Computer supported search of place-names on old maps

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Great numbers of digital pictures are available on the internet, some of which has been taken from old maps but the content of these pictures remain inaccessible to users. Meanwhile the always increasing number of these pictures generates the necessity of searchability: the settlement-names of these maps are not extractable by the use of optical character recognition (OCR) softwares.

Recently, the international way to seek place-names on old maps with computer support is that the settlements occurring on the maps are recorded into databases, which are searchable by manager programs. Basically, this method is very simple though it is not cost-effective at all; the creation of the databases is time-consuming and requires absolute concentration. Thus the content of these databases are not freely accessible.

In the followings you are to be introduced to a more economic process that may act as a replacement. This method is applicable by almost every map, on which the editor represented the referential position of the settlements to each other geometrically correct; thus the rendering of the settlements is said to be minimally consistent. The main theory relies on a mathematical relationship that exists between two sets of points. If the consistency of the sets is at least minimal from the geometrical point of view than by discerning the points within the first set the points of the other set can be approached. In fact, the searching of place-names on old maps is enabled by the solution of a mathematical problem.

Testing of the latter process was done by the appropriate use of the existing geodesic transformation softwares.