Journal of Aerospace Technology and Management

ISSN: 1948-9648

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Instituto de Aeronáutica e Espaço

Brasil

Catsumi Imamura, Osvaldo

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Journal of Aerospace Technology and Management, vol. 5, núm. 2, abril-junio, 2013

Instituto de Aeronáutica e Espaço

São Paulo, Brasil

Available in: http://www.redalyc.org/articulo.oa?id=309429107001

EDITORIAL

Research Activities in Space Program: Thinking Paradigm

Osvaldo Catsumi Imamura[1]

Space Program is one of the most ancient activity initiated by the human being. The model of program management was prepared in the last century during the World War and space rush. The Brazilian Government Space Program started in the 1970s motivated by scientific needs to access environmental and space observations. This is a very interesting way to initiate a space program, however it may be the most challenging one.

This includes developing some artifacts and knowledge with scientific and technological trends, consuming a lot of human skills and financial funds. Managing this kind of initiative requires future vision, planning, and discipline.

John Fitzgerald Kennedy, former president of the United States, presented one interesting space program promotion in his speech at Rice University (September 12th, 1962): *"We choose to go to the moon in this decade and do the other things, not because they are easy, but because they are hard, because that goal will serve to organize and measure the best of our energies and skills, because that challenge is one that we are willing to accept, one we are unwilling to postpone, and one which we intend to win, and the others, too".*

The challenge faced is to determine the objective, goals, and start designing how we have to work to carry this out. The Brazilian Government National Program for Space Activities 2012–2021 provides the following message: *"This forth version […] is certainly more realistic than the previous ones, but it also has its eyes set on horizon of dreams. It is realistic, because it seeks the path of concrete and productive achievement. It dreams, because it seeks to promote strong changes in the spirit and way in which our space activities are conducted. It is a far dream".*

Bearing these two statements in mind, the paradigm we have to deal with is the promotion of academic and scientific achievements in order to produce results we can measure to keep the path to the horizon.

Therefore, there are three ways to exercise the construction of a new paradigm. Firstly, sharing our scientific achievements with collective working in the same area of interest to promote deep interaction and results; secondly, activating those results to ignite technological developments for deploying new components and products; and thirdly, government-inducted nationwide programs can direct and accelerate the production of results in the scientific and technological domains.

The Brazilian Geostationary Satellite for Defense and Communications (SGDC) is one opportunity to introduce catalytic effort for capacity development. Although the project orientation focuses on launching a satellite in a very short timeline, it may drive research activities on new materials, technology, and systems to review some ill conditioned problems with the aim of finding a new direction and a new challenge.

Working in the environment we call space seems to be a hard work. If we imagine that we are living and thinking in a subset of space, it is possible to see that we can do more and discover new challenges and opportunities to innovate.

Research in Space Program is a great road for refining our thinking paradigm to develop management skills for conducting scientific and technological activities aligned with our dreams, but producing capacity and metrics to evaluate every achievement.

1. Graduated in Electronic Engineering – *Instituto Tecnológico de Aeronáutica* (1978), Master in Telecommunications – University of Electro-Communications (1983) and PhD in Electrical Engineering – The University of Tokyo (1987). Currently, he is a senior researcher at *Instituto de Estudos Avançados – Comando-Geral de Tecnologia Aeroespacial* (Brazil), occupying the role of Deputy Technical Director. He served as Assistant professor at *Instituto Tecnológico de Aeronáutica*; referee of Revista Scientia (Unisinos), consultant of *Fundação de Amparo à Pesquisa do Estado de São Paulo* (Fapesp), *Financiadora de Estudos e Projetos* (FINEP), *Tribunal Superior Eleitoral* and United Nations. He has experience in Electrical Engineering with emphasis on signal modeling and coding, critical embedded systems, fault-tolerant systems, voice recognition, digital signal processing and digital filters, computer and processors architecture and information systems security. E-mail: catsumi@ieav.cta.br