

SYMPOSIUM ON BUILDING BLOCKS FOR FUTURE SPACE EXPLORATION AND DEVELOPMENT (D3)

Space Technology and System Management Practices and Tools (4)

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INTEGRATED DEVELOPMENT FOR BRAZIL'S SPACE SYSTEMS PORTFOLIO

Abstract

Space is practical, economic, and strategic. Countries that participate in space reap tangible scientific, technical, and financial rewards that improve the lives of their citizens, increase their base of knowledge, advance their productive capabilities, expand their range of economic activities, and enhance their geopolitical position in space market both international cooperation and competition. The countries identified as the main space-faring nations are United States, Russia, European Community, China, Japan, India, Canada, Israel, South Korea, and Brazil; and the emerging space actors are Australia, Iran, Singapore, South Africa, and Ukraine.

Nations invest in space targeting different outcomes, the overall theme of space competitiveness is linked to national policy, national security, educational infrastructure, and economic strength. Together, the civilian, military, and commercial space sectors focus the broader space discourse around key questions such as the relative competitive position of traditional space leaders; the role of emerging space powers; and the aims of newer or smaller space participants. This paper deals of different outcomes and key questions specifically of Brazil's space policy. Brazil has a very favorable geographical location to launch spacecrafts, has national policy and security questions, is introduced into global space market and that the use of satellites is vital for economic activities generally. But, how Brazil will translate its current review of space policy into a set of efficient and effective actions to meet the national needs and still sustain the Brazil's position as the regional space leader?

This paper proposes a conceptual framework for integrated development of space systems portfolio (IDSSP) in order to translate the Brazil's space policy into a set of space systems and subsystems to meet the national needs and still sustain the Brazil's position as the regional space leader. The framework realizes the integrated development concurrently for the strategic and systems space dimensions. Space strategic dimension translates the Brazil's space policy in a set of comprehensive performance measures that provides the basis for a measurement and management of space strategy. Space strategic dimension should be realized upon perspectives of policy coordination, critical technologies, supply chain, intellectual capital, and programmatic (cost, time, quality, and others). Systems space dimension translates the Brazil's space policy in a set of comprehensive performance measures that provides the basis for development and management of space systems portfolio. Systems space dimension should be realized upon perspectives of alignment, balancing, maximation, and enabling technologies.