

# **Berlin Text System 3.1 User Manual (V 2.0)**

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# Introduction

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Welcome to Berlin Text System V 3.0 - a new Java software with a Couch DB database and an Elastic search engine, specially designed for editing and annotating Ancient Egyptian texts. The program supports entering Egyptian texts into a Text Editor and annotating all texts and all words in different layers. One of the main tasks is the lexical and grammatical annotation of text words. Using an integrated lemmatizer all text words are connected to the appropriate entries in the Lemma List, which is constantly updated and contains all known words of the Egyptian vocabulary. Furthermore all database objects are enriched with metadata, which are in turn stored and organised by a controlled vocabulary of Thesauri. As an additional structural element the layer of Abstract Text supports the mapping of different textual witnesses of texts with a long textual tradition.

The four major components - Text Editor, Lemma List, Thesaurus and Abstract Text - complement each other to guarantee the extensive word processing and analyzing Ancient Egyptian texts:

- The Text Editor provides tools for transliteration, translation, lemmatization (assigning a lemma to a word), entering hieroglyphic transcriptions via a Hieroglyph Type Writer and add annotations. Texts could be merged and arranged in a Text Corpus. The Text Editor is the core of the BTS.
- The Lemma List contains two up-to-date lists of Pre-Coptic lemmata. These lists are accessible for any BTS user. Each lemma has passport data, transliteration and translation, as well as annotations and comments attributed to it.
  - A list of lemmata, which occur in Demotic script.
  - A list of lemmata, which occur in Hieroglyphic or Hieratic script.
- The Thesaurus compiles a controlled vocabulary, which is used for the metadata of the database objects like date, location, provenance, etc. A controlled vocabulary for metadata is necessary to maintain data consistency and to allow effective and selective search functions. All terms of a thesaurus reflect a semantic network of concepts including parent / child relationships. Thesaurus entries are offered in the Passport Editor section either of the Text Editor in the Text Corpus View or of the Lemma Editor in the Lemma view.
- The Abstract Text provides a tool to connect all versions of a text with a long textual tradition via the modern segmentation of witnesses into paragraphs.

This User Manual offers an overview of the features now available in BTS.

- The Introduction chapter provides the description of the system requirements as well as step-by-step instructions for BTS installation and initial configuration. It also includes the description of the user roles.
- The General User Guide allows a prompt and easy start into BTS and explains how to edit an Egyptian text.
- The Guide for advanced and privileged users informs users with the given rights to edit the lemma list and the thesaurus entries and provides administrators and editors with relevant introductions.
- The BTS User Interface chapter is a detailed explanation of all elements available in the BTS user interface. This chapter serves as a reference to the "Guide" chapters.
- The BTS Grammar Rules chapter is a compilation of the essential rules BTS uses for transliteration.
- The BTS troubleshooting chapter offers a workaround for occurring problems.
- The Glossary gives an overview of the most important terms for the description of the BTS user interface.

## System requirements

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### Supported Operation Systems

BTS has been tested on Windows 7 SP1 64-bit, Windows 8.1 64-bit and Windows 10 64-bit. We do not guarantee the full functionality on other Windows OS (XP or Windows Server).

### Required RAM

BTS requires minimum 2 GB RAM. To work fluently we recommend at least 4 GB RAM. Your local BTS installation will constantly communicate with the server, updating the data. BTS will synchronize and download all available database files, which are now about 2 GB large. Check your internet connection and make sure it is working, otherwise BTS will be in offline-mode and will not be able to synchronize with the server.

### Mac and Linux

At the moment BTS does not support Mac or Linux OS. As a "workaround" we suggest using a virtual machine with Windows such as WINE and running BTS there. Popular VM solutions for Mac include VM Ware Fusion and Parallels (both commercial) and Virtual Box (free of charge). You will still need Windows license to install Windows on your VM.

### Required Java Version: Java V 7

BTS is a Java application, which requires JAVA Runtime Environment from Version 7 up. To check if Java is installed on your PC, go to <https://www.java.com/en/download/installed.jsp>. If the required version is not installed, the update will be automatically offered.

### Port sharing

The port number used by the Couch DB to communicate with the server should be shared in the firewall of your PC. For the port number see [Install BTS](#) on page 6.

### Internet access

BTS can be used online and offline, i.e. you do not need permanent internet access. You only need access to download the wordlist and other data during the installation process and to synchronize your local data with the server. This process runs automatically.

## Install BTS

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### Preparing the installation

Extract the BTS program package you received into the directory of your choice. The package should contain the following:

- The BTS-folder, containing system data, including the installer (bts.exe) and the manual (.pdf file)
- Keyman Keyboard (aaew.kmx)
- BBAW Libertine Font (BBAWLibertine\_ah.ttf)

NOTE: We recommend to create and use the "standard" directory on "C" drive: "c:\bts".

### Installing BTS

Double-click "bts.exe". The "BTS Installation Wizard" will start. Fill out the required fields in the following windows:

#### 1. Database Installation Settings

- *Database Installation Directory:* A standard location is automatically entered here referring to: "c:\bts\dbdir". In case you have extracted your bts program package to another directory, change the path to "*your directory*\bts\dbdir".
- *Http Port of your CouchDB on Localhost:* The default port number is 9089.

#### 2. Welcome to the Berlin Text System Installation

- *Do you have a BTS Server URL?:* Click "Yes" if you want your data to be shared and synchronized with the BTS server. Click "No" if you don't have access to the BTS server and are going to work in the "standalone" mode. The button "Next" will be activated only if you select one of the options.

NOTE: The software is not yet optimized for working without BTS Server URL. Please always select "Yes" here, because the server-link is necessary in the beginning in order to download the wordlist and other data from the server.

### 3. Server Connection

- *Server URL*: Enter the URL of the server that you have access to. Standard BTS Server address (including the port number) is: `http://aaew64.bbaw.de:9589`.
- *Your User Name*: Enter the user name you received from the BTS team.
- *Your Password for Authentication*: Enter the password you received from the BTS team.

After entering the information required, click "Connect to server". In the upper part of the window the status information will appear "The connection you have entered is OK". Note that the button "Finish" is only activated if the connection was successful.

### 4. Select Projects to Load

- *Select your main working project*: The default option is "Altägyptisches Wörterbuch BBAW". Another option is "Demotic".
- *Further projects from which you want to load and read data*: Select a project from "Available Projects" (left text box) and click "Add" to add a project. The project should then appear in the right text box.

### 5. Finish Installation of BTS

Click "Finish" to finalize the installation. After the installation the program will automatically start and the "Database Manager" window will open. If Windows-Firewall (or any other Firewall) asks you to grant "bts.exe" access to the system, confirm it.

NOTE: Although the "Database Manager" window automatically opens after the installation is finished, BTS is still importing the data from the server. This process will usually take about 20 minutes and is not visible to the user, it might take longer depending on your system. There is also no notification once the process is completed. Close the "Database manager" window and reopen it after approximately 20 minutes. As soon as the "aaew\_wlist" displays the number of c. 49.500 in "DB Doc Count" column, the process is completed.

NOTE: Sometimes the automatic log-in does not work after the installation and restart. As the result "No user logged in" and "No role" will be initially displayed in the BTS toolbar. In this case, start the program again. A small window appears, where you have to log in with your user name and password. You can activate "Remember me", so BTS will not ask you for user name and password again. You can change and deactivate this function in the [preferences](#).

### 6. Index data

Last but not least. All data imported from the server, must be indexed. Indexing enables the search, as the query is not done in the database (which would take time), but in the document indexes.

In the upper left corner of the "Database manager" window click on "Re-index all". The indexing process will start and may take up to 20 minutes. If indexing has been completed correctly, the corpus color will change from red to green. Databases that are not indexed successfully are marked either in yellow or in red. If indexing was not successful for some corpora re-index them by clicking on the button "Re-index all non-OK".

NOTE: To work with BTS all databases should be indexed correctly. Thus always re-index those databases which are marked either yellow or red.

NOTE: The items "\_replicator" and "\_uses" cannot be indexed and thus always are marked in red. You do not have to re-index these items.

## Start BTS

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BTS starts automatically during the installation process.

Afterwards BTS is started by double-clicking "bts.exe". After the installation is completed, this file serves to run the software.

BTS installer currently does not create BTS entries in the windows "Start" menu or on the desktop. You can manually create a shortcut of the "bts.exe" and drag-&-drop it into the start menu, taskbar and desktop. Click/double click this icon to start the program.

## Update / Uninstall BTS

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### 1. Update BTS

BTS automatically checks for updates every time you start the application. In case an update is found, you will be offered a choice to install it or to postpone it. The update can be installed via program user interface of BTS as well. In order to do so click "Help / Update Application" in the top menu bar.

### 2. Uninstall BTS

BTS is not listed in the "Control Panel / Programs / Programs and Features" section of your operating system. Thus it is not possible to uninstall it in the regular way. To uninstall the application, close the program window and delete all files from the installation folder.

NOTE: You might have to restart your system before deleting the folder. The reason for this is that the DB services of the program might be still running in background after closing the application and therefore might block the deletion.

NOTE: Using "Help / Uninstall software" entry in the upper menu bar of BTS will not uninstall the application completely. It only uninstalls individual components, and sometimes this may not be possible because Database service was started and is still running. You will have to close the program window and delete the files again.

## Initial configuration of BTS

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For the first use of BTS you need a few initial configurations and the intallation of the keyboard, which will be explained in the next chapter.

### Configure your BTS

After the initial BTS start, a few settings have to be made. In the menu bar click on "Preferences / Preferences" and expand the "Berlin Text System General" entry by clicking on the triangle symbol on the left.

#### 1. Active Corpora

Choose the "Corpus Settings" option from the expanded menu and add the available corpora to the list of the "Active Corpora", selecting all corpora you are going to work with.

#### 2. Sort by sort key

Expand "Corpus Settings". Click "Corpus Navigator Settings" and activate the check box "Corpus Navigator sort by sort key" if it is not activated (It should be by default). Press "Apply" to save the setting. Repeat the same for "Lemma Navigator Settings" and "Thesaurus Navigator Settings".

NOTE: By default all database objects have "0" as sort key and, thus, are organized in alphabetical order at the same level.

#### 3. Remember Me

By selecting the check box you may save your login credentials, so you do not have to enter your user name and password again, when you start BTS the next time.

#### 4. Text Editor settings

Expand the "Text Editor" entry and select the "Sign Text Editor". Activating "Show Hieroglyphs", "Show Lemma ID", "Show Flexion" (=Inflection) and "Show Translation" are recommended as the initial settings. This is, however, not required and you can change your preferences any time.

#### 5. Applying the changes

Press "Apply" after each change in order to save it and close the "Preferences" window by clicking "OK".

For more details of your personal BTS configuration see chapter [Configuration](#) on page 38.



## Installing and configuring the keyboard

To type egyptological transliteration in BTS you need to install and configure the relevant keyboard. Proceed with the following steps:

1. Install Tavultsoft Keyman Desktop

Keyman Desktop is a free software of Tavultsoft which manages the keyboard. To download it go to <http://keyman.com/desktop/download.php>, scroll down to "Download Keyman Desktop 9.0 without any keyboards" and click "Download now". Follow the instructions on the screen for the correct installation of the program.

2. Install "BBAW Libertine" Font

BTS works with "BBAW Libertine" font. For the use in the BTS no installation is necessary. It has only to be installed into your system, if you want to use it in other programs like Word etc. For this, right-click the "BBAWLibertine\_ah.ttf" you received with the program package and select "install". Check if the font has been installed in C:\Windows\Fonts.

3. Install the AAeW Keyboard

Now the AAeW Keyboard can be installed in Keyman Desktop. This keyboard layout includes all necessary characters, including brackets, verse points and cartouches.

In the task bar click "Tavultsoft Keyman Desktop" icon and select "Configuration". Click "Install keyboard..." and select file "aaew.kmx" available in your program package. Click "OK" to finish the installation.

NOTE: The "Onscreen Keyboard" function is not available yet. See [Keyboard layout](#) on page 9 of this manual for the position of the characters.

4. AAeW Keyboard characters (see [Keyboard layout](#) on page 9)

To switch to the AAeW Keyboard press CTRL + Shift (Win 7) or Windows Key + Spacebar (Win 8, Win 10).

The lower left characters are entered by simply pressing the key.

The upper characters are entered by pressing Shift + Key.

The lower right characters are entered by pressing Ctrl + Alt + Key. Ex.: "Ctrl" + "Alt" + "8" = "["

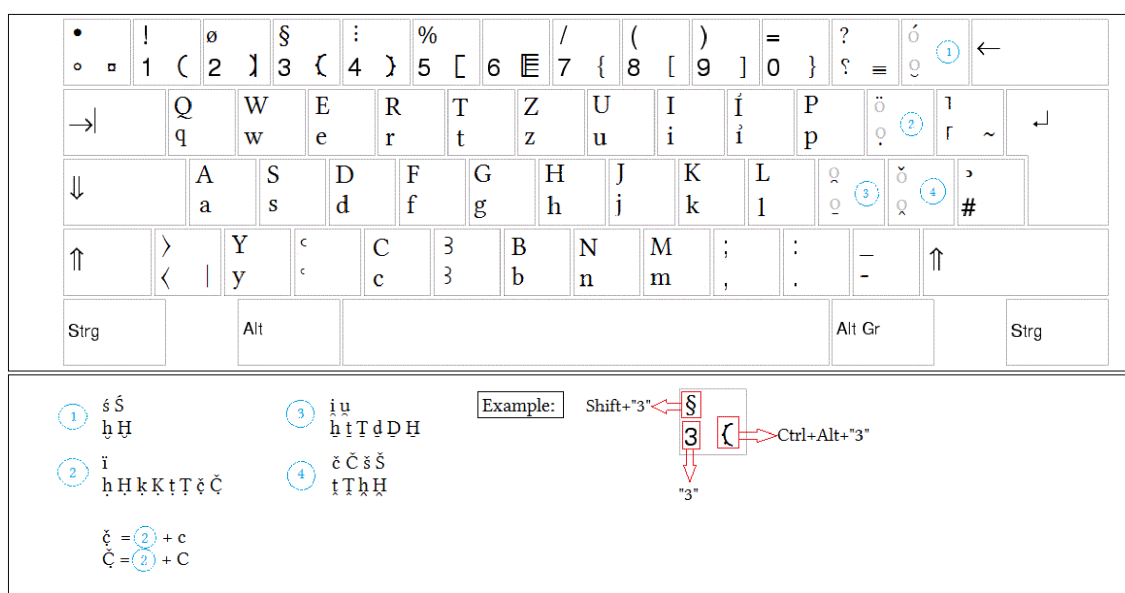
Characters such as "ḥ" are generated by "deadkeys". You type them in by combining the elements "\_" and "h" respectively. For example to type "ḥ" press the deadkey (always first) for "\_" and then "h".

NOTE: Keyboard only works for characters necessary in the egyptological transliteration, which for example uses "h with dot" (ḥ) but not "s with dot" (ṣ). This means that the deadkey "dot below the character" only works with "h", "k", "t" and "č" but not with "s" (for ṣ) or with "d" (for ḏ). Further not all characters are allowed in all parts of the BTS. In particular the transliteration system established by Wolfgang Schenkel is not allowed in the Transliteration Editor, but only in comments, bibliography etc.

NOTE: As Keyman Desktop is a separate software you have to start this software prior to use the layout in BTS. We recommend to incorporate it in the Windows Autostart function.

## Keyboard layout

BTS uses the following AAeW keyboard layout.



## User roles description

The user rights management controls which user can modify which database objects. User rights in BTS are defined by interplay of the following factors:

- *user role* with respect to particular corpora
- *user status* with respect to particular database objects
- *visibility status* of particular database objects

Independent of the role or status, every BTS user can:

- Access all entries in the drop-down menu "Window".
- Access "Preferences / Database Manager".
- Adjust individual Preferences (see [Preferences](#) on page 42 for more detail).
- Access all options in the drop-down menu "Help".

### User roles

Users can have one of five different user roles, which apply only to particular corpora: *Administrator*, *Editor*, *Researcher*, *Transcriber* or *Guest*. One user can have varying user roles in different corpora (but just one user role per corpus). E.g. a user can be an *Editor* in the corpus "bbawamarna", but only a *Transcriber* in the corpus "bbawbriefe".

NOTE: Unless specifically set by BTS administrator, the default user role with respect to all corpora as well as Thesaurus and Lemma-list is *Guest*.

### User status

Additionally to user role, a status of a *Reader* or an *Updater* can be assigned to a particular user with respect to specific database objects. For that right-click on an item and select "Edit Updaters / Readers"

For instance a Researcher with status of an Updater can edit all items in a given corpus. If the status is changed to Reader, the user will only be able to view the items. Updater and Reader status of specific database objects of a corpus can be assigned to a user by *Admin*, *Editor* or *Researcher* (the latter should have an Updater status) of a given corpus. This is done by right-clicking on a database object, selecting an option "Edit Updaters/Readers" and assigning a user to a user status through the menu on the right.

NOTE: A Reader/Updater status for an entire corpus is not effective for individual items within a corpus. I.e. such a status has to be assigned for users for every database object where a user should have editing rights.

#### Visibility status

Another factor restricting user rights is a *Visibility status* of a database object, which can be set in the Main Tab of the Passport Editor. The visibility status options are: Public, Reader, Group, Project and All Authenticated. Depending on the visibility status of an item, it may only be available for viewing or editing for users with particular rights. More on visibility status of database objects will be outlined in the description of particular user roles below.

## Administrator

The administrator role applies only to a specific database, i.e. a corpus, a lemma list, or the thesaurus database (not the entire BTS!). Administrator can edit or delete all database objects in a given corpus, with no Updater status for specific database objects required.

#### Rights

- Can manage and control any user role within a corpus where assigned. (Not available at the moment.)
- Can edit all items in a given corpus, regardless of their visibility status.
- Can add or remove database objects within a corpus. Deleted database objects can be found in the "Bin" tab, from where they can be deleted permanently.
- Can assign the status of Updater or Reader to other users who have access to a given corpus.
- The Updater/Reader status is irrelevant for the Admin, since the user role takes precedence and automatically gives the Admin rights to edit database objects.
- Can alter the visibility of individual database objects in the Passport Editor (Main Tab).

#### Limitations

- Admin user role applies to particular corpora only.
- Admin cannot edit the passport data or name of an entire corpus if not assigned administrator privileges to that particular corpus. Even if the entire corpus has a visibility status "Public", Admin user will still have a guest status when selecting the corpus. Admin has rights only for individual database objects within the corpus.
- Admin cannot create new corpora within a project.

## Editor

Editors may review and correct database objects owned by other users even if no special rights for the database object were granted to them. Thus they can review and improve the quality of the data.

#### Rights

- Can edit all items in a database, i.e. a corpus, a lemma list, or the thesaurus database, where editor rights assigned.
- Can add or remove database objects within a corpus.
- Can assign a Updater or Reader status to other users, but only for individual database objects.
- Can, technically, change the own status as a Reader or an Updater. This is irrelevant though, because the user role "Editor" takes precedence (as in the case of the Admin).

NOTE: These rights apply only for database objects with visibility "project", "public", or "all authenticated". In all other instances, the editor has only access to the database objects if assigned as Updater or Reader.

#### Limitations

- In case the corpus was created by someone else, Editors can modify individual database objects, but are attributed a guest role for the corpus itself (cannot edit the corpus passport data, or edit updaters/readers for an entire corpus).
- Cannot create new corpora within a project.

## Researcher

Researcher may create new objects within a corpus. Researchers can also edit or delete their own database objects, or objects for which they were granted editing rights (Updater status).

### Rights

- Can add database objects within a corpus.
- Can edit database objects within a corpus, when given an Updater status for these database objects.
- Can assign reader/updater status for other users, but only if the researcher has Updater status.
- Researchers can change their own status from an Updater to a Reader for a database object and thus lose their editing rights. They will not be able to upgrade the status again, i.e. to change back to the Updater.

### Limitations

- Cannot edit the already existing database objects within a corpus (created by other users) when a Reader or no status is assigned to him/her.
- If a database object within a corpus has a visibility status *Reader*, *Group* or *Project*, the Researcher will not be able to see it unless obtaining an Updater/Reader user status

## Transcriber

Transcribers are allowed to add hieroglyphic encodings. They may not create new database objects and may not change anything except adding hieroglyphic encodings to text for which they are granted the "Updater" status.

### Rights

- Can edit hieroglyphs for items within a particular corpus (only with the "Updater" status).

### Limitations

- Cannot edit transliteration, lemma or passport data of the corpus items.
- Without a Reader status in a given corpus, database object or text: can only view the corpus items, but is not allowed to edit them in any way, which also includes input of hieroglyphs.
- Database objects with a visibility status *Reader*, *Group* or *Project* will not be visible when no status is assigned to the Transcriber.

## Guest

Guests can read data but are not allowed to create new database objects, edit or delete anything.

If given no status (Reader/Updater), a guest will not be able to see the database objects in the corpus with a visibility status: Reader, Group, or Project.

Even if guests have not been given such status for a particular corpus, they will still be able to view its content.

Guests may view the lemma and the thesaurus views.

## User roles sum-up

The interplay of user roles, user statuses and visibility statuses is summarized in the table below

ADMINISTRATOR				
DB Object Visibility	User status			
	<i>No status</i>	<i>Reader</i>	<i>Updater</i>	<i>Can assign User Status?</i>
<i>Public</i>	Can edit all	Can edit all	Can edit all	Yes
<i>Reader</i>	Can edit all	Can edit all	Can edit all	

<i>Group</i>	Can edit all	Can edit all	Can edit all	
<i>Project</i>	Can edit all	Can edit all	Can edit all	
<i>All Authenticated</i>	Can edit all	Can edit all	Can edit all	
EDITOR				
	<i>No status</i>	<i>Reader</i>	<i>Updater</i>	<i>Can assign User Status?</i>
<i>Public</i>	Can edit all	Can edit all	Can edit all	Yes
<i>Reader</i>	Cannot view	Can edit all	Can edit all	
<i>Group</i>	Cannot view	Can edit all	Can edit all	
<i>Project</i>	Can edit all	Can edit all	Can edit all	
<i>All Authenticated</i>	Can edit all	Can edit all	Can edit all	
RESEARCHER				
	<i>No Status</i>	<i>Reader</i>	<i>Updater</i>	<i>Can assign User Status?</i>
<i>Public</i>	Can view, not edit	Can view, not edit	Can edit all	Yes
<i>Reader</i>	Cannot view	Can view, not edit	Can edit all	
<i>Group</i>	Cannot view	Can view, not edit	Can edit all	
<i>Project</i>	Cannot view	Can view, not edit	Can edit all	
<i>All Authenticated</i>	Can view, not edit	Can view, not edit	Can edit all	
TRANSCRIBER				
	<i>No Status</i>	<i>Reader</i>	<i>Updater</i>	<i>Can assign User Status?</i>
<i>Public</i>	Can view, not edit	Can view, not edit	Can only edit Hieroglyphs	No
<i>Reader</i>	Cannot view	Can view, not edit	Can only edit Hieroglyphs	
<i>Group</i>	Cannot view	Can view, not edit	Can only edit Hieroglyphs	
<i>Project</i>	Cannot view	Can view, not edit	Can only edit Hieroglyphs	
<i>All Authenticated</i>	Can view, not edit	Can view, not edit	Can only edit Hieroglyphs	
GUEST				
	<i>No Status</i>	<i>Reader</i>	<i>Updater</i>	<i>Can assign User Status?</i>

<i>Public</i>	Can view, not edit	Can view, not edit	Can view, not edit	No
<i>Reader</i>	Cannot view	Can view, not edit	Can view, not edit	
<i>Group</i>	Cannot view	Can view, not edit	Can view, not edit	
<i>Project</i>	Cannot view	Can view, not edit	Can view, not edit	
<i>All Authenticated</i>	Can view, not edit	Can view, not edit	Can view, not edit	

# General user guide: How to edit a text

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The following instructions are for users with basic privileges. Researchers learn the basic and most important tools. They are advised how to create and edit a text and how to configure their personal settings. Transcribers learn how to edit hieroglyphs of an already edited text. All features covered also apply to users with editor and administrator privileges.

## Introduction to BTS User Interface

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This chapter provides a brief introduction to the BTS User Interface (UI). For a detailed description see the chapter [BTS User Interface](#) below.

The BTS window is split into four major sections:

- [Menu bar](#)
- [Toolbar](#)
- [Workspace](#)
- [Status bar](#)

The Menu bar and the Toolbar are located at the top of the program window. At the bottom of the program window the Status bar is displayed. The area between Toolbar and Status bar is called Workspace. The contents of the Workspace change depending on the viewing mode. BTS has four such modes, activated by clicking on the appropriate button in the Toolbar:



[Text Corpus view](#)



[Lemma view](#)



[Thesaurus view](#)



[Abstract Text view](#)

Within each view there is a number of windows, which may include tabs and sub-tabs. Any tab and window of the workspace can be arranged according to the individual need of the user. You can maximize / minimize them within the workspace or you can move them within the workspace or you drag-&-drop them outside the BTS program UI into a separate window. If you close the separate window, you can restore the tab via the menu entry Window / Open [name of the tab] or by restarting BTS.

The default arrangement of the tabs and windows is currently the following (see the screen-shot below):

- "Navigator" window on the left

Depending on the view selected, it is named Corpus-, Thesaurus- or Lemma Navigator. The tabs are the following: for the Corpus Navigator: "Text Corpora" + "Bin"; for the Lemma Navigator: "WL" + "Bin"; for the Thesaurus Navigator: "Thesauri" + "Bin"; and for the Abstract Text Navigator: "Ths" + "Bin".

- "Annotation and Translation" window on the right

In Lemma, Thesaurus and Abstract Text view the "Translation" tab is not displayed.

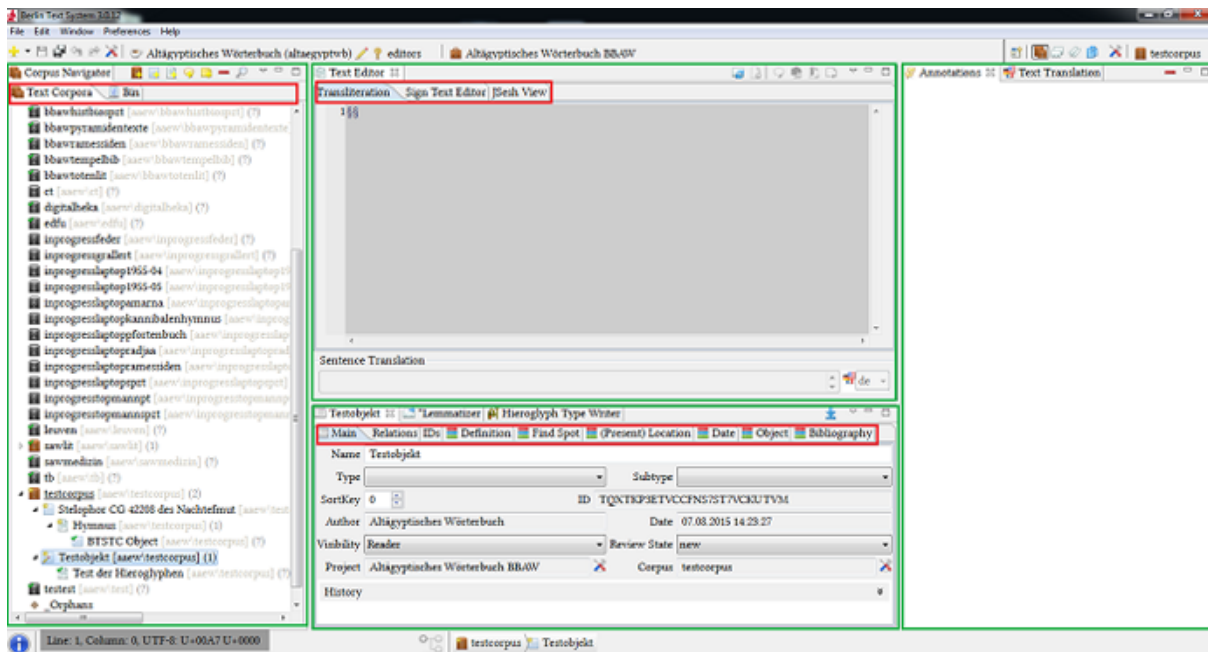
- "Editor" window at the top center

In Text Corpus view this window contains "Text Editor" tab with three sub-tabs: "Transliteration", "Sign Text Editor" and "JSesh View". In Lemma view it is called "Lemma editor" with no sub-tabs. Abstract Text view contains both "Text editor" and "Abstract text editor" tabs.

- "Passport Data Editor", "Lemmatizer" and "Hieroglyph Type Writer (HTW)" as one window at the bottom center

At the bottom three tabs are grouped together in one window. The Text Corpus and Lemma views display all three. Thesaurus and Abstract Text views have only "Passport Data Editor" tab.

NOTE: As soon as a database object is selected in the Navigator window, the titles of the tabs "Text Editor", "Passport Data Editor", "Lemmatizer" and "Translation" adopt the selected database object name.



## Creating a database object (TObject and Text)

The following functions are available to the user with at least Researcher privileges over a given corpus. Creating a Text Corpus Object and a Text are the basic steps to edit a text in BTS. Before creating a Text you need to create a Text Corpus Object, i.e. the item referring to physical inscribed object, and define the physical source of your text.

### Creating a Text Ccorpus Object






1. Choose the corpus from the Corpus Navigator tree where you wish your TCOBJECT to appear. You can add an TCOBJECT to a corpus or to another already existing TCOBJECT. Although you can later move database objects, consider a logical hierachic order.
2. Click "Add Text Corpus Object" in the toolbar. This action will add an object as a sub-entry of the chosen corpus. The newly created TCOBJECT has the relation "PartOf" to the chosen corpus or to an already existing database object of this corpus.

NOTE: A Text Corpus Object is referring to a physical object, covered with texts. Texts and Text Corpus Objects are in child-parent relation, i.e. Text is always attributed to the a specific Text Corpus Object - not vice versa (see also [Glossary](#) on page 124).

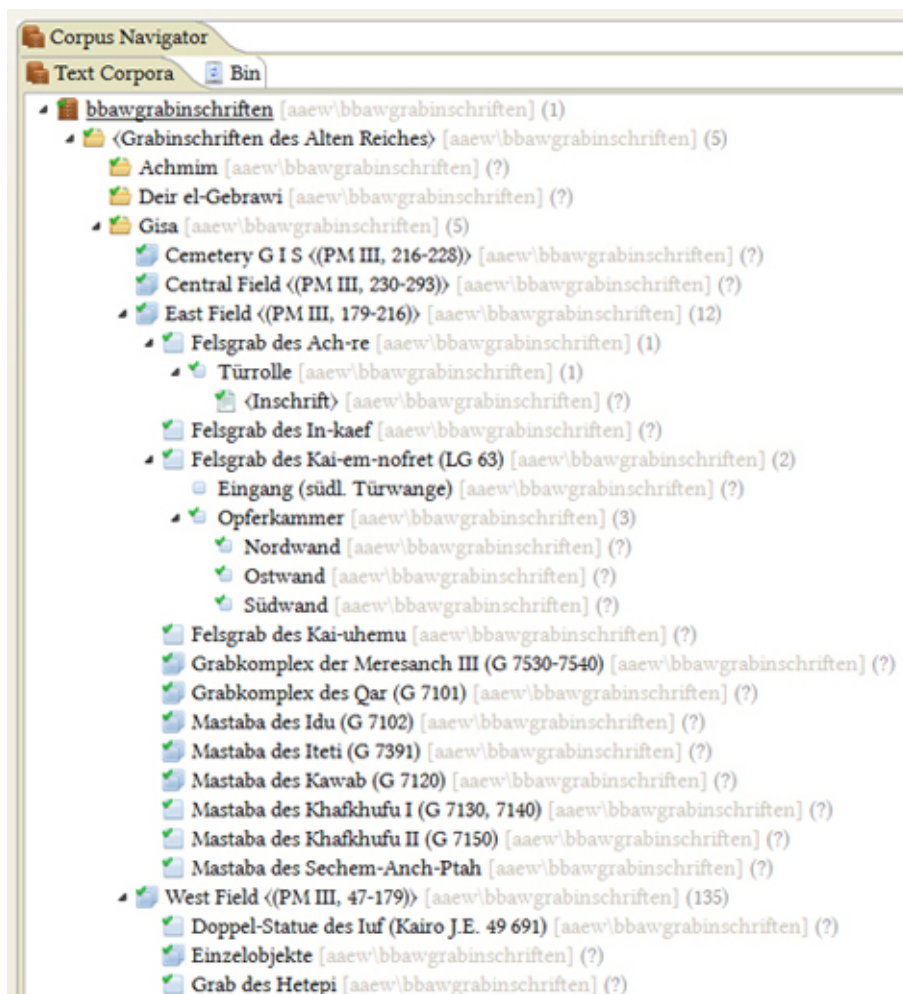
NOTE: Newly created database objects will be saved in your main working corpus (as selected in the [preferences](#)) and not in the selected corpus, if those two differ. New database objects will appear in the selected corpus, but will not be saved there. The appearance is dependent on the relations of the database objects, not on their physical storage.

3. Name your Text Corpus Object in the [Main Tab](#) of the Passport Editor (The "Name" input field will appear red). You can actually start working without naming your object and name it later. Until it is named, the object will appear in the corpora tree with the default name "BTSTC Object".
4. Define the Type of the TCOBJECT (There are no Subtypes, this not to be used). Provide as much information as possible by filling out the tabs of the [Passport Data Editor](#). The different types are the following:
  - Caption: The Caption is used as a folder to list a set of physical objects under one heading due to pragmatic reasons (e.g. the stelae from Kawa or the medical papyri).






-  Group: A Group defines a number of physical objects belonging together on geographic reasons (e.g. the graves of a specific cemetery like the Eastern Cemetery at Giza or an papyrus archive like the Abusir Papyri).
-  Arrangement: An arrangement defines a closed association of finds (e.g. the objects from the tomb of Tutankhamun or the objects from a founding deposit).
-  Scene: This is an obsolete entry that was used for data imported from the previous project. Do not use it.
-  TCOBJECT: The Text Corpus Object is the physical ancient Egyptian object that is covered with your text (e.g. the Papyrus Harris 500 or the sphinx stele of Thutmose IV.).
-  ObjectPart: ObjectPart is hierarchically subordinated to TCOBJECT. Use it, when the carrier of your text consists of more than one physical object (e.g. a statue and its base or several parts of a building).

When you create your Text Corpus Objects and Texts, be sure to arrange them in a logical hierarchic order. Texts are always child elements of Text Corpus Objects, not vice versa:



#### Creating a text

1. Select [a node](#) in the Corpus Navigator where you'd like to place your text. You can add a text to a TCOBJECT or even to an already existing text.
2. Click  "Add Text" in the Corpus Navigator toolbar. A "child"-element will be added to the selected database object. The default title "BTS Text" will be attributed to it (in order to see it, you might have to open the parent element).

3. Name your text in the [Main Tab](#) of the Passport Editor (The "Name" input field will appear red until it is filled out). You can actually start working without naming your text and name it later. Until then the default name will be "BTS Text".
4. As for the Text Corpus Object define the Type and, if applicable, also the Subtype of the database object. Provide as much information as possible by filling out the tabs of the [Passport Data Editor](#).
  -  Text: A Text is defined as a coherent entity. Your physical object might contain several texts, e.g. Papyrus Harris 500 containing "The Doomed Prince", "The Taking of Joppe" etc. Each of these tales and poems receives its own database object "Text" subordinated to the TCOBJECT "Papyrus Harris 500".
  -  Subtext: Subtexts are parts of the same text that are related to each other, but without a defined order of reading (e.g. different persons and their respective inscriptions on a relief).

NOTE: Do not treat chapters or captions of a continuous text (e.g. the medical remedies in Papyrus Ebers) as subtexts. These have to be segmented by annotations (see [Annotations, Rubra, Glosses and Comments](#) on page 30).

#### Defining the visibility

Define in the main tab of the [passport editor](#) the visibility of your database object. See also [User Roles Description](#). A default visibility can be defined in the [Preferences](#).

- reader
- group
- project
- public
- all\_authenticated

NOTE: The default visibility applies to all newly created database objects, also including annotations, rubra, comments etc. Currently there is no feature available to apply changes in the visibility to child elements. That means, if your default visibility is "reader", you have to change all TCOBJECTS, Texts, annotations, rubra etc. to "public" manually once you want to publish your text in the TLA.

#### Defining the review state

The display of the icon of your Text Corpus Objects and Texts differs according to the review state you have selected in the main tab of the [passport editor](#). A default review state can be defined in the [Preferences](#). The icons mentioned above will get one of the following additions:

-  new
-  awaiting review
-  awaiting update
-  reviewed / published

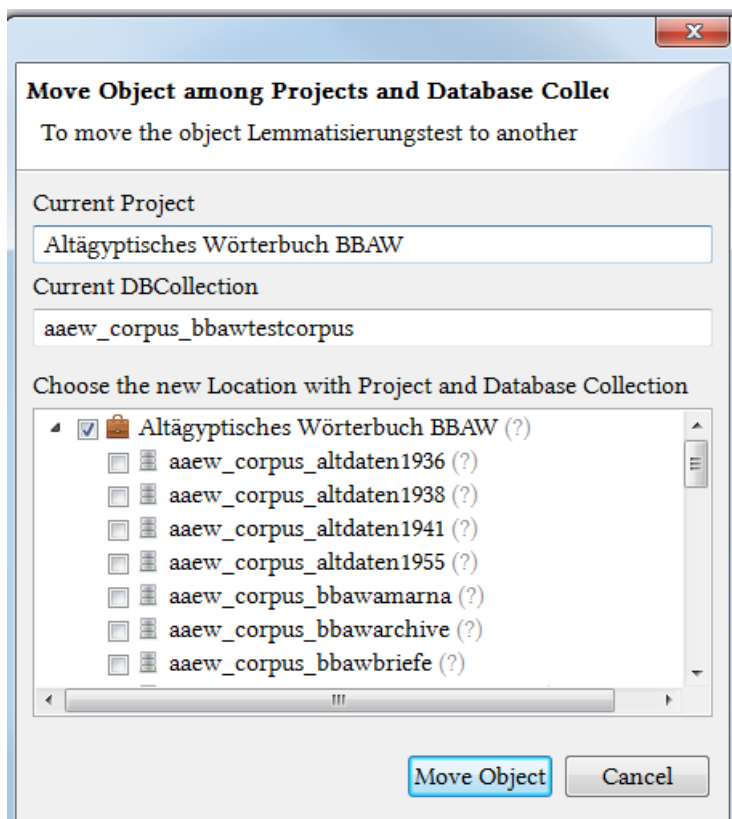
NOTE: As for the visibility, the default review state applies to all newly created database objects, also including annotations, rubra, comments etc. Currently there is no feature available to apply changes in the review state to child elements. That means, if your default review state is "new", you have to change all TCOBJECTS, Texts, annotations, rubra etc. to "published" manually once you want to publish your text in the TLA.

#### Moving database objects (TCOBJECTS / Texts)

To change a physical location of a database object (marked in square brackets aside the name) from one project or corpus to another, right click the chosen item and select "Move among projects" in the appearing context menu. In the opened window the current physical location is displayed. Alter the entries as you wish (upper field for a new project and lower field for a new corpus in the project) by clicking the checkbox in the lower field. Changing the physical location does not affect the position of the database object in the Navigator tree. The project or corpus where this Text Corpus Object or Text is actually saved is given in brackets after the name of the Text Corpus

Object or of the Text (in Grey). To change the position in the tree as well, it is necessary to change the relation in the *"Relation"s tab* of the passport editor.

NOTE: If you have accidentally created a database object within a wrong position and you do not have the rights to move it, please contact the administrator in Berlin: aegypt1@bbaw.de.



#### Deleting database objects (TCObjects / Texts)

There are two options to delete a database object from the database:

1. To delete a database object (Text Corpus Objects or Texts) select it and then click on "Delete". It will be moved to the bin ( "Bin" tab in the Corpus Navigator section), where you have the opportunity to restore it (right click the object and choose "Restore" from the context menu) or to delete it permanently. All subordinate elements will be deleted as well. Upon closing or restarting the BTS all the items in the bin will be deleted permanently.
2. A database object is deleted permanently (without moving it to the bin first) by either right-clicking the respective item and selecting "Delete Permanently" or by selecting the item from the Navigator tree and then selecting "Delete Permanently" from the drop-down menu . The removal of the database object will be visible after BTS restart.

## Editing passport data

The Passport Editor is located in the bottom part in the middle of the Text Corpus view. It is essential that you complete the metadata of your Text Corpus Objects, texts, subtexts, and glosses conscientiously. Only correct and complete metadata enable search queries and statistical evaluation of the data.

Most entries in the passport data are assigned by thesaurus lists. These lists compile a controlled vocabulary, which is used for the metadata of the database objects like date, location, provenance, etc.

Select only entries from the thesauri, if you are sure that they are the correct ones. If there remain doubts on the assignment, select "unbekannt" or "unbestimmt". You can always discuss questionable assignments, e.g. the findspot of an Egyptian object or the date of a text in the comment fields.

The thesauri are not complete, yet. In case a Thesaurus entry you need is missing, please send a proposal to the BTS team in Berlin via E-mail: aegypt1@bbaw.de.

For detailed description of passport editor fields and how there are used see [Passport Editor](#) on page 74.

## Editing a text

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The process of editing a text begins with entering the transliteration in the Text Editor Transliteration field. However, in order to enter a transliteration, you first need to [install and configure the keyboard](#) provided by the BBAW.

One of the most important steps in the text editing process is lemmatizing each word of your transliterated text. Lemmatization is a lexical annotation of each word regardless of its inflected forms. In a semi automatic process each word is linked with a lemma entry in the integrated lemma list and takes over simultaneously all lexical properties of the lemma entry like (POS-label, base translation(s), bibliographical references).

Furthermore the editing process involves entering a translation in either German, English, French, Spanish, or Russian, entering hieroglyphic writings of each text word and assigning [inflection codes](#) to the lemma. You are enabled to mark rubra and to add comments to the transliteration whenever you wish. The following order of editing is not compulsory. It is only supposed to help you with particular functions of the BTS. It is up to you to decide the order of the text editing.

NOTE: You can only enter translation, lemmatization, annotations, and hieroglyphs after you have typed the transliteration.

## Transliteration

To enter or edit the transliteration of your texts, click in the "Transliteration" tab of the [Text Editor](#) in the upper centre of the Text Corpus view.

### 1. Segmentation of a text

The text has to be sequenced in sentences according to the Egyptian syntax. Start and end each sentence with the sentence marker "\$". There is no "space" between "\$" and the following / preceeding word.

Rules for the segmentation of sentences:

- Main and subclauses belong together as one sentence.
- The emphatic construction is one sentence (e.g. *pr.n =j m pr =j h#.n =j m sp#.t =j jrj.n =j m###.t tp t#*).
- Protasis and apodosis of a conditional clause are one sentence (e.g. *jr dd=f nj #nh=f pw*).
- Relative clauses (*n.tj, jw.tj*) belong to the superordinated clause.
- Subjunctive clauses and clauses with *wn.t, n.tjt*, or *jw.tjt* belong to the superordinated clause.
- Prepositional subclauses belong to the superordinated clause (e.g. *hr m-ht hrw.w 3 sw#w hr nn + main clause + r rdj.t ...*).
- Adverbial clauses belong to the superordinated clause, if the subordination is clear.
- Continuative forms (e.g. *mtw=*) are segmented in separate sentences.
- Direct speech forms a separate sentence.

Logical phrases and formulas are treated as sentences:

- Headings, labels, and notes are sentences.
- Tables are segmented according to headings, lines, and columns. For a high degree of comprehensibility it is recommended to repeat headings and repeatedly read signs in <<...>>.
- Offering formulas and (short) prayers are treated as one sentence.

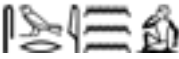
NOTE: Sentence boundaries can always be modified later, but the translation of the modified sentences will be lost.

## 2. Transliteration

The transliteration follows the BTS conventions (see [System of Transliteration](#) on page 101). Do not use the transliteration system established by Wolfgang Schenkel. These characters are not valid in the BTS text editor, but you are enabled to use it for instance in comments. Here you may also use Coptic, Greek, Hebrew etc. as long as the characters are available in unicode and are supported by the BBAWLibertine font. Coptic script (unicode) is also allowed in the text editor, e.g. for glosses, but as there is no Coptic lemma list yet, it is currently not possible to lemmatize Coptic glosses.

To enter the transliteration signs, you need to switch the keyboard layout by pressing "CTRL" + "Shift" (Win XP, Win 7) or "Windows key" + "Space bar" (Win 8, Win 10). For the keyboard layout see chapter [Keyboard layout](#) on page 9.

The transliteration in BTS represents the written forms as they appear in the text, not as they would be expected in

the dictionary, e.g.  has to be transliterated *swrj*, not *zwr* (see [System of Transliteration](#) on page 101).

## 3. Structural signs

Structural signs are used to mark up morphological properties of a lexical entry and changes caused by inflections of words in the texts (see [Structural signs and conventions](#) on page 103). Structural signs for lexical and inflectional morphology indicate:

- prefixes
- suffixes
- all kind of endings
- stemm modification
- compound words

The dual and plural endings are transliterated with ".w" or ".wj/.tj" when written phonetically. When marked graphically, they are marked with ".pl" or ".du". When the plural and dual endings are written both phonetically and graphically they are transliterated with both options: ".w.pl" or ".wj/.tj.du". For details see chapter [Structural signs and conventions](#) on page 103.

## 4. Sigla for textual criticism

Some sigla are used to indicate the condition of a text and editorial corrections and restorations (textual criticism). BTS uses sigla to mark up damaged and lost parts in a text, emendations and additions of the editor as well as ancient deletions, additions and corrections of the texts.

- Text-critical signs and brackets follow BTS conventions (see chapter [Brackets](#) on page 106).
- Damaged parts (see chapter [Gaps, lacunas, and damaged parts](#) on page 107).
  - A destruction is indicated by two hyphens --...--. E.g.: --rest of line destroyed--, --3Q-- (destruction of 3 scriptorial squares).

NOTE: It is not allowed to use the hyphen within the destruction marker.

- If the number of words missing can precisely be determined (e.g. if the words are completely lost, but with the determinatives preserved), use three underscores in brackets "[\_\_\_\_]". E.g.: "[\_\_\_\_] [\_\_\_\_]" for 2 missing words.
- Illegible parts and spaces intentionally left blank
  - If a word or a sequence of words is illegible or only partly legible, use underscores, e.g. "\_b\_"; "n\_[\_],t"; "[\_]\_[\_]"; [\_\_\_\_].pl etc. (see [Lemmatizing illegible words](#) on page 28).
  - Empty cartouches are transliterated with 3 underscores: "\_\_\_\_" and are lemmatized with lemma ID (WCN) 550225 (see [Lemmatizing empty cartouches](#) on page 28).


- Blank parts of a text that were intended for a later addition of a personal name and titles (e.g. on a coffin), are transliterated as descriptive information: "#3Q unbeschriftet#", "#5Q leer für Titel und Namen des Verstorbenen#" etc.

## 5. Sigla for textual structure

- Sentence marker

Each sentence is to be placed between sentence markers "\$", e.g. \$jw =f sḏm\$

NOTE: When you enter your transliteration, BTS will represent each sentence as one long line. To produce a

line break click  (Load Text Lemmata) or switch between Sign Text Editor and Transliteration Editor.

- Line Count

- Line counts according to the physical object are introduced by #lc: and end with #. The numbers (usually arabic numerals) are written in square brackets, e.g.: Line 1 = #lc: [1]#.

Use the line count of a principle edition if it follows the line count of the physical object, e.g. #lc: [A.2]#; #lc: [VI, 3]#; #lc: [12.4]#.

For columns use "Kol.", eg.: #lc: [Kol. 1]#.

If the line break in the original text occurs within the borders of a word, the line count is to be placed after the respective word.

- For line count according to synoptic editions used to align multiple versions of a text, as a kind of milestone use #para: ...#. E.g.: CT VI 106a = #para: CT VI 106a#.

NOTE: It is not allowed to use colon between "#" more than once, e.g. #lc: [1:4]# is not valid.

NOTE: It is not allowed to use colon directly after or directly before "#".

NOTE: The line count provided by BTS at the left edge of the Text Editor is only temporary. It changes at each line break.

- Descriptive Information

Descriptive information, e.g. for representations the inscriptions are referring to, are placed between "#".

- For the description of representations to which text refers, use "#descr: #", e.g. #descr: Amun, thronend#
- Other descriptions without reference can be added freely between two "#", e.g. #3Q sind leer gelassen# / #3Q left empty#.
- Parts intentionally left blank for a later addition of a personal name and titles (e.g. on a coffin), e.g. #5Q leer für Titel und Namen des Verstorbenen# (see above).

## 6. Ambiguities

Ambiguities have to be noted,

- if a group of hieroglyphs can be transliterated and interpreted in different ways,
- if a group of hieroglyphs can be lemmatized differently,
- if a group of hieroglyphs can be encoded with different inflection codes.

Ambiguities are entered as: "%case 1: ...| case 2: ...| case 3: ...%". You can input as many cases as you need. Be careful not to type a space in front of the vertical stroke.

Examples: %case 1: rd.du| case 2: w'r,t.du%; %case 1: sḏm.n =f| case 2: sḏm n =f%

NOTE: Sentence separators, extra-textual information and destruction markers, e.g. "\$", line counts (#lc: ...#) and --2Q--, are not allowed within ambiguities.

## 7. Using Templates




It is possible to use templates in order to speed up the transliteration process. You may create your own templates: Access the templates by right-clicking in Text Editor and selecting "Content Assist" or by pressing "CTRL +Spacebar". Depending on the position of the cursor (within a sentence / word or outside the sentence marked by §§) you will get a different set of templates to select from. This can be influenced by changing the "Context" of your templates (for more details see chapter [Templates](#) on page 44).

## 8. Copy&Paste functions

BTS supports copy&paste within the same text as well as between different texts.

- It is possible to enter the complete transliteration of a text at once out of an external source (e.g. a MS Word document) by copy&paste, if it follows all the rules of BTS grammar. The transliteration used in MS Word should be the unicodefont BBAWLibertine.
- You can copy your transliteration, parts of it or extra-textual information and paste it anywhere in the same or another text. By doing this, only the transliteration will be copied, even if the tokens are lemmatized.
- If you want to copy&paste your transliteration as lemmatized tokens, use the feature "Copy with Lemmata" and "Paste with Lemmata". This feature copies and pastes the transliteration including inflection code, hieroglyphs, and translation. It does not copy any annotation, comment, or rubrum.
  - This feature does not work for single words and phrases. You can only copy complete sentences. Mark the sentence or the set of sentences you would like to copy. Click on it (right-click) and select "Copy with Lemmata".
  - Proceed to the text where you want to insert the sentence(s). Right-click the exact position and select "Paste with Lemmata". To insert a sentence after an existing sentence, place the cursor behind the "\$" sign.

NOTE: You are not allowed to use "Paste with Lemmata" in an empty text. First you need to enter some dummy text and press "Load Text Lemmata". After pasting your text you can delete the dummy.


NOTE: The sentence you want to copy as well as the sentence in, before, or after which you want to insert the copied sentence(s) must be activated. Activation is shown by the sign  directly to the left of the sentence. It might take some time or a switch between database objects, until the sentence is activated (compare note on [translation](#) below).


## 9. System grammar check

An internal system grammar checks the validity of the transliteration, i.e. BTS follows an internal logic according to which specific signs can only occur in specific combinations. For instance, it is not allowed to leave out an ending ("nb."), to write two full stops ("nb.."), to close brackets before opening them ("n]b[") or to interlace different kinds of brackets ("n[b]"). Such inputs are marked by an error warning, for details see chapter [Grammar check](#) on page 37.

## Translation

You can enter the translation of individual sentences in the text input field "Sentence translation" of the text editor.


This window will remain deactivated (greyed out) during transliteration, until you press the button  "Load Text Lemmata" or until you have switched between the Text Editor and the Sign Text Editor.

Make sure to have selected the right language of your translation in the drop-down menu on the right (): German (de), English (en), French (fr), Spanish (es), or Russian(ru). The default language of your choice can be set up in the [Preferences](#).

In the standard view only one line will be visible. Extend the text editor window and scroll up and down if the sentence contains more than one line. The complete translation of the text will appear on the right of your BTS screen in the "Text translation" section (this usually needs refreshing the view, e.g. by clicking in the Corpus Navigator and reopening the selected text). Clicking on a sentence here will highlight it and the same sentence will be underlined in the "Transliteration" subsection. You will have to enter the translation sentence by sentence (designated in the transliteration with §§).

Within a complete egyptian grammatical sentence, it is possible to segment the translation by using the ENTER key. The input of the complete translation as a running text is not possible. Enter only one translation for each sentence, as the selection of languages is not intended for multilingual translations of one and the same text.

We advise you to enter a readable and understandable translation according to the formal rules of the target language, but not providing a free translation.

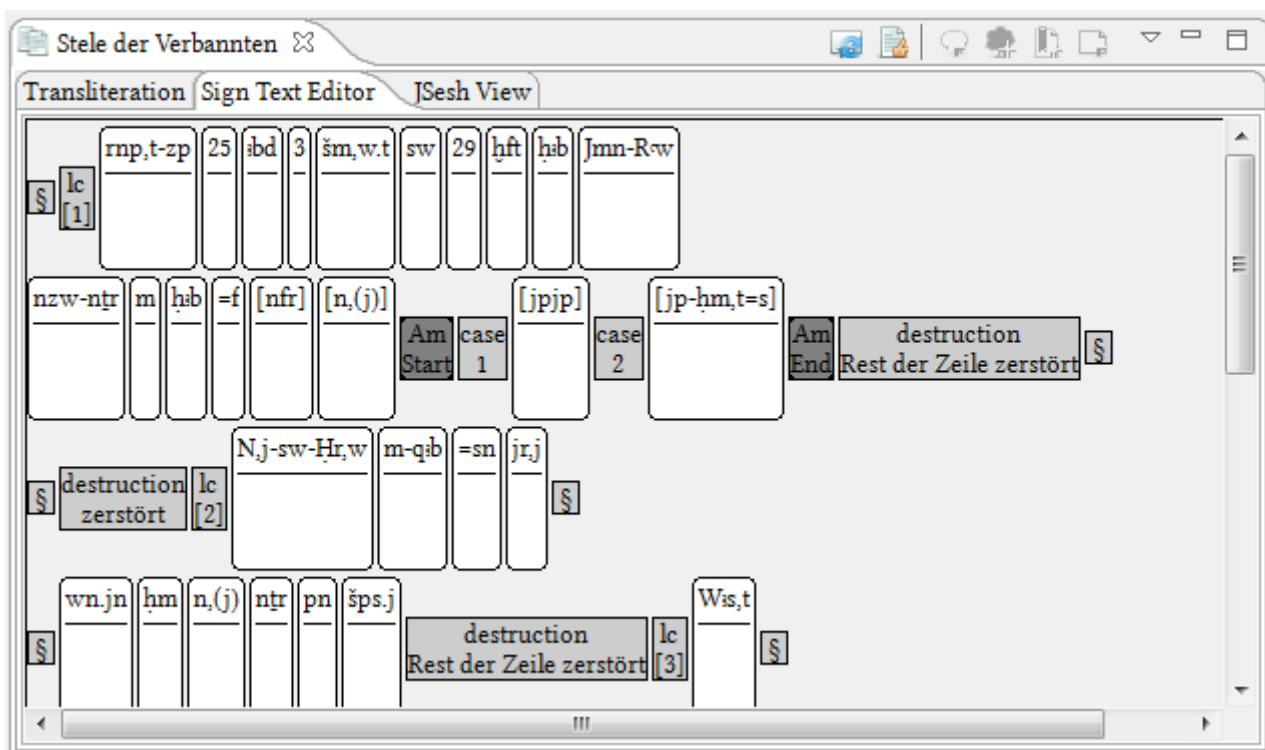
NOTE: Before you enter your translation, be sure that the relevant sentence is activated. The activation is indicated by the sign  in the Text Editor directly to the left of the relevant sentence. It might take some time or a switch between database objects, until the sentence is activated. If the sign does not show up, your translation will not be saved (compare note on [Copy with Lemmata](#) above).

## Lemmatizing

Lemmatization is one of the most important steps in the BTS text editing process with relevance to almost all queries and analyses done in the database, e.g. to find references for a specific lemma, to make collocation analyses, search for word combinations etc. Thus it is an essential prerequisite that you lemmatize your text conscientiously.

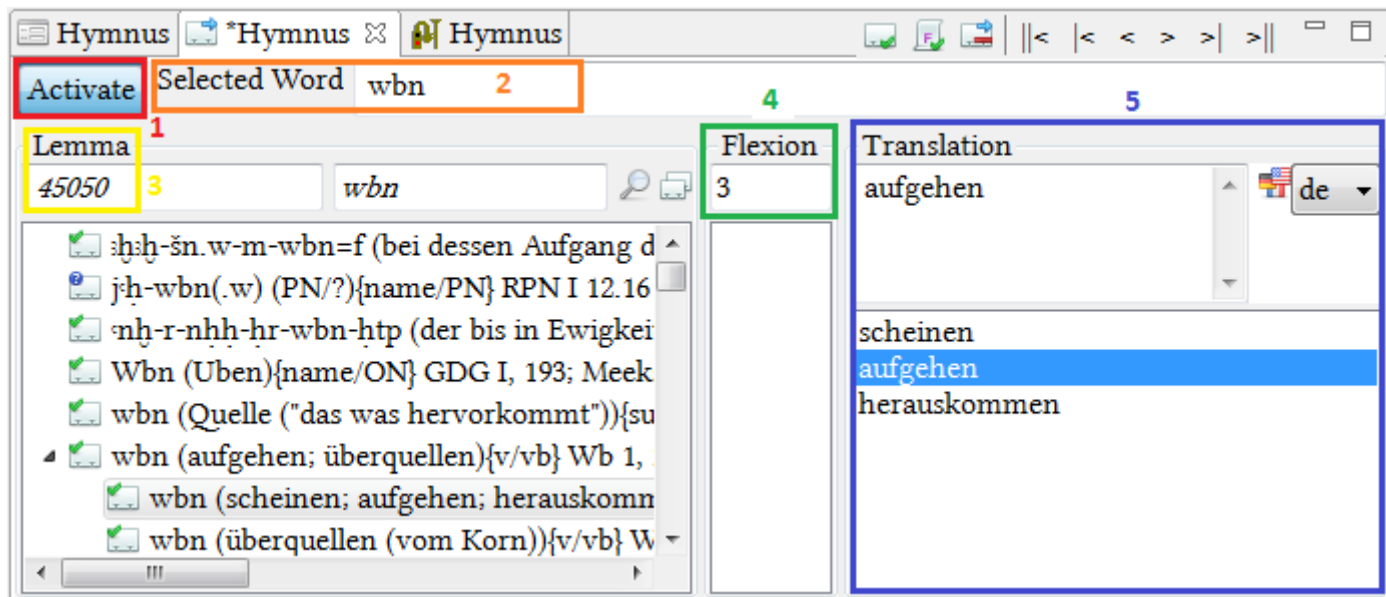
Opening and activating the lemmatizer

To lemmatize a transliterated text two tabs should be open: [Sign Text Editor](#) (default location: top center) and [Lemmatizer](#) (default location: bottom center; note that the title of the latter changes as soon as you have selected an element in the Navigator tab). Only non-grey tokens in the "Sign Text Editor" are lemmata and can be lemmatized.



Several elements are displayed in the  "Lemmatizer" tab:





1. "Activate" button: activates / deactivates the Lemmatizer (grey = deactivated; blue = activated).

NOTE: You should always click the "Activate" button after you finished the lemmatization to avoid unintended lemmatizations.

2. "Selected Word" displays the transliteration of a lemma selected in the "Sign Text Editor". In the example above *wbn* has already been lemmatized, so the other fields are filled out. If you find out that you have made an error in the transliteration, you can modify it in the "Selected Word" field and it will be altered in the Sign-Text-Editor and the Transliteration tab automatically.

NOTE: If you make changes to an already lemmatized token in the text editor, the token might loose its lemmatization, in particular if you add a character to the beginning or the end of the word.


3. Lemma provides the lemma number (WCN) from the word list (WL). Next to it, the selected transliteration of a lemma is displayed. To lemmatize a lemma, select the correct suggestion from the list in the field below. The default setting in Preferences / Preferences / Lemmatizer allows you to activate the function "automatically select the first lemma proposal". This feature enables you to navigate through the proposals via the arrow keys.
4. The field "Flexion" shows the code referring to the grammatical form of the inflection of the selected word (see [Inflection Codes](#) on page 107).
5. In the field "Translation" you can choose one or several fitting translations from the lower field (in the example there is only one option, but there can be more). Make sure to have selected the correct language in the drop-down menu on the right. The only choices currently available for the Lemmatizer are German and English. Choose several available translations by left-clicking and holding CTRL at the same time. If none of the options seems fitting to you, you can enter your own translation as well.


#### Organization of the lemma list

The lemmatizer provides a lemma list according to the parameters of your search. The entries are sorted alphabetically according to the Egyptological transliteration. Sublemmata are displayed as child-entries of the related lemmata. Each entry provides the transliteration, translation, word class, and bibliographical references. The list is divided into two parts: It first displays the entries in which your search term occurs in the first position. Results in which your search term occurs in another position (e.g. composita) are displayed in the lower part of the list.


NOTE: The list of results is limited to 500 items. If you do not find your lemma, specify your search parameters.

There are two kinds of icons in the list:

-  This lemma has been revised and can be used for lemmatization.

-  This lemma has not been revised, yet. This applies in particular to personal names from Ranke, Personennamen. If you would like to use this lemma, you are requested to contact the BTS team in Berlin via E-mail (aegypt1@bbaw.de) for revision.

### Finding the correct lemma

The lemmatizer automatically suggests lemmata which transliteration exactly matches your lemma. If your lemma is not listed, click the magnifying glass  and search for it in the lemma list by entering the WCN (i.e. the ID of the lemma) or the transliteration or the translation of the lemma. You can also reduce the search results by using the filters "Search for IDs" or "Search for Names only".

#### *Search for ID (WCN number)*

To filter for a specific WCN you have to activate the filter "Search for ID". If you do not, you will not get a result, because the full text search does not search the field "ID". (However, in case of lemmata that have been imported from the previous BTS version you will get a full text search result, because there the WCN appears as an external ID. This does not apply to lemmata created in this BTS version.)

#### *Search for transliteration*


If you use the filter "Search for Names only", BTS does not execute a full text search, but a search only on the name of the database objects. "Names" does not mean "Personal Names", but it is the standard designation, i.e. the transliteration of the lemma (dictionary form). This box is activated by default, because otherwise BTS will make a full text search in the lemma list. Additionally, you can automatically add wild cards / quotation marks by clicking the provided buttons in the search pop-up. More on search function see [Search Function](#) on page 47.

### Confirming the selected lemma

When you have found the correct lemma in the list, select it by clicking on it (left-click). Now select the specific

translation applying to your text and click on  "Confirm current lemma editing and continue to next unlemmatized word". The selection will automatically move to the next unlemmatized word.

NOTE: Due to technical reasons the confirmation button () sometimes does not work in the first place. In that case just press it a second time.

NOTE: Due to technical reasons it might happen that clicking  might not move to the next unlemmatized word, but to the first unlemmatized word in the text.

### Skipping lemmatization and navigating in the Sign Text Editor

If you do not want to lemmatize a word, e.g. because the lemma does not exist in the list or you are not yet sure about the identification, you can skip the lemmatization by either clicking on the next word in the Sign Text Editor or by using the ">" button ("move selection to next word"). You may use these buttons to navigate through the text without lemmatizing. The button ">" brings you to the next word, ">|" to the end of the line and ">||" to the end of the text. The buttons "<", "<|" and "<||" vice versa.


### Encoding inflection

Experience has learned that it is better to lemmatize a text first and afterwards fill out the field "Flexion". If you decide to encode the inflection during the lemmatization process, type the appropriate code into the field "Flexion"


before or after you have selected the lemma and then confirm with . For details see [Encoding Inflection](#) on page 29.

### Remove all lemma information

In case you want to undo the lemmatization of a word, e.g. if you have selected the wrong lemma, select the

word and click on the button  "Remove lemma information" in the Lemmatizer toolbar. This will remove the lemmatization and the encoded inflection.

### Lemma does not exist

Besides the "Wörterbuch der ägyptischen Sprache", the BTS lemma list contains words from various different sources. If you have a new lemma, which is not yet present in the BTS lemma list, or if you wish to use a lemma that has not been revised yet is thus marked by  in the lemma list, please contact the BTS team in Berlin via E-mail: aegypt1@bbaw.de.

Before you send your proposal be sure that the lemma does not exist yet:

- The transliteration of the lemma in the BTS might be different from your own (e.g. differentiation of s and z, weak consonants etc.).
- Beware of punctuation and structural signs.
- The word might be part of a compositum.
- Your word might correspond to an already existing lemma with a variant meaning.
- The word list might not be indexed properly.

## Lemmatizing idiomatic expressions and compound words

### Idiomatic expressions and collocations

Some objects are collocated with a verb so that they form an idiomatic expression. This collocation will be determined by setting the correct entry for the verb in the lemmatizer. The object itself has to be lemmatized as it is.

Example	correct lemmatization
<i>jri</i> # <i>h.w</i> – to feel pain	1) <i>jri</i> (# <i>h.w</i> ) (WCN: 851959); 2) # <i>h.w</i> (WCN: 174)
<i>rdi</i> <i>j#</i> . <i>w</i> – to praise s.o.	1) <i>rdi</i> ( <i>j#</i> . <i>w</i> ) (WCN: 851491); 2) <i>j#</i> . <i>w</i> (WCN: 20360)
<i>sdm</i> #š – to serve	1) <i>sdm</i> (#š) (WCN: 150630); 2) #š (WCN: 40900)

### Compound words

Compound words such as prepositions, nouns, proper names, titles etc. are connected by a hyphen “-” and are thus treated as one lemma, i.e. do not lemmatize *hm-ntr* separately as *hm* and *ntr* (see: [Structural signs and conventions](#) on page 103).

### Compound words separated by suffix pronoun or personal names

Sometimes titles, epithets, and other compound words might be split up by a suffix pronoun or a personal name. In this case the separation has to be marked by “+”, the suffix or personal name is lemmatized normally. Of the compound word the first part is lemmatized with the complete compound noun, the second part is left without lemmatization.

Example	correct lemmatization
<i>h#.tj-#+ M#h +n-Nfr-wsj</i>	1) <i>h#.tj-#+</i> (WCN: 857144); 2) <i>M#h</i> (WCN: 600439); 3) <i>+n-Nfr-wsj</i> (WCN: -)
<i>rn+ =f+nfr</i>	1) <i>rn+</i> (WCN: 94780); 2) <i>=f</i> (WCN: 10050); 3) <i>+nfr</i> (WCN: -)

## Lemmatizing numbers

Numbers are transliterated as they appear in the original text, i.e. they are transliterated phonetically, when they are written phonetically, and are written as numbers, when they appear as numbers in the text. This paragraph helps you to lemmatize fractions and numbers that are not written phonetically.

WCN number	
850814	cardinal number

WCN number	
863636	1/2 (fraction) (gs)
600203	2/3 (fraction) ( <i>r'.wj</i> )
92610	1/3 (fraction) ( <i>r'</i> )
600569	all other fractions (e.g. <i>r'-4</i> , <i>r'-5</i> , etc.) and rows of fractions (e.g. <i>1+1/2+1/6</i> etc.)
600235	ordinal number constructed with .nw (e.g. <i>2.nw</i> )
852650	ordinal number <i>mḥ-1</i>
852649	ordinal numbers <i>mḥ-2 ... 9</i>
600236	ordinal numbers <i>mḥ-10 ... n</i>

### Lemmatizing empty cartouches

Empty cartouches, as they occur in Ptolemaic and Roman texts, are transliterated with 3 underscores: "\_\_\_" and are lemmatized with lemma ID (WCN) 550225.

NOTE: Do not use this for damages or erased cartouches, e.g. Akhenaten's cartouche being erased.

Blank parts of a text that were intended for a later addition of a personal name and titles (e.g. on a coffin), are marked as decriptive information between "#", see [Transliteration](#) on page 20.

### Lemmatizing illegible words

If you are able to determine the exact number of words missing in a lacuna or gap without being able to designate them to a specific lemma, use the representative "[ ]". If a word or a sequence of words is illegible or only partly legible, use underscores, e.g. "\_b\_"; "n\_[ ]t"; "[ ]\_[ ]"; [ ].pl etc. In some cases it might be possible to determine word class, number, and gender. To lemmatize the representatives there are entries in the lemma list for each of these options. Therefore you have to search the WCN number via the magnifying glass (see [Lemmatizing](#) on page 24). The following list helps you to find the relevant WCN number.

NOTE: To find the complete list in the lemma list, you may also open search via the magnifying glass and search vor "[Wort]" (full text search with both check boxes deactivated). The results will appear at the end of the list.

WCN number	Word Class
850831	word (undefined)
850834	adjective
850835	adverb
850839	particle
850849	non-enclitic particle
850848	enclitic particle
850838	pronoun
850845	personal pronoun
850846	relative pronoun
850847	interrogative pronoun
850844	demonstrative pronoun
850837	preposition



WCN number	Word Class
850840	number
850850	cardinal number
850851	ordinal number
850841	interjection
850833	substantive (undefined)
850843	substantive (fem.)
850842	substantive (masc.)
850836	verb
714337	personal name (undefined)
850817	personal name (fem.)
850816	personal name (masc.)
850818	personal name (undefined, incl. titles and affiliation)
850826	name of an object or an institution
850825	name of an animal
850819	name of a king
550225	empty cartouche
850822	name of a god
850820	toponym
850824	epithet of a king
850823	epithet of a god
850821	titel or epithet of a private person


## Encoding Inflection

To encode the inflection, switch to the Sign Text Editor and activate the Lemmatizer.

Assign an inflection code to each word form (token). The inflection codes apply to forms that are distinguished morphologically. It does not encode forms that depend on grammar theory, that means there is no differentiation between morphological identical *sdm=f*-Forms. For a list of codes see [Inflection Codes](#) on page 107.

Experience has learned that it is better to lemmatize a text first and afterwards fill out the field "Flexion". If you want to encode the inflection during the lemmatization process, type the appropriate code into the field "Flexion"

before or after you have selected the lemma and than confirm with . If you choose to encode the inflection after you have finished the lemmatization (as we recommend), you can use the button  to proceed to the next not yet inflected word. You can also use the ENTER key to confirm and proceed.

NOTE: The button  brings you to the next word with default inflection code, i.e. if you defined "Default Inflection = 3" in the preferences, the button brings you to the next word with inflection code 3, although you might already have entered this code as the correct form.

## Annotations, Rubra, Glosses and Comments

BTS text editing tools include annotations, rubra, glosses and comments, which can be applied to a word or a sequence of words, a sentence or several sentences.

NOTE: This function does not apply to single letters within a word, e.g. if in the pronoun *jn* the *n* was omitted and later added in red: *j((n))*, this *n* cannot be marked as being written in red"

What is the difference between an annotation, a gloss, a rubrum or a comment?

- Annotation is intended to provide the extra-textual information for parts of the text, which may include bibliographical references and other metadata. Annotations are not limited to one fragment, they can be connected with more than one section of a text. You can use annotation, for example, to divide your text into chapters (e.g. to define and separate the remedies of a medical text or the maxims of Ptahhotep ) and other forms of alignment. Annotations can be used for syntactic, stylistic, prosopographic information. Therefore, there are different types and subtypes of annotations so that one can distinguish these types of information. If you need further types and subtypes, please contact the BTS team in Berlin.





NOTE: To separate specific parts of a text, annotations are only used, if their sequence is evident. To mark sections of a text in a case when the sequence of the chapters is not clear or ambiguous (e.g. first part being a biography and the next an offering scene or a Ptolemaic temple scene with a text and various Beischriften.), Subtext is used.

- Gloss is a semantic or phonetic explanation of a passage in a text made by an ancient scribe (not a modern comment!), written above the word or in the margin.
- Rubrum is used to mark rubrum in the text.
- Comment is an information to a text which can discuss problems of a phrase or a word (unlike annotations, comments cannot have metadata such as e.g. bibliographical information).

Annotating a text

To annotate a text, use the buttons above the "Text Editor" tab. Mark the sequence you want to annotate: for only one word just place the cursor within the word; if the word comprises a single character only, place the cursor directly behind the character. You can create more than one annotation for the same token, and vice versa, the same annotation can be created for different tokens.

NOTE: If buttons are deactivated, click somewhere outside of your text and then again in it.

-  Add Annotation: Adds an *Annotation* to the selected part of your text. A grey bar appears in the "Annotation" tab to the right, with a thin line marking which part of the text the annotation refers to. It is possible to enter Passport Data, as you may want to provide metadata (extra-textual information).
-  Add Rubrum: Converts the selected part of the text into a rubrum, which is indicated by red color of the text and a red bar on the right.
-  Add Glosse: Clicking on a button will add a "child"-element of your text in the corpora tree. The gloss can be edited like a regular text. Once it is created, it is first labelled "BTS Text". You have to rename it and enter passport data etc.
-  Add Comment: Adds a comment to the selected part of the transliteration. This will be underlined yellow.


You can also use these functions via the drop-down menu that appears when you click on the triangle to the right of the annotation symbols.

The existing annotations are displayed in the *Annotation tab* on the right. A new annotation will appear at the bottom of this list. With the arrow on the right you can expand the annotation and see more information as well as further editing options.

NOTE: All annotations to the transliterated tokens (including lemmatization) are anchored to the first and the last element of the token or the series of tokens, respectively. That means, if you make changes to the first and the

last element, the annotations loose their link to the token. If you need to make changes to an already lemmatized and/or annotated token, switch to the Sign Text Editor and make the changes in the field "Selected Word" (see also [Lemmatizing](#) on page 24).




### Deleting annotations

You can delete the annotation by selecting it and clicking  "Delete" in the upper right corner of the Annotation tab. A confirmation window will appear, click "Delete" to confirm or "Cancel" if you have changed your mind.


NOTE: You cannot delete any annotation via the "Undo" button.

### Editing annotations

Once you have created an annotation, rubrum, glosse, or comment, you are enabled to edit it by selecting it from the Annotation tab:

- Click  to edit the content and the metadata of the annotation.
- Use  to add a text selection to the annotation. You may add more than one text selection to each annotation.
- Use  to remove a current reference. This only removes the link between the annotation and the text. It does not delete the annotation.

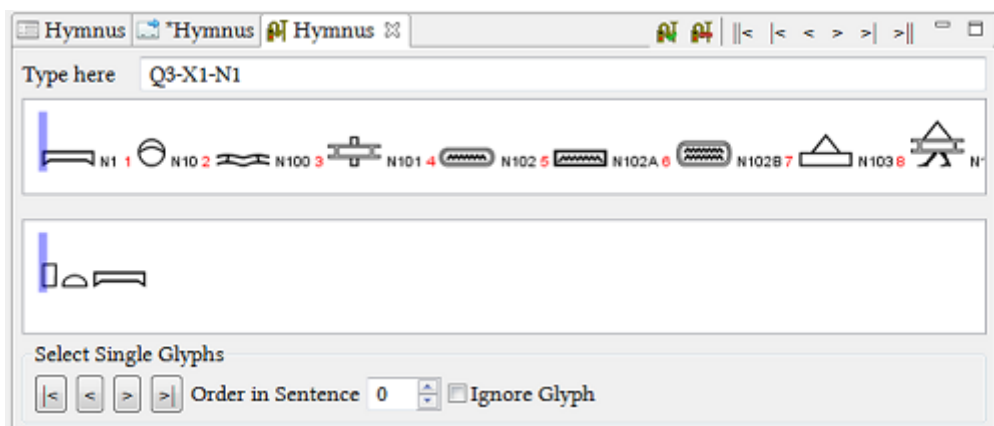
### Using filters

You can use filters to hide or display specific types or subtypes of annotation, e.g. you can hide all rubra from the list or display only comments. Select the filter by clicking  in the Annotation tab.

NOTE: When your text is loaded, BTS loads all annotations, filters them according to you filter settings and then displays the first 40 annotations. Annotations that are not displayed will appear in the list as soon as you click on the annotated token in the Transliteration Editor.

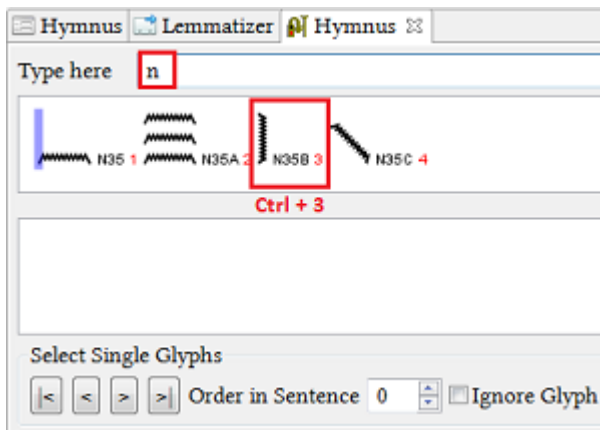
## Entering Hieroglyphs

To enter or edit the hieroglyphs of your text, switch to the Sign Text Editor and then open the Hieroglyph Type Writer (HTW). HTW is based on JSesh application created by Serge Rosmorduc.

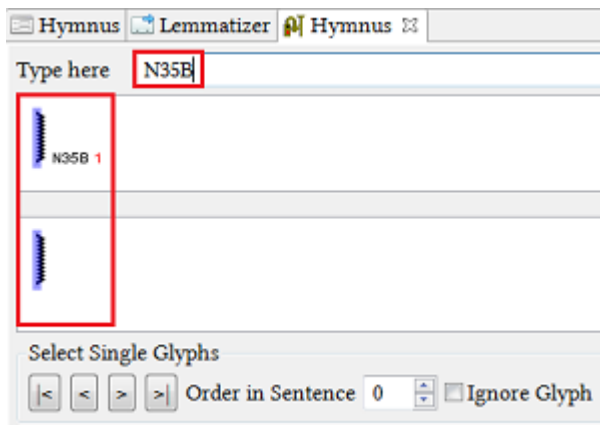


1. Click on a transliterated lemma in the Sign Text Editor tab, the word will be highlighted yellow. In the Hieroglyph Type Writer tab click into the "Type here" text field - this is where the hieroglyph input takes place. There are two different ways to enter the hieroglyphs. The first one is to enter the numbers of the Gardiner sign list (e.g. F18). The second is to enter the transliteration according to the Manuel de Codage rules. You are also allowed to combine both ways. Manuel de Codage will automatically be rendered into Gardiner codes.
2. When entering the first letters of a transliteration of a lemma, the programme will present you a list of hieroglyphs to choose from. Every hieroglyph has a number in red appearing next to it. To select a sign which does not appear on the first position on the list, press CTRL button on your keyboard and the number corresponding to the red number of the chosen sign. E.g. in the following screenshot there are four options

presented for the input of the letter 'n'. If you would like to select the N35B-sign you would have to press CTRL +3.



Afterwards, the corresponding Gardiner code will appear in the "type here" field and you will be able to continue hieroglyph input normally. You can also type "N35B" directly into the "type here" field.



Separate the hieroglyphs of a word either only by a hyphen "-" between the hieroglyphs (then all signs will be written one behind the other) or group them according to the "Manuel de Codage" rules with "-", "\*", and ":". For more details see the section [Grouping hieroglyphs](#) on page 36.

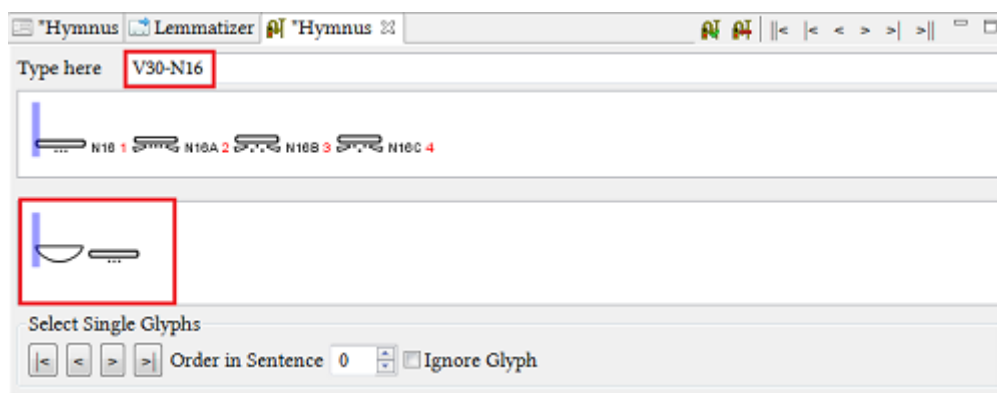
NOTE: Grouping with "&" is not allowed.



NOTE: Do not use the space bar to separate the signs, because BTS will automatically replace space by a underscore (e.g. "M17 G53" will be rendered into "M17\_-G43").

NOTE: If you enter the transliteration according to the Manuel de Codage rules, BTS will automatically render your transliteration into Gardiner codes (e.g. "i-w" will be rendered into "M17-G43", "M17-w" will also be rendered into "M17-G43").

- In order to confirm the input of the signs and end the work on one word, either press ENTER on your keyboard, or click the icon of the scribal tool in HTW (🖋️). You can also simply click on another word in the Text Editor if the word on which you would like to work is not the next one. Additionally, you can navigate between the words with the following icons in the HTW: ||< and >|| will bring you to the first and last word of the document respectively. |< and >| will bring you to the word at the beginning and end of the line respectively (the line as it appears in the Sign Text Editor, not the line of the given text), < and > will bring you to the previous and next word respectively. Furthermore, a zool-tip will be displayed on mouse-over for each icon.
- After the input and confirmation of the signs, upon returning to a transcribed word, Gardiner numbers of the signs will be shown in the "type here" field, even if the signs were initially entered as "Manuel de Codage" transliteration. In order to see the number sequence, select an already processed word.



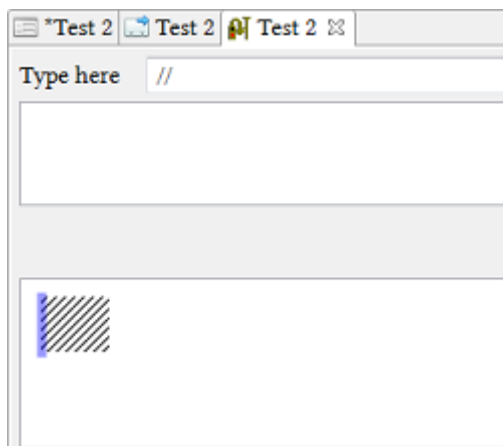


5. If you need to correct an already confirmed word, you can return to it by clicking on it in the Sign-Text-Editor or by using the previously described navigation icons. Make the alterations in the "Type here" input field and confirm it by pressing ENTER or clicking on . If you need to delete the already entered hieroglyphs, you can simply use BACKSPACE or DELETE button on your keyboard and confirm by pressing ENTER. You can also click on the  "Remove Hieroglyph Data" in the toolbar in the upper right corner, after clicking the chosen word.

## Textual criticism

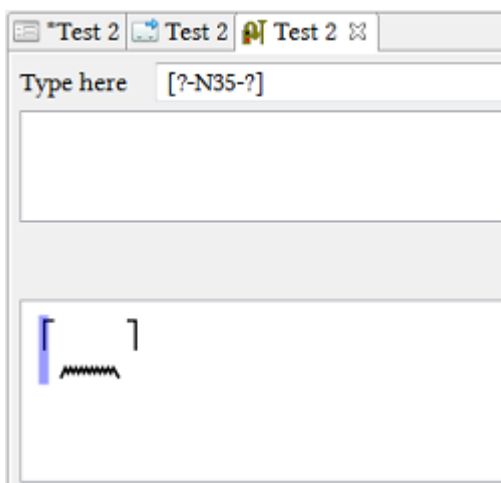
Shading (a complete destruction of a hieroglyph)

A complete destruction of the hieroglyphs (when the sign cannot be recognized anymore) is not to be reconstructed in square brackets (as in the transliteration). Instead, shading is applied to indicate that the destroyed sign cannot be read. The size of the destruction is not important, the shading will always be same size (see screen-shot below). You can enter it by using "//".



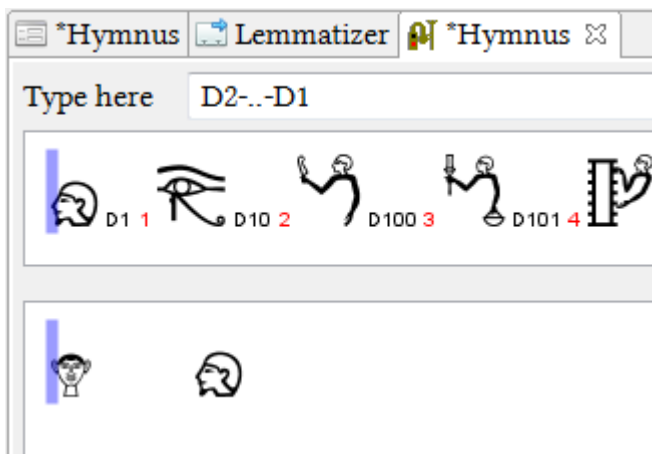
## Partial Destruction

When a sign is only partially destroyed (part of it still visible and identifiable), it is rendered by half-square brackets. The half-square brackets are entered with [?-Hieroglyph-?] (see screenshot below). Enter each partially destroyed sign separately (i.e. for each sign the brackets have to be entered separately; only one sign is allowed in one set of brackets).



### Missing Hieroglyphs

If a sign or a word is missing altogether (not destroyed) by omission of the scribe in antiquity, it is not to be supplemented. Only what is present in the text is to be encoded. If there is an empty space between two signs left in antiquity it is to be encoded with '..', as in the example below:




### Special signs and Haplographies


Dots and other hieratic signs without hieroglyphic equivalent

Some hieratic signs like lines or dots without hieroglyphic equivalent are available in the Ff group. For instance the dot is rendered by JSesh Code Ff110. As this is not a verse point, do not use "O" or "o", because in JSesh these are indeed verse points.

Cartouches

A cartouche  is to be entered with "<-...->", e.g.: <-G7->.

Serekhs

A serekh  is to be entered with "<S-...->", e.g.: <S-G7->. (S=Serekh).

**Hw.t**-sign

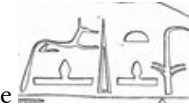


A sign in a rectangular enclosure is to be entered with "<H-...->", e.g.: <H-R8->. (H=*Hw.t*).

NOTE: For some signs there are Gardiner codes available in group O when enclosed by a ḥw.t-sign. Use these if applicable.

### Haplographies

Haplographies are encoded normally at the position of the first occurrence. In the further occurrence they are to



be encoded in double angle brackets: [&- [&- + Hieroglyph + -&]-&]. E.g. in this case the sign X8 should be written twice, so it needs to be inserted into double angle brackets in the position where it should occur for the second time: M23-X1 R4 X8 [&- [&-X8-&]-&] E15 R4.

### Inversions

*When the inverted words form a single lemma* the sign-sequence is to be entered as it appears in the script, e.g. in the title *ḥm-ntr* or the preposition *ḥft* which is usually written with *t* before *f*.

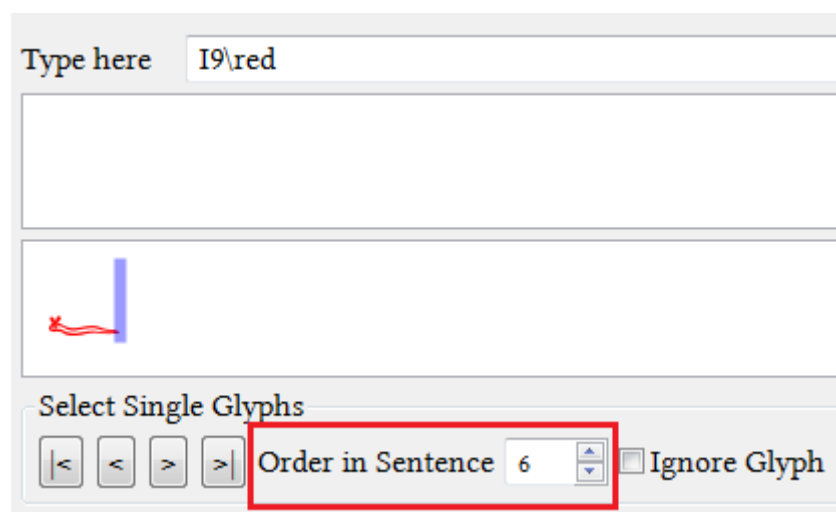
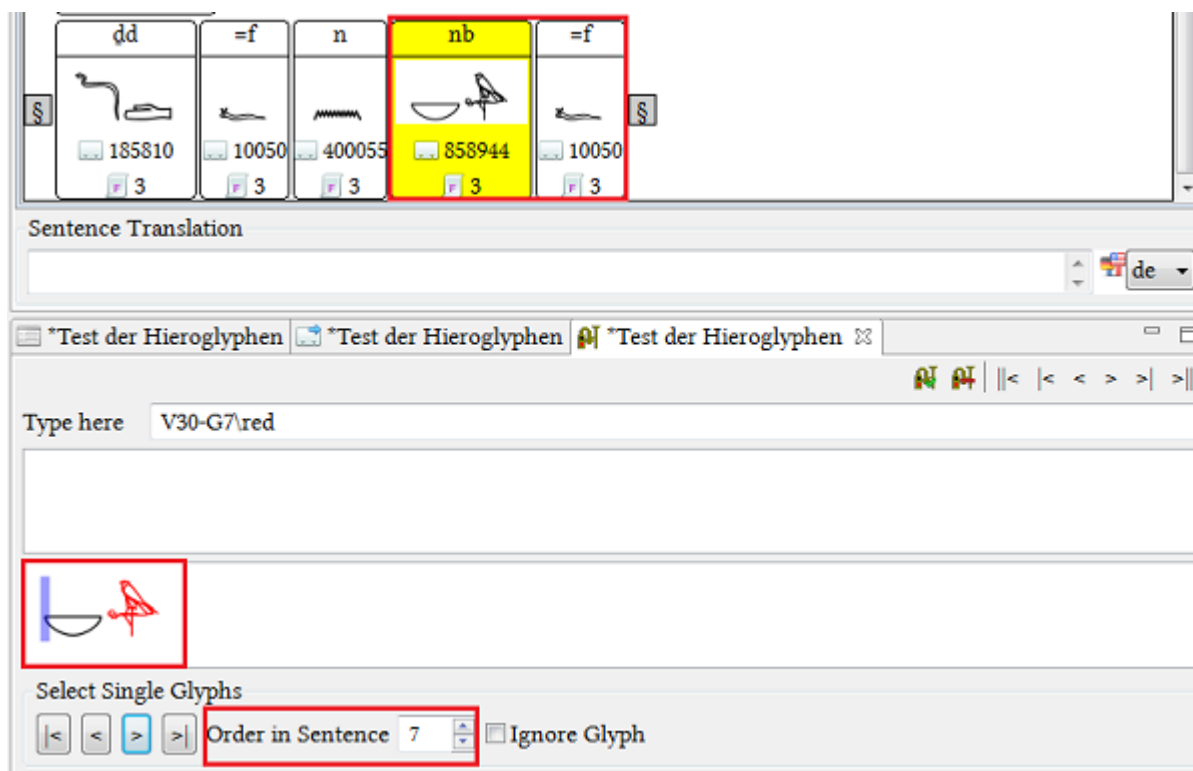
*When the inverted words do not form a single lemma*, e.g. an inverted writing of *mj R#w*, each word is to be encoded with the signs that belong to it. The inverted sign-sequence cannot be reproduced/depicted with the hieroglyphs, but the program offers the option "Select Single Glyph" to mark such inversions (see below).



*When the inversion occurs while the word boundaries are broken*, e.g. ,the signs have to be assigned to words they belong to (in this case V30+G7 and I9 separately). The inverted sign-sequence cannot be reproduced/depicted with the hieroglyphs, but the program offers the option "Select Single Glyph" to mark such inversions (see below).

### Select Single Glyphs


This function is available for the last two types of inversions. To mark the correct position of G7 determinative, select it using the buttons |<, <, >, and >|. The selected sign will be marked red. After that set the "Order in Sentence" to the position where the sign occurs in the manuscript. Then do the same with the I9 sign. In the example below G7 and I9 have to switch to positions 7 and 6 accordingly.




### Grouping hieroglyphs

Use ":" and "\*" to group hieroglyphs. It is crucial that you work with the photos or facsimile of the original text. Publications containing hand- or computer-written hieroglyphs may present the hieroglyphs in a different order than the original text. If neither photo nor facsimile of your text is available, please refrain from grouping the hieroglyphs.

Example:

H-t:p = 

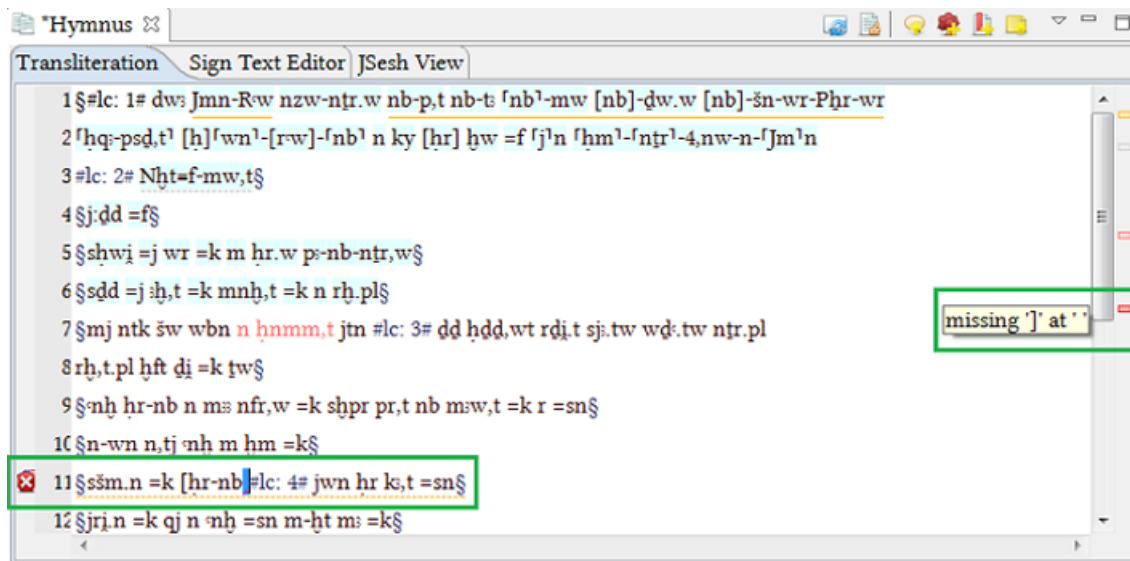
Q3\*X1:N1 = 

NOTE: Due to technical reasons, columns have to be transcribed into lines.


NOTE: Grouping with "&" is not allowed, because this has affection on the sequence of hieroglyphs.

## Grammar check

BTS is capable of checking the transliteration for errors by using formal system grammar rules. This does not mean that it can recognize wrongly selected lemmata or transliteration errors and correct them. In fact, grammar check follows an internal logic according to which specific signs can only occur in specific combinations. It detects disagreements with this logic and marks them:



Errors are marked by:

- 1) Either the  sign or a red square on the left margin of the text (depending on your system);
- 2) a dark red rectangle on the right margin next to the scroll bar of the Transliteration tab - this can serve as a "book mark" for errors which are not visible in text part actually displayed in your window; click on the rectangle to jump to the relevant text passage;
- 3) a red wavy underscore under the relevant passage.

NOTE: Do not mix up the red rectangle on the right with the light red rectangles, which show the location of a rubrum. Upon mouse-over on the rectangle the tool-tip will be displayed, explaining the cause of the error. If there are further annotations, rubra or comments annotated to the same sentence, the mouse-over also provides you these information. You get a tool-tip with only information on the error upon mouse-over on the underscored passage.

NOTE: Some combinations of round brackets and double round brackets result in errors. For example ((n(j))) is not valid in the BTS grammar. In such a case use the dummy sign "∴": ((n(j)∴)).





In the example above (see screen shot) a square bracket was opened, but the second one is missing. If you insert the required symbol the error message will disappear.

All grammar errors in the transliteration should be corrected before saving or switching to the Sign Text Editor, otherwise you lose your data.

## Data saving options

There is no auto-save function in BTS. Make sure you save your work in regular intervals to avoid loss of input.

The options for saving files are the following:

- The program will save your data automatically after you select a different database object.
- Save manually by clicking the buttons  or  in the toolbar. See [Toolbar](#) on page 66 for more information.
  -  saves the changes in the currently selected window or tab.
  -  saves all changes made in the current session.
- If you have not saved your data before leaving the program, clicking on "Exit BTS" or "Restart BTS" the software will trigger the warning: "Select the parts to save" .

NOTE: We recommend you to save your work in regular intervals. In case your operation system or BTS software hangs up, you may lose your data.

NOTE: Saving might take quite a while and perhaps you cannot work during this time or a message "BTS is not responding" can pop up. This does not necessarily mean that the software hung up.

NOTE: Newly created database objects will automatically be saved, but changing any data (including their names etc.) requires manual saving.

#### Data backup

If you work in the online mode, BTS will permanently synchronize your data with the server and produce backups. If you work in the offline mode and wish to backup your data you can manually copy the relevant folder (C:\bts\dbdir\CouchDB\var\lib\couchdb if you chose the [standard directory](#)) and save it at another directory.

## Configuration

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The BTS allows you to adjust various settings in a way that best suits your needs.

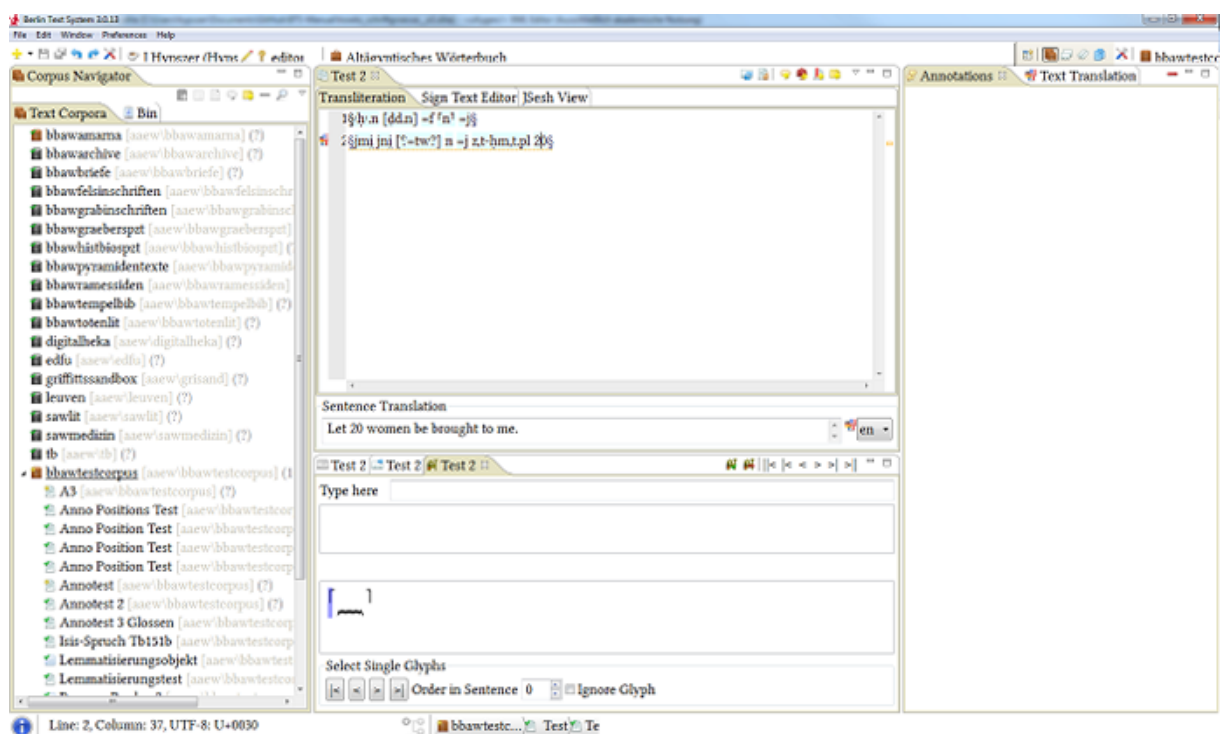
The features available for configuration are:

- Changing font size
- Adjusting display
- Defining Templates
- Setting personal preferences

NOTE: All changes in the configuration are valid on your local computer. They are not saved in your user account, i.e. if you login on another computer you have to configure your settings anew.

### Changing font size



Changing font size of the BTS is quite simple. Select Window entry from the Menu bar. The first option in the drop-down menu will be "Switch Font Size/CSS Theme". Click on it in order to enlarge the font. There is no list of font sizes to choose from. The font size will be enlarged or reduced upon clicking on the entry. Clicking on the entry the second time will bring back the original size and change the look of the BTS a little. Next two clicks will keep enlarging the font with the new coloring. The next clicks shrink it again and bring back the original coloring. Test it out in order to establish which look is the best for you. The example below demonstrates the look after three clicks on the "Switch Font Size/CSS Theme" entry.




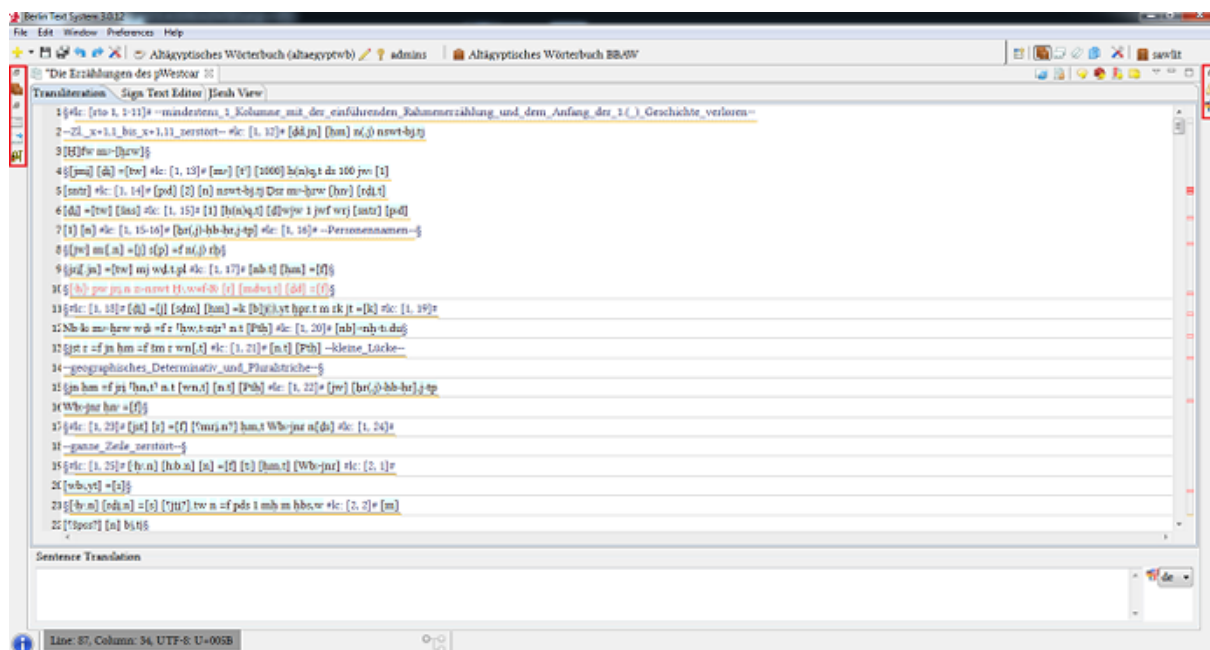
## Adjusting display

BTS is flexible in the location and display of individual tabs within it, but changes in the display and arrangement of tabs cannot be saved. Every restart of BTS restores the default settings.


### Minimizing/Maximizing

Most tabs can be minimized or maximized by clicking these two buttons:  and  respectively. When you have maximized or minimized one or several tabs of the workspace (Corpus Navigator, Text Editor, etc.), the respective icons will appear on the right or left side of the program window. For explanations of the icons see [Window](#) on page 61. Sometimes it might be necessary to return to the "Window"-entry on the Menu bar to restore the tabs by clicking on "Open Text Editor" etc.

This example shows the maximized Text Editor. Other tabs are minimized and displayed as icons on the right and left (marked by a red rectangle). To restore minimized tabs, click either their icon or restore  icon above it.



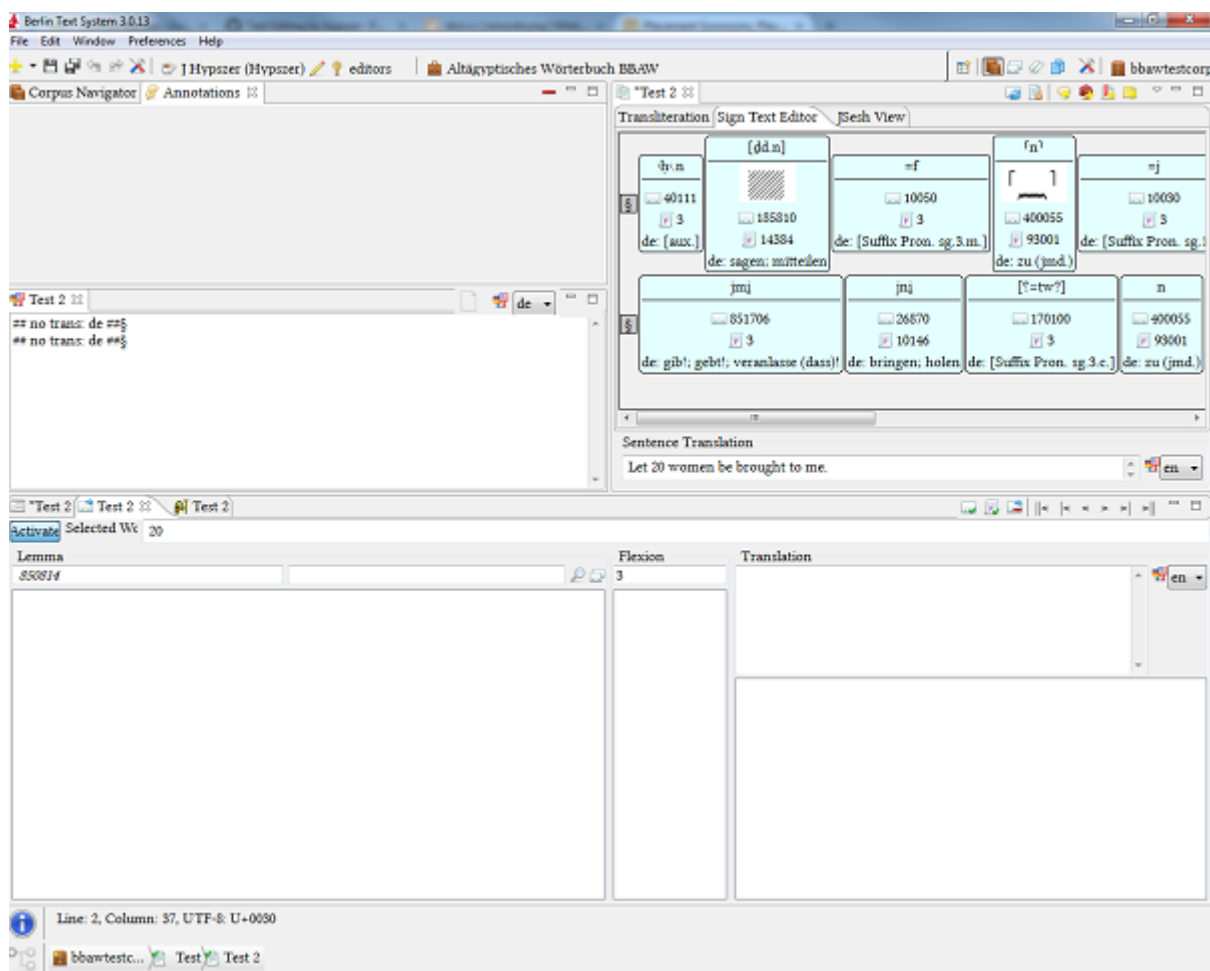
## Closing Tabs

Apart from the Navigator, most of the tabs can be closed by clicking . You can restore the closed tab via the dropdown menu "Window" in the menu bar. Restarting BTS will restore all closed tabs as well.

## Moving tabs

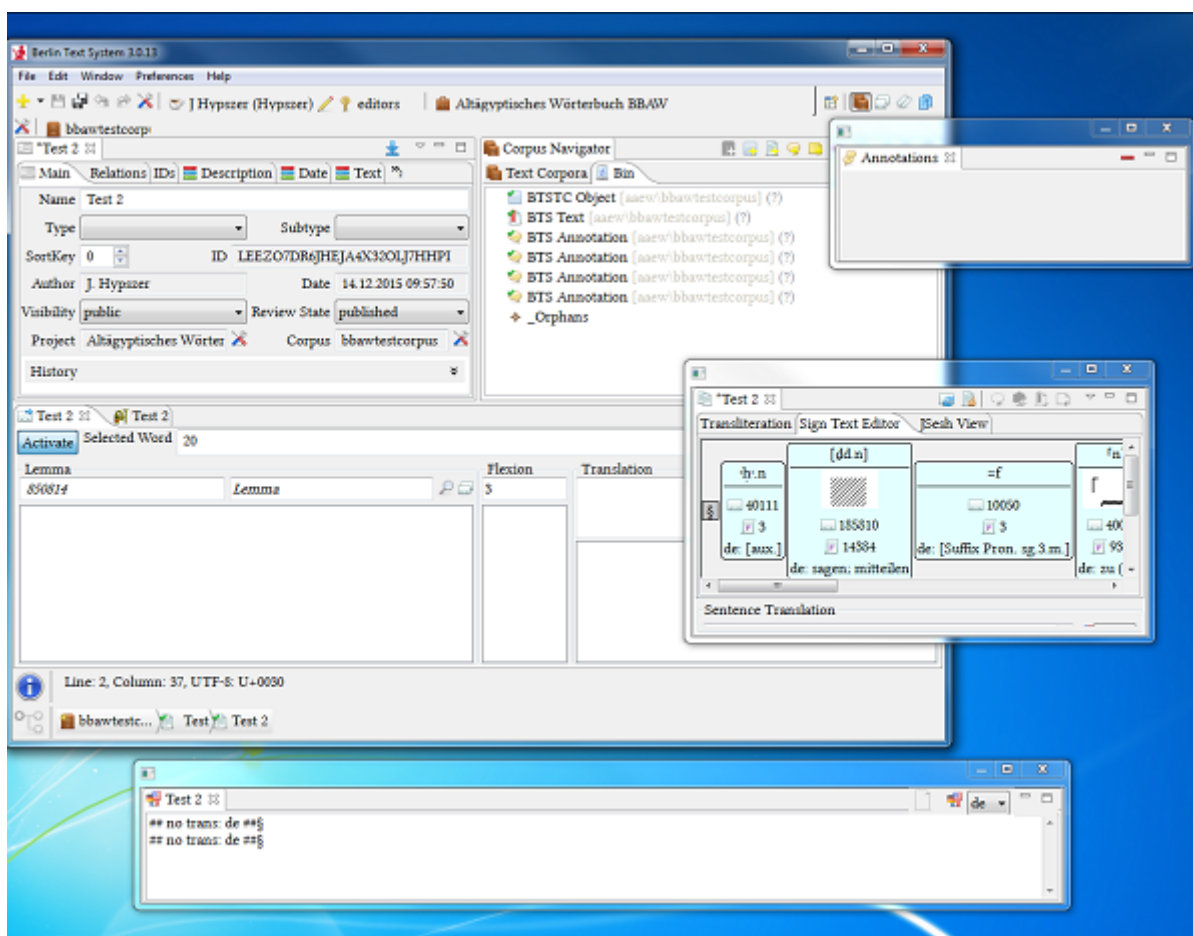
If you do not like the default arrangement of the BTS tabs, most of them can be moved (some have to stay together, like all the sub-tabs of the Text Editor: Transliteration, Sign Text Editor and JSesh View, all the sub-tabs of the Passport Editor and the sub-tabs of the Corpus Navigator: Text Corpora and Bin). You can grab a tab and just pull it to a different location within the workspace. Below is an example of rearranged sections. Annotations have been moved next to the Corpus Navigator, Translation is placed below it, and Text Editor no longer central.







It is also possible to pull an entire tab completely out of the program window. See screenshot below for an example. The tabs that have been removed from the program and now have individual windows cannot be put back in. You will have to restart the BTS in order to have the default view again.

NOTE: When you remove the last window from the program window, all windows will disappear. You need to restart BTS to restore the display.



## Preferences

To get to the "Preferences" window for individual settings, click either the button  in the left part of the toolbar menu or on a drop-down entry  Preferences..." in the menu bar / Preferences. For more details see BTS User Interface, chapter [Preferences](#) on page 62.

Expanding the "Berlin Text System General" will present several options. Those applying to you for editing a text are the following:

### Corpus Settings

Here you can choose a set of corpora you are going to work with. Every corpus that does not appear in the active corpora list on the right will not be accessed by BTS (this includes display in the Navigator tree and search queries). To activate a corpus select it in the list on the left and then click "Add". To remove the corpus from your working list, select it and click "Remove". "Add all" / "Remove all" will add or remove all available corpora to or from the active corpora list.

The check-box "Activate to select main working corpus" has a specific function. If it is activated all new database objects created in the "Corpus Navigator" window will be physically saved in the selected corpus. For example in the Corpus Navigator you have selected Corpus 2, but your main working corpus is Corpus 1. The new database object will be *physically* saved in Corpus 1, although in the Corpus Navigator it is displayed as a part of Corpus 2.

NOTE: As you are currently enabled to select a corpus as main working corpus for which you do not have any rights, it might happen that by accident you create a database object for which you then do not have any editing rights. In that case please contact the BTS team in Berlin: [aegypt1@bbaw.de](mailto:aegypt1@bbaw.de).

### Corpus Navigator Settings

- Check box "Corpus Navigator sort by sort key". By default, all database objects on the same level have "0" as a sort key and are thus sorted alphabetically. Defining a SortKey in the passport data of the database object will change its position regarding other database objects, "0" being on top. See Passport Editor, chapter [Main](#) on page 75.
- "Default Visibility" applies to all newly created database objects. It defines the visibility status a corpus will have by default after its creation.
- "Default Review State" applies to all newly created database objects. Like the "Default Visibility" above, this defines a review state which a corpus will have directly after its creation.

#### Lemma List Settings

Here you can choose a project with a main working lemma list. All new lemmata will be saved in this project. You can currently choose between "Altägyptisches Wörterbuch BBAW" and "Demotic". If you select both, the combined lemma list will be displayed in "Lemma Navigator". If you work with texts in Demotic script, please select "Demotic" as main working lemma list. Otherwise, select "Altägyptisches Wörterbuch BBAW".

#### Lemma Navigator Settings

- Check box "Lemma Navigator sort by sort key". By default all database objects on the same level have "0" as a sort key and are thus sorted alphabetically. Defining a "SortKey" in the passport data of the database object will change its position relevant to other database objects, "0" being on top.
- "Default Visibility" applies to all newly created database objects. It defines the visibility status a lemma will have by default after its creation. See also chapter [User roles description](#) on page 10.
- "Default Review State" applies to all newly created database objects. Like the "Default Visibility" above, this defines a review state which a lemma will have directly after its creation.

NOTE: "Default Visibility" and "Default Review State" apply to all newly created database objects, also including annotations, rubra, comments etc. Currently there is no feature available to apply changes in the visibility and review state to child elements. That means, if e.g. your default visibility is "reader", you have to change all TCOjects, Texts, annotations, rubra etc. to "public" manually once you want to publish your text in the TLA.

#### Lemmatizer

The Lemmatizer allows you to set a default inflection (the programmes default inflection is "3") and activate the check box "Automatically select first lemma proposal". The latter feature enables you to navigate through the proposed lemmata via the arrow keys of your keyboard. More on grammatical rules see [BTS Grammar Rules](#) on page 101.

#### Project settings

Here you can choose your main working project from the drop-down menu. The field below gives you an option to select further projects from which you want to load and read data. In the box on the left is a list of available projects. Clicking on one will give you an option to add it to the "Projects to be downloaded" on the right. Clicking on "Apply" below will download the project. Between the two fields you also have an option to remove the project from the right field and to "Add All" from available to "Projects to be downloaded" and "Remove All" from "Projects to be downloaded" to "Available Projects". Next to the "Apply" button there is also one that will restore default settings "Restore Default".

#### Remember me

Select the check box "Remember my login credentials on startup" to be logged in automatically, when starting BTS. To deactivate this function unselect the check box.

#### Text Editor

- Activate mouse-over pop-up with information on lemmata. Activating this option will display the lemmatization information about the selected lemma in the Text editor (currently unavailable).
- Show line number ruler on left side. This check box activates the line numbering (of the window) in the [Text editor](#).

#### Sign Text Editor

Defines the elements displayed in the lemma-boxes while editing tokens inside the Sign Text Editor. Additionally, the line width can be adjusted by changing the number in the "Line width in pixel" input field.

The applied changes will be visible upon refreshing the view of the "Sign Text Editor" tab.

NOTE: The function "Line width in pixel" does not work in the current version.

### Thesaurus Settings

Here you can choose a project with a main working thesaurus. All new thesaurus entries will be saved there. Currently only one working thesaurus is available: "Altägyptisches Wörterbuch BBAW".

### Thesaurus Navigator Settings

- Check box "Ths Navigator sort by sort key". By default all database objects on the same level have "0" as a sort key and are thus sorted alphabetically. Defining a "SortKey" in the passport data of the database object will change its position relevant to other database objects, "0" being on top.
- "Default Visibility" applies to all newly created database objects. It defines the visibility status a thesaurus entry will have by default after its creation.
- "Default Review State" applies to all newly created database objects. Like the "Default Visibility" above, this defines a review state which a thesaurus entry will have directly after its creation.

In the "EgyDsl" menu entry (Dsl = Domain Specific Language) you can change the appearance of your BTS. This includes applying different colours and scripts as well as importing and editing templates.

### Syntax Coloring

This feature does not work in the current version.

### Templates

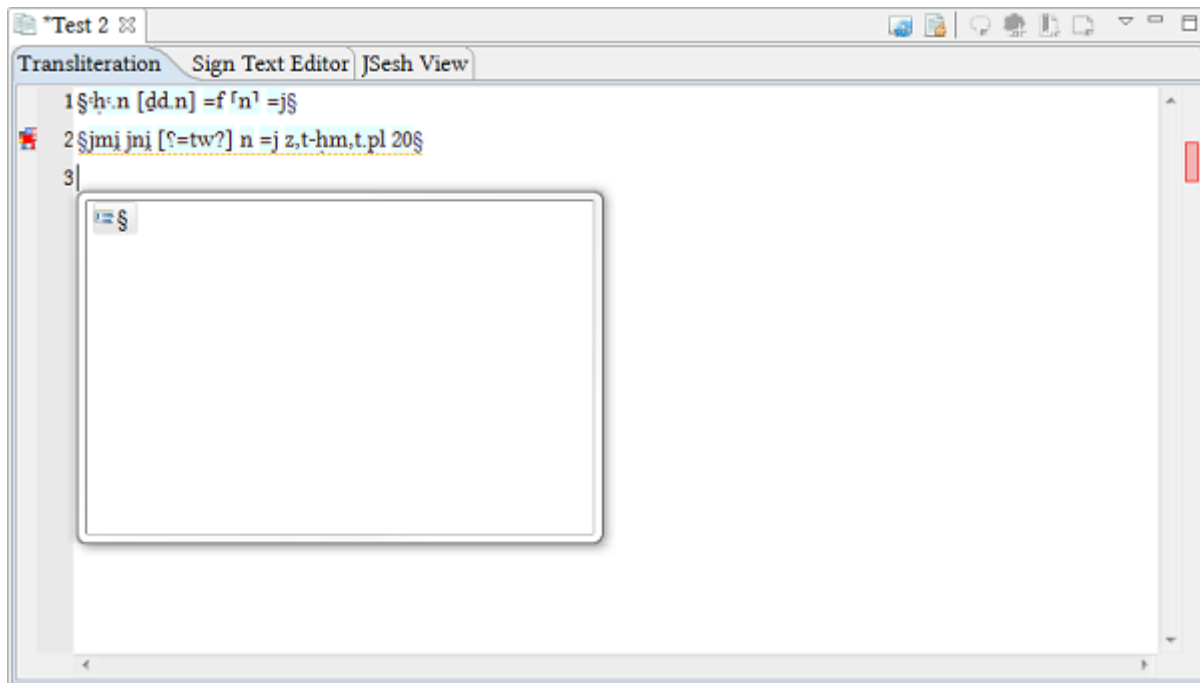
This window offers you a functionality to create templates to make the transliteration input easier. For example, you can define short cuts for line counts etc. While transliterating, right-click a word and select "Content assist". Your template will be displayed at the end of the list. Double click it - it will be automatically inserted into the text. For a detailed description see the chapter [Templates](#) on page 44.

To restore a default configuration, click the "Restore Default" button. To confirm your changes without closing the window click "Apply", to save and close click "OK". To reject all changes, click "Cancel".

## Templates

A template is a pattern used to replicate letters, shapes or designs in the word processing, e.g. line count, ambiguities, plural- and dual-endings etc. You can use this function to speed up the transliteration process.

Access the already-existing templates through the Content Assist (right-click in the Text Editor Transliteration field or pressing CTRL + Spacebar) and choose it from the menu. The already-existing templates are essentially what you can find on the keyboard layout and type manually, but you can decide which method is better for your workflow. Depending on the position of your cursor (within a sentence / word or outside the sentence marked by §§) you will get a different set of templates to choose from, so it might be helpful if you ever have doubts about what is allowed to be inserted in a given position. In the example below, the position is line 3, where no §§ have been added yet. Hence the Content Assist gives you only one option: to enter \$.

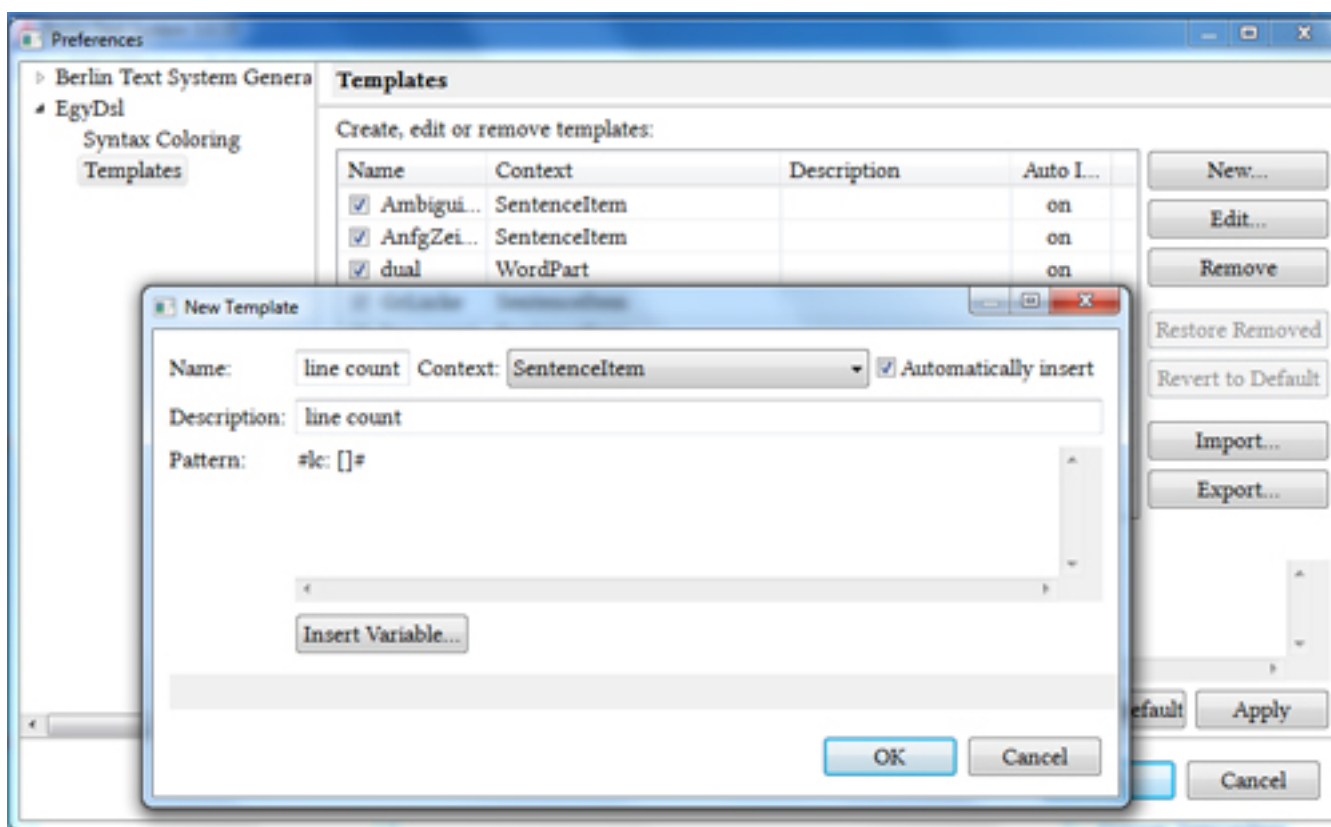


### Creating a new template

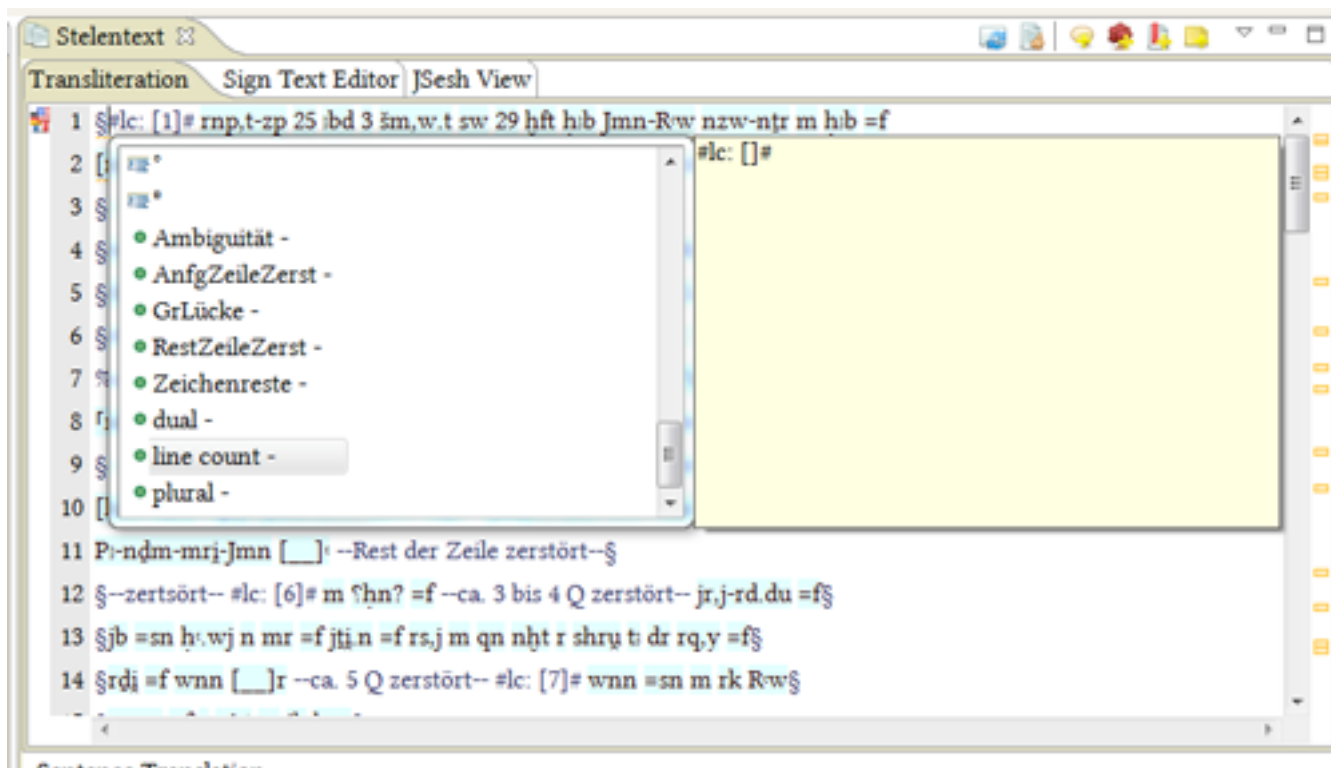
You are enabled to create your own templates. Select "Preferences" in the menu bar. Then expand "EgyDsl" and click on the entry "Templates". Clicking on "New..." will open a new window where you first have to name your template and select its context from the drop-down menu. The context determines at which position in the text the template will be displayed (SentenceItem or WordPart).

NOTE: You are advised only to select "SentenceItem" and "WordPart" as context from the dropdown menu. Use "SentenceItem" for independent items (e.g. linecount) and "WordPart" for dependent items (e.g. plural and dual endings). All other contexts shall not be used.

You may add a short description to it in order to remember what it does. Other than the name, a description is not mandatory. Name and short description will be displayed in the Content Assist. In the field "Pattern" enter the motive which will be displayed in the transliteration. The button "Insert Variable..." allows you to choose from some pre-set patterns which you can use for your template. The example below demonstrates how a template works.



When it is finished, click OK and it will appear in the list. You can edit or remove it as well. You can now use it in the transliteration. Right-click within the §§ signs and open the Content Assist (CTRL + Spacebar). Scroll to the bottom where the new template is located (using either the mouse or the arrow keys). Clicking on it once will display the pattern which will be inserted to the text. Double-clicking (or ENTER) will add the template to the transliteration.



## Changing Password

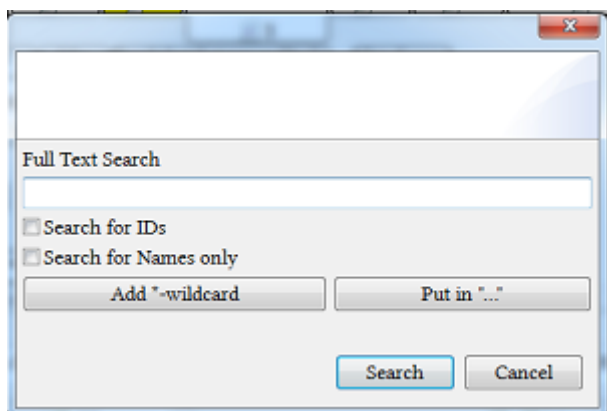
Currently not available.

## Search Function

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The search function is available in the Navigator tab of each view (Text Corpus, Lemma, Thesaurus).

In the toolbar of the Navigator, click on the search icon . A window will appear with an input field and two check boxes.



The search works as a full-text search. Therefore, the search is executed on the name of the object, the metadata of the object, and the textual data (i.e. the transliteration, the translation) of the object. The search terms are combined with the operator OR. So, when you search for Papyrus Westcar, the program will look for "Papyrus" and "Westcar" separately and present you with results that contain Papyrus or Westcar. If you want to search phrases you will have to insert a phrase into quotation marks "...", e.g. "Papyrus Westcar".

When you want to locate a specific database object within a project there are two possibilities for the search:

1. If you know the ID of a database object, enter the ID into the input field and activate the check box "Search for IDs".
2. You can restrict your search activating the check box "Search for Names only". Then, the search is no longer a full-text search, it is executed on the names of database objects.

## Indexing the database

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To index or re-index the database open the "Database Manager" by clicking Preferences > Open Database Manager in the menu bar. The "Database Manager" window will open automatically with each BTS start, if there are any problems with the index.

The "Database manager" window displays all available database collections. Each database collection is reflected by a line in the table. The number of documents per collection is shown in the column "DB Doc Count".

### Indexing

Indexing is a process, which enables the search in the database, as the query is not done in the database itself (which would take time), but in the document indexes. The status of a corpus' indexing process is indicated by the background colour of its line in the "Database Manager". Each line can have one of three background colours. Green means that everything is indexed properly. Yellow and red indicate that in this corpus a problem had occurred. The column "Index Doc Count" shows the number of the already indexed documents in this corpus. Additionally, the status of the corpus will be displayed in the "Status" column (OK- green, ERROR- red or INDEXING...- yellow). The "% indexed" column shows the percentage of the indexing process.

### Re-Indexing



BTS indexes the databases itself, when it receives new data from the server, but sometimes the automatic process produces errors and requires manual re-indexing.

Databases that are not indexed successfully are marked either in yellow or in red. If indexing was not successful for some corpora re-index them by clicking on the button "Re-index all non-OK". Re-indexing may take a while. The more databases you have to re-index, the longer it will take. During this process you will not be able to use BTS.

Re-indexing has three options:

- Re-index all
- Re-index all non-OK
- Re-index individual DB collection.

To re-index individual collections, select them by left-click, scroll to the right of the table and click on "Re-index" in the most right column.

Close

Leave the "Database Manager" window by clicking the "Close" button in the lower right corner.


NOTE: We recommend to re-index all databases that are either marked red or yellow.

NOTE: The items "\_replicator" and "\_uses" cannot be indexed and thus always are marked in red. You do not have to re-index these items.

## Revision History / Conflict Dialogue

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### Revision History

By right-click on a database object or by clicking Edit > Open Revision History  in the menu bar you can open the revision history of the selected database object in order to compare different versions and to restore a previous version.

The Revision History window is divided into two parts. The left side displays the master version, i.e. the current version. The right side shows the auto-saved versions ("Select Compare Version").


In the lower part there are the respective tabs, e.g. Passport Editor and Egyptian Text Editor for a text. Select a version by left-click and compare it to the current version. You can navigate between the tabs to see the changes made in the respective versions.

NOTE: The topmost version on the right is the latest.

To remove a conflicting version, right-click it in the list and apply "Replace current with Selected Revision".

Close the Revision History window by clicking "Close".

### Conflict Dialog

If two users work simultaneously on one database object, it is possible, that they produce different versions at the same time. This is indicated by the icon  in the Navigator tree. The conflict dialog solves the problem, which version is the preferable one.

The window is divided into two parts (as for the Revision History). The left side displays the current version. The right side shows the conflicting versions.

In the lower part there are the respective tabs, e.g. Passport Editor and Egyptian Text Editor for a text. Select a conflicting version by left-click and compare it to the current version. You can navigate between the tabs to see the changes made in the respective versions.

To remove a conflicting version, right-click it in the list and apply "Remove Conflicting Revision".

NOTE: Due to technical reasons it might take several attempts to get to the "Remove Conflicting Revision" button.



Apply your changes by clicking "Save and Close" or reject them by clicking "Cancel".

# Guide for advanced and privileged users

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The following instructions are for users with advanced privileges, in particular for Editors and Administrators. They learn how to edit, modify and administrate the data in BTS. Some topics also apply to users with Researcher status, e.g. creating new text corpus objects, lemma entries or thesaurus entries.

## Creating a corpus

---

The following function is available to the user with global administrator privileges only. The detailed description of the UI elements can be found in section [Text Corpus View](#) on page 69.

Creating a corpus

1. Click on the  "New Corpus" icon. It is located above the [Corpus Navigator](#). Alternatively, right-click on any corpus and select "Create New Text Corpus".
2. Choose a name and a prefix (a prefix is a short name under which the corpus will be saved in the database).  
NOTE: No special signs, spaces or capital letters are allowed in the prefix.
3. Select the check box if you want to "Synchronize corpus with central database". Other users will be able to see your new corpus only if it is synchronized with the remote database server. Otherwise, it will rest in offline mode on your PC. After you have finished, click "OK". Cancel the creation with the "Cancel" button.
4. Your new corpus will appear in the list of the corpora.

## Creating a database object (TObject and Text)

---


The following functions are available to the user with at least Researcher privileges over a given corpus. Creating a Text Corpus Object and a Text are the basic steps to edit a text in BTS. Before creating a Text you need to create a Text Corpus Object, i.e. the item referring to physical inscribed object, and define the physical source of your text.






Creating a Text Ccorpus Object

1. Choose the corpus from the Corpus Navigator tree where you wish your TObject to appear. You can add an TObject to a corpus or to another already existing TObject. Although you can later move database objects, consider a logical hierachic order.
2. Click "Add Text Corpus Object" in the toolbar. This action will add an object as a sub-entry of the chosen corpus. The newly created TObject has the relation "PartOf" to the chosen corpus or to an already existing database object of this corpus.

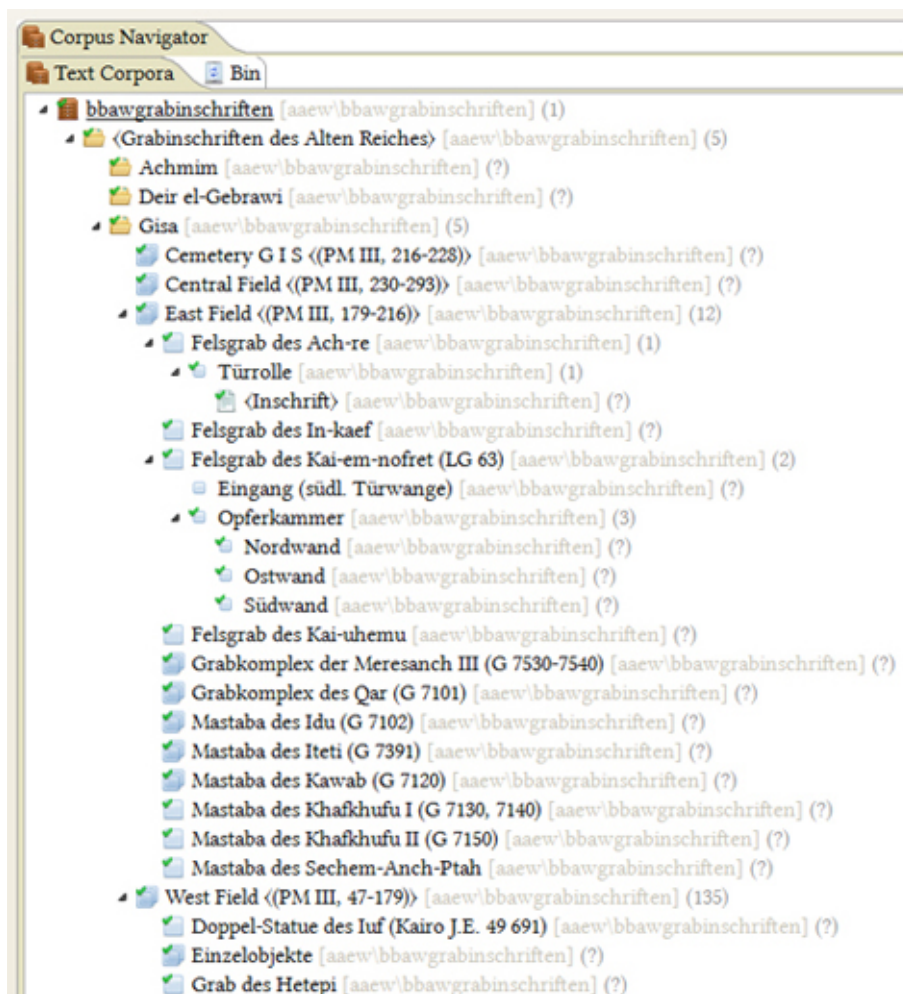
NOTE: A Text Corpus Object is referring to a physical object, covered with texts. Texts and Text Corpus Objects are in child-parent relation, i.e. Text is always attributed to the a specific Text Corpus Object - not vice versa (see also [Glossary](#) on page 124).

NOTE: Newly created database objects will be saved in your main working corpus (as selected in the [preferences](#)) and not in the selected corpus, if those two differ. New database objects will appear in the selected corpus, but will not be saved there. The appearance is dependent on the relations of the database objects, not on their physical storage.


3. Name your Text Corpus Object in the [Main Tab](#) of the Passport Editor (The "Name" input field will appear red). You can actually start working without naming your object and name it later. Until it is named, the object will appear in the corpora tree with the default name "BTSTC Object".
4. Define the Type of the TObject (There are no Subtypes, this not to be used). Provide as much information as possible by filling out the tabs of the [Passport Data Editor](#). The different types are the following:
  -  Caption: The Caption is used as a folder to list a set of physical objects under one heading due to pragmatic reasons (e.g. the stelae from Kawa or the medical papyri).



-  Group: A Group defines a number of physical objects belonging together on geographic reasons (e.g. the graves of a specific cemetery like the Eastern Cemetery at Giza or an papyrus archive like the Abusir Papyri).
-  Arrangement: An arrangement defines a closed association of finds (e.g. the objects from the tomb of Tutankhamun or the objects from a founding deposit).
-  Scene: This is an obsolete entry that was used for data imported from the previous project. Do not use it.
-  TCOBJECT: The Text Corpus Object is the physical ancient Egyptian object that is covered with your text (e.g. the Papyrus Harris 500 or the sphinx stele of Thutmose IV.).
-  ObjectPart: ObjectPart is hierarchically subordinated to TCOBJECT. Use it, when the carrier of your text consists of more than one physical object (e.g. a statue and its base or several parts of a building).

When you create your Text Corpus Objects and Texts, be sure to arrange them in a logical hierarchic order. Texts are always child elements of Text Corpus Objects, not vice versa:



Creating a text

1. Select [a node](#) in the Corpus Navigator where you'd like to place your text. You can add a text to a TCOBJECT or even to an already existing text.
2. Click  "Add Text" in the Corpus Navigator toolbar. A "child"-element will be added to the selected database object. The default title "BTS Text" will be attributed to it (in order to see it, you might have to open the parent element).

3. Name your text in the [Main Tab](#) of the Passport Editor (The "Name" input field will appear red until it is filled out). You can actually start working without naming your text and name it later. Until then the default name will be "BTS Text".
4. As for the Text Corpus Object define the Type and, if applicable, also the Subtype of the database object. Provide as much information as possible by filling out the tabs of the [Passport Data Editor](#).
  -  Text: A Text is defined as a coherent entity. Your physical object might contain several texts, e.g. Papyrus Harris 500 containing "The Doomed Prince", "The Taking of Joppe" etc. Each of these tales and poems receives its own database object "Text" subordinated to the TCOBJECT "Papyrus Harris 500".
  -  Subtext: Subtexts are parts of the same text that are related to each other, but without a defined order of reading (e.g. different persons and their respective inscriptions on a relief).

NOTE: Do not treat chapters or captions of a continuous text (e.g. the medical remedies in Papyrus Ebers) as subtexts. These have to be segmented by annotations (see [Annotations, Rubra, Glosses and Comments](#) on page 30).

#### Defining the visibility


Define in the main tab of the [passport editor](#) the visibility of your database object. See also [User Roles Description](#). A default visibility can be defined in the [Preferences](#).

- reader
- group
- project
- public
- all\_authenticated

NOTE: The default visibility applies to all newly created database objects, also including annotations, rubra, comments etc. Currently there is no feature available to apply changes in the visibility to child elements. That means, if your default visibility is "reader", you have to change all TCOBJECTS, Texts, annotations, rubra etc. to "public" manually once you want to publish your text in the TLA.

#### Defining the review state

The display of the icon of your Text Corpus Objects and Texts differs according to the review state you have selected in the main tab of the [passport editor](#). A default review state can be defined in the [Preferences](#). The icons mentioned above will get one of the following additions:

-  new
-  awaiting review
-  awaiting update
-  reviewed / published

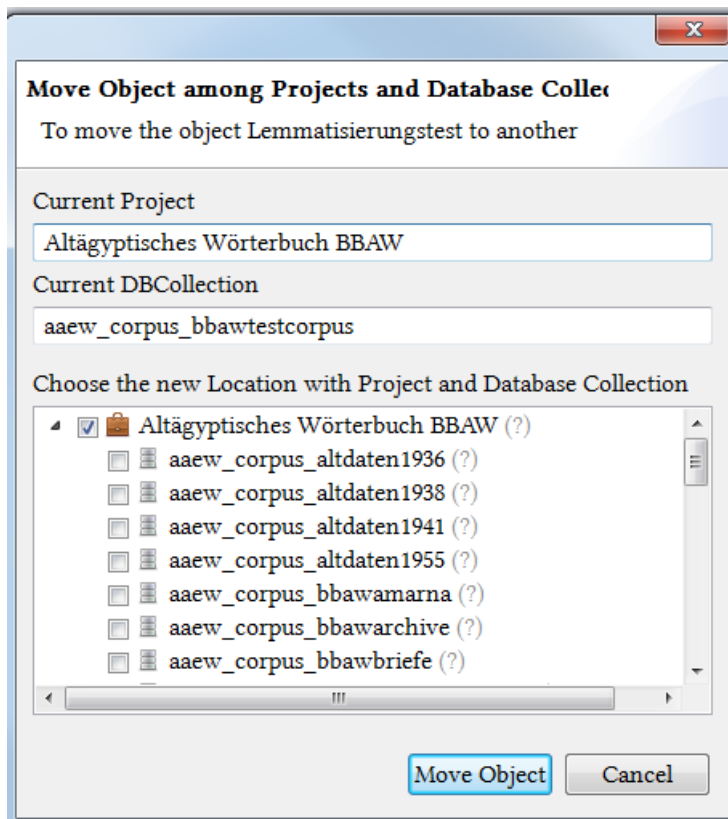
NOTE: As for the visibility, the default review state applies to all newly created database objects, also including annotations, rubra, comments etc. Currently there is no feature available to apply changes in the review state to child elements. That means, if your default review state is "new", you have to change all TCOBJECTS, Texts, annotations, rubra etc. to "published" manually once you want to publish your text in the TLA.

#### Moving database objects (TCOBJECTS / Texts)

To change a physical location of a database object (marked in square brackets aside the name) from one project or corpus to another, right click the chosen item and select "Move among projects" in the appearing context menu. In the opened window the current physical location is displayed. Alter the entries as you wish (upper field for a new project and lower field for a new corpus in the project) by clicking the checkbox in the lower field. Changing the physical location does not affect the position of the database object in the Navigator tree. The project or corpus where this Text Corpus Object or Text is actually saved is given in brackets after the name of the Text Corpus

Object or of the Text (in Grey). To change the position in the tree as well, it is necessary to change the relation in the *"Relation"s tab* of the passport editor.

NOTE: If you have accidentally created a database object within a wrong position and you do not have the rights to move it, please contact the administrator in Berlin: aegypt1@bbaw.de.



### Deleting database objects (TCObjects / Texts)




There are two options to delete a database object from the database:

1. To delete a database object (Text Corpus Objects or Texts) select it and then click on "Delete". It will be moved to the bin ( "Bin" tab in the Corpus Navigator section), where you have the opportunity to restore it (right click the object and choose "Restore" from the context menu) or to delete it permanently. All subordinate elements will be deleted as well. Upon closing or restarting the BTS all the items in the bin will be deleted permanently.
2. A database object is deleted permanently (without moving it to the bin first) by either right-clicking the respective item and selecting "Delete Permanently" or by selecting the item from the Navigator tree and then selecting "Delete Permanently" from the drop-down menu . The removal of the database object will be visible after BTS restart.

## Creating a lemma entry

This option is only available to users with researcher privileges for the lemma-list. If you have a new lemma, which is not yet present in the BTS lemma list, please send a proposal to the BTS team via E-mail: aegypt1@bbaw.de.

1. To create a new lemma, open the *Lemma View*. On the left you will see the *Lemma Navigator*: a list of available lemmata, grouped alphabetically.
2. Click on in the Lemma Navigator toolbar.
3. In the *Lemma Editor* add a transliteration for your lemma (see below).

4. In the text-input field below you may also add hieroglyphs. In order to do that, open the [Hieroglyph Type Writer \(HTW\)](#) and follow the instructions on how to enter hieroglyphs for a text.
5. In the text-input field below, enter a translation for your lemma (choosing the language of your translation beforehand).
6. Add information on transliteration, part of speech, review state in the main tab of the Passport Editor.
7. Add a bibliographical reference in the [Passport Editor](#).
8. To add an annotation or a comment to a lemma, click  "Add Annotation" and  "Add Comment" in the toolbar of the Lemma Navigator.
9. To delete a lemma entry, use the  "Delete" button in the Lemma Navigator toolbar. It will move the entry to the "Bin" tab, where you can manually delete it permanently. Closing or restarting the BTS will also lead to the permanent deletion of an entry from the bin.

### Transliteration

The lemma transliteration section is identical to [Text Editor](#). Transliterate the lemma in this field within the "\$" signs ("\$" marks the beginning and the end of the lemma). If the transliteration is not enclosed with "\$", it will not be valid.

Compound-word-lemmata: If you want to enter a lemma that consists of multiple words (e.g. as in *m-hnw*), use "-" between each element. If you want to split them into multiple elements (but have it as one entry) then just use "space" between each word. Do not enclose each word individually with "\$".


The consequence of splitting the compounds into multiple elements is that in the case of searching for a part of the compound (e.g. *hm* in the case of *hm-ntr*) the evidence of the token lemmatized as compound will appear.

Example: "*m-hnw*": Typing *\$m-hnw\$* marks one element while *\$m hnw\$* marks two elements: *m* and *hnw* (wrong: *\$m\$ hnw\$*).

### Sign-Text

In the Sign-Text section every lemma appears as a single element, no matter if the element is part of a compound word or not. This means that you can sub-lemmatize every part of a compound in addition to the compound itself (which would be lemmatized as one lemma only).





### Translation




Enter the translation for the complete lemma into this field. Select the language of your choice by left-clicking the drop-down menu marked by .

## Creating a thesaurus entry

This option is available to users with researcher privileges for the thesaurus. If you have a new thesaurus entry, which is not yet present in the BTS thesaurus list, please send a proposal to the BTS team via E-mail: [aegypt1@bbaw.de](mailto:aegypt1@bbaw.de).

The main function of the Thesaurus is to provide controlled vocabulary for the metadata of texts, (physical) objects, lemma entries and thesaurus entries, e.g. dating, location or material. For a detailed description of the individual elements of the Thesaurus view see [Thesaurus View](#) on page 94.

1. Open the Thesaurus view by clicking the  "Thesaurus" icon in the [Toolbar](#).
2. In the Thesaurus Navigator on the left, click either  "Add Thesaurus Root Entry" or  "Add Thesaurus Child Entry" to create a new thesaurus entry. A root entry may stand on its own, while a child entry is always dependent on the root entry.
3. Click on the newly created "Thesaurus" entry to edit its content. Its Passport Editor  will appear in the middle.
4. In the Passport Editor you have to type a name (default name is either "Thesaurus Root" or "Thesaurus Child"), define type and subtype via the drop-down menus and edit visibility and review status.

5. Now fill in all available metadata into the Passport Editor. For a detailed description of the individual tabs and elements of the passport editor of the Thesaurus View, see [Passport Editor](#) on page 96.
6. To add an annotation or a comment to a Thesaurus entry, click  "Add Annotation" and  "Add Comment" in the toolbar of the Thesaurus Navigator.
7. To delete a thesaurus entry, use the  "Delete" button in the Thesaurus Navigator toolbar. It will move the entry to the "Bin" tab, where you can manually delete it permanently. Closing or restarting the BTS will also lead to the permanent deletion of an entry from the Bin.

## Creating / Editing a project

---

This menu item is only available to the user with global administrator privileges.

### Creating Project

Select "File" > "New" > "New Project" in the menu bar. Selecting "New Project" will open the "Edit project name" window. To create a new project, enter "Project name", "Project prefix" and "Description". The project prefix is the internal name of the project, under which it will be saved in the database. Description is optional.

NOTE: Do not use special characters, spaces, or capital letters in the project prefix. If you have entered invalid characters, the input field will turn red and the buttons "Next" and "Finish" will be inactive.

NOTE: It is recommended not to click the "Finish" button until the last configuration window is displayed.

The button "Next >" leads to the "Project Connection Settings" window. Here you can enter "Connection Type", "Server URL" and "Database Path". The standard connection type used by BTS is "couchdb". The server URL includes the URL and port number and currently is "http://aaew64.bbaw.de:9589/". Database path is left empty.

Clicking on the "Next >" button again will display a "Project Feature" window to select among the features "Corpus Data", "Thesaurus Data", "Wordlist Data", and "Abstract Texts Data". We recommend to select all the check-boxes.

A further click on "Next >" leads to the "Project Database Collection" window, in which the newly created databases can be added or the existing ones edited. Editing includes changing the database name or activating / deactivating synchronizing and indexing check-boxes.

Confirm the creation of your project with the "Finish" button. To change or view information in the previous windows you can always click "< Back". Cancel the creation of the new project with "Cancel". The project properties can always be modified later through the "Edit current project" menu.

### Editing a project

Select "Edit" > "Edit New Project" in the menu bar. If you click on the "Edit current Project", a window comes up, where you can edit the current project's name and description.

The Button "Next >" leads to the "Project Connection Settings" window. Here you can enter "Connection Type" (BTS uses "couchdb"), "Server URL" and "Database Path".

Clicking on "Next >" will display a window with options to select additional features (Corpus Data, Thesaurus Data, Wordlist Data, Abstract Texts Data). Select the relevant check boxes and click "Next >".

In the "Project Database Collection" window you can add the existing databases to the new project. You can edit the name of the collection by clicking the "Edit" button.

Confirm the changes made to your project with "Finish". To go to the previous window you can always click "< Back". Cancel all the changes with the "Cancel" button.

## Editing Updaters / Readers of selected database objects

---

To set and edit the [User Status](#) for the currently selected database object (corpus, text, lemma, thesaurus entry etc.) select "Edit" in the menu bar and click "Edit Updaters/Readers". To use this feature your user role within the



selected corpus must at least be "Researcher" and your user status for the specific database object you want to edit must be "Updater".

On the left side of the "Edit Updaters/Readers" window the Readers and Updaters of the current database object are shown. Click on and expand "Reader" or "Updater" to display them. Clicking on the name of a user will display details on the right side.

On the right side you find the definition of the user role and drop-down menus to select and assign users to the respective role. Select the user or user group from the appropriate drop-down menu. Click on "Assign role to user" or "Assign role to whole user group" to assign a user or a user group to a role. The selected user / user group will then appear under the relevant status on the left.

To remove a user as reader or updater, select the user name on the left side of the window and then click "Remove Role from User" at the bottom of the right side.

You may also undo and redo your changes via the respective buttons  and  at the top left of the window.

Click "Save and Close" to save your changes or "Cancel" to reject them.

## Editing configuration

---

This function is available to the user with administrator privileges only.

To open the configuration window, select "Preferences" > "Edit Configuration" from the menu bar.

The "Currently Active Configuration" by default is "Altägyptisches Wörterbuch (AAEW)", but if other configurations should be available, they will appear in the drop-down menu above.

A field below shows all available BTS configurations. Expand the "Altägyptisches Wörterbuch (AAEW)", following entries will be displayed:

1. Certainty: three values are displayed: certain, probable or uncertain. No Owner Objects selected.
2. coreExpressions
3. Custom-Entries
4. Identifiers
5. objectTypes
6. Passport
7. Project-Phase
8. Relations
9. Revision-Status
10. Visibility


## Manage users and user groups

---

This function is available to the user with global administrator privileges only.

To open the user management select "Open User Manager" from the drop-down menu "Preferences" of the menu bar. Clicking on this menu entry opens the window "User Management". Select the tab: "Manage Users and User Groups".

The tab "Manage Users and User Groups" offers the opportunity to create new accounts for users and add users to project groups, which have a specific set of rights in the editing process.

In the tab  "Active Users" the active user groups are displayed. In the tab "Bin" deleted user groups are shown. In the brackets behind the group names the number of the assigned users is displayed. Clicking on a group name will open the list of assigned users. The last entry in the list "\_Orphans" shows all available users.



Each group has an ID and a name which appear in the field on the right. For each group a type can also be given and there is a possibility to write a comment. Also on the right side, below the group data, there is a section for creating new individual members within the group: "Create New User". A username and a password are to be entered while creating a new user. In the third section below there is a drop-down menu, where you can choose existing users and add them to the group by clicking on "Add user to Group".

Clicking on a username allows to modify the user information on the right side of the window. It contains such fields as "ID of User", "Forename", "Surname", "Email", "Website", "Description", "Web Description", "Siglum", and "Comment". In the ID field a username given earlier appears, but cannot be edited anymore. The check box "User is Database Administrator" can be checked. Required fields are marked by an asterisk (\*).

Functions of the buttons in this tab:



**New Group**

Adds a new group to your list of groups.



**Delete**

Deletes and moves the selected user into the tab  "Bin".



**Undo**

Undo the last action.



**Redo**

Redo last undone action.



**Edit updaters of selected database object**

Opens the window, where you can assign either "Reader" or "Updater" role to a user in relation to the user group.

## Administrate user roles and rights

---

This function is available to the user with administrator privileges only.

To open the user role administration select "Open User Manager" from the drop-down menu "Preferences" of the menu bar. Clicking on this menu entry opens the window "User Management". Select the tab: "Administrate User Roles and Rights".

The user role administration in BTS follows a certain procedure: first roles are assigned to a corpus and then users are assigned to existing roles (i.e. Project -> Corpus -> User Role -> User Name).

1st Level: Projects

A List of projects is displayed in the field on the left side. Upon clicking on a selected project, its data will appear in the field on the right. The data include: Project ID, Project Name, Project Prefix, Description, Connection Type, Server URL and DB Path. You can also click on the blue link below "Add Database Collection" and in the pop-up window give the name of the collection and check boxes "Synchronize Collection" and "Index Collection for Full Text Search" if needed. Clicking "OK" will add the collection to the selected project and it will appear at the bottom after opening the project tree.

2nd Level: DB Collections

For each collection the data will also be displayed on the right. "DB Collection Name" is shown, but cannot be edited. Two check boxes can be selected: "Synchronize with Server" and "Index Collection". Below is a drop-down menu "Create New Roles Description" where you can choose between admins, editors, researchers, transcribers or guest roles for the users. After selecting one option from the drop-down menu, click on the blue link "Add New User Roles Description" to add the role.

3rd Level: User Roles

In the tree on the left, the added roles will appear after expanding the collection. On the right, "Role Name" and "User Role Definition" (a description of tasks and rights) will appear, which cannot be changed. In the two fields below you can assign a user or a group to each role. At the bottom there is a blue link "Remove this Role and its members from DB collection". Clicking it will remove the selected role from the collection on the left.

4th Level: Users

Expanding (clicking on) a role, users with the assigned roles will be displayed. Clicking on individual users will make their first name and surname to appear on the right, in the case where an entire group has a specific role, the name of the group will appear. You can remove users and groups from specific roles by clicking the blue link on the bottom "Remove Role from User" or "Remove Group from Role".

Functions of the buttons in this tab:



New Project

Adds new project.



Delete

Deletes a project.



Undo

Undo last action.



Redo

Redo last undone action.



Edit updaters of selected database object

Opens the window, where you can assign either "Reader" or "Updater" role to a user in relation to the user group.

## Open Futon / Elastic Search GUI

---

This feature is only available to users with administrator privileges.

The administrator is enabled to open the futon and the "Elastic Search" graphic user interface via "Window" > "Open Futon" or "Window" > "Open ES GUI", respectively, in the menu bar.

Open Futon

Futon is a web-based GUI (graphic user interface), which provides a basic interface to the majority of the functionality of CouchDB. This is a "backdoor" to the database, allowing to create, update, delete and view documents and access the configuration parameters. It shows the source code of the database objects in JSON format.

For details see: <http://docs.couchdb.org/en/1.6.1/intro/futon.html>

Open ES GUI

This opens the "Elastic Search" graphic user interface with the standard internet browser. It allows to see the "backdoor" of the queries done in the BTS.

For details see: <https://github.com/jettro/elasticsearch-gui>

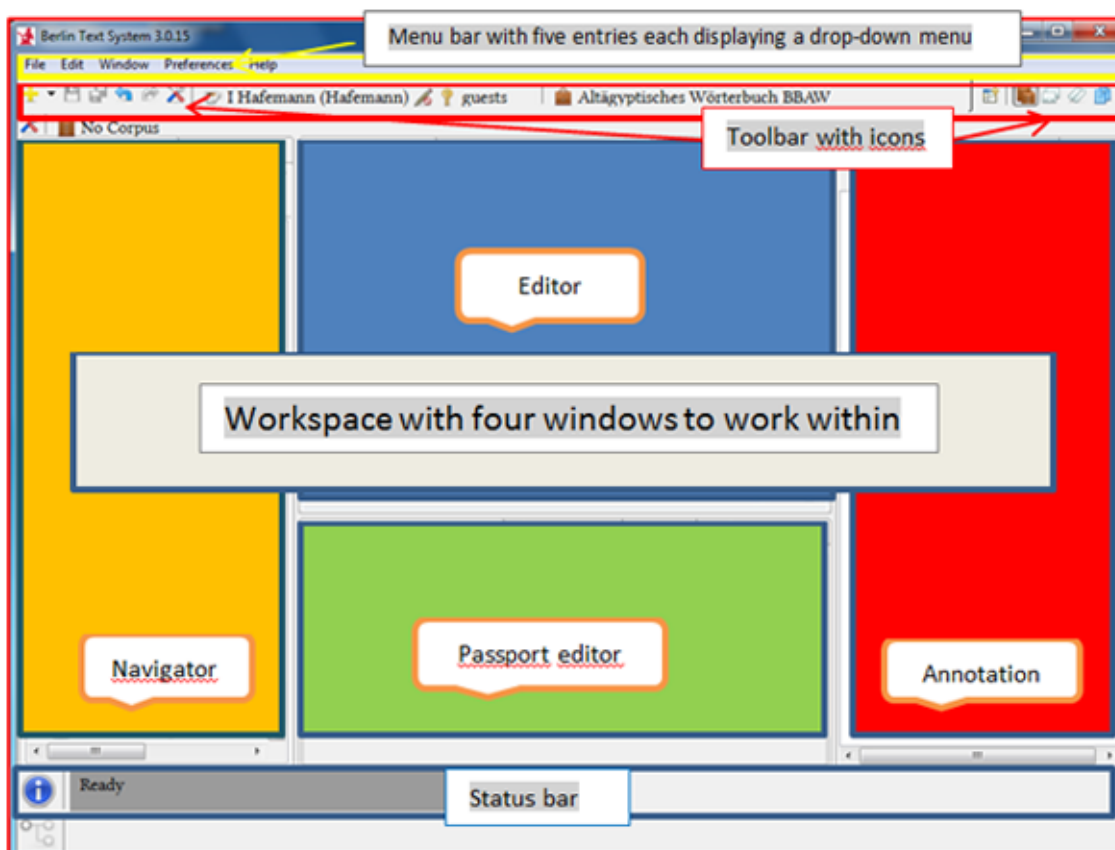
# BTS User Interface

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This section provides a detailed description of the UI elements of the application. It is intended as a reference for the user guides.

The Menu bar and the Toolbar are located at the top of the program window. At the bottom of the program window the Status bar is displayed. The area between toolbar and status bar is the Workspace.

- The *Menu bar* allows to file and edit new projects, to get access to different windows and to the preferences (with all settings of user and databases).
- The *Toolbar* offers a quick access via icons to all functions like opening a context menu, save and undo function, displaying the name of the current project and in the right margin opening one of the four different views to work with.
- The *Workspace* is a part of the BTS user interface where all database records are entered and processed. Different contents are edited within the workspace, according to your mode of work, i.e. whether you edit texts, edit the lemma list, work on the thesauri or create abstract texts. The Text Corpus View, the Lemma View, the Thesaurus View and the Abstract Text View can be accessed via the toolbar. The workspace of each view is subdivided into four windows: the Navigator window (left/yellow), the Editor window (middle above/blue) and the Passport Editor window (middle below/green) and the Annotation window (right/red).
- The *Status bar* at the bottom shows the path to the data base object the user are currently working on.

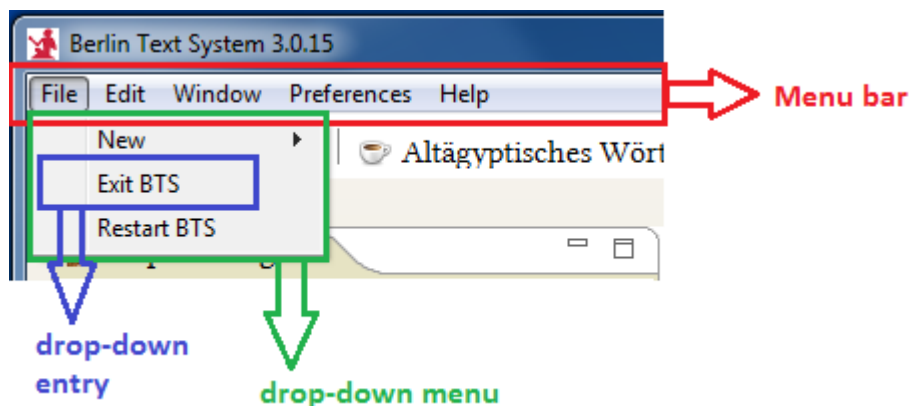


## Menu bar

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The Menu bar is located at the top of the BTS program window.

There are five menu entries, each one displaying a drop-down menu on click.



## File

Clicking on "File" opens a drop-down menu with the entries "New > New Project", "Exit BTS" and "Restart BTS".

New > New Project

This menu item is only available to users with administrator privileges.

Selecting "New Project" will open the "Edit project name" window. To create a new project, enter "Project name", "Project prefix" and "Description". The project prefix is the internal name of the project, under which it will be saved in the database. Description is optional.

Exit BTS

Click to exit the BTS program. If you have unsaved data, you will be asked to save it.

Restart BTS

Click to restart the program.

## Edit

The drop-down menu "Edit" contains the following entries:

Edit...

This entry has currently no functionality.

Edit current Project

This menu item is only available to users with administrator privileges.

If you click on the "Edit current Project", a window comes up, where you can edit the current project's name and description.


Edit Updaters/Readers

This option allows you to set *User Status* for the currently selected database object (corpus, text, lemma, thesaurus entry etc.).

Open Conflict Dialog

If two users work simultaneously on one database object, it is possible, that they produce different versions at the same time. This is indicated by the icon ⚠ in the Navigator tree. The conflict dialog solves the problem, which version is the preferable one.

Open Revision History

The Revision History  enables the user to compare the changes made to an database object and to return to a certain version of the text.

## Window

Drop-down menu "Window" contains the following entries:

Switch Font Size/CSS Theme

There are two colours (blue and gray) and three font sizes available. Clicking on "Switch Font Size/CSS Theme" will consequently switch between themes and fonts sizes. If it is not yet to your liking, click again on Switch Font Size, until you have tested all six options and made your decision. BTS will remember your personal adjustments at the startup.

Open Perspective

The window "Open Perspective" comes up with the entries Lemma, Text Corpus, Thesaurus and Abstract Text. Select the entry and click "OK" to switch to the relevant BTS view (Lemma, Corpora, Thesaurus, Abstract Text). The first time you select a different entry, it may take a while until the relevant view appears.

Further options allow you to open particular sections of each view. The following windows will be opened depending on the view:

Text corpus view



Open Text Editor



Open Lemmatizer



Open Passport Editor



Open Hieroglyph Type Writer



Open Annotation Part



Open Text Translation

Lemma view



Open Lemma Editor



Open Lemmatizer



Open Passport Editor



Open Hieroglyph Type Writer

Thesaurus view



Open Annotation Part



Open Passport Editor

## Preferences

### Edit configuration

This function is available to users with administrator privileges only.

This feature enables the administrator to edit the configuration of the particular projects concerning object types, revision status, visibility, categories in the passport editor etc.

## Open User Manager

This function is available to users with administrator privileges only.

Clicking "Open User Manager" opens the user Management. The window is divided into two tabs:



- The tab Manage Users and User Groups offers the opportunity to create new accounts for users and add users to project groups, which have a specific set of rights in the editing process.
- The tab Administrate User Roles and Rights allows the administrator to assign user roles to selected corpora and to assign users to the respective roles (i.e. Project -> Corpus -> User Role -> User Name).

## Open Database Manager

The "Database Manager" window in "Preferences" displays all available database collections. Each database collection is reflected by a line in the table. The number of documents per collection is shown in the column "DB Doc Count".

The "Database Manager" window automatically opens with each BTS start, if there are any problems with the index. To work with the databases and to enable search queries, the databases have to be indexed properly. Re-index all databases when they appear either in yellow or red (see [Indexing the database](#) on page 47).

## Preferences

To get to the "Preferences" window, click either button  in the left part of the toolbar menu or on the drop-down entry " Preferences..." in the menu bar > "Preferences".

There are two options available: "Berlin Text System General" and "EgyDsl".

### Berlin Text System General

Expanding the "Berlin Text System General" will present the following options:

#### Abstract Text Settings

Abstract Texts are currently not available. Once they are implemented, you can set your configuration here.

#### Configuration

Currently the only available option is "Altägyptisches Wörterbuch (AAEW) (10)". Click "Apply" to use this configuration. Click "Restore Default" to go back to the default configuration.

#### Corpus Settings

Here you can choose a set of corpora you are going to work with. Every corpus that does not appear in the active corpora list on the right will not be accessed by BTS (this includes display in the Navigator tree and search queries). To activate a corpus select it in the list on the left and then click "Add". To remove the corpus from your working list, select it and click "Remove". "Add all" / "Remove all" will add or remove all available corpora to or from the active corpora list.

The check-box "Activate to select main working corpus" has a specific function. If it is activated all new database objects created in the "Corpus Navigator" window will be physically saved in the selected corpus. For example in the Corpus Navigator you have selected Corpus 2, but your main working corpus is Corpus 1. The new database object will be *physically* saved in Corpus 1, although in the Corpus Navigator it is displayed as a part of Corpus 2.

#### Corpus Navigator Settings

- Check box "Corpus Navigator sort by sort key". By default, all objects on the same level have "0" as a sort key and are thus sorted alphabetically. Defining a SortKey in the Passport data of the object will change its position regarding other objects, "0" being on top. See Passport Editor, chapter [Main](#) on page 75.
- "Default Visibility" applies to all newly created database objects. It defines the visibility status a corpus will have by default after its creation.
- "Default Review State" applies to all newly created database objects. Like the "Default Visibility" above, this defines a review state which a corpus will have directly after its creation.

## Lemma List Settings

Here you can choose a project with a main working lemma list. All new lemmata will be saved in this project. You can currently choose between "Altägyptisches Wörterbuch BBAW" and "Demotic". If you select both, the combined lemma list will be displayed in "Lemma Navigator". If you work with texts in Demotic script, please select "Demotic" as main working lemma list. Otherwise, select "Altägyptisches Wörterbuch BBAW".

## Lemma Navigator Settings

- Check box "Lemma Navigator sort by sort key". Per default all objects on the same level have "0" as a sort key and are thus sorted alphabetically. Defining a "SortKey" in the Passport data of the object will change its position relevant to other objects, "0" being on top.
- "Default Visibility" applies to all newly created database objects. It defines the visibility status a lemma will have by default after its creation. See also chapter [User roles description](#) on page 10.
- "Default Review State" applies to all newly created database objects. Like the "Default Visibility" above, this defines a review state which a lemma will have directly after its creation.

NOTE: "Default Visibility" and "Default Review State" apply to all newly created database objects, also including annotations, rubra, comments etc. Currently there is no feature available to apply changes in the visibility and review state to child elements. That means, if e.g. your default visibility is "reader", you have to change all TCOjects, Texts, annotations, rubra etc. to "public" manually once you want to publish your text in the TLA.

## Lemmatizer

The Lemmatizer allows you to set a default inflection (the programmes default inflection is "3") and activate the check box "Automatically select first lemma proposal". The latter feature enables you to navigate through the proposed lemmata via the arrow keys of your keyboard. More on grammatical rules see [BTS Grammar Rules](#) on page 101.

## Project settings

Here you can choose your main working project from the drop-down menu. The field below gives you an option to select further projects from which you want to load and read data. In the box on the left is a list of available projects. Clicking on one will give you an option to add it to the "Projects to be downloaded" on the right. Clicking on "Apply" below will download the project. Between the two fields you also have an option to remove the project from the right field and to "Add All" from available to "Projects to be downloaded" and "Remove All" from "Projects to be downloaded" to "Available Projects". Next to the "Apply" button there is also one that will restore default settings "Restore Default".

## Remember me

Select the check box "Remember my login credentials on startup" to be logged in automatically, when starting BTS. To deactivate this function unselect the check box.

## Text Editor

- Activate mouse-over pop-up with information on lemmata. Activating this option will display the lemmatization information about the selected lemma in the Text editor (currently unavailable).
- Show line number ruler on left side. This check box activates the line numbering (of the window) in the [Text editor](#).

## Sign Text Editor

Defines the elements displayed in the lemma-boxes while editing tokens inside the Sign Text Editor. Additionally, the line width can be adjusted by changing the number in the "Line width in pixel" input field.

The applied changes will be visible upon refreshing the view of the "Sign Text Editor" tab.

NOTE: The function "Line width in pixel" does not work in the current version.

## Thesaurus Settings

Here you can choose a project with a main working thesaurus. All new thesaurus entries will be saved there. Currently only one working thesaurus is available: "Altägyptisches Wörterbuch BBAW".

### Thesaurus Navigator Settings

- Check box "Ths Navigator sort by sort key". By default all database objects on the same level have "0" as a sort key and are thus sorted alphabetically. Defining a "SortKey" in the passport data of the database object will change its position relevant to other database objects, "0" being on top.
- "Default Visibility" applies to all newly created database objects. It defines the visibility status a thesaurus entry will have by default after its creation.
- "Default Review State" applies to all newly created database objects. Like the "Default Visibility" above, this defines a review state which a thesaurus entry will have directly after its creation.

### Restore Default

Click this button to restore default settings.

### Apply

Click here to confirm your changes.

### OK

Confirms your changes and closes the window.

### Cancel

Closes the window without saving the changes.

## EgyDsl

In the "EgyDsl" menu entry (Dsl = Domain Specific Language) you can change the appearance of your BTS. This includes applying different colours and scripts as well as importing and editing templates.

### 1. Syntax Coloring

This feature does not work in the current version.

### 2. Templates

This window offers you a functionality to create templates to make the transliteration input easier. For example, you can define short cuts for line counts etc. While transliterating, right-click a word and select "Content assist". Your template will be displayed at the end of the list. Double click it - it will be automatically inserted into the text. For a detailed description see the chapter [Templates](#) on page 44.

### New...

Displays a pop-up window with the following options:

- Name: Enter the name of the template (this is not the performed output that the template gives, only a label).
- Context: Choose the context where your template can be used. E.g. while your position in a text is inside a word, the Content Assist will only allow you to use templates that have the context "WordPart". There are only two context that you are allowed to use here:
  - SentenceItem: The template can be used inside a sentence.
  - WordPart: The template can be used inside a word.
- Automatically insert: Not functional yet.
- Description: Enter any description for your template (optional).
- Pattern: Enter any input that you want to be performed by the template here. This means the input you have entered into the pattern will appear one-to-one in your text after clicking the template-name in the Content Assist later. You can use the button "Insert Variable..." to insert predefined states e.g. brackets etc.

### Edit



Select an already existing template and click this option in order to edit it.

Remove

Select an already existing template and click this option in order to remove it.

Restore Removed

Currently not available.

Revert to Default

Currently not available.

Import

Click this button and browse the explorer to locate your template file (this only works if you have a template (.xml) file already existing). Click it and press "open" to import a template.

Export

Select the template you want to export from the template list and press this button to export your template. Browse your explorer to the location where you want to save your export-file. Afterwards enter a name inside the pop-up-window and press "save".

Restore Default

Click this button to delete all templates from the list.

Apply

Click here to confirm your changes.

OK

Confirms your changes and closes the window.

Cancel

Closes the window without saving the changes.

## Open Futon

This menu item is only available to users with administrator privileges.

Futon is a web-based graphic user interface (short GUI), which provides a basic interface to the majority of the functionality of CouchDB. This is a "backdoor" to the database, allowing to create, update, delete and view documents and access the configuration parameters. It shows the source code of the database objects in JSON format.

## Open ES GUI

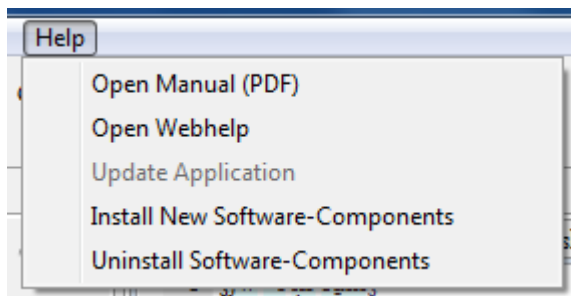
This menu item is only available to users with administrator privileges.

Opens the "Elastic Search" graphic user interface with the standard internet browser. Allows to see the "backdoor" of the queries done in the BTS.

## Changing Password

Currently not available.

## Help



### Open Manual (PDF)

Clicking on this menu entry will open the PDF version of the user manual.

### Open Webhelp

Clicking on this menu entry will open the HTML version of the user manual.

### Update Application

Searches for available software updates.

### Install New Software-Components

Select software to add to your BTS.

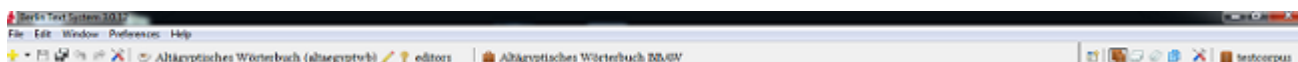
### Uninstall Software-Components

Select to see which parts of the software are installed. Select a specific path. Click "Uninstall" at the bottom of this window to uninstall selected parts of the program.

NOTE: This does not uninstall BTS. To uninstall BTS you have to delete all files from the installation path manually (see [Update / Uninstall BTS](#) on page 8).

## Toolbar

The Tool bar displays several icons. ToolTips are displayed upon the mouse-over.



New

Click the black triangle on the right of the plus sign to open a context menu.

Here you can choose between the entries to create a new corpus, a new text corpus object, a new text or an annotation. As long as you did not select a corpus in the Navigator window the entries in the context menu are disabled.



Save

Save the changes you made in the currently active window or tab. As long as you did not work in the database object it will be inactive (grey) and after saving it will return to the inactive state. If you attempt to close the program the window will ask you to save your changes unless you already have done a save before.

NOTE: There is no auto-save in BTS, but the program will save your file when you click on another database object. Make sure you save your work in regular intervals to avoid loss of input!



Save all

Save all changes in all the database objects you have worked on.

### Undo (Ctrl+Z)

Undo the last action. You can undo more than one action. The Undo-button only applies to changes in the Text Editor and can only undo actions you have done during the current session in the text. Once you have switched to another database object, the feature is not available anymore. Newly created database objects cannot be deleted this way.


### Redo

Reverse last "undone" action, applies only to changes in the Text Editor.

### Preferences


This option is available twice on the toolbar and leads to Preferences (see [Preferences](#) on page 61).

Next to the cup ☕ the name of the currently logged in user is shown. Next to pencil ✎ and key 🔑 the user role is displayed.



 displays the name of the current project.

### Open Perspective...

A pop-up window will appear with the list of four perspectives / views of the workspace (Text Corpus, Lemma, Thesaurus, Abstract Text). Select the respective perspective / view and confirm with "OK" to open it.

You can also open  *Text Corpus*,  *Lemma*,  *Thesaurus* and  *Abstract Text* by clicking on their respective icon at the right edge of the toolbar.

NOTE: The Abstract Text view is not available yet. It will compile the witnesses of a single text (e.g. Sinuhe) and deliver a generic structure, e.g. display the concordance of paragraphs. The metadata concerning the "abstract text" can be entered here, e.g. the bibliography.

To the right of the  icon you can see your main working corpus. At startup "No Corpus" is displayed. To set the corpus click on the  Preferences icon, which will forward you to the [Corpus Settings](#).

## Status bar

---

The status bar is located at the bottom of the BTS program.



To the right of this icon, the position of the currently selected database object in the Navigator tree is displayed.



To the right of this icon, a status message is displayed, e.g. the position of your cursor in a selected text (line number, column (= position in line), unicode) or the information that database objects are suppressed because you do not have the specific rights to see them. Clicking on the icon will display a window with the last 25 status messages.

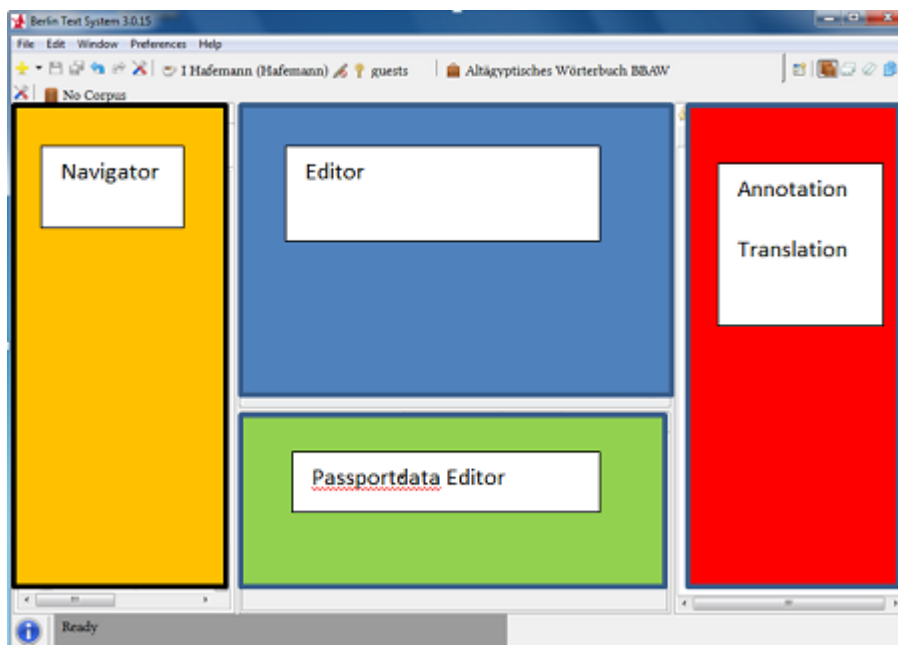
## Workspace

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The workspace is a central part of the BTS user interface, located between the toolbar and the status bar. The contents of windows and the tabs change according to four different working views: the Text Corpus view, the Lemma view, the Thesaurus view, and the Abstract Text view. The user can switch between these four views via the five right placed icons on the toolbar or via the pulldown menu "Window" in the Menu bar.

The Workspace has the same subdivision in each of the four views:

- Left: Navigator (yellow)
- Middle above: Editor (blue) - not available in Thesaurus View
- Middle below: Passport Data Editor (green)
- Right: Annotation and Translation (red) - Translation only available in Text Corpus View



## Common features

BTS workspace consists of dynamic windows, which can be maximized, minimized or dragged out of BTS interface. Each window can contain one or more tabs. Tabs can be moved from one window to another or opened in a separate window.

Sub-tabs cannot be moved independently of a tab they are assigned to, e.g. the "Passpost Data Editor" tab can be moved to the "Annotations" / "Translation" and grouped together with them. Alternatively it can be dragged out of BTS user interface as a separate window. The sub-tabs of "Passport Data Editor" (Main, Relation, IDs etc.) cannot be moved separately. The arrangement will be saved for the current view mode (Corpus, Thesaurus, Lemma and Abstract Text). Restarting the program will undo the changes and restore the default windows arrangement. See also [Introduction to BTS User Interface](#) on page 15.

NOTE: When you remove the last window from the program window, all windows will disappear. You need to restart BTS to restore the display.

The icons common for all windows are the following:

- ☐ minimizes window (places the window icon on the icon bar on the left or right side of the workspace).
- ☐ maximizes window. All other windows are automatically minimized.
- ☐ restores window to the default (non-maximized and non-minimized) view.

✕ closes the window. If you close a window, you can restore it via the dropdown menu "Window" in the toolbar or via restarting BTS.

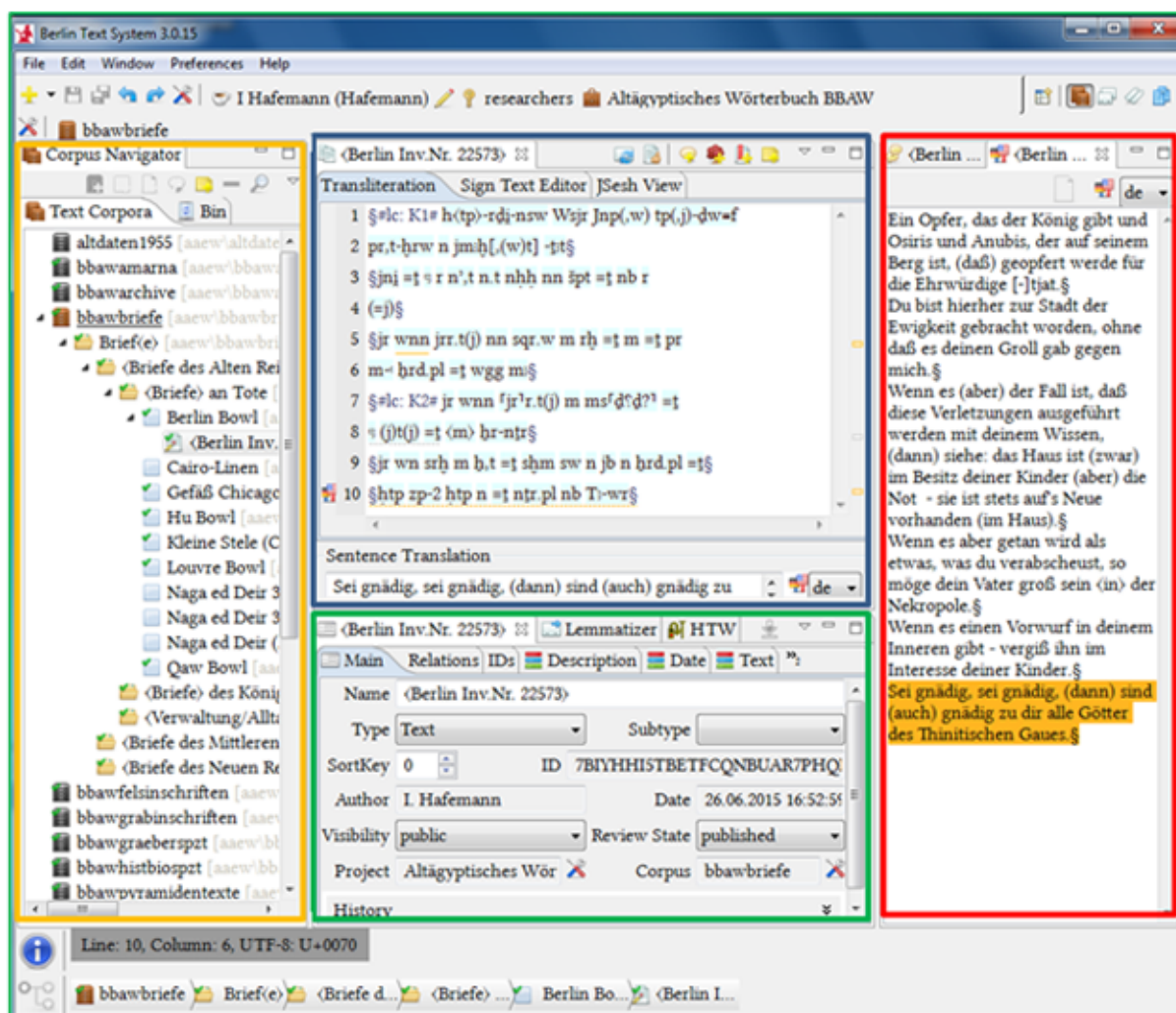
## Text Corpus View

Text Corpus is the default view of the BTS workspace. Here the user adds, arranges and rearranges database objects in the Coprus Navigator tree. The user works on text corpus objects and texts, including editing transliteration, translation, lemmatization, hieroglyphs and their metadata.

This chapter provides a general description of the Workspace with its windows and tabs of the Text Corpus View. For a step-by-step instruction of how to enter a new text see [General user guide: How to edit a text](#) on page 15.

The contents, structure and functions of the four windows are:

- "Corpus Navigator" window (yellow) on the left: To navigate in the Corpus Navigator tree and arrange database objects.
- "Text Editor" window (blue) at the top center: There are three subtabs: (1) the transliteration (with a field for language selection), (2) the Sign Text Editor and (3) a JSesh View.
- "Passport Data Editor, Lemmatizer and Hieroglyphic Type Writer" (green) are grouped in one window at the bottom center. Three subtabs are grouped together: (1) Text Corpus Object / Text-Name, (2) Lemmatizer, (3) HTW (Hieroglyphic Type Writer).
- "Annotation and Translation" window (red) on the right: To annotate words or sequences of the texts with different linguistic and metalinguistical properties and comments. One can switch to a whole Text-Translation in this window.

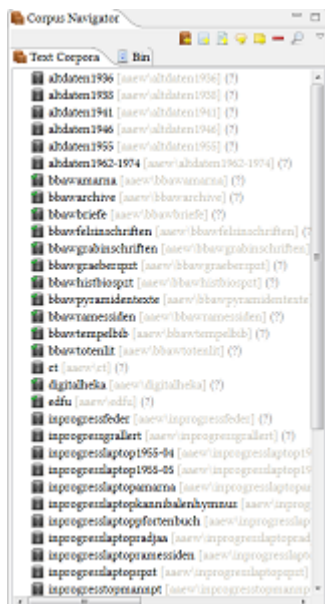


In the default view some of the tabs, like "Passport Data Editor", "Lemmatizer" and "HTW", are grouped together in one window. Nevertheless they can be rearranged and moved separately.

As soon as you select a Text Corpus Object or a Text in the Corpus Navigator, the titles of these tabs as well as those of the "Text editor", "Annotation" and "Text Translation" change to the name of the selected database object.

## Corpus Navigator

The Corpus Navigator tab is located on the left side of the Text Corpus view. Here you can see the position of the text in the corpus tree, displayed hierarchically. You can navigate through the corpora by clicking the database objects or using the "up" and "down" arrow keys on your keyboard, and using "right" and "left" arrows in order to expand or close a node (entry in a tree). Only one text can be opened at a time in the Text Editor.



Apart from its name, the physical location of the database object is displayed in square brackets. The number of elements it contains is displayed in round brackets.







(brown) is displayed for any active corpus in the tree, for which you have an updater or reader status.



(black) is displayed for any other corpus the user has the user right to see.

For activating and deactivating corpora use the Corpus Settings, see [Preferences](#) on page 42.

Corpus Navigator has two sub-tabs:  "Text Corpora" and  "Bin". A third tab with the search results will appear, when you open the search dialog. By default the tab "Text Corpora" is activated. In the "Bin" tab you can find your deleted Texts and Text Corpus Objects. Please note that generating the list of the database objects in the "Bin" tab may take up to one minute the first time you click it after installing BTS. Thereafter the preview works faster.

At the top of the Corpus Navigator section there are several buttons. Two of them,  and , are also available in other windows, see [Common features](#) on page 68.

Corpus Navigator-specific buttons are the following:



**Create New Text Corpus**

Click to create a new corpus. Only available for the administrator.



**Add Text Corpus Object**

Adds a "child" (a lower level) element to the currently selected database object. It receives a default title "BTSTC Object". Select the newly created element by clicking it and rename it in the Passport Editor.

NOTE: The physical location where the child element is saved is the active corpus by default. But if you have chosen a stable main working corpus in the [Preference Settings](#), the new element is physically saved in this corpus.



### Add Text

Adds a "child" text to the selected node. It is called "BTS Text" until you rename it in the Passport Editor.

NOTE: The physical location where the child element is saved is not the active corpus but your main working corpus you have chosen in the [Preference Settings](#).



### Add Annotation

Adds an annotation to the selected node.



### Add Comment

Adds a comment to the selected node.

### Delete

Deletes the selected database object from the Corpus Navigator tree and moves it into the "Bin" tab. In the Bin you can either restore it or permanently delete it by right-click. Note that you are only allowed to delete your own database objects, texts etc.

NOTE: This only deletes the selected database object. All child elements (e.g. Subtexts, Annotations, Comments, Rubra, Glosses etc.) remain in the database as "Orphans" and are still accessible via the Search Dialog. You have to delete all child elements before deleting the respective database object.






### Open Simple Search Dialog

Opens a search dialog in order to search for specific database objects, phrases. etc.









Drop-down menu " ▾ "

Clicking ▾ will display the drop-down menu containing options described above plus the additional ones:

- Delete Permanently: Use this option to delete an item completely (it will not be moved to the bin). The removal of the database object will be visible after you have restarted BTS.
- Restore: Click to restore an item from the bin.
- Move Object among Projects: Allows you to assign the physical location of the given database object to another corpus. Only Editors and Administrators are allowed to move database objects.
- Open Conflict Dialog: If two users work simultaneously on a database object, it is possible, that they produce different versions at the same time. The conflict dialog solves the problem, which version is the preferable one (see [Edit](#) on page 60).
-  Open Revision History: See [Edit](#) on page 60.
-  Edit Updaters/Readers: See [Edit](#) on page 60.
- Filter: Filters the corpora according to the listed criteria.
  - Filter by Project / Creator / Updaters / Review Status / Visibility / Types opens a dialogue to select your filter criteria by clicking the relevant check boxes. To undo the filter, unselect the checkboxes.
  - Only active text corpora: Displays only active corpora, marked by .
  - Filter only invalid texts: Displays all texts that do not match the formal system grammar.
  - Filter only incomplete texts: Displays all texts, which either lemmatization, encoding of inflection, hieroglyphs or translation have not been entered at all or have not been entered completely.

Icons in the Corpus Navigator tree




There are several icons that represent different types of database objects in the Corpus Navigator tree. These are combined with smaller ones to define the review state or to provide a warning.

-  Caption: The Caption is used as a folder to list a set of physical objects under one heading due to pragmatic reasons (e.g. the stelae from Kawa or the medical papyri).
-  Group: A Group defines a number of physical objects belonging together on geographic reasons (e.g. the graves of a specific cemetery like the Eastern Cemetery at Giza or an papyrus archive like the Abusir Papyri).
-  Arrangement: An arrangement defines a closed association of finds (e.g. the objects from the tomb of Tutankhamun or the objects from a founding deposit).
-  Scene: This is an obsolete entry that was used for data imported from the previous project. Do not use it.
-  TCOBJECT: The Text Corpus Object is the physical ancient Egyptian object that is covered with your text (e.g. the Papyrus Harris 500 or the sphinx stele of Thutmose IV.).
-  ObjectPart: ObjectPart is hierarchically subordinated to TCOBJECT. Use it, when the carrier of your text consists of more than one physical object (e.g. a statue and its base or several parts of a building).
-  Text: A Text is defined as a coherent entity. Your physical object might contain several texts, e.g. Papyrus Harris 500 containing "The Doomed Prince", "The Taking of Joppe" etc. Each of these tales and poems receives its own database object "Text" subordinated to the TCOBJECT "Papyrus Harris 500".
-  Subtext: Subtexts are parts of the same text that are related to each other, but without a defined order of reading (e.g. different persons and their respective inscriptions on a relief).

In combination with the icons above the review state is displayed as follows:

-  new
-  awaiting review
-  awaiting update
-  reviewed / published

These icons mark warnings etc. in combination with the icons above:

-  : This marks a conflict of versions.
-  : This marks that another user is currently working on this database object.
-  The pen marks that this is the database object you are currently working on.

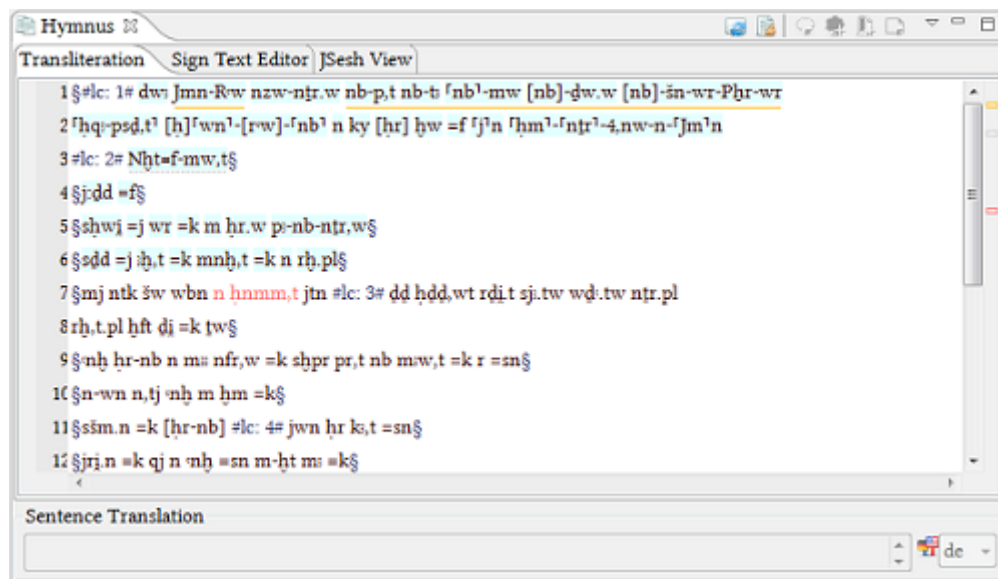
## Text Editor

The Text Editor window is located in the upper part in the middle of the Text Corpus view. It enables you to create IT-readable editions of texts and subtexts according to BTS standards. The Text editor is only active after you have selected a text / subtext in the Text Corpus Navigator. Now you can start to edit your text / subtext. The Text Editor offers you the possibility to transliterate your text / subtext (Transliteration tab), to translate it sentence by sentence (translation field) and to enrich the transliteration with hieroglyphs (HTW tab). The Sign Text Editor displays a detailed view of the properties of every token of your transliteration and is needed together with the Lemmatizer for the process of lemmatization.

This chapter provides a general description of the window. For a step-by-step instruction of how to enter a new text see [Editing a text](#) on page 20.



The Text Editor section contains two input fields. The upper one displays either the "Transliteration", the "Sign Text Editor" or the "JSesh View" - depending on the tab selected. The lower input field displays translation of the sentence, selected with the cursor in the upper window.




### Transliteration

Here you enter or modify the transliteration of the text which you previously selected in the Navigator tree. Beware of the [BTS Grammar Rules](#), otherwise the auto-checker system will trigger an error, marked by a red square and underlined red.

### Sign Text Editor

The "Sign-Text-Editor" provides the token-based presentation of the text. Initially only the transliteration is displayed there - each word / lemma in a separate box. The Lemma ID, the inflection code, the Lemma Translation and hieroglyphs of each token can be made visible via menu entry "Preferences" > "Preferences" > "Berlin Text System General" > "Text Editor" > "Sign Text Editor".

The hieroglyphic input is done in the  "Hieroglyph Type Writer" tab below. The hieroglyphic values, entered there, are automatically applied to the selected lemmata in the "Sign-Text-Editor" sub-tab. Additionally to the transcription and hieroglyphs, a lemma number and inflection code will be displayed in each word box after a successful lemmatization.

### JSesh View

Displays a cohesive hieroglyphic text. A "dot" marks the end of the sentence (signified in "Transliteration" and "Sign Text Editor" tabs with "\$" sign). Due to technical reasons only short texts are currently displayed correctly.

### Toolbar of the Text Editor

There are several buttons in the toolbar above the "Text-Editor" window. They can be used in all three tabs "Transliteration", "Sign Text Editor", and "JSesh View". We recommend to use them only in the "Transliteration" tab as we do not guarantee full functionality for the other tabs.



Load Text Lemmata

Loads word and sentence borders of your texts in order to be able to add a translation and to lemmatize the words and add the hieroglyphs in the next steps. Click this button after transliteration has been finished.

NOTE: This does not save your transliteration.



Check Text Lemmata, Flexcodes...

Checks the completeness of text lemmatization, translation and hieroglyphic transcription.



#### Add Annotation

Adds an *Annotation* to the selected part of your text. It will be underlined with a grey dotted line.



#### Add Rubrum

The active token is marked red in the text as rubrum.



#### Add Glosses

Adds a gloss respectively as a "child" of your text. You can edit it separately.



#### Add Comment

Adds a comment to the selected part. It will be underlined yellow.


You can use these functions also via the drop-down menu that appears when you click on the arrow on the right.

Additionally, for annotations, rubra and comments, a small, rectangular bar will appear on the right side of the Text-Editor with the corresponding colour. Clicking on the bar will bring you to the marked segment of the text.

#### Sentence translation


At the bottom of the Text Editor tab there is a text-input field where you can enter a translation of each sentence. With the existing transliteration it is deactivated unless a lemma has been selected in the "Text editor" or until you click somewhere into the sentence. With the new transliteration it is greyed out until you press "Load Text Lemmata" - after this the text-input field will be activated. Note that you have to switch the keyboard layout from "AAeW" to standard to enter the translation.

The translation can be entered and modified in all three tabs "Transliteration", "Sign Text Editor", and "JSesh View".

The  "Languages" icon offers a drop-down menu with a number of languages (English, German, French, Spanish, Russian) to choose from. Choose the language of your translation.

### Passport Editor

The Passport Editor section is located in the bottom part in the middle of the Text Corpus view. It contains the metadata of a selected database object. It is divided into different subsections which are organized in tabs. These categories vary depending on the database object: Text Corpus Objects have other tab than Texts.

If you are working on a "child object" and want it to have the same metadata as the "parent object", you can click  "Inherit Passport Data" in the top right corner of the Passport Editor. Note that the "parent" data will be copied in the empty fields only. If the fields were filled out, their content will remain unchanged.

The option "Inherit Overwrite Passport Data", available via the drop-down menu " ▾ " allows you to overwrite already existing metadata with updates metadata of the "parent object".

NOTE: Both inheritance procedures apply to all tabs at once, not only the currently open one.

NOTE: Be sure that all entered metadata are correct, as you might inherit errors to "child objects".

NOTE: It is not possible to undo the inheritance procedure.

## Main

The text-input fields and drop-down menus in this tab allow you to enter technical data of your text or (physical) object.

- Name: Enter or change the name of your Text Corpus Object or Text.
- Type: Choose a type (e.g. TCOBJECT, ObjectPart, Text, Subtext, etc.). For the definition of the types see [Creating a database object \(TCObject and Text\)](#) on page 16.
- Subtype: This field remains empty. Do not use it.
- SortKey: By default, all database objects on the same level have "0" as a sort key and are thus sorted alphabetically. Defining a "SortKey" in the Passport data of the database object will change its position regarding other database objects, "0" being on top.

NOTE: If your database object is in a polyhierarchical position, changes in the sortkey apply to all relations.

- ID: Displays the ID of the database object, which is generated automatically by BTS. It cannot be changed.
- Author: Displays the author (= creator) of the database object.
- Date: Displays the date of creation of the database object.
- Visibility: Define who can see the database object or Text (public, project, group, reader, all\_authenticated). See also [User roles description](#) on page 10.
- Review State: Enter or edit the review state of the database object or text (published, reviewed, awaiting-update, awaiting-review, new, transformed awaiting update).
- Project and Corpus: The field displays the name of the project or corpus, respectively. Clicking on you can move the database object to another project / corpus. You can only move the corpora or projects for which you have rights. Note that only the physical position of an object will change (displayed in the Navigator tree in square brackets), not its position in the hierarchical tree. (If you want to change the position of an item in the hierarchical tree then you have to change the relation of your text or object. See [Relations](#) on page 75.)
- History: Click to see all changes of the selected database object. Information includes the username of the editor and the date. To close the history information, change to another "Corpus Navigator" object and then back. To restore a previous version, use the Open Revision History dialogue (see [Revision History / Conflict Dialogue](#) on page 48).

## Relations

The Relations tab gives information on the relation between the database objects. The default setting is the relationship between the selected database object and its parent database object ("Part of"). BTS supports polyhierarchies, that means that database objects may have more than one parent element.

### Relation


Choose an option from the drop-down menu:


- PartOf: Your current item is a part (child) of another item.


- Family
- Is composed of
- Is cross-reference to


The last three options are offered but are not relevant for the Text Corpus at the moment.

Object: Displays the name of the related database object. This is no input field.

 Search Object: Search for the database object you want to establish a relation with. The search may take a few seconds until the results are displayed.

 Open Object in Passport Editor: Displays the passport data of the related database object.


 Add Relation: Click it to add more relations between yours and other database objects. BTS allows polyhierarchy. One item can have more than one parent element. Related items do not have to belong to the same corpus.

 Remove Widget: This removes a relation from the database object.

NOTE: If the last relation is removed, the database object will remain in the database as "Orphan" and is still accessible via the Search Dialog.

NOTE: If a database object has more than one relation, it is displayed at each respective position in the Navigator tree. This does not mean that the database object has been duplicated. To delete one of these relations, use the "Remove Widget" button in the Relation tab. Do not delete the database object itself, unless you want to delete it permanently from all appearances in the Navigator tree.

## IDs



This tab provides the option to enter external IDs of your text / object to establish links to other projects and databases. By default a  button will be displayed. Click it to add an external ID.

- Provider: Choose the provider (an external project) from the drop-down menu.

If a provider you need is missing, please send a proposal to the BTS team in Berlin via E-mail: aegypt1@bbaw.de.

- Type: Enter the type of the external ID, in case such exists.
- External ID: Enter the external ID here.

Example: The papyrus Oxford, Ashmolean Museum 1984-55 Ro is mentioned in the Trismegistos project: <http://www.trismegistos.org/hhp/detail.php?tm=56143>. Select trismegistos as provider, enter 56143 as external ID.

-  Add Identifier: Add another set of information, including the "Provider", "Type" and "External ID".
-  Remove Widget: This removes the external ID from the database object.

## Description

This tab is used for recording the working process. The provided input fields are the following:

- Line count: Enter the modulus of the text's line count (e.g. define how the lines are counted in your text).  
NOTE: Line count only applies to the item-type "text".
- Protocol: Enter the dates of your working process here (e.g. first entering, editing etc.).
- Description: This input field offers the opportunity to provide a more thorough definition of the (physical) object / text in case the name of the database object is not sufficient for identification. Usually this field remains blank.

NOTE: This does not replace conscientious naming of the database and proper filling of the passport data.





- **Comment:** Write any additional comments you may have to your work.

## Findspot





This tab allows you to put in data concerning the findspot of the Egyptian object, that bears the text you want to edit.

This tab is divided into two sections: "Place" and "Former Place".

### Place

- **Place:** Displays the name of the selected thesaurus entry. This is no input field.
  -  **Search Object:** Select the findspot from the Thesaurus.
  -  **Open Object in Passport Editor:** Displays the passport data of the selected thesaurus entry.
- **Comment:** Add a comment to the findspot.
- **is\_origin:** Select this check box if the selected findspot is the original site where the object originally came from.
- **Certainty:** Choose between "Certain", "Probable" and "Uncertain".
-  **Add Entry Group:** Add another set of information, including "Place" and "Former place". Use this option, if your objects consists of more than one fragment which were found at different places.
-  **Remove Entry Group:** Removes the set of information or clears the entry fields if it is the only entry group.



### Former place





- **former\_place:** Displays the name of the selected thesaurus entry. This is no input field.
  -  **Search Object:** Select the former place from the Thesaurus.
  -  **Open Object in Passport Editor:** Displays the passport data of the selected thesaurus entry.
- **Comment:** Add any comment to the findspot.
- **is\_origin:** Select this check box if the selected findspot is the original site where the object originally came from.
- **Certainty:** Choose between "Certain", "Probable" and "Uncertain".
-  **Add Entry Group:** Add another set of information for "Former place" (without "Place"). Use this option, if more than one former location of your object is known.
-  **Remove Entry Group:** Removes the entry group "Former place" or clears the entry fields if it is the only entry group.

Example: The Pantheon obelisk (PM VII, 409) found in 1374 under Santa Maria sopra Minerva, re-erected in 1711 opposite the Pantheon. Therefore select, the following entries: Place: Pantheon; Certainty: Certain; Former\_Place: Santa Maria sopra Minerva; Certainty: Certain; another Former\_Place: Heliopolis; Is-Origin: Check box selected; Certainty: Probable.

## Present Location







This tab allows you to put in data concerning the present location (i.e. a museum or collection) of the Egyptian object, that bears the text you want to edit.

- **Location:** Displays the name of the selected thesaurus entry. This is no input field.
  -  **Search Object:** Select the location from the Thesaurus.
  -  **Open Object in Passport Editor:** Displays the passport data of the selected thesaurus entry.

- Inventory Number: Enter the number of your object if provided. The field may contain only one inventory number. If an object consists of several fragments with separate inventory numbers or has several names, you can add another widget within the same entry group, using the following buttons:
  -  Add widget: Add another inventory number of the same object in the selected location.
  -  Remove widget: Removes the inventory number.
- Comment: Add a comment to the location.
- in\_situ: Select this checkbox, if the object still remains at its position at an archaeological site.
- is\_present\_location: Select this checkbox, if the selected location is the museum or collection where the object is stored at present.
-  Add Entry Group: Add another "location" section to enter a previous location, e.g. if the object was formerly stored in another museum.
-  Remove Entry Group: Removes the set of information or clears the entry fields if it is the only entry group.

## Date

This tab allows you to define the dating of the selected database object.



- Date: Displays the name of the selected thesaurus entry. This is no input field.
-  Search Object: Select the date from the Thesaurus.
-  Open Object in Passport Editor: Displays the passport data of the selected thesaurus entry.
-  Add widget: Add another date of the same object in the selected location. This feature is available to make "from-to"-dating possible (e.g. if your object dates Dynasty 5-6). Click to add another date text input field if the object or text can only be dated between a terminus post quem and a terminus ante quem. Use the first date field for the earlier date and the second date field for the later date.
-  Remove widget: Removes the date.
- Comment: Add a comment to the date.
-  Add Entry Group: Add another "date" section to enter a previous date. This feature is applicable to "either-or"-datings (e.g. if your object dates either to the Old Kingdom or to the Late Period). Use the first date section for the earlier date and the second date section for the later date.
-  Remove Entry Group: Removes the set of information or clears the entry fields if it is the only entry group.





## Object

This tab allows you to define the selected database object. This tab only applies to Text Corpus Objects.

This tab is divided into three parts: "Description of Object", "Technical Details", "Archaeological and Cultural Context of Object". Each of these parts has a "Comment" field, where explanatory information can be entered (ex. in case the type of an object is undefined).

### Description of Object











- Type of Object: Displays the name of the selected thesaurus entry. This is no input field.
  -  Search Object: Select the type of your object from the Thesaurus (e.g. "Schriftrolle" for a scroll).
  -  Open Object in Passport Editor: Displays the passport data of the selected thesaurus entry.
- Object is component: Displays the name of the selected thesaurus entry. This is no input field.

-  Search Object: Use this option if your object is a part of another object. E.g. if you have a "lid" which is a component of a "coffin".
-  Open Object in Passport Editor: Displays the passport data of the selected thesaurus entry.
- Owner: Displays the name of the selected thesaurus entry. This is no input field.
  -  Search Object: Select the "owner" from the thesaurus. The owner is - in sociological terminology - the agent of a social action, e.g. if you have a private tomb, select "Privatmann" for owner.
  -  Open Object in Passport Editor: Displays the passport data of the selected thesaurus entry.
- Description: Enter a description of the object.
- Comment: Allows you to write your own comment on the object.



There are also four check boxes available. Select if any of them applies to your object:





- Model: Reduced true to scale reproduction of an object in terms of illustration
- Imitation:
- Miniature: Reproduction of an object in a reduced scale
- Skeuomorph: Objects made in the form of another object but in an alien or alternative material, e.g. ceramic vessels in the shape of a stone vessel.

#### Technical Details

- Material: Displays the name of the selected thesaurus entry. This is no input field.
  -  Search Object: Select the material of your object from the Thesaurus.
  -  Open Object in Passport Editor: Displays the passport data of the selected thesaurus entry.
  -  Add widget: Add another entry field, if your object consists of different materials.
  -  Remove widget: Removes the entry.
- Dimensions: Enter the size of your object (height, width and length) into the input fields. Use cm as measurement unit. Divide the decimals with a dot and not with a comma.
- Condition: Displays the name of the selected thesaurus entry. This is no input field.
  -  Search Object: Select the condition of your object from the Thesaurus.
  -  Open Object in Passport Editor: Displays the passport data of the selected thesaurus entry.
- Technique: Displays the name of the selected thesaurus entry. This is no input field.
  -  Search Object: Select the technique of your object from the Thesaurus.
  -  Open Object in Passport Editor: Displays the passport data of the selected thesaurus entry.
  -  Add widget: Add another entry field, if different techniques were used to produce your object.
  -  Remove widget: Removes the entry.
- Comment: Add a comment of your object's technical details.






#### Archaeological and Cultural Context of Object

- Grouping: Displays the name of the selected thesaurus entry. This is no input field.
  -  Search Object: Select the grouping of your object from the Thesaurus, e.g. if your object is grouped together with other objects in an archive.
  -  Open Object in Passport Editor: Displays the passport data of the selected thesaurus entry.
- Cultural Context: Displays the name of the selected thesaurus entry. This is no input field.


-  Search Object: Select the cultural context of your object from the Thesaurus.
-  Open Object in Passport Editor: Displays the passport data of the selected thesaurus entry.
-  Add widget: Add another entry field, if your object belongs to more than one cultural context., e.g. if your object is used in a ritual context, choose "Ritual".
-  Remove widget: Removes the entry.
- Comment: Add a comment on the cultural context of your object.

## Text

The Text tab allows you to enter textual metadata of your text. It applies only to texts, subtexts and glosses.

- Secondary Inscription: Select the check box, if your text is a secondary inscription, e.g. if your text is a graffito.
- Language: Displays the name of the selected thesaurus entry. This is no input field.
  -  Search Object: You may select the language from the Thesaurus. The Berlin BTS team recommends not to use this field because the language is an intrinsic feature of the text itself and not metadata like other information you annotate in the passport editor.
  -  Open Object in Passport Editor: Displays the passport data of the selected thesaurus entry.
  - Comment: Add a comment to the language.
- Script: Displays the name of the selected thesaurus entry. This is no input field.
  -  Search Object: Select the script from the Thesaurus.
  -  Open Object in Passport Editor: Displays the passport data of the selected thesaurus entry.
  - Comment: Add a comment to the script.
- Texttype: Displays the name of the selected thesaurus entry. This is no input field.
  -  Search Object: Select the texttype from the Thesaurus.

NOTE: A thesaurus is not available at the moment. Please use the comment field.

  -  Open Object in Passport Editor: Displays the passport data of the selected thesaurus entry.
  - Comment: Add a comment to the texttype.





## Bibliography

Enter bibliographical information here. The tab contains:

- Bibliographical text field: A field to enter the bibliographical data manually. Currently it is recommended to use this field only. Divide your bibliographic items with ENTER. At the end of each item, give the following information separated with comma in square brackets:
  - A for squeeze ("Abklatsch")
  - B for bibliography ("Bibliography")
  - F for faksimile ("Faksimile")
  - H for hand copy ("Handkopie")
  - K for comment ("Kommentar")
  - L for site plan ("Lageplan")
  - P for photo ("Photo")
  - T for transcription from Hieratic ("Transkription")
  - U for transliteration ("Umschrift")
  - Ü for translation ("Übersetzung")
- The asterisk (\*) marks the leading reference you have used for your BTS edition.

Examples:





- D. Bidoli, in: MDAIK 28, 1973, 193-200 [P, Ü, K]
- R. Drenkhahn, Die Elephantine-Steile des Sethnacht und ihr historischer Hintergrund, ÄA 36, 1980 [P, A, Ü, K]
- H. Altenmüller, in: JEA 1982, 107-115 [Ü, K]
- J. Murnane, in: CdE 58, 1983, 133-135 [K]
- KRI V, 671-672 [\*H]
- F. Junge, Elephantine XI, AV 49, 1987, 55-58 [\*P, Ü, K]
- Bibliographical entry: This feature is currently not available.
  - Bib. Item: Displays the name of the selected thesaurus entry. This is no input field.
  -  Search Object: You may select the language from the Thesaurus. This feature is currently not available.
  -  Open Object in Passport Editor: Displays the passport data of the selected thesaurus entry. This feature is currently not available.
  - Pages/plates: Enter the pages / plate number complementing the bibliographical item selected from the thesaurus and select the check boxes. For the meaning of the abbreviations see above.
  - Comment: Use this input field to comment your reference.
  -  Add Entry Group: Add an additional bibliography section.
  -  Remove Entry Group: Delete a bibliography section.

NOTE: The bibliographical thesaurus does not exist yet. We recommend to use "Bibliographical text field" instead until it is available.

## Synonyms

This tab allows you to enter synonyms to the "Name" of the database object.

- Synonym: Enter a synonym of the "Name" of the database object in the Main tab.
- Language: Select the language of the synonym name from the drop-down menu.
-  Add Entry Group: Add another synonym group to add another synonym in the same or further language. You can add as many synonyms as necessary.
-  Remove Entry Group: Removes the synonym group.

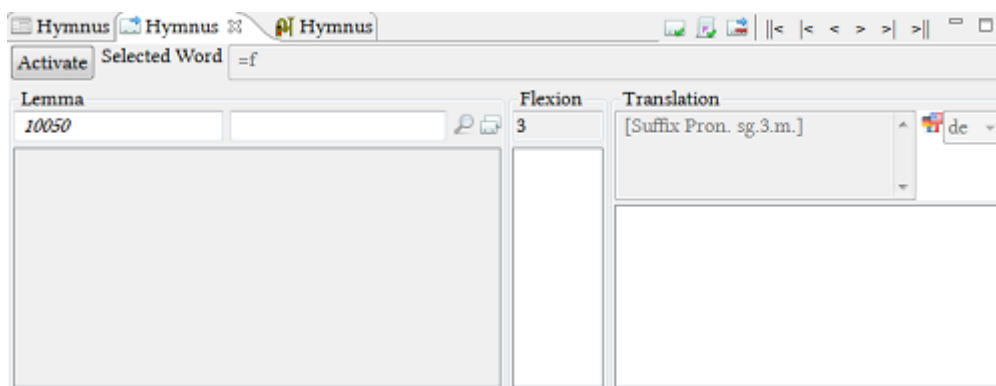
Example: Add to your text "Der Beredte Bauer" the synonym "Eloquent Peasant" with the language "en" (English).

## Lemmatizer

The Lemmatizer tab is used to reference the selected transliterated word to the lemma entry in the Lemma list. It has several text input fields and a toolbar. Using the Lemmatizer is the most important step to perform the subsequent lexical search in the database, to create word indexes or to conduct all kinds of lexical analyses.

NOTE: You can use the lemmatizer only if the Sign Text Editor tab has been selected.

NOTE: After selecting the Lemmatizer tab or after selecting a text in the Text Corpus Navigator the name of the lemmatizer will switch to the name of the selected text. Move the cursor on the tab header to see the original name of the tab.



- **Activate:** Click Activate to enable the lemmatization, click it again to deactivate it after you are done with lemmatizing. The color of the button turns from grey to blue while activated.

#### Text input fields

- **Selected Word**


This field displays the word that you had previously selected in the "Sign Text Editor". You can change its transliteration (e.g. to correct your input) and the new list of lemmas will be displayed in the field below.


NOTE: Changing the transliteration in this field, changes your transliteration in the Text Editor.

The lemmata corresponding to the altered transliteration appear only after moving first to another lemma and then coming back to the lemma you are working on. There are three sections in this field: Lemma, Flexion and Translation.


- **Lemma**

The section Lemma at the bottom left is composed of three fields. The Lemma-list is automatically generated, based on the entry in the "Selected Word" field. Selecting a lemma from the list will display its ID "Word Corpus Number" in the Lemma field. The standard transliteration of the lemma itself is displayed in the field to the right of the ID.



 **Search Object:** Opens a search dialogue where you can look for lemmata manually.

 **Open Lemma Navigator:** Opens a complete list of available lemmata ("Lemma View) in the separate window.




- **Flexion and Translation**

The section Flexion (bottom middle) and Translation (bottom right) show the default inflection number "3" and translation options for the selected lemma. The inflection number and translation can either be selected from the available ones (lower text box, this feature is not yet implemented for the inflection) or manually entered (upper text box). The values in the "Translation" field depend on the  language selection on the right.

#### Toolbar

-  Confirm current lemma editing and continue to the next unlemmatized word.
-  Confirm current lemma editing and continue to next, not yet inflected word.

Confirm the current inflection code of the lemma and continue to next word, where the inflection code has a default number "3" (i.e. has not been manually defined yet).

-  Remove lemma information.
-  Move selection to the beginning of the document.
-  Move selection to the beginning of the sentence.

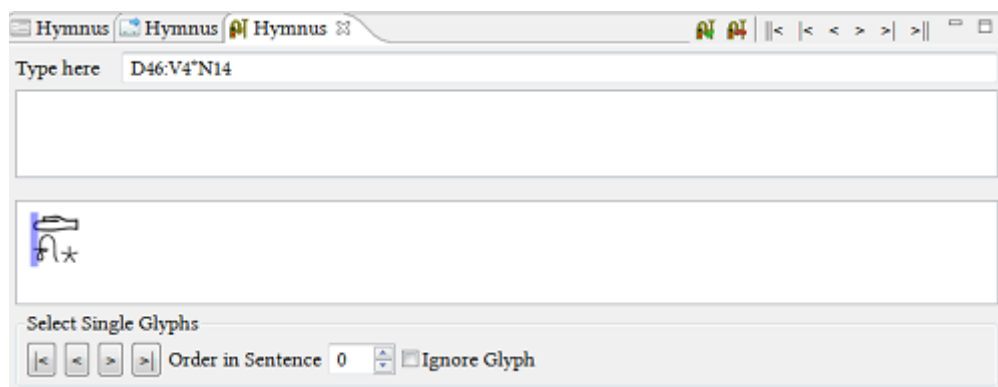
- < Move selection to previous word.
- > Move selection to next word.
- >| Move selection to the end of the sentence.
- >|| Move selection to the end of the document.

### Hieroglyph Type Writer (HTW)

The HTW-tab in the window at the bottom center leads to the Hieroglyph Type Writer. This is a tool which enables entering or editing of hieroglyphs for any transliterated text in the "Sign-Text-Editor". The Hieroglyph Type Writer is situated by default in the lower part of the BTS user interface, next to the Passport Editor and the Lemmatizer.

Note: After selecting the HTW tab or after selecting a text in the Text Corpus Navigator the name of the HTW will switch to the name of the selected text. Move the cursor on the tab header to see the original name of the tab (HTW).

In order to use the HTW you need to open the "Sign Text Editor" and select a lemma for which hieroglyphs are to be entered.



The HTW consists of the following sections:

#### Type here

Enter the hieroglyphs sign by sign either by the Gardiner codes or "Manuel de Codage" transcription of a word selected in the Sign Text Editor above. The first of the two fields below the "Type here" field offers hieroglyphic variants for selection based on your input in "Type here".

Select and confirm each sign by pressing "CTRL" + the number (marked in red next to the respective sign) or simply complete the number manually and continue after the hyphen with the next hieroglyph. The second field underneath displays the hieroglyphic writing of the word you typed in. After confirmation the writing appears within the selected word in the "Sign Text Editor".

#### Select Single Glyphs

In the case of an inversion this function offers the option to mark a hieroglyph and assign a different position for it in a sentence.

- |< Move selection to the first sign.
- < Move selection to the previous sign.
- > Move selection to the next sign.
- >| Move selection to the last sign.

- Order in Sentence: Use the up/down arrows to set a number corresponding to the position of a sign in a sentence if the transcription does not correspond to the order of signs in the manuscript.
- Ignore Glyph: Check box is applicable, for instance, in a case of a haplography. Checking this box after selecting a sign will signalize that the sign does not originally appear in the manuscript.

#### Toolbar

Placed in the upper-right corner of the HTW, the toolbar shows the following buttons:



Confirm current hieroglyph editing and continue to the next word. Pressing the "Enter" key also confirms the hieroglyph editing.



Remove hieroglyph data: Removes already entered hieroglyphs of a token selected in the Sign Text Editor.



Move selection to the beginning of the document.



Move selection to the beginning of the line.



Move selection to the previous word.



Move selection to the next word.



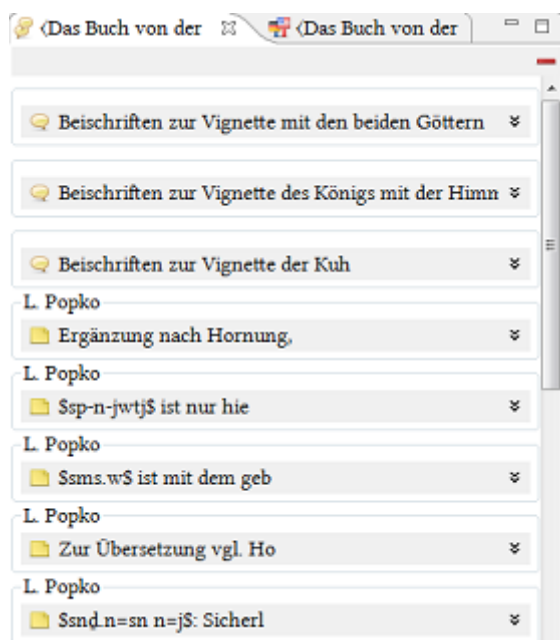
Move selection to end of line.



Move selection to end of document.

#### Annotation and text translation

The annotation and text translation window is placed on the right side of the default BTS user interface in each view.



#### Annotations

The Annotations tab can contain the following elements :



Annotation


 Rubrum


 Comment



 Glosse

Clicking one of them will display their content. The related textpart will be marked in "Transliteration" tab with different colours: red for rubra; yellow for comments; grey for annotations and blue for glosses. When you select an element, the underlining of the related segment in the text will appear thicker. Additionally, for Annotations, Rubra and Comments, a small rectangle will appear next to the scroll bar of the Text Editor with the corresponding colour. Clicking on the rectangle will bring you to the marked segment of the text.

Each annotation, rubrum, comment and gloss contains a toolbar with the following buttons:


 Add Current Text Selection as Reference: The selected text part is referenced to the current annotation, rubrum, comment and gloss. This feature provides an opportunity, for example, to reference multiple text parts to a single annotation.


 Remove Current Reference: The selected text part is removed from the current annotation, rubrum, comment or gloss. This removes only the link. It does not delete the annotation.

 Edit Comment or Edit Annotation: This opens a window with different content for annotation, rubrum and comment. It is not available for  "Glosses".

Clicking on the "Edit Annotation" will display the passport editor for annotations and rubra. Each annotation will have its own ID and its relation to the chosen text will be shown in the "Relations" tab.

By clicking the "Edit Comment" button, a "Comment Editor" window will appear. You can enter or edit a title for your comment in the upper input field and the content of your comment in the lower input field. Below there is also a section where you can see or edit a relation of the comment to the text, using the ID.


 Delete: Will delete the currently selected element.

 Filter: Here you find filter to hide or display specific types or subtypes of annotation, e.g. you can hide all rubra from the list or display only comments.

NOTE: When your text is loaded, BTS loads all annotations, filters them according to your filter settings and then displays the first 40 annotations. Annotations that are not displayed will appear in the list as soon as you click on the annotated token in the Transliteration Editor.

To learn more about annotations see [Annotations, Rubra, Glosses and Comments](#) on page 30.

### Text translation

The "Text translation" section shows a consequent, sentence-by-sentence, translation, which makes a continuous proofreading possible. The drop-down menu "Languages"  allows you to select a translation in the relevant languages. Sentences which have not been translated yet are marked as "## no trans: de ##\$" / "## no trans: en ##\$" etc. A click on a sentence highlights the sentence in the "Sign text editor", in the "Transliteration" tabs, and in the "Sentence translation" input field. A typo or another problem observed in the continuous translation can be altered in the "Sentence translation" input field, but not in the Text translation field.

## Lemma View

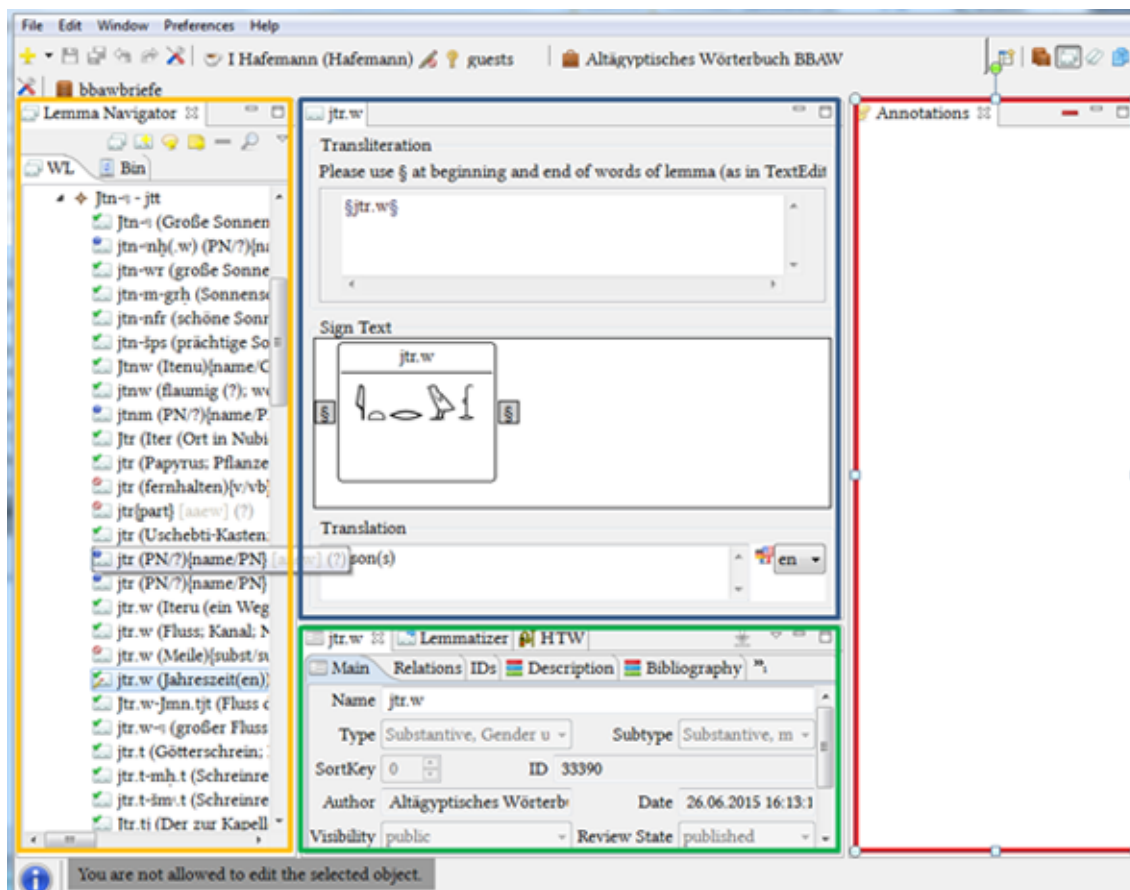
Lemma view can be activated by left-clicking the Lemma icon in the [Toolbar](#). Any user can see the contents of the lemma view, although the ability to modify it is restricted by the relevant [user role](#).

In the Lemma view authorized users can work on lemma entries. They can add new lemma entries, edit the transliteration and the hieroglyphic spellings of the entries and add and edit metadata of the entries.

NOTE: This chapter provides a general description of the Workspace with its windows and tabs of the Lemma View. For a step-by-step instruction of how to enter or edit a new lemma please refer to the relevant chapter in the User Guide section of this manual ([Creating a lemma entry](#) on page 53).

If a lemma entry you need is missing, please send a proposal to the BTS team in Berlin via E-mail: aegypt1@bbaw.de.

In the Lemma View the user can utilize four windows for the work: Lemma Navigator, Lemma Editor, Passport Editor incl. the Lemmatizer and Hieroglyphic Type Writer and an Annotation Window.





## Lemma Navigator


In the Lemma Navigator you can browse, coordinate and control the lemma entries of the TLA. It is divided into two sub-tabs: "WL" and "Bin". Clicking one of those will show either the word list or a "trash can". Please note that generating the list of the objects in the "Bin" tab may take up to one minute the first time you click it after installing BTS. Thereafter the preview works faster.


### Tools

The Lemma Navigator's toolbar includes the [standard tools](#) plus the following additional ones (from left to right):


 Add Lemma Root Entry: This adds a new lemma root entry. Entering the name of the lemma will automatically arrange its position in the hierarchical tree. A refresh might be necessary.

 Add Lemma Child Entry: This adds a new child entry to a selected root entry or child entry.

 Add Annotation: Adds an annotation to the selected lemma.

 Add Comment: Adds a comment to the selected lemma.

 Delete: This moves an entry from the WL to the Bin. Deleting entries that are moved to bin will be deleted permanently.

 Open Simple Search Dialog: This opens a search dialog to filter the WL for specific entries.

## WL

In the WL (=Wortliste/word list) the lemmata are presented as groups in a tree. The label of a specific group shows the first and the last word of each group, sorted according to the egyptological "alphabetic" order. Clicking on a group opens new subgroups (if such exist) until lemma root entries show up. Root entries can have child entries. To display child entries simply click the root entry.

Each lemma entry consists of an icon (indicating the review state of the lemma), transliteration, translation, word class, physical location of the database object. and number of relations.

Next to each lemmata there is one of the following icons:



means that a lemma is certain and confirmed.



means that the meaning of a lemma is uncertain/ not defined.



means that a lemma has been proven to be wrong and usually, upon expanding, a correct lemma, linked with the wrong lemma, will be displayed.

## Roots



represents root entries. The review state is indicated by the same small icons as for the lemma entries above.

## Bin

Entries (root or child) deleted in the word list are moved to the Bin. The entries in the Bin are not grouped alphabetically anymore. Deleting an item at this point (in the Bin) will remove it permanently. Note that the initial opening of the tab "Bin" may take some time.

Drop-down menu " ▾ "

Clicking the drop-down menu ▾ will display all the options present in the toolbar (see above) and a few more:

- Delete Permanently: Use this option to delete an item completely (it will not be moved to the bin). The item will be removed after you have restarted BTS.
- Restore: Restores a deleted lemma to its original position in the tree.
- Edit Updaters/Readers: Assign *user roles* for Lemma entries (see *Edit* on page 60).
- Open Conflict Dialog: If two users work simultaneously on a database object, it is possible, that they produce different versions at the same time. The conflict dialog solves the problem, which version is the preferable one (see *Edit* on page 60).
- Open Revision History: Opens the history of the changes made for the selected lemma (see *Edit* on page 60).
- Filter: Apply different filters on the available lemma list:
  - Filter by Project / Creator / Updaters / Review Status / Visibility / Types opens a dialogue to select your filter criteria by clicking the relevant check boxes. To undo the filter, unselect the checkboxes.
  - Filter only invalid Lemmata: Displays all texts that do not match the formal system grammar.

## Lemma Editor

The Lemma Editor is located in the upper centre of the workspace when Lemma view is active. It contains three sections.


### Transliteration

The lemma transliteration section is identical to *Text Editor*. Transliterate the lemma in this field within the "\$" signs ("\$" marks the beginning and the end of the lemma). If the transliteration is not enclosed with "\$", it will not be valid.

### Sign-Text


In the Sign-Text section every lemma appears as a single element, no matter if the element is part of a compound word or not. This means that you can sub-lemmatize every part of a compound in addition to the compound itself (which would be lemmatized as one lemma only).

#### Translation

Enter the translation for the complete lemma into this field. Select the language of your choice by left-clicking the drop-down menu marked by .

### Passport Editor

The Passport Editor section is located in the bottom part in the middle of the Text Corpus view. It contains the metadata of a selected database object. It is divided into different subsections which are organized in tabs. These categories vary depending on the database object: Text Corpus Objects have other tab than Texts.

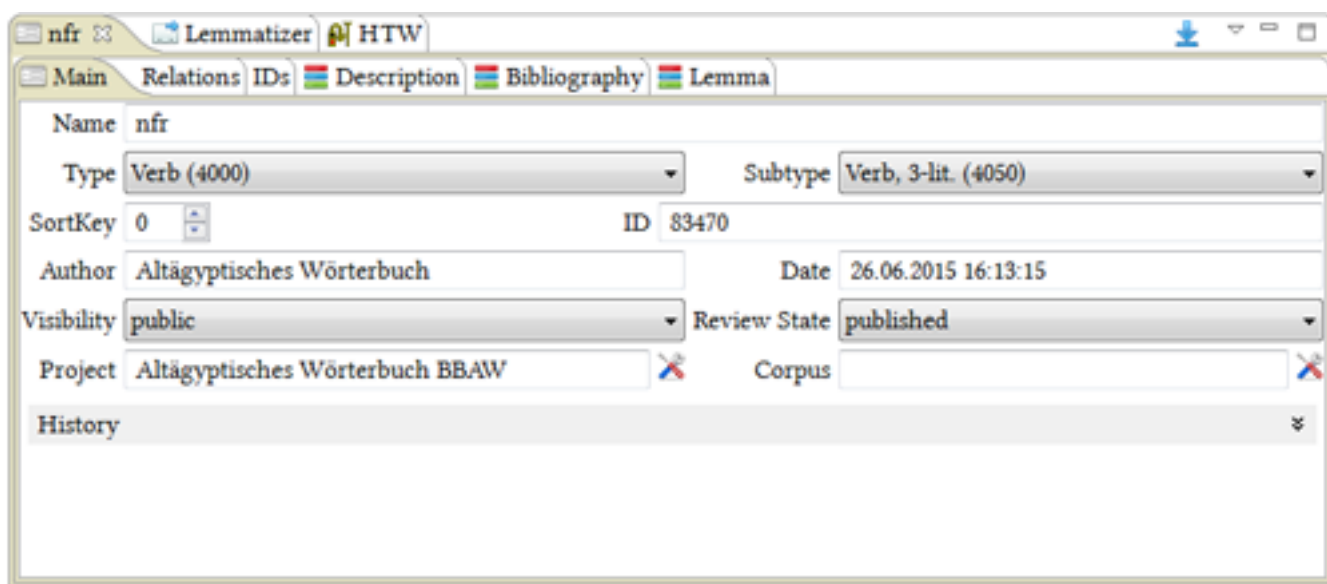
If you are working on a "child object" and want it to have the same metadata as the "parent object", you can click  "Inherit Passport Data" in the top right corner of the Passport Editor. Note that the "parent" data will be copied in the empty fields only. If the fields were filled out, their content will remain unchanged.

The option "Inherit Overwrite Passport Data", available via the drop-down menu " ▾ " allows you to overwrite already existing metadata with updates metadata of the "parent object".

NOTE: Both inheritance procedures apply to all tabs at once, not only the currently open one.

NOTE: Be sure that all entered metadata are correct, as you might inherit errors to "child objects".

NOTE: It is not possible to undo the inheritance procedure.



The screenshot shows a software window titled "nfr" with tabs for "Lemmatizer" and "HTW". Inside, there's a "Passport Editor" section with tabs: "Main", "Relations", "IDs", "Description", "Bibliography", and "Lemma". The "Main" tab is active, displaying the following fields:

- Name:** nfr
- Type:** Verb (4000) (dropdown)
- Subtype:** Verb, 3-lit. (4050) (dropdown)
- SortKey:** 0 (input field)
- ID:** 83470 (input field)
- Author:** Altägyptisches Wörterbuch (input field)
- Date:** 26.06.2015 16:13:15 (input field)
- Visibility:** public (dropdown)
- Review State:** published (dropdown)
- Project:** Altägyptisches Wörterbuch BBAW (input field)
- Corpus:** (input field)
- History:** (expandable section)

### Main


The Main tab contains general information about the lemma entry.

- **Name:** Enter or change the name (i.e. the transliteration) of the lemma.
- **Type and Subtype:** Select a type and subtype (e.g. substantive, adjective etc.).
- **SortKey:** By default, all lemmata on the same level have "0" as a sort key and are thus sorted alphabetically. Defining a "SortKey" in the Passport data of the database object will change its position regarding other database objects, "0" being on top.

NOTE: If your database object is in a polyhierarchical position, changes in the sortkey apply to all relations.

- **ID:** Displays the ID of the lemma, which is generated automatically by BTS. It cannot be changed.





- **Author:** Displays the author (= creator) of the of a lemma.
- **Date:** Display the date of creation of the lemma.
- **Visibility:** Define who can see the lemma (public, project, group, reader, all\_authenticated). See also [User roles description](#) on page 10.
- **Review State:** Enter or edit the review state of the lemma (published, reviewed, awaiting-update, awaiting-review, new, transformed awaiting update). Use only four review states: published, published-awaiting-review, published-obsolete, obsolete. Published means the lemma is certain and confirmed. Published-awaiting-review means the lemma is not yet confirmed. Obsolete means the lemma is obsolete and will not be displayed in publication. Published-obsolete means the lemma is obsolete and will be displayed in publication.
- **Project and Corpus:** The field displays the name of the project or corpus, respectively. Clicking on  you can move the database object to another project / corpus. You can only move the corpora or projects for which you have rights. Note that only the physical position of an object will change (displayed in the Navigator tree in square brackets), not its position in the hierarchical tree. (If you want to change the position of an item in the hierarchical tree then you have to change the relation of your lemma. See [Relations](#) on page 89).
- **History:** Click to see all changes of the selected lemma. Information includes the username of the editor and the date. To close the history information, change to another lemma and then back. To restore a previous version, use the Open Revision History dialogue (see [Revision History / Conflict Dialogue](#) on page 48).

## Relations


The Relations tab gives information on the relation between the lemmata. The default setting is the relationship between the selected database object and its parent database object ("Part of"). BTS supports polyhierarchies, that means that database objects may have more than one parent element.


### Relation


Choose between different types of relations from the drop-down menu:

- **PartOf:** A lemma is hierarchically subordinated to another lemma, it is a sublemma of another lemma.
- **Contains:** A lemma is hierarchically superordinated to another lemma.
- **Is composed of:** A relation between a compound and its components. Do not use this relation! Instead of this, divide the compound into its components in the texteditor, and lemmatize them.
- **Is cross-reference to:** This references your entry to another entry.
- **Referencing:** Establishes a relation between obsolete lemmata () and correct lemmata ().
- **ReferencedBy:** Defines the relation between correct lemmata and obsolete lemmata.
- **RootOf:** A relation between a lemma and its root.
- **Successor / Predecessor:** Sets the correlation between the Egyptian and Demotic word lists.
- **Is cross-reference to:** This option is offered but is not relevant at the moment.

**Object:** Displays the transliteration of the related lemma.

 **Search Object:** Search for a lemma you want to relate with your lemma.

 **Open Object in Passport Editor:** Displays the passport data of the related lemma.

 **Add Relation:** Click it to add more relations. BTS allows polyhierarchy. One item can have more than one parent element.

 **Remove Relation:** This removes relations from the lemma.

**NOTE:** If the last relation is removed, the lemma will remain in the database as "Orphan" and is still accessible via the Search Dialog.

NOTE: If a database object has more than one relation, it is displayed at each respective position in the Navigator tree. This does not mean that the database object has been duplicated. To delete one of these relations, use the "Remove Widget" button in the Relation tab. Do not delete the database object itself, unless you want to delete it permanently from all appearances in the Navigator tree.

## IDs

This tab provides the option to enter external IDs of your lemma to establish links to other projects and databases.

By default a  button will be displayed. Click it to add an external ID.



NOTE: Lemmata transferred from the project "Altägyptisches Wörterbuch" display here the ID from the project "Altägyptisches Wörterbuch" in the field External ID. In this case, the field type has the value aaew\_wcn.

- Provider: Select the provider (an external project) from the drop-down menu.

If a provider you need is missing, please send a proposal to the BTS team in Berlin via E-mail: aegypt1@bbaw.de.

- Type: Enter the type of the external ID.
- External ID: Enter the external ID here.

Example: The lemma *nfr* also appears in the Ramses project: <http://ramses.ulg.ac.be>. Select Ramses as provider, enter 96274 as external ID.

-  Add Identifier: Add another set of information, including the "Provider", "Type" and "External ID".
-  Remove Widget: This removes the external ID from the lemma.

## Description

This tab is used for recording the working process. The provided input fields are the following:

- Description: This input field offers the opportunity to provide a more thorough definition in case the name of the database object is not sufficient for identification. Usually this field remains blank.

NOTE: This does not replace conscientious naming of the database and proper filling of the passport data.





- Comment: Write any additional comments you may have to your work.

## Bibliography

Enter bibliographical information here. The tab contains:

- Bibliographical text field: A field to enter the bibliographical data manually. Currently it is recommended to use this field only. Divide your bibliographic items with Semicolon ";".

Example: Wb 1, 25; EAG § 159; Schenkel, Einf., 105; ENG §§ 59-64; JWSpG § 216

- Bibliographical entry: This feature is currently not available.
  - Bib. Item: Displays the name of the selected thesaurus entry. This is no input field.
  -  Search Object: You may select the language from the Thesaurus. This feature is currently not available.
  -  Open Object in Passport Editor: Displays the passport data of the selected thesaurus entry. This feature is currently not available.
  - Pages/plates: Enter the pages / plate number complementing the bibliographical item selected from the thesaurus and select the check boxes. For the meaning of the abbreviations see above.
  - Comment: Use this input field to comment your reference.
  -  Add Entry Group: Add an additional bibliography section.
  -  Remove Entry Group: Delete a bibliography section.

NOTE: The bibliographical thesaurus does not exist yet. We recommend to use "Bibliographical text field" instead until it is available.

## Lemma

Lemma tab provides information about different properties of the lemma. These are the following:

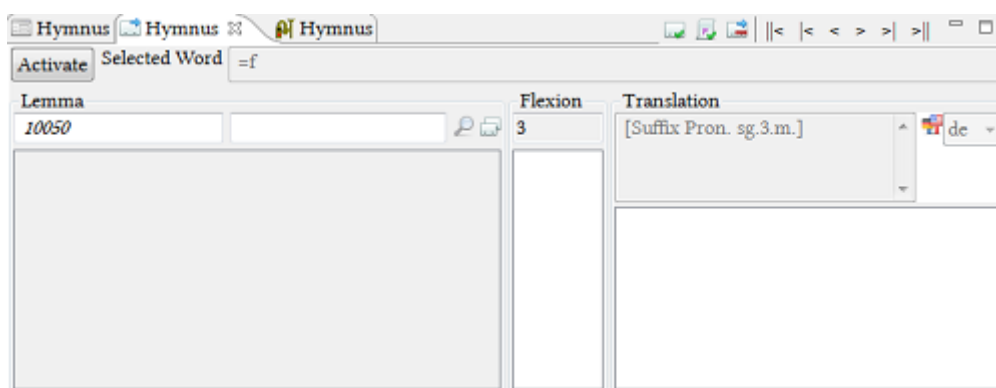
- Comment: Any comment to the Lemma which did not fit in any other subsection.
- Comment (English translation): Any comment to the English translation of the Lemma.
- Lsort, arb\_vermerk, simplify, wclassnum, woart, word\_class: These are information tags inherited from the previous BTS version. They are not used for newly created lemmata.

## Lemmatizer

The Lemmatizer tab is used to reference the selected transliterated word to the lemma entry in the Lemma list. It has several text input fields and a toolbar. Using the Lemmatizer is the most important step to perform the subsequent lexical search in the database, to create word indexes or to conduct all kinds of lexical analyses.

NOTE: You can use the lemmatizer only if the Sign Text Editor tab has been selected.

NOTE: After selecting the Lemmatizer tab or after selecting a text in the Text Corpus Navigator the name of the lemmatizer will switch to the name of the selected text. Move the cursor on the tab header to see the original name of the tab.



- Activate: Click Activate to enable the lemmatization, click it again to deactivate it after you are done with lemmatizing. The color of the button turns from grey to blue while activated.

### Text input fields

- Selected Word


This field displays the word that you had previously selected in the "Sign Text Editor". You can change its transliteration (e.g. to correct your input) and the new list of lemmas will be displayed in the field below.


NOTE: Changing the transliteration in this field, changes your transliteration in the Text Editor.

The lemmata corresponding to the altered transliteration appear only after moving first to another lemma and then coming back to the lemma you are working on. There are three sections in this field: Lemma, Flexion and Translation.


- Lemma

The section Lemma at the bottom left is composed of three fields. The Lemma-list is automatically generated, based on the entry in the "Selected Word" field. Selecting a lemma from the list will display its ID "Word Corpus Number" in the Lemma field. The standard transliteration of the lemma itself is displayed in the field to the right of the ID.



 Search Object: Opens a search dialogue where you can look for lemmata manually.

 Open Lemma Navigator: Opens a complete list of available lemmata ("Lemma View) in the separate window.








- Flexion and Translation

The section Flexion (bottom middle) and Translation (bottom right) show the default inflection number "3" and translation options for the selected lemma. The inflection number and translation can either be selected from the available ones (lower text box, this feature is not yet implemented for the inflection) or manually entered (upper text box). The values in the "Translation" field depend on the  language selection on the right.

#### Toolbar

-  Confirm current lemma editing and continue to the next unlemmatized word.
-  Confirm current lemma editing and continue to next, not yet inflected word.

Confirm the current inflection code of the lemma and continue to next word, where the inflection code has a default number "3" (i.e. has not been manually defined yet).

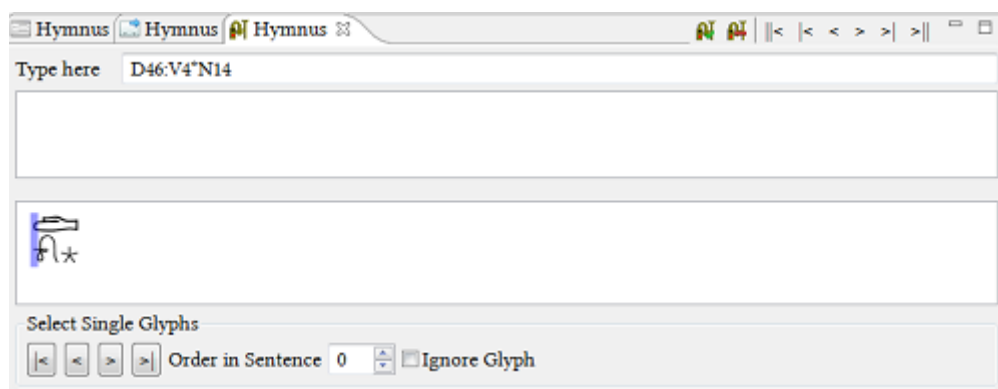
-  Remove lemma information.
-  Move selection to the beginning of the document.
-  Move selection to the beginning of the sentence.
-  Move selection to previous word.
-  Move selection to next word.
-  Move selection to the end of the sentence.
-  Move selection to the end of the document.

### Hieroglyph Type Writer (HTW)

The HTW-tab in the window at the bottom center leads to the Hieroglyph Type Writer. This is a tool which enables entering or editing of hieroglyphs for any transliterated text in the "Sign-Text-Editor". The Hieroglyph Type Writer is situated by default in the lower part of the BTS user interface, next to the Passport Editor and the Lemmatizer.

Note: After selecting the HTW tab or after selecting a text in the Text Corpus Navigator the name of the HTW will switch to the name of the selected text. Move the cursor on the tab header to see the original name of the tab (HTW).

In order to use the HTW you need to open the "Sign Text Editor" and select a lemma for which hieroglyphs are to be entered.



The HTW consists of the following sections:

#### Type here

Enter the hieroglyphs sign by sign either by the Gardiner codes or "Manuel de Codage" transcription of a word selected in the Sign Text Editor above. The first of the two fields below the "Type here" field offers hieroglyphic variants for selection based on your input in "Type here".

Select and confirm each sign by pressing "CTRL" + the number (marked in red next to the respective sign) or simply complete the number manually and continue after the hyphen with the next hieroglyph. The second field underneath displays the hieroglyphic writing of the word you typed in. After confirmation the writing appears within the selected word in the "Sign Text Editor".

#### Select Single Glyphs

In the case of an inversion this function offers the option to mark a hieroglyph and assign a different position for it in a sentence.

- Move selection to the first sign.
- Move selection to the previous sign.
- Move selection to the next sign.
- Move selection to the last sign.
- Order in Sentence: Use the up/down arrows to set a number corresponding to the position of a sign in a sentence if the transcription does not correspond to the order of signs in the manuscript.
- Ignore Glyph: Check box is applicable, for instance, in a case of a haplography. Checking this box after selecting a sign will signalize that the sign does not originally appear in the manuscript.

#### Toolbar

Placed in the upper-right corner of the HTW, the toolbar shows the following buttons:



Confirm current hieroglyph editing and continue to the next word. Pressing the "Enter" key also confirms the hieroglyph editing.



Remove hieroglyph data: Removes already entered hieroglyphs of a token selected in the Sign Text Editor.



Move selection to the beginning of the document.




Move selection to the beginning of the line.




Move selection to the previous word.





Move selection to the next word.


 Move selection to end of line.


 Move selection to end of document.


## Annotations

The annotations and text translation window is placed on the right side of the default BTS user interface in each view.

For each entry either an "Annotation"  or a "Comment"  can be entered. The relevant buttons are placed in the toolbar of the Lemma Navigator (at the left side of the workspace). Each annotation or comment offers additionally the following functions:


 Add Current Text Selection as Reference: The selected part is referenced to the current annotation or comment. This feature provides an opportunity, for example, to reference multiple parts to a single annotation.

 Remove Current Reference: The selected part is removed from the current annotation or comment. This removes only the link. It does not delete the annotation.

 Edit Comment or Edit Annotation: This opens a window to edit the content of annotations and comments.


Clicking on "Edit Annotation" will display the passport editor for annotations. Each annotation will have its own ID and its relation to the selected lemma will be shown in the "Relations" tab.

By clicking the "Edit Comment" button, a "Comment Editor" a window will appear. You can enter or edit a title for your comment in the upper input field and the content of your comment in the lower input field. Below there is also a section where you can see or edit a relation of the comment to the lemma, using the ID.

 Delete: Will delete the currently selected element.

To learn more about annotations see [Annotations, Rubra, Glosses and Comments](#) on page 30.

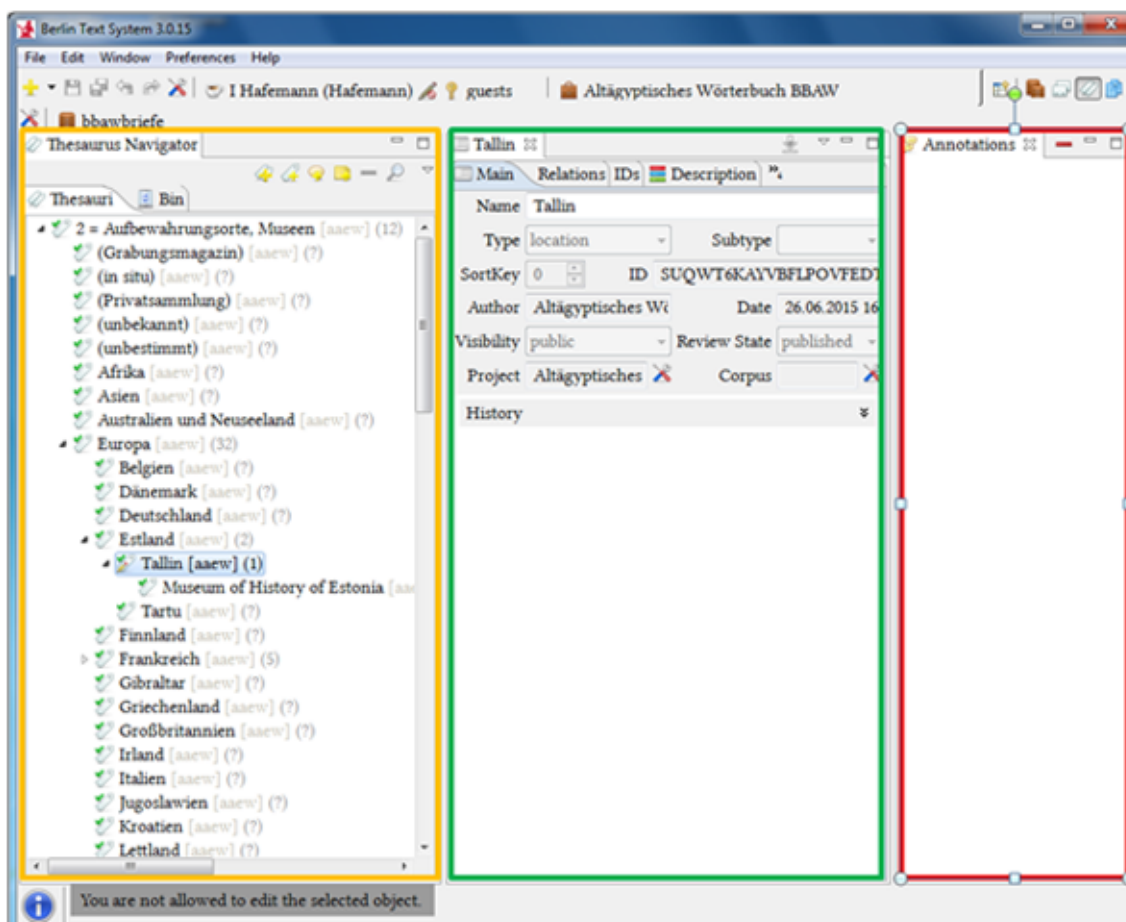
## Thesaurus View

The Thesaurus view can be activated by clicking the  "Thesaurus" icon in the [Toolbar](#). A thesaurus compiles a controlled vocabulary, which is used for the metadata of the database objects like date, location, provenance, etc. All terms of a thesaurus reflect a semantic network of concepts including relationships between synonyms, broader and narrower (parent/child) contexts, and other related concepts. Thesaurus entries are offered in the Passport Editor window of the Text Editor and of the Lemma Editor and serve to select the metadata for Text Corpus Objects, Texts or Lemma entries. New entries can be added here as well. Any user can see the contents of the Thesaurus view, but the right to create or modify them is restricted by the relevant user role.

NOTE: This chapter provides a general description of the Workspace with its windows and tabs of the Thesaurus View. For a step-by-step instruction of how to enter or edit a new Thesaurus entry please refer to the relevant chapter in the User Guide section of this manual ([Creating a thesaurus entry](#) on page 54).

If a Thesaurus entry you need is missing, please send a proposal to the BTS team in Berlin via E-mail: [aegypt1@bbaw.de](mailto:aegypt1@bbaw.de).

The three windows from left to right are: Thesaurus Navigator, Passport Data Editor, Annotations.



## Thesaurus Navigator

The window of the Thesaurus Navigator is located on the left of your workspace in the Thesaurus view. The Thesaurus list comprises a controlled vocabulary of unique concepts for describing the properties of database objects. Such metadata enable search queries on a global or local level of the database. They are attributed to the database objects in the Passport Editor.

### Toolbar

The toolbar of the Thesaurus navigator contains the following entries:



Add Thesaurus Root Entry: This adds a new "Thesaurus Root" which will appear at the bottom of the Thesaurus tree.



Add Thesaurus Child Entry: This adds a new child entry to a selected root entry or child entry.




Add Annotation: Adds an annotation to the selected thesaurus entry.



Add Comment: Adds an annotation to the selected thesaurus entry.




Delete: This moves an entry from the Thesaurus to  Bin.





Search: Search the Thesaurus for entries.

### Bin

Entries deleted in Thesaurus Navigator appear in  "Bin" tab. They are listed individually. Deleting an item here will remove it permanently. Please note that generating the list of the objects in the Bin may take up to one minute the first time you click it after installing BTS. After this the preview works faster.


Drop-down menu " ▾ "

Offers all the options available in the Toolbar (see above) plus the following:

- Delete Permanently: Delete selected entry completely. The item will be removed after you have restarted BTS.
-  Edit Updaters/Readers: Assign user roles for thesaurus entries (see [Edit](#) on page 60).
-  Open Revision History: Opens the history of the changes made for the selected thesaurus entry (see [Edit](#) on page 60).
- Open Conflict Dialogue: If two users work simultaneously on a database object, it is possible, that they produce different versions at the same time. The conflict dialog solves the problem, which version is the preferable one (see [Edit](#) on page 60).
- Filter: Filters the corpora according to the listed criteria.
  - Filter by Project / Creator / Updaters / Review Status / Visibility / Types opens a dialogue to select your filter criteria by clicking the relevant check boxes. To undo the filter, unselect the checkboxes.

## Passport Editor

The Passport Editor section is located in the bottom part in the middle of the Text Corpus view. It contains the metadata of a selected database object. It is divided into different subsections which are organized in tabs. These categories vary depending on the database object, the tabs "Thesaurus: Date" and "Thesaurus: Coordinates" apply only to specific types of thesauri.

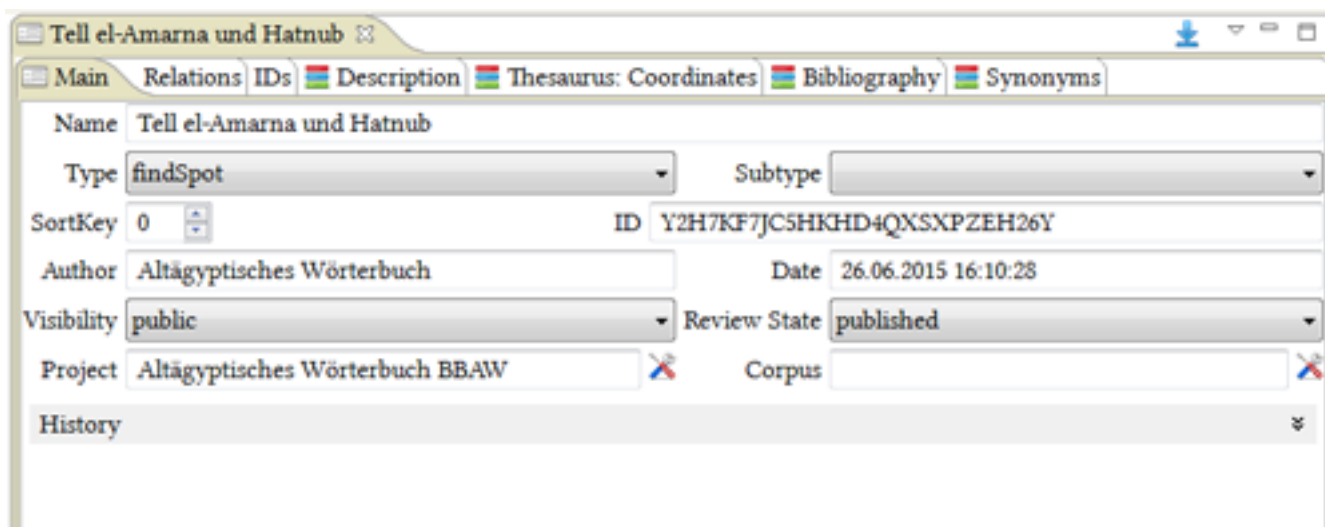
If you are working on a "child object" and want it to have the same metadata as the "parent object", you can click  "Inherit Passport Data" in the top right corner of the Passport Editor. Note that the "parent" data will be copied in the empty fields only. If the fields were filled out, their content will remain unchanged.

The option "Inherit Overwrite Passport Data", available via the drop-down menu " ▾ " allows you to overwrite already existing metadata with updates metadata of the "parent object".

NOTE: Both inheritance procedures apply to all tabs at once, not only the currently open one.

NOTE: Be sure that all entered metadata are correct, as you might inherit errors to "child objects".

NOTE: It is not possible to undo the inheritance procedure.



The screenshot shows the 'Passport Editor' window for the object 'Tell el-Amarna und Hatnub'. The window has a title bar with the object name and a close button. Below the title bar is a tabbed interface with tabs for 'Main', 'Relations', 'IDs', 'Description', 'Thesaurus: Coordinates', 'Bibliography', and 'Synonyms'. The 'Main' tab is active, showing a form with the following fields:

- Name:** Tell el-Amarna und Hatnub
- Type:** findSpot (dropdown menu)
- Subtype:** (empty dropdown menu)
- SortKey:** 0 (spin box)
- ID:** Y2H7KF7JC5HKHD4QXSPZEH26Y
- Author:** Altägyptisches Wörterbuch
- Date:** 26.06.2015 16:10:28
- Visibility:** public (dropdown menu)
- Review State:** published (dropdown menu)
- Project:** Altägyptisches Wörterbuch BBAW
- Corpus:** (empty text field)
- History:** (button with a magnifying glass icon)




## Main

The text input fields and drop-down menus give you several options to enter technical information of your thesaurus entry.

- **Name:** Enter or change the name of your thesaurus entry.
- **Type and Subtype:** Select a type and subtype (e.g. language, date, script). The subtype applies only to certain types of thesauri, e.g. the location "Aufbewahrungsort".
- **SortKey:** By default, all thesaurus entries on the same level have "0" as a sort key and are thus sorted alphabetically. Defining a "SortKey" in the Passport data of the database object will change its position regarding other database objects, "0" being on top.

NOTE: If your database object is in a polyhierarchical position, changes in the sortkey apply to all relations.

- **ID:** Displays the ID of the thesaurus entry, which is generated automatically by BTS. It cannot be changed.
- **Author:** Displays the author (= creator) of an thesaurus entry.
- **Date:** Displays the date of the creation of the thesaurus entry.
- **Visibility:** Define who can see the thesaurus entry (public, project, group, reader, all\_authenticated). See also [User roles description](#) on page 10.
- **Review State:** Enter or edit the review state of the thesaurus entry (published, reviewed, awaiting-update, awaiting-review, new, transformed awaiting update).
- **Project and Corpus:** The field displays the name of the project or corpus, respectively. Clicking on  you can move the database object to another project / corpus. You can only move the corpora or projects for which you have rights. Note that only the physical position of an object will change (displayed in the Navigator tree in square brackets), not its position in the hierarchical tree. (If you want to change the position of an item in the hierarchical tree then you have to change the relation of your thesaurus entry. See [Relations](#) on page 97).
- **History:** Displays the history of editing of the thesaurus entry. Information includes the username of the editor and the date. To close the history information, change to another thesaurus entry and then back. To restore a previous version, use the Open Revision History dialogue (see [Revision History / Conflict Dialogue](#) on page 48).

## Relations


The Relations tab gives information on the relation between the thesaurus entries. The default setting is the relationship between the selected database object and its parent database object ("Part of"). BTS supports polyhierarchies, that means that database objects may have more than one parent element.


Relation


Choose between two relations from the drop-down menu:


- **PartOf:** Your current entry is a part (child) of another.
- **Is cross-reference to:** This references your entry to another entry.

**Object:** Displays the name of the related thesaurus entry.

 **Search Object:** Search for the a thesaurus entry you want to relate with your entry.

 **Open Object in Passport Editor:** Displays the passport data of the related thesaurus entry.


 **Add Relation:** Click to add more relations. BTS allows polyhierarchy. One item can have more than one parent element.

 **Remove Relation:** Removes a relation from the thesaurus entry.

NOTE: If the last relation is removed, the thesaurus entry will remain in the database as "Orphan" and is still accesible via the Search Dialog.

NOTE: If a database object has more than one relation, it is displayed at each respective position in the Navigator tree. This does not mean that the database object has been duplicated. To delete one of these relations, use the "Remove Widget" button in the Relation tab. Do not delete the database object itself, unless you want to delete it permanently from all appearances in the Navigator tree.

## IDs



This tab provides the option to enter external IDs of your thesaurus entry to establish links to other projects and databases. By default a  button will be displayed. Click it to add an external ID.

- Provider: Select the provider (an external project) from the drop-down menu.

If a provider you need is missing, please send a proposal to the BTS team in Berlin via E-mail: aegypt1@bbaw.de.

- Type: Enter the type of the external ID.
- External ID: Enter the external ID here.

Example: The town Armant is mentioned in the Trismegistos project: <http://www.trismegistos.org/place/812>. Select trismegistos as provider, enter geoID as type, and enter 812 as external ID.

-  Add Identifier: Add another set of information, including "Provider", "Type" and "External ID".
-  Remove Widget: This removes the external ID from the lemma.

## Description

This tab is used for recording the working process. The provided input fields are the following:

- Description: This input field offers the opportunity to provide a more thorough definition in case the name of the database object is not sufficient for identification. Usually this field remains blank.



NOTE: This does not replace conscientious naming of the database and proper filling of the passport data.

- Comment: Write any additional comments you may have to your work.
- Numbering system: Define the numbering system used at the relevant collection.

NOTE: Numbering system only applies to the thesaurus "Aufbewahrungsorte".

## Thesaurus: Date

This tab allows you to define the dating of the selected database object. This tab only applies to the date thesaurus ("Datierungen"). Enter the dating of your thesaurus entry in absolute numbers, as these dates are used by the system to arrange the results of search queries in a chronological order.

- Beginning: Enter the start date of the period. Use negative numbers for periods before Common Era.
- End: Enter the end date of the period. Use negative numbers for periods before Common Era.
- Reference: Enter a reference for the dating.
-  Add entry group: Add a new section, if you want to add a chronology referring to another authority.
-  Delete entry group: Delete a section.





## Thesaurus: Coordinates

This tab allows you to enter the coordinates of the place names in the thesauri ("Aufbewahrungsorte" and "Fundstellen")

- Latitude: Enter the latitude of the location.
- Longitude: Enter the longitude of the location.

## Bibliography



Enter bibliographical information here. The tab contains:

- Bibliographical text field: A field to enter the bibliographical data manually. Currently it is recommended to use this field only. Divide your bibliographic items with ENTER.
- Bibliographical entry: This feature is currently not available.
  - Bib. Item: Displays the name of the selected thesaurus entry. This is no input field.
  -  Search Object: You may select the language from the Thesaurus. This feature is currently not available.
  -  Open Object in Passport Editor: Displays the passport data of the selected thesaurus entry. This feature is currently not available.
  - Pages/plates: Enter the pages / plate number complementing the bibliographical item selected from the thesaurus and select the check boxes. For the meaning of the abbreviations see above.
  - Comment: Use this input field to comment your reference.
  -  Add Entry Group: Add an additional bibliography section.
  -  Remove Entry Group: Delete a bibliography section.

NOTE: The bibliographical thesaurus does not exist yet. We recommend to use "Bibliographical text field" instead until it is available.

## Synonyms



This tab allows you to enter synonyms to the "Name" of the database object.


- Synonym: Enter a synonym of the "Name" of the database object in the Main tab.
- Language: Select the language of the synonym name from the drop-down menu.
-  Add Entry Group: Add another synonym group to add another synonym in the same or further language. You can add as many synonyms as necessary.
-  Remove Entry Group: Removes the synonym group.


Example: Add to your entry "Sarg" the synonym "coffin" with the language "en" (English).


## Annotations

The annotations and text translation window is placed on the right side of the default BTS user interface in each view.

For each entry either an "Annotation"  or a "Comment"  can be entered. The relevant buttons are placed in the toolbar of the Thesaurus Navigator (at the left side of the workspace). Each annotation or comment offers additionally the following functions:

 Add Current Text Selection as Reference: The selected part is referenced to the current annotation or comment. This feature provides an opportunity, for example, to reference multiple parts to a single annotation.

 Remove Current Reference: The selected part is removed from the current annotation or comment. This removes only the link. It does not delete the annotation.

 Edit Comment or Edit Annotation: This opens a window to edit the content of annotations and comments.

Clicking on "Edit Annotation" will display the passport editor. Each annotation will have its own ID and its relation to the selected thesaurus entry will be shown in the "Relations" tab.

By clicking the "Edit Comment" button, a "Comment Editor" a window will appear. You can enter or edit a title for your comment in the upper input field and the content of your comment in the lower input field. Below there is also a section where you can see or edit a relation of the comment to the thesaurus entry, using the ID.

— Delete: Will delete the currently selected element.

To learn more about annotations see [Annotations, Rubra, Glosses and Comments](#) on page 30.

## Abstract Text View

The Abstract Text View provides a tool to connect all versions of a text with a long textual tradition. It will compile the witnesses of a single text (e.g. Sinuhe) and deliver a generic structure, ex. display the concordance of paragraphs. The metadata concerning the "abstract text" can be entered here, e.g. the bibliography.

NOTE: This feature is not complete yet and is currently not available.

# BTS Grammar Rules

## System of Transliteration

The transliteration alphabet used in BTS is the following:

ʾ, ʒ, j, y, i, i, i, i, w, u, u, a, e, b, p, f, m, n, r, l, h, h, h, h, z, s, š, q, k, g, t, t, d, d

ʒ, J, Y, I, I, I, W, U, A, B, P, F, M, N, R, L, H, H, H, h, H, Z, S, Š, Q, K, G, T, T, D, D

The following signs are not allowed in the transliteration and may only be used in comments, bibliography etc.:

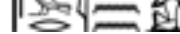
ś, Ś, k, K, t, T, č, Č, č, Č

Written forms

The transliteration in BTS represents the written forms as they appear in the text. Consonants that usually are unwritten, should be added in round brackets: "...", e.g. *r(m)t*.

- If phonetic complements indicate a consonant shift, like *d > d*, *t > t* etc., this has to be determined in the transliteration, e.g. *bṭn, w > bṭn, w*; *jṭi > jṭi*; *msḏi > msḏi*.

•

Historic writings are transliterated as they appear in the text, e.g. *swrj* instead of *zwr* for .

- Logographic writings without phonetic complements are transliterated traditionally, e.g. *rḏi*, *z#*, *zh#*, *w*.
- Ptolemaic texts are also transliterated traditionally, e.g. *hp(r)*.

## Transliteration-signs with variable conventions

The following list shows the conventions used in the BTS. Use the left conventions provided in the left column for your transliteration. Do not use the variants in the right column. Some signs, in particular ś, k, č, t, and č are not valid in the BTS transliteration editor.

BTS convention:	Comparison / Identification (do not use in BTS):
<i>j</i>	<i>i, i</i> : Strong radical (also used for nisba-endings in dual-endings)
<i>i</i>	<i>j</i> (weak)
<i>y</i>	<i>jj</i> , sometimes <i>j</i> : duplicated M17
<i>u</i>	<i>w</i> (weak)
<i>s</i>	<i>ś</i>
<i>z</i>	<i>s</i>
<i>q</i>	<i>k</i>
<i>t</i>	<i>č</i>
<i>d</i>	<i>t</i>
<i>d</i>	<i>č</i>

## Reconstruction of weak consonants

Weak consonants

Weak consonants of the verba ult. inf. have to be transliterated as *j* and *u* respectively, even if they are followed by an inflectional affix (".y" or ".w", e.g. *mri.y =f*). In case of substantives derived from verbs of ult. inf. classes it is not written, e.g. "w#.t" – "way".

Nisbe- and Dual-Endings and Double-M17

Endings of nisba-adjectives and inside a phonetically written dual are represented as "j".

The two strokes "Z4" are to be written as "j"

Only phonemes expressed by a double "M17" are to be written as "y".

## Unwritten Consonants

### Conventions

The transliteration in BTS represents the written forms as they appear in the text. Nevertheless, we recommend to determine unwritten grammatical or phonetic elements and (correctly) unwritten - but not weak - consonants by the use of the round brackets: "(...)". This helps the reader to understand your translation and makes it easier for you to lemmatize your text, as the lemmatizer finds the respective entries automatically.

Examples
<i>h(n)q,t</i>
<i>r(m)t</i>
<i>n(j)</i>
<i>(j)m(j)-r(')</i>
<i>jw =f (hr) sqm</i>
<i>jw =f sqm(.w)</i>

NOTE: Dots and commas have to be written within the round brackets: ...(.w), ...(j).

This means: whenever an unwritten but strong radical is expected, it has to appear in the transliteration. There are a few exceptions which will be listed below.

### Rules for the reflection of unwritten consonants

Grammar	Yes (x) / No (-)
Numerus	-
Infinitive	-
Passive ( <i>tw/tj</i> )	x (by using "...", e.g. <i>sqm.t(w)=f</i> )
Contigent	x (by using "<...>", e.g. <i>sqm#.jn#=f</i> )
Passive ( <i>sqm.w=f</i> )	-
Prospective	-
Subjunctive	-
Imperative	-
Stative / PSP	-
Negative-comeplement	-
Participle	-

Relativeform

-

### Numerus

Ideographic writings of numerus are not to be represented phonetically but designated through “.pl” and “.du”. For details see chapter [Structural signs and conventions](#) on page 103.

## Rules for transliterating a text

A proper transliteration should represent all phonetical and morphological information that can be received from a text. A transliteration should also represent damages of the text and mistakes or corrections of the text by the ancient scribes. We recommend transliterating the written form of any word, as long as there is no evidence that it has undergone considerable changes in its phonology.

The following structural elements should be reflected by a transliteration: every phonological or morphological element which is a part of a written word. Graphical elements without phonological or morphological function must not to be reflected (e.g. determinatives, cartouches, serekhs etc.).

## Structural signs and conventions

Structural signs are used to mark up morphological properties of a lexical entry and changes caused by inflections of words in the texts.

### Structural Signs

Structural Signs	
space	All word, including suffix pronouns, are seperated by space.
:	Prefixes, e.g. <i>j:jṛi</i> =f
=	Suffix-pronouns, e.g. <i>pr</i> =f
.	Endings (morph.), e.g. <i>rmṭ.w</i>
,	Endings (word formation), e.g. <i>nb,t</i>
!	Stem modification, e.g. <i>gmm!</i> =f
-	Linking compound words, e.g. <i>ḥm-nṯr</i>
~	syllabic writings, e.g. <i>g#~w#~š#</i>
	verse point
	reconstructed verse point
*	transliteration of cipher script (demotic), e.g. <i>*mseh*</i>
;	phonetic complements (demotic), e.g. <i>nhṯ;t</i>

### Prefixes

Only morphological prefixes are allowed to be marked by the structure sign (“:”). Do not mark any prefix of word formation.

Examples	
Morphology:	
correct: <i>j:jṛi</i> =f	incorrect: <i>jjṛi</i> =f
Word Formation:	

correct: *smn* (to make firm)incorrect: *s:mn*

### Suffixes

Suffixes are to be marked consistently by “=”. Note the space between a word and “=”. Lexically bound suffixes are also to be marked by “=” to declare the suffix as included in the word (e.g. personal names), but are used without space.

#### Examples

Morphological suffixes:

correct: *sḏm=f*incorrect: *sḏm=f*

Lexically bound suffixes:

correct: *Hpr-ḏs=f*incorrect: *Hpr-ḏs=f*

### Endings

Morphological endings are to be marked by a dot “.” (e.g. numerus endings, inflective infix/affix), endings of word formations by a comma “,” (e.g. feminine ending). Endings of proper names have to be written at the end of the full name, no matter if a name consists of compound words and/or suffixes.

NOTE: The feminine ending *.t* is marked by a comma (“,”), if the word is noun. The ending of adjectives is treated as morphological endings and thus marked by a dot (“.”), e.g. *nb,t nfr.t*.

#### Examples

Morphology:

*rmṯ.w* (men)*jr.tj.du* (both eyes)*sḏm.n=f**sḏm.hr=f*

Word Formation:

*nb,t* (lady)*mn,w* (monument)

Proper Name:

*Jnṯ-jt(j)=f,j**Hpr-ḏs=f* (he who came into being of himself)

### Notation of Plural and Dual

Plural and dual endings are morphological endings and thus marked by a dot (“.”). Phonetically written endings are transliterated as “.w”, “.wj”, “.wt” and “.tj” respectively. Strokes and other ideographic writings of number are represented by either “.pl” or “.du”. In case there is a phonetic and ideographic writing, both are represented in the transliteration, e.g. “.w.pl.” or “.tj.du”.

Dots and commas are combined if both morphological and inflectional endings appear in one word, e.g.:

- *nh,t* - "sycamore" (sg.)
- *nh.w,t* (pl. phonetic)
- *nh,t.pl* (pl. ideographic)
- *nh.w,t.pl* (pl. phonetic + ideographic)
- *jm,j-r'-hm,pl-ntr* (title, sg.)
- *jm,j-pl-r'-hm,pl-ntr* (title, pl.)

Strokes and other ideographic writing are only represented by .pl and .du, respectively, if they mark "real" plurals or duals. If written in collectiva, they are treated as determinatives and are thus not transliterated, e.g.:



- *mnmn,t* - "cattle"
- *nfr(w)* - "beauty"

#### Stem Modification

Examples

*gmm!* = *f(gm̃i)*

*wn!* = *f(wnn)*

*m#n!* = *f*

#### Compound Words

Examples

*m-hnw*

*m-ht*

*hr-tp*

*Wnn-nfr*

*hm-ntr-Jmn*

#### Proper Names

Proper names are written with an initial capital, also when they appear within a compound word.

Examples	
<i>Jni-jt(j)=f,j</i>	personal name
<i>Hr,w</i>	name of a god
<i>hm-ntr-Jmn</i>	a title
<i>h#.tj-#-n-Nhb</i>	a title
<i>Jwn,w</i>	name of a place

Cartouches, Serekhs etc.

Cartouches "# ... #", Serekhs "# ... #" and enclosures of places names "# ... #" etc. are treated as determinatives and are thus not represented in the transliteration.

#### Verse Points

Verse points are represented in the transliteration via the appropriate signs (see [Keyboard layout](#) on page 9). There has to be a space before and after the verse point. Verse points are not represented in the hieroglyphical encoding.

- # - preserved verse point
- # - reconstructed verse point
- {#} - verse point deleted by the editor

## Sigla for textual criticism

Some sigla are used to indicate the condition of a text and editorial corrections and restorations (textual criticism). BTS uses sigla to mark up damaged parts and loss of signs in a text, emendations and additions of the editor as well as ancient deletions, additions and corrections of the texts.

## Brackets

Only consonants of words or full words that are lost or partially damaged are allowed to be put into brackets (“[ ]” / “<sup>^</sup>” “<sup>^</sup>”), if signs representing the consonants are intrinsically part of the writing. This means that the consonants that are complements of fully existing ideograms should not be surrounded by brackets. If a word is partially destroyed but is still fully readable (that happens if a determinative or a complement is lost, but the word is clearly written) then there is no need for a bracket, unless there is no ambiguity possible, e.g. because of homography.



- Example 1: nfr written:  has to be transliterated as “nfr”, not “nfr<sup>^</sup>”.
- Example 2: nfr written:  has to be transliterated as “#nfr#”.

Table of brackets available in BTS

(...)	Correctly unwritten consonants / words or abbreviation expanded by the editor
[...]	Partly damaged or otherwise unclear consonants / words
<...>	Consonants / words erroneously omitted by the ancient scribe, restored or corrected by the editor
{...}	Consonants / words considered erroneous and superfluous by the editor
[...]	Consonants / words missing from the original text due to lacuna, restored by the editor
?...?	Consonants / words with doubtful reading
<<...>>	Haplography
((...))	Ancient additions to the text (above line or beside column)
{{...}}	Ancient deletions
[[...]]	Ancient reconstructions over deletions

NOTE: For <...> use the font BBAWLibertine, do not use <...>, as the latter are not valid in BTS.

NOTE: ((...)) is not to be used for glosses.

General rules for the use of brackets

- Brackets always come in pairs. You have to close each bracket you have opened. Usually the system will do this automatically, but for <...> and <<...>> this does not work. Pressing “CTRL+Spacebar” will show the markers that are allowed at the position of the cursor. For recurring elements you also can define a template in the [Preferences](#).
- Brackets have to be closed with each token (word), e.g. [jw] [nfr] (not: [jw nfr]).
- Brackets can be combined, as long as the bracket opened last is closed first, e.g. [hp(r)], <sup>^</sup>hp(r)<sup>^</sup>, ?[h]p(r)? etc. Interlacing different kinds is not valid, e.g. ?[h?]pr.

NOTE: Some combinations of round brackets and double round brackets result in errors, although they should be valid. For example ((n(j))) is not valid in the BTS grammar. In such a case use the dummy sign “::”: ((n(j)::)).

## Gaps, lacunas, and damaged parts

The editor of a text should himself decide whether to reconstruct a word / phrase or not. If you are able to reconstruct the missing parts, e.g. from parallel texts or from recurring phrases, use *Brackets*. If only a word class can be reconstructed, a "representative" should be used instead (see below).

General representation of gaps and lacunas

If words or even the number of missing words cannot be reconstructed, the lacuna has to be represented by the following notations. The marker "--...--" with two hyphens is reserved for damaged parts and will be interpreted by BTS in this way. The marker cannot be lemmatized.

- "--nQ--" with "n" as count of the number of destroyed quadrats (see examples below).
- Complete destruction at the end of a line/column: "--Rest der Zeile/Kolumne zerstört--"
- Complete destruction at the beginning of a line/column: "--Anfang der Zeile/Kolumne zerstört--"
- Complete destruction of the rest of the text: "--Rest des Textes zerstört--"

If there are traces of signs that cannot be identified, use: "--Zeichenreste--"

Examples	
3 quadrats missing	--3Q--
1,5 quadrats missing	--1,5Q--
4 to 5 quadrats missing	--4 bis 5Q--

NOTE: Between "--" no hyphens ("-") are allowed, thus write "--4 bis 5Q--", not "--4-5Q--".

Representatives

If the number of words missing can precisely be determined (e.g. if the words are completely lost, but with the determinatives preserved), use three underscores in brackets "[ ]". E.g.: "[ ] [ ]" for 2 missing words. These representations are treated as words by BTS and can be lemmatized.

In some cases it might even be possible to determine word class, number, and gender. To lemmatize the representatives there are entries in the lemma list for each of these options. Therefore you have to search the WCN number via the magnifying glass (see *Lemmatizing* on page 24). For a list that helps you to find the relevant WCN number, see *Lemmatizing illegible words* on page 28.

NOTE: To find the complete list in the lemma list, you may also open search via the magnifying glass and search for "[Wort]" (full text search with both check boxes deactivated). The results will appear at the end of the list.

## Inflection Codes

To each word form (token) an inflection code should be assigned. This enables grammatical analyses of the data. Uninflected forms, for example substantives in singular and status absolutus, get the code "3". In the following the example will be given, explaining the inflection codes of verbs with suffix conjugation.

### Suffix conjugation

The forms of the suffix conjugation can be either unmarked, geminated or a special form. The encoding distinguishes only between written forms, i.e. form that can be distinguished by their external appearance (-*n*-, -*w*-, -*t*-, -*tw*-, -*jn*-, -*hr*-, -*k#*- and combinations). Syntactical and semantic implications are not taken into account. Suffix pronouns are encoded as last digit of the codes listed below. Nominal subjects and lost subjects are encoded with 0 as last digit.

Prefixed forms of the suffix conjugation are encoded with 1 as second digit in combination with the codes listed below, e.g. 11021 = pref. SK.akt.kzl.1sg. For the encoding of complex verbal forms and negated forms of the suffix conjugation see tables below.

Suffix conjugation Owner 10000

10000 -> suffix conjugation (SK)

11000 -> prefixed suffix conjugation

kzl = unmarked ("kennzeichenlos")

akt. = active

pass. = passive

spez. = special forms

last digit: 0 = nominal subject; 1-9 = pronominal subject (see: [Suffix pronouns and dependent pronouns](#) on page 120)

10020	SK.akt.kzl	<i>pri, rdi, di, sdm, m#</i>
10040	SK.pass.kzl	
10100	SK.akt.gem	<i>dd, jrr, m##, wnn</i>
10120	SK.pass.gem=redupl	<i>sdmm.pass.</i>
10140	SK.akt.spez	special forms: <i>jnt=f, m3n=f, jwt=f, phr.y</i> - 3gem.
10160	SK.pass.spez	final <i>j, y</i> , also 2 + 3rad, irregular forms.
10170	SK.tw-pass.spez	<i>jnt.tw</i>
10180	SK.w-.akt.kzl	<i>kjw. 2inf</i>
10220	Sk.w-.akt.gem	<i>sfhh.w/kaus 2gem</i>
10240	SK.w-.pass.kzl	
10280	SK.w-.tw-pass.kzl	
10320	SK.tw-pass.kzl	
10360	SK.tw-pass.gem	<i>sdmm.tw=f</i>
10380	SK.n-.akt.kzl	<i>msi.n</i>
10420	SK.n-.akt.gem	<i>wnn.n, snbb.n</i>
10440	SK.n-.tw-pass.kzl	
10480	SK.n-.tw-pass.gem	<i>Allen gmm.n.tw, thnn.n.tw</i>
10500	SK.jn-.akt.kzl	
10540	SK.jn-.akt.gem	
10560	SK.jn-.tw-pass.kzl	
10600	SK.hr-.akt.kzl	
10610	<i>hr</i> SK.akt.kzl	
10640	SK.hr-.akt.gem	
10650	<i>hr</i> SK akt.gem	

10660	SK. <i>hr</i> -. <i>tw</i> -pass.kzl	
10670	<i>hr</i> SK- <i>tw</i> .pass.kzl	
10700	SK. <i>hr</i> -. <i>tw</i> -pass.gem	
10710	<i>hr</i> SK- <i>tw</i> .pass.gem	
10720	SK. <i>k#</i> -.akt.kzl	
10730	<i>k#</i> SK.akt.kzl	
10760	SK. <i>k#</i> -.akt.gem	
10770	<i>k#</i> SK. akt.gem	
10780	SK. <i>k#</i> -. <i>tw</i> -pass.kzl	
10790	<i>k#</i> SK- <i>tw</i> -pass.kzl	
10820	SK. <i>k#</i> -. <i>tw</i> -pass.gem	
10830	<i>k3</i> SK- <i>tw</i> -pass.gem	
10840	SK. <i>t</i> -.akt.kzl	after negative word <i>n</i> , prpp. <i>r</i>
10850	SK. <i>t</i> -.akt.gem	<i>s##.t=f</i>
10860	SK. <i>t</i> -.pass.kzl	<i>n sdm.t=f-pass</i> : Schenkel, Grammatik (1994), 177, 180 f.
10870	SK. <i>t</i> -.pass.gem	
10900	SK.akt.kzl.unpersönl.	
10910	SK.pass.kzl.unpersönl.	
10920	SK.akt.gem.unpersönl.	
10930	SK.pass.gem.unpersönl.	
10800	SK. <i>n</i> -akt.kzl.unpersönl.	
10810	SK. <i>n</i> - <i>tw</i> .pass.kzl.unpersönl.	
10940	SK.unpersönl. <i>w</i> -pass.	
10950	SK. <i>tw</i> -pass.kzl.unpersönl.	
10960	SK. <i>tw</i> -pass.gem.unpersönl.	
10190	SK. <i>tw</i> - pass.spez.unpersönl.	
10970	SK.akt.spez.unpersönl.	
10980	SK.pass.spez.unpersönl.	
10990	SK.t-akt.kzl.unpersönl.	
10570	SK. <i>jn</i> -. <i>tw</i> -pass.kzl.unpersönl.	

Examples:

*sdm=f*: 10024 + =*f*

*j:sdm=f*: 11024 + =*f*

*mrr=sn*: 10109 + =*sn*

*sdm.jn.tw=k*: 10562 + =*k*

Suffix conjugation in complex verbal forms (in combination with codes above) Owner 10000

13000	SK after aux. <i>jw</i>	SK.kzl, <i>tw-, n-, w-</i> form
14000	SK after aux. <i>#h#.n</i>	SK.kzl, <i>n-, w-</i> form
15000	SK after aux. <i>wn</i>	SK.kzl, etc.
16000	SK after aux. <i>wn.jn</i>	SK.kzl, etc.
17000	SK after aux. <i>wn.hr</i>	SK.kzl, etc.
18000	SK after aux. <i>wnn</i>	SK.kzl, etc.
19000	SK after aux. <i>jri</i>	SK.kzl, etc.

Example: *#h#.n sdm.n=sn: #h#.n + 14389 + =sn*

Negated suffix conjugation Owner 100000

Negation words are encoded separately; the negation is encoded at the verbal form *notiert*: place the digits 1-9 in front of the above mentioned codes.

Negated forms with *tm*: SK *tm=f* + neg. complement (see [Negative complement](#) on page 116).

**Table 1: Old /Middle Egyptian**

1	<i>n</i> + SK	Example: <i>n.sdm=k</i> : 110022
2	<i>nn</i> + SK	
3	<i>n ... js</i> + SK	
4	<i>jmj</i> + SK	
5	<i>n-zp/jw, t-zp</i> + SK	<i>n-zp</i> : indicative; <i>jw, t-zp</i> subjunktive
6	<i>jw, tj</i> + SK	2gem, 3inf gem.
7	<i>jw, t</i> + SK	<i>jw, t wnt</i> , e.g. <i>wnt</i> = SK.spez, z.B. 710140
9	<i>nfr/nfr-n</i>	

**Table 2: Late Egyptian**

82000	<i>bw</i> + SK	Example: <i>bw sdm=j</i> : 82021
83000	<i>bw + dj.t</i> + SK	
84000	<i>bn</i> + SK	
85000	<i>m + jri</i> + SK	
86000	<i>m + dj</i> + SK	
87000	<i>m + jri + dj.t</i> + SK	

Examples:

*bw* + akt. *sdm.t=f*: *bw* + 82844 + =*f*

*bn* + pass *sdm=f*: *bn* + 84044 + =*f*

*bw* + pass. *sdm=f*: *bw* + 82044 + =*f*

*bw jri=f sdm*: *bw* + 96324 + =*f* + 61000

$bn\ jw = tw\ r\ \underline{dj}.t: \quad bn + 96316 + =tw + r + 61430$

If the suffix conjugation is prefixed, use 1 + codes above

Examples:

182000 =  $bw + \text{präf. SK}$

183000 =  $bw + \underline{dj}.t + \text{pref. SK}$

## Pseudo participle

Owner 20000

The written forms of the pseudo participle are encoded and assigned to one form, i.e. k to kw, t to tj, without ending to w. Prefixed and geminated forms are distinguished. Combine the following codes with the codes in the table. For the use of pseudo participles in complex verbal forms see second table below.

20000 -> "psp"

21000 -> "psp.pref"

22000 -> "psp.gem"

20010	psp.sg1	$kw /sg1$ (Late Eg. $t/w$ )
20020	psp.sg2m	$tj /sg2m$
20030	psp.sg2f	$tj /sg2f$
20040	psp.sg3m	$j/w /sg3m$
20050	psp.sg3f	$tj /sg3f$
20060	psp.pl1	$wjn /pl1$ (Late Eg. $tw$ )
20070	psp.pl2	$twnj /pl2$
20080	psp.pl3m	$wj /pl3m$
20090	psp.pl3f	$tj /pl3f$
20100	psp.du2	$twny /du2$
20110	psp.du3m	$wy /du3m$
20120	psp.du3f	$ty /du3f$

Late Egyptian:  $t$ ,  $\emptyset$  for all except 3sg/pl ( $w$ ,  $\emptyset$ )

Pseudo participle in complex verbal forms (in combination with codes above)

20001	psp after aux. $jw$	
20003	psp after aux. $j.jr_i$	Late Eg.
20004	psp after aux. $j.jr_i.t$	Late Eg.
20007	psp after $tw=/\text{nom. subject}$	Present I
20008	psp after aux. $wn.jn$	
20009	psp after aux. $wn.hr$	
23000	psp after aux. $\#h\#.n$	
24000	psp after aux. $wn$	

25000	psp after aux. <i>mk</i>	
26000	psp after aux. <i>bn</i> + <i>tw</i> = (+ <i>jwn3</i> )	negation
27000	psp after aux. <i>wnn</i>	

## Participle

Owner 30000

Among the participles are only distinguished by genus and by their ungeminated, geminated and prefixed form according to the written forms. Tense and aspect are not encoded. If an ending *.y* is written, passive forms are encoded with pronominal subject (suffix). For others see [Relative forms](#) on page 112. Combine the following codes with the codes in the table:

30000 -> "partz.norm (=not gem.)"

31000 -> "partz.gem"

32000 -> "partz.pref"

30010	partz.akt.sgm	Ø/w/y
30020	partz.akt.sgf	<i>t/jt</i>
30030	partz.akt.plm	Ø/w/yw
30040	partz.akt.plf	<i>wt/jwt</i>
30050	partz.akt.dum	<i>wj/y</i>
30060	partz.akt.duf	<i>tj</i>
30070	partz.pass.sgm	<i>w/j</i>
30080	partz.pass.sgf	<i>wt/jt</i>
30090	partz.pass.plm	<i>ww/jw</i>
30100	partz.pass.plf	<i>jwt</i>
30110	partz.pass.dum	<i>wwj</i>
30120	partz.pass.duf	<i>wtj</i>

Negation with *tm*: part. + neg. compl. (see [Negative complement](#) on page 116).

## Relative forms

Owner 40000

The relative *sdm=f* and *sdm.n=f* are distinguished in their normal, geminated and prefixed forms. The pronominal subject is encoded as last digit of the code. Combine the following codes with the codes in the table:

40000 -> "rel.f.norm"

41000 -> "rel.f.gem"

42000 -> "rel.f.präf"

Last digit: 0 = nominal subject; 1-9 = pronominal subject (see: [Suffix pronouns and dependent pronouns](#) on page 120)

40010	rel.f.n-.sgm	
40020	rel.f.n-.sgf	



40030	rel.f.n-.plm	
40040	rel.f.n-.plf	
40050	rel.f.n-.dum	
40060	rel.f.n-.duf	
40070	rel.f.sgm	<i>Ø/w</i>
40080	rel.f.sgf	<i>t</i>
40090	rel.f.plm	<i>w</i>
40100	rel.f.plf	<i>wt</i>
40110	rel.f.dum	<i>wj</i>
40120	rel.f.duf	<i>tj</i>

Negation with *tm*: relative form + neg. compl. (see [Negative complement](#) on page 116).

NOTE: Recurring verbal forms like *sgm pw jrj.n=f* are not encoded as one form, but separately: Inf. *pw* Rel.f.

## Imperative

Owner 50000

The imperative of verbs is encoded in its prefixed as well as in its form with or without ending. Lexicalized imperatives are not encoded. Combine the following codes with the codes in the table:

50000 -> "imp"

51000 -> "imp.pref"

52000 -> "imp.gem"

50010	imp.sg	
50020	imp.pl	
50030	imp.du	
50040	<i>jmj.tw=</i>	Late Eg.: + suffix; 0 = unknown subject

## Nominal verbal form

Owner 60600

60000 -> "subst/adv.verbf"

60100	verbalnomen.kzl
60200	verbalnomen.endg <i>w/j</i>
60300	verbalnomen.endg. <i>t</i>
60400	verbalnomen.endg. <i>wt/jt</i>
60500	verbalnomen gem

## Infinitive

Owner 60700

Infinitives are encoded according to whether they are geminated or show an ending *.t* or not. As for the suffix conjugations, the written forms are encoded, not the expected form, that means, if an ending *.t* is expected, but not written, an infinitive without *.t* is encoded. Therefore unwritten endings can be found and analyzed easily, because the paradigm of infinitives depends on the verbal classes that are noted in the BWL.

Infinitives of combined verbal forms, i.e. the analytical forms in Late Egyptian, are encoded as well. Auxiliaries are encoded separately according to st. abs. and st. pr. (see: [Auxiliaries](#) on page 119); the complete form is encoded at the infinitive, e.g. infinitive after aux. *wn.hr* = 61090.

Last digit: 0 = nominal object; 1-9 = pronominal object (see: [Suffix pronouns and dependent pronouns](#) on page 120)

**Table 3: Infinitive without endings**

61000	inf.	
61010	inf. after aux. <i>jw</i>	pseudoverbal
61020	inf. after aux. <i>jri</i>	
61030	inf. after aux. <i>j:jri</i>	
61040	inf. after aux. <i>j:jri.t</i>	
61060	inf. after aux. <i>.mtw</i>	
61070	inf. after aux. <i>tw=</i> / nom. subject	Present I
61080	inf. after aux. <i>wn.jn</i>	
61090	inf. after aux. <i>wn.hr</i>	
64000	inf. after aux. <i>wn</i>	pseudoverbal
65000	inf. after aux. <i>#h#.n</i>	
66000	inf. after aux. <i>mk</i>	
68000	inf. after aux. <i>wnn</i>	pseudoverbal
61050	inf. after neg. <i>bwpw</i>	
67000	inf. after neg. <i>nn</i>	<i>nn sdm=f</i> : "without his hearing", <i>nn wj hr sdm</i>
61100	inf. after neg. <i>bw + jri</i>	
61110	inf. after neg. <i>bw + j:jri.t</i>	
61120	inf. after neg. <i>bn + jw</i>	
61130	inf. after neg. <i>bn + jri + jwn#</i>	
61140	inf. after neg. <i>bn + tw= (+jwn#)</i>	
61150	inf. after <i>tm</i>	<i>[jw=f (hr) (tm) inf.]</i> = Groll 90
61160	inf. after <i>m jri</i>	
61170	inf. after <i>nn jw</i>	pseudoverbal <i>nn</i> + aux. <i>jw</i>

**Table 4: Gemminating infinitives**

69000	inf.gem.	
69010	inf.gem.after aux. <i>jw</i>	pseudoverbal

69020	inf.gem.after aux. <i>jr̥i</i>	
69030	inf.gem.after aux. <i>j:jr̥i</i>	
69040	inf.gem.after aux. <i>j:jr̥i.t</i>	
69060	inf.gem.after aux. <i>mtw</i>	
69070	inf.gem.after aux. <i>tw=</i> / nom. subject	Present I
69080	inf.gem.after aux. <i>wn.jn</i>	
69090	inf.gem.after aux. <i>wn.h̥r</i>	
69400	inf.gem.after aux. <i>wn</i>	pseudoverbal
69500	inf.gem.after aux. <i>#h#.n</i>	
69600	inf.gem.after aux. <i>mk</i>	
69700	inf.gem.after neg. <i>nn</i>	Negation
69800	inf.gem.after aux. <i>wnn</i>	pseudoverbal
69050	inf.gem.after neg. <i>bwpw</i>	
69100	inf.gem.after neg. <i>bw + jr̥i</i>	
69110	inf.gem.after neg. <i>bw + j:jr̥i.t</i>	
69120	inf.gem.after neg. <i>bn + jw</i>	
69130	inf.gem.after neg. <i>bn + jr̥i + jwn#</i>	
69140	inf.gem.after neg. <i>bn + tw= (+jwn#)</i>	
69150	inf.gem.after <i>tm</i>	[ <i>jw=f(hr) (tm) inf.</i> ] = Groll 90
69160	inf.gem.after <i>m jr̥i</i>	
69170	inf.gem.after <i>nn jw</i>	pseudoverbal <i>nn</i> + aux. <i>jw</i>

**Table 5: Infinitives with .t**

61300	inf.endg.t	
61310	inf.endg.t/after aux. <i>jw</i>	
61320	inf.endg.t/after aux. <i>jr̥i</i>	
61330	inf.endg.t/after aux. <i>j:jr̥i</i>	
61340	inf.endg.t/after aux. <i>j:jr̥i.t</i>	
61360	inf.endg.t/after aux. <i>mtw</i>	
61370	inf.endg.t/after aux. <i>tw=</i> /nom. subject	Present I
61380	inf.endg.t/after aux. <i>wn.jn</i>	
61390	inf.endg.t/after aux. <i>wn.h̥r</i>	
64300	inf.endg.t/after aux. <i>wn</i>	
65300	inf.endg.t/after aux. <i>#h#.n</i>	
66300	inf.endg.t/after aux. <i>mk</i>	

68300	inf.endg.t/after aux. <i>wnn</i>	
61350	inf.endg.t/after neg. <i>bwpw</i>	
67300	inf.endg.t/after neg. <i>nn</i>	
61410	inf.endg.t/after neg. <i>bw + jri</i>	
61420	inf.endg.t/after neg. <i>bw + j:jri.t</i>	
61430	inf.endg.t/after neg. <i>bn + jw</i>	
61440	inf.endg.t/after neg. <i>bn + jri + jwn#</i>	
61450	inf.endg.t/after neg. <i>bn + tw=</i> (+jwn#)	
61460	inf.endg.t/after <i>tm</i>	
61470	inf.endg.t/after <i>m jri</i>	
61480	inf.endg.t/after <i>nn jw</i>	Pseudoverbal <i>nn</i> + aux. <i>jw</i>

Infinitive st. pr. = combination with codes of suffixes (see: [Suffix pronouns and dependent pronouns](#) on page 120)

Example: *pri.t=j* "mein Herauskommen": 61301 Inf.Endg.t st.pr. 1Sg

**Table 6: Complementary infinitive (Owner 62000)**

62000	kompl.inf.
62100	kompl.inf.endg.t
62200	kompl.inf.endg.wt
62300	kompl.inf.jt/yt
62400	kompl.inf.gem.
62500	kompl.inf.gem.endg.t

## Negative complement

Owner 63000

Forms after negation verbs *tm* and *jmi*

63000	neg.kompl	also status pronominalis, pronominal object
63100	neg.kompl.kzl	
63200	neg.kompl.endg.w	
63300	neg.kompl.endg.t	
63400	neg.kompl.gem	
63500	neg.kompl.gem.endg.t	
63600	neg.kompl.gem.endg.w	

## Nouns

Owner 70000

The inflected forms of nouns are encoded as well. Plural and dual forms are transliterated in their written forms and assigned to the respective inflection code. If they appear in status pronominalis, the suffix is encoded as last digit of the code. Status constructus (i.e. direct genitive) is encoded at the regens; the rectum is assigned code 3, i.e. unaltered to BWL.

Last digit: suffixes (see: [Suffix pronouns and dependent pronouns](#) on page 120).

70100	subst.pl.	
70300	subst.du.	
70050	subst.st.pr."	<i>pr=f</i> = 70054
70150	subst.pl.st.pr."	<i>pr.w=k</i> = 70152
70350	subst.du.st.pr."	<i>#.wj=f</i> = 70354
70060	subst.st.cs.	<i>hm,t w#b</i> (direct genitive)
70160	subst.pl.st.cs.	<i>t#š.w km,t</i>
70360	subst.du.st.cs.	<i>#.wj ntr</i>

## Adjectives

Owner 71000

The endings of adjectives according to agreement in gender and number are encoded when the adjective is used attributive. To enable the search for attributive adjectives, also forms are encoded that are unaltered to the BWL (i.e. sg. m.). Adjectives in status constructus (e.g. *nj-sw*) are transliterated with a hyphen and encoded with the endings of the pronouns (see: [Suffix pronouns and dependent pronouns](#) on page 120). Code 3 (unaltered to BWL) is only used for independent pronouns, because they always appear uninflected (e.g. *nfr-sw*-construction).

Last digit: suffixes and dependend pronouns (see: [Suffix pronouns and dependent pronouns](#) on page 120).

71010	adj.sgm	
71020	adj.sgf	
71030	adj.plm	
71040	adj.plf	
71050	adj.dum	
71060	adj.duf	
71100	adj.st.cs.	last two digits: dependend pronouns
71200	adj.sgm.st.pr.	<i>jm,j=sn</i>
71210	adj.sgf.st.pr.	<i>jm,j.t=sn</i>
71220	adj.plm.st.pr.	<i>jm,j.w=sn</i>
71230	adj.plf.st.pr.	<i>jm,j.wt=sn</i>
71240	adj.dum.st.pr.	
71250	adj.duf.st.pr.	

71260	adj. in SK m. Präfix <i>n#</i>	last digit: suffix; Late Period: [ <i>n#</i> : <i>nfr</i> = <i>f</i> ]
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## Adverbs

Owner 73000

Adverbs in status pronominalis are encoded with the respective pronouns.

Last digit: suffixes (see: *Suffix pronouns and dependent pronouns* on page 120).

72000	adv.st.pr.	st. pr. with suffix lost
72001- 9	adv.st.pr.	

## Numbers

Owner 71000 / 70000

Ordinal numbers show gender agreement with the antecedent.

**Table 7: Ordinal numbers**

74010	ord.z.m
74020	ord.z.f

**Table 8: Cardinal numbers**

74030	kard.z.m	only 1 and 2, all other cardinal numbers are nouns with respective inflection
74040	kard.z.f	

## Possessives

Owner 81000

Possessives are encoded with suffix pronouns

80000	possessivart	suffix unknown / lost
80001-9	possessivart	e.g.: $p\#j = k$ : 80002

## Relatives

Owner 82000

Relatives (including negated relatives) are encoded in combinations with pronouns and are encoded according to agreement in number and gender. Independent relatives are nouns and are not encoded here.

80100	relativum.sgm
80200	relativum.sgf
80300	relativum.plm
80400	relativum.plf

Status pronominalis in combination with codes above; last digits: suffixes and dependent pronouns (see: [Suffix pronouns and dependent pronouns](#) on page 120).

81000	relativum.mit Pers.pronom
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## Admirative suffix

The admirative suffix .wj is encoded together with the word token.

90000	adm.suff.wj
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## Verbal adjectives

Owner 91030

Verbal adjectives are encoded as one word form.

91000	verbaladj.tj=f.sg3m
91010	verbaladj.tj=s.sg3f
91020	verbaladj.tj=sn.p13

Negated form with *tm*: *tm.tj=f* + neg. compl. (see [Negative complement](#) on page 116).

## Prepositions

Owner 93100

Prepositions are encoded in status pronominalis in their complete form with suffix pronouns.

93000	prep.st.pr.	suffix lost
93001-9	prep.st.pr.	e.g. <i>r=f</i> = 93004

## Particles

Owner 94100

Particles are encoded with the endings, i.e. suffix and dependent pronouns (see: [Suffix pronouns and dependent pronouns](#) on page 120)

94000	partk.st.pr./st.cs.	suffix/dep. pr. unknown/ lost
94001-9	partk.st.pr.	<i>jr=f</i> = 94004
94015-24	partk.st.cs.	<i>mk sw</i> = 94018

## Auxiliaries

Owner 96000

The notation of combined verbal forms is encoded at the respective verb (see above [Suffix conjugation](#) on page 107, [Pseudo participle](#) on page 111, [Infinitive](#) on page 113).

Auxiliaries are distinguished between status absolutus (= code 3, unaltered to BWL) and auxiliaries in status pronominalis. If the suffix is lost, use 0 as last digit.

96300	aux.st.pr. "/general	
96200	aux.jw=	<i>jw=f m pr=f</i> (96204 + =f + m + 70054 + =f)

96310	aux. <i>jw</i> = (+prep)+vf	<i>jw</i> = <i>f hr sdm</i> (96314 + <i>hr</i> + 61010)
96320	aux. <i>jri</i> = (+prep)+vf	
96330	aux. <i>j:jri</i> = (+prep)+vf	
96340	aux. <i>j:jri.t</i> = (+prep)+vf	
96350	aux. <i>#h#.n</i> = +vf	
96360	aux. <i>wn</i> = (+prep)+vf	
96370	aux. <i>wnn</i> = (+prep)+vf	
96380	aux. <i>wn.jn</i> = (+prep)+vf	
96400	aux. <i>bwpw</i> = (+prep)+vf	
96410	aux. <i>mtw</i> = (+prep)+vf	
96420	aux. <i>tw</i> = (+prep)+vf	
96430	aux. <i>wn.hr</i> = (+prep)+vf	

NOTE: Auxiliaries in other verbal forms are currently not taken into account.

Example: *#h#.n=f sdm.n=f*: 96354 + 10384 + =*f*)

## Suffix pronouns and dependent pronouns

**Table 9: Suffix pronouns**

0	unknown/lost suffix
1	suffix pr. = <i>j</i> sg1
2	suffix pr. = <i>k</i> sg2m
3	suffix pr. = <i>t</i> sg2f
4	suffix pr. = <i>f</i> sg3m
5	suffix pr. = <i>s</i> /= <i>st</i> sg3f/c
6	suffix pr. = <i>tw</i> sg3
7	suffix pr. = <i>n</i> pl1
8	suffix pr. = <i>tn</i> pl2
9	suffix pr. = <i>sn</i> pl3 (Late Eg.: = <i>w</i> )

**Table 10: Dependent pronouns**

15	depend. pr. <i>wj</i> sg1
16	depend. pr. <i>tw</i> sg2m
17	depend. pr. <i>tn</i> sg2f
18	depend. pr. <i>sw</i> sg3m
19	depend. pr. <i>sj</i> sg3f
20	depend. pr. <i>st</i> sg3



21	depend. pr. <i>n</i> pl1
22	depend. pr. <i>tn</i> pl2
23	depend. pr. <i>sn</i> pl3
24	depend. pr. <i>st</i> pl3

### Other and uncertain options

1	"I don't know"
2	"nobody knows"
3	"unaltered to BWL"
4	"ambiguous"
5	"outstanding problem"

# Guidelines for the encoding of hieroglyphs

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For detailed information and instructions on how to encode hieroglyphs see the following external document:



*Encoding of hieroglyphs*

# BTS Troubleshooting

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- BTS does not start

If BTS does not start, it might be due to a server down time. Please contact the BTS team in Berlin.

- All windows and tabs have disappeared

This happens, when you dragged the last window or tab out of the BTS program window. Restart BTS to restore all windows and tabs.

- BTS icons are too small

On Windows 8.1 and Windows 10 systems the icons are smaller than on previous systems. Start BTS in Windows-XP-mode.

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- die Daten werden bei der Installation nicht vollständig heruntergeladen

- sehr häufig benötigtes Doppelklicken, damit erwartete Aktion funktioniert

- das lange Warten, um sicher zu sein, dass eine Aktion ausgeführt wurde oder nicht

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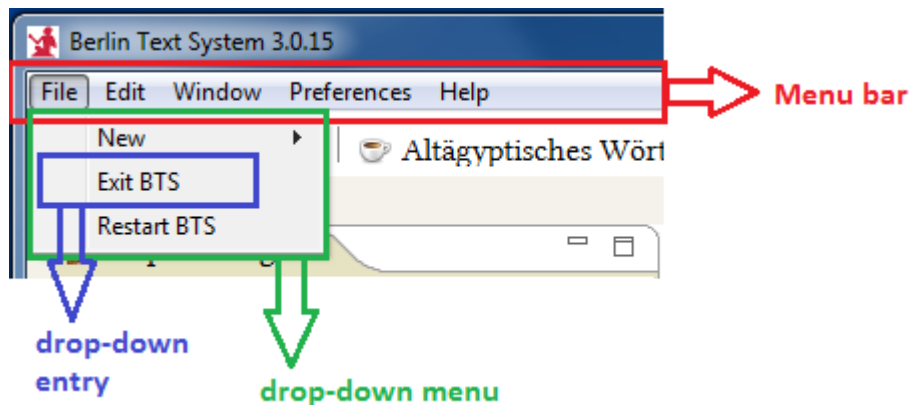
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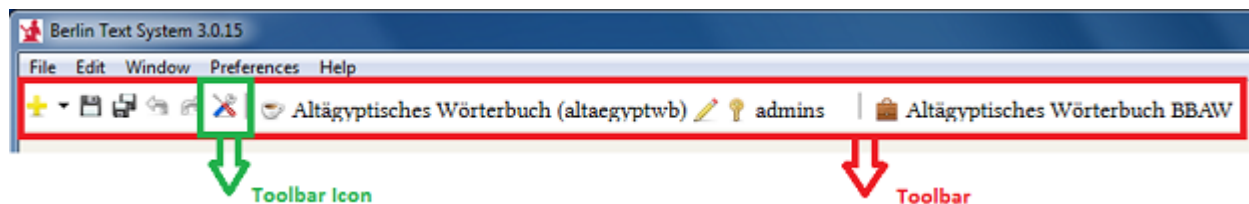
# Glossary

This manual uses the following terms for the description of the user interface:

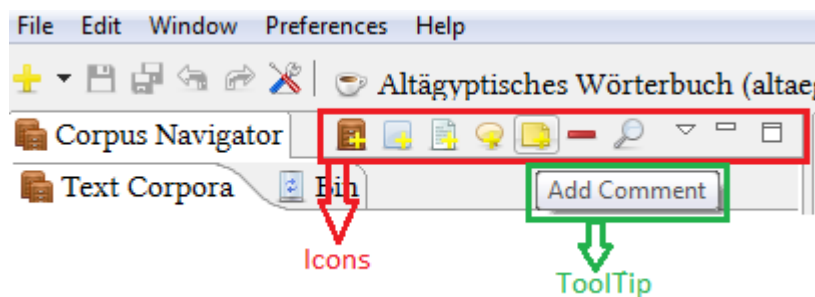
- Menu bar
- Drop-down menu
- Drop-down entry



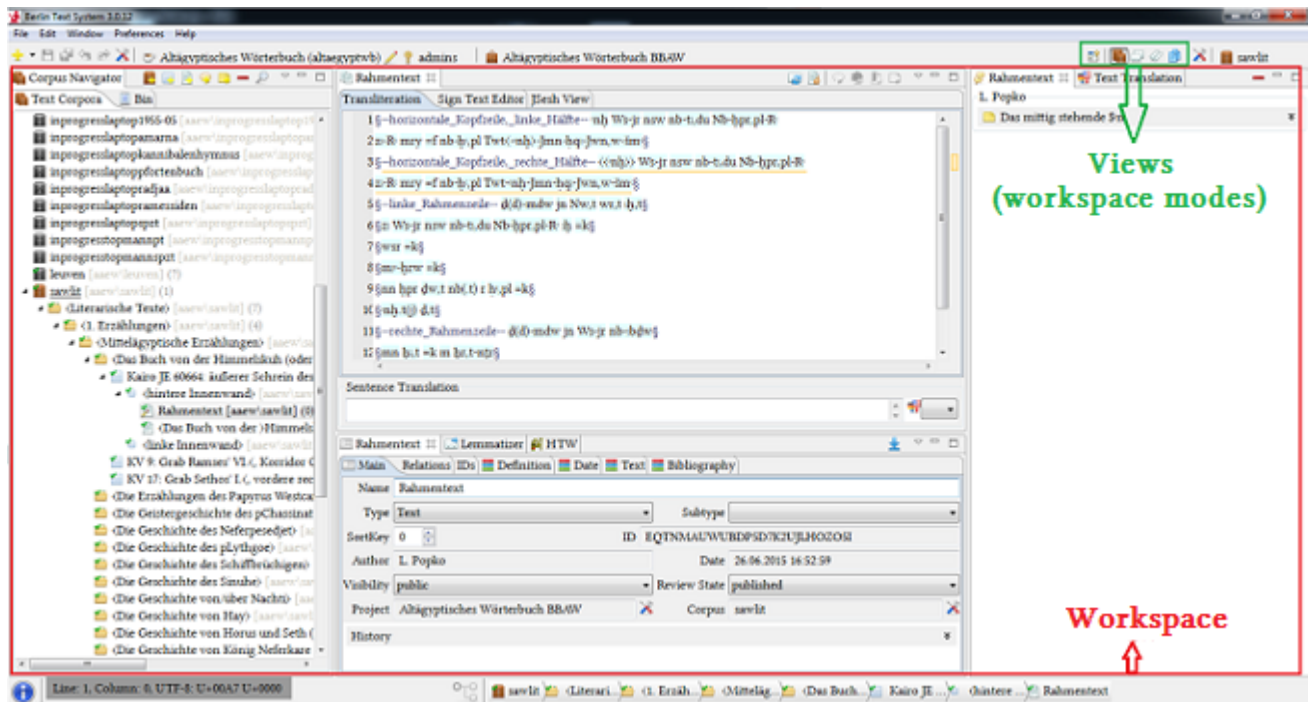
- Toolbar
- Toolbar Icon



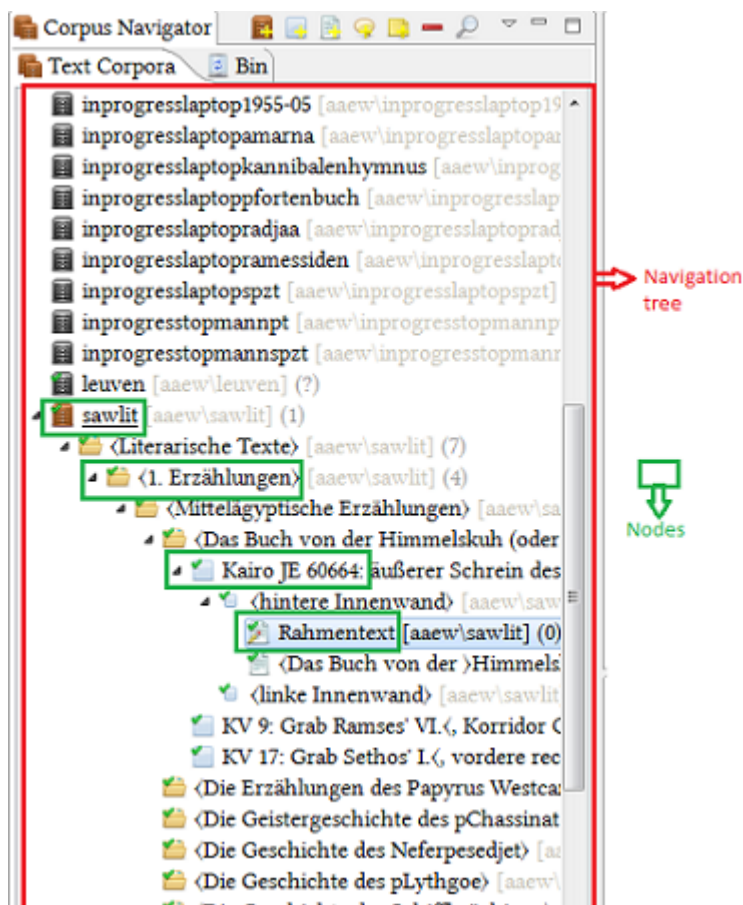
- Icon
- ToolTip (only activated by mouseover)



- Workspace: main working field between Toolbar and Statusbar in which the user can switch in one of for different views / workspace modes.
- View / Workspace mode: the Text corpus view, the Lemma view (Lemma list), the Thesaurus view (Management of Metadata) and the special level Abstract text view. These four Views differ according to the different contents and each shows own windows. The default setting of the Workspace is the Text Corpus view for edit und annotate texts.
- Viewing mode



- Navigator tree
- Node (= Branch) - entry in a navigation tree, which can be further expanded, ex. text corpus, text corpus object or a text



Moreover the following terms are used:

- Database object: any element (item) of the database
- Text Corpus Object: an item of the corpus database, which is not a text, mainly referring to a physical object. Texts and Text Corpus Objects are in child-parent relation, i.e. text is always attributed to the object.
- Child-parent relation: the relation of subordination between two items of the database
- Lemma: the canonical form (dictionary form) of a set of words
- Token: the representation of a lemma in the text (word form)
- Local and remote databases: local databases are running on user's PCs, remote databases are located on BTS central server in Berlin
- WCN: word corpus number, i.e. the ID of the lemma