

# Karten von Attika: Antiquities and Topography of Attica in the Era of Digital Humanities

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## Abstract:

The project *Karten von Attika: Antiquities and Topography of Attica in the Era of Digital Humanities* aims at the creation of a webGIS platform for the archaeology of Attica by overlaying multiple layers of geospatial data on a unified digital map. The two-decade topographic-archaeological mapping of the Attic land by the German cartographers of 19th century, resulted in a sequence of 26 cartographic sheets of mapping scale 1:25000, that published entitled *Karten von Attika*. It is the only cartographic work that with fullness and accuracy captures, among other elements, the antiquities that were visible at that time (Livieratos et al., 2013). These maps were never surpassed, neither as a cartographic achievement nor as a thematic depiction of ancient remains and traces (Korres, 2008). They were designed after thorough on-site research of the visible antiquities of that time, offering the vision of a pristine landscape, which has now been obliterated by the dramatic urbanization of Athens and Attica during the 20th century (Livieratos et al., 2013). The 26 cartographic sheets are accompanied by an explanatory text, 263 pages long, entitled *Erläuternder Text zu den Karten von Attika*, which in the context of this project is presented for the first time translated into Greek.

The aim of Dipylon Society is to transfer *Karten von Attika* into the digital era by designing and implementing an innovative cartographic platform, thus making the maps accessible and interactive. Through digital technologies (GIS and web-mapping), the maps have been rendered onto their contemporary background as the 26 cartographic sheets merged into a seamless mosaic image which has been georeferenced. All the words depicted on the map (cartographic texts), every ancient remain and the majority of 19th-century remains (cartographic signs) have been digitized and registered in a geospatial database developed for recording the cartographic information. From a technical perspective, data are managed and stored using the PostgreSQL open-source database with the PostGIS extension that allows spatial data management. In addition, the project systematizes the cartographic data by type of sign (settlement remains, funerary remains, cult remains, fortifications, quarries, port structures, road networks, etc.). Finally, for each geospatial entity that a reference in the *Erläuternder Text* exists, a link to the text has been created. In this way, the user of the platform can easily navigate from the map to the text and vice versa. With the reconstruction of the built environment of the 19th century, the one hundred and forty-year-old traces are transferred to a modern cartographic background and reveal the palimpsest of the landscape.



Figure 1. Georeferenced part of Sheet XV Cap Sunion, Karten von Attika (Curtius and Kaupert, 1881).

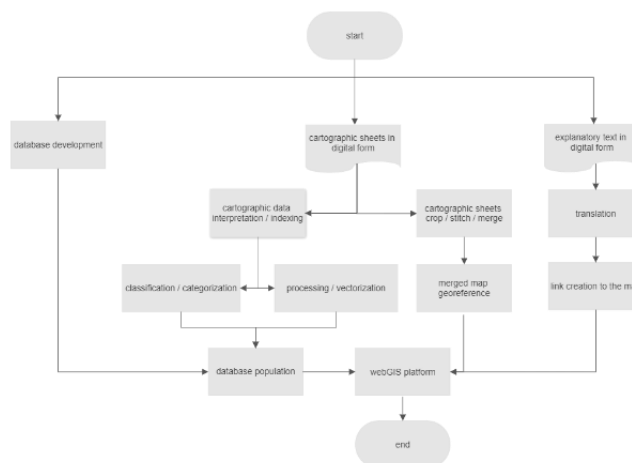


Figure 2. Chart of the workflow.

The digital platform, which is still a work in progress, was developed using methodology focused on the management and presentation of spatial and non-spatial data. Additionally, in order to have a user-friendly environment a combination of web development tools and libraries were used. Through the categorization of the cartographic data the user can navigate in Attica region of the 19th century and distinguish settlements, buildings, fortifications, archaeological remains visible at that time and even hydraulic and defensive works and geomorphological elements. They can also filter the presented data by date period, spatially isolate some of them and look for names on the map. By activating and reading the linked *Erläuternder Text*, he can also gain a fuller picture of the places walked and recorded by the German cartographers.



Figure 3. The developed interface.

The project aspires to significantly contribute to today's world of digital humanities through interdisciplinary research. As it will be bilingual (Greek / English) and freely available on the web, it will attract both the modern researcher and anyone potentially interested in ancient Attica. Upon completion, we hope that the user-friendly digital cartographic platform will give rise to a variety of derivative projects: as a methodological tool for modern teaching approaches in the sciences of Archaeology, History, Cartography and Informatics; as the basis for the creation of thematic routes in most visited places of Attica; and finally, as a model for the creation of corresponding digital cartographic applications of historical content for other areas of Greece.

## References

- Curtius, E. and Kaupert, J.A., 1881. *Karten von Attika*, Berlin, 1895-1903. Retrieved March 23, 2022 from <https://digi.ub.uni-heidelberg.de/diglit/curtius1895a/0001>.
- Korres, M., 2008. *Creation Content and Value of Kaupert's Maps of Attica*, Athens, Greece: Melissa (in Greek).
- Livieratos, E., Boutoura, C., Koussoulakou, A., Ploutoglou, N., Pazarli, M. and Tsorlini, A. 2013. *Karten von Attika: A Major German Contribution to Greek Cartographic Heritage and its Digital Approach*. In: *Proc., 26th International Cartographic Conference*, Dresden, Germany, August 25-30.