

# 2017 Formatting Instructions for Authors Using L<sup>A</sup>T<sub>E</sub>X

## AAAI Press

Association for the Advancement of Artificial Intelligence  
2275 East Bayshore Road, Suite 160  
Palo Alto, California 94303

### Abstract

AAAI creates proceedings, working notes, and technical reports directly from electronic source furnished by the authors. To ensure that all papers in the publication have a uniform appearance, authors must adhere to the following instructions.

Congratulations on having a paper selected for inclusion in an AAAI Press proceedings or technical report! This document details the requirements necessary to get your accepted paper published using L<sup>A</sup>T<sub>E</sub>X. If you are using Microsoft Word, instructions are provided in a different document. If you want to use some other formatting software, you must obtain permission from AAAI Press first.

The instructions herein are provided as a general guide for experienced L<sup>A</sup>T<sub>E</sub>X users who would like to use that software to format their paper for an AAAI Press publication or report. If you are not an experienced L<sup>A</sup>T<sub>E</sub>X user, do not use it to format your paper. AAAI cannot provide you with support and the accompanying style files are **not** guaranteed to work. If the results you obtain are not in accordance with the specifications you received, you must correct your source file to achieve the correct result.

These instructions are generic. Consequently, they do not include specific dates, page charges, and so forth. Please consult your specific written conference instructions for details regarding your submission. Please review the entire document for specific instructions that might apply to your particular situation. All authors must comply with the following:

- You must use the latest AAAI Press L<sup>A</sup>T<sub>E</sub>X style file (aaai17).
- You must use the latest AAAI Press BibTeX style file (aaai.bst).
- Download the author kit.
- Complete, sign, and return by the deadline the AAAI copyright form (proceedings authors) or distribution license (technical report authors).
- Read and format your paper source and PDF according to these formatting instructions for authors.

- Submit your electronic files and abstract using our electronic submission form **on time**.
- Submit your copyright form, and any required page or formatting charges to AAAI Press so that they are received by the deadline.
- Check every page of your paper before submitting it.

### Copyright

All papers submitted for publication by AAAI Press must be accompanied by a valid signed copyright form or, in the case of technical reports, by a valid signed permission to distribute form. There are no exceptions to this requirement. You must send us the original version of this form. However, to meet the deadline, you may fax (1-650-321-4457) or scan and e-mail the form (pubforms17@aaai.org) to AAAI by the submission deadline, and then mail the original via postal mail to the AAAI office. **If we don't receive a signed copyright or permission form, we will be unable to publish your paper.** You will find PDF versions of the AAAI copyright and permission to distribute forms in the author kit.

### Formatting Requirements in Brief

We need source and PDF files that can be used in a variety of ways and can be output on a variety of devices. AAAI imposes some requirements on your source and PDF files that must be followed. Most of these requirements are based on our efforts to standardize conference manuscript properties and layout. In general, using aaai.sty without modification (either of the actual style file, or through use of commands or incompatible packages) will result in a paper that can be successfully published. Briefly, the requirements are as follows, and all papers submitted to AAAI for publication must comply:

- Your .tex file must compile in PDFL<sup>A</sup>T<sub>E</sub>X — **no .ps or .eps figure files**.
- All fonts must be embedded in the PDF file — **this includes your figures**.
- Modifications to the AAAI .sty file, whether in the sty file itself or within your document are not allowed.
- Using packages that modify or alter the AAAI style file are not allowed.

- Using formatting tricks, whether in an effort to avoid extra page charges, make your paper fit, or simply to change the look of the paper are not allowed.
- No type 3 fonts may be used (even in illustrations).
- Your title must follow Title Case capitalization rules (not sentence case).
- L<sup>A</sup>T<sub>E</sub>X documents must use the Times or Nimbus font package (do not use Computer Modern for the text of your paper).
- No L<sup>A</sup>T<sub>E</sub>X 209 documents may be used or submitted.
- Your source must not require use of fonts for non-Roman alphabets within the text itself. If your paper includes symbols in other languages (such as, but not limited to Arabic, Chinese, Hebrew, Japanese, Russian and other Cyrillic or non-Roman languages), you must restrict their use to figures. and tables)
- Fonts that require non-English language support (CID and Identity-H) must be converted to outlines or 300 dpi bitmap or removed from the document (even if they are in a graphics file embedded in the document).
- Two-column format in AAI style is required for all papers.
- The paper size for final submission must be US letter. No exceptions.
- The source file must exactly match the PDF.
- The document margins must be as specified in the formatting instructions.
- The number of pages and the file size must be as specified for your event.
- No document may be password protected.
- Neither the PDFs nor the source may contain any embedded links or bookmarks (such as, but not limited to, those created in hyperref).
- Your source and PDF must not have any page numbers, footers, or headers.
- Your PDF must be compatible with Acrobat 5 or higher.
- Your L<sup>A</sup>T<sub>E</sub>X source file (excluding references) must consist of a **single** file (use of the “input” command is not allowed).
- Your graphics must be sized appropriately outside of L<sup>A</sup>T<sub>E</sub>X (do not use the “clip” command) .

If you do not follow the above requirements, it is likely that we will be unable to publish your paper.

### What Files to Submit

You must submit the following items to ensure that your paper is published:

- A fully-compliant PDF file.
- Your L<sup>A</sup>T<sub>E</sub>X source file submitted as a **single** .tex file (do not use the “input” command to include sections of your paper — every section must be in the single source file).

The only exception is the bibliography, which you should include separately as a .bib file. Your source must compile on our system, which includes the standard L<sup>A</sup>T<sub>E</sub>X support files.

- All your graphics files.
- The L<sup>A</sup>T<sub>E</sub>X-generated files (e.g. .aux and .bib file, etc.) for your compiled source.
- All the nonstandard style files (ones not commonly found in standard L<sup>A</sup>T<sub>E</sub>X installations) used in your document (including, for example, old algorithm style files). If in doubt, include it.

Your L<sup>A</sup>T<sub>E</sub>X source will be reviewed and recompiled on our system (if it does not compile, you may incur late fees).

**Do not submit your source in multiple text files.** Your single L<sup>A</sup>T<sub>E</sub>X source file must include all your text, your bibliography (formatted using aaai.bst), and any custom macros. Accompanying this source file, you must also supply any nonstandard (or older) referenced style files and all your referenced graphics files.

Your files should work without any supporting files (other than the program itself) on any computer with a standard L<sup>A</sup>T<sub>E</sub>X distribution. Place your PDF and source files in a single tar, zipped, gzipped, stuffed, or compressed archive. Name your source file with your last (family) name.

**Do not send files that are not actually used in the paper.** We don’t want you to send us any files not needed for compiling your paper, including, for example, this instructions file, unused graphics files, standard style files, and so forth.

**Obsolete style files.** The commands for some common packages (such as some used for algorithms), may have changed. Please be certain that you are not compiling your paper using old or obsolete style files.

### Using L<sup>A</sup>T<sub>E</sub>X to Format Your Paper

The latest version of the AAI style file is available on AAI’s website. Download this file and place it in the T<sub>E</sub>X search path. Placing it in the same directory as the paper should also work. You must download the latest version of the complete author kit so that you will have the latest instruction set and style file.

### Document Preamble

In the L<sup>A</sup>T<sub>E</sub>X source for your paper, you **must** place the following lines as shown in the example in this subsection. This command set-up is for three authors. Add or subtract author and address lines as necessary, and uncomment the portions that apply to you. In most instances, this is all you need to do to format your paper in the Times font. The helvet package will cause Helvetica to be used for sans serif. These files are part of the PSNFSS2e package, which is freely available from many Internet sites (and is often part of a standard installation).

Leave the setcounter for section number depth commented out and set at 0 unless you want to add section numbers to your paper. If you do add section numbers, you must

uncomment this line and change the number to 1 (for section numbers), or 2 (for section and subsection numbers). The style file will not work properly with numbering of subsections, so do not use a number higher than 2.

If (and only if) your author title information will not fit within the specified height allowed, put `\setlength\titlebox2.5in` in your preamble. Increase the height until the height error disappears from your log. You may not use the `\setlength` command elsewhere in your paper, and it may not be used to reduce the height of the author-title box.

```

\documentclass[letterpaper]article
% Required Packages
\usepackage{aaai}
\usepackage{times}
\usepackage{helvet}
\usepackage{courier}
\setlength{\pdfpagewidth}{8.5in}
\setlength{\pdfpageheight}{11in}
%%%%
% PDFINFO for PDFLATEX
% Uncomment and complete the following for metadata
% (your paper must compile with PDFLATEX)
\pdfinfo{
/Title (Input Your Paper Title Here)
/Author (John Doe, Jane Doe)
/Keywords (Input your paper's keywords in this optional
area)
}
%%%%
% Section Numbers
% Uncomment if you want to use section numbers
% and change the 0 to a 1 or 2
% \setcounter{secnumdepth}{0}
%%%%
% Title, Author, and Address Information
\title{Title}
\author{Author 1 \and Author 2\}
Address line\}
Address line\}
\And
Author 3\}
Address line\}
Address line\}
%%%%
% Body of Paper Begins
\begin{document}
\maketitle
...
%%%%
% References and End of Paper
\bibliography{Bibliography-File}
\bibliographystyle{aaai}
\end{document}

```

### Inserting Document Metadata with `\pdfinfo`

PDF files contain document summary information that enables us to create an Acrobat index (pdx) file, and also allows search engines to locate and present your paper more

accurately. Consequently, **document metadata for author and title are required**. The data in the metadata must be completely plain ascii. It may not include slashes, accents, linebreaks, unicode, or any  $\LaTeX$  commands. Type the title exactly as it appears on the paper (minus all formatting). Input the author names in the order in which they appear on the paper (minus all accents), separating each author by a comma. You may also include keywords in the Keywords field.

Using the above `pdfinfo` as an example, replace “Input Your Paper Title Here” from the above example with your paper title. *Leave the parentheses in place, as they are an integral part of the pass-through to Acrobat*. To add your authors, replace “John Doe, Jane Doe” in the above example with your authors. Do not use “and” and do not include any  $\LaTeX$  commands, including accents. This information is passed through directly to the PDF reader, which cannot understand any  $\LaTeX$  formatting codes. Do not use any shortcut definitions or in this area either, as they break the integrity of the PDF.

*To re-emphasize:* Do not include any  $\LaTeX$  code, definitions, scripts, or nonascii characters (including accented characters) in the metadata!

### Preparing Your Paper

After the preamble above, you should prepare your paper as follows:

```

\begin{document}
\maketitle
...
\bibliography{Bibliography-File}
\bibliographystyle{aaai}
\end{document}

```

### Use of Color

Using color with any portion of your text is not allowed. The proceedings are printed in grayscale, and use of color within your text has often resulted in the color text becoming illegible when printed. Using color for illustrations is discouraged. If you must use it, you need to use the cmyk color space for *all* your illustrations, and you must flatten layers. Most of the production problems encountered can be attributed to improper mixing of colorspace within a single document, and including multiple layers (sometimes with different color spaces!) within a single illustration. To avoid this, use PhotoShop or a similar program to alter the color space and flatten layers for every illustration.

### Incompatible Packages

The following packages are incompatible with `aaai.sty` and/or `aaai.bst` and must not be used (this list is not exhaustive — there are others as well):

- `authblk`
- `caption`
- `caption`
- `flushend`

- fullpage
- geometry
- hyperref
- layout
- nameref
- natbib
- pstricks
- savetrees
- setspace
- titlesec
- tocbind
- T1 fontenc package (install the CM super fonts package instead)

### Illegal Commands

The following commands may not be used in your paper (this list is exhaustive — there are others; generally, if it alters `aaai.sty`, it isn't acceptable):

- `\input`
- `\vspace` or `vskip` (always when used before or after a section or subsection, and almost always when used above or below a table or figure)
- `\addtolength`
- `\columnsep`
- `\top margin` (or `text height` or `addsidemargin` or `even side margin`)
- `trim` or `clip` (used to crop figures)
- any command that alters floats, or space above and below figures and tables
- `baseline stretch`
- `footnotesize` or `scriptsize` (when used in references, captions, or footnotes)

### Paper Size, Margins, and Column Width

Papers must be formatted to print in two-column format on 8.5 x 11 inch US letter-sized paper. The margins must be exactly as follows:

- Top margin: .75 inches
- Left margin: .75 inches
- Right margin: .75 inches
- Bottom margin: 1.25 inches

The default paper size in most installations of  $\LaTeX$  is A4. However, because we require that your electronic paper be formatted in US letter size, you will need to alter the default for this paper to US letter size. Assuming you are using the 2e version of  $\LaTeX$ , you can do this by including the `[letterpaper]` option at the beginning of your file: `\documentclass[letterpaper]article`.

This command is usually sufficient to change the format. Sometimes, however, it may not work. Use

$\PDF\LaTeX$  and include `\setlength{\pdfpagewidth}{8.5in}` `\setlength{\pdfpageheight}{11in}` in your preamble.

**Do not use the Geometry package to alter the page size.** Use of this style file alters `aaai.sty` and will result in your paper being rejected.

**Column Width and Margins.** To ensure maximum readability, your paper must include two columns. Each column should be 3.3 inches wide (slightly more than 3.25 inches), with a .375 inch (.952 cm) gutter of white space between the two columns. The `aaai.sty` file will automatically create these columns for you.

### Overlength Papers

If your paper is too long, turn on `\frenchspacing`, which will reduce the space after periods. Next, shrink the size of your graphics. Use `\centering` instead of `\begin{center}` in your figure environment. For mathematical environments, you may reduce `fontsize`. You may also alter the size of your bibliography by inserting `\fontsize{9.5pt}{10.5pt}` `\selectfont` right before the bibliography (the minimum size is `\fontsize{9.0pt}{10.0pt}`).

Commands that alter page layout are forbidden. These include `\columnsep`, `\topmargin`, `\topskip`, `\textheight`, `\textwidth`, `\oddsidemargin`, and `\evensidemargin` (this list is not exhaustive). If you alter page layout, you will be required to pay the page fee *plus* a reformatting fee. Other commands that are questionable and may cause your paper to be rejected include `\parindent`, and `\parskip`. Commands that alter the space between sections are forbidden. The `title sec` package is not allowed. Regardless of the above, if your paper is obviously “squeezed” it is not going to be accepted. Before using every trick you know to make your paper a certain length, try reducing the size of your graphics or cutting text instead or (if allowed) paying the extra page charge.

### Figures

Your paper must compile in  $\PDF\LaTeX$ . Consequently, all your figures must be `.jpg`, `.png`, or `.pdf`. You may not use the `.gif` (the resolution is too low), `.ps`, or `.eps` file format for your figures. Your figures must be either black and white or, if necessary, `cmymk` color. Do not use `rgb` color, and do not mix color spaces within your document. All layers must be flattened. Transparency is not supported.

When you include your figures, you must crop them **outside** of  $\LaTeX$ . The command `\includegraphics*[clip=true, viewport 0 0 10 10]...` might result in a PDF that looks great, but the image is **not really cropped**. The full image can reappear (and obscure whatever it is overlapping) when page numbers are applied or color space is standardized.

If your paper includes illustrations that are not compatible with  $\PDF\LaTeX$  (such as `.eps` or `.ps` documents), you will need to convert them. The `epstopdf` package will usually work for `eps` files. You will need to convert your `ps` files to PDF however.

**Captions** The `caption` package is not supported. Do not alter the size or presentation of captions (e.g. reducing the size or font of an entire caption.)

## Type Font and Size

Your paper must be formatted in Times Roman or Nimbus. We will not accept papers formatted using Computer Modern or Palatino or some other font as the text or heading typeface. Sans serif, when used, should be Courier. Use Symbol or Lucida or Computer Modern for *mathematics only*.

Use of `\tiny` is not allowed. This command results in 5 point type, which is below the minimum threshold for readability. In addition, it is often used within mathematical expressions, when results in type as small as 2 points.

Do not use type 3 fonts for any portion of your paper, including graphics. Type 3 bitmapped fonts are designed for fixed resolution printers. Most print at 300 dpi even if the printer resolution is 1200 dpi or higher. They also often cause high resolution imagesetter devices and our PDF indexing software to crash. Consequently, AAAl will not accept electronic files containing obsolete type 3 fonts. Files containing those fonts (even in graphics) will be rejected.

Fortunately, there are effective workarounds that will prevent your file from embedding type 3 bitmapped fonts. The easiest workaround is to use the required times, helvet, and courier packages with  $\LaTeX$ 2e. (Note that papers formatted in this way will still use Computer Modern for the mathematics. To make the math look good, you'll either have to use Symbol or Lucida, or you will need to install type 1 Computer Modern fonts — for more on these fonts, see the section “Obtaining Type 1 Computer Modern.”)

If you are unsure if your paper contains type 3 fonts, view the PDF in Acrobat Reader. The Properties/Fonts window will display the font name, font type, and encoding properties of all the fonts in the document. If you are unsure if your graphics contain type 3 fonts (and they are PostScript or encapsulated PostScript documents), create PDF versions of them, and consult the properties window in Acrobat Reader.

The default size for your type should be ten-point with twelve-point leading (line spacing). Start all pages (except the first) directly under the top margin. (See the next section for instructions on formatting the title page.) Indent ten points when beginning a new paragraph, unless the paragraph begins directly below a heading or subheading.

**Obtaining Type 1 Computer Modern for  $\LaTeX$ .** If you use Computer Modern for the mathematics in your paper (you cannot use it for the text) you may need to download type 1 Computer fonts. They are available without charge from the American Mathematical Society: <http://www.ams.org/tex/type1-fonts.html>.

## Title and Authors

Your title must appear in mixed case (nouns, pronouns, and verbs are capitalized) near the top of the first page, centered over both columns in sixteen-point bold type (twenty-four point leading). This style is called “mixed case.” Author’s names should appear below the title of the paper, centered in twelve-point type (with fifteen point leading), along with affiliation(s) and complete address(es) (including electronic mail address if available) in nine-point roman type (the twelve point leading). (If the title is long, or you have many authors, you may reduce the specified point sizes by

up to two points.) You should begin the two-column format when you come to the abstract.

**Formatting Author Information** Author information can be set in a number of different styles, depending on the number of authors and the number of affiliations you need to display. For several authors from the same institution, use `\and`:

```
\author{Author 1 \and ... \and Author n}\
Address line \\ ... \\ Address line}
```

If the names do not fit well on one line use:

```
\author{Author 1}\
{\bf Author 2}\ ... \{\bf Author n}\
Address line \\ ... \\ Address line}
```

For authors from different institutions, use `\And`:

```
\author{Author 1\ Address line \\ ... \\ Address line
\And ... \And Author n\
Address line\ ... \\ Address line}
```

To start a separate “row” of authors, use `\AND`:

```
\author{Author 1\ Address line \\ ... \\ Address line\
\AND
Author 2 \\ Address line \\ ... \\ Address line\
\And
Author 3 \\ Address line \\ ... \\ Address line\
}
```

If the title and author information does not fit in the area allocated, place `\setlength\titlebox{height}` after the `\documentclass` line where `{height}` is 2.5in or greater.

## $\LaTeX$ Copyright Notice

The copyright notice automatically appears if you use `aaai.sty`. If you are creating a technical report, it is not necessary to include this notice. You may disable the copyright line using the `\nocopyright` command. To change the entire text of the copyright slug, use: `\copyrighttext{text}`. Either of these must appear before `\maketitle`. Please be advised, however, that *if you disable or change the copyright line and transfer of copyright is required, your paper will not be published*.

## Credits

Any credits to a sponsoring agency should appear in the acknowledgments section, unless the agency requires different placement. If it is necessary to include this information on the front page, use `\thanks` in either the `\author` or `\title` commands. For example:

```
\title{Very Important Results in AI}\thanks{This work is sup-
ported by everybody.}}
```

Multiple `\thanks` commands can be given. Each will result in a separate footnote indication in the author or title with the corresponding text at the bottom of the first column of the document. Note that the `\thanks` command is fragile. You will need to use `\protect`.

Please do not include `\pubnote` commands in your document.

## Abstract

Follow the example commands in this document for creation of your abstract. Further indentation is not required. Do not include references in your abstract!

## Page Numbers

Do not **ever** print any page numbers on your paper.

## Text

The main body of the paper must be formatted in ten-point with twelve-point leading (line spacing).

## Citations

Citations within the text should include the author's last name and year, for example (Newell 1980). Append lower-case letters to the year in cases of ambiguity. Multiple authors should be treated as follows: (Feigenbaum and Englemore 1988) or (Ford, Hayes, and Glymour 1992). In the case of four or more authors, list only the first author, followed by et al. (Ford et al. 1997).

## Extracts

Long quotations and extracts should be indented ten points from the left and right margins.

This is an example of an extract or quotation. Note the indent on both sides. Quotation marks are not necessary if you offset the text in a block like this, and properly identify and cite the quotation in the text.

## Footnotes

Avoid footnotes as much as possible; they interrupt the reading of the text. When essential, they should be consecutively numbered throughout with superscript Arabic numbers. Footnotes should appear at the bottom of the page, separated from the text by a blank line space and a thin, half-point rule.

## Headings and Sections

When necessary, headings should be used to separate major sections of your paper. Remember, you are writing a short paper, not a lengthy book! An overabundance of headings will tend to make your paper look more like an outline than a paper. The `aaai.sty` package will create headings for you. Do not alter their size nor their spacing above or below.

**Section Numbers** The use of section numbers in AAI Press papers is optional. To use section numbers in  $\LaTeX$ , uncomment the `setcounter` line in your document preamble and change the 0 to a 1 or 2. Section numbers should not be used in short poster papers.

**Section Headings.** Sections should be arranged and headed as follows:

**Acknowledgments.** The acknowledgments section, if included, appears after the main body of text and is headed "Acknowledgments." This section includes acknowledgments of help from associates and colleagues, credits to sponsoring agencies, financial support, and permission to publish. Please acknowledge other contributors, grant support, and so forth, in this section. Do not put acknowledgments in a footnote on the first page. If your grant agency requires acknowledgment of the grant on page 1, limit the footnote to the required statement, and put the remaining acknowledgments at the back. Please try to limit acknowledgments to no more than three sentences.

**Appendices.** Any appendices follow the acknowledgments, if included, or after the main body of text if no acknowledgments appear.

**References** The references section should be labeled "References" and should appear at the very end of the paper (don't end the paper with references, and then put a figure by itself on the last page). A sample list of references is given later on in these instructions. Please use a consistent format for references. Poorly prepared or sloppy references reflect badly on the quality of your paper and your research. Please prepare complete and accurate citations.

If your one or more of your references spill onto another page, you may reduce the size of the references to `\small`.

## Illustrations and Figures

Figures, drawings, tables, and photographs should be placed throughout the paper near the place where they are first discussed. Do not group them together at the end of the paper. If placed at the top or bottom of the paper, illustrations may run across both columns. Figures must not invade the top, bottom, or side margin areas. Figures must be inserted using the `\usepackage{graphicx}`. Number figures sequentially, for example, figure 1, and so on.

The illustration number and caption should appear under the illustration. Labels, and other text with the actual illustration must be at least nine-point type.

**Low-Resolution Bitmaps.** You may not use low-resolution (such as 72 dpi) screen-dumps and GIF files—these files contain so few pixels that they are always blurry, and illegible when printed. If they are color, they will become an indecipherable mess when converted to black and white. This is always the case with gif files, which should never be used. The resolution of screen dumps can be increased by reducing the print size of the original file while retaining the same number of pixels. You can also enlarge files by manipulating them in software such as PhotoShop. Your figures should be 300 dpi when incorporated into your document.

**$\LaTeX$  Overflow.**  $\LaTeX$  users please beware:  $\LaTeX$  will sometimes put portions of the figure or table or an equation in the margin. If this happens, you need to scale the figure or table down, or reformat the equation. **Check your log file!** You must fix any overflow into the margin (that means no overflow boxes in  $\LaTeX$ ). If you don't, the overflow text will

simply be eliminated. **Nothing is permitted to intrude into the margin or gutter.**

**Using Color.** Your paper will be printed in black and white and grayscale. Consequently, because conversion to grayscale can cause undesirable effects (red changes to black, yellow can disappear, and so forth), we strongly suggest you avoid placing color figures in your document. Of course, any reference to color will be indecipherable to your reader.

**Drawings.** We suggest you use computer drawing software (such as Adobe Illustrator or, (if unavoidable), the drawing tools in Microsoft Word) to create your illustrations. Do not use Microsoft Publisher. These illustrations will look best if all line widths are uniform (half- to two-point in size), and you do not create labels over shaded areas. Shading should be 133 lines per inch if possible. Use Times Roman or Helvetica for all figure call-outs. **Do not use hairline width lines** — be sure that the stroke width of all lines is at least .5 pt. Zero point lines will print on a laser printer, but will completely disappear on the high-resolution devices used by our printers.

**Photographs and Images.** Photographs and other images should be in grayscale (color photographs will not reproduce well; for example, red tones will reproduce as black, yellow may turn to white, and so forth) and set to a minimum of 300 dpi. Do not prescreen images.

**Resizing Graphics.** Resize your graphics **before** you include them with LaTeX. You may **not** use trim or clip options as part of your `\includgraphics` command. Resize the media box of your PDF using a graphics program instead.

**Fonts in Your Illustrations** You must embed all fonts in your graphics before including them in your LaTeX document.

## References

The `aaai.sty` file includes a set of definitions for use in formatting references with BibTeX. These definitions make the bibliography style fairly close to the one specified below. To use these definitions, you also need the BibTeX style file “`aaai.bst`,” available in the author kit on the AAAI web site. Then, at the end of your paper but before `\enddocument`, you need to put the following lines:

```
\bibliographystyle{aaai} \bibliography{bibfile1,bibfile2,...}
```

The list of files in the `\bibliography` command should be the names of your BibTeX source files (that is, the `.bib` files referenced in your paper).

The following commands are available for your use in citing references:

`\cite`: Cites the given reference(s) with a full citation. This appears as “(Author Year)” for one reference, or “(Author Year; Author Year)” for multiple references.

`\shortcite`: Cites the given reference(s) with just the year. This appears as “(Year)” for one reference, or “(Year; Year)” for multiple references.

`\citeauthor`: Cites the given reference(s) with just the author

name(s) and no parentheses.

`\citeyear`: Cites the given reference(s) with just the date(s) and no parentheses.

**Warning:** The `aaai.sty` file is incompatible with the `hyperref` and `natbib` packages. If you use either, your references will be garbled and your paper will not be published.

Formatted bibliographies should look like the following examples.

### *Book with Multiple Authors*

Engelmore, R., and Morgan, A. eds. 1986. *Blackboard Systems*. Reading, Mass.: Addison-Wesley.

### *Journal Article*

Robinson, A. L. 1980a. New Ways to Make Microcircuits Smaller. *Science* 208: 1019–1026.

### *Magazine Article*

Hasling, D. W.; Clancey, W. J.; and Rennels, G. R. 1983. Strategic Explanations in Consultation. *The International Journal of Man-Machine Studies* 20(1): 3–19.

### *Proceedings Paper Published by a Society*

Clancey, W. J. 1983b. Communication, Simulation, and Intelligent Agents: Implications of Personal Intelligent Machines for Medical Education. In Proceedings of the Eighth International Joint Conference on Artificial Intelligence, 556–560. Menlo Park, Calif.: International Joint Conferences on Artificial Intelligence, Inc.

### *Proceedings Paper Published by a Press or Publisher*

Clancey, W. J. 1984. Classification Problem Solving. In *Proceedings of the Fourth National Conference on Artificial Intelligence*, 49–54. Menlo Park, Calif.: AAAI Press.

### *University Technical Report*

Rice, J. 1986. Poligon: A System for Parallel Problem Solving, Technical Report, KSL-86-19, Dept. of Computer Science, Stanford Univ.

### *Dissertation or Thesis*

Clancey, W. J. 1979b. Transfer of Rule-Based Expertise through a Tutorial Dialogue. Ph.D. diss., Dept. of Computer Science, Stanford Univ., Stanford, Calif.

### *Forthcoming Publication*

Clancey, W. J. 1986a. The Engineering of Qualitative Models. Forthcoming.

## Producing Reliable PDF Documents with L<sup>A</sup>T<sub>E</sub>X

Generally speaking, PDF files are platform independent and accessible to everyone. When creating a paper for a proceedings or publication in which many PDF documents must be merged and then printed on high-resolution PostScript RIPs, several requirements must be met that are not normally of concern. Thus to ensure that your paper will look like it does when printed on your own machine, you must take several precautions:

- Use type 1 fonts (not type 3 fonts)
- Use only standard Times, Nimbus, and CMR font packages (not fonts like F3 or fonts with tildes in the names or fonts—other than Computer Modern—that are created for

specific point sizes, like Times~19) or fonts with strange combinations of numbers and letters

- Embed all fonts when producing the PDF
- Do not use the [T1]fontenc package (install the CM super fonts package instead)

### Creating Output Using PDFL<sup>A</sup>T<sub>E</sub>X Is Required

By using the PDFL<sup>A</sup>T<sub>E</sub>X program instead of straight L<sup>A</sup>T<sub>E</sub>X or T<sub>E</sub>X, you will probably avoid the type 3 font problem altogether (unless you use a package that calls for metafont). PDFL<sup>A</sup>T<sub>E</sub>X enables you to create a PDF document directly from L<sup>A</sup>T<sub>E</sub>X source. The one requirement of this software is that all your graphics and images must be available in a format that PDFL<sup>A</sup>T<sub>E</sub>X understands (normally PDF).

PDFL<sup>A</sup>T<sub>E</sub>X's default is to create documents with type 1 fonts. If you find that it is not doing so in your case, it is likely that one or more fonts are missing from your system or are not in a path that is known to PDFL<sup>A</sup>T<sub>E</sub>X.

**dvipdf Script** Scripts such as dvipdf which ostensibly bypass the Postscript intermediary should not be used since they generally do not instruct dvips to use the config.pdf file.

**dvipdfm** Do not use this dvi-PDF conversion package.

### Ghostscript

L<sup>A</sup>T<sub>E</sub>X users should not use GhostScript to create their PDFs.

### Graphics

If you are still finding type 3 fonts in your PDF file, look at your graphics! L<sup>A</sup>T<sub>E</sub>X users should check all their imported graphics files as well for font problems.

## Proofreading Your PDF

Please check all the pages of your PDF file. You should be able to answer “no” to the following questions:

- Is the page size A4?
- Are there any type 3, Identity-H, or CID fonts?
- Are there any unembedded fonts?
- Are there any areas where equations or figures run into the margins?
- Does your log file indicate that you have overfull boxes?
- Did you forget to include some of your figures with your source files?
- Did you forget to include your bib file?
- Did you follow mixed case capitalization rules for your title?
- Did you include a copyright notice?
- Do any of the pages scroll slowly (because the graphics draw slowly on the page)?
- Are any of the URLs underlined and/or in color?
- Are portions of your text in color?

- Did you change the size of figure captions, or make them italic or bold?

The following are some critical L<sup>A</sup>T<sub>E</sub>X-specific errors that authors have made. Please ensure that your paper doesn't include any of them.

- An old version of aaai.sty and/or aaai.bst was used.

*The latest versions of aaai17.sty and aaai.bst are only found in the AAAI Author Kit. Authors are, without exception, required to use the latest versions of both files in all papers published by AAAI Press. The files are revised continuously. Do not use an old version of either one.*

- Some of the fonts in the PDF haven't been embedded (usually graphics files).

*When fonts aren't embedded, characters in graphics can change, sometimes with disastrous results. As a consequence, AAAI Press cannot accept papers unless all the fonts have been embedded. This ensures that if the person who opens the document does not have the font you used on their computer that they are able to view and print the file with the font you used. You can check this in Acrobat Reader in the file properties fonts window. If (Embedded Subset) or (Embedded) doesn't appear after a font, you haven't embedded that font.*

- The source won't compile with PDFLaTeX.

If .eps or .ps files are used, they will need to be converted to PDF. If the epstopdf package is used to do this, include only the PDF files that package creates (but be careful that package does not automatically embed the fonts you'll need to check them to make sure)

- There is no metadata in the PDF

This happens when you forget to include the pdfinfo in your preamble, or when you include that information incorrectly, or when you use a custom script to try to combine the author title information and the metadata information (they don't work). Please revise your source to include this information (add the title and all the authors, separated by commas, within the parentheses as shown below — do not include any LaTeX codes or accents)

```
\pdfinfo{
  /Title (Arc-Consistency and
  Arc-Consistency Again)
  /Author (Christian Bessiere,
  Marie-Odile Cordier)
}
```

- The paper contains text, tables, or figures that run into the margin

*Nothing can intrude into the margins of your paper — without exception. If the LaTeX log indicates overfull boxes involving tables, equations, or figures, they*



*must be fixed. Just check your LaTeX log file for overflow boxes, and resize the font or rewrite the equations, use scalebox on your tables, and resize your figures.*

- The title is presented in sentence case instead of title case (Up Style)

*All nouns, verbs, adjectives, adverbs, and subordinating conjunctions, along with hyphenated terms and any word at the beginning of the title or following a colon or dash must be capitalized (that includes, for example, Is and Using, which are commonly missed)*

- The hyperref, natbib, geometry, pstricks, nameref, tocbibind, titlesec, or full page packages were used

*There are a number of packages that are either incompatible with aai.sty, or alter aai.sty's coding in undesirable ways. These are the most common ones that cause problems, but by no means the only ones.*

- The document preamble contains global custom coding that has altered the look and feel of aai.sty.

*Altering the style file either directly or through commands in your source will result in page formatting fees and possible rejection of your paper. Using baselinestretch, for example, is not acceptable. As a general rule, do not use any other package or command that materially alters aai.sty style (such as, but not limited to, packages that change the way the captions look or use of vspace to squeeze your paper into a certain number of pages). Altering the page size or standard space between elements with setlength is also not allowed.*

- The figures have been cropped with LaTeX

*Do not crop your figures with LaTeX (such as through vspace or "clip"). Use a standard graphics program instead. Cropping using clip or vspace often creates layers that overlap text, and these layers can obscure text when the PDF colorspace is corrected.*

- Figure captions have been altered using caption.sty

*caption.sty alters the placement and spacing of captions. You may use subcaption (without options), but you may not use caption.sty.*

- The font size in the PDF is smaller than 6 point

*Do not use tiny for any portion of your paper. It is unreadable when printed.*

- The references are too small

*Use of scriptsize or footnotesize is not acceptable in your bibliography (small is ok if necessary).*

- The PDF is A4

All PDFs must be US Letter sized. Submissions that do not conform to this requirement cannot be published.

- The paper text is formatted in Computer Modern

*LaTeX documents must use Times or Nimbus fonts (i.e., the times package) (do not use Computer Modern for the text of your paper)*

- The PDF contains bitmapped Type 3 fonts.

*You must ensure that your graphics and text were not created using type 3 fonts. (Authors using Blackboard style fonts must be especially careful that their document does not contain type 3 bitmapped fonts; some packages default to those substandard fonts.) If you don't know the difference between type 1 and type 3 fonts, read Rick Groff's article on Converting LaTeX to PDF.*

- The paper source must be compiled with LaTeX 2.09

*LaTeX 2e is required*

- More than one source (.tex) file is included

If you fail to remove old source files you run the risk that the wrong one might be used. This is a critical error, for which there is no recourse other than withdrawing your paper.

You will need to fix these common errors before submitting your file.

## Improperly Formatted Files

In the past, AAI has corrected improperly formatted files submitted by the authors. Unfortunately, this has become an increasingly burdensome expense that we can no longer absorb. Consequently, if your file is improperly formatted, it cannot be included in the publication. If time allows, however, you will be notified via e-mail (with a copy to the program chair) of the problems with your file and given the option of correcting the file yourself (and paying a late fee) or asking that AAI have the file corrected for you, for an additional fee. If you opt to correct the file yourself, please note that we cannot provide you with any additional advice beyond that given in your packet. Files that are not corrected after a second attempt will not be included in the publication.

## LaTeX 209 Warning

If you use LaTeX 209 we will not be able to publish your paper. Convert your paper to LaTeX 2e.

## Naming Your Electronic File

We request that you name your LaTeX source file with your last name (family name) so that it can easily be differentiated from other submissions. If you name your files with the name of the event or "aai" or "paper" or "camera-ready" or some other generic or indecipherable name, you bear all risks of loss — it is extremely likely that your file may be overwritten.

## Submitting Your Electronic Files to AAI

Submitting your files to AAI is a two-step process. It is explained fully in the author registration and submission instructions. Please consult this document for details on how to submit your paper.

## Inquiries

If you have any questions about the preparation or submission of your paper as instructed in this document, please contact AAAI Press at the address given below. If you have technical questions about implementation of the aai style file, please contact an expert at your site. We do not provide technical support for  $\LaTeX$  or any other software package. To avoid problems, please keep your paper simple, and do not incorporate complicated macros and style files.

AAAI Press  
2275 East Bayshore Road, Suite 160  
Palo Alto, California 94303  
*Telephone:* (650) 328-3123  
*E-mail:* See the submission instructions for your particular conference or event.

## Additional Resources

$\LaTeX$  is a difficult program to master. If you've used that software, and this document didn't help or some items were not explained clearly, we recommend you read Michael Shell's excellent document (testflow doc.txt V1.0a 2002/08/13) about obtaining correct PS/PDF output on  $\LaTeX$  systems. (It was written for another purpose, but it has general application as well). It is available at [www.ctan.org](http://www.ctan.org) in the tex-archive.

## Acknowledgments

AAAI is especially grateful to Peter Patel Schneider for his work in implementing the aai.sty file, liberally using the ideas of other style hackers, including Barbara Beeton. We also acknowledge with thanks the work of George Ferguson for his guide to using the style and BibTeX files — which has been incorporated into this document — and Hans Guesgen, who provided several timely modifications, as well as the many others who have, from time to time, sent in suggestions on improvements to the AAAI style.

The preparation of the  $\LaTeX$  and BibTeX files that implement these instructions was supported by Schlumberger Palo Alto Research, AT&T Bell Laboratories, Morgan Kaufmann Publishers, The Live Oak Press, LLC, and AAAI Press. Bibliography style changes were added by Sunil Isar. \pubnote was added by J. Scott Penberthy. George Ferguson added support for printing the AAAI copyright slug. Additional changes to aai.sty and aai.bst have been made by the AAAI staff.

Thank you for reading these instructions carefully. We look forward to receiving your electronic files!