

SYMPOSIUM ON INTEGRATED APPLICATIONS (B5)  
Integrated Applications End-to-End Solutions (2)

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INTELLIGENT SPACE INFRASTRUCTURE. INTEGRATING EARTH OBSERVATION AND  
COMMUNICATIONS IN A LOW EARTH ORBIT CONSTELLATION.

**Abstract**

The emergence of new technologies in the realm of nanomaterials, electronics, artificial intelligence, communications and high resolution optical and hyperspectral instruments, converge in the space sector, making possible the building of a cost effective, and easy to deploy and operate, space infrastructure that combines small satellites, ground stations and terminals forming a network of peer to peer intelligent energy efficient communication nodes circling the globe. The use and exploitation of such intelligent infrastructure have significant impact in education, health, security and the environment, providing an observatory to monitor the measures to mitigate the effects of climate change. This presentation discusses the strategies, the means and the challenges to bring together this integrated and evolving solution, making possible the incorporation, in the very near future, of new emerging countries into the selected space fearing nations of the XXI