UCCAApp User Interface
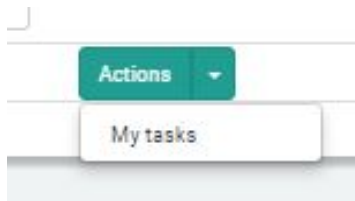
Annotation Task UI Guidelines

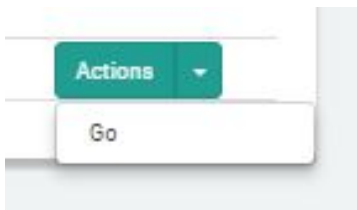## Basic First steps and General Layout

1. To select a task there are two options:
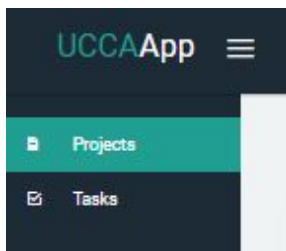
One option is to click on the **"Projects"** tab (upper left part of the screen)

Then select a relevant project from the list by clicking on the small arrow next to the "Actions" feature (on the right end of the row) > **"My tasks"**

Once you are in the relevant project enter the relevant task by clicking on the arrow next to the "Actions" feature > **"Go"**

Alternately, you can click on the **"Tasks"** tab (below the "Projects" tab) which will lead you to a list of all tasks from which you can choose the relevant task.
Once you see the relevant task, to select it click on the green **"Go"** feature on the right end of the relevant row.

Id	Status	Manager Comment	Project	User	Passage	Parent	Children	Type	Is Active	Is Demo	Actions
Id	Status	Manager Comment	Project	User	Passage	Parent	Children	Is Active			
216	NOT_STARTED	Test annotator	Root Project 2/7/2017	Dotan Dvir	Fans of the University of...	178		ANNOTATION	true		Go

Total Results: 1

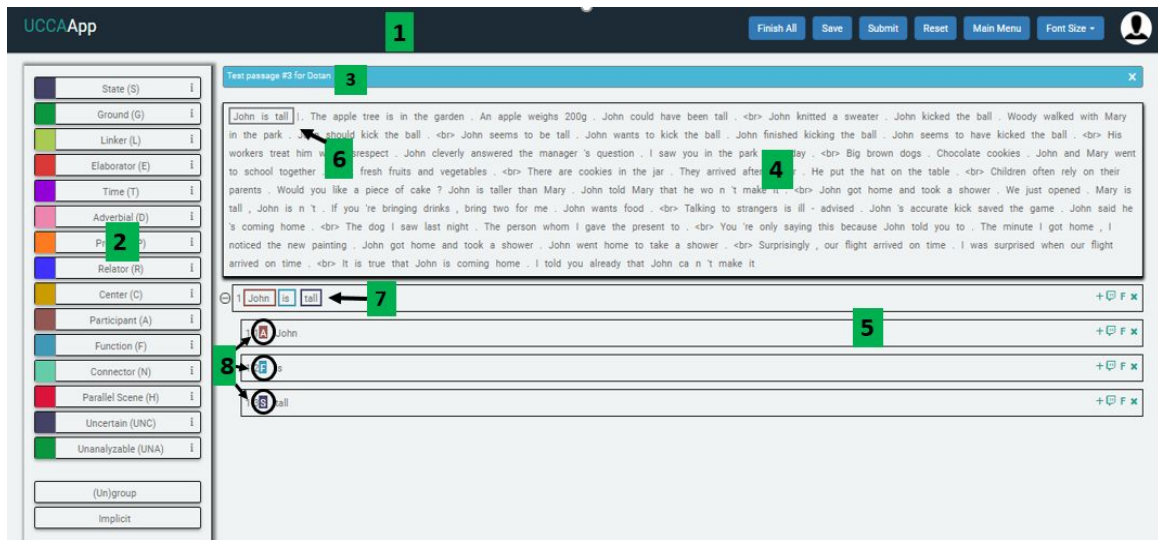2. After you select a task you will arrive to the task page.

Figure 1: Annotator task layout

Key list for the above layout:

1 - Navigation bar
2 - Category bar
3 - Row for comments or instructions made by the project manager
4 - Full text for annotation
5 - Unit hierarchy area (where all annotated units are presented)
6 - Example of a unit
7 - Example of an annotated unit divided to sub-units
8 - Examples of assigned categories for each sub-unit.

3. A few notes before you start the annotation:

    ● In order to save a draft you need to click on the **"Save"** button on the navigation
      bar (see item 1 in Layout). Otherwise your draft would not be saved.
    ● To go back to the main menu click on **"Main Menu"** in the navigation bar.
    ● You can control the font size by clicking the **"Font Size"** button in the navigation
      bar, or by using Chrome's zoom functionality.

4. We can now begin annotating. UCCA divides the text into **units** (see item 6 in Layout).
    Units are stretches of text, not necessarily contiguous. To finish a task the units must
    cover all the text (except punctuation). Units are comprised of **tokens** (a token, which

can be a word or part of a word, is the atomic unit of annotation).

Each unit is labeled by one or more **categories** (item 8 in Layout) which is selected **from the category bar** (item 2 in Layout).

The annotation work itself is done in **the main unit area** which includes:

- A possible comment or instruction from the project manager (item 3 in Layout).
- A passage area where the full text is presented (item 4 in Layout).
- A unit hierarchy area where the units created by the user are presented (item 5 in Layout)**.**

The **left sidebar** (item 2 in Layout) includes the different category types, as well as the utility mouse buttons "(Un)group" used for creating new units, and "Implicit" for creating implicit units (see below).

Hierarchical Structure

Units may contain other **sub-units**, giving rise to a hierarchical structure (see Figure 2 below). This structure of a unit and its sub-units, is called a **unit-tree.** A unit is defined as the **parent** of its sub-unit, and a sub-unit is defined as the **child** of the unit in which it is contained.

Figure 2: Unit tree

- Note that child units have the prefix of their parent unit + an additional digit which differentiates them from the rest. For example, as you can see in Figure 2 above, if the prefix of a parent unit is 1-1-2-4-4-3 then the prefix of a child unit would be 1-1-2-4-4-3-X.

Additional Features

Focus Unit:

At each given point, one unit is in focus, and is highlighted. We call this unit the **focus unit.** When a unit is in focus we can edit and act upon it. The **pointer**, a flickering text cursor ("|") is always found in the focus unit.

- Note that the passage area (the whole text) can also serve as the focus unit, but unlike other units, because it is always highlighted it won't be exceptionally highlighted when serving as the focus unit.

- **Mouse functionality:**

  *Click on a unit with the mouse **to shift that unit into focus.** The pointer will follow the focus unit.*

- **Keyboard functionality:**
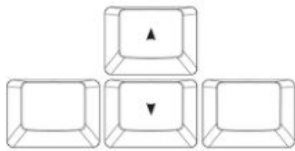
 *To move the pointer and **change the focus between unit boxes** you can use the up/down arrows.*

 *To move the pointer **inside the focus unit box** use the left/right arrows.*

Selecting and Creating Units

- For the purpose of selecting and creating units, it is only possible to select units and tokens that are within a single unit box (that is, have the same parent unit).

Stage 1: Selecting a unit

- Before we create a unit, we must first select its span. selection rules are similar to Microsoft Word user interface with "Ctrl" (or "Cmd" on Apple machines), and "Shift" combinations.

- **Keyboard functionality:**

Use **Shift + the left/right arrows** and select all tokens between starting and end point.

Note that if you use the left/right arrows without Shift all units will be deselected.

- **Mouse functionality:**

Click on a token and drag the mouse to select all tokens between starting and end point.

Stage 2: Creating a unit

- To create a new unit select two or more units/tokens and press a category button (the category buttons appear on the left sidebar). A new unit will be created with the selected category. This also applies when selecting a single token.

Alternatively you can create a new unit by selecting two or more units/tokens and   pressing the spacebar. In this case the new unit will be created without a category.

- Note that when a unit is created, the focus changes to that unit.

Default Annotation restrictions

- It is allowed to have a unit whose children are all the children of an existing unit. However, you can't do that more than once. So you can't have two unary expansions one immediately after the other.

For example, it's impossible to create another nested unit with the span "University of Texas".
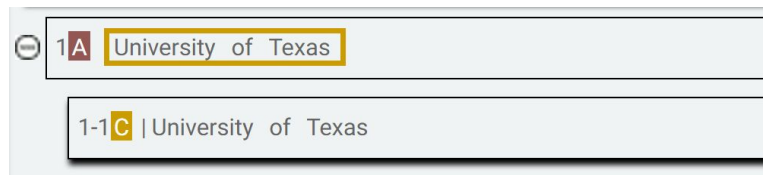
- A unit cannot have only punctuation tokens as children.

Discontiguous Units

Discontiguous units are presented with an ellipsis symbol (…) instead of the intervening tokens that haven't been grouped into the unit. This symbol is not a token and is not selectable.

Selecting Discontiguous Units

To select discontiguous units use the Ctrl/Cmd button:

- **Mouse functionality:**

  If you would like to select several units, without the system unselecting previously selected units (e.g., for creating discontiguous units)

- **Keyboard functionality:**

*After selecting the first part of the unit with the **Shift + left/right arrows**, press the **Ctrl** button while you navigate to your new point in the passage. This ensures that the selected parts remain selected while you navigate.*
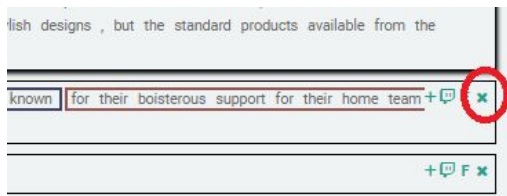*When you arrive to you new point, you can regularly select the remaining part.*

Deleting Units

- **Keyboard functionality:**

  *Select a unit box in the unit hierarchy area and press **Del** or alternatively select the unit directly in the passage and press **Spacebar**.*

- **Mouse functionality:**

*Click the **"x"** button on a unit box to delete the unit or alternatively select the unit directly in the passage and click the **"(Un)Group"** button on the left sidebar.*

- Note that when a unit is deleted, the focus moves one unit upwards. The deleted unit's children remain and are not deleted (except for the remote/implicit units which are deleted, see below).

Remote and Implicit Units

A **Remote Unit** is a child unit which is not included in the parent span but is taken from another part of the passage.

A remote unit circled in red:
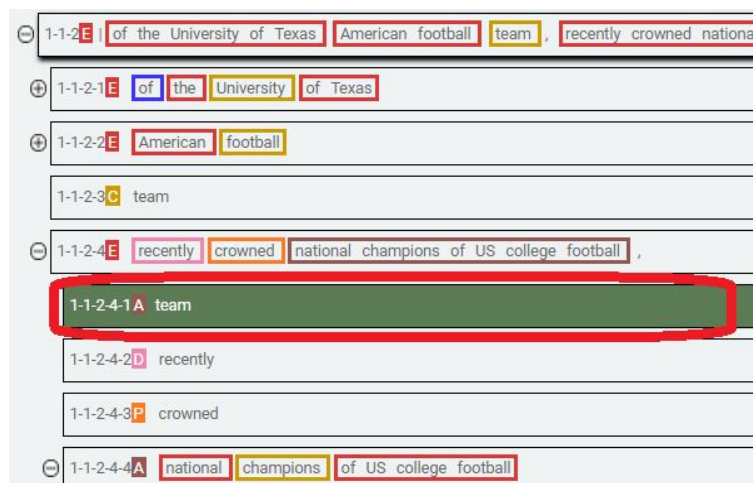
An **Implicit Unit** is a child unit added to the parent unit, that does not contain any tokens, but is only implied from the context.

> For example: "John wants food" (does he want to eat it? "eat" is not stated).

- Note that the unit boxes of remote/implicit units are highlighted with a special color.

Adding remote units

- **Mouse functionality:**

  First click on the "+" symbol in the parent unit's box.
  Then, to select the remote unit from preexisting units, either
  navigate with the arrows to the desired unit and press the
  spacebar or click on the unit with the mouse.
  The unit will be added without a category assigned to it.
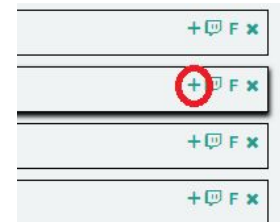
- **Keyboard functionality:**

  *Press **Shift** together with a category keyboard shortcut (see keyboard shortcuts section below), and then select a remote unit.*

  *For example, assuming that a certain category's shortcut is "A", if you press **Shift+"A"** and after that select a remote unit, a remote participant child with the relevant category will be added to the focus unit.*

- Note that when selecting a remote unit the mouse cursor is different, it appears as a target sign.

Annotation restrictions

- You can only select as a remote unit an already existing defined unit and not regular tokens.
- The remote unit cannot be an ancestor or a descendent of the parent unit.

Adding implicit units

Instead of selecting a previously created unit (as a remote unit), it is also possible to click on the "Implicit" button on the left sidebar which will add an implicit unit instead.
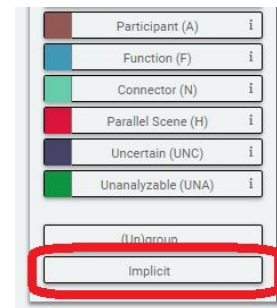
Changing the category of a remote/implicit unit

Categories of remote/implicit units can be added/removed in the same way as other units.

Deleting a remote/implicit unit:

Remote/implicit units can be deleted in the same way as other units.

- Note that when a unit which serves as a remote unit of one or more units is deleted, all its instances as a remote unit are deleted as well (The user is warned that the unit appears **N** times as a remote unit, and is asked to confirm whether he want's to delete it.)
- Also, when a unit which has remote children units is deleted, all its remote/implicit units are deleted as well.

Keyboard shortcuts

- Every functionality has a keyboard shortcut.

Alt+f	Finish
Alt+s	Save
Alb+b	Submit
Alt+x	Reset annotation
Alt+m	Main Menu

- Categories may have a single key shortcut, pre-defined by the project manager.

Order of Appearance of Units in the Unit Hierarchy

- In the unit-tree, children units are ordered according to the order of appearance of their first token in the text.

- The abovementioned does not include remote/implicit units: Remote units are always the first children to be shown, and implicit units appear immediately thereafter.

Annotation Restrictions

There are certain categorization restrictions that one needs to comply with in order to be able to submit the task. If a certain constraint was not complied with, an error sign will appear at the check-up stage (see "Finishing Units and Submitting a Task").

The constraint types are: (each constraint, except Forbid Any Children, is defined over two sets of categories X and Y)

- **Require Sibling Constraint:** if unit has category from, then there must be at least one sibling with category from Y (can be the same unit).
- **Require Child Constraint:** if unit has a category from X, then it must have at least one child with category from Y.
- **Forbid Sibling Constraint:** If unit has a category from X, then it cannot have a sibling with a category from Y.
- **Forbid Child Constraint:** If unit has category from X, then it cannot have a child with a category from Y.
- **Forbid Any Child Constraint:** if unit has category from X, then it cannot have any children of any category.

"Finishing" Units and Submitting a Task

Before the task is submitted a check-up must be applied on all units to see whether the annotation complies with the required restrictions. You can run this check-up at any given time separately on a specific unit or on all units together.

"Finish" and "Finish All"

- To run a check-up on a specific unit click on **"Finish"** (the **"F"** icon on the unit box). This checks compliance of the target unit, including its sub-tree units, with the annotation restrictions.

- To run a check-up on all units click on **"Finish All"** (on the navigation bar), it performs the check on all unit boxes that are open on the screen.

- If one of the checks fails:

  - An error message will appear describing the specific error.
  - Focus is shifted to the violating unit.
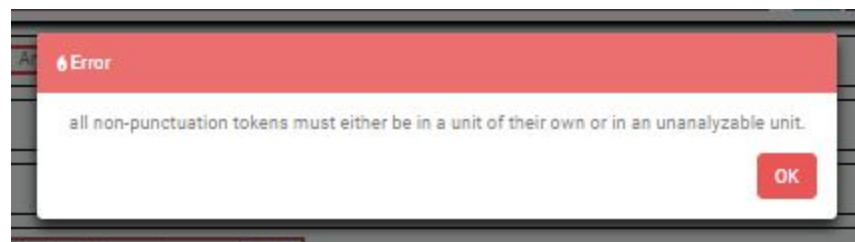
- When clicking on "Finish" or "Finish All", if check succeeds: The sub-tree of the finished unit collapses (i.e the sub-units become invisible and only the parent unit remains).
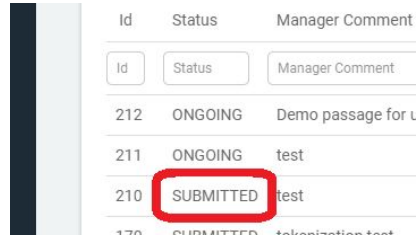

Figure 4: Collapsed unit-tree

Figure 5: Open unit-tree

- If the unit is a direct descendant of the passage unit (the whole text), after successfully clicking on "Finish", its unit box in the hierarchy area becomes completely invisible.

- Note that if a unit box is invisible it is possible to make it visible again by selecting the unit in the passage box and pressing Alt+E or by double clicking on the unit's border in the passage box.

Submitting a task

- When clicking on **"Submit"**, it is checked that all units comply with the restrictions and also the program checks that **All** non-punctuation tokens are either included in:
    - A unit which contains only them.
    - **OR** a unit with a category that has a restriction of the type forbid_any_child (for more details see the restrictions section).

- When clicking on "Submit", if check fails, an error sign will appear.

- When clicking on "Submit", if check succeeds:

    - You will be returned to the task selection window.

○ The task will be marked as "Submitted"in the tasks table.