

Satellite-borne Video Processing and Reporting Techniques for Imagery Analysis

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The availability of space-borne high resolution full-motion video such as Urthcast or Google's Terra Bella offer new data sources for imagery analysts. These sensors capture up to 90 seconds of video over an area of interest in high resolution video. The videos are analyzed in industry-standard imagery exploitation software using specialized tools specifically developed for video analysis. Video may complement or enhance existing treaty verification analysis by offering more information for visual interpretation as well as offering additional input data to create digital elevation models. Because video may be used to show activities and motion on the earth's surface, it may offer enhanced reporting methods for analysts. CTBTO's International Monitoring System may use these datasets to cross-reference observations and the On-Site Inspection Division may complement this with their existing use of remote sensing. This presentation will highlight some of the existing processing and interpretation techniques developed for satellite borne video. Preliminary results show that elevation models from SkySat video imagery can recover height information of industrial buildings with a similar quality as satellite-borne sub-meter very high resolution optical stereo pairs.

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