

## **Photogrammetry and Parallel Computing — Software and Hardware**

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We have currently a rapid growth of remote sensing satellites and aerial cameras productivity. For example European Pleiades-1A and Pleiades-1B satellites have acquisition capacity of 2,000,000 km<sup>2</sup> per day. Visionmap A3 Edge aerial camera produces 5000 km<sup>2</sup>/hour of images with 20 cm GSD. Total size of acquired aerial or satellite images is enormous and requires a lot of CPU processing time on a modern workstation. If one needs fast photogrammetric image processing he should use modern parallel computer capabilities. Today computer clusters are cheap enough and

allow fast photogrammetric processing.

This paper considers high computer performance technologies and algorithms for parallel seamless photogrammetric mosaic building for aerial and satellite images with the given DTM. Different methods and algorithms are analyzed. Some estimates are made. The second part of the paper is dedicated to storage systems that should hold initial, temporary and final images. These storage systems must be properly designed for high scalability on clusters.