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International Cooperation for the benefits of developing countries and emerging space nations (1)

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A UP³ TO SPACE APPROACH FOR ENHANCING NATIONAL SPACE CAPABILITIES AND
PROMOTING INTERNATIONAL SPACE COLLABORATIONS: EXPERIENCES FROM "NCKU
SPACE 2017"

Abstract

In 2017, the space community in Taiwan began a new space capabilities development initiative – NCKU Space Symposium at the National Cheng Kung University, Tainan. The space symposium was organized for engaging the emerging local space industries, the increasing number of public agencies related to the space technologies and applications R&D, as well as the international space communities to enhance the nationwide and international space capabilities building cooperation. The space symposium adopts an UP*UP*UP or UP³ to space capabilities building approach in order to facilitate the national space policy dialogue and decision-making, and to stimulate international cooperation for an emerging space middle power, i.e. Taiwan. The UP³ to Space approach refers to a university driven agglomerating operational model that, with its significant public R&D resources and the local networks, universities are supposed to maximize the outcomes of their space R&D activities to reward the public investments, increase its societal applications and services, and ultimately generate economic and societal benefits. In 2018, the space symposium will be held in November though with a new name, "UP³ to Space International Symposium". The 2018 UP³ to Space Symposium will continue its advocacy with its local stance and the close to users approach to discuss the national space R&D activities and policies in Taiwan. Furthermore, the symposium will apply the UP³ to Space capabilities building approach to connect the local academia and international space communities in order to encourage the cross-cutting space R&D endeavors, products and services development mainly driven by the SMEs. The symposium will also bring the citizens to be more acquainted with the benefits of the use and the exploration of outer space in their daily life. Such awareness efforts are expected to more greatly reward the public investments to and the scientific endeavors from the national and international space communities. Finally, the UP³ to Space Symposium will put focus on the international space cooperation by engaging the local and international space communities to jointly study any effective, efficient and equitable space development policy and governance pattern in order to consolidate national space community within the country and its connections with the international space partners. The organizers and several 2017 NCKU Space symposium participants

have contributed their observations regarding the university centric UP $\hat{3}$ to Space capabilities building approach in our paper.