

Depositing Remediated Resources in EMMA

Version 2.0—April 1, 2025

Introduction

The core purpose of the EMMA project and the infrastructure provided to implement it is to enable the sharing of remediated resources by disability services offices (DSOs) at member institutions.

The EMMA infrastructure consists of a set of systems and tools engineered to facilitate this process, as well as a repository in which resources—both those available to be remediated and those having been remediated—are stored.

The EMMA infrastructure integrates three repositories:

- The EMMA repository
- The Internet Archive
- The ACE Portal

In addition, EMMA provides access to OpenAlex, which is a directory of links to a wealth of available Open Access content, including OA journal articles, as well as to books available from the University of Michigan Press, provided via Bibliovault. It is expected that resources from other publishers using Bibliovault or similar services will be added.

Although EMMA facilitates access to content needed by DSOs from these sources, remediated content from any other source may also be deposited in EMMA unless the depositing institution is prohibited from doing so by contractual terms. It is not illegal to do so.

Since the delivery of accessible texts to qualified persons with print disabilities is a lawful fair use, the use of secure databases like the EMMA repository to enable that delivery by DSO staff acting within the law is also non-infringing. Once remediated files are deposited by a member institution into EMMA, another member institution is free to retrieve the remediated files for other qualified recipients (described in detail below), to further remediate them, and to deposit the resulting newly remediated files back into EMMA.

Along with the remediated resource, it is necessary to provide information in the form of metadata that identifies the resource and describes how it has been remediated. This enables other DSOs to discover available resources in EMMA and to distinguish different versions of the resource they're seeking—for example, different file formats of a given creative work that may have been remediated in different ways—so that they can obtain an optimal version for the end user they're serving.

The EMMA infrastructure is designed to facilitate this process by providing standardized metadata to describe remediated resources as well as a user interface that ensures consistency and efficiency. The EMMA metadata was developed based on properties and terms requested by the DSOs and libraries participating in its development.

The EMMA metadata is described in detail in the next main component of this documentation, “A Guide to the EMMA Metadata.” The search process is covered by the accompanying document entitled “Searching for Resources in the EMMA Repositories.” The alternative methods available for depositing remediated resources along with the metadata describing them are detailed in subsequent sections of this document.

The Deposit Workflow

Depositing a remediated resource requires a combination of bibliographic and remediation metadata. A fundamental design principle of EMMA was to enable the deposit process to involve two different parties at member institutions:

- the DSOs, who have detailed knowledge of the remediated files, the work that was done to remediate them, and what a subsequent DSO would need to know about them; and
- the academic libraries, who are expert in bibliographic metadata and in the processes involved in systematically, accurately, and efficiently managing metadata.

The DSOs are responsible for ensuring that the remediated resources are only provided to end users—students, faculty, or staff at their institution—who are “Qualified Recipients.” These are individuals who have perceptual, cognitive, physical, or other disabilities that prevent them from consuming the standard versions of those resources. Those qualified recipients typically need DRM-free versions that have been remediated in some way to provide features that enable them to consume those resources.

End users do not have access to retrieving or depositing files in EMMA. Although the search function is available to end users, in general it is the DSO who:

- searches for the optimal files for a qualified end user;
- performs the remediation for that end user;
- provides the remediated files to that end user; and
- begins the deposit of the remediated files.

Library staff are responsible for ensuring that all the metadata associated with a deposited resource is complete and correct. It is expected that the DSO may often hand off the process to the library after they have provided all the appropriate remediation metadata and basic bibliographic metadata; it is not expected that the librarians will have knowledge of remediation terminology or processes.

The librarians *will* have knowledge of what metadata is required—both bibliographic metadata, which is their expertise, and required remediation metadata, which must be obtained from or at least confirmed by the depositing DSO.

EMMA provides shared access to the metadata and the deposit manifests for resources by multiple members of the same EMMA member organization.

It is also understood that the metadata may not all be provided—either by the DSO or the library—in a single session. Particularly for the DSOs, it is common for the information about the remediation process to accumulate over time and across multiple resources. The alternative methods described below enable this.

Some DSOs prefer to deposit remediated resources one-by-one as the work on them is completed; other DSOs prefer to accumulate remediated files and deposit batches of them, often at the end of a semester or the end of an academic year. Likewise, the librarians are likely to prefer to process files in batches rather than one at a time. And when a new institution becomes a member of EMMA, they often have many remediated files that have accumulated over the years that need to be deposited; such a “bulk upload” is also enabled by the system. These alternatives are described in detail in the subsequent sections of this document.

The EMMA Metadata

EMMA metadata can be grouped in four categories.

1. Required bibliographic metadata.
2. Required remediation metadata.
3. Optional bibliographic metadata.
4. Optional remediation metadata.

This section provides a description of the metadata properties in each category and gives examples of values for each of them. Because these properties can be expressed in different ways by different DSOs, many of the metadata properties have controlled vocabularies, indicated by (CV), some of which can accept multiple values, indicated by (CV-MV). This makes the database more consistent and rigorous. The EMMA user interface provides easy-to-use drop-down lists of the vocabulary terms.

The companion document “A Guide to the EMMA Metadata” provides a comprehensive reference: the actual metadata terms used by the system—e.g., “dc_creator” for the name of the author(s) or editor(s)—as well as more complete definitions and other helpful information about them, and the complete controlled vocabularies associated with those properties that have CVs.

It is not necessary that all of the metadata be provided at once. In most cases the metadata will be developed over time.

For example, the DSO may know some of the basic bibliographic metadata as soon as they've obtained a file to remediate; as work progresses, they may have more metadata about the nature of the resource (e.g., what the quality of the text is, whether there are tables, math, images, and other complicating features) or what parts of it need to be done (the end user may only need certain chapters of a book). They will usually write a summary of what they've done when the remediation work is complete. And there might be metadata that the DSO doesn't include (e.g., a DOI for a journal article, which is not required) that the librarian may add later in the workflow, before deposit.

The following sections of this document describe different ways to record that evolving metadata in preparation for the final deposit.

Required Bibliographic Metadata

The following bibliographic metadata must be provided in order for a remediated resource to be deposited.

Note that only a small subset of these is needed for search. But all of these must be provided—if not by the DSO, then by the librarian—when the remediated resource is deposited. This makes the information in the EMMA database more complete and helpful.

- *File Name*, the file name of the remediated resource.
- *Title*, the title of the remediated resource.
- *Author/Creator*, the author(s), editor(s), or other creator(s).
- *Language*, the primary language or languages of the resource (CV-MV).
- *Type*, the type of resource, e.g., “text,” “sound,” “image,” “collection,” “interactive resource,” “dataset” (CV).
- *Format*, the format of the resource, e.g., PDF, EPUB, Braille, Word, etc. (CV).

Required Remediation Metadata

The following remediation metadata must be provided in order for the remediated resource to be deposited.

- *Entire Document Remediated?*—whether the whole resource has been remediated—“true” or “false.” (CV)
- *Parts Remediated*—The portions of the resource (e.g., certain chapters of a book) that were remediated if the whole resource wasn’t.
- *Remediation Status*—“remediated,” “not remediated,” or “born accessible” (i.e. the resource as obtained did not need any remediation, it was sufficiently accessible as-is). (CV)
- *Remediation Comments*—free text, e.g., “OCR’d,” “proofed and corrected OCR,” “converted to Word,” “added image descriptions,” “fixed the headings,” “tagged the PDF,” “Table 5 is only image + alt text,” etc.—what the DSO thinks a subsequent DSO would want to know.

Optional Bibliographic Metadata

The following information is very useful for search, to more precisely identify the deposited resource by a subsequent DSO. However, many of these properties may not be known by the depositing DSO, so they have not been designated as required for deposit.

- *Identifiers*—persistent identifier(s) of the resource, such as an ISBN for a book or DOI for a journal article.
- *Related identifiers*, such as the ISBN of the print edition if the resource is the ebook with a different ISBN.
- *Publication Date*—the publication date of the remediated resource in a formal syntax. (Can be just a year, e.g., “2016,” a more precise date in YYYYMMDD format, or even the issue date of a journal an article was published in, such as “Spring 2014.”)
- *Version*—the version of the resource (free text, e.g., “Second Edition,” “3rd. ed.,” “Large print,” “Preprint,” etc.).

- *Series Type* (if the resource is a member of a series)—“book,” “journal,” “magazine,” or “newspaper.” (CV)
- *Series Title*—the name of the series (e.g., “Harry Potter,” “PLOS One,” “The Atlantic,” etc.).
- *Series Position*—the position of the resource in the series (e.g., “3,” “Book Two,” “Volume One,” “December 2018 issue,” etc.).
- *Publisher*—the publisher’s name.
- *Rights*—the type of rights associated with the work: “Copyright,” “Creative Commons,” “Public Domain,” or “Other.” (CV)
- *Copyright Date*—the copyright date (in mm/dd/yyyy format).
- *Subject*—the subject of the work (free text).
- *Description*—a free text description of the work.

Optional Remediation Metadata

The following information is very useful to a DSO seeking a resource that has been fully or partially remediated in a manner that a given end user needs. While these properties are not required in order to deposit a resource, DSOs are encouraged to include any of these optional properties.

In addition to providing specific properties—some enabling free text and others requiring the use of a controlled vocabulary—there is also an open-ended accessibility summary to enable the inclusion of information not covered by the other properties.

- *Format Feature*—Accessibility-specific file types like “Braille – Nemeth,” “Braille – UEB,” or “Speech – TTS.” (CV)
- *Date Accepted*—The date the remediated resource and its metadata were accepted into EMMA, in mm/dd/yyyy format.
- *Source of Content*—The source of the file that was remediated, for example “publisher,” “library,” “student,” “OpenAlex,” or one of the participating EMMA repositories (including EMMA if it’s a file sourced from EMMA that has been further remediated). (CV)

- *Source of Metadata*—The source of the metadata (free text, for example a combination of “Google Books, DSO, and Library”).
- *Remediated By*—The name of the DSO (not the individual) that performed the remediation.
- *Remediated Aspects*—What was done in the remediation, e.g., “Scanned and OCR’d,” “Tagged PDF,” “Added Image Descriptions,” “Structured Headings,” “Fixed Tables,” “Linked TOC,” etc. (CV-MV)
- *Text Quality*—The quality of the text of the remediated resource: “Raw OCR,” “Cleaned OCR,” “Rekeyed,” “Proofread,” “Published.” (CV)
- *Remediation Date*—The date the remediation was completed, in mm/dd/yyyy format.
- *Accessibility Features*—Accessibility features of the remediated resource (whether provided by the remediation or already a feature of the source file), e.g., “Print Page Numbers,” “TTS Markup,” “Described Math,” “MathML,” “Alternative Text,” “Long Description,” etc. (CV-MV; aligns with EPUB/schema.org metadata)
- *Accessibility Controls*—How navigation can be controlled, e.g., “Full Keyboard Control,” “Full Mouse Control,” “Full Voice Control,” “Full Touch Control,” etc. (CV-MV; aligns with EPUB/schema.org metadata)
- *Accessibility Hazards*—Accessibility hazard information—“Flashing Hazard,” “No Flashing Hazard,” “Motion Simulation Hazard,” “No Motion Simulation Hazard,” “Sound Hazard,” “No Sound Hazard,” “None.” (CV-MV; aligns with EPUB/schema.org metadata)
- *Access Mode*—The mode or modes by which the content of the resource can be consumed, e.g., “Textual,” “Color Dependent,” “Math on Visual,” etc. (CV-MV; aligns with EPUB/schema.org metadata)
- *Sufficient Mode*—The mode or modes that are each alone sufficient to consume all of the content of the resource—“Auditory,” “Tactile,” “Textual,” “Visual.” Thus for a book with images, “Textual” would be sufficient only if image

descriptions are provided along with the text. (CV-MV; aligns with EPUB/schema.org metadata)

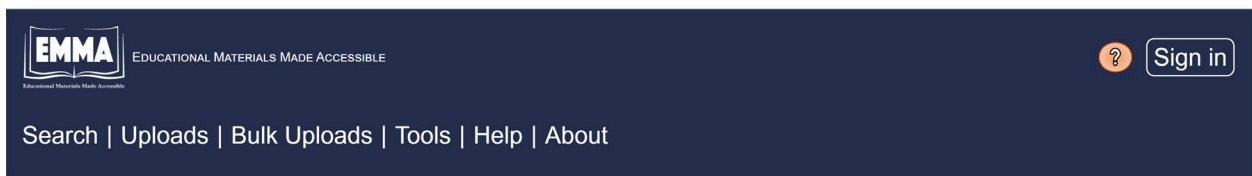
- *Accessibility Summary*—A free-text summary of accessibility issues associated with the resource that the depositing DSO wants to communicate to other DSOs that might use it. (Aligns with EPUB/schema.org metadata)

Uploading Single Files

The fundamental way to deposit a remediated resource is to do what is called a “single file upload.” This enables staff from a DSO or the academic library at its institution to deposit files one at a time, as the remediation work is finished.

If your remediated resource consists of more than a single file—for example, a file for each chapter of a book—you need to create a .zip file of the resource.

The starting point is at emma.lib.virginia.edu, which will take you to the EMMA landing page:



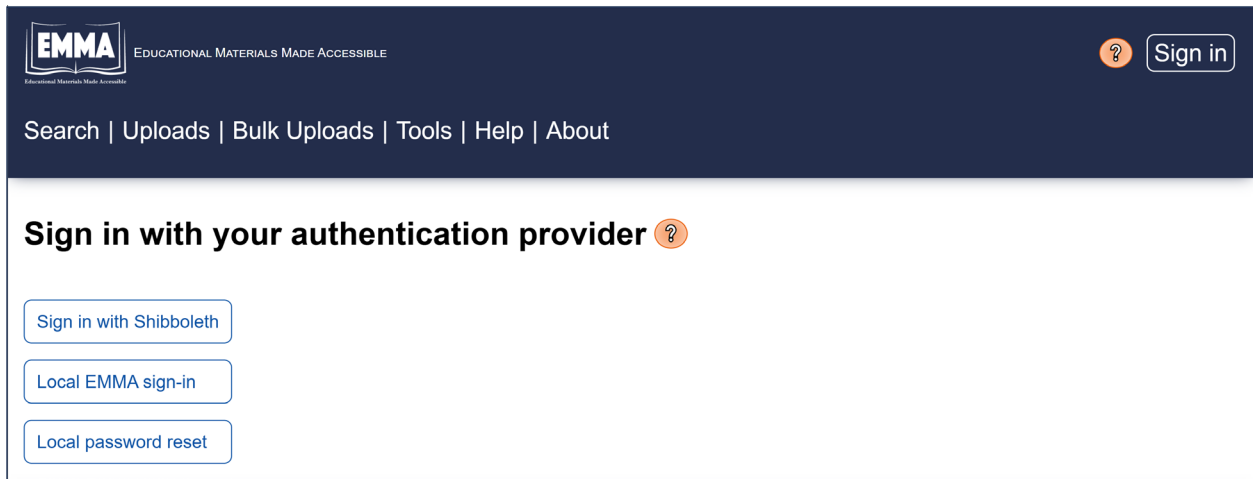
Note the question mark in the orange circle: clicking on this provides detailed help information. These occur at many places in the EMMA user interface.

Step One: Sign In

While the EMMA user interface is freely available for searching the repositories, only registered users—staff at the DSO or library of a member institution—can download resources, upload remediated resources, or perform other functions.

To log into EMMA, click the “sign in” link from the home page or go to https://emma.lib.virginia.edu/users/sign_in. You will see

three options: “Sign in with Shibboleth,” “EMMA local sign-in,” and “Local password reset.”

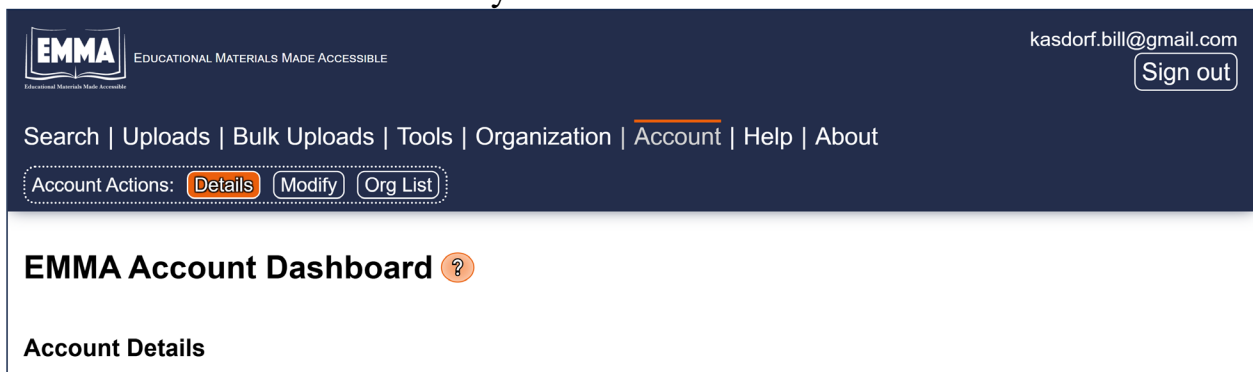


The screenshot shows the EMMA (Educational Materials Made Accessible) sign-in page. The header includes the EMMA logo and the text "EDUCATIONAL MATERIALS MADE ACCESSIBLE". On the right, there is a "Sign in" button with a question mark icon. Below the header, a navigation bar contains links: "Search | Uploads | Bulk Uploads | Tools | Help | About". The main content area is titled "Sign in with your authentication provider" with a question mark icon. It contains three buttons: "Sign in with Shibboleth", "Local EMMA sign-in", and "Local password reset".

Try the Shibboleth login first. You will be directed to choose the name of your organization from a list managed by SeamlessAccess. If your organization is on the list, you should be able to sign into EMMA by authenticating your account with your own organization. You will not need a separate password for EMMA.

If your organization is not on the SeamlessAccess list or if the Shibboleth sign-in fails for some reason, return to the EMMA sign-in page and choose “Local password reset.” You will be prompted to enter the email address associated with your EMMA account, and you will receive an automated email with instructions for setting a password. When returning to EMMA subsequently, choose “EMMA local sign-in” to use the email address and password you have set.

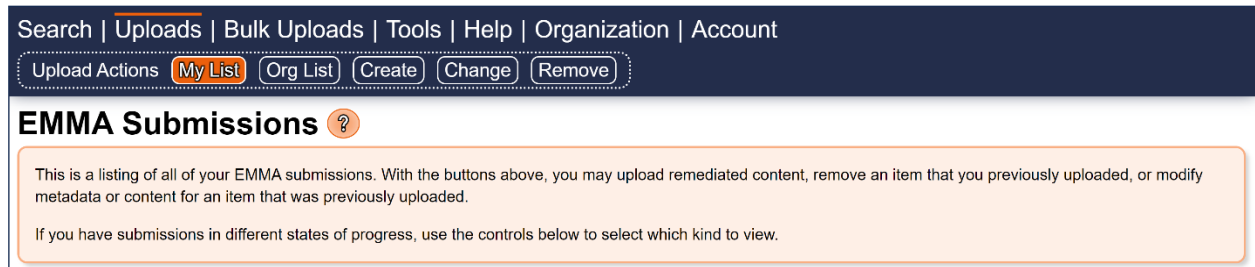
When the sign-in fields are filled in, clicking on the “Sign in” button will take you here.



The screenshot shows the EMMA Account Dashboard. The header includes the EMMA logo and the text "EDUCATIONAL MATERIALS MADE ACCESSIBLE". On the right, the user's email "kasdorf.bill@gmail.com" is displayed next to a "Sign out" button. Below the header, a navigation bar contains links: "Search | Uploads | Bulk Uploads | Tools | Organization | Account | Help | About". The "Account" link is highlighted. Below the navigation bar, there is a section titled "Account Actions:" with three buttons: "Details", "Modify", and "Org List". The main content area is titled "EMMA Account Dashboard" with a question mark icon. Below this, the section "Account Details" is visible.

Step Two: Go to Uploads

Clicking on the “Uploads” option below the EMMA logo will present this dialog.



The screenshot shows the 'EMMA Submissions' dialog. At the top is a navigation bar with links: Search | Uploads | Bulk Uploads | Tools | Help | Organization | Account. Below this is a row of buttons: Upload Actions, My List (highlighted in orange), Org List, Create, Change, and Remove. The main heading is 'EMMA Submissions' with a question mark icon. Below the heading is an orange-bordered box containing two paragraphs of text. The first paragraph explains that the listing shows all EMMA submissions and that the buttons above allow for uploading, removing, or modifying content. The second paragraph states that if submissions are in different states of progress, the controls below can be used to select which kind to view.

Search | Uploads | Bulk Uploads | Tools | Help | Organization | Account

Upload Actions My List Org List Create Change Remove

EMMA Submissions ?

This is a listing of all of your EMMA submissions. With the buttons above, you may upload remediated content, remove an item that you previously uploaded, or modify metadata or content for an item that was previously uploaded.

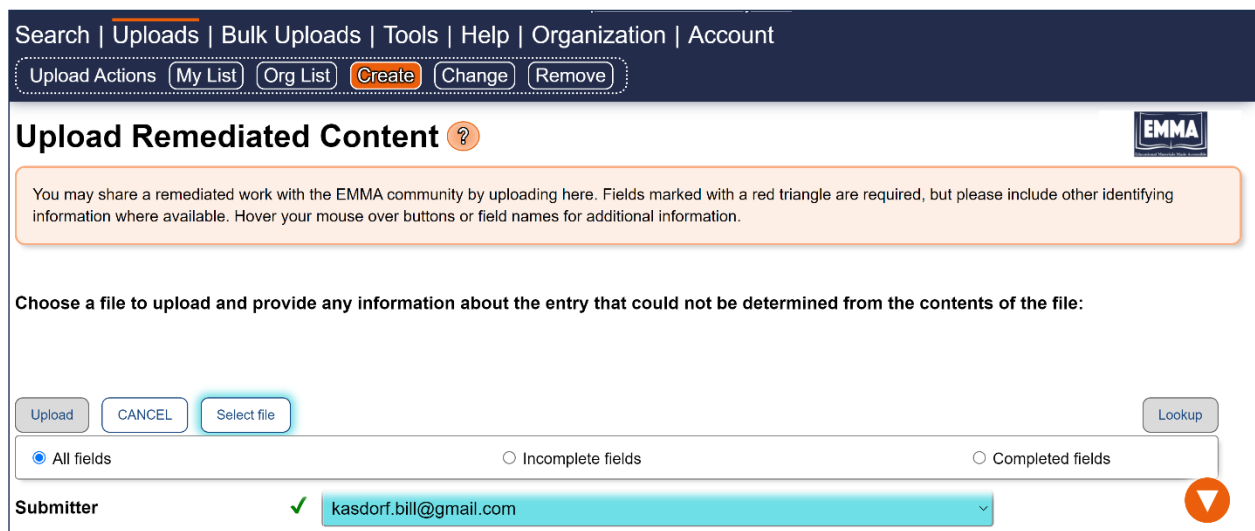
If you have submissions in different states of progress, use the controls below to select which kind to view.

That activates the “My List” button, which lists all of your existing submissions, including those you’ve started but that aren’t complete.

The “Create” button is for submitting a new item to EMMA. The “Change” button is for updating an existing EMMA entry. The “Remove” button enables you to remove an existing EMMA entry.

Step Three: Select the File to be Deposited

Clicking on “Create” will present this.



The screenshot shows the 'Upload Remediated Content' dialog. It has the same top navigation bar as the previous dialog. Below the navigation bar is a row of buttons: Upload Actions, My List, Org List, Create (highlighted in orange), Change, and Remove. The main heading is 'Upload Remediated Content' with a question mark icon. To the right of the heading is the EMMA logo. Below the heading is an orange-bordered box containing a paragraph of text. Below this box is a line of text: 'Choose a file to upload and provide any information about the entry that could not be determined from the contents of the file:'. Below this line are three buttons: Upload, CANCEL, and Select file (highlighted in blue). To the right of these buttons is a 'Lookup' button. Below the buttons is a row of three radio buttons: All fields (selected), Incomplete fields, and Completed fields. Below this row is a 'Submitter' label, a green checkmark, and a dropdown menu showing 'kasdorf.bill@gmail.com'. To the right of the dropdown menu is a red triangle icon.

Search | Uploads | Bulk Uploads | Tools | Help | Organization | Account

Upload Actions My List Org List Create Change Remove

Upload Remediated Content ?



EMMA

You may share a remediated work with the EMMA community by uploading here. Fields marked with a red triangle are required, but please include other identifying information where available. Hover your mouse over buttons or field names for additional information.

Choose a file to upload and provide any information about the entry that could not be determined from the contents of the file:

Upload CANCEL Select file Lookup

☒ All fields ☐ Incomplete fields ☐ Completed fields

Submitter  kasdorf.bill@gmail.com 

Choose the “Select file” button and navigate to the file. EMMA will perform a quick scan of the file before proceeding.

Step Four: Provide the Metadata

Clicking on “Create” populates your account name as submitter and presents all of the metadata properties, with fields in which you’ll provide the values. This screenshot shows the first two.

The screenshot shows a metadata form with three tabs at the top: "Upload", "CANCEL", and "Select file" (which is highlighted with a blue border). A "Lookup" button is in the top right. Below the tabs are three radio buttons: "All fields" (selected), "Incomplete fields", and "Completed fields". The form contains three fields: "Submitter" with a green checkmark and a dropdown menu showing "kasdorf.bill@gmail.com"; "Title" with a red triangle warning icon and a pink-shaded input field containing the placeholder text "Enter title of work"; and "Version" with a gray-shaded input field containing the placeholder text "Enter edition, version, etc.".

You can choose to show all the fields, only the incomplete ones, or only the completed fields, with the buttons shown above. The required fields are shaded in pink and have the red triangle icon next to them. The clear fields are optional. The gray text in the fields briefly describes the information needed there.

The fields that say “(unset)” and have a down arrow at their right end provide the drop-down lists of the available controlled vocabulary terms for that particular metadata property. Select the appropriate one like this:



The screenshot shows a dropdown menu for the "Series Type" field. The menu is open, showing a list of options: "(unset)" (selected and highlighted in blue), "(unset)", "Book", "Journal", "Magazine", and "Newspaper". To the right of the dropdown are two empty input fields for "Series Title" and "Series Position".




Properties that have extensive controlled vocabularies are presented as scrollable checklists, like this:

The screenshot shows a scrollable checklist with four items, each preceded by an unchecked checkbox: "Speech - TTS", "Speech - Human", "Braille - Grade 1 (uncontracted)", and "Braille - Grade 2 (contracted)". A vertical scrollbar is on the right side of the list.

Using the Bibliographic Lookup Function

Once you've provided a unique identifier like an ISBN, or at least the title and author of the work, you can click on the "Lookup" button to obtain bibliographic metadata from one or more of three authoritative online sources: Google Books, WorldCat, and Crossref. You can then choose the result that has the most useful metadata and click "Update," which will populate the relevant fields on the file upload form.

Start by entering either an identifier (e.g., an ISBN or DOI) or a title and author name in the proper fields of either the single file upload screen or the bulk upload screen described in the next section. Then click the "Lookup" button  on the top right of the single file upload screen or the star button  on the left of each line on the bulk upload screen. The results will be presented like this:

	IDENTIFIER	TITLE	AUTHOR/CREATOR
		Pride and Prejudice	Jane Austen
FROM			
▶ ORIGINAL		Pride and Prejudice	Jane Austen
▶ WorldCat	oclc:06164447	Pride and prejudice : and Northanger Abbey	Austen, Jane, 1775-1817
▶ WorldCat	oclc:1123237899	Pride and prejudice : an authoritative text	Austen, Jane, 1775-1817

You don't need to have the full author name or even the full title wording to get results. On the lookup shown above, a large number of results were returned; only a very few were of the actual work being sought. This is because the search function is designed to prioritize possibility over precision, to enable you to choose the best result rather than returning a more precise set that might miss what you're seeking based on what you've input.

Choose the one you want to use by clicking on the triangle pointer on the left and metadata from that record will be incorporated into your single file upload interface or bulk upload manifest like this:

IDENTIFIER		TITLE	AUTHOR/CREATOR
isbn:9780028179858 isbn:0028179854 oclc:46388788		Pride and Prejudice	Jane Austen
FROM CHANGE KEEP			
WorldCat	oclc:1123237899	Pride and prejudice : an authoritative text, backgrounds and sources, criticism	Austen, Jane, 1775-1817 Gray, Donald J Favret, Mary A
WorldCat	isbn:9780028179858 isbn:0028179854 oclc:46388788	Pride and prejudice and related readings	Austen, Jane, 1775-1817 Glencoe/McGraw-Hill

A DSO would likely select that edition because it's the one on the end-user's syllabus, having not only the text but related readings.

Below the properties input at the top of the screen there are indicators saying "Change" or "Keep." Two of them in the example above—the title and author/creator—are marked "Keep." That prevents the metadata that you already have in those fields from being overwritten. Only metadata from the lookup record that aligns with the properties required by EMMA which are marked "Change" will be imported.

In this case, the author/creator field says "Jane Austen." The metadata from WorldCat had "Austen, Jane" in that field, as well as other metadata not wanted in that field, but this was not imported because that field had been marked "Keep." The identifier field, which had not been provided by the input, has been populated by three useful identifiers from WorldCat, two ISBNs (likely of the hardcover and paperback editions from Glencoe) and the OCN.

Clicking the "Update" button at the bottom of that dialog will populate your upload interface with metadata from the lookup.

Publisher	Glencoe/McGraw-Hill
Author/Creator ✓	Jane Austen
Identifier	isbn:9780028179858 isbn:0028179854 oclc:46388788
Description	In late eighteenth-century England, a spirited young woman copes with the suit of a snobbish gentleman as well as the romantic entanglements of three of her four sisters. Pride and prejudice / Jane Austen -- Society from What Jane Austen ate and Charles Dickens knew / Daniel Pool -- The best
Copyright Date	2000

Step Five: Upload the File

When you begin to provide metadata, the “Upload” button is inactive:



When all of the *required* metadata has been provided, that button becomes actionable. You don’t need to do the upload at that point; you can continue to add optional metadata. When the metadata has been checked to be sure it’s accurate and complete, clicking that “Upload” button will upload your file with its associated metadata.

The Bulk Upload Process

Instead of uploading remediated resources one-by-one as the remediation work is completed, many DSOs prefer to accumulate remediated resources for upload at a later time—for example, at the end of a semester, or once all the resources for a given student have been remediated. And note that you can also upload resources that don’t need remediation because they are born accessible.

The Bulk Upload Manifest described here is the standard way to load a batch of remediated files into EMMA. Later in this document are sections that describe two other ways to get information into the EMMA Bulk Upload function: integrating a client-specific tracking spreadsheet and using the EMMA Manifest Template.

The Bulk Upload Manifest

Selecting “Bulk Uploads” from the landing page brings you to this:

Search | Uploads | Bulk Uploads | Tools | Help | Organization | Account

Manifest Actions **My List** Org List Create Change Remove Submit

Bulk Upload Manifests ?

FIRST | PREV | NEXT | Page 1 (0 manifests)

You may have more than one bulk upload manifest in the works or saved. Each bulk upload has a manifest documenting the resources it contains. Clicking on “Create” will bring up a new manifest:


Search | Uploads | Bulk Uploads | Tools | Organization | Account | Help | About

Manifest Actions My List Org List **Create** Change Remove Submit

Manifest: "Started March 27, 2025 at 5:40 pm" Edit ?

Save Cancel Submit Import (1 items) Page 1 FIRST | PREV | NEXT

	File Name	Identifiers	Title *	Author/Creator *	Version	Series Type	Series Title	Series Position
+								

EMMA defaults to naming the manifest by the date and time when it was created; click the Edit button beside the manifest name to give it the name you want it to have. Each row in the manifest contains the metadata about a single resource that is to be uploaded. Clicking on the plus sign icon  in the first cell will add a row for another resource. Clicking on the arrow in the upper left corner of the first header cell will expand the first cell of each row to explain what the symbols in that cell do:

Lookup

Delete

Insert

Item Details

No content has been provided.

No information has been provided.

This record is not ready for submission.

The three grayed-out status icons in the bottom section will each turn green when the prerequisites for upload have been fulfilled. The action icons in the top section will become active when the appropriate information has been provided, e.g., providing an identifier or the title and author/creator will activate the “Lookup” icon. That Lookup function is the same as that for Single File Upload (above).

There is a column for each of the properties described in the “Metadata” section above. The headers of columns that are required metadata have a red asterisk, and the cells in that column (here, the “Title” and “Author/Creator” cells) are bordered in red, indicating “missing data”; the borders turn yellow when data is supplied.

Clicking on the down-pointing arrow in the upper right corner of that first header cell will point the arrow up and show what the actual field name for each property is, as well as how it is expressed in the system:

◀	⬆	File Name	Identifiers	Title *	Author/Creator *	Version
		▶ field: file_data	▶ field: dc_identifier	▶ field: dc_title (required)	▶ field: dc_creator (required)	▶ field: emma_version
		▶ type: <i>see details</i>	▶ type: <i>one or more strings</i>	▶ type: <i>string</i>	▶ type: <i>one or more strings</i>	▶ type: <i>string</i>

Clicking on the right-pointing triangle beside the words “field:” or “type” points the arrow down and presents a brief description of that field or type:

◀	⬆	File Name	Identifiers	Title *
		▶ field: file_data	▶ field: dc_identifier	▶ field: dc_title (required)
		▼ type: <i>see details</i>	▼ type: <i>one or more strings</i>	▼ type: <i>string</i>
		This should be the name of a file (not the full directory path) locally available on your workstation, when the bulk upload is submitted you will be prompted for the actual file location. To simplify the bulk upload process, it's best to ensure that all files referenced in this manifest can be found in the same directory so that can be all can be selected for access with a single checkmark in the multi-select file chooser.	Each identifier should be prefixed by it's type (e.g. "isbn:"). OCLC numbers not already starting with "ocn" should be prefixed with "oclc:". Valid DOIs should already be prefixed with "doi:" but if they are in the form of a URL that should also be understood. Identifiers can be separated by newlines, semicolons (";"), or pipe symbols (" ").	A sequence of characters with no newlines

Clicking on a cell (here, the “Version” cell) will reveal a gray prompt describing what metadata belongs there:

▶	⬆	File Name	Identifiers	Title *	Author/Creator *	Version
		▶ field: file_data	▶ field: dc_identifier	▶ field: dc_title (required)	▶ field: dc_creator (required)	▶ field: emma_version
		▶ type: <i>see details</i>	▶ type: <i>one or more strings</i>	▶ type: <i>string</i>	▶ type: <i>one or more strings</i>	▶ type: <i>string</i>
🔍 ✕ + 📁 📄 🚚						Edition, version, etc.

For properties that must be expressed in a specific format, clicking on the cell will provide a template (shown in Publication Date):

	Publication Date ▶ field: emma_publicationDate ▶ type: date [YYYYMMDD]	Publisher ▶ field: dc_publisher ▶ type: string	Language * ▶ field: dc_language (required) ▶ type: one or more LanguageType values
	<input type="text" value="mm/dd/yyyy"/>		

Properties with CVs provide a pop-up or drop-down list:

	Title * ▶ field: dc_title (required) ▶ type: string	Author/Creator * ▶ field: dc_creator (required) ▶ type: one or more strings	Version ▶ field: emma_version ▶ type: string	Series Type ▶ field: bib_seriesType ▶ type: SeriesType value
				<div> <input type="text" value="(unset)"/> <ul style="list-style-type: none"> (unset) Book Journal Magazine Newspaper </div>

Properties that accommodate more than one value from a controlled vocabulary provide a scrollable checklist:

Language
<input checked="" type="checkbox"/> English <input checked="" type="checkbox"/> Spanish <input type="checkbox"/> Afrikaans <input type="checkbox"/> Amharic <input type="checkbox"/> Angika <input type="checkbox"/> Arabic <input type="checkbox"/> Armenian

Provide the file name by clicking on the “File Name” field, as shown below. This must be the complete file name, *including the extension*, of each resource to be submitted via this Bulk Upload Manifest. Resources composed of many files should be in a .zip archive (all in a single file with the extension “.zip”).

	File Name ▶ field: file_data ▶ type: see details
	<input type="text" value="this book.epub"/>








Note: copying the file name from the directory in which the file is stored and pasting it into the File Name field is safest, to avoid typos.

It's most convenient for the Bulk Upload if all the files for a given submission are in the same folder on your computer. That way, when it comes to submitting your manifest, you can just “select all” the files in that folder. There may be other files in that folder than the ones you are submitting; EMMA will only retrieve the ones specified in your manifest.

Providing the file names is required, along with the other required metadata, in order for a manifest to be submitted to EMMA. However, that does not actually upload the resource files themselves to the EMMA repository. That uploading process happens when you submit your manifest, as described in the next section. As with the other metadata properties, you may supply file names anytime up to the point of submission; you can always save a manifest with partially filled metadata and return to editing it later.

Remember to hit the “Save” button on the manifest when you complete a session of work.

Here's an example of the first four columns of the manifest for which all of the required metadata has been provided, as indicated by the scroll icon having turned green, and for which the file name has been provided, indicated by the file folder icon having turned green.

   	File Name	Identifiers	Title *	Author/Creator *
	► field: file_data ► type: <i>see details</i>	► field: dc_identifier ► type: <i>one or more strings</i>	► field: dc_title (required) ► type: <i>string</i>	► field: dc_creator (required) ► type: <i>one or more strings</i>
  	Pride and Prejudice.epub	isbn:9780028179858	Pride and Prejudice	Austen, Jane, 1775-1817

Then click the “Save” button. If you have provided a valid file name and minimally sufficient bibliographic and remediation metadata, then the manifest is ready to submit. The readiness of the manifest is shown by all three icons on the left (file folder, scroll, and truck) turning green and verbal confirmations of readiness appearing in the expanded view of the left column. If you have

supplied more than the minimum amount of metadata, a dark checkmark will be added to the scroll icon as an acknowledgment of your extra work.

Submitting Your Bulk Upload to EMMA

When you are done editing your manifest, you can use the “Submit” button in the row of four buttons at the top of the screen, under the manifest name, to go to the submission page.

Alternatively, when you log into EMMA you may submit a previously constructed manifest without further editing. The “Submit” button in the “Manifest Actions” row will provide a drop-down list of manifests, which enables you to specify the manifest you want to submit.

Search | Uploads | Bulk Uploads | Tools | Help | Organization | Account

Manifest Actions
My List
Org List
Create
Change
Remove
Submit

Submit a Bulk Upload Manifest ?

My Manifests

Select an existing manifest
Select an existing manifest
Started April 21, 2024 at 3:47 pm
Started April 21, 2024 at 12:19 pm
Started April 21, 2024 at 1:54 pm

Organization Manifests

Select an existing manifest

Either method of arriving at the submission page will present a list of the resources in your manifest with an indication of their status.

"Example Manifest"

Start
Results

Total	Ready	Queued	Submitted	Failed
3	0	0	0	0

Files
Use the file chooser to identify all of the files on your machine referenced by "FILE NEEDED" in the items below.

Item Name	Validation	File Status	Storage Status	Indexing Status	Entry Status
<input type="checkbox"/> ▶ The Elements of Style / Strunk and White	OK	▶ FILE NEEDED	NOT STARTED	NOT STARTED	NOT STARTED
<input type="checkbox"/> ▶ The Norton Introduction to Literature / Kelly J. Mays	OK	▶ FILE NEEDED	NOT STARTED	NOT STARTED	NOT STARTED
<input type="checkbox"/> ▶ Between the World and Me / Ta-Nehisi Coates	OK	▶ FILE NEEDED	NOT STARTED	NOT STARTED	NOT STARTED

This example indicates that the manifest items are complete and valid, but the files themselves have not yet been submitted. Clicking the “Files” button shown highlighted in the screenshot above will enable you to begin the submission process.

Navigate to the folder that contains the files you want to submit. Click on any file in that folder and then hit Ctrl-A in Windows or Command-A on a Mac, which will select all of them. EMMA will only import the files you’ve specified and leave the other ones behind.

Then click “Open.” That takes you back to the report, which should show that the files have been obtained. (If that doesn’t happen, check the file names to make sure they don’t have two extensions or other errors.)

"Example Manifest"

Start Results

Total	Ready	Queued	Submitted	Failed
3	3	0	0	0

Item Name	Validation	File Status	Storage Status	Indexing Status	Entry Status
<input type="checkbox"/> ▶ The Elements of Style / Strunk and White	OK	OK	NOT STARTED	NOT STARTED	NOT STARTED
<input type="checkbox"/> ▶ The Norton Introduction to Literature / Kelly J. Mays	OK	OK	NOT STARTED	NOT STARTED	NOT STARTED
<input type="checkbox"/> ▶ Between the World and Me / Ta-Nehisi Coates	OK	OK	NOT STARTED	NOT STARTED	NOT STARTED

RESOLVED FILES:

17 : Between_the_World_and_Me.epub : 3896651 bytes

15 : The_Elements_of_Style.epub : 101965 bytes

16 : The_Norton_Introduction_to_Literature.zip : 21443302 bytes

ALL FILES RESOLVED - ALL ITEMS READY FOR UPLOAD

Click the “X” button on the dialog (or use the Esc key or click outside the dialog) to dismiss it. You should see (above) that all of the cells in File Status now register as “OK.” Now click the highlighted “Start” button below the manifest title. You should see the remaining “NOT STARTED” messages change to “OK.”

"Example Manifest"

Start Results

Total	Ready	Queued	Submitted	Failed
3	0	0	3	0

Item Name	Validation	File Status	Storage Status	Indexing Status	Entry Status
<input type="checkbox"/> ▶ The Elements of Style / Strunk and White	OK	OK	OK	OK	OK
<input type="checkbox"/> ▶ The Norton Introduction to Literature / Kelly J. Mays	OK	OK	OK	OK	OK
<input type="checkbox"/> ▶ Between the World and Me / Ta-Nehisi Coates	OK	OK	OK	OK	OK

You’re done! Your resources and metadata have been deposited.

Using Your Own Tracking Spreadsheet

Most disability services offices keep track of their work with some sort of spreadsheet—Excel, Google Sheets, etc. Those spreadsheets often have at least some of the metadata needed by EMMA. And it's not difficult for them to be updated to include almost all of the metadata needed by EMMA, especially the required metadata.

But those spreadsheets also typically contain metadata that EMMA doesn't need and which you very likely don't want EMMA to have, like information about the students and other end users (technically referred to as Personally Identifiable Information, or PII), along with information about the DSO staff, schedules, etc.

With some simple temporary modifications, those spreadsheets can be exported to an EMMA bulk upload manifest.

Preparing Your Spreadsheet for Export

One way to prepare your spreadsheet for use by EMMA is simply to rename the column headings. The keys are the field values shown in the expanded header of the bulk upload manifest:

File Name	Identifiers	Title *
► field: <u>file_data</u> ▼ type: <u>see details</u>	► field: <u>dc_identifier</u> ▼ type: <u>one or more strings</u>	► field: <u>dc_title</u> (required) ▼ type: <u>string</u>
This should be the name of a file (not the full directory path) locally available on your workstation; when the bulk upload is submitted you will be prompted for the actual file location. To simplify the bulk upload process, it's best to ensure that all files referenced in this manifest can be found in the same directory so that can be all can be selected for access with a single checkmark in the multi-select file chooser.	Each identifier should be prefixed by its type (e.g. "isbn:"). OCLC numbers not already starting with "ocn" should be prefixed with "oclc:". Valid DOIs should already be prefixed with "doi:" but if they are in the form of a URL that should also be understood. Identifiers can be separated by newlines, semicolons (";"), or pipe symbols (" ").	A sequence of characters with no newlines

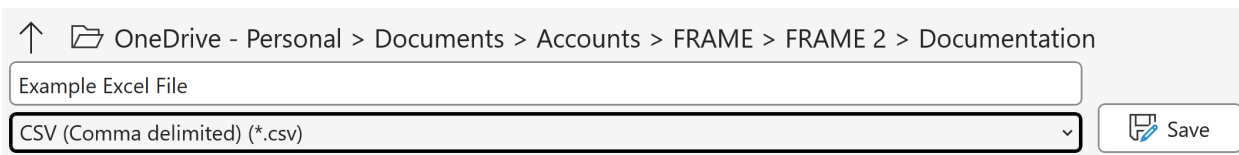
First, make a copy of your spreadsheet. Then change the headers of the columns you want to export to EMMA to be the EMMA field values: file_data, dc_identifier, dc_title, etc.

Note that EMMA expects all dates in the format YYYY-MM-DD or YYYY, and certain properties have a controlled vocabulary. If entries in your spreadsheet do not follow the controlled vocabulary for one of those fields, you will have the chance to correct them in

the EMMA manifest builder, where any non-conforming data will appear struck through with a red X icon.

Exporting Your Data

When the appropriate headers have been updated, save your file as a comma-delimited CSV file. To do that, if you're using Excel, first make sure you're not using AutoSave, and then go to File > Save As, select "CSV (Comma delimited) (*.csv)" from the drop-down list of file formats, and hit "Save."



If you're using Google Sheets, go to File > Download > Comma Separated Values (.csv).

Then go to either an existing manifest or a newly created one in your EMMA Bulk Upload interface and click the "Import" button:



Navigate to your saved CSV file and then click "Open." This will import only the columns from your spreadsheet that have the EMMA field values in their headers.

While this most likely won't have everything you need to do your bulk upload deposit, it will at least populate the manifest with all the useful and relevant information that's in your tracking spreadsheet.

The EMMA Manifest Template

The most streamlined method of all to provide EMMA metadata for deposit is to use the EMMA manifest template. It is an Excel file that has been engineered for efficiency and accuracy.

It groups the properties in the four categories listed at the beginning of this document: first the six required bibliographic properties, followed by the four required remediation properties, and then the optional bibliographic properties, and finally the optional remediation properties, with a row for each resource.

A	B	C	D	E	F	G
file_data	dc_title	dc_creator	dc_language	repository	dc_type	dc_format
OriginOfSpecies.pdf	On the Origin of Species	Charles Darwin	eng	emma	text	pdf
anatomy101.docx	Anatomy 101	Kevin Langford	eng	bookshare	text	word
UnderstandingLiterature.epub	Understanding Literature	Robin Mayhead	eng	internetArchive	text	epub

The column headers match the EMMA field names to facilitate importing into the Bulk Upload Manifest. They all have comments to provide explanations and to document which ones are required.

C	D	E	F	G
dc_creator	Heatwole, Jeffrey Lynn (jlh3rx)			dc_format
Charles Darwin	Name(s) of authors, editors, or other named contributors to the work. This field is REQUIRED for a successful submission.			pdf
Kevin Langford				word
Robin Mayhead				epub

The headers of columns that require controlled vocabularies also list the terms, and the individual cells in those columns provide a drop-down list of the terms to be selected.

G	H	I	G
dc_format	Heatwole, Jeffrey Lynn (jlh3rx)		dc_format
pdf	Format of the resource to be remediated or in which the remediated resource is provided. This field is REQUIRED for a successful submission.		pdf
word	Controlled Vocabulary List:		word
epub	braille		epub
	brf		daisyAudio
	daisy		kurzweil
	daisyAudio		pdf
	epub		grayscalePdf
	kurzweil		rtf
	pdf		tactile
			word

For properties that allow more than one term, you must put a semicolon between the values.

You can add columns for your own tracking information; these will not be imported into EMMA because they may contain Personally Identifiable Information (PII) or other information you wouldn't want to share.

The template has a tab that documents all the controlled vocabularies, divided between those that only take a single term and those that can take multiple terms.

Selection is a Single Value Only		Multi-Selections Allowed	
Source_Repository	emma	Remediated Aspects	scannedAndOcrd
	ace		proofreadCorrectedOcr
	bookshare		addedBookmarks
	hathiTrust		taggedPdf
	internetArchive		addedImageDescriptions
			structuredHeadings
Completely Remediated	true		linkedToc
	false		fixedTables
			addedMathML
Rights	publicDomain		foreignLanguageMarkup
	creativecommons		transcribersNotes
	copyright		annotations
	other		
		Accessibility Features	alternativeText
Format	braille		annotations
	brf		audioDescription
	daisy		bookmarks

This template can be exchanged between DSO staff and library staff to share the work. It can be exported to a Google Sheet with all its functionality intact, also enabling shared work.

It can be exported as a CSV file and imported into an EMMA Bulk Upload Manifest. It doesn't have to be complete; you can use the template however it is useful to you and finish the provision of metadata in the EMMA Bulk Upload Manifest after you've imported the saved CSV file.