

# MIDOSA – a Family of Software Tools for the Archivist's Desk

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The latest arrival of the MIDOSA family is MEX – the **Midos**aEditor for XML-standards. Like its other family members it is a software tool especially developed to support the archival description, this time now integrating a function for the creation of complete online presentations of digitised archives inside online finding aids. All MIDOSA tools reacted to new developments of technology and opened new ways to support archival work, to offer descriptive information to users of archives and to enhance the service quality of archives services. Based on the same principles of easy to use high tech for low budgets each of them had its specific functions.

The new development is a logic successor of the preceding MIDOSA tools. It follows the same principles and wants to achieve the same aims. They can be resumed in providing support for professional archivists offering them newest technology tailored to their needs and to enhance the visibility and usefulness of archives. By supporting professional tasks MIDOSA demonstrated that modern information techniques did not urge archivists to give up their inherited traditions and professional standards. These techniques instead allow making the archival professional principles like provenance even more relevant for the service-oriented work opening the access to archives for every body interested in investigating them.

The MIDOSA tools started with a decentralised database application on at that time very modern and just recently available microcomputers, the first PCs in the middle of the eighties with the aim to produce finding aids. Today they still are conceived to produce finding aids meanwhile with the use of Internet technologies and on the basis of international standards. MIDOSA in its different steps always used the latest technologies and made them available for the archivists' desk.

## MIDOSA

The first application called MIDOSA (**M**icrocomputer supported **d**ocumentation system for archives) was developed by the Baden-Württemberg state archives in the middle of the 80ies. From the beginning the aim of the software was to support the production of finding aids<sup>1</sup>. This was a new thinking in Germany at that time of first experiences with mainframe computers doing their jobs in batch mode mainly during the night. The debates during the annual meetings of archivists

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<sup>1</sup> Cf. Hartmut Weber, *Der Computer im Archiv – zeitgemäße Arbeitshilfe oder modische Spielerei?*, "Der Archivar", 40 (1987), p. 485-503; cf. also idem, *Archives in a Changing World*, "Revista Arhivelor", 2006, 2, p. 45-49.

were about indexing systems and the application of thesauri, promoted especially by the parliamentary archivists.

The first talks about cumulating indexes from several record groups were about indexes to existing finding aids, however soon they implied an indexing of the records themselves. In this landscape of thinking going into the direction of abolishing traditional professional approaches and replacing them by other methods supposed to be implied in modern technologies MIDOSA was the first application showing that a provenance oriented description was a professional question, and that it did not depend on the techniques available for description and for the creation of finding aids. It demonstrated that the new technologies were well usable for archival implementations and that finding aids were not outdated by new technical developments. The MIDOSA developments in the course of time showed that the modern information technologies did even better fit to using provenance based methods for providing open and comfortable access to archives.

The MIDOSA applications demonstrated how to work in a decentralised way. They were installed in several archives and there the description was done. The data produced with them were brought together into a central system, where the finding aids were printed. The data were brought together and centralised, not the applications. A main advantage of such an application at that time was the possibility to produce finding aids electronically for the modern record groups coming from working agencies. These record groups were still growing and now new accruals could be added to the finding aids after their transfer and description, which was not within reach before.

### **MIDOSA95**

The MIDOSA software, based on an early database was migrated to the more widespread database software dBase in the early nineties and was distributed as MIDOSA95 by the archives school Marburg. Compared to the preceding version it was enhanced with templates for different kinds of archival records including case files, personal files and court records. Midosa95 was made compliant with ISAD(G) and offered the possibility to choose the relevant level for the intended description as defined in the ICA standard. It was used for practical course work with archival records. Students of the archives school drafted a manual<sup>2</sup> and courses in the program of continued training were offered for users.

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<sup>2</sup> Werner Engel (ed.), *MIDOSA95 - Handbuch und Programm der als Gemeinschaftsprojekt mit der Landesarchivdirektion Baden-Württemberg entwickelten Erschließungssoftware* (bearbeitet von Thekla Kluttig und Andreas Weber unter Mitarbeit von Udo Herkert), Marburg. 1997.

Midosa für DOS

15.01.2000 Exklusiv 11.02.42  
Satz: 3 / 624 Bild: 1 / 3  
SS Best.: 401.11 Bearb.: en

Ebene: F0-ArchEinh Druckcode: a Ident.Nr.: 1997 B F0 Ord.Nr.: 1  
ändern mit <F9>

BESTELNR.: 502 Vorgang/Element:

TITEL:  
Allgemeine Verordnungen, Runderlasse, Richtlinien, Mitteilungen  
und Verfügungen des Regierungspräsidenten oder einzelner Minister

Enthält/  
Darin:  
Enthält: Verordnungen, Richtlinien und Verfügungen des Innen- und  
des Finanzministers zu den Kriegsfolgelasten sowie zum Einnahme-

Laufzeit: 1951 - 1955 ggf. vollständig:

Umfang: Sperrjahr:

<F3> Feld kopieren <F10> Aktentyp wechseln <F4> Speichern und beenden  
Bestellnummer eingeben <nur Ziffern!>

## Midosa95

### MIDOSAonline

The archives school built its first webpage for the Internet in 1995. Enthusiastic about the new possibilities that were offered with this new medium thoughts started on using the linking capacities of the internet technologies for creating online finding aids to be presented on the web. They should work like printed finding aids yet without all the restrictions opposed on them by the needs of logistics and transportation of the volumes to inspect them as well as by the need to manually turn pages after looking into the table of content.

A grant for a new development was received from the German Science Foundation and the next tool of the MIDOSA family was developed to create structured online presentations of finding aids. A conference in Marburg in 1998 presented this new idea with a prototype to the archival community including colleagues from the US that informed the participants on the first steps of EAD, the Encoded Archival Description.

The screenshot shows two windows from the MIDOSA software. The left window, titled 'Erstellungsbildschirm', contains search criteria and a detailed title description. The right window, titled 'Tabelleninhalt (Klassifikationstabelle)', displays a hierarchical table of contents for a classification system.

**Erstellungsbildschirm (Left Window):**

- SA: Bestand: 461 11
- Ebene: F0 ArchEinheit
- Druckcode: a Ident.Nr.: 1997 B F Ord.Nr.: 1
- Bestellr.: 502 / Vorgang / Element
- Sachakte: Seite 2 | Seite 3
- TITEL: Allgemeine Verordnungen, Runderlasse, Richtlinien, Mitteilungen und Verfügungen des Regierungspräsidenten oder einzelner Minister in Kassel im Haushaltswesen
- Enthält / Dairn: Enthält: Verordnungen, Richtlinien und Verfügungen des Innen- und des Finanzministers zu den Kriegsfolgelasten sowie zum Einnahme- und Ausgabewesen; Zustimmungen zu plan- und außerplanmäßigen Haushaltsausgaben, Einschränkung und Bewirtschaftung von Sachmitteln, Abführung von Verwaltungsgebühren an die Staatskasse; Betriebsmittelzuweisungen, Jahresabschlüsse und -bilanzen
- Laufzeit: 1951 - 1955 ggf. vollständig
- Umfang: Sperrjahr:
- Buttons: Tabelle, Gehe zu, Beenden, Abbrechen
- Status: 3: 624 Sachakte

**Tabelleninhalt (Klassifikationstabelle) (Right Window):**

Klassifikation	Überschrift
01	1. Übergelende Kommunalsachen
01.1	1.1 Haushalt
01.1.01	1.1.1 Richtlinien
01.1.02	1.1.2 Finanzverwaltung
01.1.03	1.1.3 Grundstücksverwaltung
01.2	1.2 Allgemeine Verwaltung
02	2. Angelegenheiten der kreisfreien Städte, Landkreise u
02.1	2.1 Allgemeine Verwaltung der kreisfreien Städte
02.1.01	2.1.1 Übergelende Angelegenheiten
02.1.02	2.1.2 Fulda
02.1.03	2.1.3 Kassel
02.1.04	2.1.4 Marburg/Lahn
02.2	2.2 Landkreise und Gemeinden
02.2.01	2.2.1 Übergelende Angelegenheiten
02.2.02	2.2.2 Landkreis Eschwege
02.2.02.1	2.2.2.1 Kreistag
02.2.02.2	2.2.2.2 Verwaltung
02.2.02.3	2.2.2.3 Zeitungsausschnitte
02.2.03	2.2.3 Frankenberg
02.2.03.1	2.2.3.1 Kreistag
02.2.03.2	2.2.3.2 Verwaltung
02.2.03.3	2.2.3.3 Zeitungsausschnitte
02.2.04	2.2.4 Landkreis Fritzlar-Homburg
02.2.04.1	2.2.4.1 Kreistag

Buttons: Übernehmen, Schließen

Status: 137: 137

## MIDOSAonline

The new concept of the online presentation and use of finding aids went already a bit further than just transforming paper finding aids into electronic form and offered new functionalities that were not available before. One of them was the possibility to give explanations on the descriptive work, on appraisal decisions, or on the way how the material came into the repository as supplementary information to descriptive units or classification groups. Was it self-evident to add such information to the introduction on the first pages of a printed finding aid before, now it was possible to offer it to users when they needed it. The new online finding aids presented also already the structured navigation with the constantly shown table of content as well as a key term search and the possibility to switch between both at any time.

The online finding aid was produced with a built in functionality in MIDOSAonline. A HTML presentation was generated with the dBase data after calling it up from inside the program. The output was a complete finding aid with a title page, a table of content, an introduction, and an index and it offered the supplementary information with little blue buttons with an "i" inside. This button opened them in a separate window. The new software was offered by the archives

school for free use or on the basis of a registration model and it encountered a considerable interest<sup>3</sup>.

### MidosaXML

During the following years German archivists studied EAD more closely to find out, if it might have advantages for their archival work and if it was applicable in their working traditions. A study group of 8 German and 8 American archivists, co-funded from both countries tried to find a common understanding of how to use EAD or to find a way to make both approaches more compliant with the aim to share finding aid data in joint access points and gateways<sup>4</sup>. The Research Libraries Group (RLG) in San Francisco had just installed a server with a large quantity of archival finding aids, many of them coded in EAD. Results of the several intense discussions in the group were on the one hand a better understanding of EAD as a text-encoding standard on the German side. On the other hand it demonstrated the perspective of joint steps to exchange and share data given the increasing international cooperation of historical research and the use of archives across national borders.

At the same time the development of MidosaXML started which marked a next decisive step of the MIDOSA developments. It should now give an answer to the new demands to exchange data with national and international gateways. For this purpose it should apply the new functionalities given by the emerging XML-standard for data encoding. It was recognised that it had the capacity of opening new flexibilities for reusing the data, since these data were now separated from their representation. The actual presentation of the data could be done in deliberately designed ways for the Internet or for printing.

So a DTD in XML format was written to conform to the dBase data in MIDOSAonline including further data from Baden-Württemberg systems for stacks management. It was largely based on EAD, however decisive deviations were accepted with the intention to answer to special needs of the German archival community. Main parts of EAD were adopted and so the final MidosaXML DTD was near to a translation of EAD into German. A translation table between both was

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<sup>3</sup> Werner Engel (ed.), *MIDOSA für Windows, Handbuch* (Stand November 2000) (bearbeitet von Daniel Karl und Anne Kathrin Rowedder), downloadable from the MIDOSA website of the Archivesschool Marburg.

<sup>4</sup> Bernhard Grau, *Das deutsch-amerikanische Projekt "Gemeinsames Fachkonzept Online-Erschließung" - Zur Übertragbarkeit der Encoded Achival description (EAD) auf die archivische Praxis in Deutschland*, in Angelika Menne-Haritz (ed.), *Online-Findbücher und Portale*, Marburg, 2002, cf. also the documentation incl. the final report on the project in English on the website of the Archivesschool Marburg at [www.archivschule.de](http://www.archivschule.de).

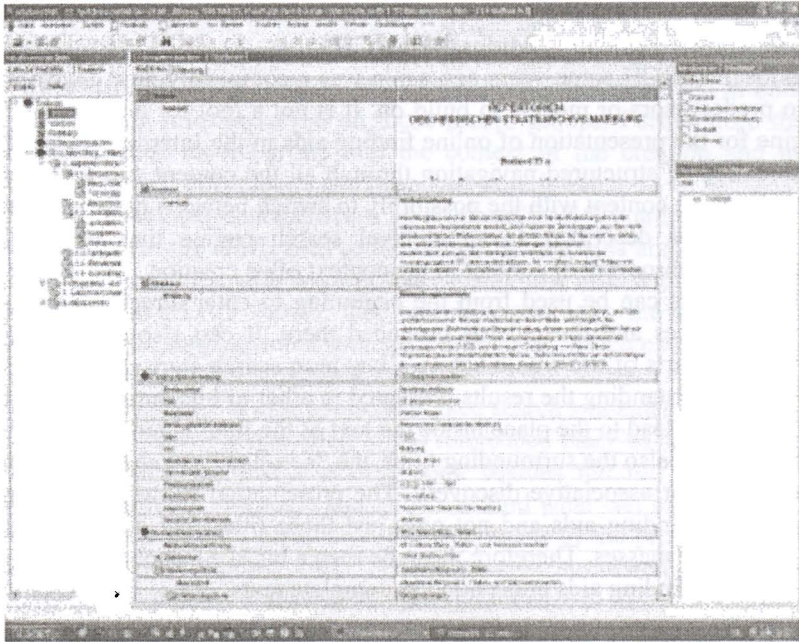
added to the manual of MidosaXML<sup>5</sup>. Especially the way used in EAD to structure the descriptive data hierarchically was adopted.

The next step in this development was the creation of a new editor. Besides the template view a table view was added which offered a structured overview of the whole finding aid with levels that could be collapsed or expanded in the working area in the middle of the screen. On the left hand side of the screen the structure is now shown and linked to the text and on the right hand side two tool boxes offer sections or elements to be included.

The elements on the screen are elements of finding aids. Therefore they are not completely identical with the elements of the DTD. The elements shown may be nested elements with other elements above that are not shown. That is the case f.i. if upper elements are just needed for the creation of a consistent hierarchy inside the XML definition, but do not contain content. They may be an element with a certain attribute and even with a standard value of the attribute. So there might be the elements "reference number" offered in the tool box. When it is clicked upon and entered into the file the combination of the element "unitid" with the attribute "type" with its value "bestellnummer" is entered into the XML file. The reference number can just be entered without worrying about the actual tagging in the XML file. The element shown implies this combination and the program translates it so that a consistent tagging is used. The archivists using MidosaXML do not need to learn XML, but they have to know the elements that are parts of finding aids, how they are used and what sort of information they convey. They can leave the rest, the technical translation, to the program.

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<sup>5</sup> Angelika Menne-Haritz, *MidosaXML – der Findbucheditor, XML-basiertes Werkzeug zur Erfassung und redaktionellen Bearbeitung von Findbüchern, entwickelt für PARSIFAL, Handbuch*, Marburg 2006, available from the MIDOSA website of the Archivesschool Marburg.



The working screen of MidosaXML

The MidosaXML format was defined for finding aids as well as for holdings guides at the level above them. The holdings guide for the whole repository should be used for structuring the online finding aids and therefore a linking mechanism between the description of a record group and the corresponding finding aid had to be included. Furthermore like in EAD a linking was installed that allows integrating images into the finding aid that can be called up f.i. from descriptive units via a text link and are shown in a separate window. MidosaXML also got a transformation style sheet that converted the MIDOSA encoding into EAD encoding to be able to offer the finding aids to the RLG gateway.

MidosaXML was developed on the basis of these works aiming at an increased internationalisation of archival description. It was available since 2001. It used the format of a hierarchical database internally and translated it into the XML format for storing and transforming in EAD. It offered new flexibility, integrating f.i. a function for printing finding aids from the same data. Furthermore it was now possible to offer a repeated use of single elements as often as needed. MidosaXML was the decisive step for the easy usable capability to share data with other archival access points and it answered to the demands of a world wide networking of archives and their users to present, share and improve online finding aids.

## MidosaSEARCH

MidosaSEARCH some years ago again was a completely new development that had no predecessors or models to build on. It is not a tool for description but a search engine for the presentation of online finding aids in the Internet. Its speciality is the combination of structured navigation through all the content and a text-based search over the same content with the possibility to switch between both at any time. Therefore it can be described as an archival search engine that supports the MidosaSEARCH.jpgdiscovery of content in the context of its creation.

The contexts can be used from the beginning to enter directly into certain areas of competencies and the records produced there. It can also be used f.i. to exclude irrelevant parts of the whole before a key term search starts and it gives the framework for understanding the results presented in a list of hits enriched with their contexts. The results lead to the place inside the text of the finding aid where they are used. At these places also the surrounding titles, the “non-hits”, are shown and can be browsed and used for associative discovery. The presentation shows all descriptive units the complete finding aids and not only just those titles that could have been retrieved in the huge masses. Therefore it can be seen a bit like a sophisticated search in e-books with the finding aids understood as complete texts.

The screenshot displays the MidosaSEARCH web interface. The top navigation bar includes the title 'MidosaSEARCH: Brandenburger Tor' and a search input field containing '1 Sitzungen des Zentralen Runde...'. The main content area is divided into a left sidebar and a main pane. The sidebar, titled 'Das Bundesarchiv', contains a tree view of the finding aid structure: 'DA 3 Zentraler Runder Tisch' (expanded), 'Einleitung', 'Zentraler Runder Tisch' (expanded), and a list of sub-items: '1 Sitzungen des Zentralen Runden Tisches' (selected), '2 Arbeitsgruppen des Zentralen...', '3 Arbeitssekretariat', and '4 Vertreter der Regierung am R...'. The main pane shows the selected item '1 Sitzungen des Zentralen Runden Tisches' with its title 'DA 3/5' and a brief description: '5. Sitzung am 3. Jan. 1990'. Below this, a detailed description is provided: 'Enthält v.a.:Vorkommnisse am 30. Dez. 1989 und 1. Jan. 1990 an Brandenburger Tor (SED-PDS)Öffnung der Tagespresse (SPD)Runder Tisch (ADN-Meldungen, Ottener Brief des FDGB)Erneuerung der Ausschüsse der Nationalen Front und Bildung einer nationalen BürgerbewegungGespräch mit Hans Modrow am 2. Jan. 1990 (UFV)Neuzulassung von Parteien, Gruppierungen und OrganisationenLage der Wirtschaft und JustizArbeitsordnung des Runden Tisches, Konstituierung der Arbeitsgruppen'. A date 'Jan. 1990' is shown to the right. Below this, another entry 'DA 3/6' is visible with the title '6. Sitzung am 8. Jan. 1990' and a description: 'Enthält v.a.:Änderung Art. 12 und 14 der DDR-Verfassung, Wahlgesetz (VL)Auflösung des AfNS (AG Auflösung des AfNS)Verhandlungen zwischen dem Ministerpräsidenten der DDR und dem Bundeskanzler der BRD (SED-PDS)Geschäftsordnung und Arbeitsweise des Runden Tisches (CDU)Konstituierung der AG Gleichstellungsfragen, Teilnahme an Sitzungen der Volkskammer (UFV)Reisegesetz (AG Ausländerfragen)Öffentlichkeitsarbeit der oppositionellen Gruppen, Volkskammerwahl am 5. Mai 1990 (DJ)Wahlgesetz und andere Gesetze der Volkskammer (AG Wahlgesetz, Gruppe "20")Wirtschaftslage (Grüne Lia)Auflösung des Ministeriums für Staatssicherheit (DBD. LDPD. NDPD.'. The interface also features a top navigation menu with 'Index', 'Gliederung', 'Brandenburger...: 7 von 21', 'Home', 'Beständeübersicht', and 'Abkürzungen'. A status bar at the bottom indicates 'Fertig'.

Online-finding aid in MidosaSEARCH



The finding aids in MidosaSEARCH are linked to the holdings guide, which can also be integrated into the key term search. Those parts of the holdings guides delivering information of records groups that are not yet described in online finding aids allow being informed even on those record groups. Furthermore the holdings guide places each record group into the context of the creation and this context enriches the textual information and the actual description.

The technical characteristics of MidosaSEARCH are, that it is document based referring to the XML files of the online finding aids and showing the HTML presentations generated with MidosaXML – and now also with MEX – both in the MIDOSA and the EAD format. The search engine uses the open source indexer Lucene. It will be supplemented soon by a third level, which can be used to represent an archival landscape in a structured way.

MidosaSEARCH offers four combined search strategies with the index terms selected during description leading to the referenced place as well as the possibility to browse through the text like in a book besides the full text search and the structured navigation. A google slot allows to find what can be named across all or selected elements of the finding aids, selected levels of the presentation, or selected single or groups of finding aids. Yet the parallel structured navigation helps to discover also the unknown answers to open questions.

MidosaSEARCH is used for a union finding aid in the Internet gateway of the network of those state archives that have records from the former socialist party and the unions of the East German GDR (Netzwerk SED/FDGB-Archivgut). The Federal Archives have recently received a grant from the German science foundation to use this existing gateway and to build on it to construct a reference model of a gateway to archives in Germany. For this purpose the union finding aid will be enlarged and the archival landscape will be integrated as third level. Conversion tools will be created that transform the data from the local archival systems into the target format used in the union finding aid. This format is the EAD profile that has been used for the own applications of the Federal Archives. The conversion tools will be based on the newest development of the Midosa family, MEX – the MidosaEditor for XML standards.

## MEX

MEX was finished in December 2007. This newest arrival in the MIDOSA family, called MEX, is a tool for the creation of structured Internet presentation of digitised archives in online finding aids. It works directly in XML on the basis of international standards. Its main aim is to offer a way that makes the creation of Internet presentations with digital images from the archival records easier. Therefore it offers a function to create a HTML presentation of an online finding aid including all corresponding digital reproductions in one step. The images of each descriptive

unit are combined into structured digital archival objects. No special IT knowledge is needed for it.

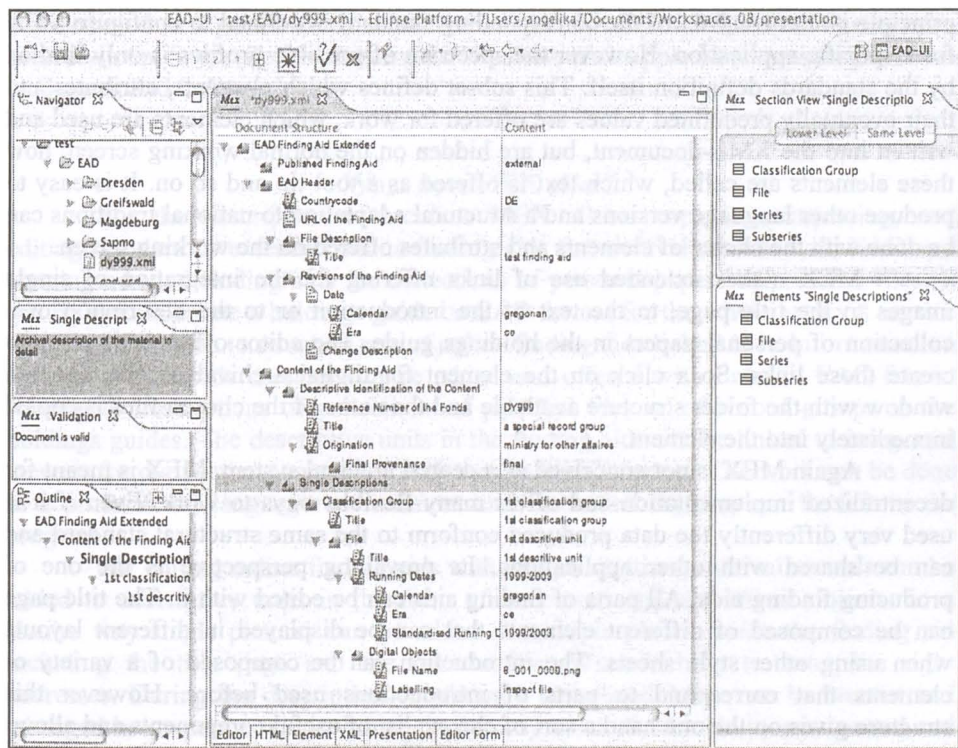
Again MEX applies newest technological developments and tailors them to fit the needs of archival professionals. Its new functions are combinations between the three international standards EAD (Encoded Archival Description), EAC (Encoded Archival Context) and METS (Metadata Encoding and Transmission Standard). They are used to create complete Internet presentations of digitised archives again based on the traditional archival methods and principles with the provenance oriented perspective by creating finding aids that offer insight into the original contexts of creation for each single item.

Furthermore the rather recent standard METS is applied to create digital archival objects of all images corresponding to one descriptive unit by gathering all relevant metadata of the images in one XML file. METS as a standard offers much more than used for MEX. More metadata f.i. on the technical process of the creation of the images, on rights and their management and on the administration of the image data can be entered before or after editing the file in MEX. It will surely be useful to keep there data on the originals that were digitised. And also the documentation of the creation and changes of the file itself can be entered and used for their administration. METS is very flexible in including data from other standards using the namespace functionality. It can contain data in EAD format with the same tagging used in EAD. However this was not implied in MEX to avoid the complications resulting from redundancies of the same data in different files.

For the purpose of presenting the digital reproductions on the Internet the METS editor in MEX offers an automated function for entering the data on images. With one click all images stored in one folder are entered at once. The data copied to the file include the addresses of the images and some basic information like the mime type. An internal reference is created for each image at the same time and the structural map, the obligatory part of METS, is filled with references to each image. Here a type attribute can be changed manually while inspecting the images on the same screen to control the final online presentation. So all steps of routine and repeated work like copying the addresses of the images to the METS file are automated while the selection of certain images as especially interesting and relevant for a first inspection of the file is done individually by the archivist. The technical creation of the presentation does not depend on the number of images selected, however the better it is done the better new users can identify the relevance of the descriptive unit for the own work.

The structural map is used to control the presentation of images from textual records in a completely new way. Considering that neither thumbnail presentations nor a series of pages are really easy to use for the investigation of archival records online a new model was tried out. Therefore two layers were conceived, one for the orientation inside a descriptive unit and the other for browsing through it or for targeted access to single pages. The orientation view contains all pages marked as

structurally relevant. For easier estimation on the relevance of pages for the research questions a special presentation was designed that just shows the upper third of a page where normally the most concentrated information on the letter can be rapidly overseen.



The working screen of MEX

### The development of MEX

MEX was developed in two consecutive projects, <daofind> and <daofind+> by the Federal Archives with support from the Andrew W. Mellon foundation, New York. The first project <daofind> tried to find a new way for editing descriptive information by applying the open source platform Eclipse, which had been coded by IBM and opened for the open source community. With this basis the new developments would work on different platforms and operating systems.

The first <daofind> project developed a prototype of the application. It was one of the first applications that installed Eclipse on the users desktop. Doing this

many of the functions of the platform could be used without programming them again and the new application could be designed as a plug in. That reduced the amount of resources for the development considerably. With the prototype it could be shown that this way worked and that it was possible to develop it further.

MEX uses the three standards EAD, EAC and METS directly. The technical principle is that a subset of the corresponding standard is defined to configure MEX for a specific application. However the spectrum of possible profiles is only limited by the standards definition itself. This subset defines which elements, attributes and their eventually predefined values are offered for work, which elements are used and written into the XML-document, but are hidden on the normal working screen, how these elements are called, which text is offered as a tool tip and so on. It is easy to produce other language versions and a structural adaptation to national traditions can be done with the choice of elements and attributes offered on the working screen.

MEX makes extended use of links offering f.i. the integration of single images to the title page, to the text of the introduction or to the description of a collection of personal papers in the holdings guide. The editor offers easy ways to create those links. So a click on the element for digital archival objects opens a window with the folder structure available and the name of the chosen files is copied immediately into the element.

Again MEX is not conceived as a central archival system. MEX is meant for decentralized implementation and offers many flexible ways to work. Even if it is used very differently the data produced conform to the same structural standard and can be shared with other applications. Its prevailing perspective is the one of producing finding aids. All parts of finding aids can be edited with it. The title page can be composed of different elements that can be displayed in different layouts when using other style sheets. The introduction can be composed of a variety of elements that correspond to parts of introductions used before. However this structure gives on the one hand a sort of cheque list of useful components and allows on the other hand the reuse of the data in other contexts.

The EAD finding aid in MEX can include in itself the documentation of its development. The EAD elements for creation and revisions are useful for the internal management of the collection of online finding aids in a repository, even if they are not used for presentation. On the level of the classification groups or of the descriptive units many explaining elements can be used when wanted.

Especially innovative aspects of MEX concern the direct use of XML-standards. It stands somehow in between XML-editors and databases. Like XML-editors MEX creates texts. However functionalities like a plausibility control of normalised times are also integrated. The data worked on have the format of XML-files. Therefore the data are open. At no moment they are in a proprietary format and there is no need to convert them. The data must not be imported but can be opened like a text in a word processor. They are stored just like that and can be opened and used with any other text editor or XML editor. The editor opens most of the valid

EAD files from other applications. Elements that are not defined in the EAD profile actually used are shown in squared brackets indicating that they are not defined and will not be used for the HTML presentation. They stay in the file where they are and will not be cut off.

The MEX software consists of several modules and has an open structure. It is distributed as a public domain for free use and is offered for adaptations as open source via the SourceForge platform for Windows and Apple Mac operating systems in German and in English<sup>6</sup>.

### **What does MEX offer?**

For the description of archives MEX allows capturing, importing, and editing standard or extended online-finding aids for archival records with EAD and creating adapted finding aids for collections of personal papers or personal files. It can be used to create a holdings guide on EAD format for the whole archival service which can be taken to structure sets of online finding aids linked to it. Information on persons and records creators can be added and offered with links in EAC format relating to descriptions of collections of personal files or of record groups in the holdings guides. The descriptive units in the finding aids can be linked to integrated viewers for digitisations controlled with data in METS format. The work can be done in a professional language environment and the actual tagging can be left to the program.

For editing online finding aids with images digitised archival records can be added to descriptive units in the form of structured digital archival objects. In a similar way single pictures can be added at multiple places inside the finding aid including the title page and the introduction. Wizards help to enter the right addresses. During the description or editing a cumulated index can be created and managed in a separate window. In a similar way a list of abbreviations is created and managed in a separate view. The tagging inside text content for these functions as well as those for rendering text bold or italic or entering line breaks is done with the context menu inside a snippet editor. While working the display can be changed between a table view and a template view, with the template offering a core set of elements that do not need to be entered one by one in the table view. Other displays of the same date give a look at the whole XML file or just the active element with the nested element and attributes underneath and at a HTML preview in form of a list of all elements used.

For creating Internet presentations a function is available using a default style sheet that generates the HTML files including the folders structure needed. It can be packed and copied to a web server as such. This functionality is available for

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<sup>6</sup> <http://sourceforge.net> with further information and documentation in the wiki space. For more details see [www.daofind.de](http://www.daofind.de) with links to examples of finding aids with digital reproductions.

each file in EAD, EAC, and METS format, as well as for a whole set of an EAD finding aids with all corresponding METS files for digital images including the copying of the images to the final place. The image presentation is enriched with descriptive information taken from the EAD files.

### **The MEX editions**

Given the great variety of choices offered by the standards five different configurations or editions have been produced to reduce the complexity. The principle when designing them was to externalise those choices that are only made once in the beginning of the work. While f.i. EAC is drafted for information on persons, families and corporate bodies, the object will not change after starting to capture information. So different editions of the EAC editors were conceived for information on persons and on corporate bodies.

The two editions for finding aids differ concerning the amount of elements defined in the configuration. The standard finding aid is seen as containing only the core elements of archival description and thus being adapted perhaps for a standardised work process with auxiliary staff. The products can be opened with the edition for extended finding aids and they can be supplemented with more information, pictures and other elements. Two other editions are available for finding aids, one for collections for personal papers and the other one for personal files or court records. The choice of the elements offered here is similar to the data fields in the corresponding database applications of the Federal Archives ZDN, the central database on German language collections of personal papers worldwide, accessible on the archives website.

The fifth edition is configured for capturing and editing holdings guides. Holdings guides are very common in German archives. Often they are printed and published as books and can be found in the holdings of university libraries. These holdings guides give a general overview on the complete holdings of the repository. The holdings guides have always been drafted in a rather structured form similar to that of finding aids. They contain descriptions of record groups each of them with a reference number and an official name followed by a description of the main areas covered by the records, the running dates as well as explanations on how the records had been created originally and how they had found their way into the repository. All this information is structurally similar to the information on descriptive units in finding aids. Therefore MidosaXML was already used to edit holdings guides and MEX offers now a specialised editor for them with an adapted choice of EAD elements and a labelling for it.

The editions for finding aids include the editor for METS files that allows creating digital archival objects for the descriptive units. The linking with the EAD file is easily done. The name of the METS file is dragged and dropped into the <dao>

– element of the EAD file. The software does everything else when the creation of the presentation is started.

With this most recent step in the developments of the MIDOSA family of software tools flexibility is achieved to an amount, which was unknown for archival software until now. The standards unify the data format, and at the same time they allow to work in environments adapted to special needs of different archival material. Especially the structural standard EAD shows its capacity to open new ways of accepting diversity. Besides its implementation content standards can be used for description with rules describing how to come to the content of the elements. Value standards can be applied to define authorities like the official names of persons or institutions. And the technical standards, describing f.i. XML and HTML, deliver the technological basis. Applying structural standards like EAD, EAC, and METS may help to understand each other better by using the same language while expressing different content.

### **The principles of the MIDOSA developments**

From its beginnings MIDOSA was a tool that supported archival work without prescribing how to do it. That means that it addresses professional archivists, who decide on what is needed to open the access to the archival material that shall be described. The professional decisions are supported, not foreclosed by the software.

Decentralisation was a basic principle from the beginning, as MIDOSA had never been conceived as a centralised archival system running on a network server, even if during work in teams the data can be shared on common storage spaces.

Another basic principle was to provide latest technology in such a way that it could unfold its productivity for archival work on the basis of the professional principles, especially provenance, to improve the service quality and the visibility of archives.

The first development MIDOSA applied the technology of the new microcomputers for decentralised work. The second step, MIDOSA95 introduced the compliance with the recently published ICA standard for data exchange ISAD(G). The next development, MIDOSAonline, reacted very early to the open possibilities of the new medium Internet to produce online finding aids. With the availability of XML and on the basis of first knowledge about EAD MidosaXML enlarged the flexibility of the tool with the use of the same data for an improved online presentation and printing of finding aids. And finally MEX adds the capability to create online presentations with embedded digital reproductions of complete records groups in one step while working directly with the international standards.

These developments were accompanied by a continuous effort to improve the research functionality in the display of the finding aids. The online finding aids were presented in a structured way with the classification as a sort of table of content used for navigation. A full text search was added going across the finding aid and

presenting the results as a list pointing to the text where the term was used. So finding aids could be used like e-books. The same way to search and retrieve archives was taken over with MidosaSEARCH that offered a cross search over the holdings guide and all finding aids linked to it. In a second version its functions have been enhanced f.i. with a second search inside a retrieved finding aid using another term and the possibility to go back to the results of the first one. MidosaSEARCH is now a real context sensitive search and discovery engine which is appreciated and used by increasing numbers of users on the website of the Federal Archives.

The MIDOSA tools can soon celebrate their 25 years. With a concept always a bit aside – and ahead – of the main stream they nevertheless influenced other developments considerably. They have shown, that with modern techniques archival principles like provenance are still useful, that they can give users orientation in the holdings and deliver context in an intuitive way. They unfold their key benefits even more in the digital Internet based environment.

## Rezumat

### *MIDOSA – o familie de instrumente software la îndemâna arhivistului*

Ultimul produs al familiei MIDOSA se numește MEX [EMX] – **MidosaEditor** for XML-standards [Editorul Midosa pentru standardele XML]. În egală măsură cu ceilalți membri ai familiei, ea reprezintă un instrument software dezvoltat în mod expres pentru sprijinirea descrierii arhivistice, în momentul de față integrând o funcție pentru crearea unor complete prezentări online a arhivelor digitale în cadrul instrumentelor online de cercetare. Toate instrumentele MIDOSA au răspuns la noile produse ale tehnologiei și au deschis noi direcții pentru a sprijini munca arhivistică, pentru a oferi informații descriptive utilizatorilor de arhive și pentru a spori calitatea serviciilor arhivistice. Bazându-se pe aceleași principii de ușurință în a folosi înalta tehnologie cu buget limitat, fiecare dintre ele are funcțiile sale specifice.

Obiectivele comune ale dezvoltărilor MIDOSA se pot sintetiza în asigurarea unui sprijin pentru arhiviștii profesioniști, oferindu-le cea mai recentă tehnologie ajustată nevoilor lor și în intensificarea vizibilității și a utilității arhivelor. Prin sprijinirea sarcinilor profesionale, MIDOSA a demonstrat că tehnicile informatice moderne i-a convins pe arhiviști să nu renunțe la păstrarea tradițiilor lor și la standardele profesionale. Dimpotrivă, aceste tehnici permit ca principiile profesionale arhivistice precum proveniența să devină încă și mai relevante pentru chestiunea atât de dezbătută a deschiderii accesului la arhive pentru oricine este interesat în investigarea lor.

Articolul de față descrie feluritele etape din dezvoltarea instrumentelor care alcătuiesc familia MIDOSA de la începutul anilor '80 în Arhivele de Stat ale landului Baden-Württemberg. Ele includ varianta primitivă a MIDOSA cu aplicarea sa



descentralizată, MIDOSA95 – bazată pe o bază de date modernă și ținând seamă de ISAD(G), MIDOSAonline – primul software destinat convertirii bazei de date în HTML, și MidosaXML – care a lăsat deoparte sistemele de gestiune a bazelor de date și a operat în mod direct în fișierele de text XML, bazându-se pe EAD. În paralel cu aceasta, MidosaSEARCH a fost dezvoltat ca un motor de căutare bazat pe fișierele de text și prezentând date în context precum în instrumentele de cercetare tipărite, dar cu multe noi utilități pentru o folosire mai lejeră.

Ultimul produs este MEX, realizat prin proiectul <daofind> și aplicabil pentru crearea de instrumente științifice online cu imagini integrate din documentele arhivistice digitalizate. Prima versiune a MEX a fost lansată în cinci ediții cu diferite profile ale EAD-Standard adaptate pentru felurite situații. Instrumentele MIDOSA pot sărbători în curând cei 25 de ani. Ele au demonstrat că, alături de tehnicile moderne, principiile arhivistice precum proveniența sunt încă utile și că pot oferi utilizatorilor orientarea necesară.