

**Biofinity Intelligent Wiki
Classroom User Manual**

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1. Introduction

In this user manual, we describe how to use the various features of the Biofinity Intelligent Wiki. It is split into four sections: 1) an introduction to the wiki, 2) basic features common to most wikis, 3) advanced features popular in Web 2.0 applications, and 4) intelligent features.

1.1. Background

The Biofinity Intelligent Wiki provides Biofinity users with an editable space to share information through wiki pages, carry on conversations through threaded comments, and other activities useful to collaborating students.

Wiki pages can be either private (unpublished) or public (published), where the former can be viewed and manipulated by only the members of the group owning the page, while the latter can be used by members of any group (including an anonymous “guest” user).

1.2. Getting Started

To begin using the Biofinity Intelligent Wiki, please browse to <http://iamas.unl.edu/wiki>. You will begin as a guest user and can view all public content in the Wiki. To interact with private content for your particular group, please login as a user by clicking the login option in the top right of the screen, then follow the prompts.

Please note that due to the use of Javascript in the Biofinity Intelligent Wiki, it is highly recommended that you use the **Firefox** browser (available for free [online](#)) for the best user experience. This browser is available for all operating systems (e.g., Windows, OS X, Linux).

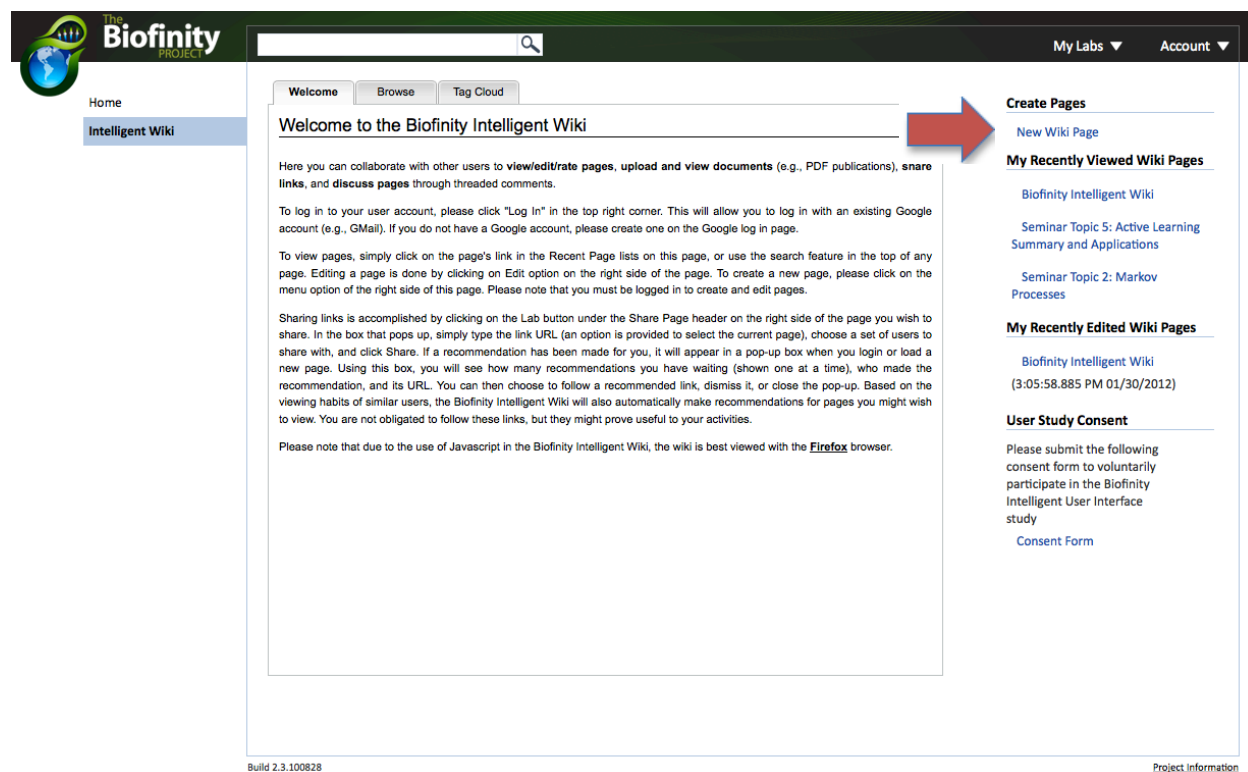
2. Basic Features

The Biofinity Intelligent Wiki contains all of the basic features you expect from a wiki. These features include the ability to: 1) create, 2) view, 3) edit, and 4) delete pages, as well as 5) browse and (6) search for pages. Also, a user can 7) upload and 8) download multimedia and other related files to pages, as well as 9) publish or unpublish pages to control public access to the page, and 10) lock or unlock pages to control page editing. Finally, a user can also 11) view a page's entire history through its tracked revisions, and 12) set the main revision for a page (i.e., the default revision viewed when reaching a page).

2.1. Creating Wiki Pages

To create a new wiki page, please follow these steps:

1. Navigate to the main wiki home page at <http://iamas.unl.edu/wiki> or click on the "Intelligent Wiki" menu on the left side of the Biofinity interface. Make sure you are logged in with a user account.



The screenshot shows the Biofinity Intelligent Wiki interface. At the top left is the Biofinity logo. Below it is a navigation menu with 'Home' and 'Intelligent Wiki'. A search bar is at the top right. The main content area has a 'Welcome' tab and a 'Tag Cloud' tab. The main text reads: 'Welcome to the Biofinity Intelligent Wiki'. Below this is a paragraph: 'Here you can collaborate with other users to view/edit/rate pages, upload and view documents (e.g., PDF publications), share links, and discuss pages through threaded comments.' This is followed by instructions on how to log in, view pages, and share links. A red arrow points to the 'Create Pages' menu on the right side of the page, which includes 'New Wiki Page', 'My Recently Viewed Wiki Pages', and 'My Recently Edited Wiki Pages'. The footer contains 'Build 2.3.100828' and 'Project Information'.

2. Choose the "New Wiki Page" option under the "Create Pages" menu on the top right of the main wiki page.
3. Enter a title for the new wiki page in the "Title" text area.
4. Enter the initial content of the wiki page in the "Content" text area.

The Biofinity PROJECT

Home
Intelligent Wiki

Create Wiki Page

Title: Biofinity Intelligent Wik|

Content:

Specifically, the Biofinity Intelligent Wiki currently supports standard collaborative wiki activities such as creating, editing, and deleting pages; attaching media and other files to pages; and a search engine for finding content within pages. However, the basic features of the wiki have been augmented with emerging Web 2.0 collaborative technologies, including: 1) tagging pages with searchable keywords, forming semantic links between related pages; 2) page and peer ratings from system users, providing an explicit and easy-to-understand quality metric; 3) threaded discussions through comments, and 4) sharing pages both privately between users within the system, as well as publically through social networking tools such as Twitter and Facebook. Our wiki also supports multiple types of pages each with specialized user interface and content, including both standard wiki pages and shared documents (e.g., publications, notes, working drafts). Furthermore, we have implemented intelligent features designed to allow adaptive software agents to provide tailored support to the needs and activities of individual users, including: 1) user modeling, based on unobtrusive, implicit tracking of user activities and actions; 2) page modeling, based on the keyword content and user ratings of pages; and 3) automated recommendations of pages for users to view based on both the page itself and the past history of Wiki users.

In the near future, we plan to extend the novel functionalities of the Biofinity Intelligent Wiki to better support collaborative research, including 1) introducing two new page types – data pages and results pages – linked to and describing content stored in the Biofinity database containing data from a diverse range of scientific disciplines and the outputs of computational biology tools, respectively; 2) matchmaking users to form collaborative groups based on user activities, expertise, and tasks; 3) enhance page recommendations to match pages with users containing the expertise and willingness to revise and improve existing pages; and 4) expand search to also use external sources used by the Biofinity project, such as Encyclopedia of Life and GBIF. In our longer term vision, we also want to use our intelligent wiki as a tool for automating ontology mining and refinement, as well as providing user training in both system usage and research practices.

[Submit](#)

5. Click the Submit button to create the new page.

2.2. Viewing Pages

The screenshot displays the Biofinity Intelligent Wiki interface. At the top left is the Biofinity Project logo. The main header includes 'Home' and 'Intelligent Wiki' tabs. A search bar is located at the top right, along with 'My Labs' and 'Account' dropdown menus. The page title is 'Biofinity Intelligent Wiki'. Below the title, there is an 'Authors' section listing 'Derrick Lam' and 'Adam Eck', each with a 'Primary Author' dropdown and a 'Submit Authorship' button. The 'Wiki Page' section contains two paragraphs of text. The first paragraph describes the collaborative tasks of a scientific research group and the introduction of the Biofinity Intelligent Wiki. The second paragraph details the features of the wiki, such as tagging pages, semantic links, quality metrics, threaded discussions, and social networking integration. On the right side, there are several control panels: 'Page Control' with 'Edit', 'Delete', 'Lock', and 'Publish' buttons; 'Revisions' showing 'Viewing Revision: 2' and 'Main Revision: 2' with 'View' and 'Compare' buttons; 'Page Ratings' showing a star rating and 'Average Rating: 0'; 'Share Page' with 'Tweet' and 'Like' buttons; 'Keywords Add' with 'Research' and 'Wiki' options; and 'Attachments Add' with a thumbnail of a screenshot titled 'BIW_Wiki_Screen...'.

To view a page, simply

- 1) Click on a link to the page either in a different page or in the recently created/edited pages links on the main page of the wiki, or
- 2) Browse for the page you want. Browsing is described in more detail in Section 2.5.
- 3) Search for the page you want. Search is described in more detail in Section 2.6.

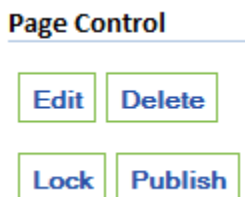
Submitting a newly created or edited page will also take you to view that page, as well.

When you view a page, you will see the current “main” revision for that page. This is either (1) the most recent revision (after creation or editing), or (2) a revision from the page’s history that has been marked as the main one for users to view. Please see Section 2.11 for more information on viewing individual revisions in a page, and Section 2.12 for information on how to change the main revision for a page.

2.3. Editing Pages

To edit a page, please follow these steps:

1. Navigate to the page you wish to edit by following the steps to viewing a page in Section 2.2.
2. Click the “Edit” button under the “Page Control” header on the top right side of the page.



3. Change the contents of the page in the edit page window. Note: the Attachments Panel (Sections 2.7-2.8) is provided on the right side so you can copy the link to images if you want to embed them in your page.

A screenshot of the 'Biofinity Intelligent Wiki' 'Edit Wiki Page' interface. The page has a dark green header with the Biofinity logo and navigation links like 'Home' and 'Intelligent Wiki'. The main content area is titled 'Edit Wiki Page' and shows the current page title 'Biofinity Intelligent Wiki' and a rich text editor for the content. The content area contains two paragraphs of text. On the right side, there is an 'Attachments Add' panel with a preview of a screenshot and a 'Biofinity Intelligent Wiki' attachment. A 'Submit' button is located at the bottom left of the content area.

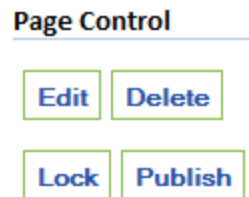
4. Click “Submit” to save your changes or navigate away to discard your changes.

Please note that only one user can edit the same page at the same time: otherwise, one user’s edits made might be overwritten by the other user. If a user is already editing a page, the “Edit” button for that page will glow red (for all browsers except Internet Explorer) warning the user. Clicking on the edit button will also bring up a warning message stating who else is editing the page.

2.4. Deleting Pages

To delete a page, you delete individual revisions of the page. To do so, please follow these steps:

1. Navigate to the page you wish to delete the current revision for by following the steps to viewing a page in Section 2.2.
2. Click the “Delete” button under the “Page Control” header on the right side of the page.



3. Confirm that you want to delete the revision by clicking “Ok” in the prompt.

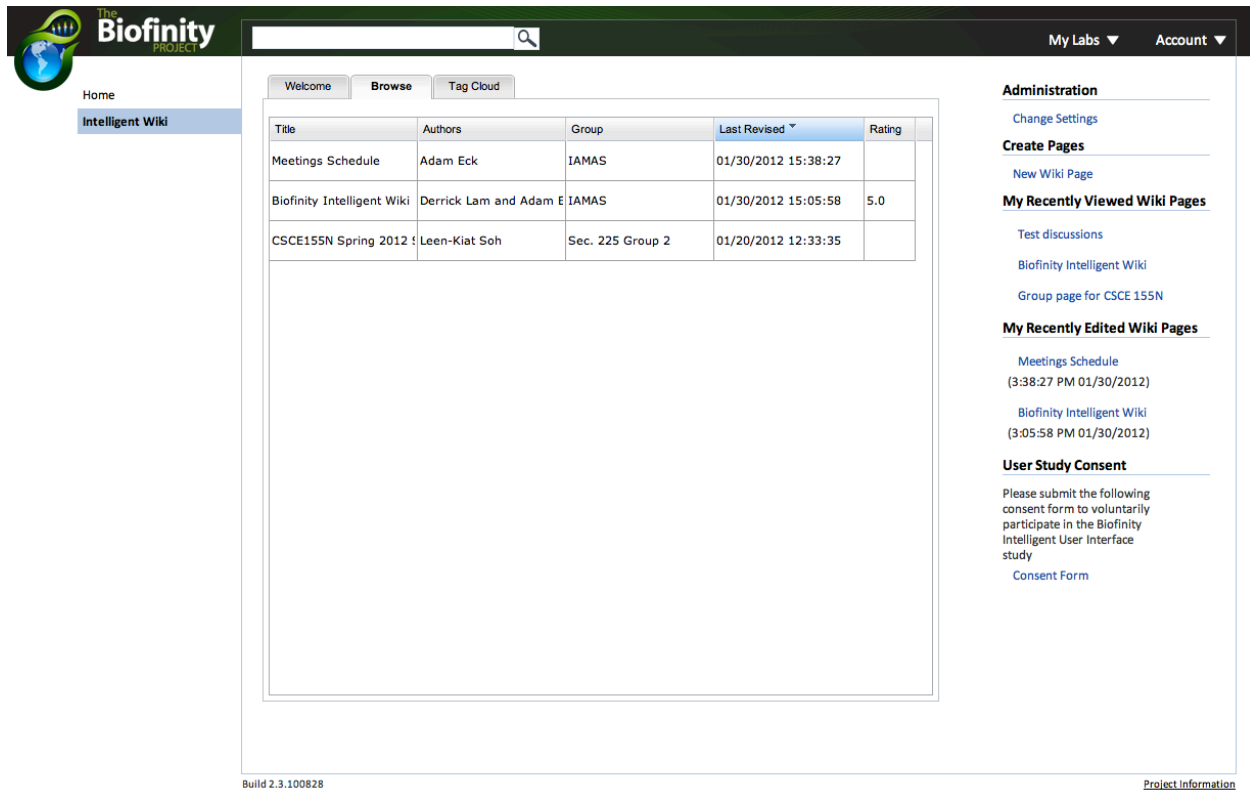
Once all revisions of a page have been deleted, the page is deleted as well.

Please note that only members of the group that owns a page can delete that page, even if the page is publicly available to all users. Also, the contents of the page are saved in the wiki database in case of accidental deletion.

2.5. Browsing for Pages

To browse for pages, please follow these steps:

1. Go to the main Wiki page by clicking on “Intelligent Wiki” on the left side of any page.
2. Click on the “Browse” tab to bring up the list of available pages.
3. Choose the page you wish to view by clicking on it in the browse list.



The screenshot shows the Biofinity Project Wiki interface. The top navigation bar includes the Biofinity logo, a search bar, and links for 'My Labs' and 'Account'. The left sidebar has 'Home' and 'Intelligent Wiki' (selected). The main content area has tabs for 'Welcome', 'Browse' (selected), and 'Tag Cloud'. A table lists three pages:

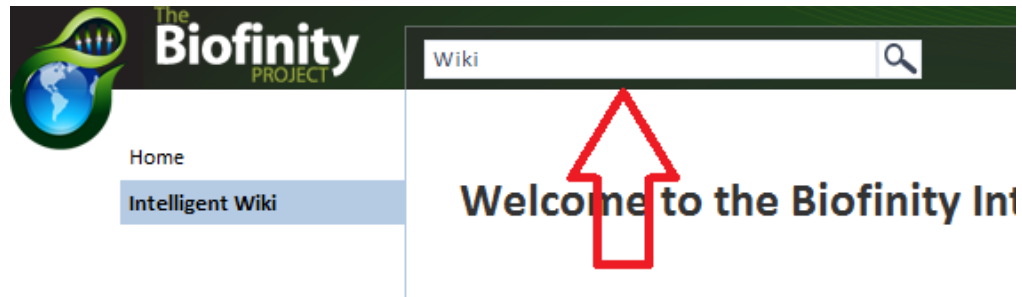
Title	Authors	Group	Last Revised	Rating
Meetings Schedule	Adam Eck	IAMAS	01/30/2012 15:38:27	
Biofinity Intelligent Wiki	Derrick Lam and Adam E	IAMAS	01/30/2012 15:05:58	5.0
CSCE155N Spring 2012	Leen-Kiat Soh	Sec. 225 Group 2	01/20/2012 12:33:35	

The right sidebar contains sections for 'Administration' (Change Settings), 'Create Pages' (New Wiki Page), 'My Recently Viewed Wiki Pages' (Test discussions, Biofinity Intelligent Wiki, Group page for CSCE 155N), 'My Recently Edited Wiki Pages' (Meetings Schedule, Biofinity Intelligent Wiki), and 'User Study Consent' (Consent Form). The footer shows 'Build 2.3.100828' and 'Project Information'.

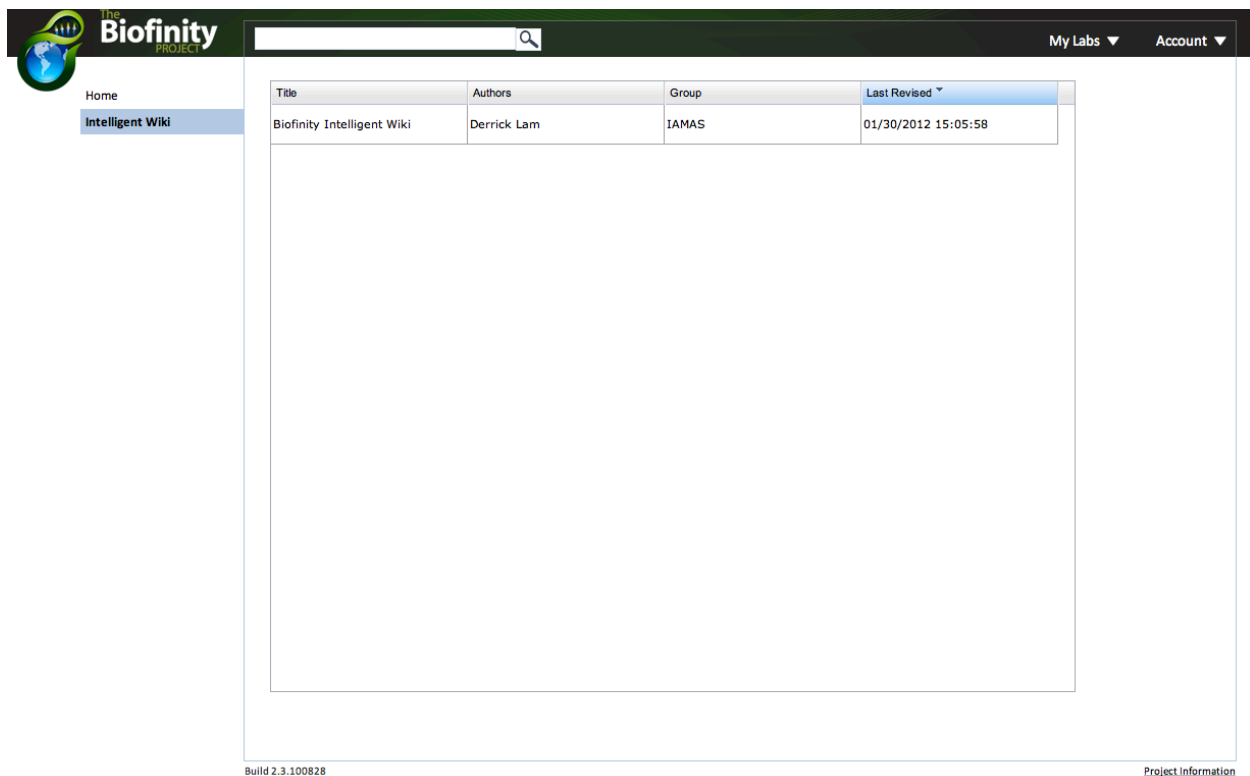
2.6. Searching for Pages

To search for a page, please follow these steps:

1. Click on the search bar in the header of any page in the wiki (including the main page).
2. Type in your search string.



3. Press enter or click on the search icon to search.
4. Click anywhere on a search result to navigate to that page.



When searching for pages, you can search by:

- a) Title
- b) Content
- c) Keywords
- d) Author

You can also search for pages by keyword (c.f., Section 3.1) by clicking on the keyword under the “Keywords” header on the right side of each page.

Keywords Add

Research



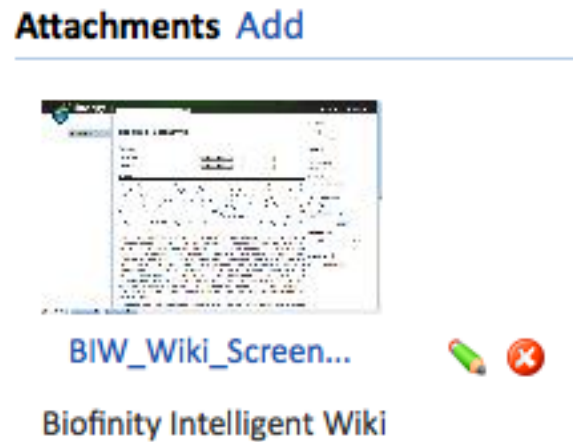
Wiki



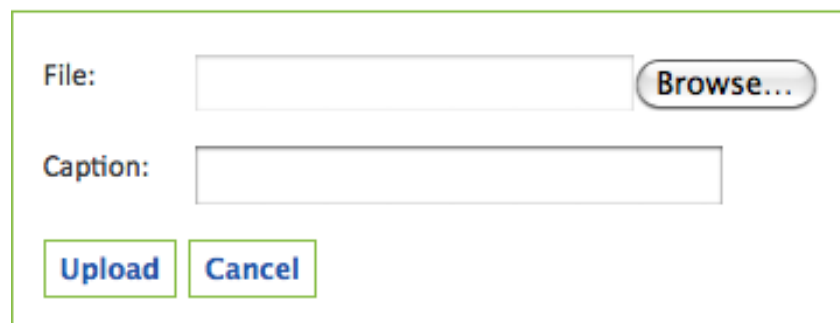
2.7. Uploading Files

To upload additional multimedia content (e.g., audio, video, images) or other files (e.g., Word or PDF documents), please follow these steps:

1. Navigate to the page you wish to upload a file for by following the steps to viewing a page in Section 2.2.
2. Go to the “Attachments” header on the right side of the page.



3. Click the “Add” button.
4. Use the file chooser to find the file you want to upload.

The image shows a file upload form. It has a 'File:' label followed by a text input field and a 'Browse...' button. Below that is a 'Caption:' label followed by a text input field. At the bottom of the form are two buttons: 'Upload' and 'Cancel'.

5. Add a caption for the attachment. This will display under the link to the attachment.
6. Click the “Upload” button.

2.8. Downloading Files

To download additional content represented by multimedia (e.g., audio, video, images) or other files (e.g., Word or PDF documents) attached to pages, please follow these steps:

1. Navigate to the page you wish to download a file from by following the steps to viewing a page in Section 2.2.
2. Go to the “Attachments” header on the right side of the page.
3. Click the link to the file you wish to download. If the file is an image, a thumbnail is provided of the image to help you determine if it is the image you want to download.

Attachments [Add](#)



BIW_Wiki_Screen...



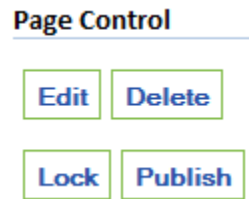
Biofinity Intelligent Wiki

4. Save the file.

2.9. Publish/Unpublish Pages

To publish pages for public use, or unpublish pages to make them only available privately within groups, please follow these steps:

1. Navigate to the page you wish to publish or unpublish by following the steps to viewing a page in Section 2.2.
2. Click on the “Publish” button under the “Page Control” header on the right side of the page to publish the page if it is currently unpublished, or
3. Click on the “Unpublish” button to unpublish the page if it is currently published.

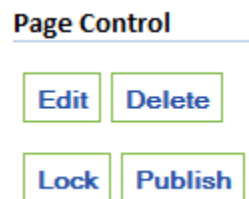


Please note that only members of the group that originally created a page can publish or unpublish the page, even if it is currently publically available to all users.

2.10. Lock/Unlock Pages

To lock pages to prevent further editing, or unlock pages to make them editable again, please follow these steps:

1. Navigate to the page you wish to lock or unlock by following the steps to viewing a page in Section 2.2.
2. Click on the “Lock” button under the “Page Control” header on the right side of the page to lock the page if it is currently unlocked, or
3. Click on the “Unlock” button to unlock the page if it is currently locked.

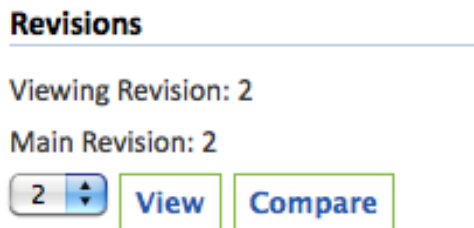


Please note that as with page publishing, only members of the group that originally created a page can lock or unlock the page, even if it is currently publically available to all users.

2.11. View Page History

To view the history of a page, you can switch your view between all of the previous editing revisions. To do so, please follow these steps:

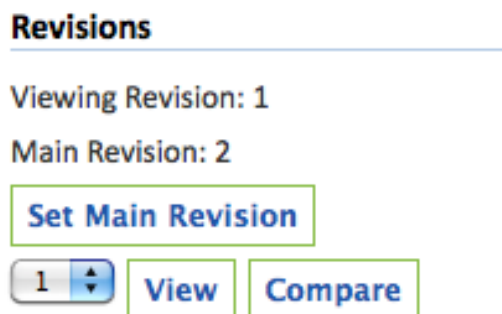
1. Navigate to the page whose history you wish to view by following the steps to viewing a page in Section 2.2.
2. The right side of the page, under the “Revisions” header, lists the current revision you are viewing.
3. Click on the drop down box to select a different revision to view.
4. Click on the “View” button to switch to that revision.



2.12. Change Main Revision

To change the main revision for page (i.e., the default one users see when navigating to that page), please follow these steps:

1. Navigate to the page you wish to set the main revision for by following the steps to viewing a page in Section 2.2.
2. The right side of the page, under the “Revisions” header, lists the current revision you are viewing and the current main revision.
3. Switch to the revision you wish to mark as main (Section 2.11).
4. Click on the “Set Main Revision” button to change the main revision to the one currently being viewed. This button only appears if you are on a non-main revision for a page.



3. Advanced Features

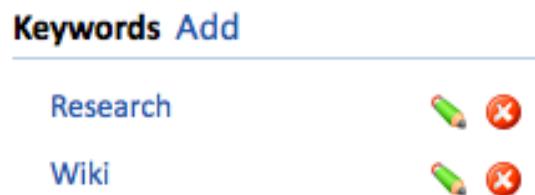
In addition to the basic wiki features described in Section 2, a user can also perform several advanced features commonly found in Web 2.0 applications, including

- 1) tagging pages with important keywords,
- 2) rating pages to assign a quality score to pages,
- 3) discussing pages with other users through threaded comments, and
- 4) sharing pages with other users or publically.

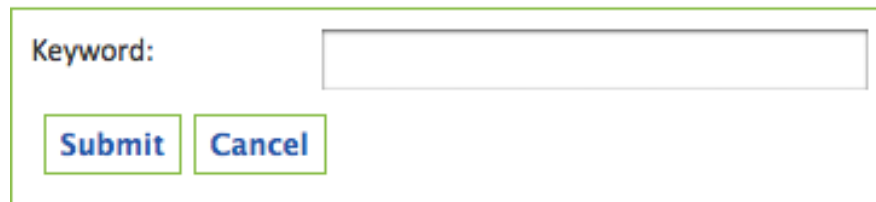
3.1. Tagging Pages with Keywords

To tag pages with important (searchable) keywords, please follow these steps:

1. Navigate to the page you wish to add a keyword to by following the steps to viewing a page in Section 2.2.
2. Go to the “Keywords” header on the right side of the page.
3. Click the “Add” button.



4. Type in the keyword you wish to tag the page with, then press the “Submit” button.



5. Existing keywords can be edited by clicking on the pencil icon next to the keyword.
6. Existing keywords can also be deleted by clicking on the red X icon next to the keyword.

3.2. Rating Pages

To rate pages with a 1-5 star rating, please follow these steps:

1. Navigate to the page you wish to rate by following the steps to viewing a page in Section 2.2.
2. Go to the “Page Ratings” header on the right side of the page.

Page Ratings

You Rated: 

Average Rating: 5

Number of Ratings: 1

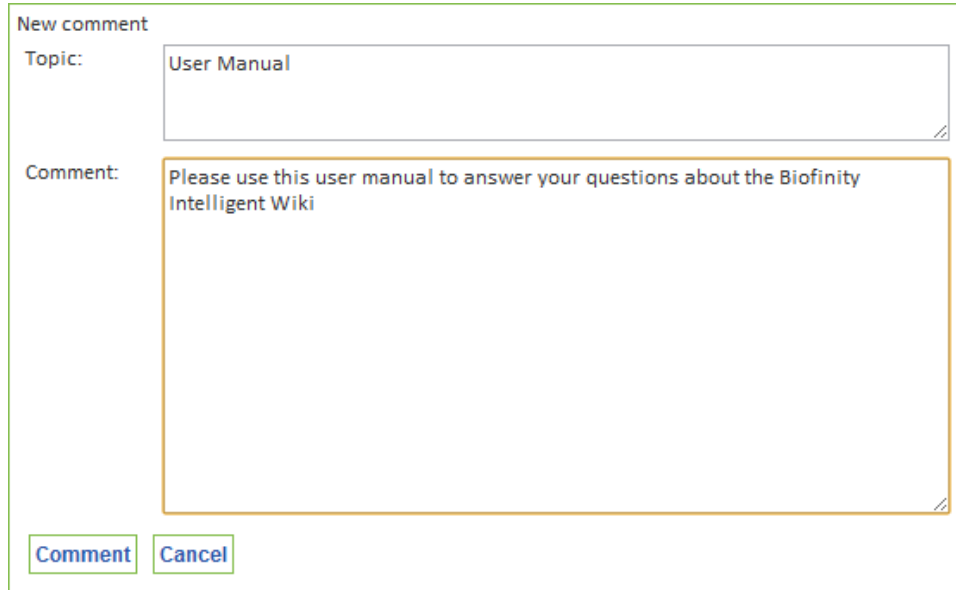
3. Click the number of stars you wish to rate the page.
4. Change your rating at any time by clicking on the desired icon.

You can view both the **average rating score** and the **number of ratings** from all users under the “Rate this Page” section of the page. Your rating for the page is displayed as colored stars.

3.3. Discussing Pages

To carry out discussions about pages in the wiki, please follow these steps:

1. Navigate to the page you wish to discuss by following the steps to viewing a page in Section 2.2.
2. Go to the “Discussion” header of the page below the page contents.
3. Click the “Create New” button to start a new discussion thread
 - 3.1. Fill in the comment topic and content in the pop up box
 - 3.2. Click the “Comment” button to post the comment



New comment

Topic: User Manual

Comment: Please use this user manual to answer your questions about the Biofinity Intelligent Wiki

Comment Cancel

4. Click on the “Reply” button on an existing comment to reply to that comment
 - 4.1. Follow steps 3.1 and 3.2 to post the reply
5. Click on the arrow next to a comment to hide or display all of the comments under that one in the thread.

Discussion [Create New](#) [Refresh](#)

▼ [New Discussion \(2 comments\) – Adam Eck](#)

I'm starting a new topic of discussion. How do you think we should organize our wiki page?

Posted: 2:57:34.537 PM 01/30/2012 [Reply](#)

▼ [New Discussion \(1 comment\) – Adam Eck](#)

I think we should start with a general introduction, then provide some background, and finally present our main idea.

Posted: 2:58:37.881 PM 01/30/2012 [Reply](#)

6. You can also click on the “Refresh” button in the Discussion header to reload the discussions without having to reload the entire page.

3.4. Sharing Pages

Sharing pages can be performed in two ways. First, a user can share a page privately within the Biofinity Intelligent Wiki with other members of her group. Second, the user can share pages publicly on either Facebook or Twitter. Please note that sharing a page is different from publishing a page – users who wish to view a shared private page must be logged in and be a member of the group that owns it.

3.4.1. Sharing Pages Privately

To share pages privately with other users within the Biofinity Intelligent Wiki, please follow these steps:

1. Navigate to a page in the wiki, preferably the page you wish to share, by following the steps to viewing a page in Section 2.2.
2. Click on the “Lab” button under the “Share Page” header on the right side of the page.



3. Click on the checkboxes for the users you wish to share the page with.
4. Type in the URL of any page you wish to share, or click the “Here” button to share the current page.

Recommend URL

First Last Email

BioBlitz User

Adam Eck biofinity.wiki@gmail.com

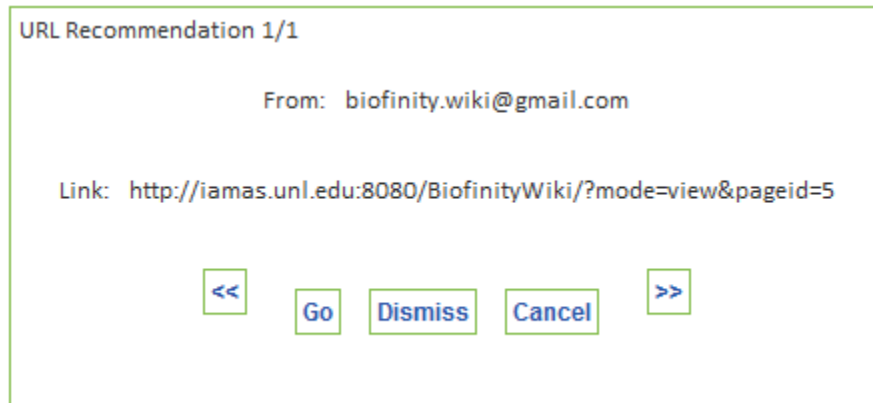
Link:

5. Click the “Share” button to send the shared URL as a recommendation to the chosen users.

3.4.2. Viewing Privately Shared Pages

To view pages shared privately by other users to you (i.e., recommended to you), please follow these steps:

1. The interface automatically checks for shared pages for you every time you load a webpage in the wiki (either pages or the main page), as well as periodically while you stay on the same webpage.
2. If you have newly shared pages available to you, a dialog box will pop up.



3. Click on the "Go" button to load the shared page, or click on the "Dismiss" button to ignore the recommendation. If you have more than one recommended page, the arrows let you navigate through all of your shared pages.

3.4.3. Sharing Pages Publically on Facebook

To share pages publically on Facebook, please follow these steps:

1. Navigate to the page you wish to share by following the steps to viewing a page in Section 2.2.
2. Click on the Facebook “Share” button under the “Share Page” header on the right side of the page.



3. Login to Facebook in the pop up
4. Click the “Share” button in the pop up after adding any desired message.

3.4.4. Sharing Pages Publically on Twitter

To share pages publically on Twitter, please follow these steps:

1. Navigate to the page you wish to share by following the steps to viewing a page in Section 2.2.
2. Click on the Twitter “Tweet” button under the “Share Page” header on the right side of the page.



3. Login to Twitter in the pop up
4. Click the “Tweet” button in the pop up after adding any desired message.

4. Intelligent Features

The Biofinity Intelligent Wiki also includes several intelligent features to improve user productivity and provide customized support to individual users. These features include

- 1) automated page recommendations,
- 2) user modeling, and
- 3) page modeling.

4.1. Automated Page Recommendations

4.1.1. Biofinity Intelligent Wiki Pages

Similar to private page sharing between users (Sections 3.3.1 and 3.3.2), the system will soon **automatically recommends pages** for users to view when they login. These recommendations will be based on pages with similar keywords to the pages the user has recently viewed and represent pages the system believes the user might be interested in. Relevant pages are determined using intelligent user and page modeling (Sections 4.2 – 4.3) which tracks user behavior as they interact with the system.

In the near future, we plan to extend our page recommendations to include pages to *edit* based on the users' interests and expertise tracked by intelligent user modeling.

4.2. User Modeling

To provide customized support to individual users of the Biofinity Intelligent Wiki, the system tracks user behavior to build a comprehensive model of each individual user. This information is kept private and is not available to other users.

A user model consists of 1) user actions, 2) recommendations, and 3) session information. For user actions, the system tracks actions taken by users, including the number of pages created, viewed, deleted, and edited, comments made or tags added/removed, as well as attachments uploaded or downloaded, page ratings, and finally the user's search history. For recommendations, the system tracks pages shared privately to other users, as well as recommended pages viewed or dismissed. Finally, for session information, the system tracks how frequently users login to the system and how long they remain logged in.

In the near future, we plan to include user interests and expertise in the user model based on the content of pages created, viewed, and edited by users.

4.3. Page Modeling

Similar to user modeling, the system also tracks actions taken on pages in order to model the page. Again, these actions include the number of views, edits, comments, recommendations, attachments, tags, and ratings.

In the near future, we plan to include automated keyword tagging based on the content of pages.