

# WebAnno User Guide

The WebAnno Team

Version 2.3.1

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# Introduction

This guide summarizes the functionality of WebAnno from the user's perspective.



It is assumed that you plan to test the WebAnno standalone version or an already existing server installation of WebAnno. For information on how to set up WebAnno for a group of users on a server, please refer to the [Administrator Guide](#).

All materials, including this guide, are available via the [WebAnno homepage](#).

# System Requirements

Table 1. Requirements for users

Browser	Chrome or Safari
---------	------------------

Table 2. Requirements to run the standalone version

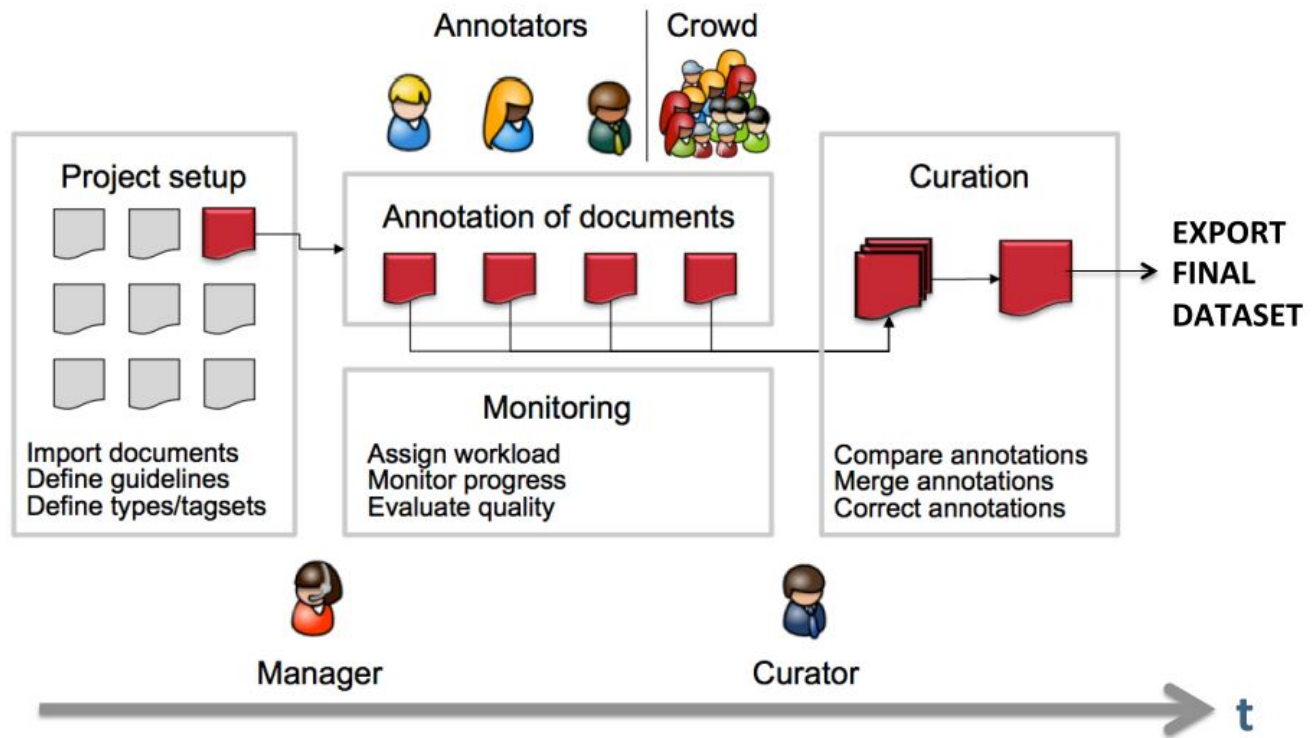
Java Runtime Environment	version 7 or higher
--------------------------	---------------------

Table 3. Requirements run a WebAnno server

Java Runtime Environment	version 7 or higher
Apache Tomcat	version 6 or higher
MySQL Server	version 5 or higher

# Workflow

The following image shows an exemplary workflow of an annotation project with WebAnno.



First, the projects needs to be set up. In more detail, this means that users are to be added, guidelines need to provided, documents have to be uploaded, tagsets need to be defined and uploaded, etc. The process of setting up and administrating a project are explicitly described in [Projects](#).

After the setup of a project, the users which were assigned with the task of annotation annotate the documents according to the guidelines. The task of annotation is further explained in [Annotation](#). The work of the annotators is managed and controlled by Monitoring. Here, the person in charge has to assign the workload. For example, in order to prevent redundant annotation, documents which are already annotated by several other annotators and need not be annotated by another person, can be blocked for others. The person in charge is also able to follow the progress of individual annotators. All these tasks are demonstrated in [Monitoring](#) in more detail. The person in charge should not only control the quantity, but also the quality of annotation by looking closer into the annotations of individual annotators. This can be done by logging in with the credentials of the annotators.

After at least two annotators finished the annotation of the same document by clicking on **Done**, the curator can start his work. The curator compares the annotations and corrects them if needed. This task is further explained in [Curation](#).

The document merged by the curator can be exported as soon as the curator clicked on "Done" for the document. The extraction of curated documents is also explained in [Projects](#).

# Installation

All-in-one version which does not require a database server or servlet container to be set up.



By default, WebAnno creates and uses an embedded database. It is not recommended to use WebAnno in such a configuration for production use. Instead, please configure WebAnno to use a database server when using it in production. For more information, please refer to the [Administrator Guide](#).

Get the standalone jar from the [WebAnnoInstFile downloads] and start it simply with a **double-click** in your file manager. WebAnno stores its data in a folder called `.webanno` (*dot webanno*) within your home folder,

You can start with the [SampleProjects example projects] to explore some of the functionalities.



If you have previously used an older version of the WebAnno standalone, make sure to clean up the temporary installation before running the new version:

- On OS X: `rm -R "$TMPDIR/winstoneEmbeddedWAR"`
- On Linux: `rm -R /tmp/winstoneEmbeddedWAR`
- On Windows: remove the `winstoneEmbeddedWAR` that should be somewhere under `C:\Users\<username>\AppData\Local\Temp`

## Optional configuration

Alternatively, you can start WebAnno from the command line, in particular if you wish to provide it with additional memory (here 1 GB) or if you want it to store its data in a different folder.

```
java -Xmx1g -Dwebanno.home=/my/webanno/home -jar webanno-XXX-standalone.jar
```

Mind to replace `/my/webanno/home` with path of a folder where WebAnno can store its data.

By default the server starts on port 8080 and you can access it via a browser at `http://localhost:8080` after you started it. You can add the parameter `--httpPort=9999` at the end of the command line to start the server on port 9999 (or choose any other port).

A full list of the command line parameters can be found in the [Winstone documentation](#).

# Upgrade

This section describes how to upgrade the standalone version of WebAnno using an embedded database. For further information on how to upgrade WebAnno, in particular the WAR version, when using a MySQL database, or older versions of WebAnno, please refer to the [Administrator Guide](#).

## Make a backup

Before any upgrade, make a copy of your WebAnno home folder.



If WebAnno is configured to use an external database, e.g. MySQL, make a backup of this database as well. See the [Administrator Guide](#) for further information.

## Upgrade from 2.0.x to 2.1.x

- clean up the temporary installation before running the new version:
  - On OS X: `rm -R "$TMPDIR/winstoneEmbeddedWAR"`
  - On Linux: `rm -R /tmp/winstoneEmbeddedWAR`
  - On Windows: remove the `winstoneEmbeddedWAR` that should be somewhere under `C:\Users\<username>\AppData\Local\Temp`
- start the new version



# Logging in

Upon navigating to the WebAnno page, the login screen opens. Please enter your credentials to proceed.



When WebAnno is started for the first time, a default user called **admin** with the password **admin** is automatically created. Be sure to change the password for this user after logging in (see [User Management](#)).

The image shows the WebAnno login interface. At the top is a red banner with a user icon and a green arrow on the left, the text "Log in" in large white letters in the center, and a globe icon with "UKP" on the right. Below the banner is a navigation bar with "WebAnno | Home" in yellow. The main area contains a "Username:" label with a text input field, a "Password:" label with a text input field, and a "Log in" button. At the bottom, a footer line reads "Technische Universität Darmstadt -- Ubiquitous Knowledge Processing Lab" followed by "-- WebAnno | 0.3.0-rc-1 (2013-06-00 19:25)".

WebAnno | [Home](#)

Username:

Password:

Technische Universität Darmstadt -- Ubiquitous Knowledge Processing Lab  
-- WebAnno | 0.3.0-rc-1 (2013-06-00 19:25)

# Main Menu

After login, you will be presented with the WebAnno overview screen. This screen can be reached at any time from within the GUI by clicking on the **Home** link in the left upper corner.

Here, you can navigate to one of the currently eight options:

- [Annotation](#) - The page to perform annotations
- [Curation](#) - Compare and merge annotations from multiple users (only for *curators*)
- [Correction](#) - Correcting automatic annotation (under development)
- [Automation](#) - Creating automatically annotated data
- [Projects](#) - Set up or change annotation projects (only for *administrators*)
- [Monitoring](#) - Allows you to see the projects, their progress and change documentstatus (only for *administrators* and *curators*)
- [User Management](#) - Allows you to manage the rights of users

Please click on the functionality you need. The individual functionalities will be explained in further chapters.

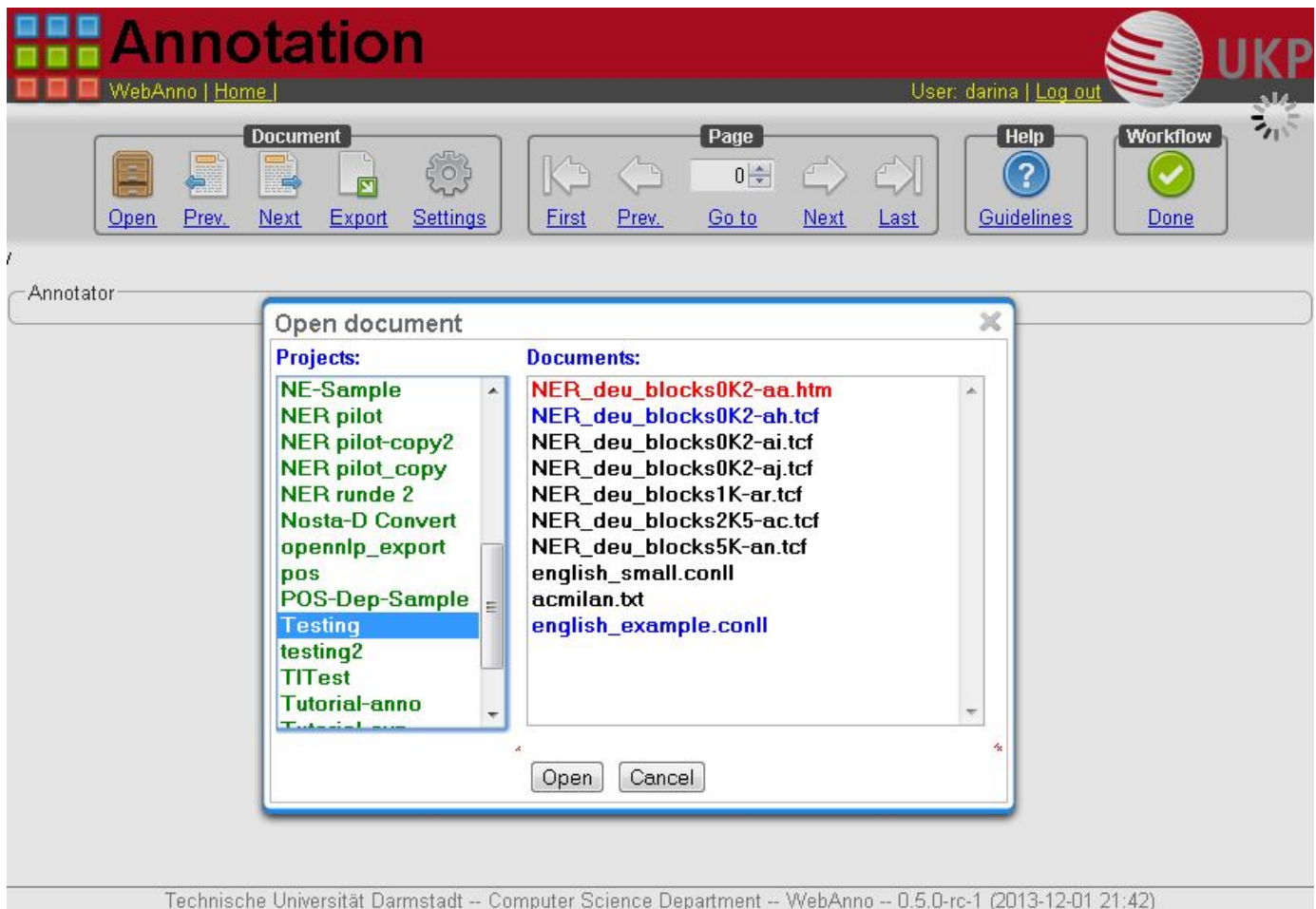
# Annotation



This functionality is only available to **annotators**, **project managers**, and **administrators**. Annotators and project managers only see projects in which they hold the respective roles.

## Opening a Document

When navigating to the **Annotation** page, a dialogue opens that allows you to select a project, and a document within the project. If you want to open a different project or document later, click on **Open** button to open the dialog.



Projects appear as folders, and contain the documents of the project. Double-click on a document to open it for annotation. Document names written in black show that the document has not been opened by the current user, blue font means that it has already been opened, whereas red font indicates that the document has already been marked as **done**.

Once the document is opened, a default of 10 sentences are loaded on the annotation page. The **Settings** button will allow you to specify the settings of you the annotation layer.

The first option allows you to select an Annotation Layer you are displayed during annotation. The second option allows you to specify the number of sentences that will be displayed on one page. The last option allows you to select auto-scroll while annotating. Auto-scroll scrolls automatically forward by putting the last annotated sentence in the middle.

## Navigation

Sentence numbers on the left side of the annotation page shows the exact sentence numbers in the document.

21	Besonders Polen kommen als Firmengründer in die Stadt , 1300 Unternehme
22	Der Wert der Kapitalanlagen ging im Vergleich zu Ende 2007 zum 30. Juni 20
	Euro zurück .
23	führt zu einer schnellen und nachhaltigen Ausweitung des Geschäfts .
24	Bereits vergangene Woche angelaufen ist Mennan Yapos " Die Vorahnung "
	Hauptrolle .
25	Die ursprünglichen Farben der Töne wandelten sich drastisch und ließen sich

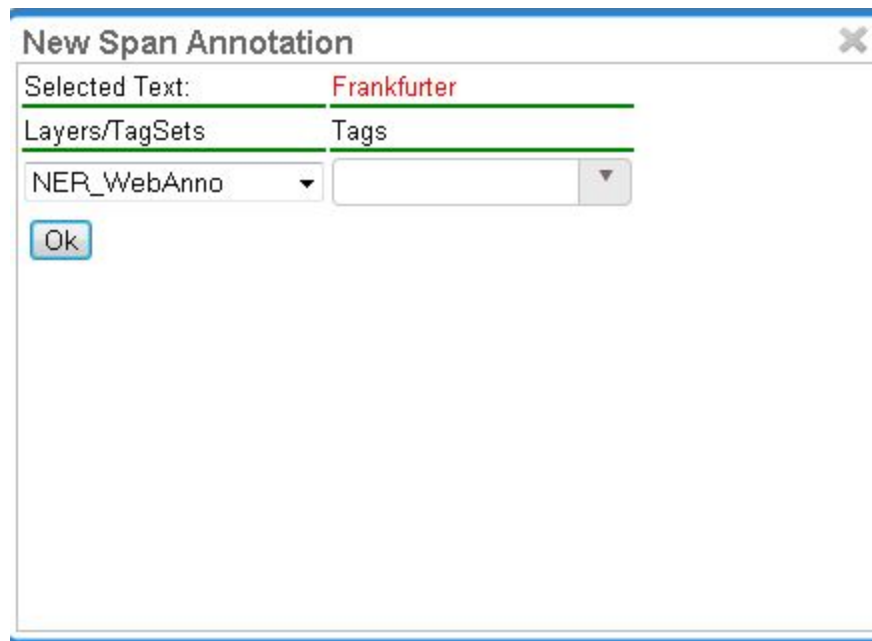
The arrow buttons **first page**, **next page**, **previous page**, **last page**, and **go to page** allow you to navigate accordingly. The **Prev.** and **Next** buttons in the **Document** frame allow you to go to the previous or next document on your project list. You can also use the following keyboard assignments in order to navigate only using your keyboard.

- **HOME**: jump to first sentence
- **END**: jump to last sentence
- **PAGE DOWN**: move to the next page, if not in the last page already
- **PAGE UP**: move to previous page , if not already in the first page
- **SHIFT+PgUp** and **SHIFT+PgDn**: go to previous/next document in project, if available

A click on the **Help** button displays the Guidelines for the tool and **The Annotator's Guide to NER-Annotation**. When you are finished with annotating or curating a document, please click on the **Done** button, so that the document may be further processed. If the button above the **Done** is a cross symbol, it means the documents has already been finished. If the symbol has a tick, it is still open.



Annotation of spans works by selecting the span, or double-clicking on a word. This opens the annotation dialog, where you can add a new annotation. The layer can be selected on the left side of the frame. The tag can be selected out of the right box, containing the tags of the tagset. One can also type in the initial letters and chose the needed tag. In the case of lemma annotation, a lemma can be typed into the box on the right.



**New Span Annotation**

Selected Text: **Frankfurter**

Layers/TagSets: Tags

NER\_WebAnno

Ok

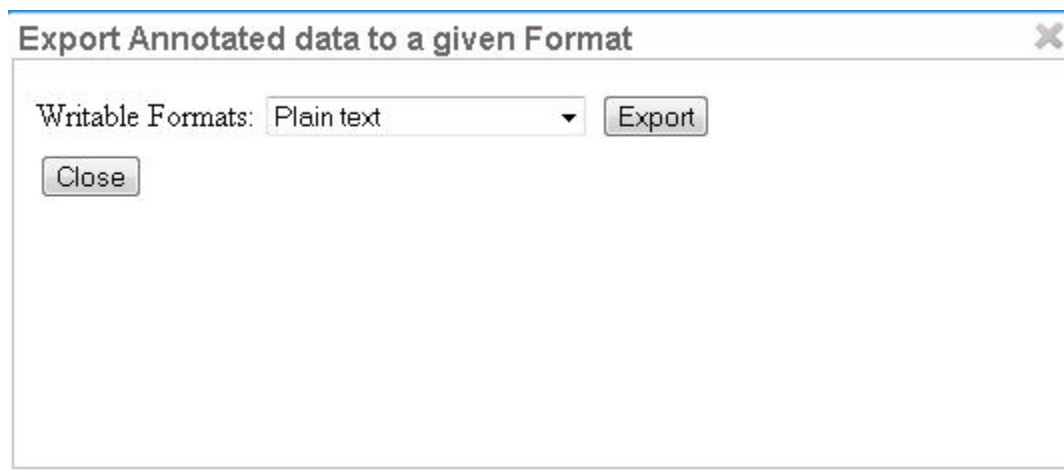
To change or delete an annotation, double-click on the annotation (span or link annotations).

Link annotations (between POS tags) are created by selecting the starting POS-tag, then dragging the arrow to connect it to its target POS tag. All possible targets are highlighted.



## Export

Annotations are always immediately persistent in the backend database. Thus, it is not necessary to save the annotations explicitly. Also, losing the connection through network issues or timeouts does not cause data loss. To obtain a local copy of the current document, click on **export** button. The following frame will appear:



**Export Annotated data to a given Format**

Writable Formats: Plain text

Export

Close

Choose your preferred format. Please take note of the facts that the plain text format does not contain

any annotations and that the files in the binary format need to be unpacked before further usage. For further information on the formats provided in WebAnno, please consult the corresponding chapter [OutputFormat WebAnno's supported formats].

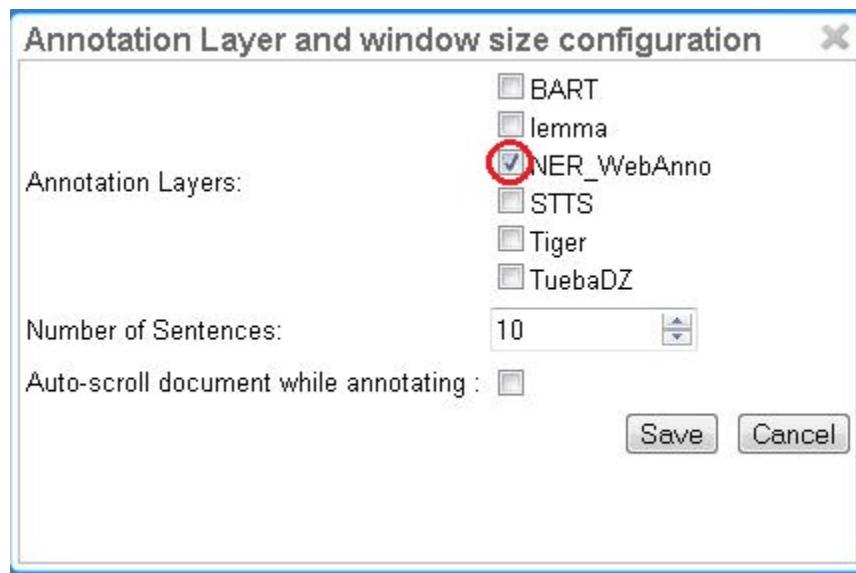
The document will be saved to your local disk, and can be re-imported via adding the document to a project by a project administrator. Please export your data periodically, at least when finishing a document or not continuing annotations for an extended period of time.

## Layers

Concerning annotation, WebAnno offers six pre-defined layers: Span annotations support NE, lemma, POS, and co-reference. Several annotation layers may be selected.

Moreover, additional custom layers may be created, as described in [Layers](#) in detail.

For example, for NE annotation, select the options as shown below (red check mark):



NE annotation can be chosen from a tagset and can span over several tokens within one sentence. Nested NE annotations are also possible (in the example below: "Frankfurter" in "Frankfurter FC").

An die Erfolge des LOCderiv Berliner Fußballclubs konnte der ORG LOCderiv Frankfurter FC Vorwärts jedoch nicht mehr anknüpfen .

Lemma annotation, as shown below, is freely selectable over a single token.

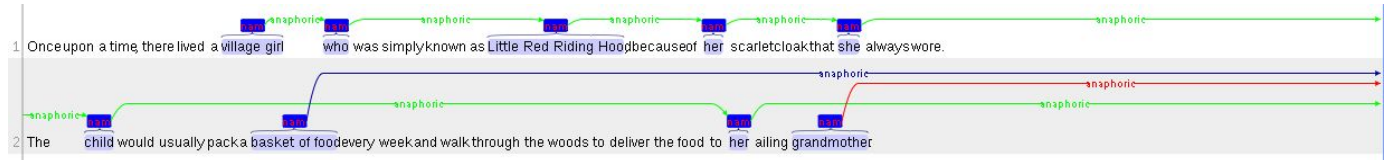
Der Ordereingang liegen lag dann auch über dem Wert des Vorquartal und dem des Vorjahr .

POS can be chosen over one token out of a tagset.



Co-reference annotation can be made over several tokens within one sentence. A single token sequence have several co-ref spans simultaneously.

The other kind of annotation that is supported by WebAnno is Arc. The arcs can be made within one sentence and their types are chosen out of a tagset. Dependency arcs are defined between POS. Every POS is allowed to have only one head. Co-reference arcs are defined between co-reference-anchors. All transitively combined anchors build a colour-coded lexical chain.





# Curation




This functionality is only available to **project managers** (managers of existing projects), **curators**, and **administrators**. Curators and project managers only see projects in which they hold the respective roles.

When navigating to the **Curation Page**, the procedure for opening projects and documents is the same as in [Annotation](#). The **Page** navigation is also equivalent to [Annotation](#).

In the left frame of the window, named **Sentences**, the sentences of the chosen document are displayed. The ones shaded in red created a conflict in annotation.


If you want to see the annotations that were made in a sentence, you have to click on the sentence. Then on the right side of the window, the annotations are displayed.





Curation

WebAnno | [Home](#)



UKP

User: darina | [Log out](#)

Document

Open

Re-create

Merge

Prev

Next

Export

Settings

Page

First

Prev

Go to 10

Next

Last

Help

Guidelines

Workflow

Done

NER\_runde\_2/NER\_deu\_blocks1K-an.tcf

showing 1-10 of 1000 sentences

Sentences

1 Santa Cruz/Madrid - So kalt wie im Münsterland ist es zwar nicht .

2 \* Ilse Weber : Wann wohl das Leid ein Ende hat .

3 Kerstin Holm schreibt über einen höchst bedenklichen Anstieg der Aidsfälle im demografisch ohnehin schon ausgezehnten Russland .

4 Dabei spielen der Einfluss Chinas und Indiens sowie Russlands auf Afghanistan-Lösungen eine zunehmende Rolle .

5 Allerdings musste er dem durch den Zusammenschluss mit der USPD -Jugend gestärkten linken Flügel Rechnung tragen und wählte die Taktik des ausgleichenden Kompromisses .

Merged

2 Bleicher , Gerlingen 1991 , ISBN 3-88350-718-0 \* Ilse Weber : Wann wohl das Leid ein Ende hat .

User: anno6

2 Bleicher , Gerlingen 1991 , ISBN 3-88350-718-0 \* Ilse Weber : Wann wohl das Leid ein Ende hat .

User: anno7

2 Bleicher , Gerlingen 1991 , ISBN 3-88350-718-0 \* Ilse Weber : Wann wohl das Leid ein Ende hat .

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The frame called **Merged** shows the result of the default merge the conflicting annotations. Below it, the annotated sentences are shown in separate frames, titled with the names of the annotators. By clicking on an annotation in one of the annotator's frames, you accept the annotation and merge it into the **Merged** view. The sentence in the merged frame can be treated like a sentence in the **Annotation**. By selecting a word with a click you are able to produce new annotations, by clicking on an annotation, you are able to change its classification or delete it. The different states of the annotation agreement are marked by different colours. If the annotations were the same, they are marked grey in the lower frames and light blue in the merged frame. If the annotations are disparate, the markings are dark blue in the lower frames. By default, they are not taken into the merged file. If you choose one annotation to be right by clicking on it, the chosen annotation will turn green in the frame of the corresponding annotator. Also, the annotation will say **USE** next to the classification. The annotations which were not chosen to be in the merged file are marked dark blue. The annotations which were wrongly classified are marked in red.

Table 4. Explanation of color codess

Light Blue (in upper frame)	final annotation
Dark Blue (in the lower frame)	not chosen annotation
White (in lower frame)	chosen annotation
Red (in lower frame)	Wrong annotation (same span, other type).

# Correction

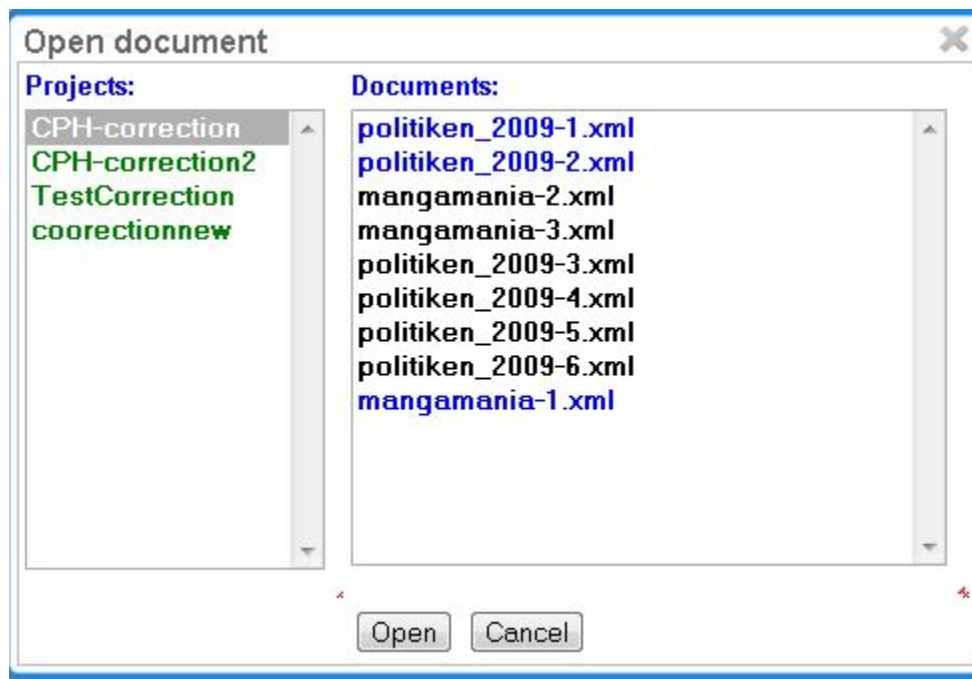


This functionality is only available to **annotators**, **project managers**, and **administrators**. Annotators and project managers only see projects in which they hold the respective roles.

In this page, already annotated documents may be checked, corrected and enhanced.

Before being able to see and correct documents, make sure to have chosen *correction* when creating your project in projects. The instruction to do so is on the following page: [Projects](#). Also make sure that the documents you upload are already annotated.

After clicking on the **Correction** symbol on the main page, the Correction page is opened. In the appearing frame, which is the left one in the image below, the user has to choose a project first.



Afterwards the documents assigned to him are displayed. Now he may choose a document. Just like in [Annotation](#) and [Curation](#), the colour of the document names signals the following: black- unopened document, blue- opened document and red - document finished.

After having chosen the document, two frames are displayed.

2

	PER	ORG
1	Schartau	sagte dem " Tagesspiegel "
2	Fischer	sei " in einer Weise aufgetreten , die alles andere als überzeugend war "
3	Firmengründer Wolf Peter Bree	arbeitete Anfang der siebziger Jahre als Möbelvertreter , als er einen fliegenden Händler aus dem Libanon traf .
4	Ob sie dabei nach dem Runden Tisch	am 23. April in Berlin durch ein pädagogisches Konzept unterstützt wird , ist allerdings zu bezweifeln .
5	Bayern München	ist wieder alleiniger Top- Favorit auf den Gewinn der deutschen Fußball-Meisterschaft .
6	Dabei hätte der tapferere Schlussmann	allen Grund gehabt , sich viel früher aufzuregen .

## -User: Suggestion

1 Schartau sagte dem " Tagesspiegel " vom Freitag , Fischer sei " in einer Weise aufgetreten , die alles andere als überzeugend war " .

2 Firmengründer Wolf Peter Bree arbeitete Anfang der siebziger Jahre als Möbelvertreter , als er einen fliegenden Händler aus dem Libanon traf .

3 Ob sie dabei nach dem Runden Tisch am 23. April in Berlin durch ein pädagogisches Konzept unterstützt wird , ist allerdings zu bezweifeln .

4 Bayern München ist wieder alleiniger Top- Favorit auf den Gewinn der deutschen Fußball-Meisterschaft .

5 Bayern hätte der tanferne Schlussmann allen Grund gehabt sich viel früher aufzuregen.

The colouring of the annotation signals the same as in [Curation](#).

# Automation



This functionality is only available to **annotators**, **project managers**, and **administrators**. Annotators and project managers only see projects in which they hold the respective roles.

This functionality gives the possibility to choose features and documents, which can be used for training of all layers that are offered in WebAnno (lemma, NER, POS and co-ref).

## Setup

After clicking on **Create Project** on the [Projects](#) page, select **automation** as your project type. The detailed description may be found in [Projects](#).

The documents, that are to be annotated, have to be uploaded in the frame **Documents**. Please make sure that the chosen format corresponds to the format of the files you are uploading.

Details Users **Documents** Layers Tagsets Guidelines Export/Import Automation

Import new documents

Format: Weblicht TCF Format

Files:  Keine Datei gewählt

Documents

- NER\_deu\_blocks1K-an.tcf
- NER\_deu\_blocks1K-ao.tcf

To manage the automation process, choose the Automation frame. The following frame will appear:

First choose your target layer in the **Select automation layer** frame. If you want to train a non-custom layer, please make sure you created or imported it in the Layer frame (for instructions to do so, see [Projects](#)).

Here you may choose the format of the target layer and optionally add some feature layers on which you want to train.

In the tab **Target layer** you may upload training files containing the target layer in WebAnno Export formats (WebAnno CPH TEI reader, plain text, binary format, XMI format, old WebAnno Format, WebAnno Format, Weblicht TCF Format, for more information on these formats, see [https://code.google.com/p/webanno/wiki/Format?ts=1407336468&updated=Format Format](https://code.google.com/p/webanno/wiki/Format?ts=1407336468&updated=Format%20Format))).

In the next tab **TAB-SEP target**, you may upload training files containing the target layer in a tab-separated format, which is structured by writing each single word in a line together with its target tag, separated by a tab. Sentences are separated by blank lines.

The same goes analogically for the feature layers. The **Other layers** tab gives the possibility to upload WebAnno Export formats and choosing the layers that are to be used in training in the format window. The **TAB-SEP feature** tab gives the possibility to upload files in the above described tab-separated format, containing the feature tags in the second column. Every file will be regarded as one separate feature.

After choosing the training files, uploading them in the right format and importing them (by clicking on **Import**), every file will be displayed in the corresponding tab in the frame **Documents**. Click on the button **Start Automation** on the left, when you have uploaded your training data. Be prepared to wait for some time, as automation is a non-trivial process.

You can see that the automation has finished either by the fact that the **Start Automation** button is enabled again, or on the [Monitoring](#) page, by choosing the project in [Monitoring](#) and looking at the progress shown in the **Training results /status** frame.

## Annotation

To see the tags that were automatically created during the previously described, go to **Home** and choose the **Automation** page. Then select a project and a file, analogically to Annotation. The page, which is demonstrated below will be displayed. The navigation, export and the marking of finished documents is the same as in [Annotation](#).

The screenshot displays the CLARIN-D Automation interface. At the top, a red header bar contains the 'Automation' title and a navigation menu with 'WebAnno | Home |'. On the right, it shows 'User: darina | Log out' and the CLARIN-D logo. Below the header is a toolbar with two main sections: 'Document' (containing 'Open', 'Prev.', 'Next', 'Export', and 'Settings' buttons) and 'Page' (containing 'First', 'Prev.', 'Go to 1', 'Next', and 'Last' buttons). To the right of the 'Page' section are 'Help' (with a question mark icon and 'Guidelines' link) and 'Workflow' (with a 'Done' button) buttons. Below the toolbar, the document name 'STTS-auto/schumacher' is displayed, followed by 'showing 1-3 of 35 sentences'. The main area is divided into two horizontal frames. The top frame, labeled 'Annotation', shows three sentences with their corresponding tags: 1. Michael Schumacher ist ein außergewöhnlicher Sportler. (NE NE VAFIN ART ADIA NN \$); 2. Sieben Mal holt er den Titel in der Königsklasse des Motorsports. (CARD NN VVFIN PPER ART NN APPR ART NN ART NN \$); 3. Neben der Rennpiste führt er ein Leben ohne Skandale, sucht aber auch dort das Risiko. (APPR ART NN VVFIN PPER ART NN APPR NN \$ VVFIN ADV ADV ADV ART NN \$). The bottom frame, labeled 'User: Suggestion', shows the same three sentences with the same tags, but the tags are highlighted in blue, indicating they are suggestions for selection.

In the lower part, you see two horizontal frames, the lower one showing the automatically created annotation. By clicking on the tags, they are selected and therefore appear in the upper frame **Annotation**. You may see that selected tags turn grey in the **Automation** frame and blue in the **Annotation** frame. You may also add new tags to the **Annotation**, just like on the Annotation page.

# Projects



This functionality is only available to **project managers** (managers of existing projects), **project creators** (users with the ability to create new projects), and **administrators**. Project managers only see projects in which they hold the respective roles. Project creators only see projects in which they hold the project manager role.

This is the place to specify/edit annotation projects. You can either select one of the existing projects for editing, or click **Create Project** to add a project.

Although correction and automation projects function similarly, the management differs after the creation of the document. For further description, look at the corresponding chapters [Automation](#), [Correction](#).

Only superadmins are allowed to create projects. Click on **Create Project** to create a new project.

Projects

- acl2013-Demo-correction
- collection2
- copy\_of\_CPH-correction
- copy\_of\_demo-annotation
- copy\_of\_demo-correction
- copy\_of\_NER\_runde\_2
- copy\_of\_Tutorial-exp
- coref-demo
- corr-tueb1
- CorrectionTest
- Correction\_test2
- CPH-annotation
- CPH-correction
- CrowdSourceTest2
- CrowdTest
- CrowdTut
- CrowdTutorial
- CrowdTut\_ProjektR2
- demo-anno-chunk
- demo-anno-coref
- demo-anno-de
- demo-anno-en
- demo-anno-lang-unicode
- demo-anno-short
- demo-anno-sv
- demo-annotation
- demo-corr-en
- demo-correction
- demo-crowd

Create project

Import Project

Datei auswählen Keine Datei ausgewählt

Import project

After doing so, a new pane is displayed, where you can name and describe your new project. It is also important to choose the kind of project you want to create. You have the choice between annotation, automation and correction. Please do not forget to save.



**Details**

General

**Name:**

**Description:**

Project Types

☒ annotation

☐ automation

☐ correction

Save Delete

After saving the details of the new project, it can be treated like any other already existing one. Also, you are displayed a new pane with many options to organize it.

**Details** Users Documents Layers Tagsets Guidelines Export/Import

General

**Name:** Relation-demo

**Description:**

Project Types

☒ annotation

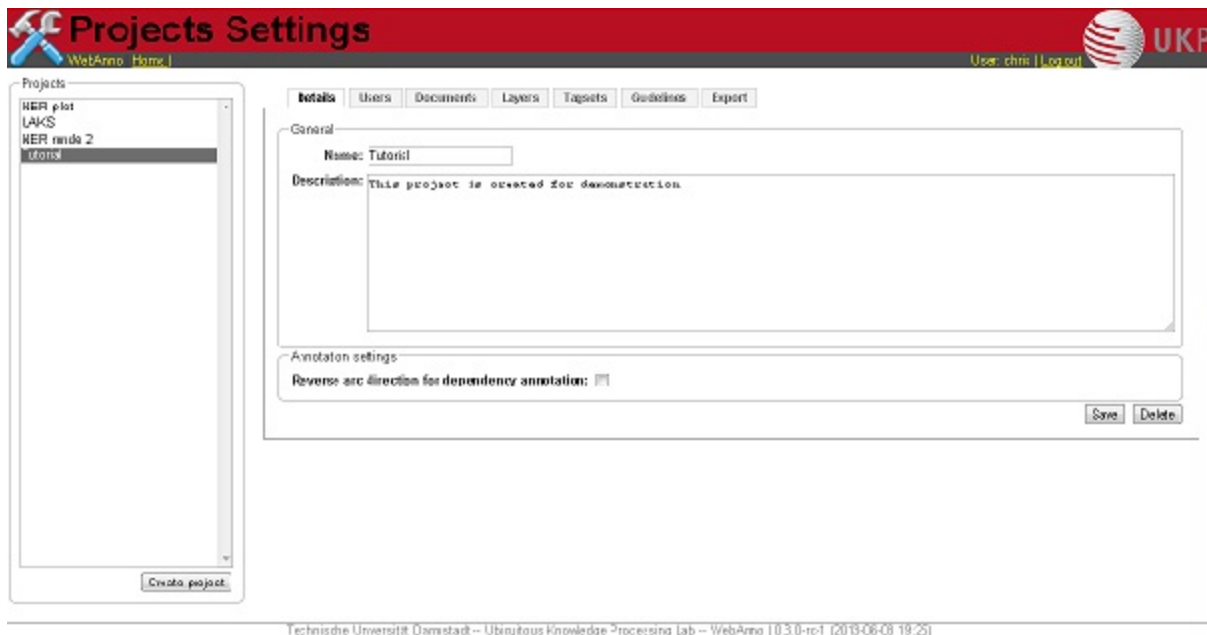
☐ automation

☐ correction

Save Delete

To delete a project, click on it in the frame **Details**. Then you are displayed the details of the project. Click on **Delete**.

The pane with the options to organize and edit a project, as described above, can also be reached by clicking on the desired project in the left frame.



By clicking on the tabs, you can now set up the chosen project.

## Users

After clicking on **Users**, you are displayed a new pane in which you can add new users by clicking on the button **Add User**. After doing so, you get a list of users in the system which can be added to the project. By making a tick in front of the log in you can chose a new user.



Please do not forget to save after choosing all members of the project. Close the pane by clicking on **Cancel**. The rights of users created like this are that of an annotator. If you want to expand the user's status, you can do so by clicking on the user and then on **Change permission**. The following frame will pop up.



After ticking the wished permissions, click update. To remove a user, click on the login and then **Remove User**.

## Documents

To add or delete documents, you have to click on the tab **Documents** in the project pane. Two frames will be displayed. In the first frame you can import new documents.



Import new documents

**Format:** XML format ▼

**Files:**  Keine ausgewählt

Choose a document by clicking on **Choose files**. Please mind the format, which you have to choose above. Then click on **Import document**. The imported documents can be seen in the frame below. To delete a document from the project, you have to click on it and then click on **Delete** in the right lower corner.

## Layers

In WebAnno, all annotations belong to an annotation **layer**. Each layer has a structural **type** that defines if it is a **span**, a **relation**, or a **chain**. It also defines how the annotations behave and what kind of features it carries.

### Creating a custom layer

This section provides a short walkthrough on the creation of a custom layer. The following sections act as reference documentation providing additional details on each step. In the following example, we will create a custom layer called **Sentiment** with a feature called **Polarity** that can be **negative**, **neutral**, or **positive**.

#### 1. Create the layer *Sentiment*

- Go to the **Layers** tab in your project's settings and press the **Create layer** button
- Enter the name of the layer in **Layer name**: *Sentiment*
- Choose the **type** of the layer: *Span*
- Enable **Allow multiple tokens** because we want to mark sentiments on spans longer than a single token.
- Press the **Save layer** button

#### 2. Create the feature *Polarity*

- Press the **New feature** button

- Choose the **type** of the feature: *uima.cas.String*
- Enter the **name** of the feature: *Polarity*
- Press **Save feature**

### 3. Create the tagset *Polarity values*

- Go to the **Tagsets** tab and press **Create tagset**
- Enter the **name** of the tagset: *Polarity values*
- Press **Save tagset**
- Press **Create tag**, enter the **name** of the tag: *negative*, press **Save tag**
- Repeat for *neutra* and *positive*

### 4. Assign the tagset *Polarity values* to the feature *Polarity*

- Back in the **Layers** tab, select the layer: *Sentiment* and select the feature: *Polarity*
- Set the **tagset** to *Polarity values*
- Press **Save feature**

Now you have created your first custom layer.

## Built-in layers

WebAnno comes with a set of built-in layers that allow you to start annotating immediately. Also, many import/export formats only work with these layers as their semantics are known to WebAnno. For this reason, the ability to customize the behaviors of built-in layers is limited and it is not possible to extend them with custom features.

Table 5. Built-in layers

Layer	Type	Enforced behaviors
Chunk	Span	Lock to multiple tokens, no stacking, no sentence boundary crossing
Coreference	Chain	<i>(no enforced behaviors)</i>
Dependency	Relation over POS,	No stacking, no sentence boundary crossing
Lemma	Span	Locked to token offsets, no stacking, no sentence boundary crossing
Named Entity	Span	<i>(no enforced behaviors)</i>
Part of Speech (POS)	Span	Locked to token offsets, no stacking, no sentence boundary crossing

The colouring of the layers signal the following:

Table 6. Color legend

Color	Description
green	built-in annotation layer, enabled
blue	custom annotation layer, enabled
red	disabled annotation layer

To create a custom layer, select **Create Layer** in the **Layers** frame. Then, the following frame will be displayed.

## Properties

Properties

Layer name:

Description:

Enabled: ☒

Technical Properties

Type:

Attach to layer:

Behaviors

Lock to token offsets: ☒

Allow stacking: ☐

Allow crossing sentence boundary: ☐

Allow multiple tokens: ☐

Save layer

Feature overview

```
[referenceRelation] [ de.tudarm
[referenceType] [ de.tudarmsta
```

New feature

Table 7. Properites

Property	Description
Layer name	The name of the layer (obligatory)
Description	A description of the layer. This information will be shown in a tooltip when the mouse hovers over the layer name in the annotation detail editor panel.
Enabled	Whether the layer is enabled or not. Layers can currently not be deleted, but they can be disabled.



When a layer is first created, only ASCII characters are allowed for the layer name because WebAnno derives an internal UIMA type name from the initial layer name. After the layer has been created, the name can be changed arbitrarily. The internal UIMA type name will not be updated.

Properties

Layer name:

Description:

Enabled: ☒

Technical Properties

Type:  Choose One ▾

Attach to layer:  -NONE- ▾

Behaviors

Lock to token offsets: ☒

Allow stacking: ☐

Allow crossing sentence boundary: ☐

Allow multiple tokens: ☐

Save layer

## Technical Properties

In the frame **Technical Properties**, the user may select the type of annation that will be made with this layer: span, relation or chain.

Table 8. Technical Properites

Property	Description
Type	The type of the layer (obligatory, see below)
Attach to layer ( <i>Relations</i> )	Determines which span layer a relation attaches to. Relations can only be created between annotations of this span layer.

The layer type defines the structure of the layer. WebAnno supports three different types.

Table 9. Layer types

Type	Description	Example
Span	Continous segment of text delimited by a start and end character offset. The example shows two spans.	[project_layer_type_span]

Type	Description	Example
Relation	Binary relation between two spans visualized as an arc between spans. The example shows a relation between two spans.	[project_layer_type_relation]
Chain	Directed sequence of connected spans in which each span connects to the following one. The example shows a single chain consisting of three connected spans.	[project_layer_type_chain]

For relation annotations the type of the spans which are to be connected can be chosen in the field **Attach to layer**. Here only non-default layers are displayed. To create a relation first the span annotation needs to be created.



Currently for each span layer there can be at most one relation layer attaching to it.



It is currently not possible to create relations between spans in different layers. For example if you define span layers called **Men** and **Women**, it is impossible to define a relation layer **Married to** between the two. To work around this limitation, instead create a single span layer **Person** with a feature **gender** what you can set to **Man** or **Woman**. Then you can define a relation layer **Married to** attaching to the **Person** layer.

## Behaviours

Table 10. Behaviors

Behavior	Description
Readonly	The layer may be viewed but not edited.
Lock to token offsets ( <i>span, chain</i> )	Annotation boundaries are forced to coincide with token boundaries. If the selection is smaller than a token, the annotation is expanded to the next larger token covering the selection. If the selection covers multiple tokens, the annotation is reduced to the first covered token.
Allow multiple tokens ( <i>span, chain</i> )	Like <i>Lock to token offsets</i> except that the annotation may cover multiple tokens. If this is enabled, then <i>Lock to token offsets</i> is automatically disabled.

Behavior	Description
Allow stacking	Allow multiple annotations in this layer to be made at exactly the same position. If this option is disabled, a new annotation made at the same location as an existing annotation will replace the existing annotation.
Allow crossing sentence boundary ( <i>chain</i> )	Allow annotations to cross sentence boundaries.
Behave like a linked list	Controls what happens when two chains are connected with each other. If this option is <b>disabled</b> , then the two entire chains will be merged into one large chain. Links between spans will be changed so that each span connects to the closet following span - no arc labels are displayed. If this option is <b>enabled</b> , then the chains will be split if necessary at the source and target points, reconnecting the spans such that exactly the newly creation connection is made - arc labels are available.



In order to create sub-token annotations, both **Lock to token offsets** and **Allow multiple tokens** need to be disabled.

## Features

Feature details

Type: ? uima.cas.String
Feature name: ?
Description:
Enabled: ? ☒
Show: ? ☒
TagSet: ? -NONE-

Save feature

In this section, features and their properties can be configured.

Table 11. Feature properties

Property	Description
Type	The type of the feature (obligatory, see below)
Name	The name of the feature (obligatory)
Description	A description that is shown when the mouse hovers over the feature name in the annotation detail editor panel.



Property	Description
Enabled	Features cannot be deleted, but they can be disabled
Show	Whether the feature value is show in the annotation label. If this is disabled, the feature is only visible in the annotation detail editor panel.
Remember	Whether the annotation detail editor should carry values of this feature over when creating a new annotation of the same type. This can be useful when creating many annotations of the same type in a row.
Tagset ( <i>String</i> )	The tagset controlling the possible values for a string feture.

WebAnno supports the following feature types.

Table 12. Feature types

Type	Description
uima.cas.String	Textual feature that can optionally be controlled by a tagset. It is rendered as a text field or as a combobox if a tagset is defined.
uima.cas.Boolean	Boolean feature that can be true or false and is rendered as a checkbox.
uima.cas.Integer	Numeric feature for integer numbers.
uima.cas.Float	Numeric feature for decimal numbers.
uima.tcas.Annotation ( <i>Span layers</i> )	Link feature that can point to any arbitrary span annotation
<i>other span layers (Span layers)</i>	Link feature that can point only to the selected span layer.



Please take care that when working with non-custom layers, they have to be ex- and imported, if you want to use the resulting files in e.g. correction projects.

## Tagsets

To administer the tagsets, click on the tab **Tagsets** in the project pane.

Tagsets

[coreference type] BART

[named entity] **NER\_WebAnno**

[pos] STTS

[dependency] Tiger

[coreference] TuebaDZ

Create tagset

Import tagsets

Format: JSON

Files: 

Dateien auswählen

 Keine ausgewählt

Import tagset

To administer one of the existing tagsets, select it by a click. Then, the tagset characteristics are displayed.

Tagsets

[coreference type] BART

[named entity] **NoSta-D**

[pos] STTS

[dependency] Tiger

[coreference] TuebaDZ

Create tagset

Import tagsets

Format: JSON

Files: 

Datei auswählen

 Keine Datei ausgewählt

Import tagset

Tagset details

Name: NoSta-D

Language: de

Layer: named entity

Description: Named Entity annotation  
as defined by F-AG7 KP2, Mark Reznicek and Burkhard Dieterle

Export as: JSON

Export tagset

Save tagset

Delete tagset

Tags

UNCLEAR

LOC

LOCderiv

LOCpart

ORG

ORGderiv

ORGpart

OTH

Create tag

Tag details

Name:

Description:

Save tag

Delete tag

In the Frame **Tagset details**, you can change them, export a tagset, save the changes you made on it or delete it by clicking on **Delete tagSet**. To change an individual tag, you select one in the list displayed in the frame **Tags**. You can then change its description or name or delete it by clicking **Delete tag** in **Tag details**. Please do not forget to save your changes by clicking on **Save tag**. To add a new tag, you have to click on **Create tag** in **Tag details**. Then you add the name and the description, which is optional. Again, do not forget to click **Save tag** or else the new tag will not be created.

To create an own tagset, click on **Create tagset** and fill in the fields that will be displayed in the new frame. Only the first field is obligatory. Adding new tags works the same way as described for already existing tagsets. If you want to have a free annotation, as it could be used for lemma or meta

information annotation, do not add any tags.



Tagset details

**Name:**

**Language:**

**Description:**

**Create Tag?:** ☒

**Export as:** JSON

To export a tagset, choose the format of the export at the bottom of the frame and click **Export tagset**.

## Guidelines

To add or delete guidelines, which will be accessible by users in the project, you have to select the tab **Guidelines**. Two new frames will be displayed. To upload guidelines, click on **Choose files** in the first frame – **Add guideline document**, select a file from your local disc and then click **Import guidelines**.



Add guideline document

**Guideline document:**  No file chosen

Uploaded guidelines are displayed in the second frame – **Guideline documents**. To delete a guideline document, click on it and then on **Delete** in the right lower corner of the frame.

## Import



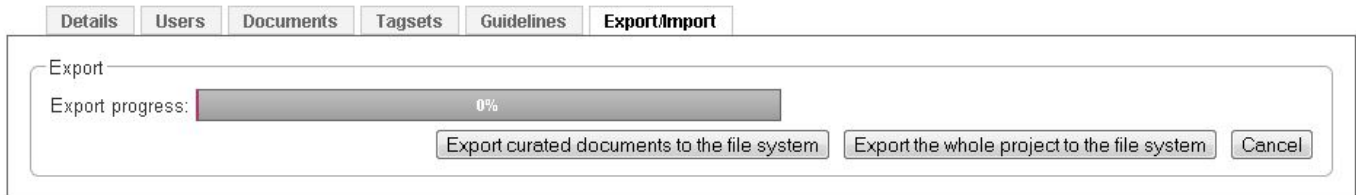
This functionality is only available to **administrators**.

Projects are associated with the accounts of users that act as project managers, annotators, or curators. When importing a previously exported project, you can choose to automatically **generate missing users** (enabled by default). If this option is disabled, projects still maintain their association to users by name. If the respective user accounts are created manually after the import, the users will start showing up in the projects.



Generated users are disabled and have no password. The must be explicitly enabled and a password must be set before the users can log in again.

# Export



WebAnno offers two modes of exporting projects:

- **Export the whole project** for the purpose of creating a backup, of migrating it to a new WebAnno version, of migrating to a different WebAnno instance, or simply in order to reimport it as a duplicate copy.
- **Export curated documents** for the purpose of getting an easy access to the final annotation results. If you do not have any curated documents in your project, this export option is not offered.

The format of the exported annotations is selected using the **Format** drop-down field. When **AUTO** is selected, the file format corresponds to the format of the source document. If WebAnno has not write support for the source format, the file is exported in the WebAnno TSV format instead.



Do not leave the export page after initiating an export before the progress bar is complete or your WebAnno instance can become locked until it is restarted!



Some browsers automatically extract ZIP files into a folder after the download. Zipping this folder and trying to re-import it into WebAnno will generally not work because the process introduces an additional folder within the archive and WebAnno is unable to handle that. The best option is to disable the automatic extraction in your browser. E.g. in Safari, go to **Preferences** → **General** and disable the setting **Open "safe" files after downloading**.

When exporting a whole project, the structure of the exported ZIP file is as follows:

- **<project ID>.json** - project metadata file
- **annotation**
  - **<source document name>**
    - **<user ID>.XXX** - file representing the annotations for this user in the selected format.
- **annotation\_ser**
  - **<source document name>**
    - **<user ID>.ser** - serialized CAS file representing the annotations for this user
- **curation**
  - **<source document name>**
    - **CURATION\_USER.XXX** - file representing the state of curation in the selected format.
    - **CORRECTION\_USER.XXX** - *correction* project: original document state, *automation* project automatically generated suggestions
- **curation\_ser**
  - **<source document name>**
    - **CURATION\_USER.ser** - serialized UIMA CAS representing the state of curation
    - **CORRECTION\_USER.ser** - *correction* project: original document state, *automation* project automatically generated suggestions
- **log**
  - **<project ID>.log** - project log file
- **source** - folder containing the original source files



The files under **annotation** and **curation** are provided for convenience only. They are ignored upon import. Only the **annotation\_ser** and **curation\_ser** folders are relevant for import.

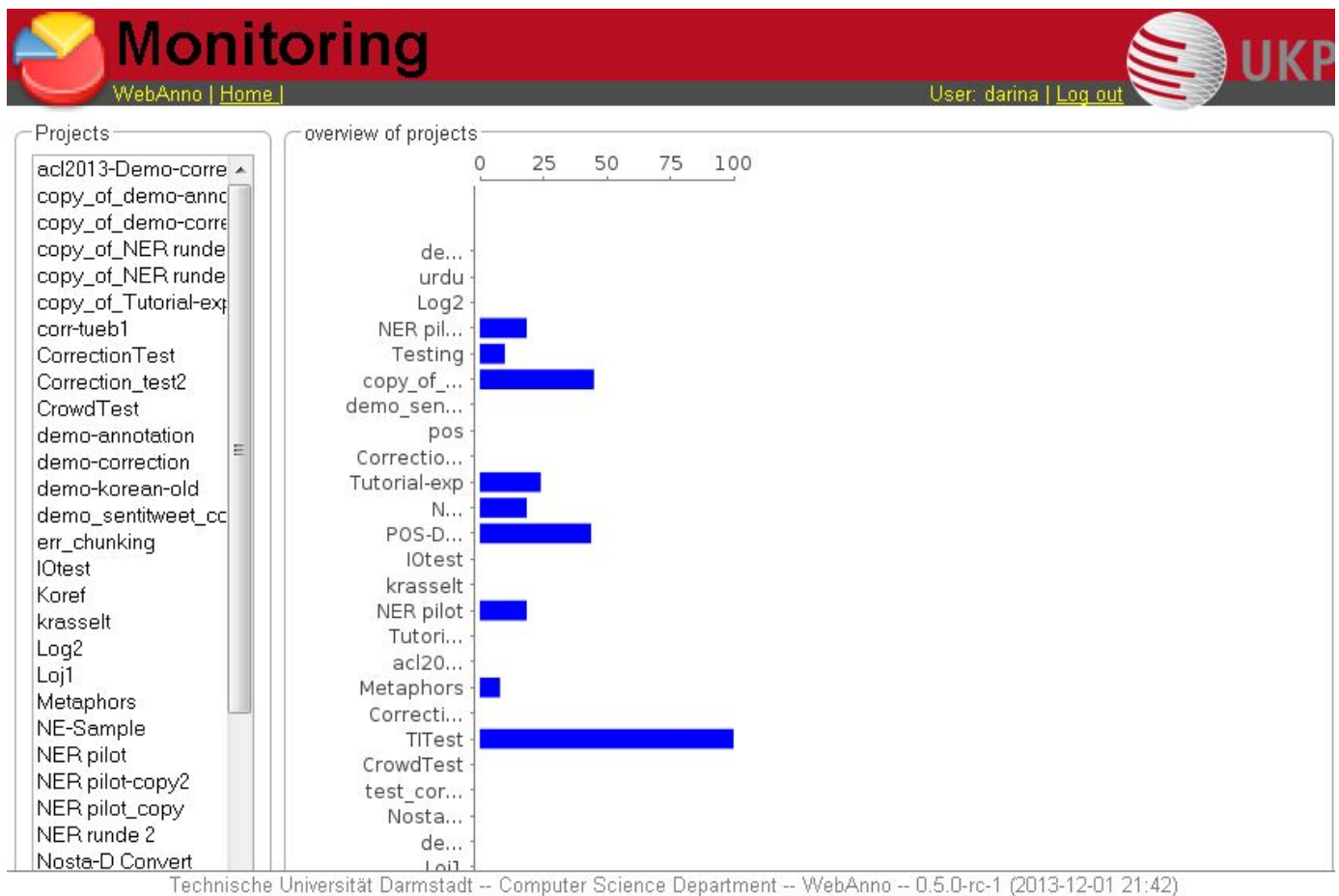
Currently, WebAnno does not allow the user to choose a specific format for bulk-exporting annotations. However, [this mailing list post](#) describes how **DKPro Core** can be used to transform the UIMA CAS formats into alternative formats.

# Monitoring

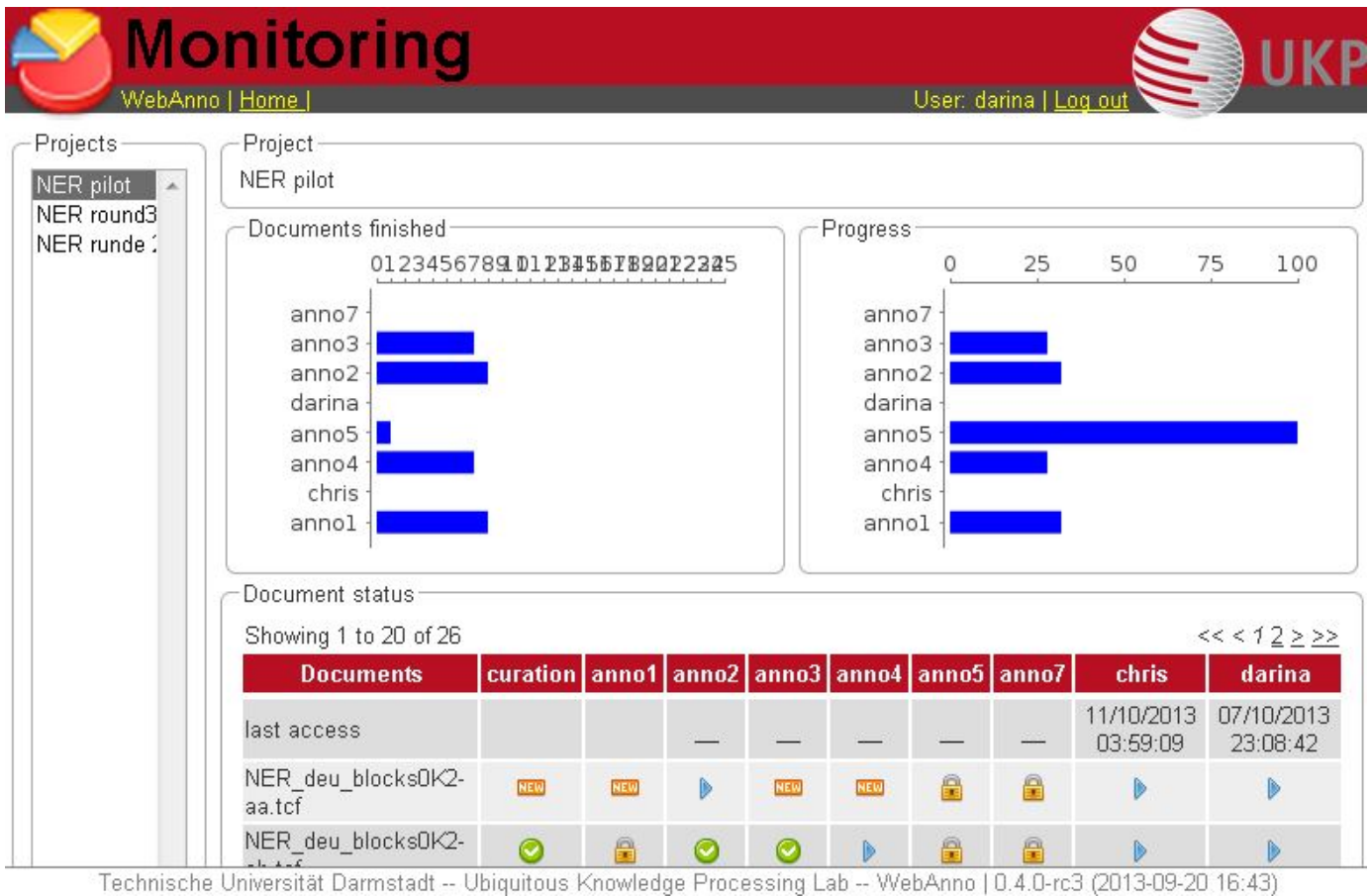


This functionality is only available to **project managers** (managers of existing projects), **curators**, and **administrators**. Curators and project managers only see projects in which they hold the respective roles.

As an administrator, you are able to observe the progress and document status of projects you are responsible for. Moreover, you are able to see the time of the last login of every user and observe the agreement between the annotators. After clicking on **Monitoring** in the main menu, the following page is displayed:








In the right frame, the overall progress of all projects is displayed. on the left frame one sees all projects, that one has an administrator role in. By clicking on one of the projects on the left, it may be selected and the following view is opened:



The percentual progress out of the workload for individual annotators may be viewed as well as the number of finished documents.

## Document Status

The following table will explain the different symbols, which explain the status of a document for a user and the described task.

Symbol	Meaning
	Annotation has not started yet
	Document not available to user
	Annotation is in progress
	Annotation is complete
	Curation is in progress

You can also alter the document status of annotators. By clicking on the symbols you can change between **Done** and **In Progress**. You can also alter between **New** and **Locked** status. The second column of the document status frame displays the status of the curation.

As there is only one curator for one document, curation is not divided into individual curators.

Scrolling down, two further frames become visible. The left one, named **Layer**, allows you to chose a layer in which pairwise kappa agreement between annotators will be calculated.

Layer

coreference ty

named entity

pos

dependency

coreference

Agreement

	users	anno5	anno6	anno7	darina
anno5		1.0	0.74	0.75	0.0
anno6			1.0	0.73	0.0
anno7				1.0	0.0
darina					0.0

## Agreement

Agreement can be inspected on a per-feature basis and it is calculates pair-wise between all annotators across all document. Agreement is calculated using Cohen’s kappa as implemented in DKPro Statistics.

The first time a feature is selected for agreement inspection, it takes a moment to calculate the differences between the annotated documents. Switching between different features subsequently is much faster.



Multiple interpretations in the form of stacked annotations not supported in the agreement calculation!



# User Management



This functionality is only available to **administrators**.

After selecting this functionality, you are displayed a frame which shows all users. By selecting a user, a frame is displayed on the right.

The screenshot shows the 'Users' management interface. On the left, a list of users includes 'anno4', which is selected. The main form on the right is for editing 'anno4'. It contains input fields for 'Username', 'Password', 'Repeat password', and 'E-Mail'. A 'Roles' dropdown menu is open, showing 'ROLE\_ADMIN', 'ROLE\_REMOTE', and 'ROLE\_USER' (the selected role). There is also a checkbox for 'Enable account:' which is currently checked. 'Save' and 'Cancel' buttons are located at the bottom right of the form.

Now you may change his role or password, specify an e-mail address or dis- or enable his account by placing the tick.



Disabling an account prevents the user from logging in. The user remains associated with any projects and remains visible in on the [Monitoring](#) page.

To create a new user, click on **Create** in the left frame. This will display a similar frame as the one described in the last paragraph. Here you have to give a login-name to the new user.

In both cases, do not forget to save your changes by pressing the **Save** button.

## 1. User roles

Role	Description
ROLE_USER	<b>User.</b> Required to log in to the application. Removal of this role from an account will prevent login even for users that additionally hold the ROLE_ADMIN!
ROLE_ADMIN	<b>Administrator.</b> Can manage users and has access to all other functionalities.
ROLE_PROJECT_CREATOR	<b>Project creator.</b> Can create new projects.

ROLE_REMOTE	<b>Remote API access.</b> Currently experimental and undocumented. Do not use.
-------------	--

# Formats

Table 13. Supported annotation formats

Format	Read	Write	Custom Layers	Description
Binary	yes	yes	yes	Binary UIMA CAS
<a href="#">CoNLL 2000</a>	yes	yes	no	POS, chunks
<a href="#">CoNLL 2002</a>	yes	yes	no	Named entities
<a href="#">CoNLL 2006</a>	yes	yes	no	Lemma, POS, dependencies
<a href="#">CoNLL 2009</a>	yes	yes	no	Lemma, POS, dependencies
Plain text	yes	yes	no	No annotations
<a href="#">TCF</a>	yes	no	no	Lemma, POS, dependencies, coreference, named entities
TEI CPH dialect	yes	no	no	
WebAnno TSV 1	yes	no	no	
WebAnno TSV 2	yes	yes	yes	
XMI	yes	yes	yes	UIMA XMI

# Troubleshooting

If the tool is kept open in the browser, but not used for a long period of time, you will have to log in again. For this, press the reload button of your browser.

If the tool does not react for more than 1 minute, please also reload and re-login.

We are collecting error reports to improve the tool. For this, the error must be reproducible: If you find a way how to produce the error, please open an issue and describe it.