

Solar System Treks - GIS that provides interactive visualization and analysis for planetary science and exploration

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Meeting the challenges of space exploration has resulted in new knowledge that has kept NASA and JPL world leaders in big data science and technology. We, NASA's Solar System Treks Project (SSTP – <https://trek.nasa.gov>) development team at JPL, under the management of Solar System Exploration Virtual Research Institute (SSERVI, <https://sservi.nasa.gov/>), have developed a Geographic Information System (GIS) based system that includes a set of web-based portals that provide a suite of interactive visualization and analysis tools to enable mission planners, scientists, and engineers to access a large volume of cartographic products and models from a growing number of spacecraft. Currently, various web-based portals are available for discovering and exploring the Moon, Mars, Vesta, Ceres, Titan and Icy Moons of Saturn, and hydrology on Earth. This presentation will provide an overview of this GIS-based system highlighting its high level architecture, technologies and capabilities that was designed and developed specifically for exploration of any Solar System bodies. We will also describe its uses, features and capabilities, highlighting visualization and analysis innovations.

Keywords: GIS, Visualization, Analysis, Solar System