**Ground Terminal Competition**

**Logo, company name

Description automatically generated**

Handbook

**Revision History**

|  |  |  |
| --- | --- | --- |
| **Version** | **Description** | **Date** |
| v1.0 | Initial document creation | 24/01/2024 |

1. **Introduction**

The BIRDS-X Project proudly announces the Ground Terminal Competition, presenting an opportunity for students, engineers, space enthusiasts and amateur radio operators to demonstrate your expertise and propel the frontiers of satellite communication. The competition is open to everyone. We invite you to embark on the design and testing of your own ground terminal. The competitors will be able to transmit and receive signals through APRS digipeating and Store and Forward (S&F) mission of the satellite.

**What is Dragonfly?**

Dragonfly is a 2-Unit satellite developed by the Kyushu Institute of Technology as part of the BIRDS-X project. Dragonfly will be launched in 2024, Dragonfly orbits the Earth collecting data and demonstrating cutting-edge technologies for future space missions.

1. **Objectives**

Increase the users of amateur radio community by communicating with a 2U APRS mission CubeSat, as well as helping people to get involved in the communication, resulting in the improvement of technical skills and democratization of space.

1. **Competition Schedule**

The following table details the schedule for *BIRDS-X Ground Terminal Competition*.

|  |  |
| --- | --- |
| Date | Action |
| January 2024 | Call for Participation |
| September 2024 | Application Deadline |
| April 2024 | Handover of satellite to JAXA |
| September 2024 | Release of satellite from ISS |
| October – December 2024 | Competition period |
| December 2024 | Final Results Announcement |

1. **Score**

**Scoring will be performed based on the following table:**

|  |  |  |  |
| --- | --- | --- | --- |
| Extra points for developing country | | **5 points** | |
| Team composition | | **Max 5 points** | |
|  | All students up to MS  Mix  All professionals and PhD students | | **5 points**  **3 points**  **2 points** |
| Motivation, objectives and expected outcome, Mission definition | | **30 points** | |
| Block diagram for the payload | | **10 points** | |
| Concept of operations | | **10 points** | |
| Preliminary budget plan | | **10 points** | |
| Schedule | | **10 points** | |
| Plan for outreach | | **10 points** | |
| Quality of application and Video Explanation | | **10 points** | |

1. **How to apply**