IAF EARTH OBSERVATION SYMPOSIUM (B1)
Earth Observation Data Management Systems (4)

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RAPID ACCESS PLANNING SYSTEM (RAPS) WEB APPLICATION FOR COLLECTION PLANNING

Abstract

Orbit Logic will present the system architecture and web-based interface for the Rapid Access Planning System (RAPS), a web-based GUI supported on the backend by Direct Access Facility (DAF) Collection Planning System (CPS). RAPS provides users with a simplified, straightforward approach to Satellite Imagery Order Management and Collection Planning; thus innovating on the workstation based client approach. RAPS has transformed the longstanding DAF desktop client into a light-weight web GUI.

The RAPS system utilizes a web GUI connected on the backend to a DAF CPS client. This approach was taken to not only give DAF CPS a much-needed facelift but also the web architecture makes the client more easily accessible. In addition, this brings DAF CPS into the cloud making it more easily upgradable and extensible in the future. The RAPS interface integrates with DAF CPS's API calls as well as its shared order database. With DAF CPS serving as the backend processing, the GUI can be solely responsible for providing a high-end visual user experience.

RAPS development capitalized on the success of DAF CPS with a web GUI that's easy to learn, understand, and utilize. The simplicity of RAPS is in the web page layout and functionality. Order Management and Collection Planning pages provide text tables, Gantt charts, and 2D and 3D map visualization to aid the operator in their tasking. Each page has been specially designed to reduce clutter and focus on the main goal of the corresponding page. At first glance, the Order Management page provides the operator with a view of all Orders and their respective locations. While the amount of data displayed is enormous, the page doesn't feel overloaded nor confusing. The Collection Planning page provides useful tools to aid the operators in tasking. Ground track and field-of-regard visuals help define the area of coverage of each satellite. The RAPS Dashboard page displays useful metrics to give authorized users a quick view into the state of the DAF. Overall, the RAPS GUI provides a candid approach to user operation in providing only the necessary tools and information while offering visualization aid for each facet.