**SPxY Project : Role Card-System Engineer**

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| **Filename:** 112001\_ORG\_R01\_Role Card-System Engineer  **Project:** Project SPxY, EPFL Spacecraft team | **Prepared by:** Valentin Suppa-Gallezot  **Approved by:** TBA |

**Role Overview:** The System Engineer for the SPxY project will plays a critical role in the design, development, and deployment of a precise antenna pointing system used in for satellites tracking applications. This position requires a strong engineering background, deep knowledge of mechanical and control systems, and the ability to work in a collaborative team environment.

**Key Duties and Responsibilities:**

**1. System Design and Development:**

* Lead the conceptualization and design.
* Collaborate with multidisciplinary teams to define system requirements and specifications.
* Develop system architectures and ensure they align with project goals and objectives.
* Conduct feasibility studies and trade-off analysis to optimize system performance.

**2. Mechanical and Control Systems:**

* Design and analyze mechanical components and systems, including motors, gears, and structural elements for reliable and precise antenna pointing.

**3. Integration and Testing:**

* Oversee the integration of the pointing mechanisms and the integration of the different subsystems composing the APM.
* Plan and execute system testing, including environmental and performance testing, to ensure system reliability and robustness.
* Troubleshoot and resolve issues related to mechanical and control systems during the testing phase.

**4. Documentation and Reporting:**

* Maintain detailed records of design decisions, test results, and system configurations.
* Create comprehensive technical documentation, including design specifications and user manuals.
* Provide regular progress updates to project management and stakeholders.

**5. Safety and Quality Assurance:**

* Ensure that the antenna pointing mechanism complies with safety standards and regulations.
* Implement quality control procedures to guarantee the system's reliability in demanding space environments.

**6. Continuous Improvement:**

* Stay current with the latest advancements in antenna pointing technology and best engineering practices.
* Identify opportunities for improvement in the system design and propose enhancements as necessary.

**Limits of Authority:** The System Engineer for the Antenna Pointing Mechanism is responsible for system design, development, and testing. However, significant decisions, such as changes to project scope or major budgetary matters, may require approval from higher-level management or project stakeholders. This role should also adhere to the safety and regulatory standards established for the project.

*Note: The duties and responsibilities listed in this role card are not exhaustive and may be subject to change as project requirements evolve.*