

24th IAA SYMPOSIUM ON SMALL SATELLITE MISSIONS (B4)
18th Workshop on Small Satellite Programmes at the Service of Developing Countries (1)

Author: Dr. Werner R. Balogh
United Nations Office for Outer Space Affairs, Austria

Ms. Rei Kawashima
UNISEC Global, Japan
Prof. Mohammed Khalil Ibrahim
Cairo University, Egypt
Prof. Yasuyuki Miyazaki
Nihon University, Japan

IDENTIFYING GLOBAL CAPACITY BUILDING NEEDS: CANSAT/CUBESAT ACTIVITIES FOR
CAPACITY BUILDING IN BASIC SPACE TECHNOLOGY DEVELOPMENT

Abstract

Since the late 1990s, advances in the field of small satellite development, including the widespread acceptance of quasi-standards such as CanSat and CubeSat platforms, the use of commercial off the shelf technology and access to affordable launch opportunities, have contributed to an increasing number of space technology developers in the World. These developments created new opportunities for international space cooperation, but also require the space community to address important challenges, such as the long-term sustainability of outer space activities and the responsibility of state actors for authorizing and supervising space activities. Japan, through activities of its space agency JAXA, through cooperation with the United Nations Office for Outer Space Affairs and through the efforts of the University Space Engineering Consortium-Global (UNISEC-Global), has taken a leading role in promoting space technology development for the peaceful uses of outer space. This paper discusses the world-wide status of space technology capacity building activities and the results of a global survey, focussing on CanSat and CubeSat-related activities and identifies options for future space technology development capacity building. UNISEC-Global and its activities are briefly introduced and the purpose and methodology of the survey are described and the survey results presented, followed by discussion of future plans for supporting world-wide capacity building in basic space technology development. The importance of the conclusions is also discussed in the context of thematic priority 7 “capacity building for the 21st century” of UNISPACE+50, to be held in 2018. This work is part of a project funded by the Ministry of Education, Culture, Sports, Science and Technology of Japan, in cooperation with UNISEC and with the Department of Aerospace Engineering, College of Science and Technology, Nihon University.