

## Investigations on possible remarks on historic maps to compile declination values of the past centuries

From many current maps we know that it is common to remark about the mean deviation of the geographic north direction from the magnetic north direction, which is shown by compasses. Nonetheless, no remarks about the magnetic declination are given neither on the investigated original maps nor on any map of the collection by Gebhard König. The compass played a minor part at mapping an area.

A collection of early maps published by Gebhard König in 1995 was investigated to prove the assumption of printed declination values on maps. This compilation contains numerous maps of all regions in Lower Austria charted between 400 AD and 1850 AD. Furthermore six early maps in their original conditions were analyzed at the Austrian National Library.

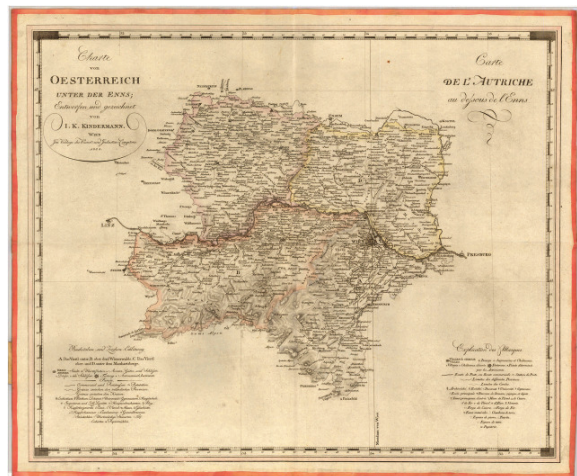
Furthermore information was gathered about the methods of mapping during the past 500 years from "Beiträge zur Geschichte der österreichischen Landesaufnahmen, Bd. 1 & 2" (Hofstätter, 1989).

It is not possible to make any conclusions about the historic declination from the analyzed historic maps. There is no remark about the magnetic declination given (Fig. 1) neither on the original maps nor in any map of the collection by König (1995).

The tourist map from Schneeberg is the only one, which shows a north arrow. However, there can't be determined any declination data from this map either. Two main problems occur: (1) early maps are often reprints from even older historic maps. The information about the declination would be distorted if at all maps preserved. (2) there is no evidence that compasses were used for historic mapping. Probable that other methods and tools were used for surveying purposes (e.g. triangulation, astronomic measurements).

Hofstätter (1989) indicates that the determination of the north direction was done by astronomic measurements. The most established method for survey was the triangulation method which was developed by Snellius in 1615. The compass was a standard tool for surveyors but in comparison with triangulation the compass played a minor part at mapping an area. It is likely that particular landmarks were surveyed precisely and the rest of

the country was outlined by observations using a compass and distance measurements (Hofstätter, 1989).



**Figure 1:** Historic map of Austria "Charte von Oesterreich, unter der Enns", Cartographer: I.K. Kindermann, 1803. ([www.altlandkarten.de](http://www.altlandkarten.de))

### References:

- E., Hofstätter, 1989. Beiträge zur Geschichte der österreichischen Landesaufnahmen: ein Überblick der topographischen Aufnahmeverfahren, deren Ursprünge, ihrer Entwicklungen und Organisationsformen der vier österreichischen Landesaufnahmen, Bd. 1 & 2, Bundesamt für Eich- und Vermessungswesen, 513 pp.  
G., König, 1995. Alte Landkarten aus Niederösterreich, Metternich'sche Schlossverwaltung Grafenegg, 78 pp.

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