MRO DKF Post-Processing Tool

This software tool saves time and reduces risk by automating two labor-intensive and error-prone post-processing steps required for every DKF (Deep Space Network) Keyword File that MRO (Mars Reconnaissance Orbiter) produces, and is being extended to post-process the corresponding TSOE (Text Sequence Of Events) as well. The need for this post-processing step stems from limitations in the sequence and planning of such operations for acquisition of scientific data.

This program was written by Jeffrey S. Norris, Thomas M. Crockett, Jason M. Fox, Joseph C. Joswig, Mark W. Powell, Khawaja S. Shams, Recaredo J. Torres, Michael N. Wallick, and David S. Wittman of Caltech for NASA's Jet Propulsion Laboratory. This software is available for commercial licensing. Please contact Karina Edmonds of the California Institute of Technology at (626) 395-2322. Refer to NPO-45871.

UAVSAR Flight-Planning System

A system of software partly automates planning of a flight of the Uninhabited Aerial Vehicle Synthetic Aperture Radar (UAVSAR) — a polarimetric synthetic-aperture radar system aboard an unpiloted or minimally piloted airplane. The software constructs a flight plan that specifies not only the intended flight path but also the setup of the radar system at each point along the path.

A user first specifies the desired image swath by specifying certain geographic and geometric features of the swath or the desired flight path. Using an input digital elevation map (DEM), the software predicts the image swath and sets such variables as a data window position (DWP). A raster backscatter classification file co-registered with the path.