

# DeVill – the digital database of medieval and early modern deserted villages in Eastern Austria

## The digitization of the Deserted Villages Archive of the Austrian Society for Medieval and Modern Archaeology

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### Introduction

In 1971, Fritz Felgenhauer established the Deserted Villages Archive (DVA) (Felgenhauer-Schmiedt, 2023). Already back then Felgenhauer persuaded a landscape archeological approach to the research field of deserted villages and his research group accumulated archival resources of various types on sites of the medieval and early modern period mostly located in the province of Lower Austria. With the establishment of the Austrian Society for Medieval and Modern Archaeology in 1985, the DVA became the property of the society. In succession, the geographer Kurt Bors influenced significantly the development of the archive and developed a systematic methodology for geographical-archaeological field research of deserted villages (Bors, 2013).

Currently the archive contains information about 2500 deserted villages of the medieval and early modern period in the eastern part of Austria. Due to personnel constraints, the archive is not open to the public. However, interested parties could access the materials by appointment. Thus, consulting the society's DVA is rather cumbersome. This situation sparked the desire to digitize the DVA and to make it freely accessible to other researchers and the wider public.

### DVA Data

The DVA contains various types of archival materials, including

- manuscripts on the creation, organization, and workflows of the archive
- correspondence
- handwritten and typewritten descriptions of sites
- bibliographies
- extracts of literature
- photocopies of old local historical literature
- photographs
- cartographic representations
- archaeological surface finds

### The DeVill Project

The issue, how to make the DVA freely accessible was first discussed among the authors and other colleagues in June 2022, quickly identifying the open-source database software OpenAtlas (<https://openatlas.eu/>; Eichert 2014) as a suitable tool. The project respectively the digital database to be created was dubbed "DeVill – Deserted Villages Archive" (<https://devill.oegmn.or.at/>). Thanks to external funding by the "Digital Cultural Heritage" program (<https://www.bmkoes.gv.at/kunst-und-kultur/schwerpunkte/digitalisierung/foerderprogramm-kulturerbe-digital.html>), digitizing of the archive started in spring of 2023 and was completed in summer of 2024.

## Digitization

For the digitization of text documents, a Fujitsu SV600 overhead scanner was applied, producing searchable PDFs, and a Nikon D300 DSLR camera for digitizing large-format cartographic representations. Archaeological surface finds were digitized using a Laser Aided Profiler (<https://www.laseraidedprofiler.com/>) for creation of two-dimensional representations. Photographic images were digitized using a scanner at 1200 dpi resolution. These various types of archival materials respectively data require a versatile adaptive online database for data entry and backend as well as a vivid and interactive frontend.

## Backend

The DeVill data structure, backend, and frontend are largely based on the THANADOS project (<https://thanados.net>; Eichert, 2020; Filzwieser and Eichert, 2020). OpenAtlas, used for the backend development, features a vast array of data entry possibilities for projects such as THANADOS or DeVill, using the International Council of Museums' Conceptual Reference Model (<https://www.cidoc-crm.org/>).

## Frontend

As data entry into OpenAtlas for DeVill included a large amount of geographical data, basic GIS elements and categories relevant to deserted villages research had to be included into the frontend as well. The digital objects and their metadata, enabling complex data linkages, were uploaded in PDF, PNG, JPG, and SVG formats, as well as GLB files for (new) 3D representations of the immediate landscape surrounding the respective site. A thesaurus was created to define and disclose the terminology used, aiming for subsequent integration with existing controlled vocabularies where possible, and underlining the project's adherence to the FAIR principles (<https://www.go-fair.org/fair-principles/>) as well as enabling future aggregations into platforms like europeana (<https://www.europeana.eu/>), Kulturpool (<https://kulturpool.at>) or ARIADNEplus (<https://ariadne-infrastructure.eu/>).

Due to the alignment of DeVill's structure with CIDOC-CRM, a formal ontology well suited for describing all types of cultural heritage data and thus facilitating the comprehensive representation of data associated with the archival materials and findings, a generic representation of all mapped data on the villages is possible. This furthermore gives the possibility to constantly develop the frontend, adding new features, charts, and analytical tools. CIDOC-CRM's widespread use within the digital humanities also ensures easy data reuse by other projects employing the same ontology. All data within DeVill can thus also be exported, using the frontend, including detailed information on how to cite the respective dataset and the applied license.

The DeVill-frontend provides a distinct landing page for each site with persistent URLs together with an overview map of all located sites and their distribution, as well as all villages with approximate/assumed location information. The detailed view of the respective sites features all relevant information on the village (name, dating, literature, general description, etc.) together with connected files as well as a map viewer, showing the exact position and extent of the village, based on the current state of research. Where applicable, surface finds are available as SVG files. For sites for which exist a well-executed site sketch, digital terrain models are provided which are intended to give a rough impression of the landscape and topographical situation of the former villages. All publicly available files come with the respective metadata (e.g. IIIF manifests) and licenses (human as well as machine-readable) for further use in third party applications, as linked open data.

## Conclusion

DeVill aims to achieve two things. On the one hand, the online access to the DVA shall give both national and international researchers the opportunity to use this extensive data set, facilitate publications, and stimulate future cooperation. The database could be expanded to include further cross-border collaborations as well as abandoned medieval settlements from all over Europe and beyond. Conversely, all the data provided via DeVill can be exported and reused in other databases and projects. On the other hand, DeVill also intends to offer low-threshold access to the archival holdings, which should enable local residents to obtain information about the settlement history of their particular region.

## References

- Bors, K. (2013). Dokumente zur geografisch-archäologischen Ortswüstungsprospektion in Niederösterreich, in Theune, C., Scharrer-Liška, G., Huber, E.H., and Kühnreiter, Th. (eds), *Stadt – Land – Burg. Festschrift Für Sabine Felgenhauer-Schmiedt zum 70. Geburtstag*, Rahden/Westf., pp. 101–110.
- Eichert, S. (2014). OpenATLAS – An Open Source Database Application for Archaeological, Historical, and Spatial Data. *Proceedings of the 18th International Conference on Cultural Heritage and New Technologies 2013, CHNT 18, 2013*.
- Eichert, S. (2020). Digital Mapping of Medieval Cemeteries: Case Studies from Austria and Czechia. *ACM Journal on Computing and Cultural Heritage* 14. DOI: <https://doi.org/10.1145/3406535>
- Felgenhauer-Schmiedt, S. (2023). Einblicke in die Entwicklung der Wüstungsforschung seit 1969. In C. Theune, C., and Kühnreiter, Th. (eds), *Die Tagung "Burgen- Und Siedlungsarchäologie Des Mittelalters" in Wien 1969 – Ein Meilenstein in der Genese der Mittelalterarchäologie als Fachzweig in Europa*. Beiträge zur Mittelalterarchäologie in Österreich Beiheft 14, Österreichische Gesellschaft für Mittelalter- und Neuzeitarchäologie, Wien, pp. 18–23.
- Filzwieser, R. and Eichert, S. (2020). Towards an Online Database for Archaeological Landscapes. Using the Web Based, Open Source Software OpenAtlas for the Acquisition, Analysis and Dissemination of Archaeological and Historical Data on a Landscape Basis. *Heritage* 3, pp. 1385–1401. DOI: <https://doi.org/10.3390/heritage3040077>