



Authoring Tool – Manual

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Last updated: May 23, 2011

1. Purpose of this document

The LASAD framework is designed to be used in a vast set of argumentation domains. To fit to domain-specific needs, LASAD is highly configurable. However, since most users will not be familiar to the XML configuration of the system, we designed a graphical editor called the “LASAD authoring tool”. This editor will enable you to configure the system to fit your needs. This document will give you an overview of what is possible with the editor and how it is done. Please read through it carefully. If there are still problems with the use of the authoring tool, feel free to contact the LASAD development team (frank.loll@tu-clausthal.de) directly.

2. Getting started

The authoring tool is part of the standard client of LASAD. After login to the system, there will be an additional tab called “LASAD Authoring Tool” (see Figure 1), which contains the authoring part of the system.

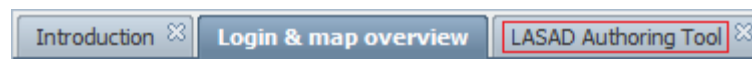


Figure 1. The LASAD Authoring Tab

3. Configuring LASAD

The configuration of LASAD consists of four steps: (1) user definition, (2) ontology definition, (3) template definition, and (4) create / delete sessions. The ontology defines the elements that are available to model the argument, whereas the template defines the interface elements (e.g. availability of a chat) and system functions (e.g., cursor tracking). By means of sessions concrete instances of configurations can be created. Even though it is recommended to follow these steps one after another, you can use them independently from each other. In addition, there is a short instructional text at the top of each step to help you use the tool.

Step 1. User Definition

The first step of the configuration process is the user definition. On the left hand side (see A in Figure 2) there is a list of existing users sorted by their roles. This list serves only overview purposes and does not provide any additional functions.

On the right-hand side (see B in Figure 2), there are the possible actions: (1) add user, (2) delete user. To add a user, you have to provide a unique username and a password. Finally, each user has to get a role assigned. Each role is connected to a set of rights. Currently, there are the following four roles available:

- *Guest*: A guest is only able to join existing sessions, but not to create new sessions. In these sessions, he or she has no further restrictions.
- *Standard*: This role should be used for typical users of the system. Users with this role are allowed to create new sessions based on existing templates or to join pre-defined or existing sessions. During the sessions they are allowed to modify the argument map, i.e. “work with the system”.
- *Teacher*: The teacher has the same rights as a standard user. In addition he or she has access to the authoring tool and any map restrictions (see section “Step 4. Create / Delete Sessions”) will be ignored for teachers.

- *Developer*: In addition to the teacher's role, a developer is able to access un-tested parts of the framework. Furthermore, he or she will get access to a debug tab that shows internal processes of the system such as actions being transferred to the server, etc.

The developer role is not recommended to be used by end-users.

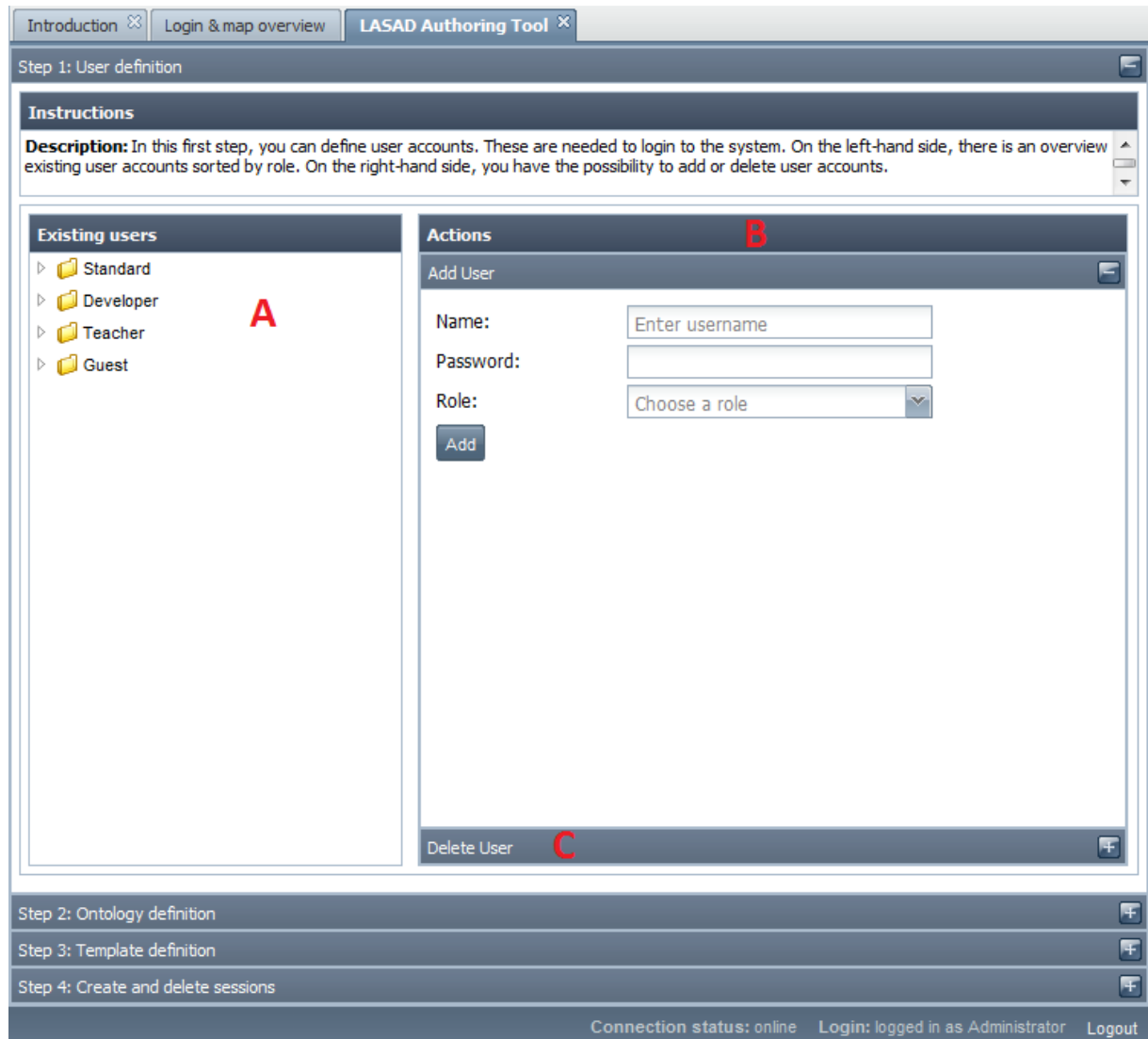


Figure 2. Step 1: User definition

In addition to the possibility to add users, you can delete existing ones as well. Therefore, you have to click on the button “Delete User” (see C in Figure 2), where you can then choose the user you want to delete from the list.

Step 2. Ontology Definition

The next step is usually the definition of the ontology that is underlying the argument. The ontology describes the available elements to model the argument, i.e. nodes and relations in the graph-based argument visualization which is used in LASAD's standard settings. The ontology definition consists of two steps: (1) add / delete ontology, and (2) edit ontology.

Step 2.a. Add / Delete Ontology

The first step is pretty similar to the definition of the users. On the left-hand side (see **A** in Figure 3), you have an overview of existing ontologies, whereas you can add or delete an ontology on the right-hand side.



Figure 3. Step 2a: Add / Delete Ontology

Add ontology: Here, you need to provide a unique name for the new ontology. The new ontology will not contain any elements unless you clone an existing ontology.

To edit a specific ontology, i.e. to add concrete elements to it, you have to choose one from the overview list on the left-hand side. After that, the button “Step 2b: Edit Ontology” (see **B** in Figure 3) will be enabled and you can edit the chosen ontology there. Another way to edit an ontology is a simple double click on the name of the ontology.

Delete ontology: If you want to delete an existing ontology, just choose it from the dropdown list in the “Delete ontology” panel on the right-hand side. However, if you delete an ontology which is used by one or multiple templates, these templates and all sessions that are based on these templates will be deleted as well. Use this option with care!

Step 2.b. Edit Ontology

Once you selected an ontology and switched to “Step 2b: Edit Ontology”, you will have an overview of nodes and relations of the ontology on the left-hand side (“Elements of this ontology”), whereas a preview of the currently selected element is shown on the right-hand side. The actions that can be done are shown in the bottom area in this step. Figure 4 shows an example of Step 2b: Edit Ontology.

Important! If you edit an ontology which already is the basis for a template or session, these will be deleted.

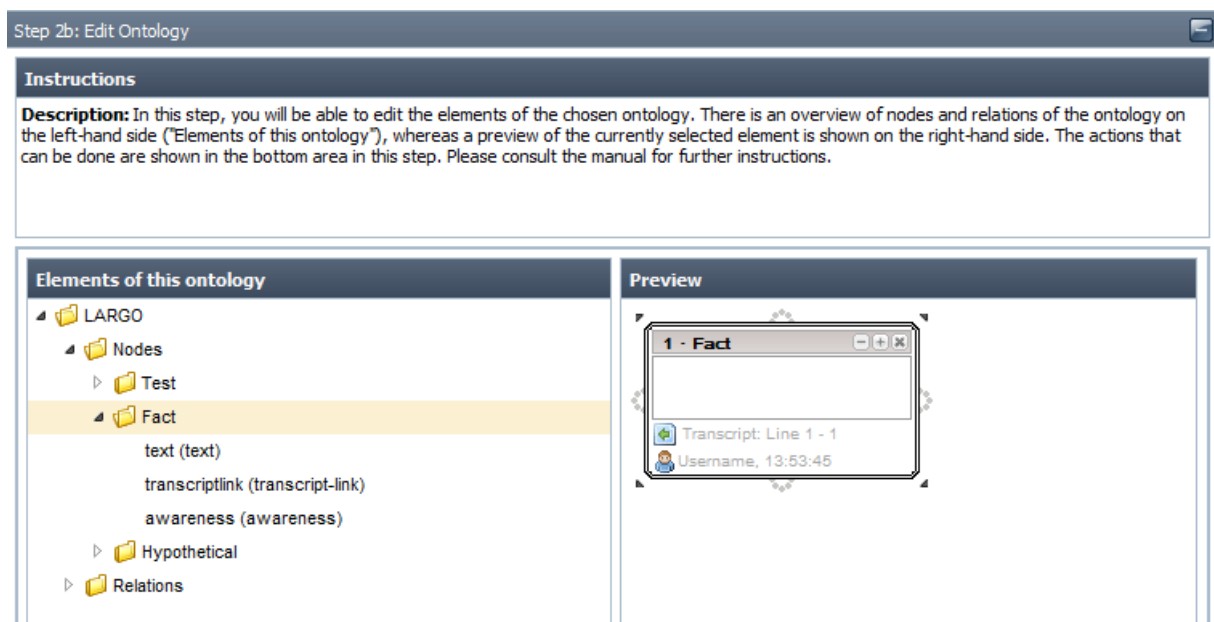


Figure 4. Step 2b: Edit Ontology

In this step, you have the following possibilities:

Add node: To add a new node to the ontology, you must select “Nodes” in the overview. This will open two possible actions (add a new node, delete an existing node, cf. Figure 5). A node is specified by the following options:

- *Title:* The name of the node that will appear in the title bar of the box that will be created during a session. Each title must be unique in the ontology.
- *Color:* A set of possible colors of the node. The color is shown in the background of the title bar. If you choose “Other...” there is a palette of additional colors available.
- *Border-Style:* Each node does have a border. The border can be used to differentiate between elements easier.
- *Add Text Field (Default):* Typically, each node provides the possibility to enter a text to actually argue. Enabling this checkbox will add this standard text field. Only disable it, if you are sure, that you do not want the user to add a text (which should be a rare exception). [Other elements can be added later]

Once you defined these options, you should click on “Preview”, which will give you a first impression of the newly created node in the upper right preview area. After checking the preview, you can modify the options. Finally, you must click on save to create the new node.

Figure 5. Step 2b: Add a new node...

Delete node: The second action that is available is “Delete an existing node”. Here, you can choose from a list of existing nodes of the ontology. If the ontology does not have any nodes, this option will not be available.

Modify existing node: If you want to change the configuration of a node, just click on the name of the node in the overview on the left-hand side. After that, you can click on “Modify this node...” in the actions at the bottom of the screen. Here, you will have the same options as on creation of the node.

Add relation (see Figure 6): To add a new relation to the ontology, you must select “Relations” in the overview. Then, you will get access to the actions “Add a new relation...” and “Delete an existing relation...”. Each relation consists of two parts: a curved line and a panel that is centered on the line. A relation is specified by the following options:

- *Title:* The name of the relation that will appear in its title bar. Each title must be unique in the ontology.
- *Directed:* Here, you can define if you want to have an arrow at the end of the relation which indicates a direction.
- *Draw line only:* If you do not want to show the title of the relation and if you do not want to use additional elements for this relation, you can enable this checkbox to only show the delete button on the relation’s line.
- *Panel color:* The color you define here is used as background color for the panel that is in the middle of the relation. However, if you choose to enable “Draw line only” this panel will not be visible anyway. If you choose “Other...” there is a palette of additional colors.
- *Line color:* Specifies the color of the curved line. If you choose “Other...” there is a palette of additional colors.
- *Thickness of line:* Specifies how thick the line will be.
- *Width:* Specifies the width of the panel in the middle of the line. Again, if you enabled “Draw line only” the panel will not be visible anyhow and, hence, the width does not matter at all.

Once you defined these options, you should click on “Preview”, which will give you a first impression of the new relation in the upper right preview area. A relation will always connect two nodes (or a node and a relation). Thus, there are two dummy elements in the preview. These serve only for demo purposes and will not appear later. After checking the preview, you can modify the options. Finally, you must click on save to create the new relation.

Figure 6. Step 2b: Add a new relation...

Delete relation: This step is analogue to the delete node action, i.e. you can choose from a list of existing relations. If the ontology does not have any relations, this option will not be available.

Modify existing relation: If you want to change the configuration of a relation, just click on the name of the relation in the overview on the left-hand side. After that, you can click on “Modify this relation...” in the actions at the bottom of the screen. Here, you will have the same options as on creation of the relation.

Add elements to nodes and/or relations: Once you defined the general set of nodes and relations, you may want to add additional elements to single nodes or relations to enrich their functionality. To do so, select the node / relation. This will change the set of available actions to add and delete elements. Each element of a node / relation is identified by two options: (1) the type of the element, and (2) a unique id. The latter is used as identifier to distinguish between multiple elements of the same type. If you want, for instance, to add two separate text fields to a node / relation, these must have different unique ids. These ids can be chosen freely, but should point to the actual function of the element. In this example, you could assign “title” and “content” as unique ids to describe to their actual function. Further, you can use an existing unique id of another element that has already been added to a node / relation. This way, the existing element with the same unique id will be replaced by the new one. For those elements that are only addable once, you do not need to provide a unique id, because it is specified automatically (e.g. for awareness and url elements)

Available element types (screenshots of examples are given in the appendix):

Awareness: This element will show the author of the node or relation. It is particularly useful if multiple users work with the ontology collaboratively

URL: An element that allows entering an URL to link the contents of the node or relation to an external source.

Text Field (see Figure 7): The basic element of each node. Here, you can define additional ones that can be used in relations as well. Each text field can have an (optional) label in front of it. In addition, you can decide whether you want to allow one or multiple lines of text. If you decide to use multiple lines, this will influence the size of the node or relation, i.e. if you set the minimum number of visible lines to 3, the users will not be able to shrink the node to less than these 3 lines. The maximum number of visible lines, however, will limit the maximal size of the node.

The screenshot shows a software interface titled "Actions" with a dark blue header. Below the header is a light blue bar with the text "Add a new element..." and a small icon on the right. The main area is divided into two sections. The first section, "General element settings", contains a "Type:" label with a dropdown menu showing "Text Field" and a "Unique ID:" label with a text input field containing the placeholder "Enter a unique identifier for the ele". The second section, "Additional options for this element", contains two checkboxes. The first checkbox, "Use label for the text field", is checked and has a "Label:" label with a text input field containing the placeholder "Enter a label for the text field". The second checkbox, "Use multiple lines", is also checked and has two sliders below it. The first slider is labeled "Min. no. of visible lines [3]:" and the second is labeled "Max. no. of visible lines [3]:". Both sliders have a blue knob and a horizontal track. At the bottom of the main area are two buttons: "Preview" and "Save". Below the main area is a dark blue bar with the text "Delete an existing element..." and a small icon on the right.

Figure 7. Step 2b: Add a new element: text field

Score (see Figure 8): An element to assign a score to a node or relation. For this score, you can define a minimal and a maximal value. The default score is the score that is presented once the element is created.

Actions

Add a new element...

General element settings

Type:

Score

Unique ID:

Enter a unique identifier for the element

Additional options for this element

Label:

Enter a label for the score field

Min. Score [0]:

Max. Score [1]:

Default Score [0]:

Preview

Save

Delete an existing element...

Figure 8. Step 2b: Add a new element: score

Dropdown (see Figure 9): An element that allows choosing from a given set of alternatives. Each alternative is defined in a new line. In addition to the defined menu items, there is always a blank option automatically added. Further, you can define a label, which will appear in front of the options. Once the element is created, the blank option will be chosen.

Actions

Add a new element...

General element settings

Type:

Dropdown

Unique ID:

Enter a unique identifier for the element

Additional options for this element

Label:

Enter a label for the drop down list

Options (one per line):

Option 1
Option 2

Preview

Save

Delete an existing element...

Figure 9. Step 2b: Add a new element: dropdown

Delete elements from nodes and/or relations: Here, you can delete an element of the chosen node or relation. Similar to the other delete actions for nodes and relations, it will only be available if there are elements.

Modifying elements: Similar to the modification of nodes and relations, you can edit existing elements by clicking on the respective element. This will allow you to edit the options of the element in the action area of the screen. However, this option is only available for elements that have additional options, i.e. for dropdown, score and text elements. The other elements do not have any options that can be modified.

Order of elements: The elements will be added in the order, you create them. However, you can change the ordering of the elements afterwards via drag and drop in the overview list on the left-hand side.

Step 3. Template Definition

Once, the ontology is defined, there is a need for a template. Whereas the ontology defines the elements available for modeling the argument, the template is used to configure the interface of the system. Examples of configurable interface parts are shown in the Appendix.

On the left-hand side of this step, there is an overview of existing templates sorted by ontologies. Similar to the other steps, there is - on the right-hand side – a set of possible actions: (1) add template, and (2) delete template.

Add template:

First of all, there is a set of general options. Here, you have to choose on which ontology the template is based as well as a unique name and an (optional) description which appears during login in the details of the session.

After that, you have to decide if you want to support individual or collaborative argumentation. If you want to support argumentation in groups, you have to enable the checkbox “Group argumentation”. Once, you enable group argumentation, you have a set of options that needs to be defined:

- *Maximum number of users*
- *List of active users:* Shows a list of users that are actively working on a map instance based on the template
- *Use chat:* Provide a simple text chat in the interface
- *Cursor tracking:* The users’ cursors will be visible to all other users that participate at an argument session which is based on this template (see below).

Important: This option should be used with care! It will cause a lot of network traffic which may lead to problems with slow internet connections or multiple / larger groups of users.

The next step is to decide if there should be a **given** internally **text** that can be used to create relations between the text and the argument elements. To provide a text, you can just enter it into the respective text area. Each press of enter / return will result in a new line of the given

text. Any other line breaks that may be inserted while editing the text (for instance if the window is too small) will be ignored. To enable linking between the text and the argument element, it is important to know that it is only possible to relate an element to a complete line (or multiple lines) but not to single words or parts of a given text's line. *Please note: You can only create relations between a given text and a part of the argument graph if it has an internal link element.*

Delete template: To delete a template, choose "Delete template" from the actions on the right-hand side and select the template you want to delete from the drop down menu.

Step 4. Create / Delete Sessions

The last step is pretty similar to normal login. Here, you will get, again, an overview of existing sessions (pre-defined as well as user-created ones) on the left-hand side ordered by template. On the right-hand side, you have the possibility to create a new pre-defined session that will appear in the users' login screen at the bottom in the overview of pre-defined and existing sessions.

The only difference is the possibility to restrict a session to a specific set of users, i.e. only the users you select here will be able to see this session (and, hence, to join it). To restrict it to more than one user, choose a first one. Then, a new menu will appear to allow you further restrictions. Please note that the session is not visible for you in the login screen as well (unless you are using a teacher or developer account). This option is of course only applicable to sessions that should be used by a single user.

However, if you do not want to create pre-defined sessions, but you want the users to create their own sessions from the existing templates, you can just skip this step.

4. An Example

To exemplify how to use the authoring tool, we will go through a simple example first. For this example, we will have the following requirements:

Requirements

- Three students will use the system
- The system should provide them with a general ontology with two kinds of elements: (1) a simple orange node titled “Contribution” with a text area and an awareness element that shows who created it as well as (2) two simple directed relations entitled “pro” (in green color) and “contra” (in red color).
- Each student should work on a pre-defined session on his or her own, but all sessions should be visible for all users
- The pre-defined sessions should be visible to all users

To configure the system, you first have to login to the system with a teacher or developer account. Then, the actual work begins. We will start with the definition of the users. In this concrete case, we will use the following combinations of usernames and passwords:

Username: Ted	Password: x23nxiuA
Username: John	Password: j8m7XhSA
Username: Alice	Password: UHj78xkL

Note: Each username must be unique.

Therefore, we have to open the “LASAD Authoring Tool”. Then, you have to put the username and password in the respective fields. After that choose “Standard” for role and create the user by clicking the add button (see Figure 10). This step has to be repeated for the other users. You can check the users that are already defined by extending the “Standard” folder on the left-hand side by clicking on the small triangle in front of it.

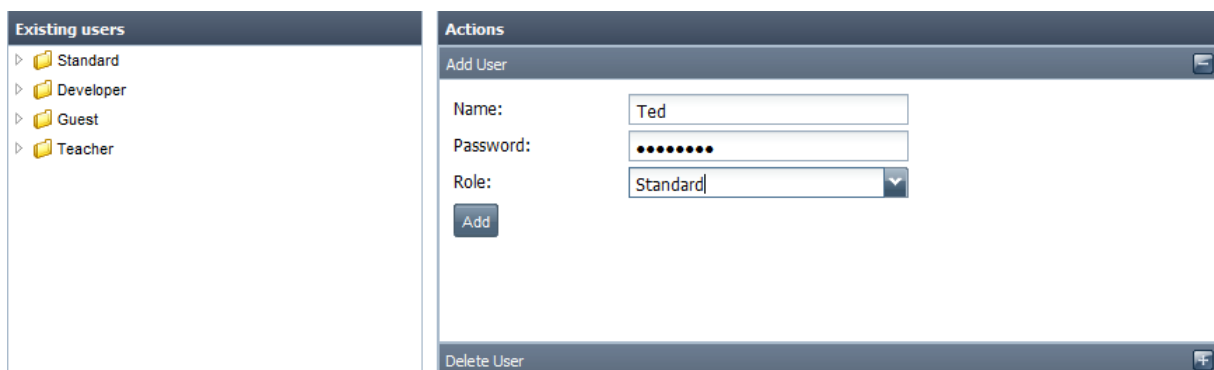


Figure 10. Add User Example

Once the user definition is done, we can switch to the ontology definition. Here, we will start with Step 2a: Add / Delete Ontology. Then, we create a new ontology with the name “A Simple Ontology” by entering the name in the respective field and clicking on the “Add” button. The new ontology should appear in the overview on the left-hand side. We have now created an empty ontology. Next, we have to add the node and relations to it. Therefore, we click on the newly created ontology entitled “A Simple Ontology” in the overview on the left-hand side and open the edit window by clicking on “Step 2b: Edit Ontology” at the bottom afterwards. After that, we will click on nodes and enter the title “Contribution” in the respective field. In addition to that, we will choose Orange as color and click on preview (see Figure 11).

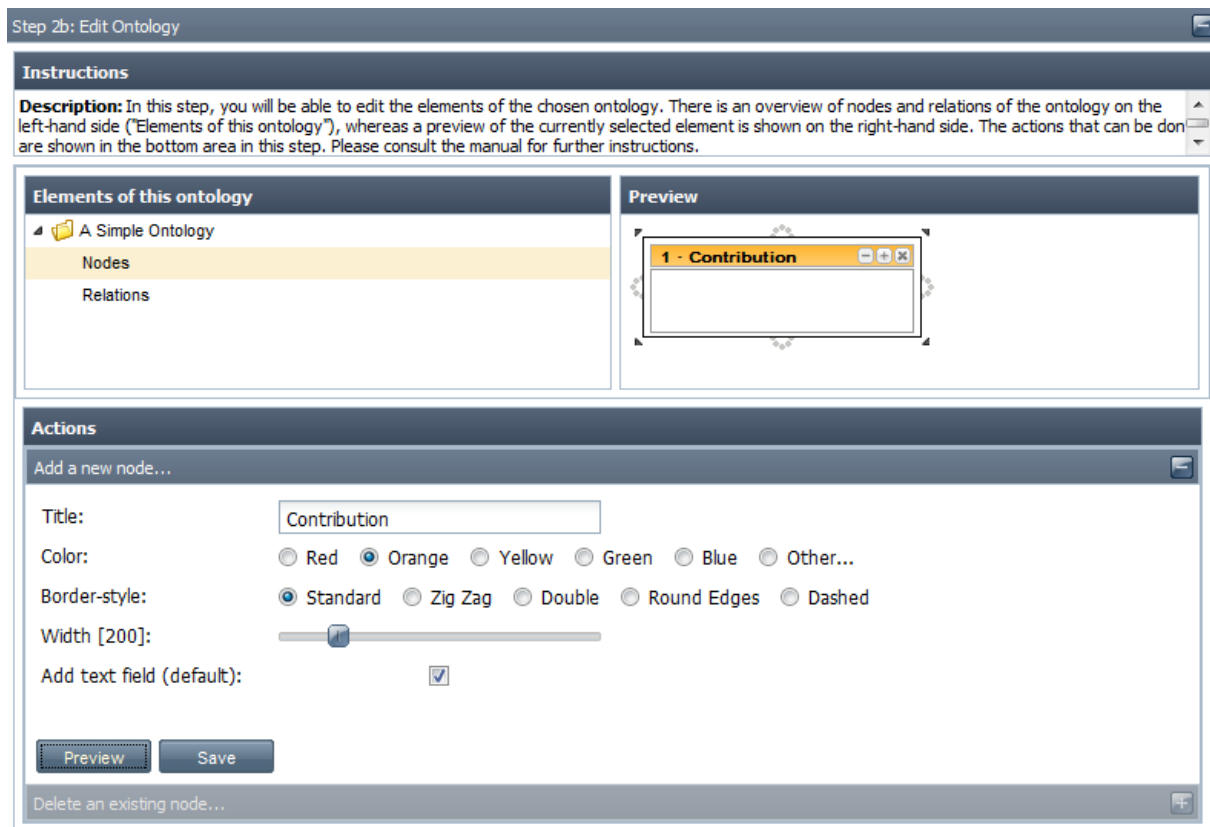


Figure 12. Edit Simple Ontology Example

After we checked the contribution node, we confirm the creation with a click on “Save”. This will result in an updated overview on the left-hand side as shown in Figure 12.

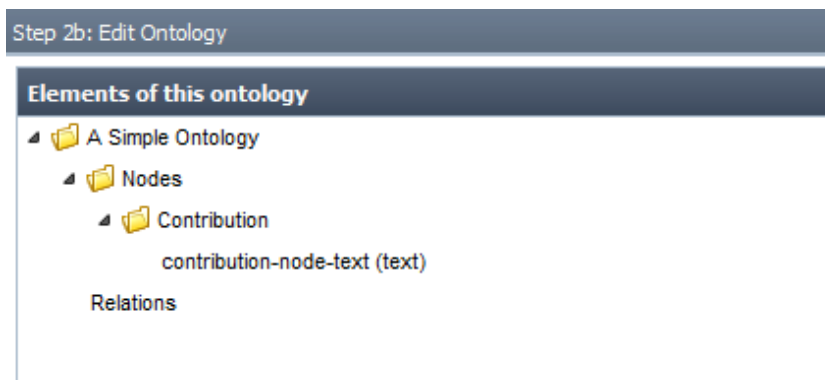


Figure 12. Updated overview of ontology elements after adding the contribution node

Once the basic contribution node was created, we want to add the awareness element that will show the author of the element later. Thus, we click on “Contribution”, and choose “Awareness” from the type drop down menu (see Figure 13). After that we check the preview and save the new element.

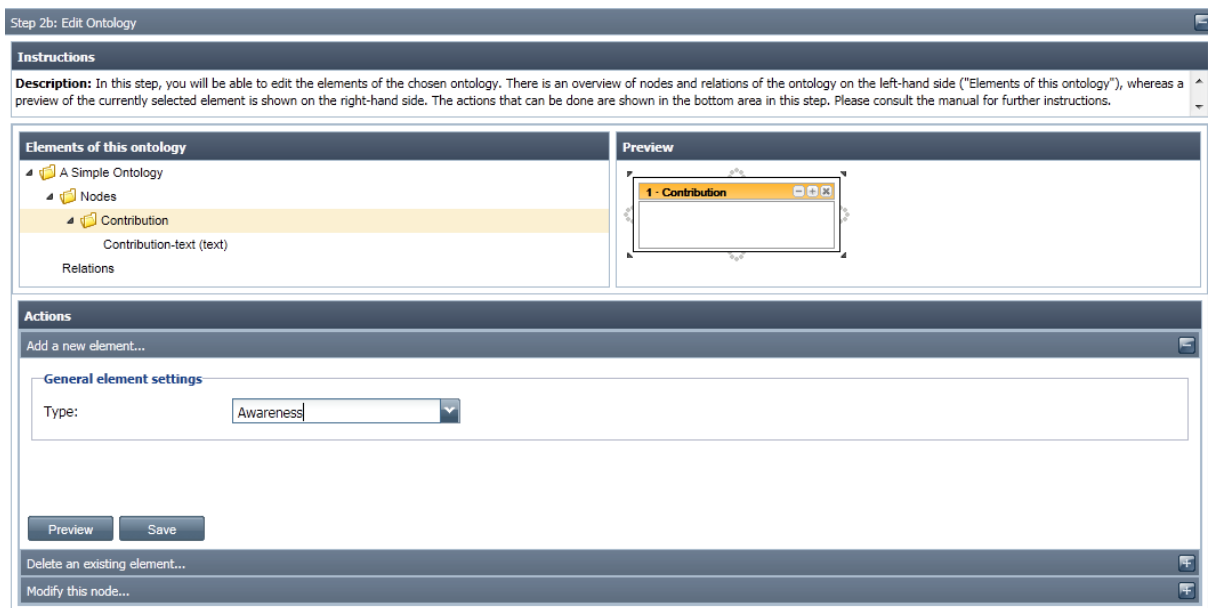


Figure 13. Updated overview of ontology elements after adding the contribution node

We will proceed with the “Pro” relation. Therefore, we click on “Relations” in the overview and configure the new relation as shown in Figure 14, i.e. the “pro” relation will be directed and in green color.

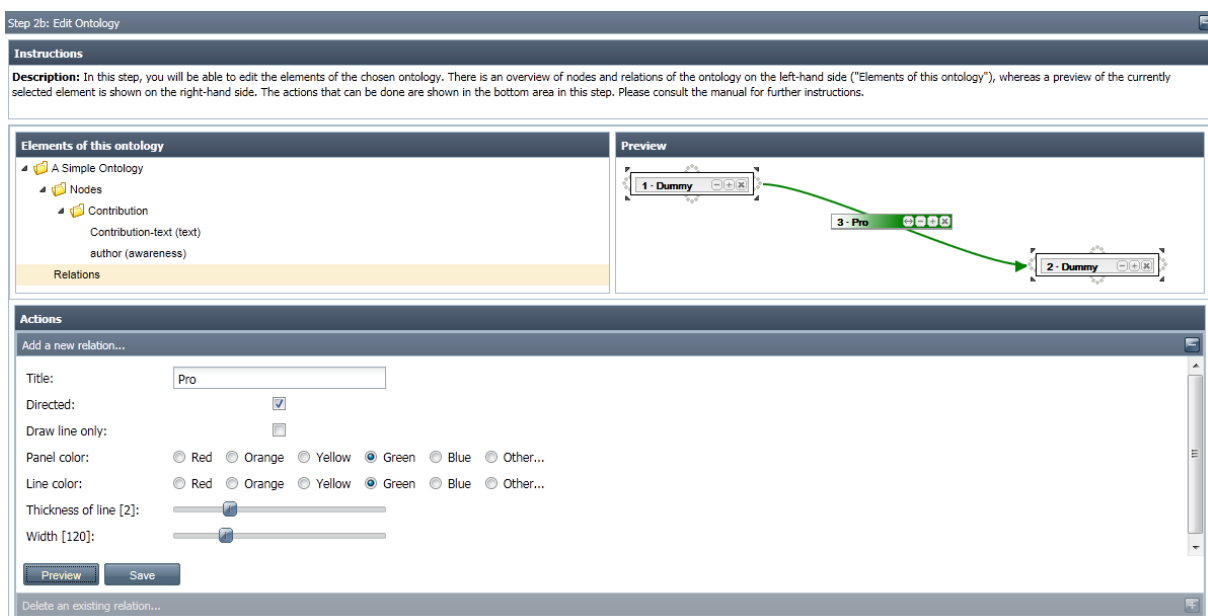


Figure 14. Add “Pro” Relation Example

After checking the preview, we will confirm the creation by clicking on the “Save” button. The overview will be refreshed again. We repeat this step with the red colored “Con” relation that should be directed as well.

Finally, the overview should look like the one given in Figure 15.

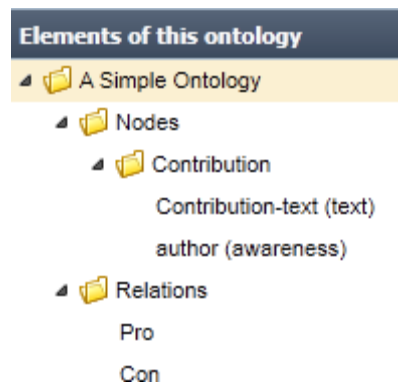


Figure 15. Overview of ontology elements after adding all elements

The ontology definition is complete. Thus, we will proceed by clicking on “Step 3: Template definition”. Here, we create a new template that is based on the ontology we just created. We do not want to make the sessions that will be based on the template collaborative, i.e. we do not enable “Group argumentation”. In addition, we do not want to have a given text. Hence, we do not enable “Use a given text” as well. Overall, the configuration should look like shown in Figure 16 (the name of the template can of course be freely chosen).

Figure 16. Create a template: Example

Once we click on “Add”, the overview on the left-hand side will be refreshed and our newly created template can be found in the “A Simple Ontology” folder.

The last step is to create three new sessions. These sessions could be created by the users in the login screen as well. In this example, however, we will create three pre-defined sessions. Thus, we switch to “Step 4: Create and delete sessions”.

Here, we choose the template we just created and assign a unique name. We do not want to restrict the access to the sessions, thus we leave the restrictions empty. The configuration should therefore look like the one given in Figure 17.

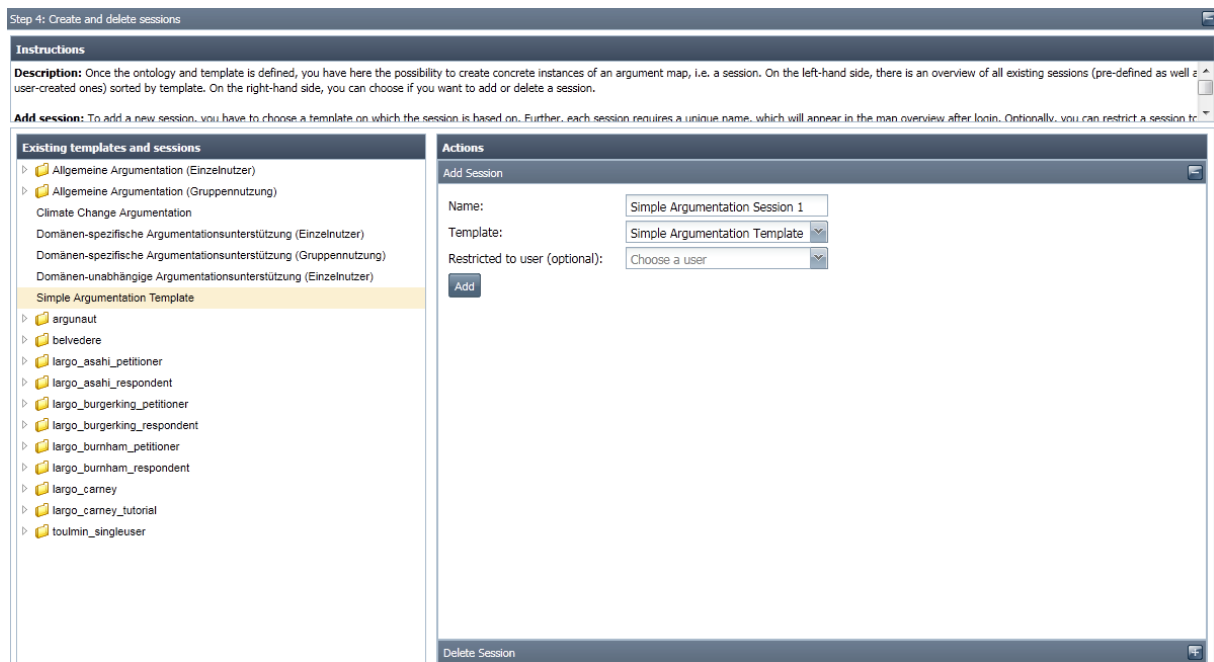


Figure 17. Create a session example

This step must be repeated three times to create the three pre-defined sessions.

Congratulations! After these steps, the users are able to find the newly created template and sessions in the login screen (click on Login & map overview at the top of the screen) and can work with it to create argument structures such as the following:

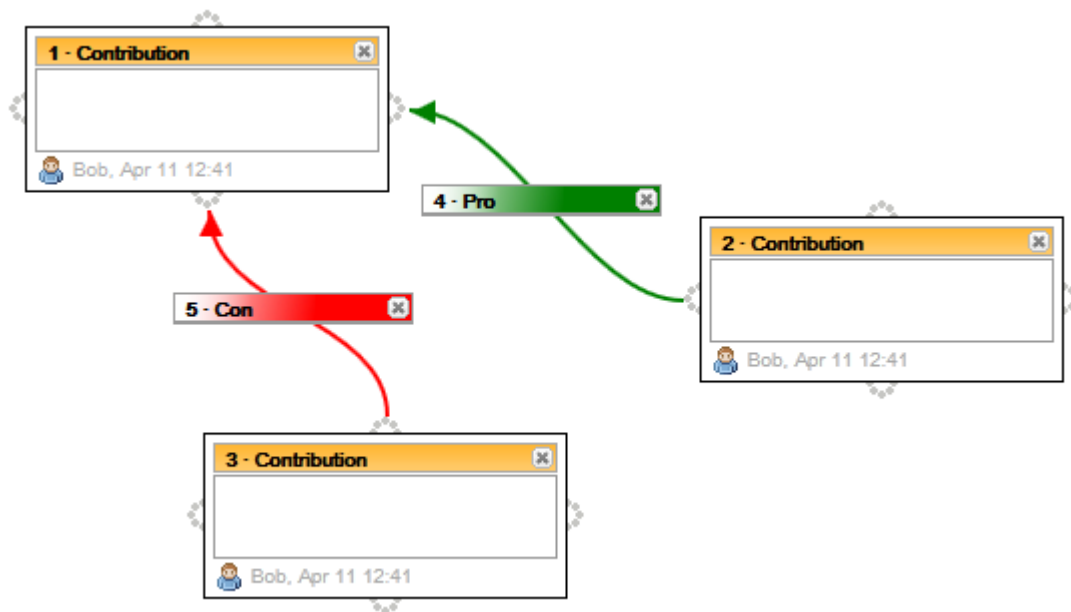


Figure 18. Example of the newly created ontology

5. Known Issues & Limitations

The authoring tool was designed to be as simple to use as possible. Therefore, some configuration options were not integrated into detail. An example here is the definition of text field height on pixel

basis instead of line basis. If you have additional requirements that cannot be covered by the authoring tool, please contact us directly.

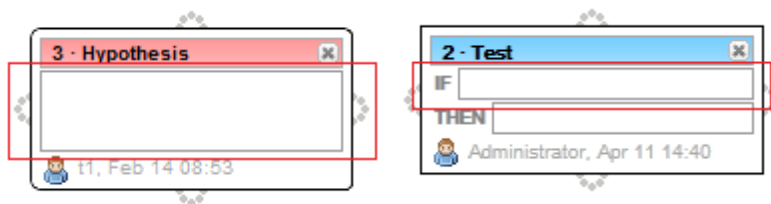
6. Further Reading

If you would like to get more information about the LASAD project, please visit our website (<http://cscwlab.in.tu-clausthal.de/lasad>) and check out our publications.

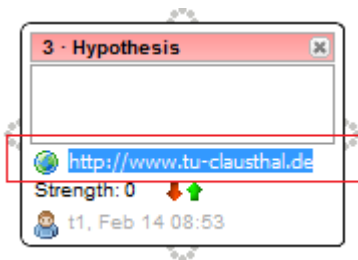
7. Appendix

7.1. Available element types of the ontology

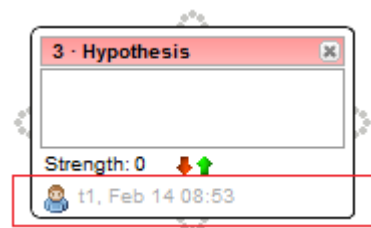
- Text / Labeled Text



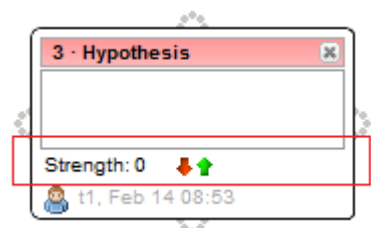
- URL



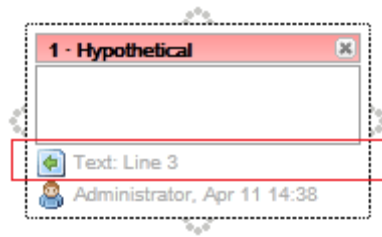
- Awareness



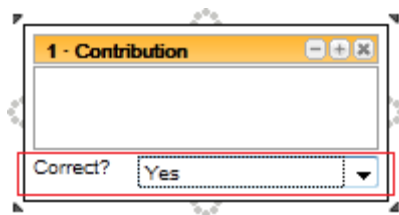
- Score



- Internal link

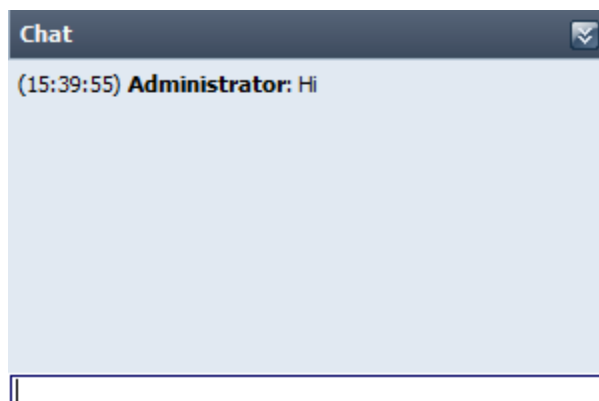


- Dropdown

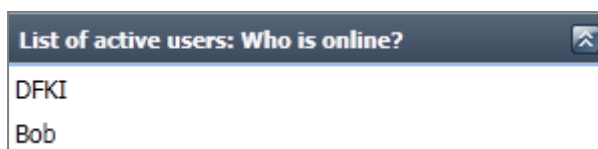


7.2. Interface elements

- Chat



- List of active map users



- **Given text**

Given text	
1	CHIEF JUSTICE REHNQUIST: Do you pronounce your name "Stare-ing"?
2	MR. STARING: "Starring."
3	CHIEF JUSTICE REHNQUIST: "Starring," okay. They have two dots over the "a" and I wasn't sure just how that figured out.
4	MR. STARING: I'm not sure how they got there.
5	ORAL ARGUMENT OF GRAYDON SHAW STARING, ESQ. ON BEHALF OF PETITIONER