**SPxY Project : Design of the GUI interface**

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| **Filename:** 404001\_TN\_R01\_Required GUI design  **Project:** Project SPxY, EPFL Spacecraft team | **Prepared by:** Valentin Suppa-Gallezot  **Approved by:** TBA |

# Scope

This note aims to define the GUI interface for the SPxY project. It summarizes the main functions and features to be shown and integrated.

# Functions to be implemented

The following functions shall be found on the user interface:

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| Function | Description | Method |
| F01\_MODEL\_TRAJECTORY | Display of the estimated trajectory from TLE around a 3D modeled Earth | Python library |
| F02\_TLE\_SELECTION | Scrolling bar with downloaded TLE | Data from control |
| F03\_GENERAL\_DATA\_DISPLAY | Info of the antenna angles, data from drivers, and other information needed | Data from encoders, drivers, signal strength |
| F04\_SIGNAL\_DATA\_DISPLAY | Prompt of the received data | Data From antenna |
| F05\_MODE\_SELECTION | Selection buttons for tracking of SSA modes |  |
| F06\_GO\_TO\_MODE | The antenna goes to the designated position either from X-Y angles or from LLA (Latitude, longitude, altitude) |  |
| F07\_EMERGENCY\_STOP | Shut down the system from button, other button for setting the system at rest position |  |
| F08\_CAMERA\_DISPLAY | Display of the camera flow |  |
| F09\_CONTROL\_PANEL | Begin tracking and control of the antenna |  |
| F10\_SAVING\_PANEL | Save the data from the TLE and updated position to update the TLE value for better accuracy. Save also the data retrieve from the antenna. |  |
| F11\_GENERAL\_INFO | Show if the APM, antenna is powered and linked to the computer, show a fault display in case of drive PB |  |

# Design of the GUI

