GATE Teamware 1.3 User Guide
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Preface


Preview
This Document is a preview of Version 1.3, but it also applies to Version 1.2.
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www.fairviewresearch.com
Introduction

GATE Teamware is an online management system for manual and semi-automatic annotation of text collections. GATE Teamware is part of the GATE (General Architecture for Text Engineering) family of products developed by the GATE Team at the University of Sheffield’s Natural Language Processing Center. Teamware is compatible with the popular GATE Developer text engineering framework.

GATE Teamware is designed to simplify the manual effort needed to develop high-quality, accurate annotations of text. Teamware annotation processes can be used as an input to the development of annotation algorithms, or as a manual editing step for previously annotated Documents. Teamware is also integral to “life cycle” systems in which continuous improvement of annotation, or changing annotation needs are required.

GATE Teamware’s internal workflows are designed to streamline complex annotation tasks into easily manageable projects. Projects are based on reusable workflow templates, eliminating redundant set-up tasks. The various Roles necessary for creating high-quality annotations are segregated in the Teamware system in order to minimize the need for content experts and annotators to set up and manage projects.

Finally, as a self-contained online platform, GATE Teamware supports wide distribution of project tasks to anyone with Internet access, making it possible to conduct annotation projects with participants around the globe. GATE Teamware’s real-time project tracking systems allow for instant adjustments in projects, and support commercial annotation teams with detailed annotator-by-annotator tracking and progress reports.

In this Guide

This guide supports Teamware users, managers and administrators. Teamware’s workflow is centered around projects and user Roles. This guide will discuss the Teamware project management workflow, how to set up and manage projects, how to work with the various screens and interfaces, how to manage users and Roles, and other aspects of routine Teamware usage.

Additional Resources

This guide does not cover in detail the installation and maintenance of Teamware on Internet servers. Please refer to the separate Teamware Installation guide for this information.

This guide also does not cover the theory, practice and art of annotation itself. A separate “Introduction to Manual Annotation” is available as a primer on basic annotation practices, common types of annotation projects, and the various goals for manual annotation efforts.

In most annotation projects, the work of annotators is governed by strict rules in the form of project guidelines. These rules proscribe exactly what annotations should be created and under what circumstances, often with examples and procedures for handling exceptions and unanticipated problems (which are common in annotation projects). An example guideline and a blank guideline template form are provided as an appendix to this guide.

The GATE website at the University of Sheffield also has vast resources covering many aspects of annotation, text engineering and the GATE Developer framework. Users of this guide may find the answers to many questions at that site. (http://gate.ac.uk)

Requesting GATE Teamware

GATE Teamware is available as a distribution package directly from the GATE Team at the University of Sheffield. It is free for non-commercial, academic use.
Quick Start Guide

This section provides a brief overview of accessing and getting started with an existing GATE Teamware system. For information on installing a new system, please see the *GATE Teamware Installation Guide*, available here [ ].

Prerequisites

Teamware management consoles, the annotation interface and resources (documents, projects, annotation service packages, and reports) all are accessed through a web browser. The following browsers are supported and have been tested for use with GATE Teamware:

- Internet Explorer
- Opera
- Chrome
- Safari

You can **not** use Firefox as an Annotator. You **can** use it as a Manager.

- The User Roles section (see page 9) has more information about Annotators and Managers.

Login

When you first access Teamware from your web browser you need to login with a User name and password.

If you forget your password, you can use the password hint option to have a password reminder sent to the email address associated with your Account.

**Signup Button**

You can also click the **Signup** button to create a new Annotator Account.

**Logout Button**

Click the **Logout** button on the bottom of the page to log out.

Edit Profile

From the **Main Menu** click **Edit Profile** to change your password and update other User Account information.

This page also shows your current level of access to Teamware features. These features are associated with predefined User Roles. A Teamware administrator can assign Roles.
User Roles

There are several types of Users of Teamware, each with different Roles and objectives. This chapter presents a quick description of the most common Roles and functions.

- The User Accounts section (see page 35) has more information about assigning Roles to Users.

Predefined Roles
The following Roles are predefined in Teamware:
- Annotator
- Manager
- Administrator
- Super Administrator

Teamware predefined Roles can be assigned by the Administrator (see page 10). The Super Administrator (see page 11) can create new types of Roles that are unique from the predefined Roles.

For Annotators

The Annotator Main Menu shows links to the Edit Profile (see page 8) and Annotation Editor screens.

Starting the Annotation Editor
The Annotation Editor is the primary tool for the manual annotation process. The Annotation Editor section (see page 12) has detailed information about using the Editor. The information below explains how to start the Editor.

Downloading the Start Document
Starting the Annotation Editor will download the viewDocument.html.jnlp file, which is a Java webstart application file. Most browsers will open the file automatically, however Annotators may need to open it if the browser does not.

Granting Unrestricted Access
The browser may also request permission to access the Teamware Annotation Editor. Follow the instructions to grant this access.

Document Assignment
Annotators can not choose which Document to annotate. Instead, Teamware assigns Documents to Annotators from a pool of Documents. This assignment is based on predefined Project Rules.

- The Project Rules section (see page 46) has more information about the parameters that control Document assignment.

For Managers

Managers create and monitor Projects and Workflow Templates. They upload, download and review Document sets, called Corpora. They also access Project tracking screens and reports.

Projects
Projects allow Managers to create customized work flows, designate Corpora to process, and assign work to Annotators. Projects are created from Workflow (WF) Templates.
Managers can browse, create and delete Projects.
User Roles

- The Using Projects section (see page 21) has more information.

WF Templates
Work Flow (WF) Templates are reusable settings for configuring Projects.
Managers can browse, create and delete WF Templates.

Schemata
Schemata provide a powerful and flexible method for defining and controlling Annotation procedures by pre-defining the Annotation Types that can be assigned to a range of text.
Schemata are selected within WF Templates.
  - The Using Schemata section (see page 27) has more information.

Documents
Managers can browse, create and delete Corpora. They can also use these GATE tools: ANNIC Search, Annotation Differ and IAA Calculation.
  - The Using Documents section (see page 30) has more information.

Project Tracking Screens and Reports
Teamware includes a number of screens to monitor Processes, Projects, Tasks, etc. so that Managers can quickly determine current status of the factory.
  - The Processes section (see page 42) has more information.

Document Status Summary
This screen shows the progress of annotation processes, including the number of Documents annotated, and the number remaining.

Document Status Details
This screen shows annotation progress on a Document-by-document basis.

Annotator Record View
This screen shows individual Annotator performance.

Record Summary for All Annotators
This screen shows how workload is shared among the Annotators.

For Administrators
Administrators have almost total control of all Teamware operations, with the exception of a few operations reserved for the Super Administrator (see page 11).
Administrators handle User Accounts, create and configure Services, and monitor Workflow processes. Administrators also see the same screens as Managers, and can perform the same functions.

User Accounts
Teamware controls access to data using Accounts with Roles. Everyone logs in with a name and password. Every Account includes Roles that control what a User can do, and what information a User can see.
Administrators can create, delete and suspend Accounts, and can also use the Teamware Bulk Upload feature to quickly add Accounts from an Excel worksheet.
  - The User Accounts section (see page 35) has more information about Accounts.
Services
Administrators can create automated annotation procedures with GATE Developer. These procedures can be "wrapped" into Services, which are treated as Modes in Teamware.

- The Services section (see page 40) has more information.

Processes
Administrators can monitor Processes and Tasks that are created by Teamware when Projects are run.

- The Processes section (see page 42) has more information.

Super Administrator
This section provides an overview of the Super Administrator Role.

- See the Super Administrator Guide for more information.

Assigning Privileges to Roles
The Super Administrator can configure, for each standard Role, the Teamware functions that can be performed.

For example, the Super Administrator can specify that Managers can access the IAA Calculations (see page 31)

Creating Custom Roles
Unique Teamware Roles can also be created by the Super Administrator.

For example, the Super Administrator can create a new Role called NewAnnotator, and delete the standard Role called Annotator.
Using the Annotation Editor

This chapter explains how to use the GATE Teamware Annotation Editor.

Editor Modes
The Editor can be used in two Modes:

- **Pool Mode** is designed for Annotators who get Documents from a pool of Documents.
- **Direct Mode** is designed for Managers and Administrators who need to access a particular Document directly.

Starting the Editor

Multiple Methods
You can start the Editor using one of these methods:

1. Clicking a link delivered in email.
2. If you are an Annotator you can click the Annotator Editor link on your Home screen to open the Editor in Pool Mode.
3. If you are a Manager or an Administrator you can open the Editor in Direct Mode when you list individual Documents.

Downloading the Start Document
When you start the Annotation Editor in both Pool Mode and Direct Mode (see page 12) your browser will download the viewDocument.html.jnlp Document. Most browsers will open the file automatically, however you may need to open it yourself if the browser does not.

Granting Unrestricted Access
When you start the Annotation Editor your browser may also ask you to allow access to the Teamware Annotation Editor. Follow the instructions to grant this access.

Overview of the Process
A general overview of the Annotation procedures is as follows:

**Pool Mode**

1. Click the **Get Task** button to load a Document.
2. Click the **Reject** button if you do not wish to annotate this Document.
3. Annotate the Document using the tools described below.
4. **Save** the Document to work on at a later date.
5. **Finish** the Document to complete annotation.
6. Click the **Get Task** button again to load the next Document.

**Direct Mode**

1. Click the **Get Task** button to load a Document.
2. Annotate the Document using the tools described below.
3. **Save** the Document to work on at a later date.
4. Exit the Annotation Editor to return to the Document list.
Layout of Annotation Editor

The figure below shows an example Annotation Editor layout:

![Annotation Editor Layout](image)

This example shows a typical layout in **Pool Mode**. Your layout may be different depending on Project Annotation Rules (see page 46).

The **Toolbar** buttons are on the top row. The **Toolbar** buttons that you see on the Annotation Editor depend on the **Mode** you are using as explained below:

### Pool Mode Buttons

**Loading a Document**

In **Pool Mode** the **Get Task** button appears on the left to load Documents:

![Get Task Button](image)

**Annotating a Document**

With a Document loaded the **Finish**, **Save** and **Reject** buttons appear for Annotation:

![Annotation Buttons](image)

The three buttons on the right are always visible no matter what Mode you use. They are explained in the Other Features section (see page 20).

### Direct Mode Buttons

**Direct Mode** (see page 12) allows you to open a single Document without clicking the **Get Task** button.

![Direct Mode Buttons](image)

The first button on the left is the **Connect to Document Service** button. The Connect to Document Service feature is currently disabled.

The next button is the **Save** button. Make sure you save all your changes before exiting the Annotation Editor.
If you have not saved your Document the Editor will ask you to save the Document to avoid losing Annotations.

In Direct Mode (see page 12) you need to exit the Annotation Editor to open another Document.

Document Editor
The Document Editor appears below the Toolbar buttons:

There are three areas within the Document Editor which are described below:

- Annotation Set Column
- Annotation List Area
- Document Area

Annotation Set Column
The Annotation Set Column on the right side of the Editor appears in Direct Mode (see page 12). In Pool Mode the Project Rules may allow this column to appear, or it may be blank in your display.

The example Annotation Set Column above shows two Annotator Sets delineated by arrows. The top set, which is blank, is always the default Annotation Set. In this example the second set is called annotator3. It contains four Annotation Types, each displayed with different background colours.

Annotation Sets and Types
- Annotation Sets are groups of Annotations.
- Annotation Types are categories of Annotations, such as "Name" or "Date".

Clicking the arrows on the left will expand and contract the branches of the tree structure.

Annotation List Area
The top of the Document Editor is the Annotation List area, which shows detailed information about all the Annotations currently in the Document:
Displaying Annotations in the Annotation List
When you select an Annotation Type from the Annotation Set column by checking the box, detailed information about all the current Annotations of that type are displayed in the Annotation List area.

Document Area
The Document Area on the bottom of the Document Editor displays the current Document.

Displaying Annotations in the Document Area
Clicking an Annotation Type (see page 14) from the Annotation Set column will display all of the current Annotations of that type in the Document area. In the example below the Measurement Annotation Type is selected:

Identifying Individual Annotations
To pinpoint a specific Annotation select an item in the Annotation List area to display the Annotation in the Document area. The Annotation will be both highlighted and blinking.

Sorting Columns
Click any of the headings in the Annotation List area to sort the cells in the column below. Click the heading again to reverse the sort order.

Searching for Annotations
Enter a query in the Select field on the bottom of the Annotation List area, and then type ENTER to search the list. The annotation with the closest match is highlighted in both the Annotation List area and the Document.

You can also search using the Search & Annotate Tool (see page 18).

Title Bars
The title bar at the bottom of the Annotation Editor shows the name of the current Document. The bar on the top of the Editor shows status messages, for example:
Creating an Annotation

The Annotation Popup

To create a new annotation using the Annotation Popup:

- Select an Annotation Type (see page 14) in the Annotation Set column
- Select text in the Document.
- Then hover the mouse over the highlighted area until an Annotation Popup appears as shown below:

![Annotation Popup]

In the example above the selected Annotation Type pos includes several Subtypes that you need to enter.

The R in the left column indicates that these Subtypes are required.

You cannot complete an Annotation until all required fields are entered.

The highlighted area in the Document blinks to indicate that you are currently annotating this text.

The buttons on the top of the Popup are explained below.

Pin Button
Click the Pin button to keep the Annotation Popup from disappearing. The popup will remain until you click the X in the upper right, or you click the Pin button again.

Selection Arrows
It can be difficult to precisely select characters in a Document, and also to exclude characters like whitespace. The arrow buttons on the top of the Annotation Popup can help. The arrows on the left will add or subtract one character from the left of your current selection. The arrows on the right will do the same for the right side of your selection.

Deselect Button
Click the button with the red X to erase the current selection in the Document.

Add New Annotation
If your Project Manager allows it, you can enter a new Annotation Type (see page 14) using the Annotation Popup. Select the _New_ option as shown below:
Enter a name for your Annotation Type, and any Subtypes.

In Direct Mode (see page 12) you can also enter an Annotation Set on the bottom of the Annotation Set column (see page 14), and click the New button as shown below:

If the New button appears dimmed, your Project Rules do not allow you to create Annotation Sets (see page 14).

Annotation Type Colours

Colours are randomly assigned to each Annotation Type (see page 14).

- Annotation Sets are groups of Annotations.
- Annotation Types are categories of Annotations, such as "Name" or "Date".

Changing Colours

Right-click a Annotation Type to change the colour:

You can change the current colour using a variety of selection options:
Saving Documents
You can save the current Document by clicking the **Save** button so that you can continue work at a later time. The current Document will re-open the next time that you start the Annotation Editor.

Finishing Documents
When you have finished annotating a Document click the **Finish** button. This indicates that the Document is ready for the next processing step. You can then Annotate another Document.

- If you have not saved your Document the Editor will ask you to save the Document to avoid losing Annotations.

- When you finish a Document you can not annotate it again unless you have a role with more privilege than the Annotator role.
  - The Edit Profile section (see page 8) has more information about Roles.

Rejecting Documents
If your Administrator allows its, you can click the **Reject Task** button if you do not want to Annotate a particular Document. If you do not see the **Reject Task** button, then the Project Rules do not allow this option.

- The Project Rules section (see page 46) has more information about rejecting Tasks.

- Once an Annotator rejects a Document only Users with more privilege than the Annotator can access the Document.
  - The Edit Profile section (see page 8) has more information about Roles.

Search & Annotate Tool
Teamware includes a tool to locate annotation information quickly. To open it, click **Open Search & Annotate tool** on the bottom of the Annotation Popup:
The top row of the tool shows search options. The bottom buttons execute search and annotation commands.

<table>
<thead>
<tr>
<th>Expression</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case</td>
<td>Case sensitive search</td>
</tr>
<tr>
<td>Regexp</td>
<td>Regular expression search</td>
</tr>
<tr>
<td>Whole</td>
<td>Whole word search</td>
</tr>
<tr>
<td>Highlights</td>
<td>Restrict the search to only the highlighted text.</td>
</tr>
</tbody>
</table>

Hover your mouse over a search expression on the top row to see more information about the expression:

- Click the **First** button to find the first match.
- Click the **Next** button to find the next match.
- Click the **Prev** button to locate the previous match.
- Click the **Annotate** button to create an Annotation of the selected text.

You can also click the **Ann. all next** button to automatically select and annotate all matches.

**Search Expression Builder**

Click the *Question Mark* button on the *Annotation Popup* to display the **GATE Search Expression Builder**.

The GATE Search Expression Builder is a GATE-specific regular expression tool.
• For more information, see the JAPE section of the Gate User Guide.

Editing and Deleting Annotations

Annotations often need to be reviewed and modified for accuracy.

Annotations and Sets

Make sure you are working on the correct Set when you change Annotations:

• It's easy to inadvertently create a new Annotation Set.
• It's also easy to create Annotations in the wrong Set.

Other Features

The three buttons on the right side of the Annotation Editor provide additional features. They are, from left to right, Show Application Log, Help, and Edit Settings.

Show Application Log

The Annotator GUI Application Log is a list of the activity that occurs "behind the scenes". You only need to click the Show Application Log button if you experience problems.

Help

Click the Help button to display online help.

Edit Settings

Click the Edit Settings button to change the appearance of the Annotation Editor using the options below:

Look and Feel

The Look and Feel option will change the "skin" of the Editor. The available options are:

• Metal
• CDE/Motif
• Mac OS X

Font Options

You can change the type of fonts displayed by the Editor.

• The Text components font option controls the appearance of the Annotation List Area.
• The Menu components font option controls the appearance of the Annotation Popup.
• The Other components font option controls that appearance of the Editor labels like the Document Editor tab.
Projects

Projects allow you to create customized Work Flows, designate Corpora to Annotate, and assign work to Annotators.

Project Modes

Modes are the phases of a Project. There are three types:

- Pre-Processing
- Manual Annotation
- Post-Processing

These are explained in more detail below.

Using Pre-Packaged GASes in Modes

All Project Modes utilize Annotation Pipelines, installed in Teamware as a GAS (GATE Service). A GAS is a particular type of GATE Annotation Pipeline; the same Pipelines that you can create in the GATE Developer.

- The Services section (see page 40) has more information.

You can select from a number of Pre-Packaged GASes to perform functions; for example Pre-Manual, Pre-Curation, Copy/Merge, OntoText-Specific, Alexandria-Specific, etc.

Creating WF Templates

Work Flow (WF) Templates are reusable settings for configuring Projects. When you create a new Project that must specify a WF Template. The sole purpose WF Templates is to provide configuration parameters for creating new Projects.

Sharing and Modifying WF Templates

When creating new Projects, Managers and Administrators can use WF Templates that were created either by themselves, or by other Users.

Once a WF Template is complete it can not be modified. You can only delete and re-create the Template.

The WF Template Wizard

Teamware includes a WF Template Wizard to help you quickly build custom templates. There are two methods to start the Wizard:

- From the Home screen select Projects -> WF Templates -> My WF Templates, and then click the Create Workflow Template button to display the Workflow Template screen.

- From the Home screen select Projects -> New Project to display the Create New Project screen. Select the Blank Template to display the Workflow Template screen.
After entering a name and description you can configure Modes.

**Configuring Pre-Processing Mode**

You can specify one or more Annotation Pipelines in Pre-Processing mode. These Pipelines, in the form of GASes, will run as soon as you start a Project.

You do not need to select a GAS if you do not require one for Manual Annotation.

- The Services section (see page 40) has more information about GASes.

The Project does not become available for Manual Annotation until all Pre-Processing Pipelines are complete.

**Configuring Manual Annotation Mode**

Manual Annotation Mode allows one or more Annotators to create, edit or remove Annotations. This Mode configures the Project Rules.
Annotators per Document
Select the number of Annotators who must Finish this Document before the Document is complete.

- The Project Rules section (see page 46) has more information about the number of Annotators.

Cancel Task Allowed
The Cancel Task Allowed option controls whether annotators can reject Documents.

- If you select this option, the Annotation Editor displays the Reject Task button.
- If you clear this option, Annotators will not have the ability to reject Documents.

The Project Rules section (see page 46) has more information about cancelling Tasks.

Anonymous Annotation
This option creates generic Annotation Set names instead of using the User Account name. Generic names are assigned as annotator1, annotator2, etc.

- The Project Rules section (see page 46) has more information about Anonymous Annotation.

Annotation Schemas
You must select at least one Schema per Project.

- The Schemata section (see page 27) has more information about creating and using Schemata.

Add Schema&popup=true:
This option is currently disabled.

Pre-Manual Services
Certain GASes are designed to specifically to prepare Documents for Manual Annotation.

You must select at least one GAS for Manual Annotation. Any more are optional.

Configuring Post-Processing Mode
This Mode also runs multiple Automatic Annotation Pipelines.

You do not need to select a GAS if you do not require one for Post-Processing.
Curation Mode

Curation Mode uses a specialized GAS to enable the review and correction of Annotated Documents.

Creating New Projects

On the Create New Project screen select a WF Template, and then click Select:

The Project Data screen appears:

Corpus

After entering a Project Name select a Corpus.

Roles

Next assign the Roles to the Project. The User Roles Descriptions (see page 9) has detailed descriptions of the standard Roles.

Starting Projects

Click the Save & Start button to begin Project execution.

Teamware displays a list of the Projects that use the same WF Template:
Project List Icons

List Processes

Click the Processes icon to display the Process List.

- The Process List section (see page 42) for more information.

Suspend Project

Click the Suspend Project icon to suspend the Project.

Resume Project

Click the Resume Project icon to resume a suspended Project.

Change Project Actors

Click the Actors Icon icon to display the Change Project Actors screen.

- The User Roles Descriptions (see page 9) has more information about the Actors.

End Projects

Click the End Project icon to end the Project.

A Project is not considered complete until a certain protocol is followed, for instance that a pre-defined number of Annotators have processed a Document.

- The Project Rules section (see page 46) has more information.
Export Project Options: CSV and PDF

Click the CSV Export Option to download a comma-separated value file. This option produces a file that can be imported to spreadsheet programs like Excel.

Click the PDF Export Option to create an Adobe Portable Document Format file.
Schemata

Schema-Driven Editing

GATE Teamware uses an XML Schema definition language to configure the operation of the Annotation Editor. Schemata provide a powerful and flexible method for defining and controlling annotation procedures.

The Schema defines the Annotation Type (see page 14) as well as optional or required features.

Creating a New Annotation Schema

You need to create customized Schemata to identify Annotation Types. Each Type requires a corresponding Schema file.


W3C provides a tutorial to help you to get started: XML Schema Primer

Listing Schemata

To view the Schemata that currently exist, from the Home screen select Resources -> Schema to display the Annotation Services screen.

You can click the Schema Name to view the XML Schema code.

You may need to use an option in your browser to view the XML code, for example a command like View Source.

Uploading Schemata

To upload a Schema click the Upload Schema button to display the Upload an Annotation Schema File screen.
You can choose up to five Schema files to upload at a time by clicking the Choose File button. Click the Upload button to perform the upload process.

Example Schemata

There are a number of example Teamware Schemata available to use as templates. They are stored in the GATE directories plugins/ANNIE/resources/creole/schema, and listed below:

- AddressSchema.xml
- CorefSchema.xml
- DateSchema.xml
- EmailSchema.xml
- EntityHeadSchema.xml
- Entity MentionSchema.xml
- EntitySchema.xml
- FacilitySchema.xml
- GpeSchema.xml
- IdentifierSchema.xml
- InternetSchema.xml
- LocationSchema.xml
- MoneySchema.xml
- OrganizationSchema.xml
- PercentSchema.xml
- PersonSchema.xml
- PhoneSchema.xml
- PosSchema.xml
- SentenceSchema.xml
- StreetSchema.xml
- SyntaxTreeNodeSchema.xml
- TokenSchema.xml
- UtteranceSchema.xml

Example Schema for a Date Annotation

The example below shows the format of a simple Date Annotation.
The Add a New Annotation section (see page 16) shows how the Annotation Popup displays Annotation Types and Subtypes.

**Export Schema Options: CSV and PDF**

Click the CSV Export Option to download a comma-separated value file. This option produces a file that can be imported to spreadsheet programs like Excel.

Click the PDF Export Option to create an Adobe Portable Document Format file.
Documents

Teamware includes a number of features for loading and tracking large Document sets, which are called Corpora.

Add Corpora

From the Home screen select Resources -> Documents to display the Corpora screen:

The screen lists all of the Corpora, and the Project that use each Corpora.

List Documents

Click the Corpus name to display a list of the Documents in the Corpus.

View Document

Click the View Document icon to use the Annotation Editor.

Annotation Differ

Annotation Differ helps to determine how multiple Annotators handle the same information, customisation and adaptation tasks. It compares the differences between Annotations from one Annotator compared to the Annotations from another Annotator.

- All the Annotations in one Set are compared to another Set.
- Comparisons are made on a document-by-document basis.

You can perform full Corpus Annotation Differ in GATE Developer.
Click the **Annotation Differ** icon to use the Annotation Differ tool.

Teamware downloads the AnnotationDiffGUI:

![Annotation Diff GUI](image)

The download could take several minutes depending on your Internet connection speed.

**Granting Unrestricted Access**
When you start the **Annotation Differ GUI** your browser may also ask you to allow access. Follow the instructions to grant this access.

**Annotation Differ GUI**
The **Annotation Differ GUI** appears:

![Annotation Differ GUI](image)

The **Key Set** is the base Annotation Set. The **Response Set** is the Annotation Set for comparison. You can choose Sets to compare, however the **Key Document** and **Response Document** are selected for you.

**IAA Calculation**
IAA Calculation helps to determine how multiple Annotators handle the same information, customisation and adaptation tasks.

Click the **IAA Calculation** icon to use the IAA Calculation tool.
List Project Processes

In the Corpora screen (see page 30) click a Project to display the Processes in that Project.

- The Process List section (see page 42) has more information about this list.

New Project

If the New Project icon appears next to the Corpus Name you can click this icon to create a new Project using this Corpus.

- The Create New Project section (see page 24) has more information about new Projects.

ANNIC Search

ANNIC Search offers ANNIC-based JAPE rule authoring for customisation and adaptation tasks.

Overview

ANNIC (ANNotations-In-Context) is a full-featured annotation indexing and retrieval system. It is provided as part of an extension of the Serial Data-stores, called Searchable Serial Data-store (SSD).

Displaying the ANNIC Search Screen

Click the ANNIC Search icon to use the tool

Teamware downloads the AnnicGUI:

The download could take several minutes depending on your Internet connection speed.
Granting Unrestricted Access
When you start the **ANNIC Search GUI** your browser may also ask you to allow access. Follow the instructions to grant this access.

**ANNIC Search GUI**
The **ANNIC Search GUI** appears:

![ANNIC GUI](image)

**Download Corpus**
Click the **Download Corpus** icon to download all of the Documents in this Corpus as a zip file. The downloading and saving of the zip file to your system is processed through your browser.

**Upload Documents**
To upload Documents to Teamware, from the Home screen select **Resources -> Documents** to display the **Corpora** screen (see page 30). Then click the **Add** button to display the **Upload** screen:

![Upload a Zip File that contains Documents](image)

When the upload is complete Teamware displays the results:
Documents

Click the View Corpus button to List Documents (see page 30).

Export Document Options: CSV and PDF

Click the CSV Export Option to download a comma-separated value file. This option produces a file that can be imported to spreadsheet programs like Excel.

Click the PDF Export Option to create an Adobe Portable Document Format file.
User Accounts

Teamware controls access to data using Accounts with Roles. Everyone logs in with a name and password. Every Account includes Roles that control what a User can do, and what information a User can see.

- The User Roles Descriptions section (see page 9) has more information.

Administrators can create, delete and suspend Accounts, and can also use the Teamware Bulk Upload feature to quickly add Accounts from an Excel worksheet.

Implementation Notes

- An Account that does not have an Annotator Role can not perform Annotator functions, even if other Roles with more privileges are assigned to the Account.

- An Account with the Administrator Role can perform all Manager functions.

List Current Users

To view the Current User Account, from the Home screen select Admin -> Manage Users to display the Current Users screen.

Create Account

From the Current Users screen click the Add button to create a new Account:
The Bulk Upload features allows you to create multiple Accounts quickly using an Excel worksheet.

From the Current Users screen click the Bulk Upload button to display the screen:

Excel Template

Click the end of the sentence The template can be downloaded here to obtain a copy of the blank Excel worksheet.
Fill in the worksheet, and then click the Choose file button to select the File to Upload.

Email Notification

You can send an email notification to the new Users and yourself after the Accounts have been created.

After selecting email options click the Upload button to begin the bulk upload process.

Disable Users

You can Disable Accounts if you wish to prevent a User from logging in to the system. Disabling retains the User information in Teamware.

Clear the Enabled box in the Current Users screen, and then click the Update button:

List Active Users

To view the Active Users, from the Home screen select Admin -> Active Users to display the Active Users screen.

Clickstreams

A Clickstream is the recording of what a User clicks when using Teamware. When a User clicks anywhere in the application, the action is logged. Clickstream analysis is useful for a number of reasons. For more information, see Wikipedia.

To view the Clickstreams, from the Home screen select Admin -> Clickstreams to display the All Clickstreams screen.
Bots

Bots are automated or semi-automated tools that run automated procedures on the Internet. Bots have the potential to disrupt Internet applications like Teamware. For more information, see Wikipedia.

You can choose whether to view No Bots, All Bots, or Both.

Super Administrator

The Super Administrator determines what User Roles can view Teamware screens.

For example, the Super Administrator can specify that Managers can access the IAA Calculations (see page 31)

See the Installation Guide for more information about SuperAdmin.

Roles Table

Documents

<table>
<thead>
<tr>
<th>permission</th>
<th>annotator</th>
<th>curator</th>
<th>manager</th>
<th>admin</th>
<th>super admin</th>
</tr>
</thead>
<tbody>
<tr>
<td>list corpora</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>create new corpus</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>edit corpus</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>delete corpus</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>download datastore</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Services (GAS)

<table>
<thead>
<tr>
<th>permission</th>
<th>annotator</th>
<th>curator</th>
<th>manager</th>
<th>admin</th>
<th>super admin</th>
</tr>
</thead>
<tbody>
<tr>
<td>list services</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>create new service</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>edit service</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>delete service</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

Schemas

<table>
<thead>
<tr>
<th>permission</th>
<th>annotator</th>
<th>curator</th>
<th>manager</th>
<th>admin</th>
<th>super admin</th>
</tr>
</thead>
<tbody>
<tr>
<td>add schema</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>delete schema</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
**WF Templates**

<table>
<thead>
<tr>
<th>permission</th>
<th>annotator</th>
<th>curator</th>
<th>manager</th>
<th>admin</th>
<th>super admin</th>
</tr>
</thead>
<tbody>
<tr>
<td>list all templates</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>create new WF Template</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>delete any WF Template</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

**Projects**

<table>
<thead>
<tr>
<th>permission</th>
<th>annotator</th>
<th>curator</th>
<th>manager</th>
<th>admin</th>
<th>super admin</th>
</tr>
</thead>
<tbody>
<tr>
<td>list all projects</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>create new projects</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>delete any projects</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>change project &quot;actors&quot;</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

**Users**

<table>
<thead>
<tr>
<th>permission</th>
<th>annotator</th>
<th>curator</th>
<th>manager</th>
<th>admin</th>
<th>super admin</th>
</tr>
</thead>
<tbody>
<tr>
<td>create users</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>bulk upload users</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>update users</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>list active users</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>view clickstreams</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
Projects utilize Annotation Pipelines, which are installed Teamware as a GAS (GATE Service). A GAS is a particular type of GATE Annotation Pipeline; the same Pipelines that you can create in the GATE Developer.

Managers and Administrators can view and edit existing GASes (GATE Services) as explained below.

Creating a GAS

Teamware includes a number of Pre-Packaged GASes to perform common functions; for example Pre-Manual, Pre-Curation, Copy/Merge, OntoText-Specific, Alexandria-Specific, etc.

You can also create your own customized GASes; instructions are found in the Super Administrator Guide.

Listing Annotation Services

To view the GASes that currently exist on your system, select Resources -> Services from the Home screen to display the Annotation Services screen.

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>URL</th>
<th>Active</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUR_Curation</td>
<td>Aureus Corpus curation</td>
<td>/ml-service/services/application</td>
<td></td>
</tr>
<tr>
<td>CN</td>
<td>CN Sentence</td>
<td>/ml-service/services/application</td>
<td></td>
</tr>
<tr>
<td>copy_gaz</td>
<td>copy Section, Reference, Measurement annotations from annotator1/2 annotation sets to consensus annotation set</td>
<td><a href="http://gatekeeper1.dos.ahaf.ac.uk/lighthouse/copy-service/services/GATEService">http://gatekeeper1.dos.ahaf.ac.uk/lighthouse/copy-service/services/GATEService</a></td>
<td></td>
</tr>
<tr>
<td>Medline</td>
<td>GAS for preparing Medline abstracts</td>
<td>/ml-service/services/application</td>
<td></td>
</tr>
<tr>
<td>merge_gaz</td>
<td>copy annotation1/2 to annotation1/2_original as a backup, merge annotation1/2 annotations into consensus, delete annotations1/2 annotations that have been merged</td>
<td><a href="http://gatekeeper1.dos.ahaf.ac.uk/lighthouse/merging-service/services/GATEService">http://gatekeeper1.dos.ahaf.ac.uk/lighthouse/merging-service/services/GATEService</a></td>
<td></td>
</tr>
<tr>
<td>OT_pre-manual_gaz</td>
<td>Pre-manual gaz that copies annotations from default AS</td>
<td>/ml-service/services/application</td>
<td></td>
</tr>
<tr>
<td>Pharma_Parameters</td>
<td>Correction of Pharma Parameters of ex=Pharma (e.g. Pharma (cnn))</td>
<td>/ml-service/services/application</td>
<td></td>
</tr>
<tr>
<td>Pre-Curation GAS</td>
<td>Enables annotators to see all annotations in the &quot;Processed&quot; annotation set.</td>
<td>/ml-service/services/application</td>
<td></td>
</tr>
<tr>
<td>pre-manual_gaz</td>
<td>GAS for prepping manual annotation task</td>
<td>/ml-service/services/application</td>
<td></td>
</tr>
<tr>
<td>pre-processing_gaz</td>
<td>Pre-processing GAS for automatic annotation task</td>
<td>/preprocessing-service/services/GATEService</td>
<td></td>
</tr>
</tbody>
</table>

Edit Annotation Service

To edit an Annotation Service, from the Annotation Services screen click the Edit icon or click the Annotation Service Name on the left column.
Export GATE Services Options: CSV and PDF

Click the CSV Export Option to download a comma-separated value file. This option produces a file that can be imported to spreadsheet programs like Excel.

Click the PDF Export Option to create an Adobe Portable Document Format file.
Processes

How Processes are Created

Each Mode in a Project (see page 21) becomes a Teamware Process when the Project starts (see page 24).

Each Process executes sequentially in the order in which the Mode is listed in the Project. Each Process must complete before the next Process begins.

When Projects start, the currently executing Mode is the current Process. You can see this by selecting Projects -> All Projects -> View Processes to create a Process List.

Process List

How Tasks are Created

When a Project is running all documents in the Corpora are treated as separate Tasks.

Task List

To display the Task List select the Projects -> All Projects -> Processes screen from the Home screen, and then click the List Task button.

Execute Task

Click the Execute Task icon to run a Suspended Task, and to display the Task Detail screen:
Tasks are Suspended when Projects are Suspended.

- The Suspend Project section (see page 25) has more information.

**Reject Task**

Click the **Reject Task** icon to Reject a Task. The **Group Tasks** screen appears:

**Group Task**

To display the **Group Tasks** screen, select **Projects -> Group Tasks** from the Home screen:

**Process Monitoring**

Click the **Process Monitor** icon to display the **Document Status Summary** screen.

- The Project Tracking section (see page 44) has more information about the Document Status Summary.
Reports

Teamware includes a number of reports to monitor Processes, Projects, Tasks, etc. so that you can quickly determine current status of the factory.

Project Tracking Screens and Reports

**Document Status Summary**
This screen shows the progress of Annotation Processes. To view the report, from the Home screen select Projects -> All Projects -> Processes -> Process Monitoring:

![Document Status Chart](image)

**Document Status Details**
This screen shows annotation progress on a document-by-document basis. To view the report from the Document Status Summary report click the Details button:

![Document Status Details Table](image)

**Annotator Record View**
This screen shows Annotator performance. To view the report from the Document Status Details report click the Annotator name:
Record Summary for All Annotators
This screen shows how workload is shared among Annotators. To view the report from the Annotator Record View screen click the Annotator View button.

Record Summary for ‘testuser’

Canceling Tasks and Processes
Managers and Administrators can cancel Projects that are hung using the End Project icon (see page 25).
All Tasks and Processes in the Project are treated as if they were completed successfully.
Project Rules

This chapter explains how Teamware controls the process of annotating Documents. Teamware Projects includes Rules to ensure that proper protocol is followed. This section explains the Rules. The Projects section (see page 21) describes how to configure these Rules.

Annotator Sets

Set Creation

Teamware creates Sets for each User. The Annotation Editor controls how Sets are used as explained below:

Pool Mode

In Pool Mode, the Annotation Editor only displays the Set created for the User. The Annotator can not change or add to this set.

Direct Mode

In Direct Mode, the Annotation Editor displays the Set created for the User, however the User can create their own Sets, and change existing Sets.

Set Names

If you select Anonymous Annotation (see page 46) each Annotation Set is assigned a generic name: Annotator1, Annotator2, etc.

If you do not use Anonymous Annotation, each Annotation Set is assigned the name of the User Account.

Anonymous Annotation

Anonymous Annotation makes post-processing easier by simplifying the Annotator names. Instead of the User Account name, Teamware assigns generic names like annotator1, annotator2, etc.

Number of Annotators per Project

Specifying the number of Annotators ensures that each Document is reviewed by a minimum amount of people.

Random Document Assignment

If you have more than one Annotator assigned to a Project, Teamware will use the Random Document Assignment feature in Pool Mode (see page 12). The Annotation Editor, in Pool Mode, will randomly select Documents from the Pool of Documents when the Annotator clicks the Get Next Task button.

Allowing Annotators to Cancel Tasks

The Cancel Task Allowed (see page 23) option controls whether the Annotation Editor displays the Reject Task button. If you do not allow Annotators to cancel Tasks, then the Reject Task button appears dimmed in the Annotation Editor.
Project Completion Based on Annotation Completion

Teamware ensures that each Document is Annotated correctly, and that all Documents in a Project are Annotated completely.

A Project is not considered complete until the pre-determined number of Annotators have processed a Document. This number is defined in the WF Template.
Acknowledgements

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