

Guidelines for Preparing CERL Technical Report Manuscripts

Prepared by the CERL Technical Information Branch

Revised 17 February 1999 (ms_prep.ctv.rtf)

This document specifies the basic requirements for preparing CERL Technical Report manuscripts. It covers the two fundamental aspects of preparing the manuscript: (1) mechanical formatting requirements (including software file formats) and (2) mandatory content. *It also includes new material about copyright clearances and the "fair use" exception to copyrights.* All CERL Principal Investigators (PIs) and contractors are required to follow this guidance unless an exception is justified by the PI and agreed to by a CERL Technical Editor.

- **NOTE TO IN-HOUSE PIs:** this document supersedes the 1991 CERL Author's Guide. Deviation from these requirements by you or your contractor may result in processing delays and publishing costs in excess of your project budget.
- **NOTE TO ALL CONTRACTORS:** manuscripts not conforming to these guidelines may not be accepted by the CERL PI as a final product, and your payment may be delayed as a result. Deviations from these guidelines are acceptable only if justified and coordinated in advance through the CERL PI with a CERL Technical Editor.

Before You Begin Writing: Pay Close Attention to Copyright Issues

CERL authors, including contractors, are required to adhere to the letter and spirit of U.S. copyright law. Copyright is a legal doctrine that protects the integrity and commercial value of an author's intellectual property. Copyright does not prohibit the free exchange of ideas or facts, but is intended to protect an author's specific expression, form, and arrangement of ideas and facts. *For purposes of CERL technical reporting, you must assume that all scholarly and technical literature — including manufacturer's catalogs and marketing material — is protected by a copyright.*

The "fair use" doctrine is a limited exception to copyright that permits reporting and interpretation of another author's copyrighted work without his or her express permission. Fair use is not a generic "loophole" in copyright law: it only authorizes the reuse of brief excerpts from a copyrighted work for a few very specific purposes. If your republication of the material could damage the work's commercial value to the copyright holder, then by definition it *would not be* fair use. Be especially careful about reproducing graphs, charts, or photos from a copyrighted work.

Violation of copyright law is a felony when the infringement involves more than 10 copies and causes commercial damages of more than \$2500 to the copyright owner. The individual — not CERL or the Corps of Engineers — is accountable for any alleged copyright infringement.

In the past it has been relatively easy to get permission to reproduce copyrighted material, but this issue is becoming very complicated in the age of Internet-based publishing. Many copyright owners are now unwilling to grant permission to reprint on the Internet, or will only grant such permission in return for a substantial royalty payment.

The best policy is to avoid reproducing any excerpts from a copyrighted work unless absolutely necessary. Avoid reproducing copyrighted work solely for the reader's convenience or your own. *Consider reproducing copyrighted work ONLY IF the original author's specific presentation of ideas is so uniquely pertinent that you cannot capture its full meaning by paraphrasing it AND you are convinced that the material must be physically presented on the pages of your report to be understood in the proper context.* If you decide to extract copyrighted works beyond the boundaries of fair use, then you must secure the copyright owner's permission to reprint. Your first point of contact on this should be a CERL Technical Editor. See "Reference Documentation" below for more information.

Mechanical Formatting Requirements

DO NOT ATTEMPT TO PREPARE “CAMERA-READY” PAGE LAYOUTS. The basic formatting rule is that technical reports are to be submitted in typescript form, *not* as a fully formatted publication. The *only* formatting preparation required or expected for a CERL technical report manuscript is as follows.

For Text

- Use Microsoft Word for Windows 6.x or later. **The Technical Information Branch can no longer guarantee effective or timely processing of files created with any version of WordPerfect.** Double-space the electronic file *and* the hardcopy. The hardcopy must be an exact printout of the electronic file.
- Use 1-inch margins throughout. Do *not* change margins, page size, etc., anywhere in the document.
- Use the MS Word style “Normal” as the default body type. If you are not using Word stylesheets, then use Times or Century Schoolbook 12 point type as the default font. Please do *not* use *sans-serif* fonts such as Helvetica, Arial, Univers, etc.
- ***AUTOMATIC FORMATTING OF HEADINGS USING STYLESHEETS:*** This is the preferred method. Use the stylesheet specs provided in Normal.dot, which is the default Microsoft Word document template. (See your Word software documentation for details.) Apply the styles as follows:
 1. Use “Normal” for all regular body text.
 2. Use “Heading 1” to format chapter titles.
 3. Use “Heading 2” to format first-order heads within a chapter (also called “a-heds”).
 4. Use “Heading 3” to format second-order heads within a chapter (also called “b-heds”).
 5. Use “Heading 4” to format third-order heads within a chapter (also called “c-heds”).
 6. Use “List Bullet” to format bulleted lists and use “List Number” to format numbered lists.
 7. Use “Caption” for table and figure captions.
- ***MANUAL FORMATTING OF HEADINGS AND SUBHEADS:*** If you prefer not to use stylesheets, then indicate the hierarchy of subheads with casing, bolding, and italicization only. Chapter Titles are uppercase and bold; a-heds are bold; b-heds are bold italic, and c-heds are bold italic and indented by one tab. *Please do not change font families or sizes anywhere in the text.*
- Insert equations in text where they belong and number them. Create equations and algorithms using the equation-editing module in Word. The standalone equation application *MathType* may also be used, but the equations must be embedded in the manuscript word processing file.

For Data Tables

- All tables must be numbered and include a concise descriptive title.
- All tables must be referenced in the text in the proper numerical sequence.
- Create all data tables using either the MS Word table-editing facility or one of the industry-standard spreadsheet packages (i.e., Microsoft Excel or Lotus 1-2-3). *Do NOT align tabular data using the spacebar; doing so will delay editorial processing and increase costs billed to the project.*
- Use an 8 point or 9 point typeface; a condensed typeface is acceptable as long it is legible. Do not change font families or sizes anywhere in a table.
- Do not integrate tables into the text. In the hardcopy manuscript, collate them in order at the end. In the word processing file, either place them in numerical order at the end of the file or place them in separate electronic files.

For Graphics (Photos, Drawings, Charts, Computer Screen Dumps)

- All graphics must be numbered and include a concise descriptive caption.
- All graphics must be referenced in the text in the proper numerical sequence.

- Submit all graphics in electronic format, and include a hardcopy proof. In the rare case where a graphic is available as hardcopy only, this hardcopy must be camera-ready professional quality. *Photocopies and fax copies are NEVER acceptable as camera-ready art.*
- TIF and JPEG are the preferred electronic file formats for photographs. GIF is acceptable for line drawings, charts, and plots. WMF (Windows Metafile format) is an acceptable export format for graphics generated in AutoCAD, SigmaPlot, and other engineering software packages.
- The use of bitmap formats (BMP, PCX) is strongly discouraged because they are unnecessarily large and they are not scalable. Bitmaps are acceptable ONLY for screen dumps intended to illustrate computer software documentation, but compressed scalable formats like GIF, JPEG, and WMF are preferred. See below for more information. *Important: bitmap graphics ARE NOT SCALABLE, so you must save them at the size that you intend for them to be viewed.*
- *Do not integrate graphics into the text* (except as described below for screen dumps). In the hardcopy manuscript, collate them in numerical order at the end. In the word processing file, either place them in order at the end of the file or place them in separate electronic files (the latter is preferred).
- **SPECIAL INSTRUCTIONS FOR SCREEN DUMPS:** In software manuals, insert all screen dumps where they belong in text. *Do not number them.* Provide all screen dump graphics in a uniform size using a grayscale format. Make sure that all text and icons in the screen dump are legible at the reproduction size selected, and that all other elements such as buttons and scroll bars are differentiated and readable.

Mandatory Content

The main body of a technical report should be organized according to the specific requirements of the individual topic. However, there are several items of mandatory content: frontmatter, an introductory chapter, a concluding chapter, and comprehensive reference documentation for all text, graphics, and data drawn upon or extracted from other sources.

Frontmatter

Abstract. This should be a 200-word summary of the research problem, objective, and outcome. The subject matter may require inclusion of a few words about the approach, the scope, or technology transfer.

Foreword. The contractor usually will not have the correct information to complete this section, so the PI should do it. The foreword lists the sponsoring organization and technical monitor, the funding vehicle and work unit (direct-funded or reimbursable), the CERL organizational elements and contractors who conducted the work, and acknowledgment of the CERL Commander and Director.

Table of Contents, List of Figures, List of Tables. These lists should accurately reflect the organization and graphical content of the report, but it is not necessary to include the page numbers of each listed element—an editor will do that later.

Introduction

Background. This section states the problem to be addressed and its impact on the U.S. Army. It cites any related previous research and a reason why the current research is being conducted. It should specify who executed the work (CERL, contractors, partner organizations) and identify the targeted users of the report or the technology.

Objective. This should be a concise statement of the research objective. Any secondary objective stated here must be specifically addressed in the Conclusions section. The objective must be the same one documented for that work unit on form DD 1498 in the CERL Research and Development Management Information System (RDMIS).

Because a contractor does not have access to RDMIS, the in-house PI is responsible for verifying the correlation between the report's objective statement and the RDMIS objective.

Approach. This section specifies the research methodology. If the methodology is complex or otherwise warrants a chapter of its own, this section can simply cross-reference the reader to the appropriate chapter.

Scope. This is optional but usually very helpful for defining any limitations, caveats, etc., of which the reader should be aware.

Mode of Technology Transfer. This is the PI's recommendation to the sponsoring organization as to which channels should be used to promote adoption of the technology by Army users (e.g., regulations, guide specifications, training courses, publicity, etc.). In reports on customer-reimbursable research this section is optional but still desirable.

Concluding Chapter

This is the last chapter before the reference list. The title and content may vary depending on the requirements of the report. It is usually called "Summary" or "Conclusions and Recommendations."

Summary. In reports that document empirical observations or straightforward research findings (such as the results of a field demonstration or a laboratory test series), the report concludes with a Summary. The Summary covers about the same ground as the Abstract, but reiterates the research results in more detail than the Abstract.

Conclusions. Conclusions differ from a Summary in that they include the author's *interpretation* of the findings. Conclusions are required where expert interpretation is necessary to clearly and completely communicate results to the reader. In other words, the Conclusions are where the author tells the reader what the research results mean in terms of the Army problem and objective statement presented in Chapter 1.

Recommendations. A report will frequently (but not always) include one or more Recommendations pertaining to the Conclusions. Recommendations generally will pertain to (1) how the Army should apply the research product in the field or (2) what the Army should do to transition the product into the next stage of the Research, Development, Test, and Evaluation process.

Reference Documentation

In-text reference citations. Use the short forms specified in "The CERL Author-Date System of References for Technical Publications," which is available from any CERL Technical Editor or the Contracts Office. Do not use footnotes or endnotes.

Reference list. This list is published immediately after the final numbered chapter of the report, but before any appendices. It must include every information source cited in text plus any uncited sources that were drawn upon. Use the long forms specified in "The CERL Author-Date System of References for Technical Publications," which is available from any CERL Technical Editor or the Contracts Office.

POC information for copyright clearances. For any text, data, or graphics that are directly quoted, extracted, or reproduced in the technical report, the author must provide the copyright owner's name, full mailing address, and telephone number. The CERL Technical Editor or Editorial Assistant will follow up with the copyright owner for permission to reprint. If the in-house PI or contractor has already secured permission to reprint from the copyright owner, the *original, signed copy* of the permission document must be provided to the Technical Editor.