Schedules Documentation

This script reads in a GTFS feed and outputs a timetable with the correct stop labels and numbers to correspond to the map timepoints.

Requisites

* [Python 3](https://www.python.org/)
* [GTFSTK](https://mrcagney.github.io/gtfstk_docs/)
* [Pandas](https://pandas.pydata.org/pandas-docs/stable/)
* [Numpy](https://docs.scipy.org/doc/numpy/)
* [TKInter](https://docs.python.org/3/library/tkinter.html)
* [Jupyter](https://jupyter.org/documentation)/IPython

Usage

1. Run the script. A dialog box will open. Find the GTFS zipfile and the folder that you’d like to save the data to. If you want a specific route or day of week, select it. Otherwise, select All to run all routes and weekday types. Click “Run” to begin running. **TODO: Build as .exe that can be run without downloading requisites. TODO: The route selection dropdown is based on the current published** [**http://valleyregionaltransit.org/gtfs/VRT\_Transit1.zip**](http://valleyregionaltransit.org/gtfs/VRT_Transit1.zip) **GTFS feed. The dropdown should change when the user selects a different GTFS feed.**
2. The script will output Excel spreadsheets to the output folder. **TODO: don’t save Saturday schedules for routes without Saturday service.**
3. To make the outputs ready for export to Illustrator:
   1. Select all and clear all formats.
   2. Delete the first column. **TODO: get the export to not include this.**
   3. In the same row as the first time and one column past the last timepoint (i.e. on a route with 4 timepoints, cell F3), insert the formula =SUBSTITUTE(SUBSTITUTE(TEXT(A3,"h:mmAM/PM"),"AM",""),"PM",""). This will drop the AM/PM off the text. Fill this formula for all times
   4. Move or copy the timepoint labels and numbers to be over the AM/PM-less times.
   5. Rotate the timepoint labels up.
   6. Put outbound and inbound schedules on the same sheet. **TODO: I bet Jimmy could come up with some cleverness like he did with the** [Stop List Generator](file:///\\VRIDE-FS2\Development\Planning%20-%20New%20File%20Structure\GIS\Compiled%20Stop%20List.xlsx) **to automate a bunch of the illustrator tasks.**
4. Copy and paste into Illustrator.
   1. Delete all paths so that only text items remain
   2. Group the times in each column
   3. Fonts:
      1. AM times: Avenir LT Std, 55 Roman
      2. PM times and timepoint labels: Avenir LT Std, 95 Black
   4. Numbers:
      1. Set font color to white
      2. Increase font size to 14 (approximate, use your judgement)
      3. Draw a black square, copy and paste for each timepoint
      4. For each timepoint, center align vertically and horizontally to the number (set the alignment to “Use Key Object” and make sure the number is highlighted on the screen).
      5. Group the square and the number with the square behind the number.
   5. Align the number boxes and timepoint labels to the right edge of the times for each column.
   6. Copy and paste in other elements from the current schedules. Specifically the direction and weekday indicator boxes and “BOLD=P.M.”. If a route is interlined with another, include the “ROUTE BUS COMES FROM” and “ROUTE BUS GOES TO” indicators
   7. The interlined symbols are from the System Map. I would recommend making a library of these. The interlines are added to the schedule manually. **TODO: automate the interlines from the GTFS block\_id.**
   8. There’s more artistry to this than a lot of things. Try to align inbound and outbound times so that the trips line up horizontally, get break up long timepoint labels into two lines, make sure everything is compact but has some breathing room, etc.
5. Save your schedule.
6. Place the schedule in the brochure template
   1. Open your template or the current copy of the brochure.
   2. Press Ctrl+Shift+P and open your .ai schedule.
   3. Place the file in the brochure where needed.
7. If additional edits need to be made, open the links panel in Illustrator, and edit original to edit original. This maintains a single source for all of the schedules in various formats (online, printed, rollplots, etc).