

19th SYMPOSIUM ON SMALL SATELLITE MISSIONS (B4)  
13th UN/IAA Workshop on Small Satellite Programmes at the Service of Developing Countries (1)

Author: Mr. Carlos Alvarado

Central American Association for Aeronautics and Space (ACAE), Costa Rica, carlos.alvarado@acae-ca.org

Mr. Adolfo Chaves Jimenez

Delft University of Technology (TU Delft), The Netherlands, a.chavesjimenez@tudelft.nl

Ms. Magaly Sandoval

Central American Association for Aeronautics and Space (ACAE), Costa Rica,

magaly.sandoval@acae-ca.org

Mr. Johan Carvajal

Central American Association for Aeronautics and Space (ACAE), Costa Rica, johan.carvajal.g@gmail.com

THE IMPACT OF AN AEROSPACE ORGANIZATION IN DEVELOPING COUNTRIES: THE  
CENTRAL AMERICAN CASE

**Abstract**

The Central American Association of Aeronautics and Space (ACAE, in Spanish) is a non-profit organization, which leads the efforts in order to introduce the Central American region in the world's technologic paradigm of aerospace development. Its vision is to inspire the Central American talent to participate in the development of the aerospace industry.

ACAE is working harmoniously with the private sector, the government and the academia of Costa Rica through initiatives as the development of the aerospace related law framework, the promotion of research, the generation of innovative projects and the promotion and diffusion of knowledge in the aerospace field.

With these objectives in mind, the association is working on the creation of an aerospace cluster of companies in Costa Rica. In order to increase the knowledge about the aerospace market in the country, ACAE conducted a research during 2011 in partnership with the Foreign Trade Corporation of Costa Rica (PROCOMER) and the most prestigious Business School of Latin America (INCAE). The study showed a markets value in the country around USD \$170MM, which approximately 17% of it invested in R&D, and more than 4000 jobs related with the field.

ACAE has come to the conclusion that in order to show the capacity of Central American people to develop a space project, a practical demonstration is a mandatory. In partnership with the most prestigious technological university in the country, the Costa Rica Institute of Technology (TEC), the association is working on the design of the first satellite of the region, a nanosatellite based in the CubeSat specification. The planned launch year of this nanosatellite is 2015. The first steps to achieve this goal were made by experiments using meteorological balloons sending electronic equipment to the Stratosphere, inspiring the entire society and motivating new generations of engineering students to join this academic project.

This paper will explain the experience of developing the design of the first Central American nanosatellite. The reason of the project will be described, along with the impact that it has had at the moment and the future results and effects for the region expected by the organization.