SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
Open Space: Participatory Space Education and Outreach (8)

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THE LUNAR INITIATIVES

Abstract

The goal of the Lunar Initiatives sponsored by Flexure Engineering are to extend beyond LEO the highly successful CubeSat Paradigm, an architecture and collaborative mission development and management paradigm based on open source hardware and software evolved by participant communities who de-velop robust standardized buses with innovative pay-loads 'tested by flying' at low cost. Hands on Collaborative Workshops: In support of this goal, we sponsor combined in-person/virtual events: the LunarCubes Workshop (lunarcubes.com, next scheduled November 13-15 2013, Palo Alto) and Lunar Science and technology Applications Workshop (LSA2013.com, next scheduled April 10-12 2014, Cocoa Beach) to bring together scientist and engineer designers and developers of science-driven advanced cubesat concepts, providers of innovative compact hardware and software components, and investors, enabling productive collaboration. Through these col-laborations, we are promoting the development of open source/open standards model that will allow for the rapid adoption of successful ideas and methods while allowing individuals and companies to control their key inventions that will be the foundation of their suc-cess. Through use of internet and social media tools, we provide opportunities and vehicles for collabora-tion. We are also in the process of supporting the de-velopment of and providing online tools to support such collaborations. Updatable Payloads and Technologies Database: We have created SPACE (Small Payloads and Ad-vanced Concepts for Exploration), an extensive intera-tive spreadsheet representing development history, design, applications, and requirements, and operating characteristics of potential payloads and supporting components at various stages of development to sup-port a broad range of applications (resource utilization, field geology, monitoring packages, observatories). Inputs are meant to reflect a broad constituency reflect-ing national and international interests. The spread-sheet will be hosted at the LunarCubes.com website (by Flexure Engineering), with a mirror site at the Na-tional Space Society, and will be continuously updated and maintained as an open source directory. Special Interest Groups: Flexure sponsors cu-besat-related special interest groups (SIGs) that inter-act during monthly telecons. These Include: Lunar-Cubes Small Payloads and Advanced Cncepts, Lunar-Cubes Space Coast Initiative, Deep Space Networks and Communication, and Cryogenic Applications. Collaborative websites are provided to act as clearing-houses for the work of participants or their collabora-tors. A primary goal is to identify challenges and po-tential solutions in each of these areas and form col-laborative teams to work in these areas of research and development.