

# ACM SIGGRAPH Conference / Symposium / Workshop Content Formatting Instructions

## Introduction / Overview

This document contains formatting and delivery instructions for authors of content submitted for review and/or accepted to a conference or workshop sponsored by ACM SIGGRAPH.

The instructions found here may be used to format several types of content. For simplicity, each type has a category number; this number will be used throughout this document to highlight type-specific formatting instructions.

### Category 1

Full-length papers, typically eight to twelve pages in length, to be published in one of the ACM SIGGRAPH special issues of the ACM Transactions on Graphics journal,

### Category 2

Full-length papers, typically eight to twelve pages in length, with a single color plate page, to be published in the proceedings of a conference, symposium or workshop sponsored by ACM SIGGRAPH,

### Category 3

Short papers, typically four pages in length, with a single color plate page, to be published in the proceedings of a conference, symposium or workshop sponsored by ACM SIGGRAPH,

### Category 4

One-page abstracts to be published in the proceedings of a conference, symposium or workshop sponsored by ACM SIGGRAPH.

If your content has been accepted for presentation at the ACM SIGGRAPH annual conference, supplemental material – animation, still images, HTML presentations, etc. – which helps to better document your work can also be submitted for publication. Guidelines for preparing and delivering supplemental material are covered in the "Supplemental Material" section of this document.

Papers accepted for publication in the proceedings of a Eurographics Workshop Series event should be formatted with the instructions available from the Eurographics site, at this URL:

<http://www.eg.org/EG/Publications/WSPubl/>

The organizers of the event to which your work is being submitted or has been accepted are responsible for providing specific guidance in the areas of deadlines and page count.

Questions about formatting and delivery of your material should be directed to Stephen Spencer, ACM SIGGRAPH Director for Publications, at "spencer@siggraph.org".

## **File Format**

The printed and electronic documentation for ACM SIGGRAPH conferences and workshops are prepared from Adobe Acrobat (PDF) documents. This is the format in which your material should be delivered. Extenuating circumstances may force the delivery of a PostScript file in place of a PDF document.

Supplemental material does not need to be delivered as PDF documents.

## **Formatting Specifications**

Please follow these formatting specifications when preparing your content. If you are using LaTeX, the 'acmsiggraph' class faithfully implements these specifications. If you choose to use another application (Microsoft Word, InDesign, FrameMaker, etc.), please set up your document to these specifications.

### Document Specifications:

- Paper Size: 8.5 x 11 inches (216 x 279 cm)
- Top Margin: 0.75 inch
- Bottom Margin: 1.0 inch
- Left Margin: 0.75 inch
- Right Margin: 0.75 inch
- Columns: 2
- Column Width: 3.33 inches
- Column Gutter: 0.34 inch

### Typeface Specifications:

- Title: 14 point sans-serif (Arial or Helvetica), bold, centered
- Affiliation: 10 point serif (Times or Times Roman), centered
- Body: 9 point serif on 10 point leading (line spacing), justified
- Caption: 9 point serif, centered under figure
- Section Head: 10 point sans-serif, bold, flush left, numbered
- Subsection Head: 10 point sans-serif, bold, flush left, numbered
- Subsubsection Head: 10 point sans-serif, italic, flush left, numbered
- References: 9 point serif on 10 point leading

### **Adjustment of the typeface size and style, the line spacing or margins is not permitted.**

If your content has multiple authors, you may format the affiliation text in multiple, centered columns. Affiliation text should include full names, company or institution, and email address.

The program chair or organizer of the event to which your content has been accepted is the final arbiter of page count. Please abide by their decision, and bring any questions regarding page count to their attention.

Your content should not have page numbers on it. If necessary, they will be added during production.

Content in category 1 (papers accepted to the ACM SIGGRAPH annual conference or to the ACM SIGGRAPH Asia conference) must leave a 1.5 inch tall space at the base of the left-hand column on the first (or only) page for ACM copyright information. Content in categories 2 and 3 must also leave a 1.0

inch tall space at the base of the left-hand column on the first (or only) page for ACM copyright information. This space is in addition to the 1-inch bottom margin. Content in category 4 does not need to include this blank space.

Content in categories 1 – 3 must also contain the following elements at the beginning of the document, this order:

- Abstract: one or two paragraphs which describes the work
- Keywords: a list of relevant keywords
- CCS: a list of descriptors from the ACM Computing Classification System, located at <http://www.acm.org/class/>.

Content in categories 2 and 3 may, at the author's discretion and with the consent of the event's program committee, submit a single color plate page for publication, formatted to the same page size, margin and typeface specifications as the rest of the content. The color plate page is not included in the paper's page count. Please check with your event's program chair(s) for information on color plates.

The "acmsiggraph" LaTeX class, BibTeX style, and examples is available from

<http://www.siggraph.org/publications/instructions/acmsiggraphac.zip> (Annual Conferences)  
<http://www.siggraph.org/publications/instructions/acmsiggraph.zip> (other sponsored events)

Annotated examples of each of these kinds of documents may be found at the conclusion of this document.

## Images

If your content includes images, it's very important that they are of sufficient resolution to be faithfully reproduced. To determine the optimum size (width and height) of an image, multiply its size in inches, as it appears in your document, by 300. The resulting numbers are the optimum X and Y resolution, in pixels, of the image. Image quality will suffer if these guidelines are not followed.

Example 1: An image measures two (2) inches by three (3) inches when positioned in a document. This image should have a resolution of no less than 600 pixels by 900 pixels in order to be reproduced faithfully.

Example 2: Capturing a screenshot of your entire 1024 x 768 display monitor may be useful in illustrating a concept from your research. In order to be reproduced faithfully, that 1024 x 768 image should be no larger than 3.4 inches wide by 2.5 inches tall (approximately) when positioned in your document.

If you are using TeX to prepare your document, please make certain that each image is reproduced in its entirety, and not a subset of the image displayed with the "viewport" command. It has been our experience that this command is a fragile one, and the entire image will be visible after production, overlapping other images and text on the same page.

## Color

With content staying in the digital realm from your hands to the printing press, color fidelity can only be maintained if you carefully use a standard color space, and/or if you provide a proof print for comparison.

The default colorspace used by SIGGRAPH is sRGB, which is equivalent to viewing your image on a modern monitor with a whitepoint of 6500 and a gamma of 2.2. You can easily setup such a monitor on a PC or a Mac using the [Adobe Gamma Utility](#) or the [ColorSync Monitor Calibrator](#).

Once you have established a standard monitor, view your image in a dim (but not dark) environment and adjust it until it looks right. Be sure your viewing program is not applying "gamma correction" or modifying the colors in any way that interferes with the standard setup.

If you have the ability to convert your RGB images to CMYK, using Adobe Photoshop or a similar program, please do so:

1. Make sure to establish the correct profile for your monitor.
2. Make sure to turn color correction on.
3. Use "US Web Coated (SWOP)" color settings for output.

Regardless of whether you leave your images in RGB, or convert to CMYK, it's always acceptable to send a reference print for color-critical images, and we encourage you to do so. If you wish to do that, send the print(s) to this address:

Stephen Spencer  
The University of Washington  
101 Allen Center, Box 352350  
Seattle, WA 98195-2350

Clearly identify the image(s) you send by writing pertinent information on the back of each image. You should include your last name and the figure ID, and perhaps some content-specific identifier (see below for examples).

- Davidson Figure 10 (left)
- Davidson Figure 10 (right)
- Smith Figure 3a (horses)

## Citations and References

ACM SIGGRAPH citation format is the familiar "author year" format. The year is separated from the author by a single space. If the article has two authors, their last names are used, separated by the word "and." If the article has three or more authors, the primary author's name, followed by "et al." are used.

[Yee 2000] – one author

[Parke and Waters 1996] – two authors

[Fedkiw et al. 2001] – three or more authors

Multiple citations at a single point in the document are separated by semicolons.

[Fedkiw et al. 2001; Kartch 2000].

When the last name of the primary author is used in body text, it may be omitted from the citation, leaving the year.

"...as shown in Fedkiw et al. [2001], the coefficient remains..."

(LaTeX users can use "`\cite{citekey}`" to produce the long citation form, and "`\shortcite{citekey}`" to produce the short citation form.)

The reference list or bibliography must be unnumbered, alphabetized by primary author's last name, with the author list set in small caps, followed by the year of publication, followed by other information. The page number, if any, appears last in the reference. Author names are arranged as last, initials. The second and successive lines of each entry are indented 2em (approximately four spaces). Journal, book, thesis and conference proceedings titles, as well as journal volumes, are set in italic type.

Examples adhering to these guidelines follow: a journal article, article in conference proceedings, book, and PhD thesis, respectively.

SAKO, Y. and FUJIMURA, K. 2000. Shape Similarity by Homotropic Deformation, *The Visual Computer* 16, 1, 47-61.

FEDKIW, R., STAM, J., and JENSEN, H. W. 2001. Visual Simulation of Smoke. In *Proceedings of ACM SIGGRAPH 2001*, ACM Press / ACM SIGGRAPH, New York. E. Fiume, Ed., Computer Graphics Proceedings, Annual Conference Series, ACM, 15-22.

PARKE, F. L., and WATERS, K. 1996. *Computer Facial Animation*. A. K. Peters.

KARTCH, D. 2000. *Efficient Rendering and Compression for Full-Parallax Computer-Generated Holographic Stereograms*. PhD thesis, Cornell University.

Of particular note is the difference in reference to papers published in the ACM SIGGRAPH conference proceedings and in ACM journals: in 1993, 2002, and 2007, changes were made in the proper reference format, reflecting changes in the ordering of the Proceedings series, ACM SIGGRAPH's partnership with the ACM Transactions on Graphics journal, and finally, ACM's "online first" initiative. More information on this last change can be found online at <http://doi.acm.org/10.1145/1284621.1284637>.

Example of post-2006 reference (includes all ACM journals):

HAYS, J. and EFROS, A.. 2007. Scene Completion Using Millions of Photographs. *ACM Transactions on Graphics*, 26, 3, 4:1-4:8.

Example of 2001 - 2006 reference:

FATTAL, R., LISCHINSKI, D., and WERMAN, M. 2002. Gradient Domain High Dynamic Range Compression. *ACM Transactions on Graphics*, 21, 3, 249-256.

Example of 1993 - 2001 reference:

FEDKIW, R., STAM, J., and JENSEN, H. W. 2001. Visual Simulation of Smoke. In *Proceedings of ACM SIGGRAPH 2001*, ACM Press / ACM SIGGRAPH, New York. E. Fiume, Ed., Computer Graphics Proceedings, Annual Conference Series, ACM, 15-22.

Example of pre-1993 reference:

ELBER, G. and COHEN, E. 1990. Hidden Curve Removal for Free Form Surfaces. In *Computer Graphics (Proceedings of ACM SIGGRAPH 90)*, 24, 4, ACM, 95-104.

Any reference to the SIGGRAPH annual conference should be the words "ACM SIGGRAPH" followed by a space, followed by the last two digits of the conference year (pre-2000) or the entire conference year (2000 and later). It is incorrect to spell the name of the organization or the conference with only an initial capital letter - "Siggraph" - or use an apostrophe before the year - "SIGGRAPH '83."

### **Preparing an Acceptable PDF Document**

The printed and electronic documentation for ACM SIGGRAPH conferences and workshops are prepared from Adobe Acrobat (PDF) documents. This is the format in which your material should be delivered. Extenuating circumstances may force the delivery of a PostScript file in place of a PDF document.

All of the typefaces used in your document must be embedded. This is a requirement for publication, as it guarantees the reader will see your paper the way you intend.

LaTeX users should use the 'dvips' and 'ps2pdf' applications to create their PDF documents. Adobe Acrobat Distiller works well, and Adobe has a free (registration required) PDF creation service online at <http://createpdf.adobe.com/>. These tools are preferred as the option of creating a PostScript file is available, should you not be able to create a PDF with all typefaces embedded.

Those who use 'pdftex' or 'pdflatex' (and its variants) should make certain that all typefaces, even the so-called 'standard' typefaces, are embedded.

Adobe PDFWriter is **unacceptable** for use. PDF documents created with this application will be returned to the author for revision.

Those without access to these PDF creation tools, and those unable to create an acceptable PDF document, after following these instructions, may prepare a PostScript file of their paper and deliver it in place of a PDF document.

*Configuration Notes: dvips / ps2pdf / etc.*

"dvips" should be invoked with the "-Ppdf" and "-G0" (that's a zero – "0" – and not a capital "O") command-line options, in order to use Type 1 PostScript typefaces:

```
dvips -Ppdf -t letter -G0 -o paper.ps paper.dvi
```

The "-Ppdf" and "-G0" flags should be specified in that order; reversing them does not work, and will result in unacceptable results.

If you are using version 7.x of GhostScript, please use the following method of invoking 'ps2pdf,' in order to embed all typefaces and ensure that images are not downsampled or subsampled in the PDF creation process:

```
ps2pdf -dCompatibilityLevel=1.3 -dMaxSubsetPct=100 \  
-dSubsetFonts=true -dEmbedAllFonts=true \  
-dAutoFilterColorImages=false -dAutoFilterGrayImages=false \  
-dColorImageFilter=/FlateEncode -dGrayImageFilter=/FlateEncode \  
-dMonoImageFilter=/FlateEncode paper.ps paper.pdf
```

If you are using version 8.x of GhostScript, please use this method in place of the example above:

```
ps2pdf -dPDFSETTINGS=/prepress -dCompatibilityLevel=1.3 \  
-dAutoFilterColorImages=false -dAutoFilterGrayImages=false \  
-dColorImageFilter=/FlateEncode -dGrayImageFilter=/FlateEncode \  
-dMonoImageFilter=/FlateEncode -dDownsampleColorImages=false \  
-dDownsampleGrayImages=false paper.ps paper.pdf
```

*Configuration Notes: pdftex / pdflatex / etc.*

Configuration of these tools to embed all typefaces can be accomplished by editing the "updmap.cfg" file to enable inclusion of the standard (or base) 14 typefaces.

Linux users can run the "updmap" script to do this:

```
updmap --setoption pdftexDownloadBase14 true
```

Windows users should edit the "updmap.cfg" files found in their TeX installation directories (one or both of the following may be present):

```
INSTALLDIR\texmf\web2c\updmap.cfg  
INSTALLDIR\localtexmf\miktex\config\updmap.cfg
```

Ensure the value for "pdftexDownloadBase14" is "true," and then follow the instructions found here: <http://www.miktex.org/manual/psfonts.html#chgupdmapcfg> to update your MikTeX installation.

*Configuration Notes: Acrobat Distiller*

Please download and install the version of the "DDAPOptimized" Adobe Acrobat Distiller job options file appropriate for your computer platform and version of Adobe Acrobat Distiller from the following URL:

```
<http://www.cenveo.com/ads/pdf_instructions/setup.asp>
```

and use that job options file when creating PDF documents in Acrobat Distiller. (PC and Macintosh versions of this file, for use with Acrobat Distiller 4.0 and 5.0, are available. Version 5.0 will work with

newer versions of the Acrobat Distiller application.) The "DDAPOptimized" job options file embeds all typefaces and does not downsample or subsample images when creating the PDF document.

### **Checking Your PDF Document**

Verification of the proper embedding of typefaces in your PDF document can be accomplished with the "pdffonts" application, part of the "Xpdf" package available from <<http://www.foolabs.com/xpdf/>>.

Newer versions (7.0 and above) of the Adobe Acrobat Reader application may also be used to determine if all typefaces are embedded: with the PDF under scrutiny loaded into the application, select "Document Properties" from the "File" menu, then select the "Fonts" tab. If the terms "Embedded" or "Embedded Subset" appear next to each and every typeface in this list, your document is acceptable for publication.

If no such terms appear next to any of the typefaces in this list, those typefaces are not embedded in the PDF.

Documents in categories 1 – 3 **must have all typefaces embedded** prior to publication.

### **Supplemental Material**

Material accepted for presentation at the ACM SIGGRAPH annual conference may be accompanied by supplemental material: images, animations, HTML or VRML presentations, source code, etc. This supplemental material is intended to help the reader better understand your work.

You can make your supplemental material available to Stephen Spencer via Web or FTP, or by sending him a CD-R containing the files. His e-mail address is [spencer@siggraph.org](mailto:spencer@siggraph.org).

The ACM SIGGRAPH Full Conference DVD-ROM is a hybrid Macintosh / ISO-9660 DVD-ROM with Joliet extensions. Filenames of up to thirty-two characters in length, and of mixed case, are acceptable. Please do not use spaces in file or folder names.

TIFF images are preferred, though GIF and JPEG images are acceptable. Images should not be compressed (LZW or otherwise).

Animations may be submitted in Quicktime, MPEG or MPEG-4 AVI format. Uncompressed animation files are not acceptable. WMV files are acceptable but not recommended.

HTML presentations are accepted, provided that (a) your presentation should not rely on external resources for images or navigation elements, and (b) the file and folder names of your presentation must match the filenames used in hyperlinks, both in spelling and in case.

PDF (Adobe Acrobat) documents are also acceptable as supplemental material.

If you wish to include instructions or documentation for the end user, please place this information in a plain text file called "readme.usr" with the rest of your material.

If you have other types of material you'd like to submit as supplemental material, please contact me and we can discuss the best way to include it on the DVD-ROM.

Please follow the instructions for preparation of supplemental material. Material that does not conform to these guidelines – in particular, attention to file naming and case guidelines - may not be included on the DVD-ROM.

## **Copyright Forms**

Content in categories 1 – 3 must be accompanied by a completed ACM Copyright Form (except as noted below). The form must be filled out and signed by one author, preferably the primary author. Material without accompanying copyright forms will not be printed.

If your paper was accepted for presentation at the ACM SIGGRAPH annual conference (category 1) and you wish to submit supplemental material of any kind, you must also complete the "Supplemental Material Addendum" to the ACM Copyright Form.

Content in category 4 does not need an accompanying ACM Copyright Form; the Submission and Authorization Form required for submission to programs in that category is sufficient for legal purposes.

If your organization requires the use of their own copyright form, please contact Stephen Spencer as soon as possible to resolve any issues of copyright transfer.

The copyright for some events sponsored by ACM SIGGRAPH may be held by another organization; in that case, use of the copyright form used by that organization would be required.

Please use these forms for the ACM SIGGRAPH Annual Conference or ACM SIGGRAPH Asia:

<<http://www.siggraph.org/publications/instructions/acm-copyright-form-ac.pdf>>

<<http://www.siggraph.org/publications/instructions/copyright-addendum-ac.pdf>>

Please use this form or other conferences, workshops or symposia sponsored by ACM SIGGRAPH:

<<http://www.siggraph.org/publications/instructions/acm-copyright-form.pdf>>

## **Permissions to Use**

All of the images, audio and video pieces used in your paper or supplemental material must have proper copyright clearance. If you are using material you didn't create yourself, you must contact the owner of the material and secure permission to reuse. This permission may cost you money, and lack of it will require you to use alternate material. If you have any questions about copyright clearance for material you are using in your paper, please contact Stephen Spencer at +1-206-616-3281 or [spencer@siggraph.org](mailto:spencer@siggraph.org).

A good resource for proper and improper uses of images downloaded from the Web can be found online at the following URL: <<http://www.infotoday.com/searcher/jan02/tomaiuolo.htm>>. (Please don't assume that images found on the Web are freely available for reproduction. It is highly likely that they aren't.)

If the material you wish to reuse was originally published by ACM, you should speak with the Copyrights and Permissions office at ACM. The e-mail address to use for this purpose is

[permissions@acm.org](mailto:permissions@acm.org).

If the material you wish to reuse was originally published by IEEE, you should visit <<http://www.computer.org/portal/pages/ieeecs/content/copyright.html>> for information on obtaining permission to reuse IEEE-copyrighted material.

## Examples

Several example documents (Adobe Acrobat format) illustrate the formatting guidelines contained in this document.

1. <http://www.siggraph.org/publications/instructions/threepage.pdf>  
A three-page paper, with space left for the ACM copyright information. Suitable for use as an example of Categories 1 – 3.
2. <http://www.siggraph.org/publications/instructions/colorplate.pdf>  
A single color plate page, suitable for use with an accompanying Category 2 or 3 paper.
3. <http://www.siggraph.org/publications/instructions/onepage.v1.pdf>  
<http://www.siggraph.org/publications/instructions/onepage.v2.pdf>  
Two one-page abstracts without space for the ACM copyright information. Suitable for use as an example of Category 4.

Please note that the lengths of these documents may not exactly match the number of pages granted your accepted paper by the program chair of the event to which it was accepted. The program chair has the final say on paper length.