

# A Review of the Königsfelden Online Edition

*Königsfelden Online. Die Urkunden und Akten des Klosters und des Oberamts Königsfelden.* <https://www.koenigsfelden.uzh.ch> (Last Accessed: 2022-08-07). Reviewed by  Christopher Pollin (Zentrum für Informationsmodellierung (ZIM-ACDH), Austrian Centre for Digital Humanities, Karl-Franzens-Universität Graz), christopher [dot] pollin [at] uni-graz [dot] at.

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## Abstract

This review deals with the digital edition “Die Urkunden und Akten des Klosters und des Oberamts Königsfelden 1308–1662” (Charters and Records of Königsfelden (1308–1662)), which was carried out by the Department of History of the University of Zurich between 2017 and 2020. The edition project provides access to more than 1500 charters and records. The aim of this review is to discuss the project context, the web interface, the data and the quality of the edition. A particular focus will be given to the FAIR data principles. Overall, *Königsfelden Online* is a successful implementation of a digital edition that provides a coherent collection of structured documents for further research.

## Introduction

The digital edition of the charters and records of the Königsfelden Monastery and the Oberamt Königsfelden from the years 1308–1662 (<https://www.koenigsfelden.uzh.ch>) is the achievement of the Historical Seminar of the University of Zurich and offers insights into a wide range of topics: from social issues of the urban elites and the service nobility to aristocratic history and aspects of economic and women's history. It should be noted at the outset that the edition discussed here deals with a fully annotated corpus of historical sources. The edition created from this material not only provides access to these historical sources and their metadata via collections, but also a full-text search option, indices, a map for locating documents, and experimental visualizations. Moreover, users can access digital facsimiles of the source material, transcriptions, annotated text, including diplomatic annotations such as abbreviations, and annotations of named entities like persons, families, organizations, places, and their historical context. For the annotation of the text, the project used XML and followed the Guidelines of the Text Encoding Initiative P5 (TEI). At the time of the review, the database contained 1557 documents.

This review focuses on the following subjects: The first section provides an overview of the topic, objectives, methods, content, and modelling of the edition. The second section addresses the publication and presentation, including technical aspects, as well as the user interface of the collection, the search options, and the edition views. After a particular focus on the FAIR data principles, the review concludes with a brief discussion of the experimental visualization that the digital edition additionally provides.

# Scope of the edition

Under the direction of Prof. Simon Teuscher, University of Zurich, and in collaboration with the State Archives of the Canton of Aargau and the Swiss Legal Sources Foundation, the project was carried out between 2017–2020 as part of the National Fund project *Edition der Urkunden und Akten des Klosters Königsfelden* (Infrastructure: Editions, 10FE15\_157907). In addition to the funding from the Swiss National Science Foundation, the project was supported by a contribution from the *Lotteriefonds* of the Canton of Aargau. Originally, the project was initiated by Dr. Tobias Hodel, who was in charge until October 2019, as well as Dr. Claudia Modellmog and Prof. Simon Teuscher. After that, Dr. Colette Halter-Pernet took over the lead until the end of the project. In addition, 10 staff members were involved in the project in various employment relationships and work areas.



Start Einleitung Dokumente Überlieferung Karte Register

## Die Urkunden und Akten des Klosters und des Oberamts Königsfelden

1308-1662

Herausgegeben von Colette Halter-Pernet, Tobias Hodel und Simon Teuscher

Bearbeitet von L. Barwitzki, S. Egloff, C. Halter-Pernet, F. Henggeler, T. Hodel, M. Nadig, A. Steinmann und S. Stettler. Technisch umgesetzt durch I. Prada Ziegler



### Königsfelden Online

Geschichte des habsburgischen Dienstadels, der Monarchien und der städtischen Eliten im Gebiet der heutigen Schweiz, Wirtschaftsgeschichte eines Klosters, Adelsgeschichte aus Frauenperspektive, Archivierungstechniken und mehr – das Schriftgut Königsfeldens bietet Einblicke in vielfältige Themenbereiche. Die Zeugen ebendieser Geschichte(n), die Urkunden und Akten des Klosters und der nachmaligen Berner Hofmeisterei Königsfelden, die seit der Gründung des Klosters durch die Habsburger anfangs des 14. Jahrhunderts entstanden sind, wurden in einem mehrjährigen Projekt am

### Suche

brief umb die gekoufften g

Suche im:

Homepage of the digital edition (<https://www.koenigsfelden.uzh.ch>).

# Die Urkunden und Akten des Klosters und der Hofmeisterei Königsfelden

Dokumente

## Klostergründung

Sortierung:  
Datum

StAAG U.17/0001

26. Januar 1270

Graf Rudolf IV. von Habsburg verkauft mit Zustimmung seiner Gattin Gertrud und seiner Söhne Albrecht und Hartman dem Abt und Konvent von Wettingen seine Güter zu Lupfig (Lupphanck) und Birr (Bire), jährlich 25 Stück (frusta) abwerfend, um 40 Mark Silbers, die zur Tilgung einer Schuld zu Freiburg im Uechtland verwendet werden.

Kaufgeschäft

StAAG U.17/0002

24. März 1291

Konrad, Ulrich, Johannes und Werner von Reitnau (Reitnowa), Gebrüder, verkaufen dem Arnold Trutman zu Beromünster den ihnen als Erblehen vom Stift Säckingen zustehenden Zehnten in den Dörfern Othmarsingen (Othwessingen), Hendschiken (Henschinchon) und Dottikon (Dothinchon) um 102 Pfund Pfennige. Zustimmung der Adelheid von Kaiserstuhl (Cheiserstuel), Chorfrau zu Säckingen, als Prokuratorin jenes Zehntens. Trutman hat dem Stift jährlich 10 Mütt Roggen Zins auszurichten.

Kaufgeschäft, Zehnt

StAAG U.17/0003

16. Oktober 1292

Herzog Albrecht I. von Österreich überlässt Mechthild von Gösseo (Goezzeehon) die Güter zu Mänthal (Muenendal) die 7 Stück (frusta) Frtrao abwerfen und

Sammlungen

- Nach Datierungen
- Nach Dorsualschichten
- Nach Schlagwörtern

Öffne Dokument

Gib die Nummer eines Dokuments (inkl. vorgestellten Nullen!) ein und drücke den Knopf, um unmittelbar das entsprechende Dokument zu öffnen.

zB. 0727/01

ÖFFNEN

Suche

Initial view of the documents. Documents are identified by shelfmark, date, short summaries, and keywords (<https://www.koenigsfelden.uzh.ch/exist/apps/ssrq/documents.html>).

In the project *Königsfelden Online* (see fig. 1 & 2), the primary source material that is made accessible are charters. In contrast to the project *Monasterium.net*<sup>\*</sup>, which is an information portal linking various collections, *Königsfelden Online* is thus an edition project of a single collection. Being a part of *Monasterium.net*, however, ideas on how to describe charters digitally have been advanced (Vogeler 2010, Vogeler 2018). Here, the Charters Encoding Initiative (CEI) is certainly central, and its considerations have been incorporated into the TEI (TEI P5, ‘Representation of Primary Sources and Winslow 2019).

## Selection and Content

Two projects were carried out in advance: The project *Königsfelden und sein Adel. Annäherungen an eine neue Sozialgeschichte* (SNF Projekt 2012–2016) and the book project *Königsfelden. Königsmord, Kloster, Klinik* (2010–2012). Both projects were – according to their abstracts and publication lists – essential for the realization of the digital edition. The knowledge gained in the context of these projects forms the basis for the classification of the sources provided with regard to the research questions. Another central preliminary work is the doctoral thesis *Schriftordnungen im Wandel. Produktions-, Gebrauchs- und Aufbewahrungspraktiken von klösterlichem Schriftgut in Königsfelden (1300–1600)* by Hodel (2020), as it is particularly relevant for the “Dorsualnotizen”<sup>\*</sup>, which will be dealt with later.

According to the project description, the reviewed project comprises a so-called “Bestandesedition”<sup>\*</sup>. It consists of digitized facsimiles as well as transcribed and annotated texts of historical sources from the archive collection *Urkunden und Akten des Oberamtes Königsfelden 1314–1797* of the *Aargau State Archives*.<sup>\*</sup> These collections are edited according to the provenance principle, i. e. the organization of the documents is based on their origin. The annotations refer to named entities such as persons, organizations and places and at the level of textual structure to the normalization of abbreviations, additions or comments. The collection, which was accumulated over a period of four years, comprises about 1,000 individual sheets and three edited cartularies (“Kopialbücher”).

To enable a quick introduction to the material, the project description outlines those parts of the collection that are relevant to specific research areas. The following research areas are mentioned explicitly: Research on monastic communities, on the history of religious orders, on late medieval economy (e. g. on court and tithe administration), on local housekeeping, on written and oral administrative practices, on institutionalizations and systematization of rights, on gender history, on questions of Reformation history, on church and city history, on architectural history, as well as archaeology and art history, and on the Swiss “nobility” (e. g. on the Habsburg service nobility or on the “bourgeois” elites of the cities).

## Documentation

All in all, the edition is well documented. The detailed project description includes the project context, the scope of the material, and editorial guidelines. A detailed documentation of the technical implementation and the workflows for the collecting of the data is, however, missing. On the Zenodo<sup>\*</sup> page related to the project, the scope of the digital data is specified, but the workflows of the data acquisition or the modelling decisions are not documented.

## Mission

Since the edition calls itself a “Bestandesedition”, its primary intention is to serve as an information system providing access to historical sources. As far as this purpose is concerned, the edition keeps its promise. The three main objectives of the edition are:

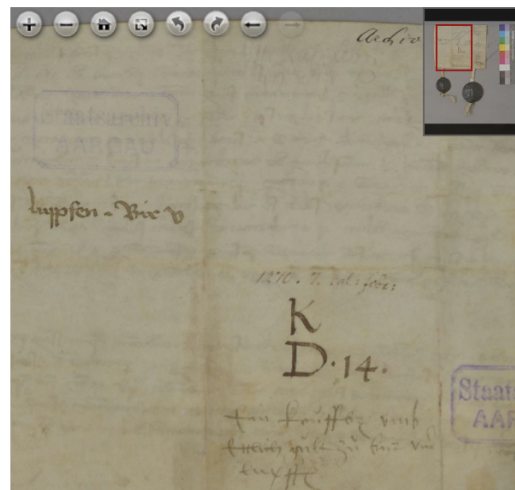
- To provide the scientific community with a comprehensive corpus of historical sources, taking into account digital methods for further processing of the data.
- The preparation and annotation of the so-called “Dorsualnotizen”, which are located on the back of the original documents. These notes, consisting of signatures, date, notations or brief remarks, allow tracing the origin, purpose, location, and organization of the documents. This type of information offers new insights into the study of medieval and early modern written and administrative culture (cf. for more details: Hodel 2020, 109–170).
- A contribution to the development and implementation of digital editions in general.

As elaborated in the following, these defined objectives are clearly achieved by the edition.

## Method and Representation of documents and texts

As far as categories of information are concerned, the edition focuses on “Regesten” (short summaries), named entities, the description of the material as well as editorial annotation for a better understanding of the content, such as additions, loss, or deletion of text. This edition is thus document-focused. The aim of the edition is to make the documents findable and to serve as a working basis for further – but not exclusively historical – research.

| [verso]  
 brieff umb die gekoufften gùlt ze Lupfen und Bir von den herren von Wettingen  
 Luppfen Bir v  
 ein kouffbrief umb ettlich gùlt zů Birr und Lupffen  
 K D 14  
 ze Lenzburg [...] <sup>b</sup> [...] <sup>c</sup>  
 ultra Rùsam Rùdolfus <sup>d</sup> Habsburg <sup>d</sup> comes  
 super Luppheane et Bire  
 1270 7 calendas februarii  
 Archiv Königsfelden 1.  
 Staatsarchiv AARGAU  
 Staatsarchiv AARGAU

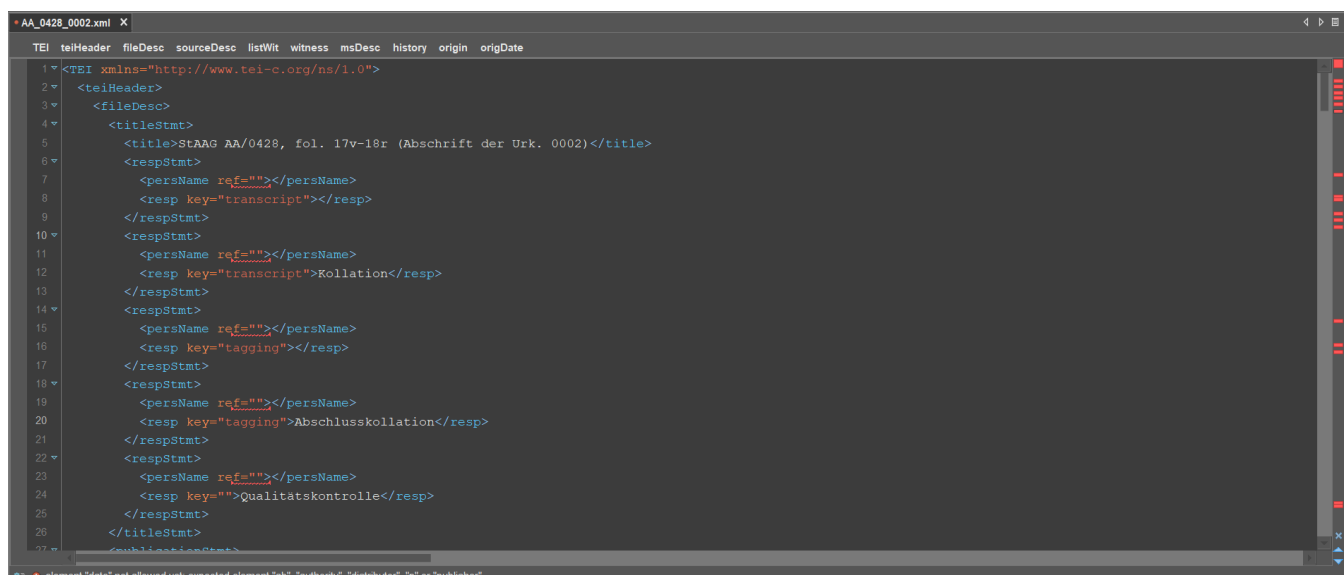


The backside of a facsimile of the text-image synopsis showing the “Dorsualnotizen” ([https://www.koenigsfelden.uzh.ch/exist/apps/ssrq/docs/U-17\\_0001.xml](https://www.koenigsfelden.uzh.ch/exist/apps/ssrq/docs/U-17_0001.xml)).

The digital facsimiles are of high quality and displayed using the IIIF\* viewer OpenSeadragon.\* It is possible to zoom into the scans to analyse details in writing and seals. For charters, the front and back sides are shown. The backside is also transcribed and annotated, as they contain the earlier mentioned “Dorsualnotizen” (see fig. 3). On the back, however, it is not so easy to quickly match the transcription and the position of the text in the facsimile. A highlight function for the text, especially the notes on the back, would allow an optimized synoptic view since the notes are very scattered and can be found in different positions.

## Modelling

There is a detailed description of transcription guidelines and annotation practices. For the transcription\* as well as for the dating\* the edition project applies the guidelines of the Swiss Legal Source Foundation (SSRQ). For both areas of application, the project offers a recommendation (but not a TEI customization) with regards to the implementation in TEI. Deviations from SSRQ and the specific features for “Dorsualnotizen” are noted separately.\* Thus, primarily, the edition is based on the TEI Guidelines. The basic structure of the TEI documents in the edition consists of the facsimile and its zones to express regions on the digital facsimiles and the annotated text areas. The textual body is represented using `<p>` and `<lb>` elements. The `<msDesc>` element, moreover, contains the most important metadata.



Snapshot of a TEI file after downloading it from Zenodo. (AA\_0428\_0002.xml from <https://zenodo.org/record/5179361>, accessed 20.12.2022).

Whereas the TEI documents (see fig. 4) are well-formed to allow further processing and to ensure their reusability, a more detailed exploration of the edition revealed that the documents are not valid according to the TEI. Unfortunately, the project does not provide any indications in the metadata of the XML/TEI files, nor a TEI customization, ODD or schema that could be referenced to the TEI documents of the edition to ensure their consistency.

After examining three TEI documents<sup>\*</sup>, the following minor errors that lead to invalid TEI documents have been identified. Many of these problems seem to be due to sloppy implementation but are mostly minor bugs.

- Empty attributes `@ref` ( `ref=""` ).
- Invalid `<publicationStmt>` and `<editorialDecl>`. Moreover, the `<publicationStmt>` element seems to lack information.
- Empty elements like `<taxonomy>`, `<listPerson>`, `<listOrg>`, or `<listPlace>`.
- Invalid use of the attributes `@width` and `@height` as the unit of measurement, like “cm”, is missing to match the regular expression.
- Improper usage of the attribute `@type` ( `type="marginal"` ) in `<p>` elements.
- Invalid usage of the attribute `@agent` in `<damage agent="faded ink">`, as attribute values do not allow spaces.
- Also, the element `<comment>` is used incorrectly.

In addition to these non-TEI compliant implementations, the following decision concerning the text model are worth discussing as well: Annotating the “Dorsualnotizen” is essential for the project. It seems to me, however, that the usage of the attribute `@rend` does not fit. It is used like: `<p facs="#facs_2_region_1533022656524_73" rend="dorsual_22_sigle">`. The TEI guidelines define `@rend` as follows: “*indicates how the element in question was rendered or represented in the source text*”.<sup>\*</sup> So, in my opinion, the attribute `@rend` should be used to express the representation of the text, like italic, bold, or dotted. ‘Knowing’ that the text on the back of a document is a “Dorsualnotiz” according to a certain categorization, as it is used for the search functionality, is not covered within the scope of `@rend`. Therefore, the attribute `@ana` would be a better fit.

Documents within Monasterium.org may represent an alternative or comparable use of XML/TEI for annotating these types of documents (cf. Roland 2020). The given example does not contain an annotated text, but rich metadata about the document, which are especially important to implement a front end with different search functions.

## Publication and presentation

## Technical infrastructure

Since the technical implementation is poorly documented, it is not clear whether the mention of *eXistSolutions GmbH* refers only to the usage of eXist-db<sup>\*</sup>, or if they also carried out the implementation. The hosting and maintenance of the eXist database is not further specified. The long-term archiving of the data is – reasonably – handled by Zenodo.

## Browse, Search and Index

Searching and browsing are essential functionalities of a platform on which sources are to be found for research purposes. And they also play an important role in the edition. Therefore, the Königsfelden online edition offers four points of access: Collections, Search, Index and Map.

| Sammlungen                                    |                                          |                                 |
|-----------------------------------------------|------------------------------------------|---------------------------------|
| Chronologische Aufteilung                     | Dorsualschichten                         | Häufigste Schlagwörter          |
| Klostergründung 66                            | Latein <i>pro</i> (< 1321) 8             | Kaufgeschäft 449                |
| Agnes von Ungarn in Königsfelden 300          | über, aus Besitz Agnes (< 1343) 71       | Abgabe 268                      |
| Kopialbuch I (ca. 1335) 208                   | Kopieverweis (< 1370) 6                  | Lehen 221                       |
| Reformansätze der herzoglichen Verwaltung 182 | über, nicht aus Besitz Agnes (< 1372) 83 | Bestätigung 145                 |
| Kopialbuch Ia (1417-1427) 63                  | über (< 1381) 29                         | Schenkung 136                   |
| Zwischen Bern und Habsburg 321                | Doppelaufstrich (< 1408) 182             | Konflikt 129                    |
| Kopialbuch II (ca. 1480-1530) 183             |                                          |                                 |
| Intensivierung der Berner Verwaltung 208      |                                          |                                 |
| Säkularisation und Berner Landvogtei 55       |                                          |                                 |
|                                               | ZEIGE MEHR/WENIGER DORSUALSCHICHTEN      | ZEIGE MEHR/WENIGER SCHLAGWÖRTER |

Collection view in the footer of the homepage, which gives an overview of the entire collection.

The *Collection view* (see fig. 5) can be accessed in two ways. Via “Documents” in the navigation or as one of the areas on central views, which is located above the footer. In the latter, the separation into the three main categories “Chronologische Aufteilung”, “Dorsualschichten” and “Häufigste Schlagwörter” gives an overview of the content and scope of the categories. From the generated hit list, users can get to the detailed view of a single document.

Suche

Suchergebnis

Wein\*

Suche im:

☐ Bearbeitungstext
 

☐ Titel
 ☐ Regest
 ☐ Kommentar
 ☐ Anmerkungen

☒ Editionstext

Felder und Facetten:

Zeitraum:

1350

1659

Sprache:

Frühneuhochdeutsch

Trägermaterial:

Pergament

SUCHE

ZURÜCKSETZEN

Gefundene Treffer: 7

Sortierung: Titel

1

Editionstext

Datum: 17. Mai 1380

StAAG U.17/0388

...henden auf dem Botzperg auz dem Nidern Ampt, \* es sey an **wein**, an korn oder an dheinerley sach, der jerklich acht...

2

Editionstext

Datum: 11. Februar 1454

StAAG U.17/0670

... Ellsass und andern enden \* nach irer notdurft \* ir **wein**, getraid, \* zins und anders heben \* und zu dem b...

3

Editionstext

Datum: 11. November 1458

StAAG U.17/0702/01

...Ellsazz \* und andern ennden nach irer notturfft ir **wein**, getrayd, zynns und anders heben \* und zu dem benanten irem kl...

4

Editionstext

Datum: 27. Mai 1461

StAAG U.17/0715

...m Elsazz und andern enden nach irer notturfft ir **wein**, getraid, zinsz und anders heben und zu dem benannten ...

Full text search for “Wein\*” using truncation (\*) with further constraints and its search results ([https://www.koenigsfelden.uzh.ch/exist/apps/ssrq/search.html?refresh=true&query=Wein\\*&subtype=edition&filter-period-min=1350&filter-period-max=&filter-language=Fr%C3%BChneuhochdeutsch&filter-material=Pergament&doc=](https://www.koenigsfelden.uzh.ch/exist/apps/ssrq/search.html?refresh=true&query=Wein*&subtype=edition&filter-period-min=1350&filter-period-max=&filter-language=Fr%C3%BChneuhochdeutsch&filter-material=Pergament&doc=)).

The *Search view* is another entry point and allows full-text searches and advanced search queries. The query can be restricted to edition text or to metadata, and it is possible to further refine the search in terms of time, language, and medium. Detailed information on how to use the search (truncation, Boolean operators, wildcards, etc.) can be easily accessed. Searching for “Wein\*” in the edition text with additional settings, for example, returns a transparent and explicable result (see fig. 6). It is clear why a document was found, as the query text is highlighted in its context. Thus, the online edition provides a comprehensible and straightforward search that offers enhanced settings without overwhelming the user.

# Wirtshaus

## Informationen

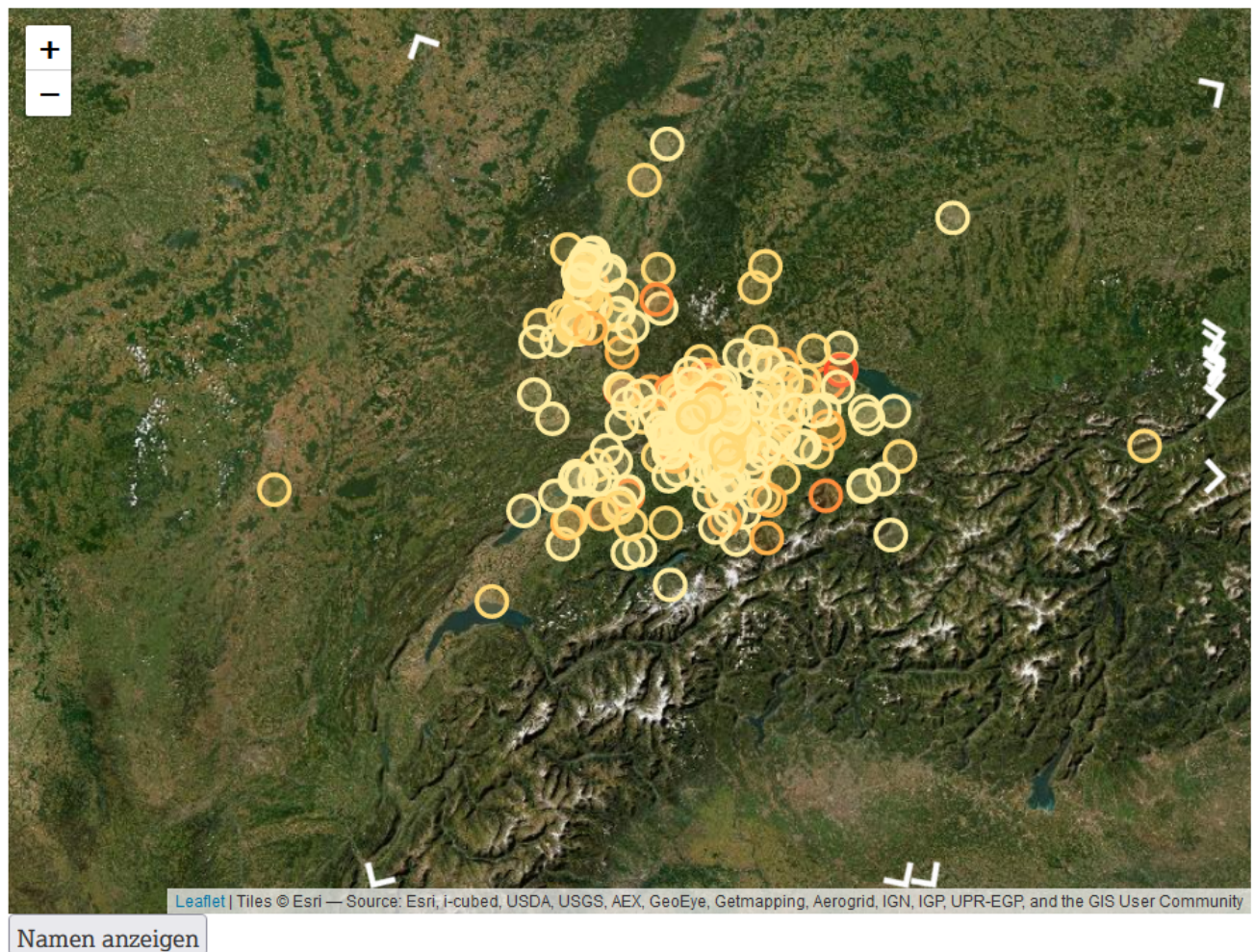
Bei diesem Eintrag handelt es sich um ein Schlagwort.

## Vorkommen in Dokumenten

| Dokument                        | Erwähnung | Schlagwörter                    |
|---------------------------------|-----------|---------------------------------|
| <a href="#">StAAG U.17/0394</a> |           | Abgabe, Kaufgeschäft, Wirtshaus |
| <a href="#">StAAG U.17/0600</a> |           | Lehen, Wirtshaus                |
| <a href="#">StAAG U.17/0622</a> |           | Kaufgeschäft, Lehen, Wirtshaus  |
| <a href="#">StAAG U.17/0815</a> |           | Konflikt, Urteil, Wirtshaus     |
| <a href="#">StAAG U.17/0906</a> |           | Wirtshaus                       |

Index search for the keyword “Wirtshaus” (<https://www.koenigsfelden.uzh.ch/exist/apps/ssrq/detail.html?ref=key000064>).

The *index view* (see fig. 7) is used to search for documents that are directly linked to named entities like people, organizations, places or keywords. In this regard, it should be mentioned that the display of the results list in the index search differs from the other search views, as it is the detailed view of an index term. For example, the “Regest” is missing, which could be a critical information for certain users. Instead, it is similar to the tabular-like index results view, which is used to represent prosopographic data of annotated persons.



Documents displayed applying the map view. Click to list all documents linked to this location on the right side of the map (<https://www.koenigsfelden.uzh.ch/exist/apps/ssrq/map2.html>).

The last main point of access to the documents is the *map view* (see fig. 8), from which all documents can be selected on a map in order to get to the edition view. There are no further filter options available. Only the frequency of mentions of an annotated place is highlighted. The relation of the place to the document is not visible, just whether the place was annotated or not. The handling of the map view could certainly be improved with little effort since there are many JavaScript libraries for this use case. Especially, regarding the fact that nowadays users are accustomed to well-functioning interfaces and smooth handling due to applications like Google Maps.

## Interface and Usability

The web front end is implemented using Bootstrap 3 and jQuery. Responsiveness of the webpage is given. Functionalities like the facsimile viewer are hidden in the mobile view, which represents a pragmatic solution.

A major drawback of the website are the loading times. The loading of certain pages and search queries takes quite a long time. For example, when clicking on the “Documents” button in the navigation to view all documents, it takes about 15 seconds for the page to load. Even if you click on the pagination, you will encounter slow processing, because it loads all the 60 documents until the next action can be performed.

The same loading issue arises with search queries, although an online edition, being a special type of web resource, should allow users multiple query functions to search for specific documents or explore the collection. The loading time might severely lower the users' motivation and might edge the threshold of the users' patience.

☒ STANDARDISIERT

StAAG U.17/0102  
**Eigenleute, Kaufgeschäft**  
 29. September 1329, Engelberg  
 > Regest  
 > Stückbeschreibung  
 Editionstext  
 | [recto]  
 Allen, die **disen brief ansehen** oder hörent lesen, künden wir, **Walter, von gottis erbarmde** a **vent des gotzhüs von Engelberg**, daz wir mit willigem müte und **le köffenne** hein geben dem **erberen götlichen vröwen samnünge des gotzhüs ze Künigsveld** ein matte ze **Tëtwill**, dū ùnser gotzhüs eigen waz, in allem rechte, daz wir dar an hatten und si **Wernher selige Baseler, ùn's gotzhüs eigen man**, sinen kinden gab, dū bi ùn sint, **hern Arnolde, priestere und münche ùnser conventes** und **swester Margaretun, siner tochter, kloster vröwen ùnser conventes**, dū òch beidū williklich daz vorenande güt verköffet hant umbe vierzehend halb phünt gemeiner phenningen, die wir von dem egenandem samnünge hein emphanen und in ùnser gotzhüs nōtdürft eigentlich sint bekeret. Har uber zeinem ùrkünde und zeiner vergicht hein wir, der

**Orte**  
**Dättwil** (CH-AG) Dorf/Village  
 Gemeindeteil/Partie de commune  
**Engelberg Kloster** (CH-OW)  
 Benediktinerkloster/Couvent des bénédictins  
**Personen**  
**Arnold Basler** (1329)  
**Margaretha Basler** (1329)  
**Walter Amstutz** (1296-02.01.1332)  
**Werner Basler** (vor 1329)  
**Familie/Organisation**  
**Engelberg Kloster**  
 (Benediktinerkonvent/couvent des Bénédictins)  
**Königsfelden**  
 (Klarissenkonvent/couvent des Clarisses)

Detailed view of a document with the “standardized” selected view showing the normalized text. All annotations are coloured ([https://www.koenigsfelden.uzh.ch/exist/apps/ssrq/docs/U-17\\_0102.xml?odd=ssrq-norm.odd](https://www.koenigsfelden.uzh.ch/exist/apps/ssrq/docs/U-17_0102.xml?odd=ssrq-norm.odd)).

The *detailed view of a document* (see fig. 9) is divided into a section containing data and text, as well as a section with the digital facsimiles in an embedded OpenSeadragon Viewer, which represents a classic image-text synopsis. Furthermore, it consists of a “Register”, basic metadata about the document and its materiality, its language or format, and the transcribed text of the edition. Via a checkbox the text can be read as standardized or non-standardized text. The categorization of annotated entities such as places, persons or organizations is explained by an overview and a coloured legend. Here you can also find further contextual information, like life data or hyperlinks to the detailed view of a named entity, such as a person. Annotations such as additions or deletions are resolved via tooltips. At this point it should be noted that some tooltips are not immediately recognizable. For example, there is a tooltip on the textual sequence “disen brief ansehen” that contains additional information on the original spelling “b’ef” for the standardized word form “brief”. The lack of any apparent indication of a tooltip, therefore, not only deprives the user of interesting additional information, but also constitutes a limitation in terms of usability.

Accessibility is a distinct field of web development that also deals with barrier-free access to web content. In order to optimize the accessibility of a website, the web content needs to provide valid data, for example in terms of HTML5 validity, which in turn has an impact on whether your web content will be discovered by search engines. The accessibility of web pages can be tested manually or by using tools, such as the WAVE Web Accessibility Evaluation Tool\* or the W3C HTML5 Validator\*.

When validating the web page of the Königsfelden edition with WAVE, minor errors in the HTML code become visible. It shows that the `@alt` and `@label` attributes are missing, and that there is more than one `<main>` section. Especially `@alt` and `@label` are important attributes if a page is to be read by a screen reader. These are minor errors that do not impede the functionality but still limit accessibility and do not

represent good practice. Usually, the funding agency and/or the institution hosting the website has/have their own specifications that have to be considered. For more details on the accessibility of web pages, I can highly recommend the blog post by Stanley (2018).

When exploring the edition, another restriction must be taken into consideration: The entire digital edition is only available in German. Since the majority of the sources is in German, the user interface is also adapted to German speakers, which is legitimate by all means. Nevertheless, an abstract in English could possibly open up access to other groups as well.

## FAIR

The FAIR<sup>\*</sup> data principles create a reference framework that improves the findability, accessibility, interoperability, and reusability of data (Wilkinson 2016). In its origin, it refers primarily to the data itself, but in this context, it also covers the edition as a whole. In the case of this review, it concerns the XML/TEI files, which are stored separately from the edition on Zenodo. The following aspects are discussed in detail with respect to the FAIR criteria.

## Findability

By findable we mean whether a data set can be easily found by both humans and machines. It includes four sub-goals. The first refers to assigning globally unique and persistent identifiers to the data. Each document has a citation suggestion that looks like this: “Digitale Edition Königsfelden, URL: <[www.koenigsfelden.uzh.ch/exist/apps/ssrq/docs/U-17\\_0001.xml](http://www.koenigsfelden.uzh.ch/exist/apps/ssrq/docs/U-17_0001.xml)>, Stand: 7.8.2022.” It contains a URL that uniquely identifies each document. However, it cannot be concluded whether the URL is a persistent identifier. Instead, it shows that eXist-db is addressed directly. On Zenodo, there is a DOI that refers to the entire data dump: 10.5281/zenodo.5179361.

Secondly, sufficient metadata, that allows contextualizing the documents, can be found on the Zenodo webpage and also on the edition webpage. For each individual TEI document, this is only partially the case. In the TEIs one can only find metadata about the actors involved, the title of the edition, the publication date, descriptive metadata of the document contained by <msDesc>, and the transcription and annotation guidelines. Other necessary metadata about the individual object, rights or publication can only be found on the Zenodo webpage. The criteria are thus satisfied to a limited extent. Furthermore, there is no identifier or URL that establishes a link between the individual document and the edition. This is only possible via the signature, such as “StAAG U.17/0887b”. The shelfmark is used as ID, as indicated in the URL of the web representation of the document<sup>\*</sup>, where, in terms of URL consistency, characters have to be replaced. Using “0887b”, one can find the object on the page via the “Open Document” function. Overall, from my point of view, in this regard the edition is not complying with the FAIR data principle, that requires metadata to clearly and explicitly include the identifier of the data they describe. Whereas the edition can be found effortlessly via search engines such as Google, Yahoo or Bing, it is not listed in the Marbacher Editionendatenbank<sup>\*</sup> nor in Franzini’s<sup>\*</sup> catalogue, nor is it findable via scientific search engines like Google Scholar or Semantic Scholar. During the peer review of this review, the edition has been listed in Sahle’s<sup>\*</sup> catalogue in 2022. All in all, however, the findability of the edition is given.

## Accessibility

If an edition is freely accessible for any user without access restrictions (including authentication and authorization), then it is accessible in the sense of the FAIR criteria. The website can be accessed via HTTP without further authentication or authorization. The access to metadata, even when the website is no longer available, however, is only partially guaranteed. As mentioned before, some portions of metadata can be found on Zenodo, some on the edition webpage and a big part, but not all metadata in the TEI documents of this edition. Now, since the TEIs do not include all the existing metadata, changes on the edition webpage or Zenodo would affect the accessibility of a large part of the metadata.

## Interoperability

Generally, data is used together with other data in applications or workflows for analysis, storage, and processing. Therefore, it is necessary that data, with as little effort as possible, can be merged, integrated, or combined. Consequently, data should use a formal, accessible, shared, and broadly applicable language for knowledge representation. The TEI is the (de facto) standard that is used for the realization of editions of historical sources. It should be noted, however, that adaptations are necessarily domain specific. This means that historical documents, such as charters, require their own modelling. Next to the XML/TEI files all other primary data of the project can be found and cited on Zenodo (Halter-Pernet, Colette et. al 2021). This data dump consists of PageXML (~30.0 MB), which is the output of Transkribus\*, XML/TEI files (19.0 MB) specified by Swiss legal sources, and digital facsimiles (21.0 GB).

## Reuse

The goal of the fourth FAIR data principle is to maximize the reuse of data. For this purpose, data should be well described in order to be used in various contexts. The platform is licensed with CC BY-NC-SA and the edition data with CC BY 4.0. Data and metadata are therefore released with an explicit and accessible data usage license. However, this information should also be included in the `<teiHeader>` of the TEI documents. Data are associated with detailed information on provenance like project title, persons involved, and editing guidelines. These details can be found in the XML/TEI, and some further information on provenance are available in the project description on the edition and on the Zenodo page. Thus, with the selection of the XML/TEI format, the data meets a domain-relevant community standard.

Even though it is not explicitly defined in the FAIR criteria, data exports and API are crucial for digital editions. No technical interfaces, spin-offs or export formats could be identified, neither does it seem to be possible to directly address the XML/TEI of a source document in the web front end. Nevertheless, the FAIR data principles are met.

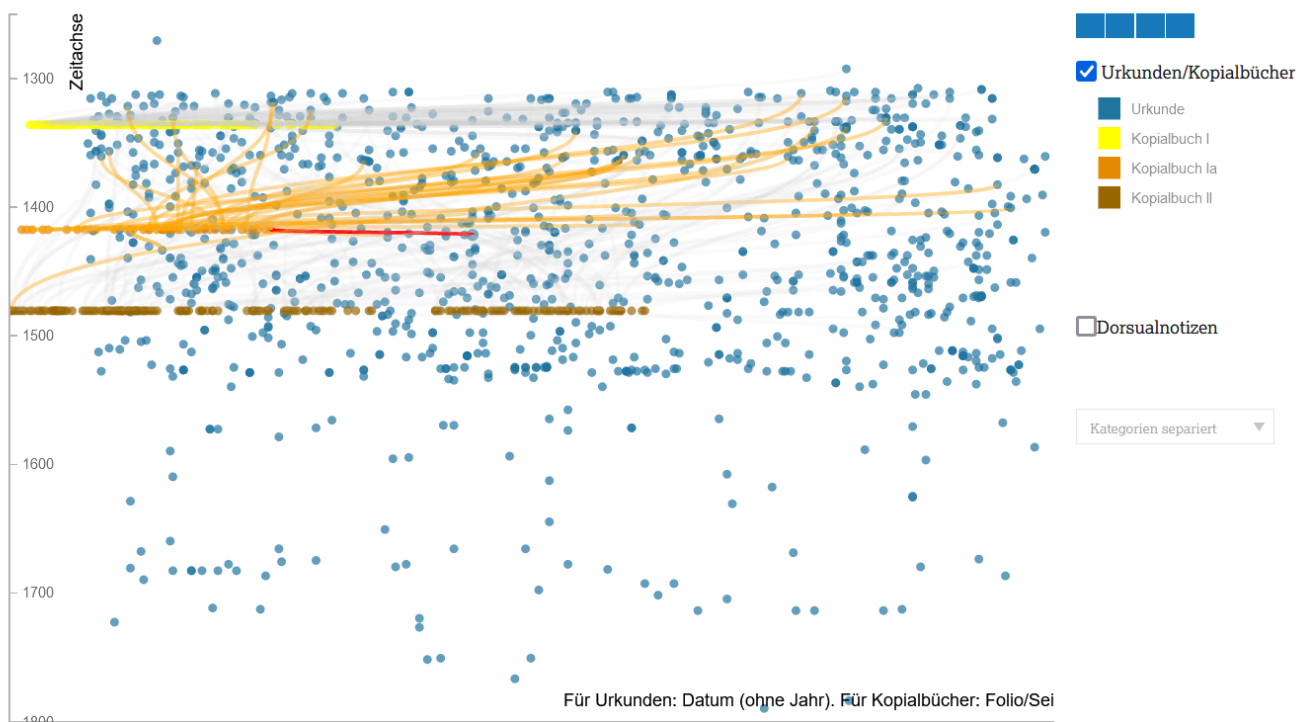
## Experimental visualization

The “Überlieferung” button leads the user to an experimental overview, where the collection is presented by means of information visualization. This view incorporates four sections: 1) the visualization of the creation of documents, their copies and their “Dorsualnotizen”, 2) the frequency and occurrence of “Dorsualnotizschichten”, 3) the network visualization of the “Dorsualschichten”, and 4) a section on archival orders. It is a very good idea to provide such a view, as it allows exploratory access to the dataset, in addition to the already existing ones. The first three sections will be briefly discussed in the following. Before doing so, though, I want to emphasize that I am well aware that it is a complex challenge to create

interactive visualizations from a dataset of historical information. Especially, if you do not only wish to produce beautiful images, but to also create added value in terms of gaining knowledge via the visualization, and in particular, if you are providing it as an interactive web application.

## Visualization of the production of charters, their copies and their “Dorsualnotizen”

Mit Klick auf die Punkt wird die entsprechende Urkunde oder Abschrift in einem neuen Fenster geöffnet.



Visualization that illustrates the production of documents as well as the copying activity (<https://www.koenigsfelden.uzh.ch/exist/apps/ssrq/stemma.html#visualisierung>).

This visualization illustrates the production of documents as well as the copying activity (see fig. 10). The Y-axis represents the time (1300–1789) and the X-axis represents the individual pages of the cartularies. Each blue dot symbolizes a single document located at the correct height of the Y-axis depending on the date of origin. The X-axis shows the date of origin within the year (January–December). The horizontally arranged dots in different shades of yellow indicate copies of documents in the three processed cartularies. Each document is also connected to its copies by lines. Based on the position of the yellow dot above the X-axis, it is possible to find out on which folio page in the corresponding cartulary users can find the copy. Clicking on the dot opens the corresponding document in a new window.

The idea behind the visualization is very interesting. It provides an overview of the temporal relationship between the cartularies and documents. However, there seem to be some issues as far as the implementation is concerned. The orange highlighting creates a messy ball of information, and it is quite difficult to select another related element. Clicking on one of the buttons under “Dorsualnotizen” on the right, such as “dors\_2”, does not lead to any result. In my opinion, it would be advisable to implement the *Mantra of Information Seeking* (Shneiderman 1996, 336–343), namely, to filter the information space according to certain criteria, like the “dorsal layers” and then jump into the details – the document itself.

# Frequency and occurrence of “Dorsualnotizschichten”

## Häufigkeit und Vorkommen von Dorsualnotizschichten

Die Abbildung zeigt den jeweiligen zeitlichen Umfang einzelner Dorsualnotizschichten und ermöglicht : Dorsualschichten sind mit den Editionsdaten verlinkt.

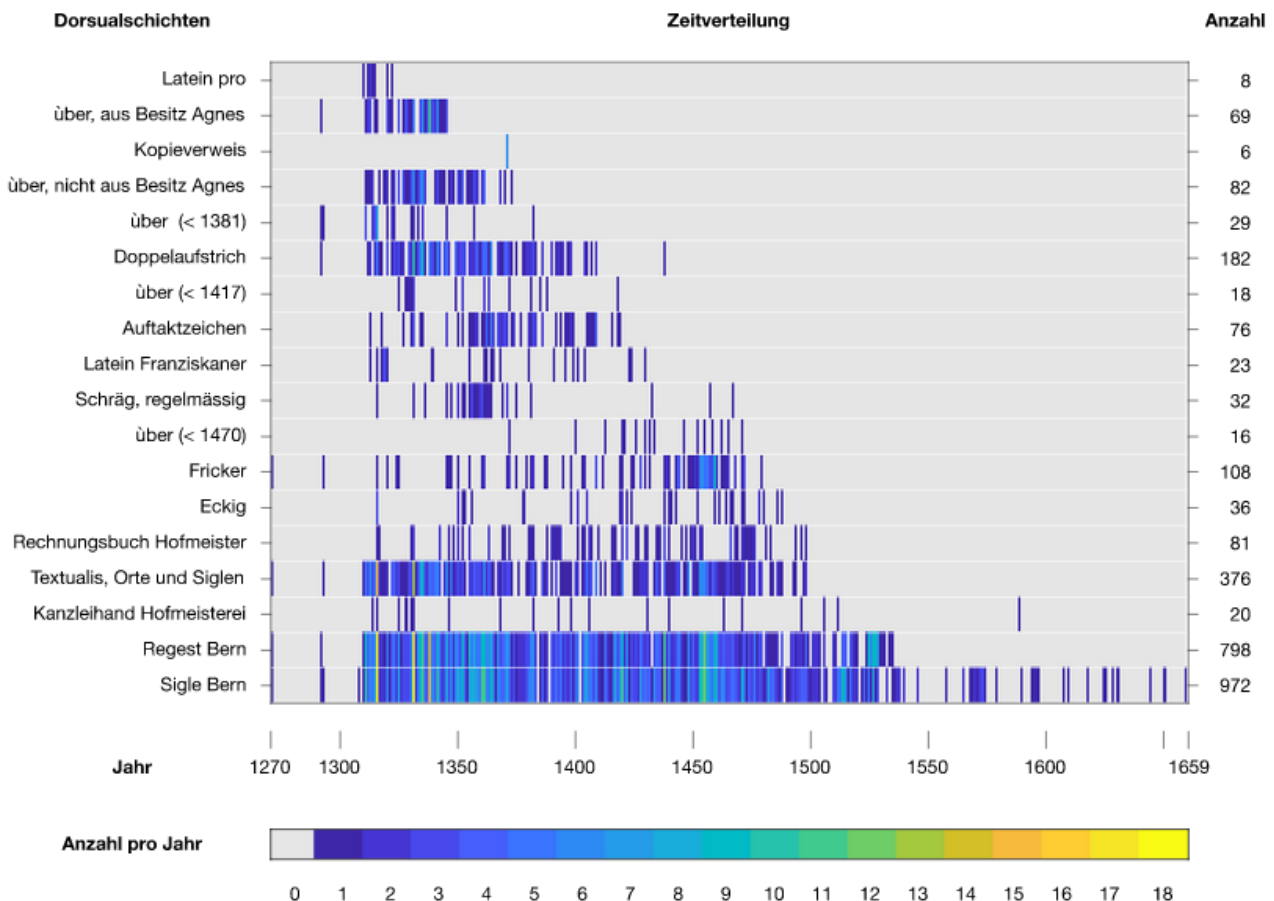


Diagram that shows the respective temporal scope of the individual “Dorsualnotizschichten” (<https://www.koenigsfelden.uzh.ch/exist/apps/ssrq/stemma.html#Dorsualnotizschichtenzeitlinienvisualisierung>).

The diagram shows the respective temporal scope of the individual “Dorsualnotizschichten” and thus enables a visual comparison of the target documents (see fig. 11). The designations of the “Dorsualschichten” are linked to the documents of the edition. This is a successful visualization, in my opinion. At a glance, you can see the number of “Dorsualschichten” and in which period they occur. The additional heat-map-like layer shows the occurrence of the phenomena per year in colour. The existing legend provides an easy way to understand the visualization and colour coding. A click on the labels of the “Dorsualschichten” should give a search result of all corresponding documents, but, unfortunately, it only leads to an error message. It would be a great additional feature to get another layer of information showing time-related details about the documents, and thus providing an immediately visible temporal classification of the documents without a search query. This could be solved, for example, with a hover function over each bar representing a single year. Alternatively, common filter functions could help to bring more interactivity into the visualization.



All in all, this is a successful implementation of a digital edition, even if minor flaws remain. However, these shortcomings do not really limit the use of the resource as they relate to invalid HTML5 and TEI, accessibility, user interface issues, as well as not entirely perfect but very interesting visualizations. Nor do these minor insufficiencies diminish the achievement of compiling and providing (almost) FAIR-compliant research data. The only real issue I notice is the loading time of certain web pages and search queries. From my experience, I dare to say that with maybe 2-3 months more project time, these minor issues and maybe also the loading time troubles could have been fixed.

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## Figures

Homepage of the digital edition (<https://www.koenigsfelden.uzh.ch>).

Initial view of the documents. Documents are identified by shelfmark, date, short summaries, and keywords (<https://www.koenigsfelden.uzh.ch/exist/apps/ssrq/documents.html>).

The backside of a facsimile of the text-image synopsis showing the “Dorsualnotizen” ([https://www.koenigsfelden.uzh.ch/exist/apps/ssrq/docs/U-17\\_0001.xml](https://www.koenigsfelden.uzh.ch/exist/apps/ssrq/docs/U-17_0001.xml)).

Snapshot of a TEI file after downloading it from Zenodo. (AA\_0428\_0002.xml from <https://zenodo.org/record/5179361>, accessed 20.12.2022).

Collection view in the footer of the homepage, which gives an overview of the entire collection.

Full text search for “Wein\*” using truncation (\*) with further constraints and its search results ([https://www.koenigsfelden.uzh.ch/exist/apps/ssrq/search.html?refresh=true&query=Wein\\*&subtype=edition&filter-period-min=1350&filter-period-max=&filter-language=Fr%C3%BChneuhochdeutsch&filter-material=Pergament&doc=](https://www.koenigsfelden.uzh.ch/exist/apps/ssrq/search.html?refresh=true&query=Wein*&subtype=edition&filter-period-min=1350&filter-period-max=&filter-language=Fr%C3%BChneuhochdeutsch&filter-material=Pergament&doc=)).

Index search for the keyword “Wirtshaus” (<https://www.koenigsfelden.uzh.ch/exist/apps/ssrq/detail.html?ref=key000064>).

Documents displayed applying the map view. Click to list all documents linked to this location on the right side of the map (<https://www.koenigsfelden.uzh.ch/exist/apps/ssrq/map2.html>).

Detailed view of a document with the “standardized” selected view showing the normalized text. All annotations are coloured ([https://www.koenigsfelden.uzh.ch/exist/apps/ssrq/docs/U-17\\_0102.xml?odd=ssrq-norm.odd](https://www.koenigsfelden.uzh.ch/exist/apps/ssrq/docs/U-17_0102.xml?odd=ssrq-norm.odd)).

Visualization that illustrates the production of documents as well as the copying activity (<https://www.koenigsfelden.uzh.ch/exist/apps/ssrq/stemma.html#visualisierung>).

Diagram that shows the respective temporal scope of the individual “Dorsualnotizschichten” (<https://www.koenigsfelden.uzh.ch/exist/apps/ssrq/stemma.html#Dorsualnotizschichtenzeitlinienvisualisierung>).

Network visualization of the Königsfelden edition (<https://www.koenigsfelden.uzh.ch/exist/apps/ssrq/stemma.html#Dorsualnotizschichtenzeitlinienvisualisierung>).

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