Author's Guide to the ACM SIGPLAN Class (`sigplanconf.cls`)

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Chapter 1

Introduction

The ACM SIGPLAN style is a LaTeX class file that you use to prepare papers for SIGPLAN conference proceedings. It is the latest in a rather long line of such class files that includes `acmconf.cls`, `acm_proc_article-sp.cls`, and `sigplan-proc.cls`. The new class is called `sigplanconf.cls` and replaces all of the previous class files.

The ACM SIGPLAN class file is a variant of the standard LaTeX article style. It is based on `article.cls` and both replaces and adds to its features. This author's guide assumes you are familiar with LaTeX and describes the features of the ACM SIGPLAN class file that are new or different.

1.1   What You Need

You only need two files to use the ACM SIGPLAN class file:

- The LaTeX class file, `sigplanconf.cls`

- This document, `sigplanconf-guide.pdf`

- A template file, `sigplanconf-template.tex`, to help you get started preparing your paper.

These files are available at www.acm.org/sigs/sigplan/authorInformation.htm

1.2   Status of the Class File and Author's Guide

Version 1.0 of the class file and the matching author's guide will be released in Spring 2005. The class file contains a complete revision history at the end, beginning with its creation in September 2004.

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Chapter 2

Document Prolog

This chapter describes the commands used in the prolog of your paper. The prolog is the portion of the LaTeX source file that precedes the text of the paper.

2.1 Example

```
\documentclass[preprint]{sigplanconf}

\usepackage{amsmath}
\usepackage{amssymb}
\usepackage{graphicx}

\newcommand{\cL}{{\cal L}}

\begin{document}
... text of the paper ...
\end{document}
```

2.2 The Document Class

The `\documentclass` command names the ACM SIGPLAN class file and lists any desired options.

▷ `\docmentclass[`*option-list*`]{sigplanconf}`

The *option-list* argument is optional, and so is enclosed in square brackets if specified. Table 2.1 lists the available options and notes which ones are present by default.

Table 2.1: Document class options

Option	Default?	Description
9pt	yes	Set paper in 9-point type.
10pt		Set paper in 10-point type.
11pt		Set paper in 11-point type.
blockstyle		Set paragraphs block style with extra space between.
cm, computermodern		Use Computer Modern fonts.
indentedstyle	yes	Set paragraph indented style with no extra space.
mathtime		Use the MathTime math fonts.
nocopyrightspace		Do not include the standard copyright space (see Section 3.7).
numberedpars		Heads produced with the \paragraph command are numbered (see Section 4.2).
onecolumn		Set in single column format. The text size defaults to '11pt' instead of '9pt'.
preprint		This is a preprint. Include a running footer.
times	yes	Use Times Roman fonts.
twocolumn	yes	Set in double column format.

Table 2.2: Packages used by the ACM SIGPLAN class.

Package	Used
mathtime	when the 'mathtime' option is specified

2.3   Packages

If you need to use any LaTeX packages, these are specified immediately following the \documentclass command. Table 2.2 lists the packages that are used by the ACM SIGPLAN class.

2.4   Definitions

If you need any macro definitions for your paper, these should appear immediately before the \begin{document} command that indicates the start of the text of the paper. It is best to use \newcommand to defined macros, rather than \def, to ensure that existing macros are not accidently redefined.

2.5   Text

The text of your paper is enclosed in the `\begin{document}`...`\end{document}` environment that follows the prolog.

Chapter 3

Title Page

This chapter describes the commands used to produce the title page of your paper.

3.1   Example

The following example presents many of the commands necessary to produce the title page of your paper. Subsequent sections will discuss the commands in detail.

```
\begin{document}
\conferenceinfo{PLDI '05,}{June 12--15, 2005, Chicago, Illinois, USA.}
\CopyrightYear{2005}
\crdata{1-59593-056-6/05/0006}

\title{The Ontological Foundation of Object-Oriented
  Programming\thanks{This material is based upon work supported
  by the National Science Foundation.}}
\subtitle{Philosophy Invades Software Engineering}

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\authorinfo{Fred Flymuffin}
  {Washington University in St. Louis}
  {flymuffin@cs.wustl.edu}

\maketitle

\begin{abstract}
It turns out that object-oriented programming reflects the fundamental
ontological existents of the universe.
```

```
\end{abstract}

\category{F.9.9}{Philosophy of Programming}
{The ontological basis of programming}

\terms
Object-Oriented Programming, Philosophy

\keywords
OOP, Ontology, Programming Philosophy
```

3.2   Conference Information

The following commands allow you to include optional conference information in the standard copyright text that appears at the bottom of the first column of your paper. You can exercise additional control over the copyright information; see Section 3.7.

▷   \conferenceinfo{*name*}{*date/location*}

This command specifies the abbreviated name of the conference (e.g., `PLDI '05`) and its date and location information (e.g., `12--15 June 2005, Chicago, Illinois, USA`).

▷   \copyrightyear{*year*}

This command specifies the 4-digit copyright year of your paper.

▷   \copyrightdata{*data*}

This command specifies the so-called copyright data for your paper. It consists of the ISBN of the proceedings along with a stylized date.

The printer of the proceedings will supply you with the information required for all three of the commands described in this section, so you can specify it before you submit camera-ready copy; it should be omitted otherwise.

3.3   Title and Subtitle

The following commands are used to provide the title and optional subtitle for your paper.

▷   \title{*title*}

This command specifies the title of your paper. You can use the linebreak (\\) command to break lines in the title.

▷ \subtitle{*subtitle*}

This command specifies the subtitle of your paper, which is optional. You can use the linebreak (\\) command to break lines in the title.

3.4 Authors

The following command is used to specify one or more authors of your paper.

▷ \authorinfo{*name*}{*affiliation*}{*email/URL*}

This command specifies the name, affiliation, and email or URL of one of the authors of your paper. You must include an \authorinfo command for each author, in the order they should appear. All authors appear on the title page.

You can specify two or more authors sharing the same affiliation by using either of these commands in the *name* argument: \and separates two names that appear on the same line; \\ separates two names that appear on separate lines.

▷ \maketitle

This command must appear following the authors in order to typeset the top of the title page.

3.5 Footnotes

The following commands can be used to footnote the title, subtitle, or authors in a paper.

▷ \titlenote{*note-text*}

This command sets a footnote with its reference at the current position. The footnote is referenced with a character such as an asterisk or dagger.

▷ \thanks

This command is a synonym for \titlenote, usually used to set a footnote giving credit.

3.6 Abstract and Cataloging Information

The following commands are used to set the abstract and cataloging information that appears at the beginning of the body of your paper.

▷ \begin{abstract} ... \end{abstract}

This environment includes the abstract for your paper.

▷ \category{*CR-number*}{*category*}{*subcategory*}[*description*]

This command produces a category descriptor. You may include multiple occurrences of this command. The first occurrence of this command sets the unnumbered paragraph heading "Categories and Subject Descriptors."

The category descriptor consists of the following: CR-number; category name in brackets; subcategory name; optional description preceded by em-dash.

▷ \terms

▷ \keywords

See section 4.3.

3.7   Copyright Space

You can eliminate the copyright space altogether using the 'nocopyrightspace' class option (see Table 2.1).

The following commands allow you to exercise additional control over the information that appears in the copyright text.

▷ \permission{*text*}

This command specifies text to replace the standard permission statement that is included in the copyright text.

▷ \toappear{*text*}

This command specifies text to completely replace the standard copyright statement that is included in the copyright space. The standard copyright statement includes the permission, conference name, conference date and location, copyright year, and copyright data.

Chapter 4

Hierarchy

This chapter describes the commands that are used to produce hierarchical headings in your paper.

4.1 Sections

▷ `\section{`*title*`}`

This command produces a numbered section heading. The heading is set off from the next paragraph, which is not indented.

▷ `\section*{`*title*`}`

This variant produces an unnumbered section heading.

▷ `\subsection{`*title*`}`

This command produces a numbered subsection heading that is numbered within the preceding section. The heading is set off from the next paragraph, which is not indented.

▷ `\subsubsection{`*title*`}`

This command produces a numbered sub-subsection heading that is numbered within the preceding subsection. The heading is set off from the next paragraph, which is not indented.

4.2 Paragraphs

▷ `\paragraph{`*title*`}`

This command produces a so-called "paragraph heading." The heading is run into the text of the next paragraph. Whether or not the heading is numbered is controlled by the '`numberedpars`' class option (see Table 2.1).

4.3   Standard Headings

The following commands should be used to produce standard headings in your paper.

▷ `\keywords`

This command produces the unnumbered paragraph heading "Keywords" for use at the beginning of your paper.

▷ `\terms`

This command produces the unnumbered paragraph heading "General Terms" for use at the beginning of your paper.

▷ `\acks`

This command produces the unnumbered section heading "Acknowledgments" for use at the end of your paper.

Chapter 5

Figures and Tables

This chapter describes a few features that the ACM SIGPLAN class provides for coding figures and tables.

5.1 Figures

A numbered floating figure is coded in this fashion:

```
\begin{figure}
\begin{center}
... content ...
\end{center}
\caption{Foundational framework of the snork mechanism.}
\label{fig-ffsm}
\end{figure}
```

This produces a figure with its content at the top and its caption at the bottom. A horizontal rule separates the content and the caption, in order to make the figure stand out a bit from the text. Occasionally, this rule interferes with horizontal rules in art or tabular material that is part of the content. It can be suppressed as follows:

▷ `\nocaptionrule \caption{ ... }`

The `\nocaptionrule` prefix on the `\caption` command suppresses the rule above the caption.

5.2 Tables

A numbered floating table is coded as follows:

```
\begin{table}
\begin{center}
```

```
\begin{tabular}{...}
... tabular content ...
\end{tabular}
\end{center}
\caption{Critical parameters of the snork mechanism.}
\label{tab-cpsm}
\end{table}
```

This produces a table with its tabular material at the top and its caption at the bottom. The rule above the caption should always appear. In addition, the table looks more pleasant if you use `\hline` to produce a horizontal rule at the top and below the column heads.

Chapter 6

Bibliography

This chapter describes how to prepare a bibliography for your paper.

6.1 Coding the Bibliography

The printer for SIGPLAN proceedings wants the bibliography to be included in your main LaTeX file. If you generate the bibliography with BibTeX, you should then merge the resulting .bbl file into the main file. Here is an example:

```
\begin{thebibliography}{10}

\bibitem{ahmed02}
Amal~J. Ahmed, Andrew~W. Appel, and Roberto Virga.
\newblock A stratified semantics of general references embeddable in
  higher-order logic.
\newblock In {\em In Proceedings of the 17th Annual IEEE Symposium on Logic in
  Computer Science (LICS 2002)}, July 2002.

\bibitem{appel01:fpcc}
Andrew~W. Appel.
\newblock Foundational proof-carrying code.
\newblock In {\em Symposium on Logic in Computer Science (LICS '01)}, pages
  247--258. IEEE, 2001.

\end{thebibliography}
```

The bibliography would normally appear at the end of your paper, just before the \end{document} command. Consult a LaTeX manual for a description of the thebibliography environment.