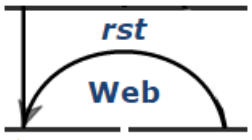

rstWeb
User Guide – Version 1.3.0

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Introduction

rstWeb is an open source, browser based annotation tool for discourse analyses in Rhetorical Structure Theory. It is meant to support collaborative, online annotation projects using just a Web browser, without the need to install software for annotators, though there is also a standalone local version for offline use if you do not have access to a server.

Getting Started

Local Installation

rstWeb runs in your browser no matter what, but you can run a local version of the software the emulates a Web server on your own machine. Getting this to work is a little different in Windows and Mac/Linux, and primarily requires Python and the library cherrypy to be installed (for Linux, replace your package repository for the Mac's easy_install, i.e. apt-get, yum etc. depending on your Linux flavor)

1. Make sure Python 2.X is installed (preferably 2.6 or newer):
    - For **Mac**, Python is typically installed by default, no need to do anything
    - For **Windows**, download and install Python from https://www.python.org/
2. The Python package *cherrypy* must be installed if it isn't already:
    - For **Mac**, you may need to install pip first, by opening a terminal and typing:
      sudo easy_install pip
      Enter your password, and once pip is installed, run this command:
      sudo pip install cherrypy
    - On **Windows**, pip is installed by default with Python, so you should only need to open a command line (Start menu -> run -> cmd) and type:
      pip install cherrypy
3. Unpack all of the files from the rstWeb repository in Github to some folder
4. Run the appropriate script:
    - On **Mac/Linux**: run *rstweb_local.sh*
    - On **Windows**: run *rstweb_local.bat*
5. You can now use rstWeb in your browser at: http://127.0.0.1:8080/

If you run into problems getting the software to run, please contact amir.zeldes@georgetown.edu

Server Installation

1. Make sure Python 2.X is installed (preferably 2.6 or newer)
2. Unpack all of the files from rstWeb to the directory they will be served from
3. Configure your Web server to have read, write and execute privileges within this folder
4. You may want to forbid users from interacting with files other than the top level python scripts in the main rstWeb directory (in particular, no one should have access to the configuration files)

5. You will also want to disallow or simply delete the local version's launch script, start_local.py, since server users shouldn't be able to use it. You may also remove the .bat and .sh scripts.
6. If you're using Apache, here is a possible configuration file:

```
Alias "/rstweb" "/var/www/html/rstweb"
<Directory "/var/www/html/rstweb/">

RewriteEngine On
RewriteBase /
DirectoryIndex open.py

<IfModule mime_module>
AddType application/x-httpd-py .py
</IfModule>

RedirectMatch 404 ".+\.(py(c|o)|db|txt|rs3|ini)$"
RedirectMatch 404 ".*/(modules|export|import|templates|users).*$"

AddType text/html *
Options Indexes FollowSymLinks MultiViews
Options +FollowSymLinks
Options +ExecCGI
AddHandler cgi-script .py
AllowOverride None
Order allow,deny
allow from all
</Directory>
```

7. Use the administration interface to change the passwords/user names to secure your system.
8. You're all set!

Troubleshooting

If you're having trouble, it's possible some permissions are set incorrectly, or that your server needs to be configured to execute the Python scripts. Otherwise, the entry point for the program is the script *open.py*. If you're using the Apache configuration above, this acts as the directory index, so you can simply direct users to http://.../<rstwebsdirectory>/.

Logging in

Local version

If you're using the local version, you will be automatically logged in as the user 'local'. You will have administrator rights (see Administration), but User Management will be disabled (the user 'local' will be used for all annotations.

Server version

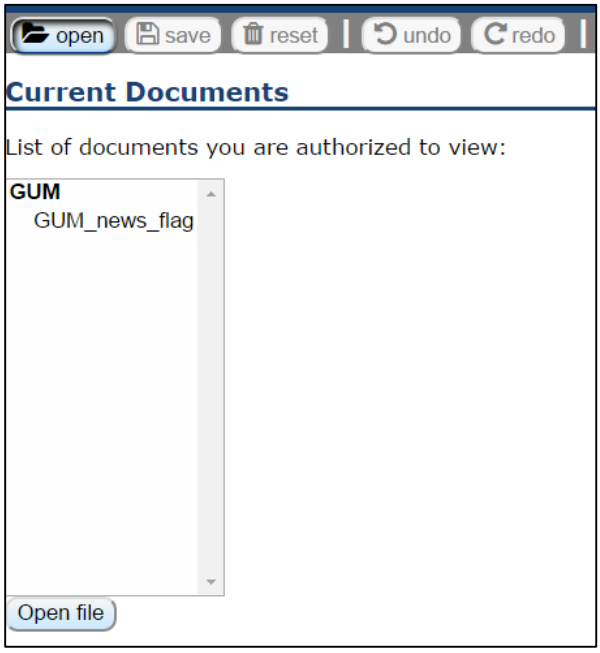
If you are working on a server over the internet, a login will be provided for you by an administrator (see User Management below). To log in, go to the server URL, e.g. http://corpling.uis.georgetown.edu/rstweb/ - if you are not already logged in, you will be prompted to enter your credentials. To create new user names as an administrator, see Administration.

Annotation

Opening a document

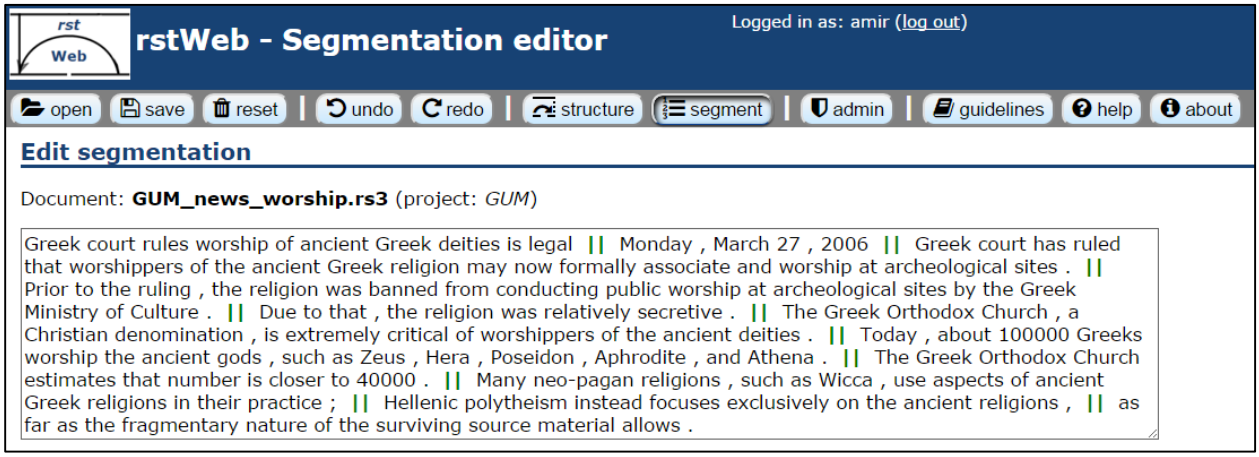
Once you are logged in, you will see a list of the documents you are allowed to edit, grouped by annotation project. You can return to this screen using the *open* button.

Administrator users may see all documents. Note that every user has their own copy of the documents they are working on, so that multiple annotated versions of each document can exist simultaneously.



There are two modes while annotating: **segmentation mode** and **edit structure mode**.

Segmenting units



In segmentation mode, you can split the text into Elementary Discourse Units (EDUs). Initial EDU borders can be set by either importing an already segmented .rs3 file (e.g. from RSTTool), or by importing a plain text file with one EDU per line (see Import under Administration). You can alter segmentations at any time by pressing the *segment* button.

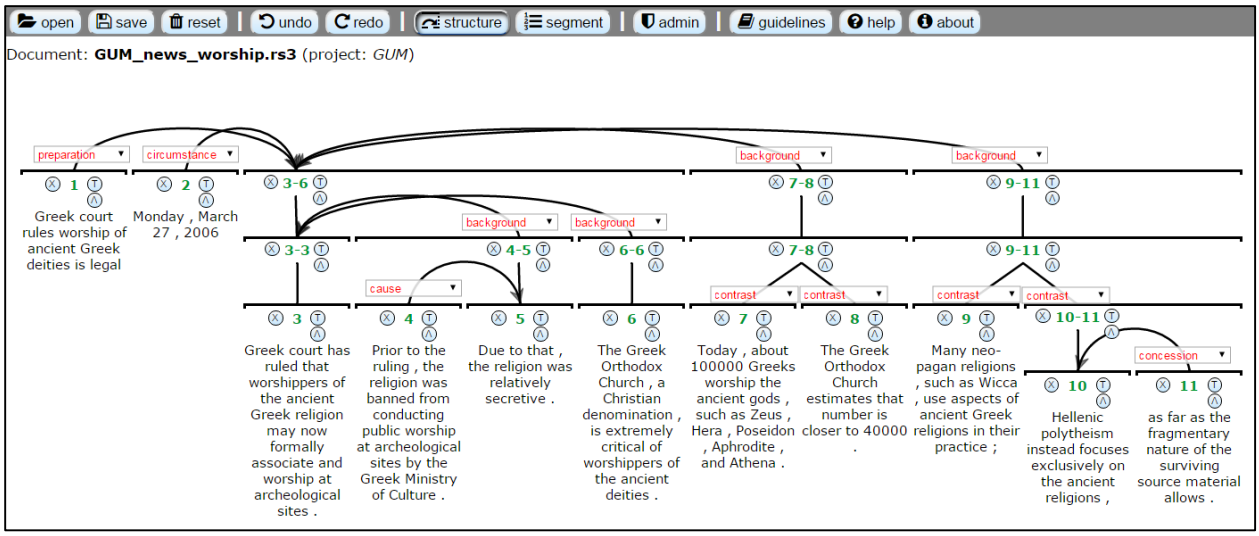
To add segments, click on a space between words. To remove segments, hover over the green dividers between segments and click on the x that appears to remove them.

It is possible to add and remove segmentations of already structured texts. In this case, adding a segment will cause the first part of that segment to remain linked to the annotation graph, and the second part will be inserted as a new unattached EDU for annotation. Deleting a segmentation border will merge the second unit into the first, so that the relations involving the first part of the new merged segment are retained, but those for the second part are deleted.

If a guideline link has been set for the current project, the *guidelines* button will allow you to access guidelines for your project (see Administration).

Editing structure

To annotate RST relations use the *edit* button. The interface below shows an annotated document with relations already in place.



In edit mode, each elementary discourse unit (EDU) has its text under a line with a number giving its position in the text. Similarly, groups of units have a range of numbers. You can connect nodes, unlink them, and group them together under spans and multinuclear nodes. You can undo and redo actions at any point using the appropriate buttons.

Don't forget to save your work! If you make a mistake and want to go back to the original form of the document when it was imported, you can also use the *reset* button (**warning:** this will delete all of your annotations for this document!)

If a guideline link has been set for the current project, the *guidelines* button will allow you to access guidelines for your project (see Administration).

Connections

- To connect nodes, drag from the numbers under one unit to the numbers under a target unit
- To change the relation between two units, use the drop down list on the connection between them
- To unlink a node from the graph, click its ⓧ button - all of the nodes connected above it will be unlinked

Spans

- Use the Ⓣ button to add a span above a node. The span will group together all of the nodes connected to that node

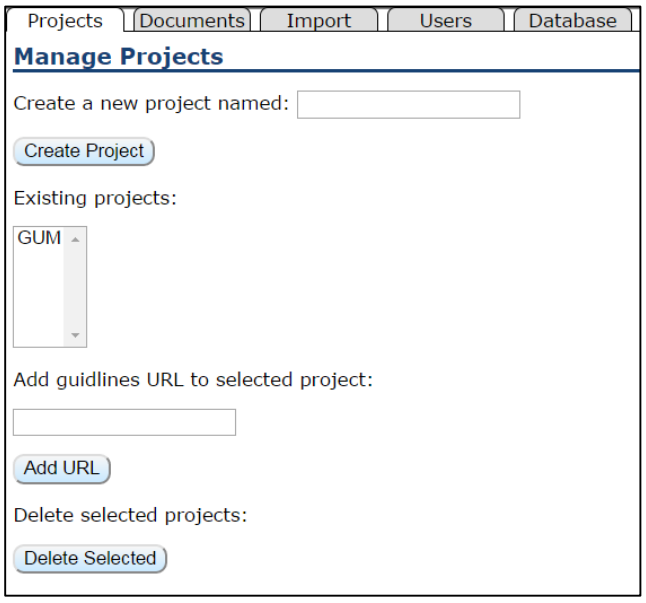
Multinuclear relations

- Use the Ⓐ button to create a multinuclear node (multinuc) above a node. The multinuc can have multiple child nodes with the same relation (e.g. a set of items in contrast to each other)
- To change the relation of a multinuc to its children, change the relation box of any of its children
- When connecting a new node to a multinuc node, it will be added as a multinuc child by default. You can change the relation to a satellite relation by choosing "change to satellite" in the relation box

Administration

The administration interface is only available to administrator users (marked with level 3 in the user file in the users/ directory). It contains five tabs:

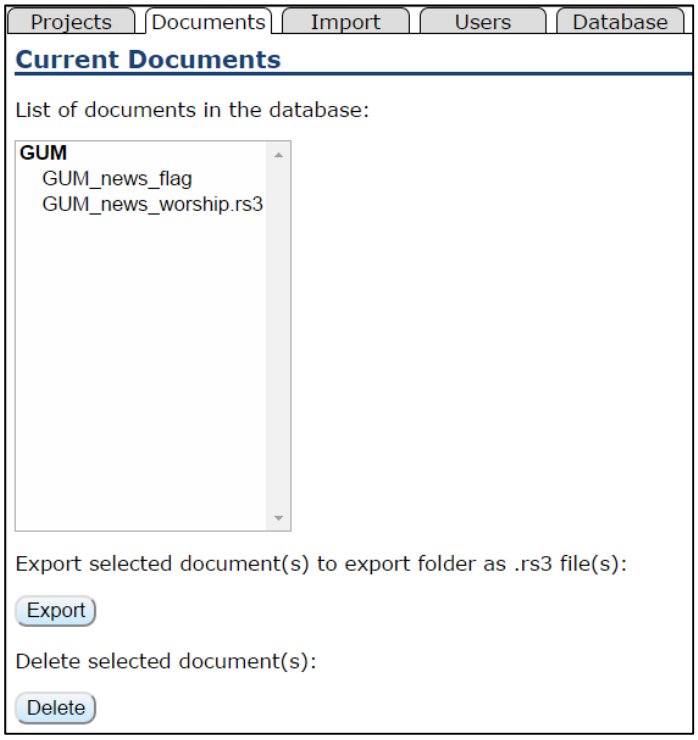
Projects



This tab lets you create new projects and delete existing ones. Projects are used to group documents together. Deleting a project will remove all documents within it permanently!

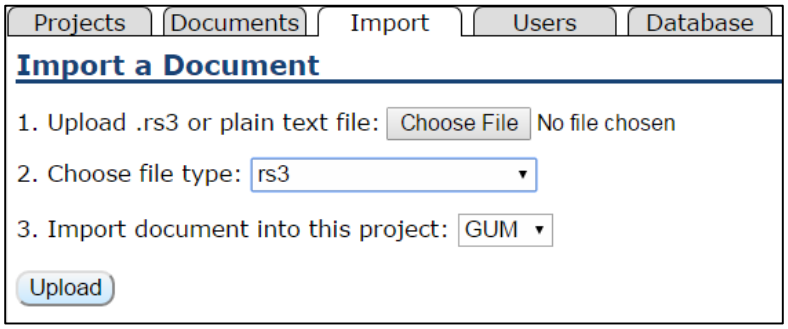
You can also add a URL giving guidelines for one or more projects. If you enter a URL and select multiple projects, all of those projects will be given the guideline URL, which is available from the *guidelines* button while editing. To change the URL, simply specify the new one and click *Add URL*.

Documents



This tab shows you a list of all documents and allows you to delete them or export existing document annotations. If multiple annotators have worked on a document, one rs3 file will be created for each annotator's version in the export/ folder.

Import

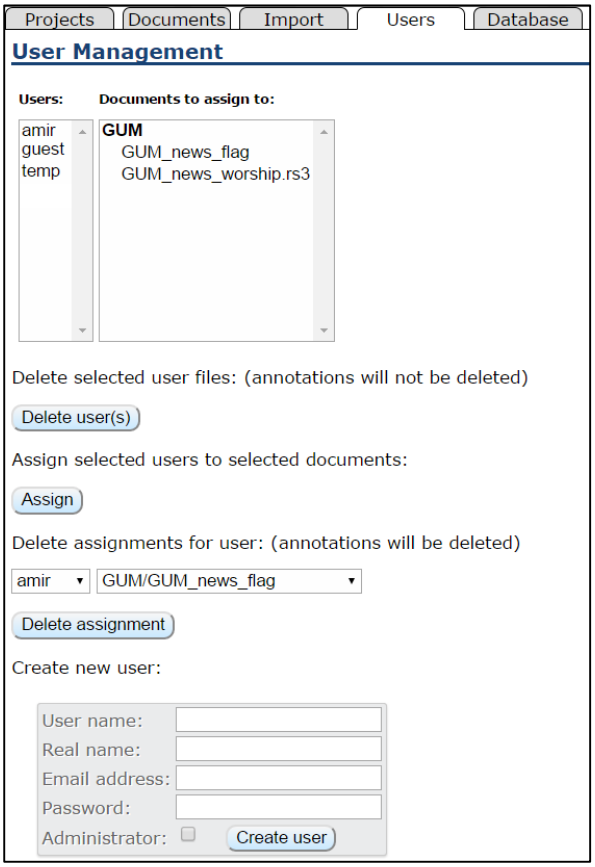


Here you can import new documents. Choose between .rs3 format (from RSTTool) and plain text (one EDU per line). When importing plain text files, the default relations that are available for annotation are determined by the file *default_rels.tab* in the *users/* configuration directory (alternatively you can choose a different location in *users/config.ini*).

The new documents will be imported into a new project and a version of the document will be created for your user. You can assign the document to other users in the Users tab. A copy of the imported document will be saved in the import/ folder and you can always revert to the imported state of the file while editing by using the *reset* button after you've opened the document.

Users

The Users tab lets you create and delete user files. These are stored as .ini files in the users/ directory. User management is only possible in server mode – this tab will be disabled in local mode and the default user will always be 'local'.



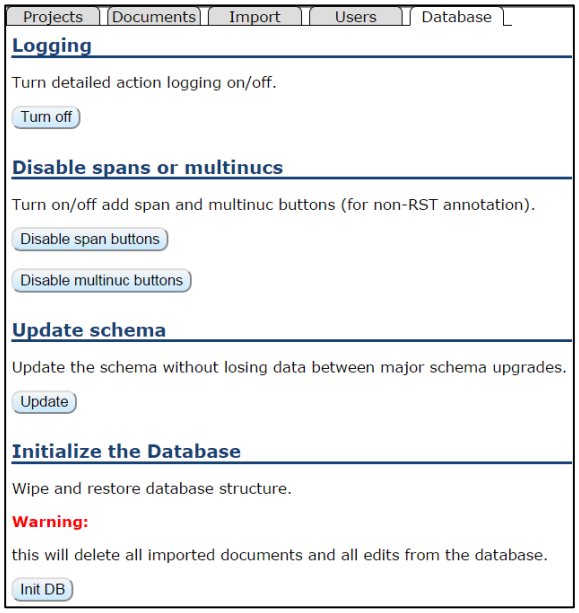
New users can be defined as either normal users or administrators using the checkbox in the new user form at the bottom. Administrators can see all documents and have access to the administration interface.

New user names cannot be: 'config', 'default', 'local', 'temp', 'emails', '_orig' or 'pending'.

For normal users, you need to assign a user name to a document name in order to make that document visible to the annotator. You can assign multiple annotators to multiple documents simultaneously by selecting multiple lines in the Users and Documents to assign boxes. Once you assign a document, a copy of it will be created in the system which can then be annotated and exported without affecting other copies of that document.

Deleting an assignment will delete that user's version of the document, but will not affect other users' annotations and will not remove the document from the system.

Database



This tab allows you to turn detailed logging on or off, and update the schema from older versions of rstWeb to the latest version of the software (this should usually not result in loss of data, but make a backup of your database just in case). The logging functionality records all submitted editing operations (after clicking *save* in the editor), allowing you to retrace the entire annotation history of each document, when logging is on.

It's also possible to disable the use of the add span/multinuc buttons in the interface. This is potentially useful if you want to annotate outside of the framework of RST (e.g. binary discourse relations), and want to prevent users from adding multinucs or spans, if your annotation framework does not support those.

Finally, you can also wipe the database clean and restore its original schema, current to the installed version. This is mainly useful if the database file becomes corrupt somehow, or if you want to quickly delete all data in the database (delete all documents and projects).

Configuration file

Some aspects of the interface, especially file and directory paths for templates, default relations etc. are configured in *users/config.ini*. You can edit this file to use different templates, place import and export files in different locations, and in the future also to use automatic mail notifications to new users (not yet supported).