Geo-locational Accuracy of Orthorectified Vision-1 HR data products

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Abstract

Vision-1 is the first UK owned HR optical earth observation satellite in orbit. As part of the Airbus earth observation catalogue, it supplements similar EO data provided by the existing Pleiades constellation. It is capable of providing data across five bands (four multispectral VNIR and one panchromatic) with resolution up to 87cm.

One of the major uses of HR data is in high resolution mapping projects. Such projects may contribute to emergency relief efforts or they may be for general municipal use. In either case, good absolute orthorectification accuracy is must. This enables improved interoperability with data from other missions, more accurate results from time series, and good overlap when creating a data mosaic.

Thus, it is a major requirement that orthorectified data provided to users from the Vision-1 satellite is of sufficient geo-locational quality.

This presentation will describe:

1. The methodology used to create orthorectified Vision-1 data products in the Airbus production chain and the achieved accuracy according to that production chain 2. The efforts to validate the accuracy of these products using reference data external to the product chain. This includes validation against two different sources of reference data:
   - Freely available aerial reference data
2. The high-resolution Airbus OneAtlas Base Map product
   (See: https://www.intelligence-airbusds.com/en/8839-basemap)
3. The results of those efforts

Keywords - Product Validation