Abstract

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

To Someone important

Acknowledgements

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Abbreviations

TMH Transmembrane helix, page 3

It's always further than it looks
It's always taller than it looks
And it's always harder than it looks

Chapter 1

Samples

Potentially something introductory here

Lists can be inline using (i) item one, (ii) item two, (iii) item three.

1: A todo!

Add TODOs for example like this. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Mark lines to note with color bars like this. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

1.1 This is a section

1.1.1 And this is a subsection

We should probably not go deeper than this.

Figure 1.1. A simple face made up of hiragana. Henohenomoheji or hehenonomoheji is a face drawn by Japanese schoolchildren using hiragana characters. It consists of seven hiragana. This caption should always contain at least three sentences.

1.1.2 Floats

A general note on captions: Every caption should have a basic descriptive introduction sentence. Following upon this are at least three more sentences describing the float. These should enable the reader to understand the float without having to read the text where the float is referred to. Captions are what people are most likely to read, so make those count. Captions do not contain (large amounts of) analysis, this belongs in the result section. Methodology only as much as needed, not too much. Captions have enough information to understand what is shown without having to refer to the text.

A sample Figure can be seen in Figure 1.1. Some results are shown in Figure 1.1. One could also say there are some results (Figure 1.1). Actively, as in Figure 1.1 shows that this is possible and so on, is possible as well, however do not make the Figure the subject of the text, write some statement and then refer to the Figure in the end. Also do not overuse varioref as I am here.

A sample Table is shown in Table 1.1 on the facing page.

There is some python magic in Code 1.

```
#!/usr/bin/env python
import antigravity
print https://xkcd.com/353/
```

Code 1. This is a sample listing. Sentence 1,2,3

Table 1.1. This is a sample table. Sentence 1,2,3.

Column 1	Column 2	All math	this autolinebreaked
Data 2	Data 3	42^2	This is a longish text to show that this will automatically break the line as needed. However, using tabularx with textwidth also means, that we will always extend the full page which might not always look very nice...
a	b	120	We can also use notes[1], crazy huh[2] yay[3]

[1] This is a footnote. When all long [2] consider putting all of them below eachother using `beginthreeparttable[normal]`
[3] but this is probably nicer for many smaller ones

Some random math in Equation (1.1).

$$HVAL(L;pid) = pid - \begin{cases} 100 & \text{for } L \leq 11 \\ 480 \cdot L^{-0.32(1+\exp(-L/1000))} & \text{for } 11 < L \leq 450 \\ 19.5 & \text{for } L > 450 \end{cases} \tag{1.1}$$

1.1.3 Referencing stuff

A single citation looks like this (Käll *et al.*, 2005). Here are several citations at once (Hofacker *et al.*, 1994; Käll *et al.*, 2005). We can also reference a website (CodonW, 2014). See here for a full list of supported citation commands by natbib.

IDs in databases are less ambiguous in a sans-serif font, better use custom command dbid so it looks like this: a037o not a037O.

There are also automatically inserted abbreviations, they are used by simply using the word such as TMH with that command. Now, if we later want to reference to this again, we could use TMH as such, but we should not overuse that, if at all. Something like once per section/chapter should be fine, in case someone crossreads the thing. Make sure though that the abbreviation is introduced in the text, before being used, and that the link goes to that first introduction.

1.1.4 Journal article

To directly include the PDF of a paper (for cumulative theses) use `\includepdf[pages=-]{paper.pdf}`

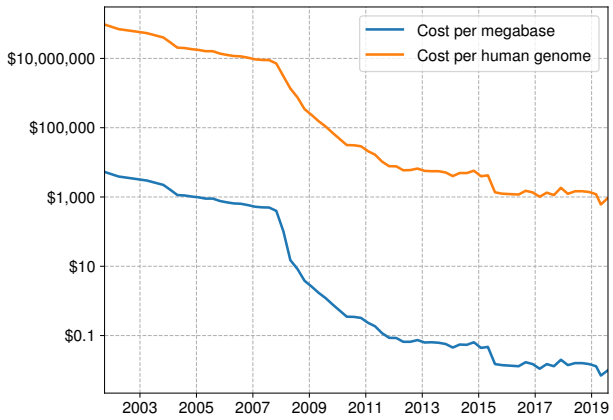

Figure 1.2. Decline in sequencing costs.

1.1.5 PGF plots

Use matplotlib's PGF backend to create natively rendering plots such as Figure 1.2. Make sure to setup the preamble in line with the document.

```
plt.rcParams.update({
"pgf.texsystem": "pdflatex",
"pgf.preamble": [
r"\usepackage[T1]{fontenc}",
r"\usepackage[utf8]{inputenc}",
r"\usepackage[english]{babel}",
r"\usepackage[scaled]{helvet}",
r"\usepackage[charter,expert]{mathdesign}",
r"\usepackage{XCharter}",
]
})

...

fig.savefig('sequencingCost.pgf', format='pgf', transparent=True)
plt.close(fig)
```

References

CodonW (2014). codonw.sourceforge.net/. Accessed 2014/2/26. 3

Hofacker, I., Fontana, W., Stadler, P., Bonhoeffer, L., Tacker, M., and Schuster, P. (1994). Fast folding and comparison of RNA secondary structures. *Monatshefte für Chemie*. 3

Käll, L., Krogh, A., and Sonnhammer, E. (2005). An HMM posterior decoder for sequence feature prediction that includes homology information. *Bioinformatics*, **21**(suppl 1), i251. 3