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BIRDS PROJECT AS PLATFORM TO DEVELOP AND DEPLOY THE FIRST SATELLITES OF FOUR SOUTH ASIAN NATIONS

Abstract

The BIRDS Project of the Kyushu Institute of Technology ("Kyutech") in Japan has become famous in the small satellite academic community for assisting non-space-faring nations design, build, test, launch, and operate their first satellites – or their first university satellites. In this talk we focus on a particular region: South Asia. Using BIRDS-1, BIRDS-2, or BIRDS-3 as training platforms for space engineering students (graduate-school level), the nations of Bangladesh, Bhutan, Sri Lanka, and Nepal are doing their first satellites, or have done it already. There are several implications involved when a non-space-faring nation finally gets its first indigenous satellite into space. This talk will explore those implications. The central implication is that the students who build their nation's first satellite using the overseas facilities of Kyutech will be fully equipped (in terms of skills and know-how) to return to their respective nations and build the second satellite at home. This second satellite is supremely significant. Often heard at various international venues are grandiose plans by non-space-faring nations to establish "an indigenous and sustainable national space program". These well-meaning efforts often do not succeed because the key ingredient is missing in such efforts: in-house engineers with requisite skills to design, build, and test, space-going hardware. We believe the "BIRDS Paradigm" offers the solution to this common start-up failure among developing nations as it provides that crucial ingredient in a unique and novel way. To make this thesis manageable in one presentation, we limit the story to four countries of one compact region of the world.