Contribution ID: **27**   Type: **lightning talk**

Arenal Board: an open-hardware single-board OBC-COMs board.

Thursday 9 December 2021 16:55 (5 minutes)

After working in the Irazú project, a basic store-and-forward and Costa Rica's first satellite, and reviewing documentation for the BIRDS projects from Kyutech, Japan, we found a potential project in the design of an open-hardware OBC and a LoRa-based COMs on a single board, using a specific microcontroller: the STM32WL series, a powerful MCU with an SX1276 integrated on a silicon level. This reduces the board's complexity, and by combining the two boards in one, volume is saved. LoRa is chosen for this since the expected use case is basic telemetry and commands; mission data such as imaging should be sent through a dedicated mission COMs module, which should be easier to implement given the increased space.

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Session Classification: Lightning Talks