



EAGLE Argumentation Tool User Manual

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1 Introduction

The EAGLE Argumentation Tool provides a way for clerks in public administration to share their reasons and arguments for case decisions and to find similar ("most on point") cases about particular legal issues. The main service provided by the tool is to help clerks to decide "like cases alike", which is a basic principle of justice, for legal issues which are not well-defined by rules.

Reasons and arguments are represented and visualized in argument maps. To make it easy for clerks to enter and find argument graphs for cases about a particular issue, such as whether requiring an adult to support his or her parent would cause "undue hardship", a domain model is first specified for each such issue, using a simple plain text file, and uploaded to the EAGLE platform as an OER. Custom forms for entering and searching for cases, specific for each issue, are generated automatically from these domain models. Conceptually there is a separate case-base for each issue and each such case-base is an OER, with all the metadata properties common to all OERs, such as being able to be classified using the EAGLE process mapping tool.

1.1 Problem Addressed

Clerks in public administration often need to decide "open" issues in cases for which there are no clear rules about how to implement the law. For example, family support law in Germany requires family members to support their direct ancestors (parents, grandparents, etc.) and descendants (children, grandchildren, etc) if they are financially capable after taking care of their own needs and the relative is needy, unless doing so would cause "undue hardship". The concept of "undue hardship" is not defined by any rules in the legislation. Nonetheless clerks are obligated to decide "like cases alike" and to justify their decisions in a clear way with reasons and arguments. And the basic fairness principle requiring like cases to be decided alike applies not only to the each clerk individually, but to all clerks in all responsible public agencies deciding this issue, collectively.

1.2 How the Argumentation Tool Can Help

The Argumentation Tool helps clerks to decide open issues, issues for which there are insufficient rules, and to justify their decisions in a clear way with reasons and arguments, in such a way as to help ensure that like cases are decided alike, collectively for all clerks deciding such issues, across the boundaries of particular agencies.

This is achieved by sharing a database of cases, called "casebases", where each case in the casebase describes the facts of the case, the decision of the issue of the case and the reasons and arguments for and against the decision. The casebase is structured in such a way as to enable clerks to search for the cases, using factors and dimensions, which are most similar to the facts of some new case which has been yet to be decided. This enables the clerks to find and view the reasons and arguments, pro and con, for the decisions of the cases most similar to the one to be decided, so as to be able to make sure that the current case is decided fairly. Once a decision has been reached, the clerk can enter it into the casebase, along with the reasons and arguments pro and con the decision, to share it with other clerks and help them to decide further cases.

Essentially, the argumentation tool helps clerks to share their decisions and arguments, to enable them to learn from each other about how to decide open issues and collectively ensure that cases are fairly decided.

1.3 Innovative Features

Document management solutions provide a way to share documents, including of course documents describing how cases with open issues have been decided and why. The argumentation tool goes beyond generic document management systems by using a structured model of the relevant factors to be considered when deciding open issues to enable a similarity metric to be defined, which can then be used to find and rank cases by similarity. Document management solutions provide a way to search for cases using full-text and/or metadata-based search, but are not able to find similar cases, or order cases by similarity.

Moreover, the argumentation tool provides a systematic way to explain the reasoning behind each case decision, using argument graphs. These argument graphs can be visualized in argument maps (“box and arrow diagrams”) in such a way as to make it easier to quickly grasp and understand complex chains of reasoning. An example argument graph is shown below.

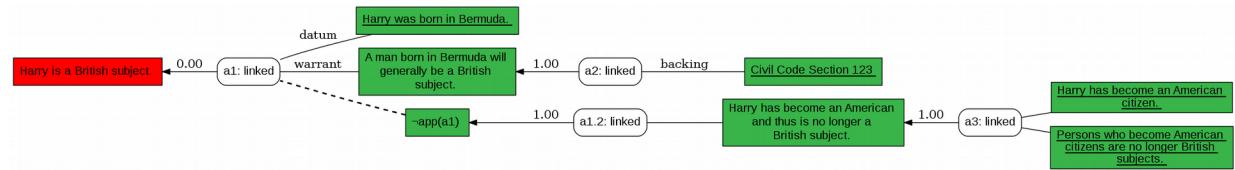


FIGURE 1: EXAMPLE ARGUMENT GRAPH

2 Concepts

Case

A case is a description of a decision of an issue along with the reasoning supporting the decision, for example whether a particular person, e.g. "John Smith", is entitled to a housing benefit.

Casebase

A casebase is a set of cases about some issue, such as entitlement to housing benefits.

Dimension

A dimension is some property of the domain relevant for deciding an issue. Dimensions are modelled as an ordered set of qualitative (i.e. not numeric) values, called "factors". For example, an "age" dimension could consist of the factors "very young", "young", "middle-aged", "old", and "very old", in this order.

Domain model

A domain model for some kind of issue is modelled by a set of dimensions, along with the possible options for deciding the issue, represented using a simple special-purpose programming language, based on the JavaScript Object Notation (JSON), a data format widely used by Web applications.

Factor

A factor is a symbolic value of a dimension, represented by an a string, e.g. "young" or "old".

Issue

An issue is a question to be resolved or decided, such as whether or not a particular person is entitled to a housing benefit.

Metadata

Metadata are properties of cases and casebases, such as the title of the case, the name of the clerk who decided the case and the date of the decision.

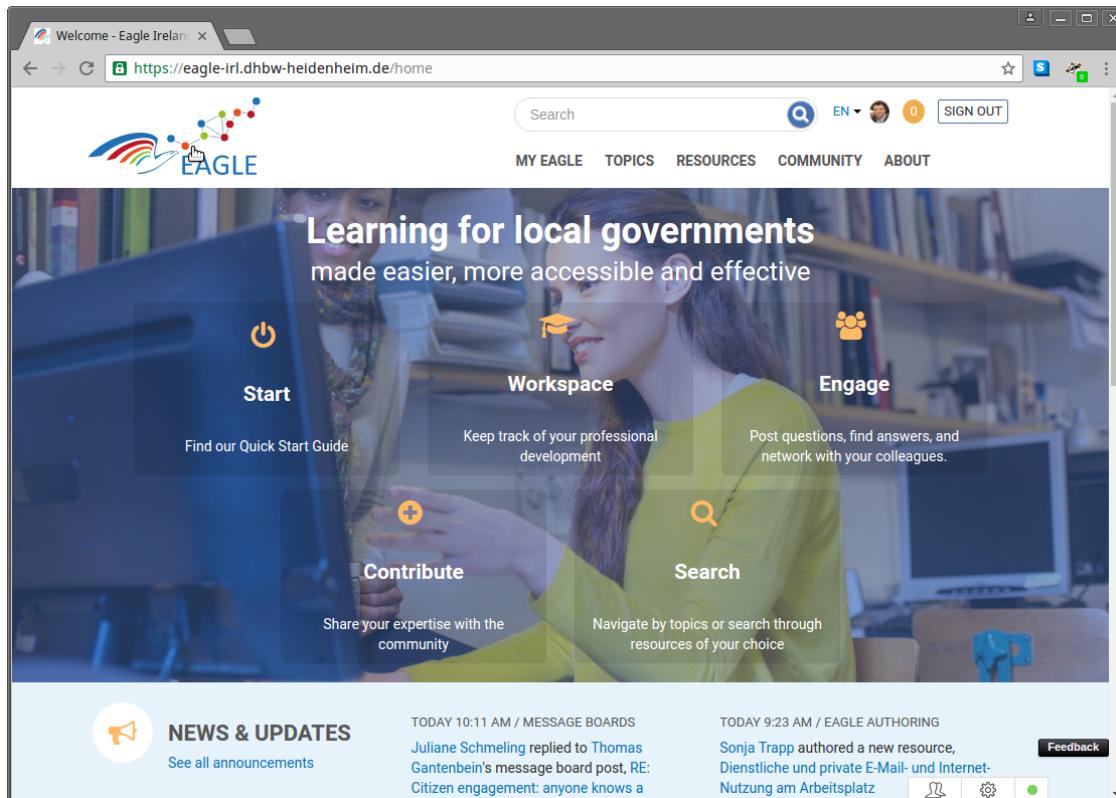
Option

An option is a possible resolution or decision of an issue. For example, if the issue is whether or not a person is entitled to a housing benefit, the options might be "yes" and "no". In general, there can be more than two options.

3 Getting Started

In this section we take a first look at the EAGLE argumentation tool, showing you how to find casebases which have already been created and how to search a casebase for cases similar to some case you are working on and trying to decide. For instructions about how to create a new casebase, see the sections entitled "Defining and Editing Domain Models" and "Creating Casebases".

First, go the home page of the EAGLE platform and login to your account.



Next, click on the "resources" link near the top, righthand side of the page and then check the "Casebase" box in the list of formats on the lefthand side of the page. This will filter the resources to list only casebases, as illustrated below:

The screenshot shows the Eagle Irela web interface at <https://eagle-irl.dhbw-heldenheim.de/resources>. The left sidebar contains several filter categories:

- Portal Scope:** Eagle Ireland (2) (checked)
- Organization Scope:** EAGLE Team (2) (checked)
- Type:** Resource (2) (checked)
- Format:** Casebase (2) (checked)

The main pane displays the results of the search "All (2)". Two items are listed:

- Possession of Wild Animals
- Choosing a car to buy

Below the results, it says "showing results : 1 - 2" and there is a "[1]" button.

We will be using the "Possession of Wild Animals" casebase in this tutorial. Click on the "Posession of Wild Animals" item in the list. This will cause the item to be expanded to display further information, such as the categories and keywords of this casebase resource, as well as the name of its author, the date it was last modified and the number of times it has been viewed:

The screenshot shows the same interface after clicking on the "Possession of Wild Animals" item. The right pane now displays detailed information about this casebase:

- Category:** Environment_Nature and Animals
- Keywords:** law, possession, property, animals
- Description:** Model of the dimensions of wild animal property cases
- Author:** Thomas Gordon
- Last modified:** 14-09-2016 14:28
- Views:** 10
- Rating:** 5 stars

At the bottom of the pane, there is an "eye" icon with the text "showing results : 1 - 2" and a "[1]" button.

Now click on the "eye" icon at the bottom of the pane with this information about the casebase to show a description of the domain model of the casebase.

The screenshot shows the EAGLE Argumentation Tool interface. At the top, there is a navigation bar with links for 'MY EAGLE', 'TOPICS', 'RESOURCES', 'COMMUNITY', and 'ABOUT'. On the right side of the header, there are icons for search, language (EN), user profile, notifications (0), and 'SIGN OUT'. Below the header, a blue banner displays the word 'Argumentation'. The main content area is titled 'Domain Model'. It contains fields for 'Issue' (set to 'Possession of Wild Animals'), 'Options' (list: 'possession', 'no-possession'), and 'Description' (text area containing 'Model of the dimensions of wild animal property cases'). At the bottom of this panel are two buttons: 'Find Cases' and 'New Case'. A cursor arrow is visible on the right side of the page.

To search the casebase for cases similar to the one you are interested in or are working on, click on the "Find Cases" button on the bottom left of the domain model panel. A form for selecting the values ("factors") for each dimension of the domain model for the case you are interested in will be displayed:

The screenshot shows the EAGLE Argumentation Tool interface with the 'Search for Similar Cases' panel open. The panel has a title 'Dimensions' and a section for 'Applicable Convention' with four radio button options: 'full-possession', 'informal-exclude-right', 'social-preference', and 'ac-none' (which is selected). Below this is a section for 'Closeness of Pursuit' with five radio button options: 'physical-possession', 'mortal-wounding', 'certain-capture', and 'hot.pursuit' (the last one is partially visible). At the bottom right of the panel, there is a 'Feedback' button. The overall layout is consistent with the previous screenshot, featuring the same header and sidebar.

Select some factors in the form, changing the default values. For the purposes of this tutorial, it doesn't really matter which factors you select, so feel free to experiment. When you are finished, scroll down to the bottom of the panel, using the inner scrollbar of the panel, not just the scrollbar of the window further to the right, and the click on the "Submit" button.

The screenshot shows a web browser window for the EAGLE Argumentation tool. The URL is https://eagle-irl.dhbw-heldenheim.de/argumentation#_48_INSTANCE_tQh95r0lepwt_=https://carneades.fokus.fraunhofer.de/eagle. The page title is "Argumentation". The top navigation bar includes links for "MY EAGLE", "TOPICS", "RESOURCES", "COMMUNITY", and "ABOUT". A search bar and a sign-out button are also present.

Similar Cases Found

The most similar cases for each option are listed, in order of similarity, showing the most similar cases first.

no-possession

Rank	Title	Decision Year	Similarity
0	Popov v Hayashi	2002	0.58
1	Young v Hitchens	1844	0.57
2	Pierson v Post	1805	0.44

possession

Rank	Title	Decision Year	Similarity
0	Keeble v Hickerhill	1707	0.56
1	Ghen v Rich	1881	0.56

Feedback

A sorted list of similar cases is shown for each possible resolution ("option") of the issue. In the domain model of the casebase for wild animals possession, the options are "no possession" and "possession". In the example, the "Popov v Hayashi" case is the most similar case to the case we are working on in which it was decided that possession was not obtained and "Keeble v Hickerhill" is the case which is most similar to our case in which it was decided that possession was obtained.

The similarity scores are shown on the right for each case. The scores are in the range of 0.0 to 1.0, from least to most similar.

To view more information about a case list, click on the name of the case, for example "Popov v Hayashi":

Argumentation - Eagle

Title: Popov v Hayashi

Citation: WL 31833731 Ca. Sup. Ct. 2002

Year Decided: 2002

Court: California Superior Court

Author of Majority Opinion:

Author of Minority Opinion:

Keywords: possession, conversion, baseball

Language: English

Description: Popov sued Hayashi for conversion, believing that once it had touched his glove the baseball became his and although Hayashi came about it legally, he still had the duty to return it to its rightful owner.

Before the baseball was hit, it was considered property of MLB and after it was hit was considered intentionally

Feedback

Here we see the "metadata" of the case, with such properties as the title of the case, the year it was decided and a description of the material facts of the case. The description of a case may also include the reasoning and arguments used to reach and justify the decision. To see the factors of the case, scroll further down the panel displaying the case.

Argumentation - Eagle

pm-malice

Quarry Land Connection:

- resident
- frequent-visitor
- regular-visitor
- occasional-visitor
- transient
- once-only

Quarry Value:

- market-value
- social-value
- domestic-pet
- personal-value
- qv-none

Find Similar Cases **Argument Map** **Edit** **Delete** **Feedback**

At the bottom of the panel there are several buttons:

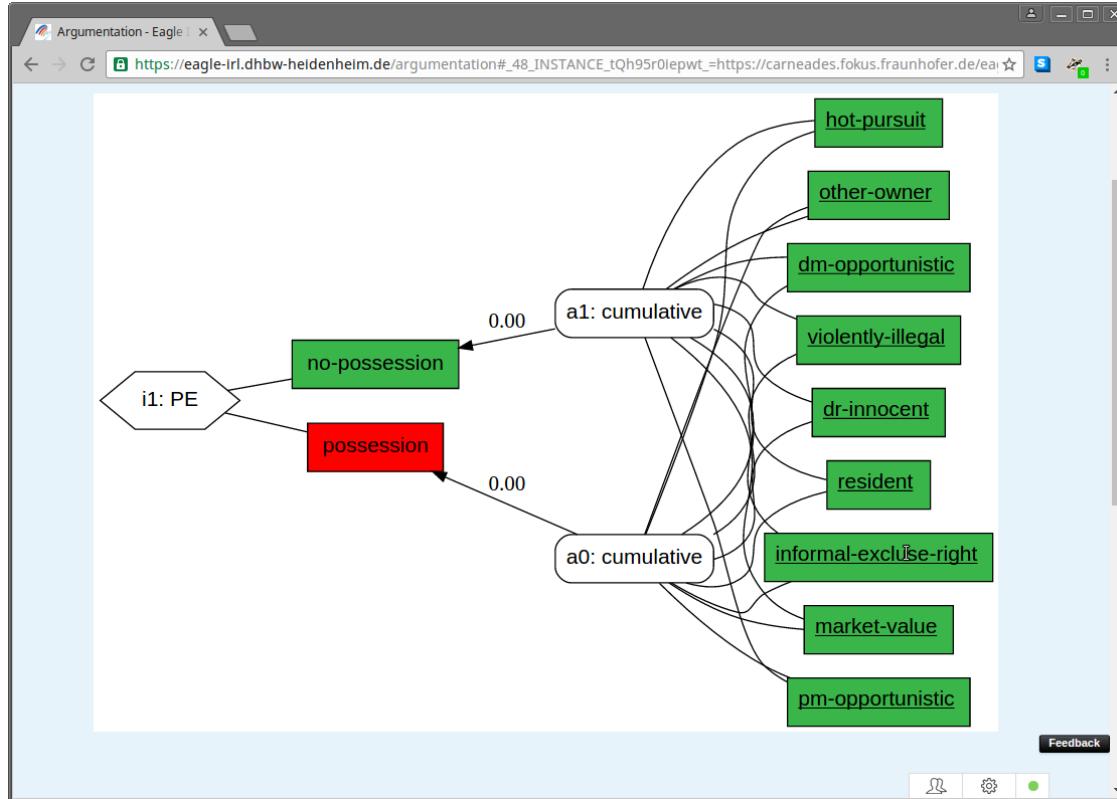
Find Similar Cases for searching again, this time for cases most similar to the case being displayed ("Popov v Hayashi" in the example).

Argument Map for displaying an argument map showing the reasoning behind the decision of the case.

Edit for modifying the case.

Delete for deleting the case from the casibase.

Clicking on the "Argument Map" button causes this diagram to be shown:



The argument map shown in this example is only for the sake of illustration. It is not very informative, since it only shows the factors of the case, on the right, and the decision of the case, "no-possession". A future version of the argumentation tool may provide a user-friendly argument map editor, allowing users to visualize in detail the reasoning from the factors to the decision as well as showing, optionally, how each factor is supported by the material facts of the case and these material facts have been supported by evidence.

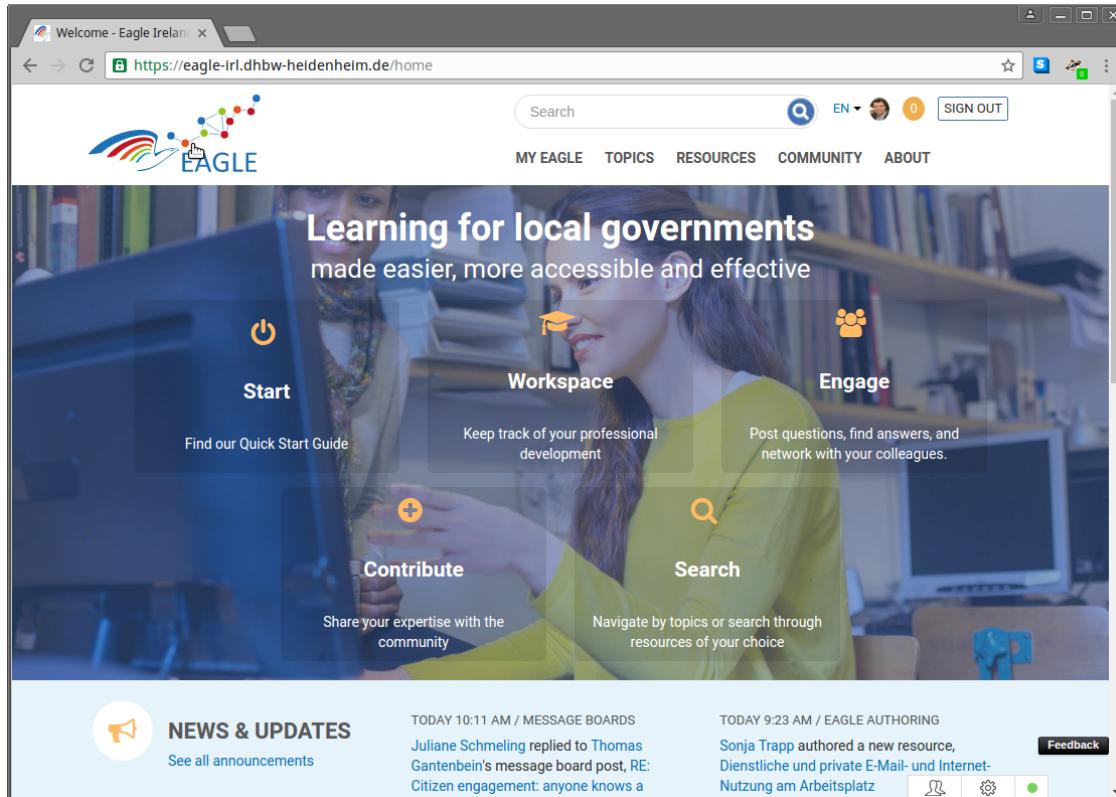
This completes our overview and introduction to the EAGLE Argumentation Tool. For further information, see the instructions for specific tasks in the next section.

4 Task Instructions

4.1 Casebase Tasks

4.1.1 Finding Casebases

First, go the home page of the EAGLE platform and login to your account.



Next, click on the "resources" link near the top, righthand side of the page and then check the "Casebase" box in the list of formats on the lefthand side of the page. This will filter the resources to list only casebases, as illustrated below:

The screenshot shows the Eagle Ireland resources search interface. The main area displays two results: "Possession of Wild Animals" and "Choosing a car to buy". The sidebar on the left contains several filter panels:

- Portal Scope:** Selected "Eagle Ireland" (2).
- Organization Scope:** Selected "EAGLE Team" (2).
- Type:** Selected "Resource" (2).
- Format:** Selected "Casebase" (2).

At the bottom right of the sidebar, there is a "Feedback" button.

We will be using the "Possession of Wild Animals" casebase in this tutorial. Click on the "Posession of Wild Animals" item in the list. This will cause the item to be expanded to display further information, such as the categories and keywords of this casebase resource, as well as the name of its author, the date it was last modified and the number of times it has been viewed:

The screenshot shows the expanded details for the "Possession of Wild Animals" casebase. The expanded pane contains the following information:

- Description:** Model of the dimensions of wild animal property cases
- Category:** Environment, Nature and Animals
- Keywords:** law, possession, property, animals
- Author:** Thomas Gordon
- Last modified:** 14-09-2016 14:28
- Views:** 10
- Rating:** 5 stars
- Actions:** Eye icon (description), bookmark, refresh, edit, delete.

At the bottom right of the expanded pane, there is an "Eye" icon.

Now click on the "eye" icon at the bottom of the pane with this information about the casebase to show a description of the domain model of the casebase.

The screenshot shows the EAGLE Argumentation interface. At the top, there's a navigation bar with links for 'MY EAGLE', 'TOPICS', 'RESOURCES', 'COMMUNITY', and 'ABOUT'. A search bar and a sign-out button are also present. The main content area has a blue header 'Argumentation'. Below it, a section titled 'Domain Model' contains fields for 'Issue' (set to 'Possession of Wild Animals'), 'Options' (list: 'possession', 'no-possession'), and 'Description' (text: 'Model of the dimensions of wild animal property cases'). At the bottom of this section are 'Find Cases' and 'New Case' buttons. The right side of the interface includes a sidebar with icons for user profile, settings, and feedback.

4.1.2 Creating Caselines

First, go the home page of the EAGLE platform and login to your account.

The screenshot shows the EAGLE platform home page. It features a banner with the text 'Learning for local governments made easier, more accessible and effective'. Below the banner are six service icons: 'Start' (with a power icon), 'Workspace' (with a graduation cap icon), 'Engage' (with a people icon), 'Contribute' (with a plus icon), 'Search' (with a magnifying glass icon), and 'Find our Quick Start Guide', 'Keep track of your professional development', and 'Post questions, find answers, and network with your colleagues.' respectively. At the bottom, there's a 'NEWS & UPDATES' section with a megaphone icon, a link to 'See all announcements', and two message board entries: one from 'Juliane Schmeling' and another from 'Sonja Trapp'. The right side of the page includes a sidebar with icons for user profile, settings, and feedback.

Next, click on the "My Eagle" button near the top of the page and click on the "Casebase" button in the list of resource tool on the right:

The screenshot shows the EAGLE Studio interface. On the left is a sidebar with links: Dashboard, Studio (which is selected), My Resources, My Network, My Groups, My Forums, My Blogs, and My Wiki. The main area has a blue header bar with the word "Studio". Below it, there are two tabs: "Notes" (selected) and "Vault". The "Notes" tab contains a text input field with placeholder text: "add your notes here (up to 5000 characters) - they will be saved automatically". To the right of the notes area is a sidebar titled "Contribute and engage" which includes links for "See demo", "Resource Tools" (with sub-links for Text, Presentation, Audio, Video, Picture), "Casebase", and "Test Item".

This will cause a form like the one shown below, for entering new casebases, to be displayed:

The screenshot shows the EAGLE Authoring interface. The left sidebar is identical to the Studio interface. The main area has a blue header bar with the word "Authoring". Below it, there are four tabs: "1. Metadata" (selected), "2. Resource", "3. Categorize", and "4. Publish". The "1. Metadata" tab contains fields for Title*, Description*, Keywords*, and Language*. Below these fields is a "Type*" section with radio buttons for TEXT, PRESENTATION, AUDIO, VIDEO, IMAGE, CASEBASE, TEST, INTERACTIVE, and OTHER. At the bottom of the form is a note: "Choose the type of resource you would like to create. A resource editor wo" followed by a set of icons.

Enter the requested information and then click on the "Next" button at the bottom of the page. This will cause a form for entering the domain model of the new case base to be displayed:

The screenshot shows the EAGLE Authoring interface. The top navigation bar includes links for MY EAGLE, TOPICS, RESOURCES, COMMUNITY, and ABOUT. The main title is "Authoring". Below it, a horizontal menu bar shows "1. Metadata", "2. Resource" (which is highlighted in blue), "3. Categorize", and "4. Publish". On the left, a sidebar lists "Dashboard", "Studio", "My Resources", "My Network", "My Groups", "My Forums", "My Blogs", and "My Wiki". The main content area contains a large text input field with the following JSON code:

```

1 {
  "Description": "Model of the dimensions of wild animal property cases",
  "Issue": "Possession of Wild Animals",
  "Options": [
    "possession",
    "no-possession"
  ],
  "Statements": [],
  "Dimensions": {
    "AC": [
      {
        "Default": "ac-none",
        "Description": "Applicable Convention",
        "Factors": [
          "full-possession",
          "informal-exclude-right",
          "social-preference",
          "ac-none"
        ]
      }
    ],
    "COP": [
      {
        "Default": "cop-none",
        "Description": "Closeness of Pursuit",
        "Factors": [
          "physical-possession",
          "mortal-wounding",
          "certain-capture",
          "hot-pursuit",
          "chasing",
          "started-pursuit",
          "cop-none"
        ]
      }
    ],
    "DM": [
      {
        "Default": "dm-pleasure",
        "Description": "Motive of Party Denying the Possession Claim",
        "Factors": [
          ...
        ]
      }
    ]
  }
}

```

Copy and paste the domain model, which should be in JSON format, into the provided text box of the form:

The screenshot shows the EAGLE Authoring interface with the domain model JSON pasted into the text input field. The JSON code is identical to the one shown in the previous screenshot. The text area has line numbers on the left and a scroll bar on the right.

Scroll to the bottom of the page and click on the "Next" button. This will cause a page to be displayed for classifying the new casebase:

The screenshot shows the EAGLE Authoring interface. At the top, there's a navigation bar with links for 'MY EAGLE', 'TOPICS', 'RESOURCES', 'COMMUNITY', and 'ABOUT'. A 'SIGN OUT' button is also present. Below the navigation is a blue header bar with the word 'Authoring' in white. The main content area has a sidebar on the left containing links for 'Dashboard', 'Studio', 'My Resources', 'My Network', 'My Groups', 'My Forums', 'My Blogs', and 'My Wiki'. The main panel is titled 'Choose the Topic and Sub Topic to categorize your resource'. It has two sections: 'Topics' and 'Sub Topics'. The 'Topics' section lists: Administration, Organisation and Policy; Automobile, Transport and Infrastructure; Economy and Tourism; Education and Science; Environment, Nature and Animals; Family and Partnership; Health and Healthcare; Housing and Building; Labor, Career and Social Welfare; Migration and Integration; Recreation, Culture and Sports; Registration System and Order; Safety and Emergencies; Taxes, Finances and Law. The 'Sub Topics' section is currently empty. At the bottom of the main panel are 'Feedback' and 'Help' buttons. A progress bar at the top indicates the current step is '3. Categorize'.

After selecting a topic and subtopic for the casebase, click on the "Next" button. This will display an encouraging message if everything goes well:

The screenshot shows the EAGLE Authoring interface after a successful categorization step. The main panel displays a message: 'Congratulations!!! The authoring of your resource is almost complete. Click the finish button to publish your resource.' At the bottom of the main panel are 'Cancel', 'Back', 'Next', and 'Finish' buttons. The 'Finish' button is highlighted in blue, indicating it is the next action to be taken. The sidebar on the left remains the same as in the previous screenshot.

Finally, click on the "Finish" button to complete the process. Or, alternatively, click on the "Cancel" button to abort the process.

4.1.3 Editing Casebases

First, go the home page of the EAGLE platform and login to your account.

Welcome - Eagle Ireland

https://eagle-irl.dhbw-heidenheim.de/home

EAGLE

MY EAGLE TOPICS RESOURCES COMMUNITY ABOUT

Learning for local governments made easier, more accessible and effective

Start

Find our Quick Start Guide

Workspace

Keep track of your professional development

Engage

Post questions, find answers, and network with your colleagues.

Contribute

Share your expertise with the community

Search

Navigate by topics or search through resources of your choice

NEWS & UPDATES

See all announcements

TODAY 10:11 AM / MESSAGE BOARDS

Juliane Schmeling replied to Thomas Gantenbein's message board post, RE: Citizen engagement: anyone knows a

TODAY 9:23 AM / EAGLE AUTHORIZING

Sonja Trapp authored a new resource, Dienstliche und private E-Mail- und Internet-Nutzung am Arbeitsplatz

Feedback

Next, click on the "My Eagle" button near the top of the page. This will cause a page like the following to be displayed:

Studio - Eagle Ireland

https://eagle-irl.dhbw-heidenheim.de/studio

EAGLE

MY EAGLE TOPICS RESOURCES COMMUNITY ABOUT

Studio

Dashboard

Studio

My Resources

My Network

My Groups

My Forums

My Blogs

My Wiki

Notes

add your notes here (up to 5000 characters) - they will be saved automatically

Vault

Add link Add file

http:// ...

Add

Contribute and engage

Use the Contribute tools to create a document or other resource. Use the Engage tools for collaboration.

See demo

Resource Tools

Text

Presentation

Audio

Video

Picture

Casebase

Test Item

Feedback

Click on the "My Resources" button on the left. This will cause a list of the resources you have created to be displayed:

The screenshot shows the EAGLE My Resources interface. On the left, there's a sidebar with links: Dashboard, Studio (selected), My Resources, My Network, My Groups, My Forums, My Blogs, and My Wiki. The main area displays a list of resources under 'My Resources'. The first two items are 'Choosing a car to buy' and 'Possession of Wild Animals'. A search bar at the top has 'sort results' dropdown set to 'All'. To the right, a 'Contribute and engage' sidebar lists various resource types: Text, Presentation, Audio, Video (selected), Picture, Casebase, Test Item, and Interactive. A 'See demo' button is also present.

Click on the title of the casebase you would like to edit, for example the casebase for the possession of wild animals. This will cause further information about the casebase to be displayed:

The screenshot shows the EAGLE My Resources interface after clicking on the 'Possession of Wild Animals' casebase. The 'My Resources' sidebar is still visible. The main area now displays detailed information for the selected casebase. At the top, it says 'Possession of Wild Animals'. Below that, there's a table with columns: Category (Model of the dimensions of wild animal property cases), Keywords (Environment, Nature and Animals, law, possession, Keeping of Animals and Animal Protection, property, animals), Author (Thomas Gordon), Last modified (14-09-2016 14:28), and Views (14). There are also five star ratings. On the right, the 'Contribute and engage' sidebar is visible with the 'Casebase' option selected.

Now click on the edit icon, the icon with the pencil, on the bottom right of the panel displaying the information about the casebase. This will cause a form to be displayed for editing the casebase, similar to the form used to create new casesbases, but with the current information about the case displayed:

The rest of the editing procedure is the same as for creating new cases. Just follow the online instructions, complete the series of forms and then click either "Cancel" or "Finish".

4.1.4 Deleting Casebases

First, go the home page of the EAGLE platform and login to your account.

Next, click on the "My Eagle" button near the top of the page. This will cause a page like the following to be displayed:

The screenshot shows the EAGLE Studio interface. On the left, there is a sidebar with various buttons: Dashboard, Studio (which is selected), My Resources (highlighted in blue), My Network, My Groups, My Forums, My Blogs, and My Wiki. The main area is titled "Studio". It has two main sections: "Notes" and "Vault". The "Notes" section has a text input field with placeholder text: "add your notes here (up to 5000 characters) - they will be saved automatically". To the right of the notes section is a sidebar titled "Contribute and engage" which includes buttons for "See demo", "Resource Tools", "Text", "Presentation", "Audio", "Video", "Picture", and "Casebase". Below these are buttons for "Test Item", "Interactive", and "Feedback".

Click on the "My Resources" button on the left. This will cause a list of the resources you have created to be displayed:

The screenshot shows the EAGLE My Resources interface. The left sidebar is identical to the Studio interface, with "My Resources" selected. The main area is titled "My Resources". It displays a list of resources: "Choosing a car to buy" and "Possession of Wild Animals". A message "showing results : 1 - 2" is visible between the two items. To the right of the list is a sidebar titled "Contribute and engage" with buttons for "See demo", "Text", "Presentation", "Audio", "Video" (which is highlighted in green), "Picture", "Casebase", "Test Item", "Interactive", and "Feedback".

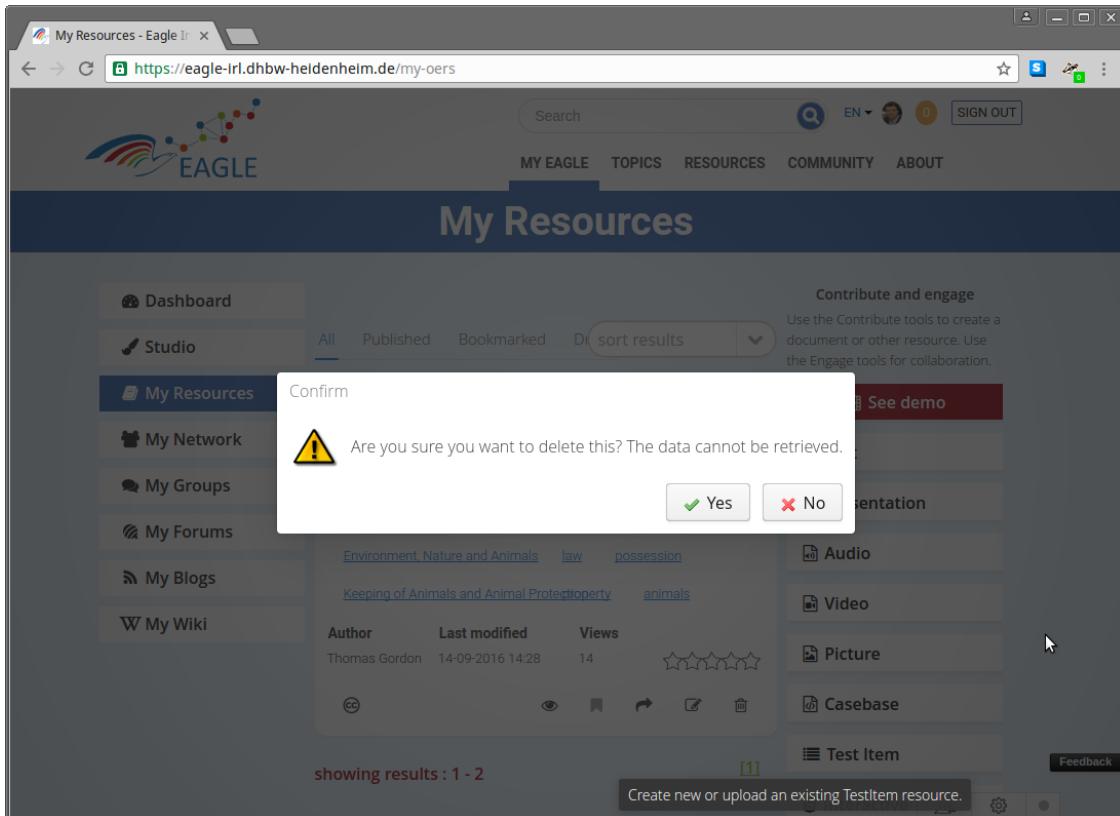
Click on the title of the casebase you would like to edit, for example the casebase for the possession of wild animals. This will cause further information about the casebase to be displayed:

The screenshot shows the EAGLE My Resources page. On the left, there's a sidebar with links like Dashboard, Studio, My Resources (which is selected), My Network, My Groups, My Forums, My Blogs, and My Wiki. The main area displays a list of resources. One resource is highlighted: "Possession of Wild Animals". It has a description: "Model of the dimensions of wild animal property cases". Below it, there are sections for Category (Environment, Nature and Animals, law, possession) and Keywords (Keeping of Animals and Animal Protection, property, animals). There are also columns for Author (Thomas Gordon), Last modified (14-09-2016 14:28), and Views (14). At the bottom, there are edit and delete icons. To the right, there's a sidebar titled "Contribute and engage" with options like See demo, Text, Presentation, Audio, Video, Picture, Casebase, Test Item, and Interactive. A feedback button is also present.

Now click on the trash can icon, on the bottom right of the panel, displaying the information about the casebase. This will cause the case displayed:

The screenshot shows the EAGLE Authoring interface. The left sidebar is identical to the My Resources page. The main area is titled "Authoring" and has four tabs: 1. Metadata (selected), 2. Resource, 3. Categorize, and 4. Publish. The "1. Metadata" tab contains fields for Title (Possession of Wild Animals), Description (Model of the dimensions of wild animal property cases), Keywords (possession,animals,law,property), and Language (English). Below these, there's a section for Type with radio buttons for TEXT, PRESENTATION, VIDEO, IMAGE, CASEBASE, TEST, INTERACTIVE, and OTHER. A note says "Choose the type of resource you would like to create. A resource editor" followed by a toolbar with icons for text, presentation, audio, video, picture, casebase, test item, and interactive. A feedback button is also present.

The rest of the editing procedure is the same as for creating new cases. Just follow the online instructions, complete the series of forms and then click either "Cancel" or "Finish".



Click on "Yes" to confirmation the deletion, or "No" to cancel the operation.

4.2 Case Tasks

4.2.1 Finding Cases

To search the casebase for cases similar to the one you are interested in or are working on, click on the "Find Cases" button on the bottom left of the domain model panel. A form for selecting the values ("factors") for each dimension of the domain model for the case you are interested in will be displayed:

The screenshot shows a web browser window for the EAGLE Argumentation tool. The URL is https://eagle-irl.dhbw-heidenheim.de/argumentation#_48_INSTANCE_tQh95r0lepwt=https://carneades.fokus.fraunhofer.de/eagle. The page has a dark blue header with the EAGLE logo and navigation links for MY EAGLE, TOPICS, RESOURCES, COMMUNITY, and ABOUT. Below the header is a large blue bar with the word 'Argumentation'. The main content area is titled 'Search for Similar Cases' and contains two sections: 'Dimensions' and 'Closeness of Pursuit'. Under 'Dimensions', there is a list of four options: 'full-possession', 'informal-exclude-right', 'social-preference', and 'ac-none', with 'ac-none' being selected. Under 'Closeness of Pursuit', there is a list of four options: 'physical-possession', 'mortal-wounding', 'certain-capture', and 'hot-pursuit', with 'physical-possession' being selected. At the bottom right of the form, there is a 'Feedback' button.

Select some factors in the form, changing the default values. For the purposes of this tutorial, it doesn't really matter which factors you select, so feel free to experiment. When you are finished, scroll down to the bottom of the panel, using the inner scrollbar of the panel, not just the scrollbar of the window further to the right, and the click on the "Submit" button.

The screenshot shows a web browser window for the EAGLE Argumentation tool. The URL is https://eagle-irl.dhbw-heldenheim.de/argumentation#_48_INSTANCE_tQh95r0lepwt_=https://carneades.fokus.fraunhofer.de/eagle. The page title is "Argumentation". The top navigation bar includes links for "MY EAGLE", "TOPICS", "RESOURCES", "COMMUNITY", and "ABOUT". A search bar and a sign-out button are also present.

Similar Cases Found

The most similar cases for each option are listed, in order of similarity, showing the most similar cases first.

no-possession

Rank	Title	Decision Year	Similarity
0	Popov v Hayashi	2002	0.58
1	Young v Hitchens	1844	0.57
2	Pierson v Post	1805	0.44

possession

Rank	Title	Decision Year	Similarity
0	Keeble v Hickerhill	1707	0.56
1	Ghen v Rich	1881	0.56

Feedback

A sorted list of similar cases is shown for each possible resolution ("option") of the issue. In the domain model of the casebase for wild animals possession, the options are "no possession" and "possession". In the example, the "Popov v Hayashi" case is the most similar case to the case we are working on in which it was decided that possession was not obtained and "Keeble v Hickerhill" is the case which is most similar to our case in which it was decided that possession was obtained.

The similarity scores are shown on the right for each case. The scores are in the range of 0.0 to 1.0, from least to most similar.

4.2.2 Viewing Case Metadata

First search for cases similar to the case you are working on. The similar cases will be listed as shown in the example below.

The screenshot shows the EAGLE Argumentation tool's interface. At the top, there is a navigation bar with links for 'MY EAGLE', 'TOPICS', 'RESOURCES', 'COMMUNITY', and 'ABOUT'. A 'SIGN OUT' button is also present. The main title 'Argumentation' is displayed in a large blue header. Below the header, a section titled 'Similar Cases Found' lists cases based on similarity. There are two sections: 'no-possession' and 'possession'. Each section contains a table with columns for Rank, Title, Decision Year, and Similarity.

Rank	Title	Decision Year	Similarity
0	Popov v Hayashi	2002	0.58
1	Young v Hitchens	1844	0.57
2	Pierson v Post	1805	0.44

Rank	Title	Decision Year	Similarity
0	Keeble v Hickergill	1707	0.56
1	Ghen v Rich	1881	0.56

At the bottom right of the interface, there are several small icons for feedback and user interaction.

To view the metadata of one of cases found, click on the title of the case in the list. For example, clicking on "Young v Hitchens" will then show:

The screenshot shows the properties of the case 'Young v Hitchens'. The title of the case is displayed at the top. Below it, there is a section titled 'Properties' containing various metadata fields. The fields include:

- Title: Young v Hitchens
- Citation: Young v Hitchens 1844
- Year Decided: 1844
- Court: Queen's Bench
- Author of Majority Opinion: (empty field)
- Author of Minority Opinion: (empty field)
- Keywords: possession, wild animals, fishing
- Language: English

At the bottom right of the interface, there are several small icons for feedback and user interaction.

Here we see the "metadata" of the case, with such properties as the title of the case, the year it was decided and a description of the material facts of the case. The description of a case may also include the reasoning and arguments used to reach and justify the decision. To see the decision and factors of the case, scroll further down the panel displaying the case.

Argumentation - Eagle | X

https://eagle-irl.dhbw-heldenheim.de/argumentation#_48_INSTANCE_tQh95r0lepwt_=https://carneades.fokus.fraunhofer.de/eagle

Case Decision:

no-possession
 possession

Case Factors

Applicable Convention:

full-possession
 informal-exclude-right
 social-preference
 ac-none

Closeness of Pursuit:

physical-possession
 mortal-wounding
 certain-capture
 hot-pursuit
 chasing
 started-pursuit

Feedback

4.2.3 Viewing Argument Maps

First view the metadata of the case you are interested in. At the bottom of the metadata panel there are several buttons:

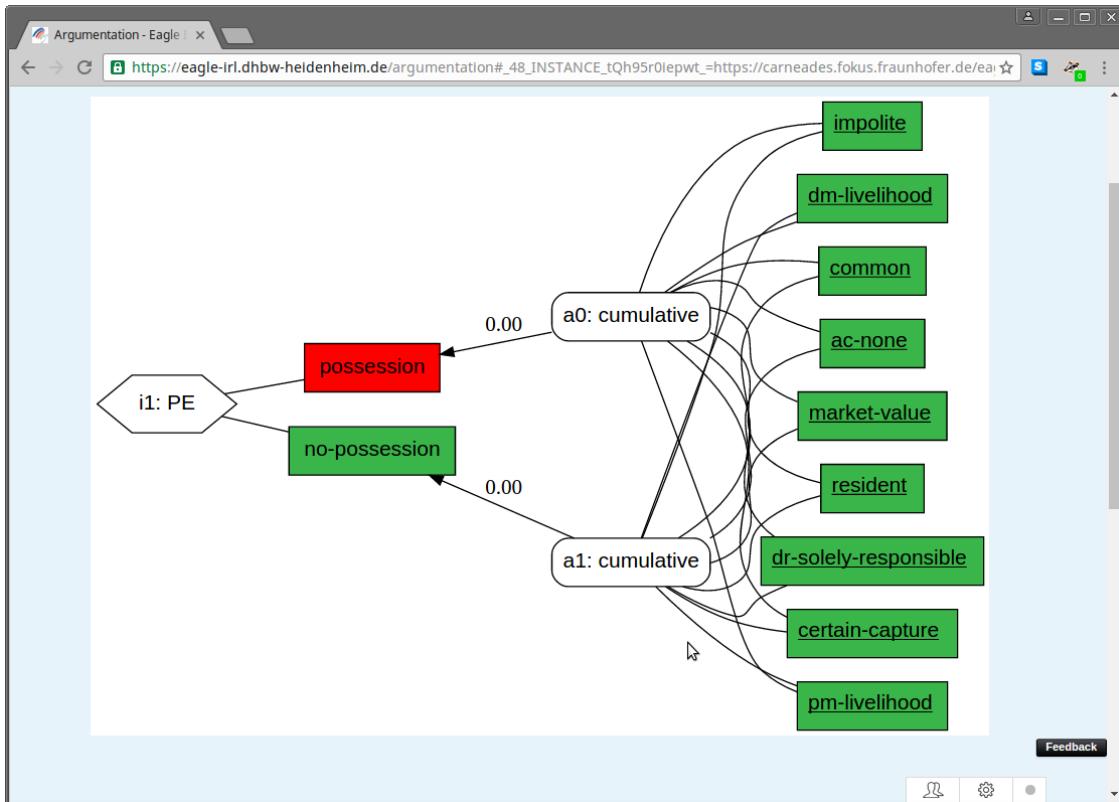
Find Similar Cases for searching again, this time for cases most similar to the case being displayed ("Popov v Hayashi" in the example).

Argument Map for displaying an argument map showing the reasoning behind the decision of the case.

Edit for modifying the case.

Delete for deleting the case from the casibase.

Clicking on the "Argument Map" button causes this diagram to be shown:



The argument map shown in this example is only for the sake of illustration. It is not very informative, since it only shows the factors of the case, on the right, and the decision of the case, "no-possession". A future version of the argumentation tool may provide a user-friendly argument map editor, allowing users to visualize in detail the reasoning from the factors to the decision as well as showing, optionally, how each factor is supported by the material facts of the case and these material facts have been supported by evidence.

4.2.4 Entering Cases

First find the casebase which you want to enter a new case, for example the casebase about the possession of wild animals. You should see a page which looks like the one below, with a panel displaying the metadata of the casebase:

The screenshot shows the EAGLE Argumentation tool interface. At the top, there is a navigation bar with links for 'MY EAGLE', 'TOPICS', 'RESOURCES', 'COMMUNITY', and 'ABOUT'. On the right side of the header, there are icons for search, language (EN), user profile, notifications (0), and 'SIGN OUT'. Below the header, a blue banner displays the word 'Argumentation'. The main content area is titled 'Domain Model'. It contains sections for 'Issue' (with the value 'Possession of Wild Animals'), 'Options' (listing 'possession' and 'no-possession'), and 'Description' (with the value 'Model of the dimensions of wild animal property cases'). At the bottom of this panel are two buttons: 'Find Cases' and 'New Case'. A cursor arrow is visible on the right side of the screen.

Next, click on the "New Case" button at the bottom of the panel displaying the metadata of the casebase. This will cause a form to be displayed for entering the metadata, description and factors of the new case:

The screenshot shows the EAGLE Argumentation tool interface with the 'New Case Form' panel open. The panel has a title 'New Case Form'. It contains several input fields: 'Title' (with an empty input field), 'Citation' (with an empty input field), 'Year Decided' (with an empty input field), 'Court' (with an empty input field), 'Author of Majority Opinion' (with an empty input field), 'Author of Minority Opinion' (with an empty input field), and 'Keywords' (with an empty input field). At the bottom right of the panel, there is a 'Feedback' button and a set of small icons. A cursor arrow is visible on the right side of the screen.

After entering the requested information, click on the "Submit" button at the bottom of the panel to upload the case to the casebase:

The screenshot shows a web-based application window titled "Argumentation - Eagle". The URL in the address bar is https://eagle-irl.dhbw-heidenheim.de/argumentation#_48_INSTANCE_tQh95r0lepwt_=https://carneades.fokus.fraunhofer.de/eagle. The main content area contains three groups of radio buttons:

- Case Factor:**
 - resident
 - frequent-visitor
 - regular-visitor
 - occasional-visitor
 - transient
 - once-only
- Quarry Value:**
 - market-value
 - social-value
 - domestic-pet
 - personal-value
 - qv-none
- Case Decision:**
 - possession
 - no-possession

At the bottom left is a "Submit" button, and at the bottom right is a "Feedback" button.

4.2.5 Editing Cases

First navigate to the page for viewing the metadata, description and factors of the case you want to edit, for example by clicking on the title of the case in a list of similar cases:

The screenshot shows the EAGLE Argumentation interface with a blue header bar containing the EAGLE logo and navigation links: MY EAGLE, TOPICS, RESOURCES, COMMUNITY, ABOUT, and SIGN OUT. Below the header is a large blue banner with the word "Argumentation". The main content area is titled "Similar Cases Found" and contains the following text: "The most similar cases for each option are listed, in order of similarity, showing the most similar cases first." There are two sections: "no-possession" and "possession", each with a table of similar cases.

Rank	Title	Decision Year	Similarity
0	Popov v Hayashi	2002	0.58
1	Young v Hitchens	1844	0.57
2	Pierson v Post	1805	0.44

Rank	Title	Decision Year	Similarity
0	Keeble v Hickergill	1707	0.56
1	Ghen v Rich	1881	0.56

At the bottom right is a "Feedback" button.

Let's suppose you want to edit the "Popov v Hayashi" case. Clicking the title of the case in the list will display a page showing its metadata, description, and factors:

Argumentation - Eagle | X

https://eagle-irl.dhbw-heidenheim.de/argumentation#_48_INSTANCE_tQh95r0lepwt_=https://carneades.fokus.fraunhofer.de/eagle

Title:
Popov v Hayashi

Citation:
WL 31833731 Ca. Sup. Ct. 2002

Year Decided:
2002

Court:
California Superior Court

Author of Majority Opinion:

Author of Minority Opinion:

Keywords:
possession, conversion, baseball

Language:
English

Description:
Popov sued Hayashi for conversion, believing that once it had touched his glove the baseball became his and although Hayashi came about it legally, he still had the duty to return it to its rightful owner.

Before the baseball was hit, it was considered property of MLB and after it was hit was considered intentionally

Feedback

Next, scroll to the bottom of panel to reveal the menu of buttons:

Argumentation - Eagle | X

https://eagle-irl.dhbw-heidenheim.de/argumentation#_48_INSTANCE_tQh95r0lepwt_=https://carneades.fokus.fraunhofer.de/eagle

pm-malice

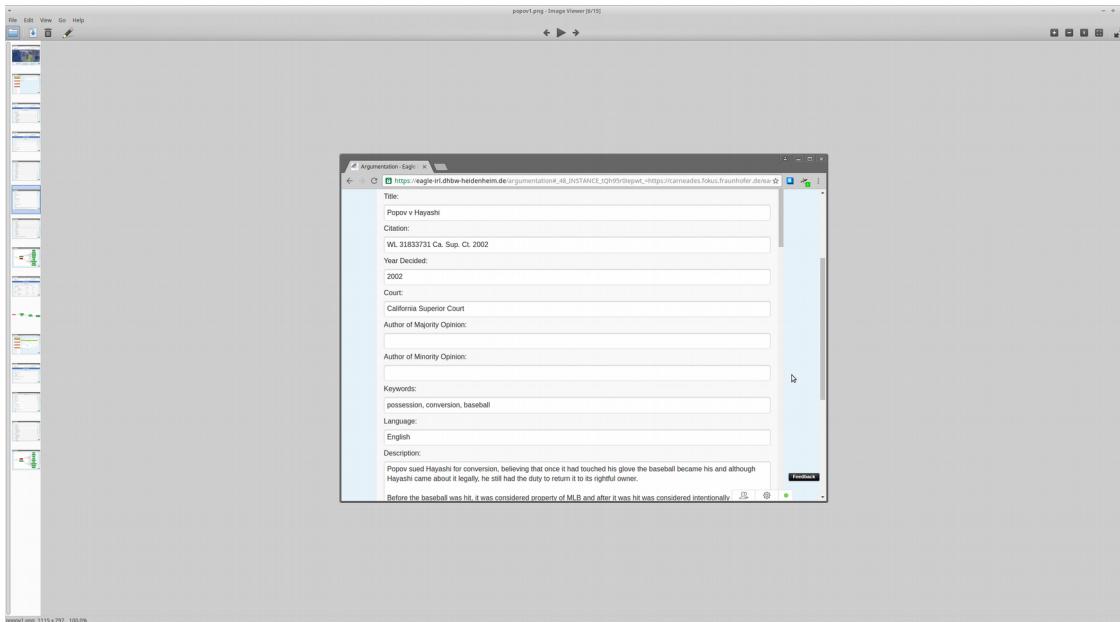
Quarry Land Connection:
 resident
 frequent-visitor
 regular-visitor
 occasional-visitor
 transient
 once-only

Quarry Value:
 market-value
 social-value
 domestic-pet
 personal-value
 qv-none

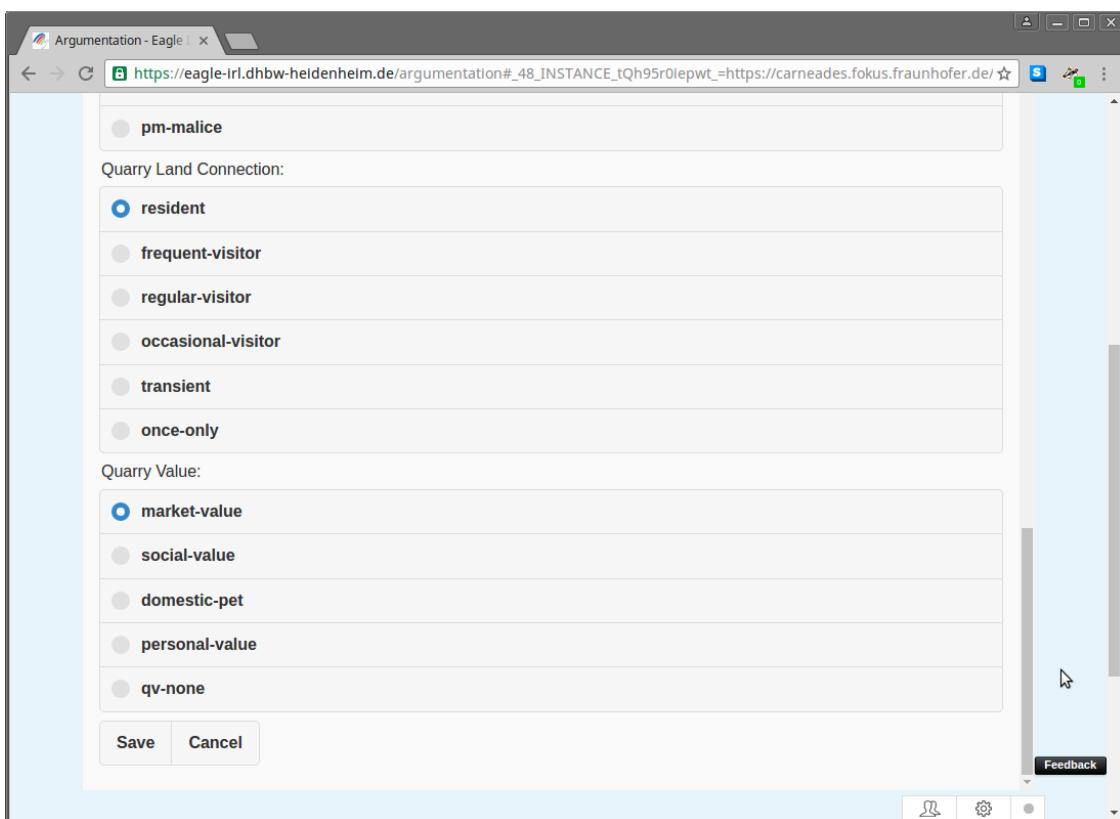
Find Similar Cases Argument Map Edit Delete

Feedback

Click on the "Edit" button. This will display the same form used to view the case, but no in editing mode:



Modify the case to your likely using the form and then scroll down to the bottom of the pane, to reveal the command buttons:



Click on the "Cancel" button to cancel your modifications, or the "Save" button to upload the modifications to casebase, replacing the prior version of the case. Saving the case will cause a confirmation panel to be displayed:

The screenshot shows the EAGLE Argumentation tool's user interface. At the top, there is a navigation bar with links for 'MY EAGLE', 'TOPICS', 'RESOURCES', 'COMMUNITY', and 'ABOUT'. On the right side of the top bar, there are icons for language ('EN'), user profile, notifications (0), and 'SIGN OUT'. Below the top bar, a blue header bar displays the word 'Argumentation'. In the main content area, a light gray box contains the text 'Case Changes Saved!'. Below this, a section titled 'Actions' contains three buttons: 'View Case', 'Argument Map', and 'Home'. In the bottom right corner of the main content area, there is a 'Feedback' button and a row of small icons.

4.2.6 Deleting Cases

First navigate to the page for viewing the metadata, description and factors of the case you want to edit, for example by clicking on the title of the case in a list of similar cases:

The screenshot shows the EAGLE Argumentation tool's user interface. At the top, there is a navigation bar with links for 'MY EAGLE', 'TOPICS', 'RESOURCES', 'COMMUNITY', and 'ABOUT'. On the right side of the top bar, there are icons for language ('EN'), user profile, notifications (0), and 'SIGN OUT'. Below the top bar, a blue header bar displays the word 'Argumentation'. In the main content area, a light gray box contains the text 'Similar Cases Found'. Below this, a message states: 'The most similar cases for each option are listed, in order of similarity, showing the most similar cases first.' There are two sections: 'no-possession' and 'possession'. Each section contains a table with columns for Rank, Title, Decision Year, and Similarity. A cursor is visible over the 'Similarity' column of the second row in the 'no-possession' section.

Rank	Title	Decision Year	Similarity
0	Popov v Hayashi	2002	0.58
1	Young v Hitchens	1844	0.57
2	Pierson v Post	1805	0.44

Rank	Title	Decision Year	Similarity
0	Keeble v Hickergill	1707	0.56
1	Ghen v Rich	1881	0.56

Let's suppose you want to edit the "Popov v Hayashi" case. Clicking the title of the case in the list will display a page showing its metadata, description, and factors:

Argumentation - Eagle | X

https://eagle-irl.dhbw-heidenheim.de/argumentation#_48_INSTANCE_tQh95r0lepwt_=https://carneades.fokus.fraunhofer.de/eagle

Title:
Popov v Hayashi

Citation:
WL 31833731 Ca. Sup. Ct. 2002

Year Decided:
2002

Court:
California Superior Court

Author of Majority Opinion:

Author of Minority Opinion:

Keywords:
possession, conversion, baseball

Language:
English

Description:
Popov sued Hayashi for conversion, believing that once it had touched his glove the baseball became his and although Hayashi came about it legally, he still had the duty to return it to its rightful owner.

Before the baseball was hit, it was considered property of MLB and after it was hit was considered intentionally

Feedback

Next, scroll to the bottom of panel to reveal the menu of buttons:

Argumentation - Eagle | X

https://eagle-irl.dhbw-heidenheim.de/argumentation#_48_INSTANCE_tQh95r0lepwt_=https://carneades.fokus.fraunhofer.de/eagle

pm-malice

Quarry Land Connection:
 resident
 frequent-visitor
 regular-visitor
 occasional-visitor
 transient
 once-only

Quarry Value:
 market-value
 social-value
 domestic-pet
 personal-value
 qv-none

Find Similar Cases Argument Map Edit Delete Feedback

Click on the "Delete" Button. The case will be deleted from the casibase.

Warning: There is no warning asking you to confirm the deletion.

After deleting the case, you will be shown the list of available casesbases.

Click on the title of a casibase, if you would like to continue working with one.

5 Credits

The EAGLE Argumentation Tool has been built using the argumentation system.

- Conception and Design
 - Tom Gordon
- Programming
 - Tom Gordon
 - Horst Friedrich
 - Arun Prakash

6 User Manual License



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