

Making Postscript and PDF International

Status of this Memo

This memo provides information for the Internet community. It does not specify an Internet standard of any kind. Distribution of this memo is unlimited.

Copyright Notice

Copyright (C) The Internet Society (1998). All Rights Reserved.

Abstract

Certain text formats, for example Postscript (MIME-Type: application/postscript; file extension .ps) and Portable Document Format (MIME-Type: application/pdf; file extension .pdf) specify exactly the page layout of the printed document. The commonly used paper format is different in North America and the rest of the world. North America uses the 'Letter' format, while the rest of the world mostly uses the ISO-standard 'A4' format. This means that documents formatted on one continent may not be easily printable on another continent. This memo gives advice on how to produce documents which are equally well printable with the Letter and the A4 formats. By using the advice in this document, you can put up a document on the Internet, which recipients can print without problem both in and outside North America.

A very short summary of the advice in this document: If you are using U.S. Letter paper format, ensure that both the left and right margins are at least 21 mm (0.8 in). If you are using A4 paper format, ensure that both the top and bottom margins are at least 33 mm (1.3 in).

Table of Contents

1. Introduction	2
2. Two methods for printing on different paper formats	2
2.1 Method 1: Use wider margins	2
2.2 Method 2: Print with reduced size	3
2.3 Method 3: Buy paper in the A4 size	4
3. Acknowledgements	4
4. Security Considerations	4
5. References	4

6. Author's Address	5
7. Full Copyright Statement	6

1. Introduction

Certain text formats, for example Postscript (MIME-Type: application/postscript; file extension .ps) and Portable Document Format (MIME-Type: application/pdf; file extension .pdf) specify exactly the page layout of the printed document. The commonly used paper format is different in North America and the rest of the world. North America uses the 'Letter' format, while the rest of the world uses the 'A4' format.

The North American Letter format is 216 x 279 mm (8.5 x 11 in) while the ISO standardised A4 format is 210 x 297 mm (8.3 x 11.7 in). The Letter format is thus 6 mm (0.2 inches) wider, while the A4 format is 18 mm (0.7 inches) taller.

This means that documents formatted on one continent may not be printable on another continent. It is obviously desirable that documents on the Internet are printable on all continents. This paper gives advice on how to achieve this.

This memo is not intended for HTML documents, but the advice may be of value also for HTML developers in case they are using fixed-size graphics and fixed WIDTH sizes of objects in HTML documents.

2. Three methods for printing on different paper formats

2.1 Method 1: Use wider margins

Paper format you use when converting the document to Postscript or PDF	Paper orien- tation	Suggested change of margins	Suggested minimal margins			
			Left	Right	Top	Bottom
A4	Portrait (upright, vertical)	Add 18 mm (0.7 inches) to the top of page and bottom of page margins	20 mm 0.8"	20 mm 0.8"	33 mm 1.3"	33 mm 1.3"
A4	Landscape (lying, horizontal)	Add 18 mm (0.7 inches) to the left and right margins	33 mm 1.3"	33 mm 1.3"	15 mm 0.6"	15 mm 0.6"

Letter	Portrait (upright, vertical)	Add 6 mm (0.2 inches) to the right margins	20 mm 0.8"	26 mm 1.0"	15 mm 0.6"	15 mm 0.6"
Letter	Landscape (lying, horizontal)	Add 6 mm (0.2 inches) to the top of page and bottom of page margins	15 mm 0.6"	15 mm 0.6"	21 mm 0.8"	21 mm 0.8"

The reason why you have to add 18 respectively 6 mm to both the top and the bottom margin is that you do not know what kind of printer the recipient uses, and different printers feed paper in different ways, requiring the margin to be added either at the top or the bottom of the paper. Left and right margins on any paper format should be at least 20 mm wide to accomodate filing with ISO 838 hole punches.

Note: Ensure that also headers, footers, and page numbers are within the suggested minimal margins. Many word processors put headers, footers and page numbers outside the specified text margins.

2.2 Method 2: Print with reduced size

This is a method useful for the recipient of a document with the wrong paper size: The recipient sets the printer to print with reduced size. When the sender produces the PDF or Postscript files, the sender should 'print' with 100 % size, but when the recipient prints the PDF or Postscript files, and if the program for printing PDF or Postscript files allows this, the recipient should print the document with 94% or less of full size. Many programs for printing Postscript files do not allow this. In that case, the recipient can convert a Postscript document to PDF format and then print it with the PDF printing program. This requires, however, that the recipient has the Adobe Acrobat Distiller program, which is not freeware. Recent versions of the freeware ghostscript can also convert to PDF format. The user may also have to specify the paper size as the actual paper size loaded in the printer, not the paper size specified when the document was converted to PDF or Postscript format.

It is also possible to edit the Postscript file, and add a scale command to it, before sending it to the printer.

Method 2 can be more difficult for the recipient, who has to manage these settings himself. However, manufacturers of printing software may in the future make method 2 easier by making this service automatic, perhaps controlled by a 'shrink to fit paper size' checkbox in the printing window and a 'default shrink to fit paper size' preference setting.

In general, the authors of this RFC recommend PDF as the preferred formatted document distribution format over Postscript, not only because PDF printing programs typically feature a 'shrink to fit' option to handle different paper sizes elegantly, but also because PDF has built-in per page data compression, PDF files can be displayed without being fully downloaded, PDF is more portable, PDF has a better method of rendering fonts not available in the printer and PDF allows to embed URLs.

2.3 Method 3: Buy paper in the A4 size

People in North America who often need to print international documents might choose to buy paper in the A4 size. It is available in the U.S. from many large paper distribution companies, and almost all laser printers support it.

3. Acknowledgements

Markus Kuhn has provided many helpful suggestions on this document.

Adobe, Acrobat, Distiller, Exchange and Postscript are trademarks of Adobe Systems Incorporated or its subsidiaries.

4. Security Considerations

Adherence to the recommendations in this memo will increase the likelihood that a document will be readable, and look the same, to all recipients, and thus reduce the risk of misunderstanding. The recommendation does not in itself introduce any known new security risks. Of course, there might be a risk that reliance on the recommendations in this memo will make certain writers too sure that their documents will look the same.

Postscript (TM) has well known security risks. These are discussed in [MIME].

5. References

- A4 Writing paper and certain classes of printed matter
- Trimmed sizes - A and B series, International
Standard ISO 216, International Organization for
Standardization, Geneva, 1975.
- ANSI Bond Papers and Index Bristols - Common Sheet Sizes,
North American National Standard ANSI X3.151, North
American National Standards Institute, 1987.

- ISO 838 Paper - Holes for general filing purposes - Specifications, International Standard ISO 838, International Organization for Standardization, Geneva, 1974.
- Kuhn Markus Kuhn: International Standard Paper Sizes. <URL:<http://www.ft.uni-erlangen.de/~mskuhn/iso-paper.html>>.
- PDF Tim Bienz, Richard Cohn, James R. Mechan: Portable Document Format Reference Manual, Version 1.2, Adobe Systems Incorporated, <URL:<http://www.adobe.com/supportservice/devrelations/PDFS/TN/PDFSPEC.PDF>>.
- MIME Freed, N., and N. Borenstein, "Multipurpose Internet Mail Extensions (MIME) Part Two: Media Types", RFC 2046, November 1996.

6. Author's Address

Jacob Palme
Stockholm University and KTH
Electrum 230
S-164 40 Kista, Sweden

Phone: +46-8-16 16 67
Fax: +46-8-783 08 29
EMail: jpalme@dsv.su.se

7. Full Copyright Statement

Copyright (C) The Internet Society (1998). All Rights Reserved.

This document and translations of it may be copied and furnished to others, and derivative works that comment on or otherwise explain it or assist in its implementation may be prepared, copied, published and distributed, in whole or in part, without restriction of any kind, provided that the above copyright notice and this paragraph are included on all such copies and derivative works. However, this document itself may not be modified in any way, such as by removing the copyright notice or references to the Internet Society or other Internet organizations, except as needed for the purpose of developing Internet standards in which case the procedures for copyrights defined in the Internet Standards process must be followed, or as required to translate it into languages other than English.

The limited permissions granted above are perpetual and will not be revoked by the Internet Society or its successors or assigns.

This document and the information contained herein is provided on an "AS IS" basis and THE INTERNET SOCIETY AND THE INTERNET ENGINEERING TASK FORCE DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY THAT THE USE OF THE INFORMATION HEREIN WILL NOT INFRINGE ANY RIGHTS OR ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

