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21st IAA SYMPOSIUM ON BUILDING BLOCKS FOR FUTURE SPACE EXPLORATION AND DEVELOPMENT (D3)
Space Technology and System Management Practices and Tools (3)

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OPEN INNOVATION WITH SPACE DATA ECOSYSTEMS

Abstract

In order to stimulate innovation, drive economic development, and spur social good, governments are releasing data to the public. This data represents information the government gathers or creates in areas ranging from space to energy to weather. (Open data, which is the focus here, can be defined as human- or machine-readable records that can be accessed by the public and used without restriction or licensing.) These data can be accessed from departmental or agency web sites or through centralized sites such as the U.S.'s Data.gov or the UK's Data.gov.uk. Reporters, researchers, technologists, analysts, businesses, and others use this data to understand and investigate a wide variety of issues, and use emerging analytical tools to do sophisticated data analysis for business intelligence and innovation. Many of these government datasets are large and complex and most involve geospatial data, much of which is derived from satellite data.

The release of this data, the imperfect understanding of the benefits of that release, and the emergent tools and trends in artificial intelligence, predictive analytics, and big data provided a perfect opportunity to investigate the structures and frameworks of data, technologies, and stakeholders — the ecosystems — that support open data systems. This paper is squarely in the midst of this intersection of events, satellite data, and answers the question of how to measure, manage, and invigorate an open data ecosystem around the release of open space data, who should be engaged to derive innovation and social impact.