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## OPEN SOURCE CUBESAT ENGINEERING

**Abstract**

When the concept of the CubeSat was first presented to the public more than a decade ago, it was attributed with the intention to foster the collaboration in the area of small satellite developments, in particular projects from educational institutions.

At a first glance this objective seems to have been achieved; yet only at the surface. Till today, although a large amount of publications and technical papers are available covering the subject, the very details of each of the dozens/hundreds of individual CubeSat projects remain with the few people of each team that was doing the development.

Gladly, this is about to change. There is a movement towards open source and open design, not only for software but also hardware projects. Why shall this not also be applicable to space engineering? Open source engineering is a term for the development of physical products, machines and systems through use of publicly shared design information. This allows for true collaboration and also increase reliability, since basically anybody can find mistakes and help to improve.

This paper presents the objectives and activities of a newly established working group for Open Source CubeSat Engineering. Several projects are already published, covering CubeSat subsystem and component designs. These projects can be freely used, changed, and shared (in modified or unmodified form) by anyone. They are hosted on GitHub and accessible to the public. The motivation is to foster the advancement of CubeSat technology and to enable collaboration among developers.