

SYMPOSIUM ON INTEGRATED APPLICATIONS (B5)
Tools and Technology in Support of Integrated Applications (1)

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SPACE FOR PEACEFUL INNOVATION

Abstract

Achieving new innovations in space requires a combination of supportive policies, innovative technologies, structured data, and processes that drive sustainable outcomes. The integration of these multi-dimensional knowledge components is part of the next-generation of integrated applications.

Focused on a few technologies, this paper looks at the ability of the space community to be innovative by integrating policies, data, visualizations, and education. Open data forms the basis for the work, and these activities integrate data from many international missions. These data are then visualized to help inform new innovations and insights ranging from spacesuit design to tracking disease outbreaks. New educational paradigms were used as the authors taught young and old the use of open data and visualizations in hack-a-thons from Kampala, Uganda to the U.S. open data effort in Washington D.C., using space imagery and geospatial information systems in open and innovative educational events. And then the policies and directives from the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS), Transparency and Confidence Building, A Code of Conduct for Outer Space, and others are added.

The integration of these applications, policies, data, and technologies that are taught, communicated, and created by those in both developed and developing nations drives the future of integrated applications for the peaceful exploration of space and the use of space data by all people.