor. All owners and the applicable Govt. license rights should be indicated (DFARS 252.227-7013, DFARS 252.227-7018). For example, a SBIR document may incorporate information from a large company. Different Govt. rights are assigned depending on whether or not the information was pre-existing or if it was the result of the SBIR effort. For DFARS guidance, visit http://www.acq.osd.mil/dpap/dars/dfars/index.htm
28. Is the correct notice page used?				The notice page should contain the appropriate rights legend. Documents with special license rights will be handled on a case-by-case basis. For notice pages and guidance, visit http://www.wrs.afrl.af.mil/library/stinfo.htm .
29. Are all pages, paragraphs, figures, etc. that contain proprietary information marked with the appropriate Govt. rights legend?				Pages, paragraphs, figures, etc. should be marked with the appropriate Govt. rights legend or other identifier (DFARS 252.227-7013(f)(1), DFARS 252.227-7018(f)(1)). The location of rights in the document is entered on the notice page. For DFARS guidance, visit http://www.acq.osd.mil/dpap/dars/dfars/index.htm
30. Does the document contain copyrighted material?			18	If Yes, proceed to Question 31. If No, proceed to Question 35. Answering No could indicate that the document is a paper written by a Government employee as part of that person's official duties and does not have copyright protection in the United States.
31. Is the document a conference paper or journal article?			22	Indicate in block 22 if it is a preprint (not yet published) or a reprint (in published format) and the name of the journal/conference, publisher, and date (reprint only). The copyright notice (owner and date) should be displayed on the first page of reprints. Preprints are subject to copyright and an appropriate notice will be added by the editor. See also Question 33.

QUESTION	Y	N	79	COMMENTS
Intellectual Property Considerations				
32. Is the whole document copyrighted?				The copyright notice should be entered on the contractor-generated cover.
33. Does the document contain incorporated copyrighted material?			22	Copyrighted material is often found in an appendix. If incorporated, indicate in block 22 the location in the document and all owners. The copyright notice should be displayed on the first page of each incorporated material. Journal articles and conference papers are often placed in an appendix of a final report. It is recommended that they be published separately with a Technical Paper (TP) report number, and a list of the publications placed in the final report.
34. Does the Govt. have a license or permission to use the copyrighted information?				Publications resulting from contracts may be copyrighted, so ensure that the Govt. receives a license or permission to use, which included dissemination. Also ensure that the Govt. receives a license or permission to use copyrighted material incorporated in a document. Without a license or permission, copyrighted material cannot be included into a WRS published document.
QUESTION				
Markings Considerations				
35. Is the classification of the document entered?			14	The choice is UNCLASSIFIED, CONFIDENTIAL, or SECRET. If a secret or confidential document, the editor will ensure that the document has the proper classified markings. Classified documents should receive a full edit.
36. Is a classification warning(s) entered?			15, 22	The choice is NF (NOFORN), RD (Restricted Data) and FRD (Formerly Restricted Data). If another warning applies, enter in block 22. The editor will ensure that any applicable warnings are applied.
37. Are there any constraints on the public distribution of the content?			19, 21	If No, assign Distribution Statement A and include the AFRL WS Public Affairs Case Number and date cleared. Proceed to Question 42. If Yes, proceed to Question 38.
38. Has the reason(s) for constraints on distribution been selected?			20	The first step is to choose the appropriate reason(s) for restricting the distribution. There are 10 authorized reasons and up to 3 may be selected. For guidance, visit http://www.wrs.afrl.af.mil/library/sti-dist.htm
39. Does the document contain export-controlled information?			18-20	Answer the following question. Does the information pertain to technical data as defined by the International Traffic in Arms Regulation, Part 120.10 (22 CFR 120)? If Yes, check CONTAINS EXPORT CONTROLLED INFORMATION and check either "Critical Technology" or "Direct Military Support (highest reason)" as the reason. For guidance on distribution statements and reasons, visit http://www.wrs.afrl.af.mil/library/sti-dist.htm . For ITAR guidance, visit http://www.pmdtc.org/reference.htm#ITAR .

QUESTION	Y	N	79	COMMENTS
Markings Considerations				
40. Has the appropriate restricted distribution statement been selected?			19	The second step is to choose the restricted audience by selecting a distribution statement. There are six choices, and the chosen statement must agree with the chosen reason(s). If Distribution Statement F or X is chosen, the editor will contact the submitter for further discussion. For guidance, visit http://www.wrs.afrl.af.mil/library/sti-dist.htm . [add other URLs]
41. Does the document contain software that can run a program?			18-20	If Yes, check CONTAINS SOFTWARE OR CODE. Only complete, executable code will be acknowledged. Distribution Statement B or E and the reason "Specific Authority (AFI 33-114)" should be assigned. For guidance on distribution statements and reasons, visit http://www.wrs.afrl.af.mil/library/sti-dist.htm .
QUESTION	Y	N	79	COMMENTS
Final Considerations				
42. Is the bibliographic information on the WL Form 79 and the SF298 in agreement?				Inconsistencies between the WL Form 79 and the SF298 is one of the major problems in a submissions package. The common bibliographic information on both forms should be the same.
43. Have the questions on this list been answered successfully and the WL Form 79 completed?				If Yes, congratulations. The document submission package is ready. If No, questions must still be addressed. The STINFO office staff is always available for assistance.

4. Technical Report Elements

In addition to the specialized forms that accompany the submission of each document, the presence of other elements is essential to the publication of high quality reports. The ANSI/NISO Z39.18-1995 publication provides approved guidelines for organizing and formatting technical reports. The ANSI standard describes the three major sections of a technical report—front matter, text, and back matter—and each subsection within the major sections.

Note: The elements described here are adapted from ANSI/NISO Z39.18-1995 (ISSN: 1041-5653) *Scientific and Technical Reports—Elements, Organization, and Design* manual.

Table 3 outlines these document elements in the sequence in which each should physically appear in the document:

Table 4. Document Section/Element Descriptions

Major Section*	Required Elements	Optional Elements	Explanation
Front Matter	Cover/Title Page		Protects printed report and provides information for description and bibliographic control (unnumbered)
	Notice Page		Calls attention to restrictions or limitations on distribution (unnumbered).
	Report Documentation Page (SF 298)—includes Abstract box		The SF 298 is filed in federal agency databases and contains document title, author name(s), filing numbers, report terms, abstract, and report classification. The front page is always numbered with a lowercase Roman i in the bottom center; backside of page is never numbered. The abstract briefly describes purpose, scope, and findings. The abstract should not contain undefined symbols, abbreviations, or acronyms. An abstract for a limited document should be unlimited and unclassified whenever possible.
	Table of Contents		Outlines the organization and sections in the document (always numbered Roman iii).
	List(s) of Figures and Tables		Required for five or more figures or tables or any combination thereof (Roman pagination continues).
	Abstract		Briefly informs of purpose, scope, and findings.
		Foreword	Written by someone other than the document's author, provides background or context for the report (Roman pagination continues).
		Preface	Announces purpose and scope; acknowledges contributions of nonauthors (Roman pagination continues).
		Acknowledgments	Used if acknowledgments are too lengthy to present in the Preface (Roman pagination continues).

Table 4. Document Section/Element Descriptions (Concluded)

Major Section*	Required Elements	Optional Elements	Explanation
Text Body	Summary		Summarizes the problem, results, conclusions, and recommendations (Arabic pagination starts at 1 and continues in sequence through the remainder of all sections in the document).
	Introduction		States subject, purpose, scope and plan for developing the document.
	Methods, Assumptions, and Procedures		Describes research methodology.
	Results and Discussion		Presents findings and discusses their significance.
	Conclusions		Presents substantiated findings, discusses their implications, and presents author's opinion.
		Recommendations	Suggests a course of action.
	References		Cites sources of information used by author(s) of the document.
Back Matter		Appendixes	Contains supplemental information not essential to the text.
		Bibliography (Publications)	Lists additional sources of information not cited in the text of the document.
	List(s) of Symbols, Abbreviations, and Acronyms		Contains explanations of symbols, abbreviations, and acronyms; required if there are more than five not readily recognized as standard.
		Glossary	Contains definitions of unfamiliar terms.
		Index	Lists major topics alphabetically; not required in reports of fewer than 50 pages.
		Distribution List	Required element for classified reports, the distribution list provides permanent record of initial distribution of report.
Misc.		Copyright and other Restrictions	Text that protects ownership rights.
		Errata	Text that identifies errors in the printed document.
		Typography	Description of the document's type sizes and type faces.
		Report Writing	Description of writing process.

*Each major section, whether required or optional, starts on a new page of the report.

4.1 Front Matter

Front matter consists of a combination of the following elements:

- WL Form 79
- Cover/title page
- Notice page (optional for work unit directives and technical papers)
- SF 298
- Table of Contents
- List of Figures and List of Tables (both optional if fewer than five combined)
- Foreword page
- Preface page
- Acknowledgments page

4.1.1 Table of Contents

A table of contents is mandatory for documents over 15 pages long, and the first page should be numbered with a lowercase Roman iii. The column headings should read Section, and Page. Only the first three section level headings are required, though including up to two additional subsection headings is acceptable. The headings should be listed exactly as they appear in the body text. Page numbers in the table of contents should accurately cross-reference the pagination of the report in its current, submitted form. The page numbers and section heading text will probably change as a result of editing.

4.1.2 List of Figures/Tables

A list of figures should appear on a new page following the table of contents. It is mandatory for documents that contain more than five figures or some combination of figures and tables totaling more than five. A list of tables is required if five or more tables appear in the document. Column headings on the List of Figures or List of Tables page should be written as follows: Figure (or Table) and Page.

For both figure and table titles, note only the identifying number in the Figure (or Table) column. The titles should be listed exactly as they appear in the body text. Page numbers should accurately cross-reference the pagination of the figures/tables in the report. The List of Tables may follow the List of Figures on the same page if both lists fit on the same page; otherwise, the List of Tables should start on the page following the List of Figures. The page numbers and title heading text may change as a result of editing.

4.1.3 Foreword

The foreword is an optional introductory statement that presents background material or that places in context a report that is part of a series. An authority in the field who is someone other than the report's author writes the foreword. A foreword precedes a preface, if both are included.

4.1.4 Preface

The optional preface includes necessary administrative information, such as the following:

- Contractor name and address
- Contract number

- Inclusive dates of research reported
- Project manager
- Office symbol
- Credit for use of copyrighted material
- Report numbers and titles of associated efforts.

The preface may also announce the purpose and scope of the document and acknowledge any contributions for individuals not identified as authors or editors. The preface is numbered consecutively in lowercase Roman numerals.

4.1.5 Acknowledgments

In the acknowledgments element, the author acknowledges significant technical assistance contributed to the content of the report. The acknowledgements page follows the preface, or the List of Tables page if a preface is not used.

4.2 Body Text

The body text section consists of a combination of the following elements:

- Summary
- Introduction
- Methods, Assumptions, and Procedures
- Results and Discussions
- Conclusions
- Recommendations
- References.

4.2.1 Summary

Use a summary to explain why the work was initiated, or to outline principal conclusions and recommendations. The summary usually presents more information than was contained in the abstract box on the SF 298. If supplied, the summary should be the first page of the text body. It clearly states the problem, the key points of the report, major results, conclusions, and recommendations. The summary should never introduce material not found elsewhere in the text.

4.2.2 Introduction

An introduction is required to acquaint the reader with the work being described and to show the relationship between the present task and previous or current work. It also indicates the value of the results achieved.

4.2.3 Methods, Assumptions, and Procedures

This required element includes information concerning materials, equipment, and techniques used, system of measurement used, and circumstances (environment, etc.) involved in the work. This allows individuals qualified in the field to reproduce the work in an attempt to achieve (replicate) similar results.

4.2.4 Results and Discussions

Present results and discussion in the results and discussions element, or separate this element and entitle the separate parts as *Results* and *Discussion of Results*. Address the degree of accuracy and the significance of the research results and provide information that substantiates conclusions. In an appendix, include the supporting details that are not essential to an understanding of results.

4.2.5 Conclusions

Include interpretations of findings and their implications (positive, negative, or neutral) in the mandatory conclusions element.

4.2.6 Recommendations

If recommendations are the logical outgrowth of the work, state them in a recommendations element so that they will have maximum visibility. Recommendations could include additional areas for study, alternative approaches, or specific design problems. It should be the last element in the major body text section.

4.2.7 References

Begin the references element on a new page that is also the last page of the report preceding the document's back matter. In the order that they were referenced in the body text, list full references to all outside sources of information used in the preparation of the work.

Note: On all unlimited documents, references cited must be in the public domain or have been cleared for public release. If limited documents are referred to in an unclassified, unlimited document, the following statement should accompany the reference: "Limited document [reason, i.e., critical technology], but no limited information from this reference has been included in this report."

CAUTION: Classified documents should never be referenced in an unlimited work.

Two formats for reference entries are common: the number-identification system, and the author-date format (alphabetical). In the number-ID system, reference entries are numbered consecutively with Arabic numbers in the Reference section (in the sequence in which their corresponding citations appear in the text) and fully identified. Within the body text, include the reference number inside brackets when citing the source.

In the author-date format, authors' names and year of publication are cited in the text in parentheses and keyed to an alphabetically arranged list of references.

Include the following elements for each cited reference: full name of authors, title of work referenced, publication date and, if any are government documents, the National Technical Information Service (NTIS) or DTIC accession number (AD number). If no works were referenced in the document, exclude the reference element. Consult a style guide, and then format the reference entries in conformance with style rules.

4.2.7.1 General Guides to Building and Formatting a Reference Section

- Ensure that all items in the reference section are directly referenced and cited in the body text, and that any reference item not specifically referenced in the text appears in a bibliography section (unnumbered and alphabetically ordered).

- After preparing a reference section list, ensure that each item is correctly cited in the body text.
- Ensure that publication titles are spelled out completely.
- Enclose all article titles in quote marks (also titles of addresses, editorials, essays, papers, reports and studies).
- Exactly match the punctuation that appears in the title of the published work, though case may vary.

Use title case capitalization conventions in reproducing publication titles, in conformance with rules in a recognized style guide.

4.2.7.2 Citing Internet/World Wide Web

Citation styles for Internet publications are still evolving. Like most references, references to Web documents ideally should contain the name of an author, a title, and a date of publication. The nature of the document should be given in brackets immediately following the title, i.e., [Database], [Electronic data file], [FTP archive], [WWW document], etc.

For additional guidance, refer to the following Internet site for a variety of standards for referencing on-line documents in scientific publications:

<http://www.usd.edu/engl/citingsources.html>

4.3 Back Matter

The back matter section consists of a combination of the following elements:

- Appendices
- Bibliography
- List(s) of Symbols, Abbreviations, and Acronyms
- Glossary
- Index
- Distribution List.

4.3.1 Appendices

In appendices, include related and addendum material that is not essential to understanding body text material. Material in appendices provides detailed descriptions or explanations of points in the text, extensive test data, and complex and detailed justification of a report assumption. Appendices might also be used to explain derivations of unfamiliar formulas used in the text, tabulations referenced frequently throughout the report, details of special instrumentation, and lists of materials when contracts require that lists be included in the report. However, exclude information that logically belongs in the text.

4.3.1.1 Appendix Format

Type the appendix name and title centered at the top of the first page of the appendix, as the following example shows:

Appendix A

Title of Appendix

If there is only one appendix, identify it as the Appendix, not as Appendix A. If the appendix contains a table of contents, list of figures, or list of tables, the front matter element title (e.g., Table of Contents) will follow the appendix title on the same page.

For section and subsection headings within the appendix, write the appendix identification letter, the number of the section, a period, and then the heading of the section/subsection, for instance, **A1.2 Section Heading and Numbering Format in Appendices**. Use the same heading formats for the section level as used in the body text.

Number figures, tables, equations, and references in the appendices with the letter of the appendix, followed by a hyphen and the sequential number of the figure, table, equation, or reference in the appendix, starting at 1, e.g., **Figure A-1. An Illustrative Appendix Figure; Table A-1. An Illustrative Appendix Table**; and for reference citations, [A-1].

If there is only one appendix, titled Appendix, all tables and figures in that appendix are prefixed with A-, the “A” representing the word, Appendix. EXCEPTION: If an appendix contains an appendix, prefix the sub appendix title with the letter of the parent appendix, and continue alphabetic sequencing through however many appendices are included in the parent appendix, e.g., AA-1, AB-1, etc.

Each appendix should be referred to in the body text. Any references cited in an appendix must be listed as the last page of the appendix.

Appendix page numbering is a sequential continuation of the Arabic text page numbering.

4.3.1.2 Security Considerations in Appendices

In classified documents, text in the appendix page header and footer of the first page must indicate the highest classification that applies to any paragraph in that appendix. This practice applies to all other sections of a classified document.

If all material in an appendix is unclassified, indicate “This section is unclassified in its entirety” on the first page of the appendix, and include “UNCLASSIFIED” in the headers and footers of each page. Portion markings are unnecessary when using this method.

4.3.2 Bibliography

In the bibliography, include entries that describe additional supplemental material that was not specifically referenced in the body of the document. List bibliographic entries on a new page after the appendices, and include information similar to that included in the Reference section entries (authors’ names, date of publication, etc.). Arrange the entries alphabetically by author, and do not number them.

4.3.3 List(s) of Symbols, Abbreviations, and Acronyms

For more than 10 unfamiliar symbols, abbreviations, and acronyms combined, list full descriptions/definitions alphabetically by abbreviation on a new page following the bibliography page. When first introduced in the body text, completely write out abbreviations and acronyms, followed by the abbreviation or acronym in parentheses, and subsequently use the acronym/abbreviation in the body text.

4.3.4 Glossary of Terminology

Define unusual terms either in the text or as a footnote the first time they are used in the text. When many such terms are used, list them in alphabetical order with definitions.

4.3.5 Distribution List

Editors routinely provide the Distribution List page for classified documents. The distribution list provides the complete business mailing address of the individuals and organizations receiving copies of the report.

4.4 Miscellaneous

Miscellaneous matter consists of a combination of the following elements:

- Copyright and other restrictions (AFI 51-303)
- Limited rights
- Trade names
- Errata.

4.4.1 Copyright and Other Restrictions

Contractors are responsible for obtaining permission to use copyrighted material that appears in their documents. Brief excerpts from copyrighted material (other than material copyrighted by the contractor for which no permission is required) can be included in TRs without written permission of the copyright holder, if the use falls within the judicially recognized doctrine of fair use. In general, this doctrine permits use of limited portions of the material, such as quotations for scholarly purposes, which do not interfere with the copyright holder's expected economic return. Any doubt regarding the fairness of a particular use should be referred to the local Staff Judge Advocate.

The following conditions apply when using copyrighted materials:

- Copyright holders are often willing to give permission to the Government to use their material. The AFI 51-303 prescribes Air Force procedures concerning use of copyrighted material, and explains how to obtain permission. A sample letter for requesting permission from the copyright holder appears in Appendix N. Consult with the local Staff Judge Advocate if further assistance is needed.
- If the entire document is copyrighted, the report will be specifically identified, and the following statements shall appear: "© year and copyright owner's name," and "This work is copyrighted. The United States has for itself and others acting on its behalf an unlimited, paid-up, nonexclusive, irrevocable worldwide license. Any other form of use is subject to copyright restrictions."

See Appendix L for a sample request letter for permission to use copyrighted materials.

4.4.2 Limited Rights

Because the inclusion of limited rights restricts the distribution of a TR, use only such information that is mandatory to an understanding of the report. Prior to submitting the TR for editing, gain approval from the POC and author to use material covered by limited rights.

4.4.3 Trade Names

The indiscriminant use of a trade name in place of the proper descriptive term may turn the trade name into a generic term with loss of trademark protection to the owner. Accordingly, use trade names sparingly and with respect for the proprietary nature of the trade name. If a trade name must be used, include a suitable acknowledgment that the goods are sold under that trade name, or set off the term in quotation marks. Consult AFI 51-303 for full restrictions and instructions concerning trade names.

4.4.4 Errata

Errors are normally corrected during proofing. If an error is printed in the final copy, write an erratum that indicates the required corrections. The erratum is sent to all recipients of the original document.

4.5 Security and Warning Markings

In classified documents prepared according to DoD 5200.1-R/AFR 205-1, Information Security Program Regulation, each page, with few exceptions, and each paragraph must contain the classification of the material. When providing technical documents to personnel from another DoD activity, classification markings minimize the chance that DoD personnel might inadvertently give documents to inappropriate recipients.

CAUTION: Classified information and references WILL NOT be included in unlimited reports.

4.5.1 Front Matter Classification Markings

Documents may be classified to protect a compilation of information or the source of information rather than the information itself. In such cases, marking paragraphs or illustrations individually would be misleading. Instead, mark the overall classification of the report centered in the header and footer of the cover page and on the SF 298. Include an explanation of the basis for the assigned classification in the preface.

“Derived From” and “Declassify On” instructions must appear on the cover page of a classified document, unless the information is Restricted Data (RD) or Formerly Restricted Data (FRD). If a security classification guide is used to classify the document, cite by title, date of the guide, and any changes thereto. If multiple sources are used to classify a document, list them at the end of the report.

4.5.2 Header and Footer Classification Markings

In the page header and footer of all pages in a classified TR, state the highest classification that applies to any paragraph on that page.

If an entire section of a classified TR is unclassified, write, “This section is unclassified in its entirety,” on the first page of the section, and indicate “UNCLASSIFIED” in each page header and footer.

4.5.3 Paragraph/Heading Level Classification Markings

Security classification markings on classified documents are braced in parentheses and appear at the beginning of each element (heading, subheading, caption, paragraph, figure title, and table title) in the document's body text. Mark these elements individually with the appropriate classification of the information contained in that particular element. The following abbreviations are used: (U) for UNCLASSIFIED, (C) for CONFIDENTIAL, (S) for SECRET, and (S/NF) for SECRET/NOFORN.

The following is a sample¹ of how classification code markings should be made in classified documents:

SECTION

(U) INTRODUCTION

1. (S) FIRST POSITION HEADING

a. (C) Second Position Subheading

(1) (U) Third Position Subheading

(a) (C) Fourth Position Subheading

2) (U) Third Position Subheading

b. (U) Second Position Subheading

2. (C) FIRST POSITION HEADING

Portions of pages will not be left blank for the purpose of beginning a major paragraph or subsection on a new page. Warning notices for pages will be shown once in short form on the lower right side of the page (between the last line of text and the page number). Restrictive markings, such as NF for NOFORN, and FOUO (For Official Use Only), for paragraphs will be shown either in conjunction with the paragraph classification at the beginning of each paragraph or alone as the classification portion marking.

4.5.4 Figure/Table Markings

Indicate the classification level of figures on the upper left corner and lower right corner of the figure. Ensure the letters are larger than the print in the illustration so that the marking will be conspicuous (bold print) and will be reproduced on any copies made. Portion markings in parentheses are required between the figure number and the title.

¹ For illustration purposes only; flush left align section and subsection headings.
10/11/2005

Table Markings

Indicate the classification level of tables on the upper left corner and lower right corner of the table. Ensure the letters are larger than the print in the illustration so that the marking will be conspicuous (bold print) and will be reproduced on any copies made. Portion markings in parentheses are required between the table number and the title.

5. Standards for Submission of Technical Reports

The ANSI/NISO Z39.18-1995 standard suggests uniform presentation of visual and tabular matter, formatting, and pagination, and provides additional guidance concerning presenting numbers, formulas, equations, symbols, abbreviations, and acronyms. This standard is available free to DoD organizations from the following address:

Defense Printing Service Detachment Office
700 Robbins Avenue
Philadelphia, PA 19111-5094
Phone: (215) 697-2667
DSN 442-2667
FAX (215) 697-1462

The AFRL has developed supplemental guidelines to the ANSI/NISO Z39.18-1995 standard, which are described in this section.

5.1 Paper, Margin, Line Spacing, and Typeface Characteristics

At a minimum, use good quality 20-pound white bond stock paper (8 ½ by 11 inches) for all submissions. Maintain margins of at least 1 inch on all sides of text pages, and center the page number at least two lines below the last line of text copy. Do not use full text justification. The ANSI/NISO standard recommends that text be left justified, creating a ragged right margin.

For body text, use at least 11-point type, not exceeding 12-point type, and use the same font throughout the body text, with the exception of text in figure callouts and tables. Although any standard serif typeface is acceptable for body text, don't make extensive use of unusual type styles such as capitals, italic, and script. Excessive spacing between words and after punctuation is not acceptable.

Use high quality print—not ragged, broken, or light lettering. Include text on one side of the paper, using one and a half to double line spacing for drafts and single-spacing for camera-ready copy. Print the copy using a high-quality laser printer, and don't bind the pages.

5.2 Publication Formats—Reports in Parts and Volumes

Select the most economical method available for final reproduction of the report, and divide it into volumes if it contains more than 800 pages. Break volumes at the end of a major section of text, or at some other logical point. With each volume, include an SF 298, Preface (stating which volume it is and how many volumes are included in the TR), Table of Contents, and other appropriate front matter. Page numbering for subsequent volumes is a continuation from the immediately preceding volume.

Sometimes it may be desirable to publish a report on one subject, but in separate parts, each part available under separate cover. Beginning with the first part, include an appropriate statement in the Preface of each part outlining the situation. Use separate page numbering for each part.

5.3 Figure/Table/Page Numbering Conventions

5.3.1 Figure Numbering and Titling

Skip one blank line below figures, and center each line of the figure title, which should have the following format: Figure 1. Title. Number figures consecutively throughout the document (excepting figures in appendices) using Arabic numerals. Do not use sectional numbering that reflects the numbered section in which the figure appears. Use initial capitals on major words in the figure title and use consistent typeface and font size across all figure titles. The figure title should not be a complete sentence and should not end with a period. Any other nontitle text that appears in the figure title should be removed and reformatted as figure callouts, notes, captions, or body text.

For each continuation of a figure that spans several pages, write the full title under each segment of the continued figure: "Figure 1. Title (Continued)." On the last page of a spanned figure, write "Figure 1. Title (Concluded)." Give subtitles, designated (a), (b), (c), etc., to each part or view in a figure.

5.3.2 Table Numbering and Titling

Two lines above tables, centered, write the word, Table, followed by a space, and then the table number, followed by a period and the title of the table, centering all lines of the title. Number tables consecutively throughout the document (excepting tables in appendices) with Arabic numerals. Do not use sectional numbering that reflects the numbered section in which the table appears. Use initial capitals on major words in the table title and use consistent typeface and font size across all table titles.

Treat tables that span pages similarly to figures: write the full title on each portion of the table: "Table 1. Title (Continued)." On the last page of the spanned table, write "Table 1. Title (Concluded)."

5.3.3 Pagination

Number pages consecutively across all sections, including appendices. Center the page number at the bottom of each page.

5.4 Report Writing Tips

5.4.1 Heading Conventions

Divide text into logical major parts called sections and subsections. Designate each section/subsection with heading text that contains a sequential, sectional Arabic numeral that shows subordination of subsections, such as the following:

1. Methods and Materials (main heading)

Text that explains this level and introduces next heading level.

1.1 Design of Equipment (subheading level 1)

Text that explains this level and introduces next heading level.

1.1.1 Components of Equipment (subheading level 2)

Text that completes the topic idea or leads to next heading level.

On the same line as the section/subsection numeral, write the heading in initial capitals for major words, boldface the text, and align the numeral flush with the left margin. Consistently start the body text (or subheading text) after skipping one single-space line below the heading (about 6 points below). Start each major section division (main heading) on a new page (the first major body text element and section starts on a right side page).

5.4.2 Sentence/Paragraph Phrasing

Make sentences and paragraphs effective. Avoid long or short choppy sentences and paragraphs. Strive for good lead sentences, and achieve readability and emphasis by varying the types of sentences used. Write in the active voice, which is more direct and eliminates unnecessary words. Observe the difference in the following samples:

Active voice: “The AFRL/ML conducts research on nonnuclear conventional weapons.”

Passive voice: “Research of nonnuclear conventional weapons is conducted by AFRL/ML.”

Do not try to crowd a paragraph of information into one sentence; split long sentences into two or more sentences.

5.4.3 Word Form and Meaning

Explain specialized words and expressions, and write out acronyms at their first occurrence in the text (unless the first occurrence is in a constricted space, such as a table or figure). When Air Force nomenclature is used for equipment, use the official nomenclature first. A shortened name may be used throughout the report, if it is explained in a footnote or in parentheses after its first use.

5.4.4 Spelling and Grammar

Use correct, acceptable spelling. Carelessness can affect technical accuracy. Example: “adsorption” means something different from what “absorption” means.

Be sure that pronouns refer clearly to their antecedents. Misuse of references such as “this” and “it” can change or obscure technical meanings. Be sure that nouns and verbs agree in number.

Watch verb tenses. Generally, the work that is being described in the report has already been accomplished. Therefore, the most logical tense is the past tense when reporting the activity. However, use the present tense when a condition, a parameter, a physical law, etc., is true, exists, or is in effect without regard to the information in the report. Use future tense if conditions of the work remain applicable in the future.

Use adjectives instead of a series of nouns as adjectives. Reduce hyphenated nouns used as unit modifiers.

5.4.5 Mathematical Work

If the formulas and equations fit on one line, present in sentence form and punctuate for clarity and consistency. Never start a sentence with a formula or an equation. If the formula or equation does not fit on one line, set off from the text, making sure it is centered or indented, depending on its length; align a series of equations on the equality signs. Formulas and equations are always italicized whether included as part of the text or displayed. Place derivations of equations, methods of calculation, and other support mathematical work in an appendix

Consecutive equation numbers are enclosed in parentheses at the right-hand margin with a minimum of ¼ inch between the last term in the equation and the equation number.

When referring to equations in the body text, use the word, Equation, followed by its number; e.g., Equation 3.

5.4.6 Figure Format

Figures can be line drawings/illustrations or photographs.

5.4.7 Line Drawings and Illustrations

Observe the following considerations when designing figures:

- Treat figures consistently throughout a report.
- Prepare figures so that details and callouts (labels) will be clearly legible after final reduction; ensure that the text will be no smaller than 6 point for final reproduction.
- Do not add a border or a frame, or use background tones in line drawings unless they contribute substantially to clarity.
- Place illustrations as near as possible after the first text reference.
- For in-house reports, rough pencil line art may be submitted.
- Draw line drawings, schematics, graphs, sketches, etc., in India ink on white bond, art board, or vellum.
- Avoid color unless color adds more clarity than crosshatching, reverses, dots, or similar techniques that can be effective substitutes for color.
- Size:
 - Submit line drawings that are to be reproduced the same size as, or smaller than the original.

Note: Oversize art is any illustrative copy such as graphs, tables, schematics, etc., that is larger than the final page or the space provided. All reductions will be proportionate, dimension for dimension, to the nearest one-eighth of an inch.

- Whenever possible, avoid the use of oversized illustrations that must be folded. Often a large illustration can be divided to appear on facing pages. When foldouts cannot be avoided, begin them on a right-side page and number as one page. The reverse will be blank. The next page used will be an odd-numbered page.
- Unless it is not possible to do so and maintain readability, place illustrations so that they may be reviewed without turning the page sideways. If this is not possible, place the illustrations sideways so that they can be seen by rotating the page clockwise.
- Submit clean line art.

- Do not write company names, trademarks, corporate seals, or logos on illustrations. Mention company names in the body text when absolutely necessary for clarity and understanding of the material or in a comparative study.

5.4.8 Photographs

In addition to observing all guidelines for figures, consider the following when using photographs in figures:

- Submit digitized photographs.
- Do not type or write on photographs.
- When practical, crop or mask photographs to eliminate insignificant detail.
- Exclude distracting or excess details from photographs.
- Exclude people from photographs except for size comparison or when needed to point out or emphasize a part of the subject.

5.4.9 Table Format

Tables should be as simple as possible so that the reader can easily grasp the meaning of the data. Avoid vertical and horizontal lines whenever spacing can be used effectively.

Locate tables as near as possible after their first text reference except in special situations. To maintain readability, attempt to place tables so that they may be viewed without turning the page sideways.

Identify applicable units of measure or degrees in the table title, in the column headings, or in a note to save space in columns.

Use a horizontal line to separate the column boxheads from the body of the table. Avoid other vertical and horizontal lines wherever spacing can be used effectively.

5.4.10 Footnotes

Explanatory footnotes are included in a report only to clarify text information and should be as brief and clear as possible. To avoid preparing footnotes, incorporate material into the text by enclosing it in parentheses or by placing it in a separate paragraph.

When used to clarify information, footnotes are keyed to the text of the report with superscript Arabic numbers. Footnotes are placed at the bottom of a page and separated from the text by a 12-space horizontal line. The footnote marking sequence starts over on each new page. If a footnote runs longer than its page margin, it is completed at the bottom of the subsequent page, preceding any footnotes from the next page. When a footnote is needed to clarify tabular information, a superscript sequence of lowercase letters or symbols should be used to avoid confusion with text footnotes. Footnotes do not appear in the abstract on the SF 298.

Footnotes should be typed flush left at the foot of the page on which their reference numbers or symbols appear.

Example:

¹The Chicago Manual of Style (13th edition) provides additional information on footnoting.

The referenced footnote number or symbol in the text is typed a half-space above the appropriate line of text without any type of restrictive mark or punctuation. Footnotes to tables should be typed directly below the table.

Appendix A

Sample Technical Report Cover/Title Pages

This appendix contains sample Cover/Title Pages, starting on the following page.

Click on one of the following Directorates to get a usable template.

[Information Directorate](#)

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AFRL-VA-WP-TR-2005-XXXX

PUT YOUR TITLE HERE

William A. Crossley

**Purdue University
School of Aeronautics and Astronautics
West Lafayette, IN 47907-2023**



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A documents.

SEPTEMBER 2004

Final Report for 29 September 2000 – 31 May 2004

Approved for public release; distribution is unlimited.

STINFO FINAL REPORT

**AIR VEHICLES DIRECTORATE
AIR FORCE MATERIEL COMMAND
AIR FORCE RESEARCH LABORATORY
WRIGHT-PATTERSON AIR FORCE BASE, OH 45433-7542**

AFRL-PR-WP-TR-2004-XXXX

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**Purdue University
School of Aeronautics and Astronautics
West Lafayette, IN 47907-2023**

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SEPTEMBER 2004

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AFRL-IF-WP-TR-2004-XXXX

Put your title here



Roy B. Penwell

**ITCN, Inc.
591 Congress Park Drive
Dayton, OH 45459-4036**

FEBRUARY 2004

Final Report for 26 May 2003 – 23 February 2004

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Larry Fehrenbacher
David Palaith
Matthew Daniels

Technology Assessment & Transfer, Inc.
133 Defense Highway
Suite 212
Annapolis, MD 21401

SEPTEMBER 2003

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MAY 2004

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Appendix B

Sample Notice Pages

This appendix contains sample Notice pages, starting on the following page.

Click on one of the one of the following for a usable form.

Notice Page 1. (Unlimited Document - Distribution Statement A)

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This report has been reviewed by the Air Force Research Laboratory Wright Site Office of Public Affairs (AFRL/WS) and is releasable to the National Technical Information Service (NTIS). It will be available to the general public, including foreign nationals.

THIS TECHNICAL REPORT HAS BEEN REVIEWED AND IS APPROVED FOR PUBLICATION.

[signature of project monitor/in-house author]

[signature of supervisor]

[signature of three letter chief]

This report is published in the interest of scientific and technical information exchange and does not constitute approval or disapproval of its ideas or findings.

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Appendix C

WL Form 79 Sample

This appendix contains a sample WL Form 79.

[Click here for a usable form.](#)

REQUEST FOR EDITING AND PUBLISHING SUPPORT				REPORT NUMBER	
ROUTE	LEVEL	IN DATE	IN ED	OUT DATE	OUT ED
1. CONTRACT NUMBER		2. PROGRAM ELEMENT		3. JON	
4. MONITOR		5. SYMBOL		6. PHONE	
7. <input type="checkbox"/> NO PRINTING (DTIC & Library Only) send: SF 298, this FORM, signed Notice Page, 2 copies of report		<input type="checkbox"/> COMPLIANCE CHECK & PRINT send: SF 298, this FORM, signed notice page, mailing labels		<input type="checkbox"/> EDIT, RETURN FOR CAMERA READY send: SF 298, this FORM	
8. TITLE					
9. SUBTITLE					
10. CONTRACTOR					
11. TYPE REPORT <input type="checkbox"/> FINAL <input type="checkbox"/> INTERIM		12. INCLUSIVE DATES (MO/YR) FROM: _____ TO: _____		13. PAGE COUNT	
14. CLASSIFICATION <input type="checkbox"/> UNCLASSIFIED <input type="checkbox"/> CONFIDENTIAL <input type="checkbox"/> SECRET			15. WARNING <input type="checkbox"/> NF <input type="checkbox"/> RD <input type="checkbox"/> FRD		
16. DTIC EXEMPT <input type="checkbox"/> YES <input type="checkbox"/> NO		17. DTIC EXEMPT REASON			
18. Y N		Y N			
<input type="checkbox"/> <input type="checkbox"/> SF 298 INCLUDED		<input type="checkbox"/> <input type="checkbox"/> CONTAINS EXPORT CONTROLLED INFORMATION			
<input type="checkbox"/> <input type="checkbox"/> NOTICE/RELEASE PAGE INCLUDED		<input type="checkbox"/> <input type="checkbox"/> LAB DIRECTORS FUNDS USED			
<input type="checkbox"/> <input type="checkbox"/> CONTAINS LICENSE RIGHTS (SBIR)		<input type="checkbox"/> <input type="checkbox"/> SBIR PHASE 1 (send 2 copies)			
<input type="checkbox"/> <input type="checkbox"/> CONTAINS PROPRIETARY (Limited Rights)		<input type="checkbox"/> <input type="checkbox"/> SBIR PHASE 2			
<input type="checkbox"/> <input type="checkbox"/> CONTAINS SOFTWARE OR CODE		<input type="checkbox"/> <input type="checkbox"/> COPYRIGHT			
19. DISTRIBUTION STATEMENT (Check one)					
<input type="checkbox"/> A: Approved for public release, distribution unlimited					
<input type="checkbox"/> B: Distribution authorized to US Government agencies only (reason)(date of determination). Other requests for this document shall be referred to controlling DOD office.					
<input type="checkbox"/> C: Distribution authorized to US Government agencies and their contractors (reason) (date of determination). Other requests for this document shall be referred to (controlling DOD office).					
<input type="checkbox"/> D: Distribution authorized to Department of Defense and US DOD contractors only (reason) (date of determination). Other requests for this document shall be referred to (controlling DOD office).					
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<input type="checkbox"/> F: Further dissemination only as directed by (controlling office) (date of determination) or DOD higher authority.					
<input type="checkbox"/> X: Distribution authorized to US Government Agencies and private individuals or enterprises eligible to obtain export-controlled technical data in accordance w/DODD 5230.25 (date of determination). Controlling DOD office is (insert) _____					
20. REASON: (Check one)		<input type="checkbox"/> ADMINISTRATIVE OR OPERATIONAL USE		<input type="checkbox"/> FOREIGN GOVERNMENT INFORMATION	
		<input type="checkbox"/> CONTRACTOR PERFORMANCE EVALUATION		<input type="checkbox"/> PREMATURE DISSEMINATION	
		<input type="checkbox"/> CRITICAL TECHNOLOGY		<input type="checkbox"/> PROPRIETARY INFORMATION	
		<input type="checkbox"/> DIRECT MILITARY SUPPORT		<input type="checkbox"/> SOFTWARE DOCUMENTATION	
		<input type="checkbox"/> TEST & EVALUATION		<input type="checkbox"/> SPECIFIC AUTHORITY	
21. PA (Public Affairs) Number and Date Cleared:					
22. REMARKS:					
23. SUPERVISOR'S SIGNATURE					

Appendix D

SF 298 Sample Form

This appendix contains a sample SF 298. On SF 298 hardcopies, instructions may appear on the reverse side.

When completing the SF 298, verify that the page count on the SF 298 matches the actual number of pages in the camera-ready report. Missing pages will delay the final printing.

Number the front of the SF 298 as page i, but do not number the back of the SF 298.

Confine abstract text to the front portion of block 14. Use the back of the SF 298 only if necessary.

The form, modified slightly to fit, is presented on the following page.

[Click here for a usable form.](#)

SAMPLE

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
The 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 Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.					
1. REPORT DATE (DD-MM-YY) June 2002		2. REPORT TYPE Final (Interim or Terminated)		3. DATES COVERED (From - To) 02/24/2000 – 06/22/2002	
4. TITLE AND SUBTITLE PROBE TECHNOLOGY FOR LOW OBSERVABLE (LO) NONDESTRUCTIVE EVALUATION (NDE)				5a. CONTRACT NUMBER F33615-00-C-5201 (sample)	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER 62102F (sample)	
6. AUTHOR(S) Names of all authors associated with TR/TM/TP in the format that these names appear on the cover page.				5d. PROJECT NUMBER 4349 (sample)	
				5e. TASK NUMBER S5 (sample)	
				5f. WORK UNIT NUMBER 07 (sample)	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Full address, including departments/divisions/branches, of the contractor, company, or in-house organization who wrote the TR/TM/TP.				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) Materials and Manufacturing Directorate Air Force Research Laboratory Air Force Materiel Command Wright-Patterson AFB, OH 45433-7750				10. SPONSORING/MONITORING AGENCY ACRONYM(S) AFRL/MLLP	
				11. SPONSORING/MONITORING AGENCY REPORT NUMBER(S) AFRL-ML-WP-TR-2002-XXXX	
12. DISTRIBUTION/AVAILABILITY STATEMENT Distribution authorized to U.S. Government Agencies and their contractors; Critical Technology; June 2002. Other requests for this document shall be referred to AFRL/MLLP, Wright-Patterson AFB, OH 45433-7750.					
13. SUPPLEMENTARY NOTES Export control restrictions apply. Report contains color.					
14. ABSTRACT Insert abstract here. Use maximum of 200 words.					
15. SUBJECT TERMS separate, subject, terms, with, a, comma					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT: SAR	18. NUMBER OF PAGES 104	19a. NAME OF RESPONSIBLE PERSON (Monitor) John Smith 19b. TELEPHONE NUMBER (Include Area Code) (937) 255-1234
a. REPORT Unclassified	b. ABSTRACT Unclassified	c. THIS PAGE Unclassified			

Appendix E

Distribution Statements and Reason Codes

Distribution statements help to control the distribution of the documents based on the security restrictions of the information that appears in the documents or on a need-to-know basis. Per AF instruction 61-204, which provides guides for disseminating scientific and technical information, all technical documents that may be disseminated outside of the DoD must be marked with one of the seven distribution statements. Do not disseminate technical documents in draft or preliminary form without assigning distribution statements.

Distribution statements remain in effect until the controlling DoD office changes or removes them. Each controlling DoD office must establish a procedure for reviewing its documents periodically or when they receive a request for the document for possible changes or removal of distribution statements. For unclassified documents, the controlling DoD office must obtain public release determination according to AFD 35-1 before assigning distribution statement A.

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- Program management responsibility is transferred, addresses of designated controlling DoD offices are changed, or controlling DoD offices are re-designated
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After choosing an appropriate distribution statement, which must be stated on the WL Form 79, the SF 298, and the cover page, choose a code for the reason that the distribution statement was selected for the document. Not all reason codes are applicable for each distribution statement. Fill in the reason, the date of determination, and the controlling DoD office.

Distribution statement codes are optional for contractor-technical proposals or documents submitted in anticipation of award of contracts. The following is specific guidance for assigning distribution statements:

- Distribution statements A through X may be applied to unclassified Air Force technical documents, while only distribution statements B through F may be applied to classified documents.
- When a classified document is declassified, retain the original distribution statement until the controlling office either removes or changes the statement. When a classified document is declassified and has no distribution statement, handle the document as distribution F until the controlling office assigns a distribution statement.
- Mark and control scientific and technical documents that include contractor-imposed limited-rights legends and computer software that includes contractor-imposed restricted-rights legends according to subpart 27.4 [revised: 27.71] of the Defense Federal Acquisition Regulation Supplement.
- If the technical document is not intended for publication and does not have a cover or title page, stamp, print, or write the distribution statement on the front page of the document.

- When possible, put the portions of the document that contain information requiring distribution limitation in an appendix or separate volume to permit broader distribution of the basic document. Write the abstract on the SF 298 so that the information in the abstract will not have a limited distribution (i.e., that it is approved for public release).
- You must include distribution statements and export-control notices on newly created documents.
- You do not need to apply markings to technical documents that were created before the implementation of this instruction until someone asks for them. Mark and control them properly before disseminating them.
- When older documents contain superseded distribution statements, convert the statements as follows:
 - Assign distribution statements C, B, E, and F to technical documents bearing distribution statements 2, 3, 4, and 5 of superseded DoD Directive 5200.20, *Distribution Statements (Other than Security) on Technical Documents*, 29 March 1965, respectively.
- Do not reevaluate technical documents with distribution statements A and B of cancelled DoD Directive 5200.20, *Distribution Statements on Technical Documents*, 24 September 1970 or documents with distribution statements A-F contained in Secretary of Defense Memorandum "Control of Unclassified Technology with Military Applications," 18 October 1983.
- For the classified subcategory, Secret/NOFORN, only distribution statements E and F are valid.

E1. Distribution Statements

A. Approved for public release; distribution unlimited. (Does not require a Reason Code)
B. Distribution authorized to U.S. Government agencies only (reason) (date of determination). Other requests for this document shall be referred to (controlling DoD office).
C. Distribution authorized to U.S. Government agencies and their contractors (reason) (date of determination). Other requests for this document shall be referred to (controlling DoD office).
D. Distribution authorized to DoD and U.S. DoD contractors only (reason) (date of determination). Other requests for this document shall be referred to (controlling DoD office).
E. Distribution authorized to DoD components only (reason) (date of determination). Other requests for this document shall be referred to (controlling DoD office).
F. Further dissemination only as directed by (controlling office) (date of determination) or DoD higher authority.
X. Distribution authorized to U.S. Government agencies and private individuals or enterprises eligible to obtain export-controlled technical data in accordance with DoDD 5230.25 (date of determination). Controlling DoD office is (insert).

E2. Distribution Statement Reason Codes

REASON	STATEMENT					
	B	C	D	E	F	X
(No Reason Code needed for Distribution Statement A documents)						
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 may be applied to manuals, pamphlets, technical orders, technical reports, and other publications containing valuable technical or operational data.	X	X	X	X		
CONTRACTOR PERFORMANCE EVALUATION. To protect information in management reviews, records of contractor performance evaluation, or other advisory documents evaluating programs of contractors.	X			X		
CRITICAL TECHNOLOGY. To protect information and technical data that advance current technology or describe new technology in an area of significant or potentially significant military application or that relate to a specific military deficiency of a potential adversary. Information of this type may be classified. When unclassified, technology is export controlled .	X	X	X	X		
DIRECT MILITARY SUPPORT. The document contains export-controlled technical data of such military significance that release for purposes other than direct support may jeopardize an important technological or operational US military advantage. Designation of such data is made by competent authority in accordance with DoDD 5230.25.				X		
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 normally is classified at CONFIDENTIAL or higher in accordance with DoD 5200.1-R, and is export controlled .	X	X	X	X		
PREMATURE DISSEMINATION. To protect patentable information on systems or processes in the developmental or concept stage from premature dissemination.	X			X		
PROPRIETARY INFORMATION. To protect information not owned by the US 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.	X			X		
SOFTWARE DOCUMENTATION. Releasable only in accordance with DoDI 7930.2.	X	X	X	X		
TEST AND EVALUATION. To protect 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.	X			X		
SPECIFIC AUTHORITY. To protect export-controlled information not specifically included in the above reasons but which requires protection in accordance with valid documented authority such as Executive Orders, classification guidelines, DoD or DoD-component regulatory documents. When filling in the reason, cite "specific authority (identification of valid documented authority)."	X	X	X	X	X	

Appendix F

Sample Editor Transmittal Letters

This appendix contains two sample transmittal cover letters from Technical Editors to submitters of TRs, TMs, and TPs. The samples differ based on the classification of submitted materials.

The transmittal letters provide information to submitters about the edited copy and instructions for further work on the document. Return the Transmittal Letter with any edited report, and review the letter's checklist for the following items:

- If the document is destined for public release and not 6.1 funded, approval from the AFRL/WS [date and public release number] is needed.
- Review/approval by ASC/SYSR for all foreign address mailings must be noted.
- Monitor's signature is provided.
- Certification of contractor-imposed limited rights or right-to-view export-controlled information is evident, if applicable.
- IMPAC card holder name and phone number is included.
- Signed Notice Page. Three signatures are required: monitor, supervisor, and 3-letter Chief. Technical reports cannot be sent to printing without this signed document.

SAMPLE

**TRANSMITTAL LETTER
DISTRIBUTION STATEMENT A**

SAMPLE

MEMORANDUM FOR: AFRL/SNRP
Attn: (Monitor name)

04/10/03

FROM: DET 1 AFRL/WSCL (STINFO)
Bldg. 196, Room 1
Wright-Patterson AFB, OH 45433-7035

SUBJECT: Return of Edited Draft

1. Your report, AFRL-SN-WP-TR-2003-XXXX, is attached for review and correction. Please prepare and return a camera-ready copy of the report within 30 days in accordance with the CDRL. Include a signed notice page and return the report to DET 1 AFRL/WSCL (STINFO).
2. The following may apply when mailing copies of this report:

FOREIGN ADDRESSES - Must be reviewed and approved by ASC CXI, Foreign Disclosure.
3. Thank you for your cooperation. If you have any questions, please do not hesitate to call (55197).

(Editor Name)
Technical Editing
Technical Information Branch

1st Ind.,

Date _____

TO: Det 1 AFRL/WSCL (STINFO)

1. The attached approved camera-ready report is forwarded for printing. Please print the following quantities: paper copies ____ and/or *CDs _____. STINFO will add two required copies (CDs and/or Paper) to distribute to DTIC and the AFRL (Wright Site) archive.

2. If report contains color, is color required on paper copies? Yes ____ No ____

3. Check the appropriate requirements that have been met with this submission:

For printing payment, IMPAC cardholder has funds* and complete the following:

Name _____ Phone _____

A signed notice page is included (not required for technical papers and journal articles).

A completed SF298 is included.

I certify that this report has been approved/cleared for public release.

Assigned AFRL/WS number: _____ Date approved by AFRL/WS _____.

1 Atch
Camera-Ready Report

Monitor Signature

*If no funds, STINFO will generate its required copies and return materials/printing paperwork to submitting monitor's liaison.

SAMPLE

**TRANSMITTAL LETTER
LIMITED DOCUMENT**

SAMPLE

MEMORANDUM FOR: AFRL/SNRP
Attn: (Monitor)

04/10/03

FROM: DET 1 AFRL/WSCL (STINFO)
Bldg 196, Room 1
Wright-Patterson AFB, OH 45433-7035

SUBJECT: Return of Edited Draft

1. Your classified report, AFRL-SN-WP-TR-2003-XXXX, is attached for review and correction. Please return a camera-ready copy of the report within 30 days in accordance with the CDRL. Include a signed notice page and return the report to DET 1 AFRL/WSCL (STINFO).

2. The following may apply when distributing/ mailing copies of this report:

EXPORT RESTRICTIONS - All non government addressees must be registered with the Defense Logistics Services Center (DLSC) (<http://www.dlis.dla.mil/JCP>).

3. Thank you for your cooperation. If you have any questions, please do not hesitate to call (55197).

(Editor Name)
Technical Editing
Technical Information Branch

TO: Det 1 AFRL/WSCL (STINFO)

1. The attached approved camera-ready report is forwarded for printing. Please print the following quantities: paper copies ____ and/or *CDs _____. STINFO will add the required copies (CDs and/or paper) to distribute to DTIC and the AFRL(Wright Site) archive.

2. If report contains color, is color required on paper copies? Yes ____ No ____

3. Check the Appropriate requirements that have been met with this submission:

- For printing payment, IMPAC cardholder has funds* and complete the following:
Name _____ Phone _____
- A signed notice page is included (not required for technical papers and journal articles).
- A completed SF298 is included.

1 Atch
Camera-Ready Report

Monitor Signature

*If no funds, STINFO will generate its required copies and return materials/printing paperwork to submitting monitor's liaison.

**TRANSMITTAL LETTER
CLASSIFIED DOCUMENT**

MEMORANDUM FOR: AFRL/SNRP
Attn: (Monitor)

04/10/03

FROM: DET 1 AFRL/WSCL (STINFO)
Bldg 196, Room 1
Wright-Patterson AFB, OH 45433-7035

SUBJECT: Return of Edited Draft

1. Your classified report, AFRL-SN-WP-TR-2003-XXXX, is attached for review and correction. Please return a camera-ready copy of the report within 30 days in accordance with the CDRL. Include a signed notice page and return the report to DET 1 AFRL/WSCL (STINFO).

2. The following may apply when distributing/ mailing copies of this report:

EXPORT RESTRICTIONS - All non government addressees must be registered with the Defense Logistics Services Center (DLSC) (<http://www.dlis.dla.mil/JCP>).

CLASSIFIED INFORMATION – Addressees must have the required individual or facility clearances and Storage facilities.

3. Thank you for your cooperation. If you have any questions, please do not hesitate to call (55197).

(Editor Name)
Technical Editing
Technical Information Branch

TO: Det 1 AFRL/WSCL (STINFO)

1. The attached approved camera-ready report is forwarded for printing. Please print the following quantities: paper copies ____ and/or *CDs _____. STINFO will add the required copies (CDs and/or paper) to distribute to DTIC and the AFRL(Wright Site) archive.

2. If report contains color, is color required on paper copies? Yes ____ No ____

3. Check the Appropriate requirements that have been met with this submission:

- For printing payment, IMPAC cardholder Name _____ Phone _____
- A signed notice page is included (not required for technical papers and journal articles).
- A distribution list is part of the report.
- All paragraphs are marked IAW AFI 31-401.
- A completed SF298 is included.
- I certify that this report contains contractor-imposed limited rights, the contracting officer has approved it.

1 Atch
Camera-Ready Report

Monitor Signature

Appendix G

Journal Article Sample

This appendix contains a sample journal article of the type accepted by the Technical Editing Office for editing. The Air Force encourages its scientific and technical personnel to publish research results in recognized journals. The publication of information generated by AFRL-related R&D programs in national and international journals enhances the reputation of the Laboratory, and provides a far-reaching means of sharing AFRL technological advancements.

The majority of articles must be cleared prior to publication with the AFRL/WS Public Affairs (PA) Office (see Appendix H for sample request paper work for PA approval). Under the following circumstance, PA clearance for articles is not required:

- Contracted fundamental research, which is sponsored by 6.1 funds, clearance.
- 6.2-funded, university and college projects (require classification review only).

The AFI 61-202, *United States Air Force Technical Information Program*, requires that official articles be submitted to DTIC, official articles being defined as articles created using Air Force dollars or Air Force time. Finding DoD-generated articles that appear in national or international sources can be difficult, time-consuming, and expensive. Placing copies of all DoD-generated articles in DTIC's comprehensive collection of scientific and technical information ensures that these articles are readily available to DoD, other government agencies, contractors, and, where applicable, the general public.

Two copies of each article (as submitted for publication) along with a WL Form 79 *Request for Editing and Publishing Support*, should be sent to Det 1 AFRL/WSCL (STINFO). One copy will be retained in the AFRL technical reports vault and one copy will be sent to DTIC.

SAMPLE

Transition on Turbine Blades and Cascades at Low Reynolds Numbers

Richard B. Rivir*
Directorate Name

US Air Force Air Force Research Laboratory
Wright-Patterson AFB, Ohio

Abstract

The words that follow are merely randomly selected excerpts from an article, as this is an example only. Unpredicted losses in the low-pressure turbine during operation at high altitudes has stimulated current interest in transition, and separation at low Reynolds numbers. In the turbine, free stream turbulence levels or unsteadiness resulting from vane wakes, passage vortices, and end wall horseshoe vortices exceeds the unsteadiness levels associated with a fully turbulent boundary layer.

In our work on low pressure, low Reynolds number turbine flows we have a few new measurements of transition, transition length and turbulence scales to add

Introduction

The commonly held physical picture of the transition process is illustrated schematically in Figure 1. Two D Tollmien Schlichting waves are amplified, breaking down into Emmons spots which propagate as a wedge with a following quiet wedge region until the boundary layer has become fully turbulent. Turbine transitions

*Associate Fellow

This paper is declared a work of the U.S. Government and as such is not subject to copyright protection in the United States

Appendix H

PA Request Forms

This appendix contains sample forms that monitors use to request Public Affairs clearance to disseminate documents. The forms have been modified slightly to fit on the page. Submit a copy of the following AFRL Form 6 to Det 1 AFRL/WS (Public Affairs) for public release documents.

[Click here for a usable form.](#)

PUBLIC AFFAIRS SECURITY AND POLICY REVIEW REQUEST FOR PUBLIC RELEASE CLEARANCE

SUBMIT TO:					
PHONE:		FAX:		E-MAIL:	
Note: Public release clearance is not required for material presented in a closed meeting and which will not be made available to the general public, on the internet, in print, or electronic media.					
1. SUBMITTER NAME, PHONE, OFFICE SYMBOL:					
2. MEDIA FORMAT: <input type="checkbox"/> CD-ROM <input type="checkbox"/> Print/Paper <input type="checkbox"/> Video <input type="checkbox"/> Zip Disk <input type="checkbox"/> Other					
3. DOCUMENT TYPE (Documents must be complete including all figures, charts, photographs, embedded videos, and text.)					
<input type="checkbox"/> Abstract	<input type="checkbox"/> Journal Article	<input type="checkbox"/> Success Story			
<input type="checkbox"/> Accomplishment Report	<input type="checkbox"/> News Release	<input type="checkbox"/> Tech Horizons			
<input type="checkbox"/> Briefing Charts	<input type="checkbox"/> Poster Session	<input type="checkbox"/> Technical Paper			
<input type="checkbox"/> Brochure	<input type="checkbox"/> Proceedings	<input type="checkbox"/> Technical Report			
<input type="checkbox"/> Digital Image/Photo	<input type="checkbox"/> Presentation w/Script	<input type="checkbox"/> Data (Printed Output)			
<input type="checkbox"/> Display/exhibit/Model	<input type="checkbox"/> Solicitations (BAA, PRDA, Etc)	<input type="checkbox"/> Video			
<input type="checkbox"/> Fact Sheet	<input type="checkbox"/> Speech	<input type="checkbox"/> Web (Article, Page, Site)			
		<input type="checkbox"/> Other _____			
4. DOCUMENT TITLE					
5. AUTHOR(S) NAME, DUTY TITLE, OFFICE SYMBOL					
6. COMPANY NAME (PRIME CONTRACTOR), CONTRACT OR AGREEMENT NUMBER					
6 a. Indicate: <input type="checkbox"/> Contract <input type="checkbox"/> Cooperative Agreement <input type="checkbox"/> CRADA <input type="checkbox"/> Grant <input type="checkbox"/> Other _____					
7. RELEASE AND DISTRIBUTION					
7 a. Date Needed					
7 b. Event/Forum				7 c. Date	
7 d. Location					
7 e. Publication				Submittal Deadline	
7 f. Web Site					
7 g. Other					
8. Has related information been previously cleared for public release? <input type="checkbox"/> No <input type="checkbox"/> Yes Case Number:					

NATIONAL SECURITY STATUTES AND TECHNOLOGY ISSUES

Note: Check Yes or No (Provide a brief explanation for all positive responses in the COMMENTS BLOCK 13 below)

- 9 a. Yes No Are any aspects of the technology included in the U.S. Munitions List (USML) (International Traffic in Arms Regulation (ITAR), 22 Code of Federal Regulations (CFR) Part 121)? See the U.S. Munitions List at: <http://www.pmdtc.org/references.htm#ITAR>
- 9 b. Yes No Are any aspects of the technology that is included in the Commerce Control List (CCL), (Export Administration Regulations (EAR) Part 774, Categories 0-9)? See the CCL at: <http://www.commerce.gov>
- 9 c. Yes No Do any aspects of the technology meet the definition of Critical Technology as defined by DoDD 5230.25, or result in the transfer, duplication, design, manufacture, operation or repair of an article on the Militarily Critical Technologies List (MCTL) or CCL? See the MCTL at <http://dtic.mil/mctl>
- 9 d. Yes No Is this technology, system, or program covered by a Security Classification Guide and/or a DD 254?
- 9 e. Yes No Is this information covered by a Technology Protection Plan or has it been identified as a critical research technology task/program?
- 9 f. Yes No Does this information meet the criteria for Distribution Statement "A"—unclassified, unlimited information? (A "Yes" answer does not require an explanation in Block 13)

10. RELEASE AUTHORITY & MANAGEMENT RESPONSIBILITY INTERNATIONAL AND JOINT EFFORTS

- 10 a. Yes No N/A If this material results from an international agreement, is the U.S. Air Force authorized to release information for these programs? If not, Please identify who owns the rights to release in Block 13.
- 10 b. Yes No N/A If this is a joint program, does your organization maintain primary management responsibility and authority to release all information generated under the programs that are jointly funded with other Agencies, Departments such as MDA, DARPA, NASA, DOE, NAVY, ARMY, etc.? If not, please provide the name of the lead organization in Block 13.
- 10 c. Yes No Are there any potentially sensitive technical information or political issues discussed in the attached material that should be reviewed by another organization? If yes, please provide the name of the organization in Block 13.

11. SBIR PERMISSION TO RELEASE/BUDGET CATEGORIES—PROGRAM ELEMENTS

- 11 a. Yes No N/A When requesting public release clearance for a Small Business Innovative Research (SBIR) contractor, is a contractor waiver letter on file granting permission to release this material? (This statement applies when the program manager is responsible for the actual public release.)
- 11 b. Funding is under Budget Category-Program Element:
 6.1 6.2 6.3 6.4 6.5 6.6 6.7 Other

12. REFERENCES (Check all that apply.)

- N/A
- All references are unclassified/unlimited and are available to the public.
- References # _____ are subject to distribution limitation. No limited information from these references is included in the document.

13. COMMENTS 1. Provide a brief description for responses from Blocks 9 and 10. Include the state of development for the system, process, or technology. 2. Provide any additional comments deemed necessary and give block numbers to which comments apply.

14. CERTIFICATION SIGNATURES AND DATE

To the best of my knowledge, the information contained in the attached document is technically accurate, does not disclose any proprietary, classified, or militarily critical technology information and is suitable for public release. This information does not violate copyright laws. Public release implies the material may be made available to a general, worldwide public, including users of the Internet and organizations hostile to the United States. This material does not reveal sensitive security practices, procedures, weaknesses, vulnerabilities, countermeasures, or capabilities.

*Originator/Author Name (Print)	Signature	Date
*OPSEC Reviewer Name (Print)	Signature	Date
**Optional Name (Print)	Signature	Date
*Division/designated representative (Print)	Signature	Date
**Optional Name (Print)	Signature	Date
**Optional Name (Print)	Signature	Date

*Required signatures for all requests.
 **Optional as required by technology directorates.

15. PUBLIC AFFAIRS CERTIFICATION

The information is:

- Cleared for public release:
- Cleared as Amended
- Not Cleared

Public Affairs Officer

Signature

Date

Note:

1. Information requiring higher headquarters review, refer to AFRL Instruction 35-103
2. To expedite processing, complete all sections of the form. Submit two copies of both the form and material to the servicing public affairs office. Higher headquarters requires 11 copies of the material.

For further guidance concerning Public Release of documents see AFRL Instruction 35-103.

Appendix I

Related Publications Resources

I1. DoD Resources

The following publications contain policies and instructions that are related to Air Force Policy Directive 61-2.

Publication Designation	Title	Former Publication or Date
DoD Directive 3200.12	DoD Scientific and Technical Information (STI) Program (STIP)	February 11, 1998
DoD Directive 5200.12	Conduct of Classified Meetings	July 27, 1992
DoD Directive 5230.24	Distribution Statements on Technical Documents	March 18, 1987
DoD Directive 5230.25	Withholding of Unclassified Technical Data From Public Disclosure	November 6, 1984
DoD Directive 5230.27	Presentation of DoD-Related Scientific and Technical Papers at Meetings	October 6, 1987
DoD Directive 8910.7	Management and Control of Information Reqs.	June 11, 1993
DoD Instruction 3200.14	Principles and Operational Parameters of the DoD Scientific and Technical Information Program	May 13, 1997

I2. Air Force Policy Directives

This directive interfaces with the following Air Force policy directives and instructions:

Publication Designation	Title	Former Publication or Date
AFPD 61-1	Management of Air Force Science and Technology	AFR 80-3
AFI 61-201	Responsibilities of the Local STINFO Officer	AFR 83-1
AFI 61-202	AF Technical Publications Program	AFR 83-2
AFI 61-203	R & T Work-Unit Information System	AFR 80-12
AFI 61-204	Controlling the Distribution of Classified and Unclassified STINFO.	AFRs 80-30, 80-34, 83-3
AFI 61-205	Sponsoring or Cosponsoring, Conducting, and Presenting DoD-Related Scientific and Technical Papers at Unclassified and Classified Conferences, Symposia, and Other Similar Meetings	AFR 80-43
AFI 61-207	Air Force Information for Industry Offices	AFR 80-11
AFI 61-208	Air Force Potential Contractor Program	No Former Publication
AFI 61-209	Advance Planning Briefings for Industry	No Former Publication
AFR 80-39 (Joint Departmental Publication)	Certification and Registration for Access to Scientific and Technical Information	May 5, 1977
DTIC/TR-97-7 AD-A328942	DoD STINFO Manager Training Course - STINFO Documentation	No Former Publication
DTIC/TR-93-10 AD-A260200	DoD STINFO Manager Training Course - Training Manual	No Former Publication

13. STINFO Web Sources

The following Internet sites are available (if viewing this document in an MS Word file, click on the items to open a browser window and access the related Internet site):

- [Air Force Research Laboratory Technology Transfer](#)
- [Air Force Science and Technology Bulletin Board](#)
- [Defense Technical Information Center \(DTIC\)](#)
- [DTIC Midwestern Regional Office](#)
- [DoD Research & Development Descriptive Summaries \(RDDS\)](#)
- [DoD SBIR & STTR Programs](#)
- [DoD STINFO Manager Training Program](#)
- [Export Control Reference Tools on the Internet](#)
- [Government Contractor Resource Center](#)
- [Small Business Innovative Research \(SBIR\)](#)

13.1 Other Web Sources

- [Access Online](#) – by NCSA and associates – inventors of MOSAIC
- [Computer-Mediated Communications Magazine](#) – (edited by several universities)
- [Cybernetics Digest](#)
- [Database magazine](#) – for professional online searchers – (available in our Library)
- [Defence Systems Daily](#) – provides daily Defence and Aerospace news from around the world
- [InterFace Magazine](#)
- [Internet Research](#) – *registration required* for full-text
- [Internet World Magazine](#) – (available in our Library)
- [Interpersonal Computing and Technology Journal](#) (IPCT-J)
- [iWorld](#) – Internet News and Resources
- [JavaWorld](#) – designed for Web professionals
- [Microsoft Interactive Developer](#) – for web site developers
- [NCT Web magazine](#) – (National Computer Tectonics)
- [Net Day News](#)
- [NetGuide](#)
- [Net-Happenings](#)
- [NetscapeWorld](#) – designed for Web professionals
- [Netsurfer Digest](#)
- [NewsLinx: Web News](#)
- [Online magazine](#) – for professional online searchers – (available in our Library)
- [Online User](#)
- [Publish](#) – dedicated to the electronic publishing profession
- [Spectrum](#) – the Journal of the Web Developer’s Virtual Library
- [Web Developer’s Journal](#) – “complete back issues and excerpts”
- [Web Week Magazine](#)
- [WebMaster Online](#) – [archive of past issues](#)
- [WebServer Magazine](#) – *free but must register*

- [WEBsmith](#) – “the How-To Magazine of the World Wide Web”
- [Wired News](#) – (*Must register to use*) – electronic counterpart to Wired magazine – (available in our Library)

I3.2 General Internet Resources

- [Back to School](#), Self-directed Internet instruction
- [Free](#) Trade & Professional Newsletters
- [In Site: New Internet Site Additions](#)
- [Internet Guides - North Carolina State University](#)
- [Internet Policies](#) at Wright-Patterson AFB
- [Internet Resources](#), compiled by Heriot-Watt University Library, UK
- [Net Scout Services](#), InterNIC, includes the [Scout Toolkit](#)
- [U.S. National Information Infrastructure Virtual Library](#)

I3.3 Professional Associations

- [Internet Society](#)
- [InterNIC Registration Services](#)
- [W3C - The World Wide Web Consortium](#)

I3.4 Web Authoring Tools

- [A Beginner's Guide to HTML](#)
- [Bare Bones Guide to HTML](#)
- [Klensin on SGML](#)
- [The VRML Repository](#)
- [Frequently Asked Questions about CGI Programming](#)
- [The Perl Language Home Page](#)
- [PERL Resources on the Web](#)
- [Virtual Library of WWW Development](#)
- [Yale Web Style Guide](#)

Appendix J

Terms and Definitions

Certified Contractor

Private individual or enterprise located in the United States or Canada who is certified and registered with the Defense Logistics Service Center for access to export-controlled technical data.

Classified Military Information

Information originated by or for the DoD or its Agencies or which is under their jurisdiction or control and that requires protection in the interests of national security. It is designated top secret, secret, and confidential, as described in E.O. 12356 (reference (q)). Classified military information may be in oral, visual, or material form.

Conference or Symposium

A conference, meeting, seminar, or other similar gathering, conducted by a DoD component, a DoD contractor, or an association, institute or society whose membership includes DoD or contractor personnel, at which participants disclose unclassified or classified DoD information or information of interest to the DoD.

Cooperative Research and Development Agreement (CRDA)

A written agreement (not a procurement contract) that involves the transfer of money and/or services (and possibly research results) from the private sector participant to the federal developer of the technology. The CRDAs are often used to license or assign rights to intellectual property developed by the U.S. Government scientists and engineers. The U.S. Government, as a minimum, retains a royalty-free right to use, for governmental purposes, any invention made under a CRDA.

Defense Technical Information Center (DTIC)

The focal point within DoD responsible for collecting, storing, retrieving, and disseminating information resulting from or relevant to, DoD research, development, test, evaluation, analysis, studies, and acquisition management activities. The DTIC's mission is to assist research, development and acquisition activities in using the defense technology base more easily and cost effectively. It has three major databases:

- The Technical Report Bibliographic Database—large database containing citations to 1.5 million items
- The R&T Work-Unit Information System Database—contains management information about on-going and completed R&T work efforts.
- The Independent Research and Development (IR&D) Database—contains descriptions of technical programs that are initiated and performed by DoD contractors and not wholly funded by DoD (this database contains proprietary information and is only available to DoD activities and authorized federal agency R&D personnel).

An accession number (AD number) is required to obtain copies of materials from DTIC. The AFRL Technical Editing Office is responsible for ensuring that AFRL technical publications are sent to the DTIC for inclusion in their comprehensive collection of DoD official technical information.

DTIC acknowledges the receipt of reports and other information by assigning a unique AD number. This is forwarded via E-mail to STINFO, and the technical editor forwards the AD number to monitors. Monitors should indicate the assigned AD number in the case file and the ASTARS record.

Export Controls on Technical Data

Export controls, including the control of critical technology, protect U.S. technology with military applications from inadvertent disclosure to foreign governments and foreign nationals. Export controls are governed by law and implementing regulations. Goods and technical data deemed inherently military in character fall under the jurisdiction of the International Traffic in Arms Regulations (ITAR). Goods and technical data with the potential for both military and civilian use fall under the jurisdiction of the U.S. Department of Commerce and are governed by the Export Administration Regulations (EAR).

Freedom of Information Act (FOIA)

The legal channel that broadens and controls public access to U.S. Government records. The FOIA requests are processed by the FOIA manager.

Independent Research and Development (IR&D) Program

A DoD program that encompasses the technical efforts, i.e., projects, of DoD contractors that are initiated and funded by the companies themselves. The IR&D program is directed toward continually improving the contractor's technological competence to meet DoD's future requirements for advanced technology, systems, or hardware.

Information Analysis Center (IAC)

Federally funded and usually contractor-operated, IACs vary in type of services provided and size. They collect, review, analyze, appraise, summarize and store available information on subjects within highly specialized technical areas of DoD concern.

Intelligence

The product resulting from the collection, processing, integration, analysis, evaluation, and interpretation of available information concerning foreign countries or areas.

National Technical Information Service (NTIS)

The single largest source of U.S. Government R&D information available to the public. The NTIS collection contains approximately 2 million titles, about 30 percent originating from foreign sources. The NTIS is self-supporting and sells its products and services.

Proceedings

Papers and other formal information presented at a scientific or technical meeting that are printed together for ease of reference and to preserve knowledge. They should be submitted to DTIC for preservation and possible dissemination.

Proprietary Information

Classified or unclassified data, the rights to which are owned by private firms or citizens (i.e., patents, copyrights, or trade secrets). Proprietary information may not be disclosed without the owner's consent.

Research & Development Descriptive Summaries (RDDS)

Formerly known as Program Element Descriptive Summaries (PEDS), provide information on research, development, test and evaluation programs and program elements (PE numbers) within the DoD.

Small Business Innovation Research (SBIR) Program

The Small Business Innovation Development Act, passed by Congress in 1982 to stimulate U.S. productivity and the economy by increasing technological innovation. The program operates as a three-phase process:

- PHASE I: small firms are invited to submit proposals during two solicitation periods, one of 60 days and the other 90 days. Phase I winners are awarded contracts which average \$60,000 to \$100,000 to complete a 6-month proof-of-concept effort.
- PHASE II: the R&D effort with a duration of approximately 2 years. Most Phase II awards are between \$500,000 and \$750,000. Awards for Phase II work are based on the results of Phase I efforts and the scientific and technical merits of Phase II proposals.
- PHASE III: small business is allowed to pursue commercial applications of the work started in Phase I and II and to seek nonfederal funding.

STINFO

Scientific and Technical Information.

STINFO Liaison

Individual appointed by an organization to work with the STINFO Office to assist with the efficient processing of technical reports, papers, and other data. The STINFO liaisons work with the AFRL STINFO Program Coordinator to inform scientists, engineers, project officers, data managers and supervisors of relevant DoD, Air Force, and STINFO program requirements. They also serve as organizational points of contact for the STINFO office.

STINFO Office

Office designated by the local commander to carry out and enforce compliance with the various elements of the U.S. Air Force Scientific and Technical Information Program.

STIP

Coordinated, comprehensive Scientific and Technical Information Program within DoD developed to provide for the interchange of scientific and technical information within and among DoD components and their contractors, federal agencies and their contractors, and the national and international scientific and technical community.

Technical Document

Any recorded information or data, regardless of its physical form or characteristics, that contains scientific and technical information or technical data including production, engineering and logistics information. Excluded are official Air Force publications, which are not distributed through the DTIC.

Technical Meeting

A conference, seminar, symposium, exhibit, convention, or other type of formally scheduled session. Advanced Planning Briefings for Industry (APBI) are also included. It is conducted, sponsored or cosponsored by a DoD organization, DoD contractor, or a private association, institute, or society whose membership includes DoD personnel or DoD contractors. Official information is disclosed outside official DoD channels.

Technical Memo

A technical document prepared to preserve or control scientific, technical or analytical information not deemed suitable for publication as a technical report because it does not meet the criteria of ANSI/NISO Z39.18-1995. For example, when a research effort terminates before completion, a technical memo should be prepared to record any empirical findings.

Technical Paper

Conference papers and other publications, such as journal articles and preprints, that are not formal technical reports.

Technical Report

Any preliminary or final technical document prepared to record, document, or share results obtained from, or recommendations made on, or relating to, DoD-sponsored or cosponsored scientific and technical work. Differentiated from technical memos and papers by comprehensiveness and format.

Work Unit Information Summaries (WUIS)

The set of data elements that describe, for separate research, development, test and evaluation efforts, what is being accomplished, the performer, locations, sponsor, cost, and progress to date. Submitted to the DTIC for inclusion in the R&T Work-Unit Information System, a database that makes available information of current work in progress.

Appendix K

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Appendix L

Sample Request Letter for Permission to Use Copyrighted Materials

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