Writing Cantonese with XeLaTeX on Overleaf

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This article demonstrates how to write Cantonese characters in documents using XeLaTeX on Overleaf.

1 Introduction

The Hong Kong Supplementary Character Set (latest version HKSCS-2016 (HKSARG, 2017)) is a set of specific Cantonese characters that is not included in common traditional Chinese character set for various reasons (Lu et al., 2014). Without appropriate settings in the LaTeX document, these Cantonese characters may not be rendered properly. In this article, we show a working example on writing these characters with XeLaTex on Overleaf.

2 XeLaTeX and xeCJK

To setup an Overleaf project for Chinese document using xeCJK with XeLaTeX, we follow the example in https://www.overleaf.com/learn/latex/Chinese. Essentially, it includes the following two steps:

1. Click on "Menu" at the top left corner and choose "XeLaTeX" as compiler in settings.

2. Add "\usepackage{xeCJK}" at the beginning of the document source.

3 Fonts

The default xeCJK font on Overleaf is FandolSong, which covers both Simplified Chinese and Traditional Chinese glyphs but not the characters in

HKSCS-2016. For example, using FandolSong as the CJK font, the second, fourth and the fifth character of 【石F尾FF居民】 cannot be rendered.

Lim (2020) listed all the OTF/TTF fonts installed on Overleaf that can be used with fontspec in XeLaTeX. A general principle for selecting font when writing Cantonese is to use fonts specified with "HK" locality, such as AR PL UMing HK and AR PL UKai HK. As we can see below, using the two mentioned fonts, all the characters in previous example can be rendered properly.

AR PL UMing HK:【石硤尾邨嘅居民】

AR PL UKai HK:【石硤尾邨嘅居民】

To use the selected font, add "\setCJKmainfont{<fontname>}" at the beginning of the document source.

References

HKSARG. 2017. Hong kong supplementary character set –2016. Office of the Government Chief Information Officer and Official Languages Division, Civil Service Bureau The Government of the Hong Kong Special Administrative Region (HKSARG).

LianTze Lim. 2020. \fontspec All the Fonts!

Qin Lu, Kwan Hin Cheung, Dan Xiong, Shing Yu, and Jian Xu. 2014. Supporting Chinese Character Variants in Hong Kong through Ideographic Variation Sequence. In Unicode Conference, San Jose.