A template for minireports

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I. Introduction

The purpose of this template is to give writers a starting point for making a nice-looking document which is consistent across reports. It was created in LyX, which gives a word processor interface. But the is a plain LaTeX version available too which was generated from the lyx file. If using LyX on mac you may wish to note the following

- You can install using homebrew with

  ```
  brew install --cask lyx
  ```

  It will appear in your Applications folder. You may need to right click->Open it the first time you run it.
- The UI doesn't work well with dark mode - in LyX go to LyX -> Preferences... -> Look & Feel -> Colors and uncheck "use system colors". Also turn off dark mode Apple menu -> System Preferences -> General -> Appearance -> Light.

The UI has buttons for most common formatting operations. You can insert pure latex using "evil red text" by pressing cmd+L.

The template has Mike's acronym macros already defined. Standard acronyms are in sapacronyms.txt and additional acronyms can be defined by editing that file, or simply adding them to the list at the top of this document. So using some ERT we can define the acronym for Relative Transfer Function (RTF) on its first use, after which it will appear as RTF.

Maths is entered using the equation editor which allows you type latex maths commands which it will typeset on-the-fly.

Non-printing notes can be added using the "Insert LyX note" button, which looks like a post-it note.

Citations such as [1], [2] are nicely handled. Bib file sources are defined by clicking on the 'BibTeX Generated Bibliography' button at the bottom of this document and add the paths to local sources.

II. Some maths

The microphone signals, $x_m(t)$, are related to the source signals, $s_m(t)$, according to

$$x_m(t) \quad = \quad \sum_{n=1}^{N} \left(h_{m,n}(t) * s_n(t)\right) + v_m(t)$$

where...

III. Next steps

- Edit your document
- To View the output do cmd+r or to export as pdf do File->Export->PDF (pdflatex)
- If you want to automatically create the pdf whenever you view then have a look at this stack exchange answer.

References

[1] M. Zohourian, A. Archer-Boyd, and R. Martin, "Multi-channel speaker localization and separation using a model-based GSC and an inertial measurement unit," in *Proc. IEEE Int. Conf. on Acoust., Speech and Signal Process. (ICASSP)*, 2015, pp. 5615–5619.

[2] C. Knapp and G. Carter, "The generalized correlation method for estimation of time delay," *IEEE Trans. Acoust., Speech, Signal Process.*, vol. 24, no. 4, pp. 320–327, Aug. 1976.