Graphics Interface
Instructions To Authors

Michael D. McCool

School of Computer Science
University of Waterloo

Abstract

Review submissions should follow the format described here as closely as possible. A PDF file is required for review, but no hardcopies.

For accepted papers, by the final submission deadline PDF versions of accepted papers must have been uploaded and a signed release form and a cheque covering any charges must have been physically received by the proceedings editor. A physical camera-ready hardcopy and a reference hardcopy with page numbers will also be required and should be included with the release form. However, the camera-ready hardcopy will be used for printing only in unusual circumstances. There will be no extensions, since we have a tight printing schedule. Please note the special rules for colour, specifically that colour may only be printed on one side of each physical sheet. Papers should be formatted as in this example. Page sizes and margins must be respected.

Key words: Author instructions, layout, paper formatting, electronic submissions.

1   General Comments

The paper must be in English with an English abstract. A French abstract (résumé) is optional. Any translation of the abstract must be provided by the authors.

The nominal length of papers is eight pages.

2   Review Submissions

Papers submitted for review should follow the formatting conventions described in this document as closely as possible. This can be most easily accomplished by using the style files provided for Word or LATEXin this author's kit. Strict adherence to the rules for colour are not necessary for the review version of your paper, but please respect the margins, spacing, and point size so that we may accurately assess the printed length of your paper. You also may want to make some modifications to make it easier for the reviewers. For instance, you might want to number *all* equations to make them easier to refer to.

A PDF file is *required*, uploaded via the GI website. Please take care to ensure that your PDF file is as portable as possible. PDF generated directly by pdflatex or by Word via Adobe's distiller is acceptable (see the appropriate sections later on using how to use one of these tools to generate portable PDF).

No hardcopies are required for review, and images in review papers should have image setttings suitable for online viewing, for instance, use of the RGB colour space. Review submissions should not use JPEG compression (if using distiller, turn off lossy image compression) and should have at least 100 dpi image resolution, but higher resolution is acceptable and in fact encouraged.

Paper manuscripts submitted for review should be anonymous. Identification information will be collected on the upload page and will be tracked separately. Do not use your name or names in the headers or title. Avoid using any images characteristic of your lab. Do not refer to your own work as "yours" or "the authors'". Use third person in all references.

Although you do not have to submit a copyright clearance form for review, it is expected that you will do so for the final version of the paper without substantially changing the content of your paper, so please ensure that you do have publication rights to the content of your review submission. One author of every accepted paper must also register for and attend the conference.

3   Final Submission

Final submission of accepted papers to appear in the proceedings must be in the form of PDF files and will be printed directly from submitted files. Submission of two hardcopies is also required: a camera-ready hardcopy with colour pictures and no page numbers, and a reference hardcopy with page numbers written in, for which colour is optional. The camera-ready hardcopy will be used for colour reference, but will only be scanned for printing in unusual circumstances.

Papers submitted electronically will be added the GI web site at www.graphicsinterface.org, and may appear in the future in digital libraries and CD-ROM collections. An optional second PDF file may be submitted for online use (for example, using RGB colours

rather than CMYK colours, if CMYK colours were used in the version submitted for printing, or with an alternative colour scheme).

A copyright clearance form and payment of any page charges will also be expected with the final submission.

4 Page Charges

Papers without colour taking up eight pages or less will be printed without charge. There will a $200 charge for each *pair* of pages in excess of eight. There is also a charge for colour. To add colour to a page requires $50 for the first page printed in colour, and $150 for each page after that. Colour may only be printed on one side of each physical sheet. The first page of each paper will be odd, and will appear on the right-hand side of the open proceedings. Therefore, each physical sheet will be printed with an odd-even pair of pages.

5 Page Formatting

GI papers must be formatted using the following guidelines. Note that the provided LaTeX and Word style files cover most of these points, and this paper is an example of a correctly formatted GI paper using the provided LaTeX style file.

The body of the paper should use a Times-Roman 10–point font with a vertical spacing of 12 points. The text must appear in *two columns* and should be correctly hyphenated and right–justified. The margin settings in Table 1 are required, using 8.5 inch by 11 inch paper.

Please note:

- The paper size *must* be 8.5 by 11 inches, or U.S. letter. Please verify your paper size in Acrobat before submitting the paper. Notes later in this document describe how to set and correct paper sizes using pdflatex and distiller.

- The formatting of GI papers is NOT the same as SIGGRAPH papers. Please do NOT use the SIGGRAPH style files. Your margins will be in the wrong places and we will not be able to add our headers and footers.

No text or figure should extend beyond the margins: it may be cut off in the printing, or overprinted with headers and footers. Papers should not include page numbers. Page numbers as well as appropriate headers and footers will be added by the proceedings editor.

On the *back* of each page of the final camera-ready hardcopy please mark the paper number and page number (starting at one at the start of the paper) in light pencil (blue pencil if possible). Mark the page numbers on the front of the reference hardcopy.

Measurement	mm	inches	pts
Paper width	215.9	8.5	612
Paper height	279.4	11	792
Left margin	25	1	72
Right margin	25	1	72
Top margin	25	1	72
Bottom margin	30	1.25	90
Column width	80	3.125	225
Between columns	5	0.25	18

Table 1: Paper size and margin settings.

5.1 First Page

The title should be centered with a baseline 38 mm (1.5 inches or 108 points) below the top edge of the paper and should be in bold 14–point mixed capitals *and* lower case. A bold Times font should be used. If more than one line is required, use 18–point spacing for the title.

Authors

The authors' names and affiliations should be 10–point, single spaced, centered, should not extend outside the left and right margins, and should use both upper and lower case letters. Multiple author names should be placed side by side in multiple columns if space permits; otherwise, they may be placed on a single line, one after the other. Multiple affiliations can also be placed side by side in multiple columns underneath the authors, if each author has a separate affiliation. Otherwise they can be identified by corresponding superscripts in italics ([a], [b], [c], etc.).

Note: author's names should be omitted from review submissions.

Abstract

The abstract (100 to 200 words) should be headed by the word "Abstract" in 10-point italics, centered over the left column, 90 mm (3.5 inches or 252 points) from the top edge of the paper. The body of the abstract should be in the left column of the two-column format, single spaced, with care being taken to remain within the column margins. It should be printed in the same font as the body text. If the abstract is provided in both English and French (and we encourage you to do so, if you can provide a good French abstract), the two versions should appear one below the other. The word "Résumé" should be printed in 10-point italics above the French abstract. A line starting with "Key words:" in 10-point italics and listing a few well-chosen key words, also in italics, should appear below the abstract(s).

Text

The text of the paper should immediately follow the "Key words", and should be typeset using 10-point type. All headings should be in 10–point boldface Times, using both capitals and lower case, and should be left-justified in their columns. Sections are numbered 1, 2, 3, etc; sub-sections are numbered 4.1, 4.2, 4.3, etc; sub–subsections are not numbered, but the sub–subsection heading is still 10–point boldface.

5.2 Second and Subsequent Pages

These pages should be typeset in two-column format, single spaced, with care being taken to remain within the margins.

6 Equations

Displayed equations should be numbered only if they are referenced (in the final printing; for the review copy, number everything if you can). For instance, this equation is not referenced again:

$$f(x) = \cos(x).$$

These two, however,

$$g(x) = \sin(x), \qquad (1)$$
$$h(x) = f(x)g(x), \qquad (2)$$

are referred to as Equation 1 and Equation 2.

Equations should be punctuated as if they were phrases, with commas between multiple equations. However, the only verb in a sentence should not be the "=" sign in an equation. Do not begin a sentence with a numeral or a mathematical symbol. Don't say "$E = mc^2$ is an interesting equation"; say instead "The equation $E = mc^2$ is interesting".

7 Figures

Figures should be typeset in the body of the text with appropriate captions. Refer to figures using the terminology Figure 1, Figure 2, Figure 3, etc. For subfigures, use Figure 1a, Figure 1b, etc. Tables may also be included, should be numbered separately, and referenced as with Table 1. The contents of tables should be centered.

Captions to figures and tables should be set in a 10-point slanted or italic Times font to distinguish them from the main body text. Captions should start with the word "Figure" or "Table" and the number as shown in the examples.

Figures can span either a single column or two columns. If they span two columns, they should under no conditions extend beyond the outer margins, or appear above the title/author block. Also, all other conventions for captions and numbering should be followed.
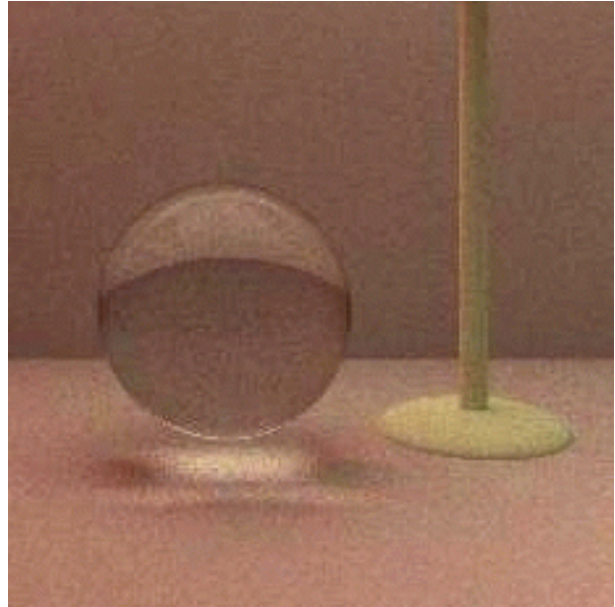

Figure 1: This is an example of how to include an RGB image stored in a PNG file. RGB images should represented relative to the sRGB colour space.

8 Bibliography and Citations

The bibliography should be headed by the word "References", left-justified, in 10–point boldface Times. References should be ordered alphabetically by first author. The reference section should not be numbered.

Refer to citations using a square-bracketed numeral [2]. Multiple citations should be referenced with a comma-separated list inside brackets [1, 2]. Try to list such citations in numerical order. Citations are not nouns! They should be treated grammatically as parenthetical statements. Say "Consider the work of Some Author and Her Cat [2]", not "Consider the work of [2]". Do not start a sentence with a citation.

9 Colour

Colour pictures should be included in your paper if you feel that colour adds to the information being conveyed. Colour figures ideally should be concentrated on as few pages as possible in order to reduce the cost of colour reproduction—author charges do *not* fully recover the cost of colour printing. Colour images can only be printed on one side of each physical sheet of paper in the proceedings, where a physical sheet consists of an odd-numbered page and the following even-numbered page. Every paper will begin on an odd page. Colour printing must be specifically requested and paid for. Colour images on pages not identified for colour printing will be
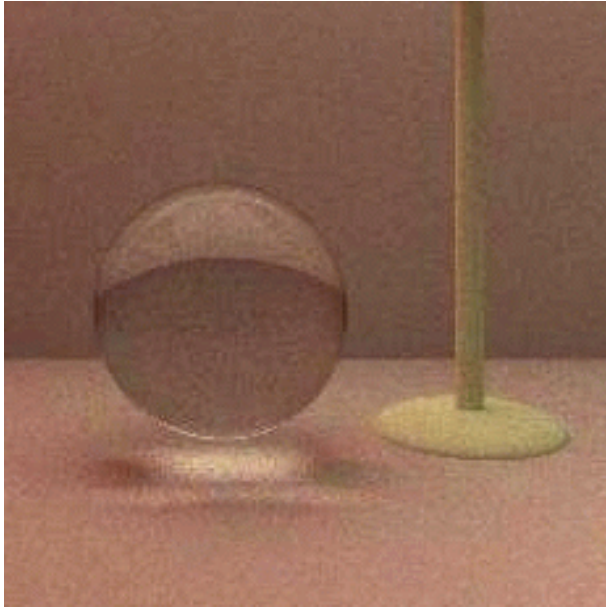
Figure 2: Here we have converted the RGB image in Figure 1 to PDF using Photoshop, specifying the sRGB colour space. Compare this with Figure 3.

printed in greyscale, but of course will show up in colour in the electronic version of your paper presented on the web site.

Your colour pictures will be automatically considered for the front and back covers of the Proceedings. If you don't wish to have your pictures considered, please indicate this on the release form. Colour images may also be emailed in attachments directly to the proceedings editor at

mmccool@cgl.uwaterloo.ca.

You must, of course, have the copyright to any images that appear in your papers or that you submit for the cover. The cover design also uses vector graphics and code; *please* submit these as well, the former as EPS or PDF files and the latter as raw text.

10 Electronic Version of Paper

Instructions for electronic submission can be found on the GI web site. Electronic submission of your paper as a PDF file is *required*.

To submit an electronic version of your paper through the GI web site, you will need to know your paper number and password, which you received when you first submitted your paper.

If your PDF file for printing is significantly different from the version you want to present for online viewing
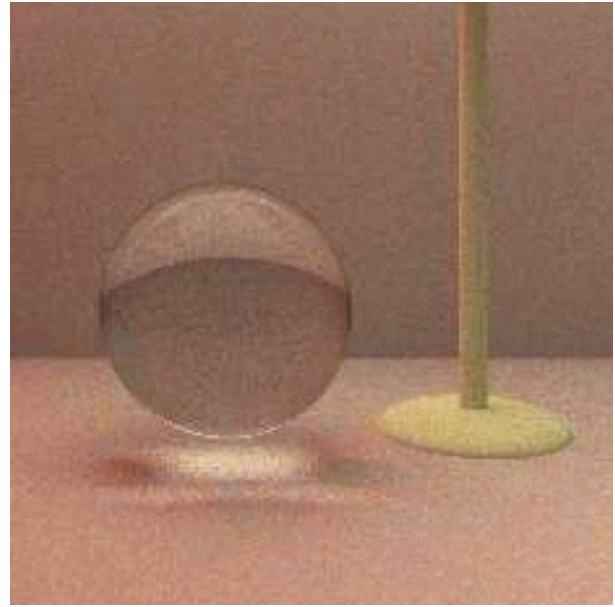

Figure 3: This is an example of how to include a CMYK image stored in a PDF file. In this case, Photoshop 6.0 was used to convert the PNG file in Figure 1 using the sRGB source colour space, the Kodak SWOP Proofer CMYK Uncoated Stock destination ICC profile (in SWUL28M.icm), a dot gain of 20%, black point compensation, the relative colourimetric intent, and the Microsoft colour conversion engine. Note that the conversion has not been optimized to display the same as the original in Acrobat Reader, but to print as close to the original as possible.

(for instance, you used the CMYK colour space for images in the version to be printed, or want greyscale on certain pages for printing and colour for online), then submit a separate file for the web archive. However, aim for quality, not small size. We can generate a version with subsampled images, etc. if necessary, but would like to archive a high-quality version. See the submission web page for details.

10.1 Style Files and PDF Conversion

A LaTeX2ϵ document class, gipaper.cls and an example input file, giformat.tex, conforming to these specifications are provided in the author's kit available on the conference Web site. The example file, which is in fact the source for this document, is set up to use pdflatex. Please consider using pdflatex to process your files and produce PDF directly. The results are generally superior to conversion from DVI to PDF, although this will also work. Information on pdflatex can be found at www.tug.org.
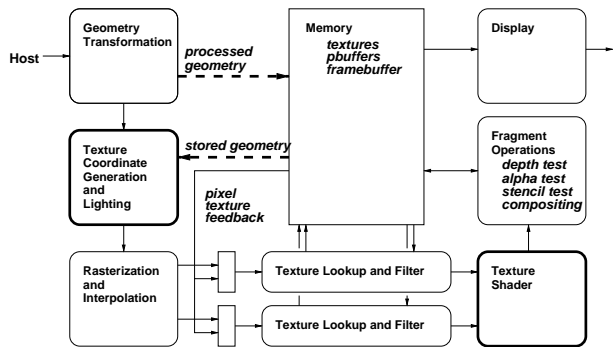
Figure 4: This is an example of how to include a vector graphics image stored in a PDF file. Convert EPS images to PDF if you are using `pdflatex`.

See the comments in the example file on how to set up `pdflatex` appropriately. In particular, you may have to modify your `pdftex.cfg` configuration file to get the correct PDF paper size; it should look something like Figure 5. A `pdftex.cfg` file is included with this package but will need to be modified for your installation to access your fonts (just compare it with your existing configuration file). You should also make sure `pdflatex` is configured to use English hyphenation rules, as some distributions do not use this as the default. This can be accomplished with the `babel` package, again as shown in the example file.

```
% example pdftex configuration file
output_format 1
compress_level 9
decimal_digits 3
% Get these right!
page_width 8.5in
page_height 11in
horigin 1in
vorigin 1in
% Your map file is probably different
map pdftex.map
```

Figure 5: What your `pdftex.cfg` file should look like to get the right page size. There are other ways to change the PDF paper size, but this is the most reliable.

To use `pdflatex` you will also have to convert all images to PDF, PNG, or JPEG. JPEG is not recommended, however, as it uses lossy compression; if you *must* use it, use a quality setting as high as possible. NEVER use JPEG compression for screen shots including text.

Adobe distiller (or illustrator) can be used to convert EPS files to PDF if you want to include an EPS diagram

in a paper via `pdflatex`. You can also use the free program `ghostview` for this purpose. The `pdflatex` distribution in particular includes a script to convert EPS files to PDF based on `ghostview`.

Note that there is an incompatibility between PDF files generated by earlier versions of `pdflatex` and Acrobat 5.0; namely, some files may display but not print. We will accept these files, and will fix them for presentation on our website, but if you want to fix them yourselves, either (a) get the latest version of `pdflatex` which includes a workaround for the Acrobat 5.0 bug involved or (b) from Acrobat 4.0.5, print to distiller. The resulting file will print under Acrobat 5.0 but will have lost all bookmarks, etc. Distiller and acrobat can also be used this way to fix page size problems: print to distiller with a large page size, NOT using fit-to-page, then crop to the right size and positioning in Acrobat (a horrible hack, we know). A much better (and cheaper) solution to both these problems is to get the latest distribution of `pdflatex` and set it up correctly. If you do use "print to distiller" to massage your PDF files, make sure you use the correct "Press" settings described below to avoid degrading your images.

A Microsoft Word template is also available, `template.doc`. Due to difficulties we have had in the past with font embedding and version compatibility in Word, we will *not* be accepting Word documents directly. You must convert your files to PDF by printing to the Abode distiller printer driver. You have to do this on the same computer as the Word installation to pick up, convert, and embed the necessary TrueType fonts. Printing a PostScript file on one machine and converting on another will generally not work unless both machines have exactly the same TrueType font installation.

If you use Adobe distiller to convert files from Word or any other word processor to PDF, please use the "Press" settings: image resolution of 300dpi or better, no JPEG compression (ZIP compression is OK and in fact desirable, though), and full embedding of fonts. Do *not* use PDFWriter: it cannot correctly capture the TrueType math font used in Word.

Test your PDF file on a machine different from the one you used to generate it, ideally on one with a different operating system, to make sure all fonts have been embedded correctly. Make sure your file is both viewable under the Acrobat reader and prints correctly. Watch out in particular for missing symbols and diagrams that print incorrectly.

10.2 Optimizing Print Quality

The printer used to print the proceedings is an offset press that uses metal plates generated by an imagesetter with a resolution of 2540dpi. Colour is printed using CMYK

process colour using four separate passes. We will be printing on uncoated paper.

This printing technology has certain implications that you should take into account when preparing your files. First of all, the resolution is *VERY HIGH*. After halftoning, images will have a TRUE resolution of 300dpi, with approximately 200 shades of grey. You should take advantage of this by submitting high-resolution images: an image that is the width of a column should be approximately 900 pixels wide. If the resolution is lower, it may appear pixellated. You can put screen shot images in a single column and it is possible to see every single pixel. On the other hand, JPEG compression artifacts will be very noticeable, *especially* with screen shots.

Make sure that JPEG compression is *not* used when you create your PDF file, and also make sure that your images are *not* subsampled by distiller to 72dpi (which is the default behaviour). Images should originate at 300dpi and be maintained at this resolution or higher.

Colour images are printed using process colour, which requires conversion to a CMYK colour space. It is not mandatory, but you can do this conversion yourself. This will save the proceedings editor some trouble and will give you more control over issues like gamut mapping. There are other advantages: if you want to put text labels on top of your images, it is best if you convert to CMYK and *then* put the text labels in only the K channel. This will keep the edge of the labels crisp. Conversion to CMYK can be done using Photoshop—see the caption of Figure 2 for appropriate settings for Photoshop 6.0. RGB and CMYK images can be mixed in the same PDF file. However, CMYK images may not be rendered correctly (the same way they will print) in Acrobat Reader so you may want to submit a version with RGB images for the website. If you submit documents with RGB images, we will assume the sRGB image space (see www.srgb.com) for the purposes of conversion to CMYK.

Unfortunately, one of the drawbacks of offset press technology is that colour consistency is hard to control. In particular, no ICC profile is available for the press, since ink density and plate pressure are manually adjusted. We will assume the Kodak SWOP Proofer CMYK Uncoated stock ICC profile as a target for our conversions. The printers will then adjust the press by eye to match the colours in your submitted hardcopy, so submit a colour hardcopy that has colours you are happy with.

For text, the high resolution means that resolution-independent vector fonts should be used. Use the Times font as specified, and avoid the use of resolution-dependent DVI files if you are using LaTeX. Fortunately, pdflatex converts the Computer-Modern math fonts

to a resolution-independent vector form.

For line drawings, make sure that your lines are wide enough. A hairline, or the finest line the imager can generate, won't show up during printing due to various non-linear effects in the printing process. Make all lines at least 0.5pt wide or wider, *after* scaling. If you want to halftone lines in graphs to distinguish them by greyscale, make them at least 3pts wide.

Acknowledgements

Note there is no section number on the acknowledgement section header or on the header for the references.

References

[1] Another Author. Another paper. In *Another Conference*, pages 22–33, 1995.

[2] Some Author and Her Cat. Some paper. In *Some Conference*, pages 1–21, 1995.