

"CubeSats: Toy or Tool? - Commercial & Scientific Use Case Examples"

Abstract:

After their invention, CubeSats were frequently regarded as expensive toys for students, allowing to practice an end-to-end space mission as close to real life as possible. Over time, the format revealed its remarkable capabilities and led to significant advancements in science as well as to the advent of new business models. It developed so quickly, that some believed, that the possibilities of CubeSats are limitless. But of course this isn't the case. CubeSat technology has several strengths but also a lot of limitations. With several examples of real missions from the past two decades in this talk the boundaries of the technology will be investigated and future industry trends identified.

Biography:

Walter Ballheimer is co-founder and CEO of German Orbital Systems GmbH (GOS). He specialized in satellite technology, with emphasis on electronics and remote sensing payloads. Participated in multiple student satellite projects and as a student assistant conducted lectures and was responsible for BEESAT-1 mission operations. After graduating from the university, he worked at the chair of astronautics and aeronautics where he was involved in multiple satellite projects, including BEESAT, TechnoSat and TUBIN. He specialized in remote sensing payloads and satellite electronics.

GOS was founded 2014 with the goal to provide an affordable access to space technology for a broad range of customers. Since then I am responsible for our strategy, the business development as well as top level engineering decisions. German Orbital Systems is the only German company focusing on CubeSats. Our core business is building turnkey satellite missions for customers, we also build separation sequence controllers for cluster launches. Large part of our revenues is invested in research. We have ongoing research projects in space debris monitoring as well as in additive manufacturing of structures and in novel electrical power systems. German Orbital Systems is not venture backed.