SIMphoto – FREE SOFTWARE FOR SINGLE-IMAGE PHOTOGRAMMETRY

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Abstract:

This paper is focused on presentation of the SIMphoto software. This software was created by student David Čížek during his diploma project which was done in Department of Mapping and Cartography. Acronym SIMphoto means Single IMage photogrammetry. This software was developed as a toll for image rectification (= photomap creation). The idea of creation of software arose during longer period of author´s (Mr. Hodač) collaboration with colleagues from the area of Culture Heritage (CH area). Photomaps are very common type of photogrammetric results used in that area. It is quite usual that historian and architects are creating photomap by themselves. They are using different technologies, some of them, maybe most of them, are not correct from photogrammetrical point of view. One of reasons of it is that they do not have an appropriate tool. A lot of tools for image rectification exist. Many of them have redundant functionality, some of them are quite expensive, none of them is for free. This state was the starting point and motivation for new software application development. SIMphoto was created as an open-source free software. It is simple software focused on one topic – image rectification. There are included various types of image rectification techniques which are following main cases of measurement (distances or control points) and configuration (pure frontal or tilted image). Image rectification is a core function of the software but there are also present others – inserting graphic scale, print to pdf, measurement upward of photomap, distortion removing etc. (see appendix). SIMphoto is working with one image only (mosaiking is not possible) and is distributed in English and Czech language [1]. Finally we can say that presented software is just in use and feed-back from our colleagues from CH area is positive.

REFERENCES

[1] *SIMphoto web pages* [online]. 2010 [cit. 2011-08-01]
www: <http://lfgm.fsv.cvut.cz/~hodac/simphoto>

APPENDIX

Appendix 1: SIMphoto - functionality

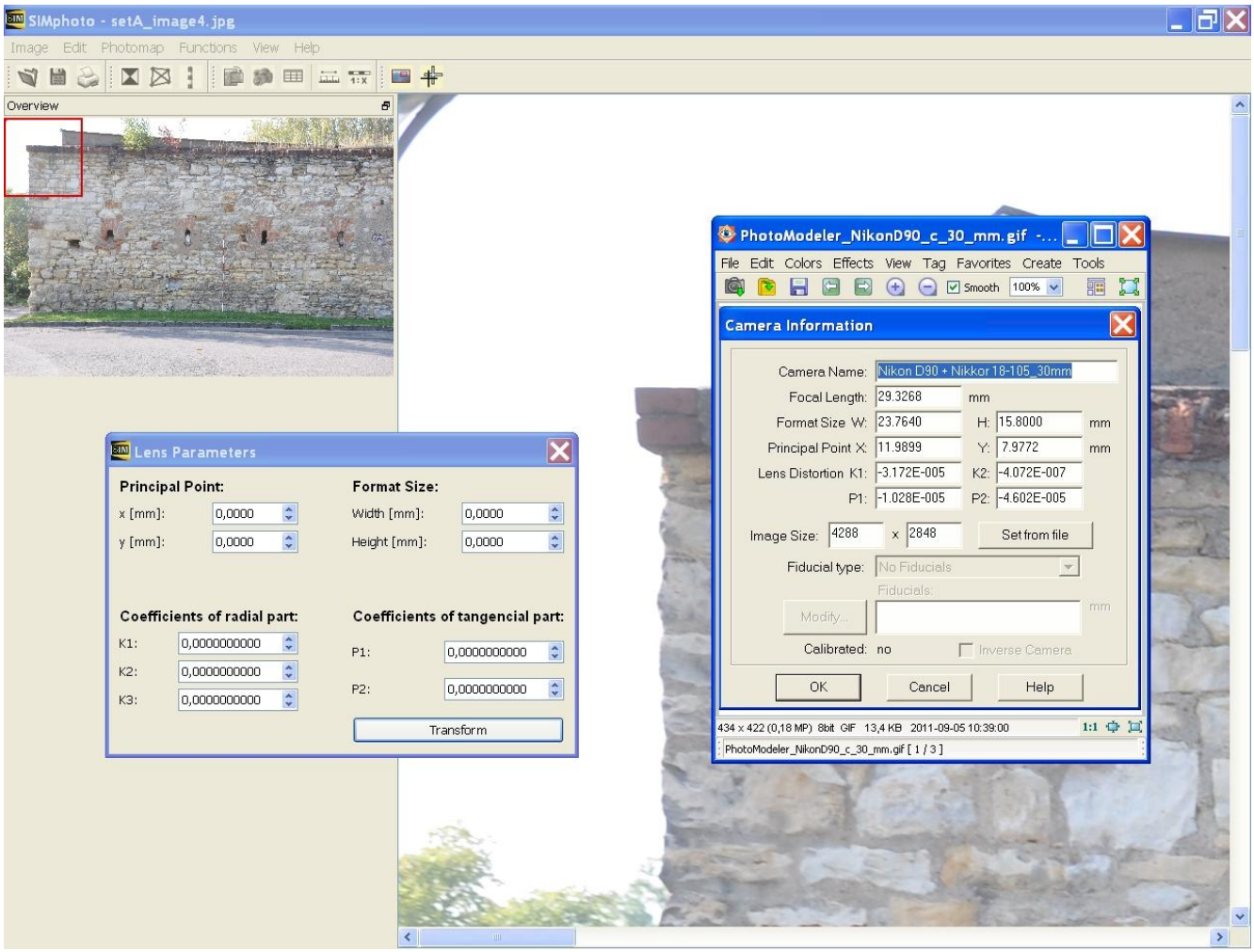

Figure 1: distortion removing

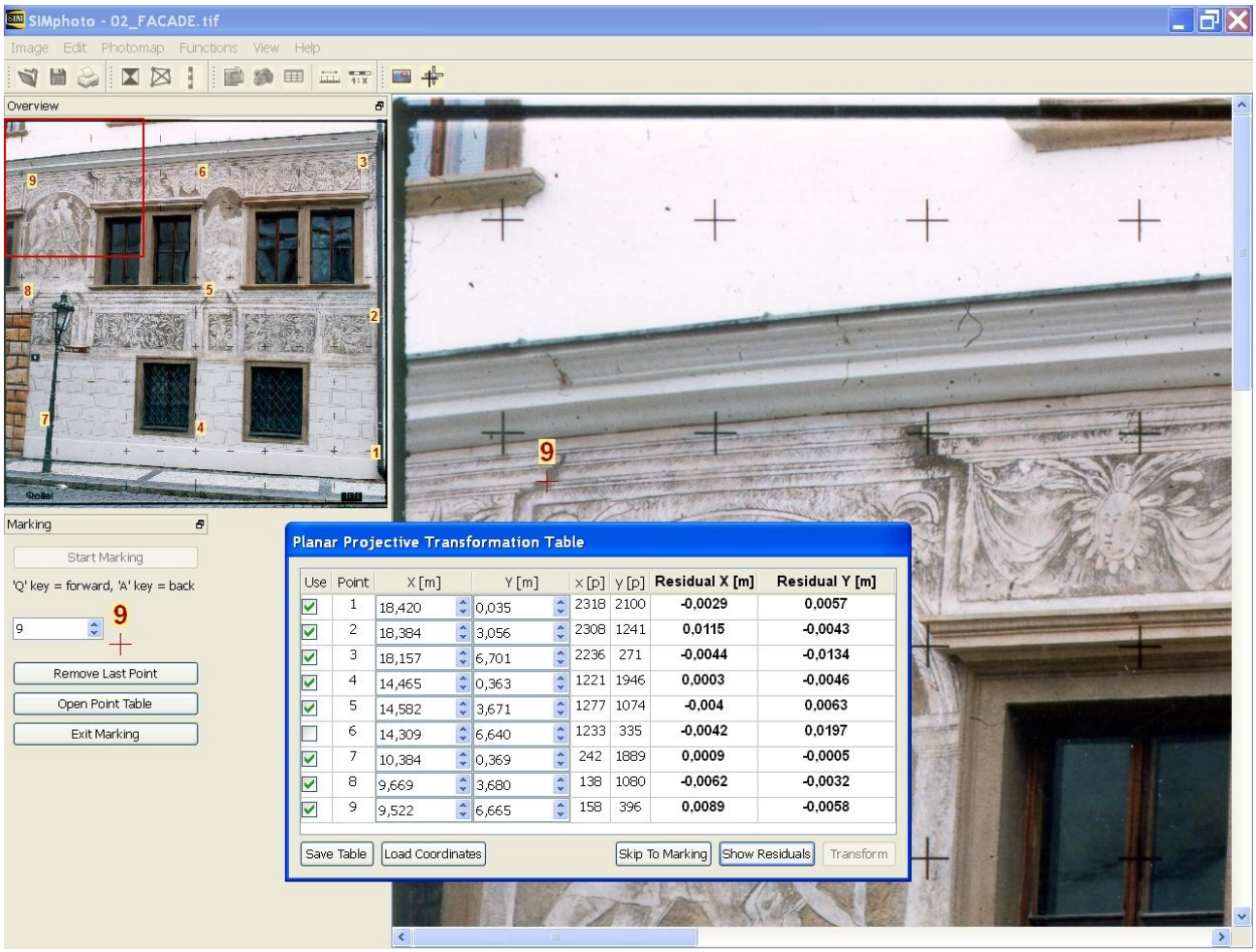

Figure 2: control points collection

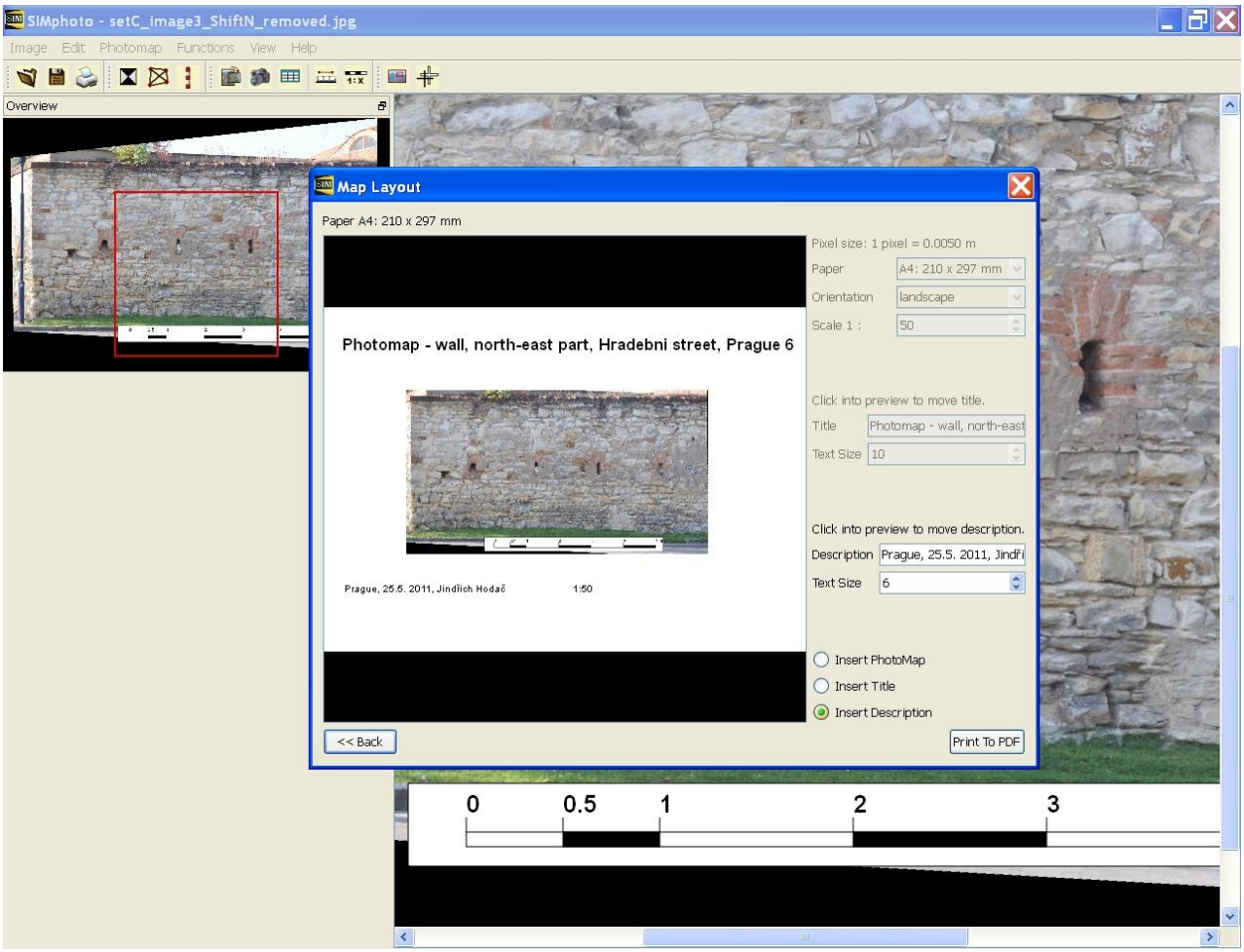

Figure 3: map layout preparation