

IP over Avian Carriers — A Brief Overview

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This paper gives a brief overview of the use of pigeon as a physical layer underlying the IP protocol.

1 Introduction

The introduction describes the problem, why it is important, the main ideas of the following paper, what are the main contributions of the paper, etc.

2 Some section

Use section labels for references, e.g., to

Section 1, that offer competing solutions, etc.

All sources must be properly referenced, ideally by using the BiBTeX/Biber system. References can then be very conveniently made with the `cite` command. For example, reference [leuwen00:_handb_schol] discusses some of the elementary rules on writing scientific papers, amongst others how to correctly cite other documents. Lot's of other sources exist to help with writing [williams16:_style] or research in general [booth16:_craft_resear].

Reference [Taylor:SIGuide:95], e.g., describes how to correctly use the SI system of units and their correct typographical representation.

3 Some other section

Such a section could, among other things, include a figure. Note that a figure is a so-called floating object: it is moved around the actual text in order to best fit on a page. This is in stark contrast to some

GUI-based word processing tools, where the placement of figures is usually more associated with luck than principle.

As figures float around, expressions like “the following figure” must never be used. Instead, figures need a caption, a label, and must be properly referenced in the main text. An example for this concept is shown in Figure 1.



An example figure.

Figure 1: An example figure with a caption.

In general, only vector graphics in PDF or (possibly) encapsulated postscript (eps) format should be included in any kind of text, as this allows arbitrary scaling, rotation etc. without any loss of quality. Bitmap formats (PNG, JPEG, GIF, ...) should only be used if no other alternative exists — e.g., when including photographs.

4 Word processing & L^AT_EX

This document has already introduced the most important constructs of L^AT_EX. What is necessary to produce documents with L^AT_EX is simple any normal text editor and a L^AT_EX distribution. This is commonly installed on practically all UNIX-type systems; for Windows, an excellent L^AT_EX exists, called MikTeX, available from www.miktex.org. Almost all distributions come with a large patch of exam-

ples and introductory material; consult your local installation for details.

Lots of supplementary and background information, FAQs, etc. is available from the Comprehensive TeX Archive Network (CTAN); the German mirror of which is `www.dante.de`.

5 Just some text

Just some text to show pagination etc.

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tor. Nam euismod tellus id erat.

6 Math

$$a + b = \sqrt{c} = \int \sin(x) dx$$

7 Tables

Tables like Table 1; they float and should be typeset using the booktabs package (see documentation there).

a	b
c	d
e	f

Table 1: Example table

8 Pet peeves

8.1 Language/correctness

- It is “related work” in the singular – “work” is considered a non-countable noun here and hence takes no plural “s”. Do not think of it as the collection of papers, each one a single “work”.
- Punctuation: Typical punctuation errors occur with compound and complex sentences; in particular, when conjunctive adverbs are used. See here for details: <http://www.towson.edu/ows/sentences.htm>
- Watch out for punctuation rules, in particular, punctuation of defining vs. non-defining relative clauses (e.g., “bla, that” is almost always wrong).
- Check hyphenation rules, in particular, for compound attributes (http://en.wikipedia.org/wiki/English_compound#Hyphenated_compound_adjectives). Roughly: compound nouns tend not to be hyphenated, compound attributes usually are (with plenty of exceptions)

- “can not” and “cannot” mean opposite things; often, many people mean “cannot” but incorrectly write “can not”. E.g., “This dog can not bark” (it is able to sometimes shut up) vs. “This dog cannot bark” (it is unable to produce sound).
- It is “et al.”, abbreviating “et alia”; hence, the period is required after “al” and wrong after “et”
- Quoting a comma rule from <http://grammar.ccc.commnet.edu/grammar/commas.htm> :

Use a comma to set off introductory elements, as in “Running toward third base, he suddenly realized how stupid he looked.”

It is permissible to omit the comma after a brief introductory element if the omission does not result in confusion or hesitancy in reading. If there is ever any doubt, use the comma, as it is always correct.

If you would like some additional guidelines on using a comma after introductory elements, click [HERE](#).

- Currently, an “idiot’s comma” is sneaking into common language, offsetting a (perhaps long) subject from its predicate. This is *totally and absurdly* wrong!
- The so-called “zero article” (leaving out any article from a noun phrase) is well described here: <http://grammar.ccc.commnet.edu/grammar/determiners/determiners.htm> (search for “zero article”); in context with abstract nouns, this link might be a good start: <http://www.bbc.co.uk/worldservice/learningenglish/youmeus/learnit/learnitv255.shtml>. Incorrect article use really hinders readability.
- Whether or not a word or an acronym is preceded by “a” or “an” depends on whether the initial *sound* is a vowel or a consonant; the written form of word or acronym does not matter!
- Watch out for correct use of third person singular “s” conjugation

8.2 Style

- Read and follow <http://www.ieee.org/documents/stylemanual.pdf>
- “Section 4”, “Figure 1”, ... are proper names and are hence capitalized; the word “section”, “figure”, ... WITHOUT the number does not refer to a specific entity, is hence not a proper name, and is hence not capitalized.
- Avoid “lonely” headings – if there is a 3.1, there must also be a 3.2
- Use verbs, not adjectives. E.g., “is dependent on” → *depend son* (same thing, shorter text)
- Check rules on capitalization of title case, in particular, for conjunctions, prepositions, etc.
- Do not use contractions: write “does not” instead of “doesn’t”; “has not” instead of “hasn’t”, etc.

8.3 Typesetting

- Use a short space \,, between number and unit. It is “2 kg”, not “2 kg” (and certainly not “2kg”). Never use “sec”; the correct abbreviation for second is “s”. In general, there are plenty of rules for units in the SI system; compare <http://physics.nist.gov/cuu/Units/>
- Units are typeset upright (roman)
- Multi-letter variables, subscripts etc. are typeset upright. Example: t_{abc} would be correct. (only single-letter variables are italic)
- There is a space between a word and a citation: it is “bla [1]”, not “bla[1]”. Also, the citation goes BEFORE the full stop, it is part of the sentence: “bla bla [1].” not: “bla bla. [1]”
- Distinguish between hyphen and dash (- or – in \LaTeX) – this is REALLY annoying.
- In many fonts, the signs for opening quotes and closing quotes differ. \LaTeX allows the writer to express which ones are desired by “ for opening quotes and ” for closing quotes. Using “bla”, however, is not correct! Single quotes are set

correspondingly. For languages other than English, there are specific quotation commands as well. (Any decent text preparation systems allows this distinction; consult your manual if you are not using L^AT_EX.)

- Correct rules for typesetting math and similar texts are collected here: <http://physics.nist.gov/cuu/pdf/typefaces.pdf>
<http://physics.nist.gov/cuu/pdf/sp811.pdf>
- **Never, ever** include bitmaps, especially not bitmaps with lossy compression except for things like photpgrahs. Use vector formats like EMF, EPS, or PDF.

8.4 References

- BiBTeX: watch out for use of { } in title field to ensure correct capitalization
- BibTeX: mind the warnings of BiBTeX! If BiBTeX complains about a missing field, it usually really is required!
- When quoting a figure or a table, the caption should state the reference as well as which figure or table it is in the original reference

8.5 Other resources

- <http://www.ece.ucdavis.edu/~jowens/commonerrors.html>

9 Conclusion

At the end, there is a final section *concluding* a paper, putting the entire work into perspective and explaining, on a larger level, what the consequences of this work are. Also, unexpected results can be discussed here, etc.

Putting a *summary* at the end is a common, yet bad practice. Try to avoid it; it is just boring.