

# **DISTA – a portable software solution for 3D-compilation of photogrammetric image blocks**

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## **ABSTRACT**

A photogrammetric evaluation system used for the precise determination of 3D-coordinates from blocks of large metric images will be presented. First, the motivation for the development is shown, which is placed in the field of processing tools for photogrammetric evaluation tasks. As the use and availability of metric images of digital type rapidly increases corresponding equipment for the measuring process is needed. Systems which have been developed up to now are either very special ones, founded on high end graphics workstations with an according pricing or simple ones with restricted measuring functionality. A new conception will be shown, avoiding special high end graphics hardware but providing a complete processing chain for all elementary photogrammetric tasks ranging from preparatory steps over the formation of image blocks up to the automatic and interactive 3D-evaluation within digital stereo models. The presented system is based on PC-hardware equipped with off the shelf graphics boards and uses an object oriented design. The specific needs of a flexible measuring system and the corresponding requirements which have to be met by the system are shown. Important aspects as modularity and hardware independence and their value for the solution are shown. The design of the software will be presented and first results with a prototype realised on a powerful PC-hardware configuration will be featured.

**Keywords:** OpenGL, wxWindows, Geographic Information Systems, Digital Photogrammetry, Photogrammetric Workstations, 3D-Measurements, Stereoscopy