A TAC SAMPLER

MICHAEL BARR, GEOFF CRUTTWELL, AND ROBERT ROSEBRUGH

ABSTRACT. This is distributed as a sampler to illustrate good TAC style.

1. Introduction

This note includes samples of what we consider good TAC style. There are no explicit skips nor any other explicit formatting instructions in the LaTeX code; these should be left to the journal style. For the same reason, the LaTeX code has no explicit numbering of headings or proclamations of Theorems and so forth. However, they are labelled to allow logical references in the code, such as to Theorem 2.2. Moreover, TAC style uses the hyperref package to create links to citations like [Lamport, 1986] and to internal references like Lemma 2.1. Reference links work only if \label's are used. All links are coloured a dark blue without boxing. Though permitted, external links are strongly deprecated because of their impermanence.

Please note that there are additional comments in the source file sample.tex for this sampler that you are urged to consult. You should also consult the on-line author instructions on the TAC web site.

2. Main results

2.1. Lemma. All papers must be in \(\mathbb{L}T_{EX} \), version 2e.

PROOF. Otherwise the editors would have to do a lot of work to prepare the paper for publication.

2.2. Theorem. The TAC style is easy to use.

PROOF. Sectioning is the same as in LaTeX article style; proclamations such as definitions and theorems are easily specified by macros such as \newtheorem{thm}{Theorem}; it is easy to use \mathrmdef{Hom} to define a macro \Hom that produces roman Hom when used in math mode. Similarly \mathbfdef{Set} gives Set in bold.

We would like to thank Donald Knuth, Leslie Lamport, Kris Rose, and all the others who make high quality math typesetting possible.

²⁰²⁰ Mathematics Subject Classification: 00A00.

Key words and phrases: TAC, diagrams.

[©] Michael Barr, Geoff Cruttwell, and Robert Rosebrugh, 2020. Permission to copy for private use granted.

- 2.3. Theorem. [Lamport, 1986] The following are equivalent
 - 1. Lists are best done with listing macros such as enumerate;
 - 2. you will never have to renumber anything if you use automatic numbering of lists and other things.

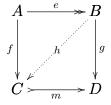
2.4. REMARK. For proclaimed matter that should be set in Roman we use the TAC macros \newtheoremrm{}{}.

3. Further comments

- Source files should include all and only author macros that are actually used.
- Be sure to use macros for multicharacter identifiers, such as \Hom above.
- Be sure to distinguish between < and \langle and similarly between > and \rangle . Not only does the former character look wrong as a tuple delimiter, but the spacing is completely wrong.
- For diagrams, use Xy-pic or diagxy. They can be used together since diagxy is built on top of Xy-pic. A syntax example from the diagxy manual is

```
$$\bfig
\square/>>'>'>' >->/[A'B'C'D;e'f'g'm]
\morphism(500,500)|m|/.>/<-500,-500>[B'C;h]
\efig$$
```

which makes a familiar diagram:



• Although we accept most reasonable bibliographical styles, the following is the one we most strongly recommend. It results in an [author, year] entry in the paper, rather than uninformative numbers in brackets. It allows use of e.g. \cite{LUG} and the code for this article is:

_

\refs

\bibitem [Lamport, 1986] {LUG} L. Lamport, Latex User's Guide \& Reference Manual. Addison-Wesley (fifth edition), 1986.

\endrefs

References

L. Lamport, Latex User's Guide & Reference Manual. Addison-Wesley (fifth edition), 1986.

Department of Mathematics and Statistics, McGill University 805 Sherbrooke St. W, Montreal, QC, Canada H3A 2K6 Department of Mathematics and Computer Science, Mt. Allison University 67 York St., Sackville, NB, Canada E4L 1E6

Email: barr@math.mcgill.ca rrosebrugh@mta.ca