Heuristic evaluation of WebAnnotator

by Joao Batalha

1.

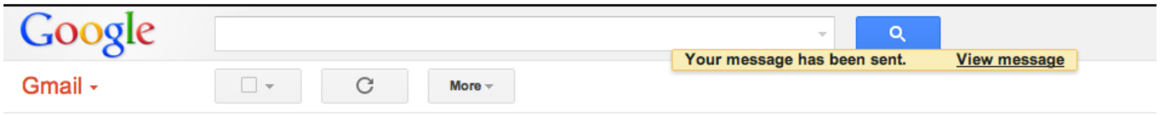
Description of Problem:
No feedback after the user saves the annotated page or shares it with people.

Usability heuristics:
Norman's Feedback principle

Impact:
I think it would be beneficial to give the user information that confirms that his action had its intended consequences. For instance in Gmail, every time you delete, send or save an email it shows you a confirmation toast. Specially if the user is trying to share the document with people it is nice that he gets a confirmation saying that x, y and z are now able to edit the document.

Severity:
Minor

Here is a picture of the toast on Gmail:



Your message has been sent. View message

2.

Description of Problem:
Topbar disappears if you scroll down.

Usability heuristics:
Norman's Visibility principle
Nielsen's Error Prevention

Impact:
The Topbar should always be at the top even when you scroll down so that the user can easily save and share. Especially because you do not have keyboard shortcuts, if the user is annotating a very long page, it should be easy for the user to save his progress. If this is not the case the user might be prone to do a lot of work without saving. In web browsers it can be fairly easy to close a tab (specially if the user is using Command + w to close other programs windows), which makes it easy for the user to lose his work.

Severity:
Minor

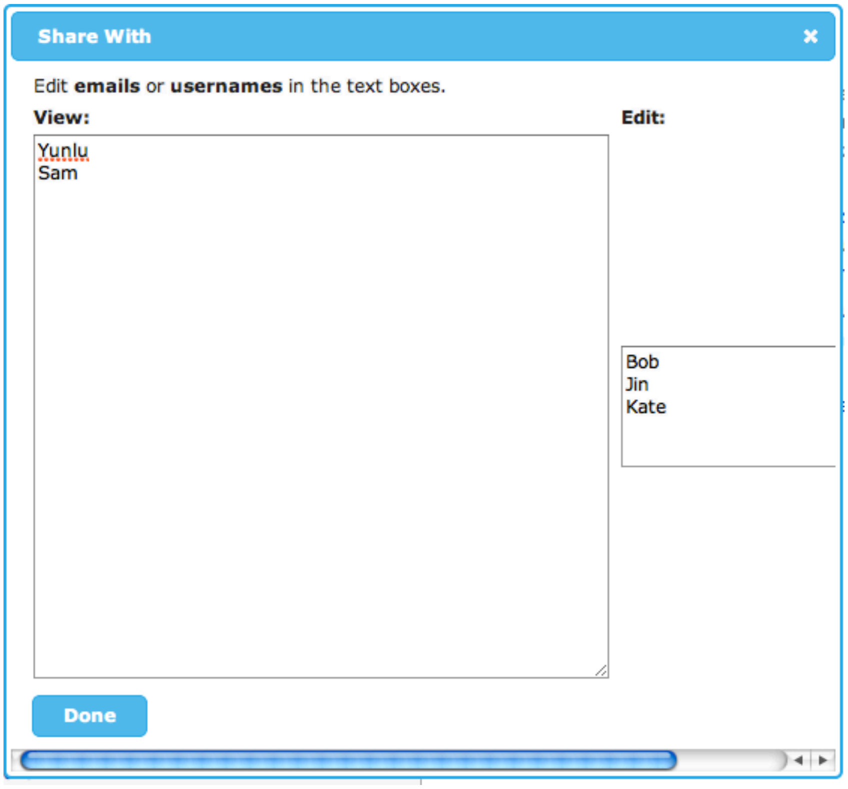
3.

Description of Problem:
Issues with resizing textareas in *share* popup.

Usability heuristics:
Nielsen’s Aesthetic and minimalistic design
Nielsen’s Consistency and Standards

Impact:
This is a small issue that can be easily solved. However if a user expands the textarea by accident it might cause some problems.

Severity:
Minor



Edit **emails** or **usernames** in the text boxes.

Yunlu
Sam

Bob
Jin
Kate

4.

Description of Problem:

Issue with display of annotation tools, when I try to annotate something next to the right margin.

Usability heuristics:

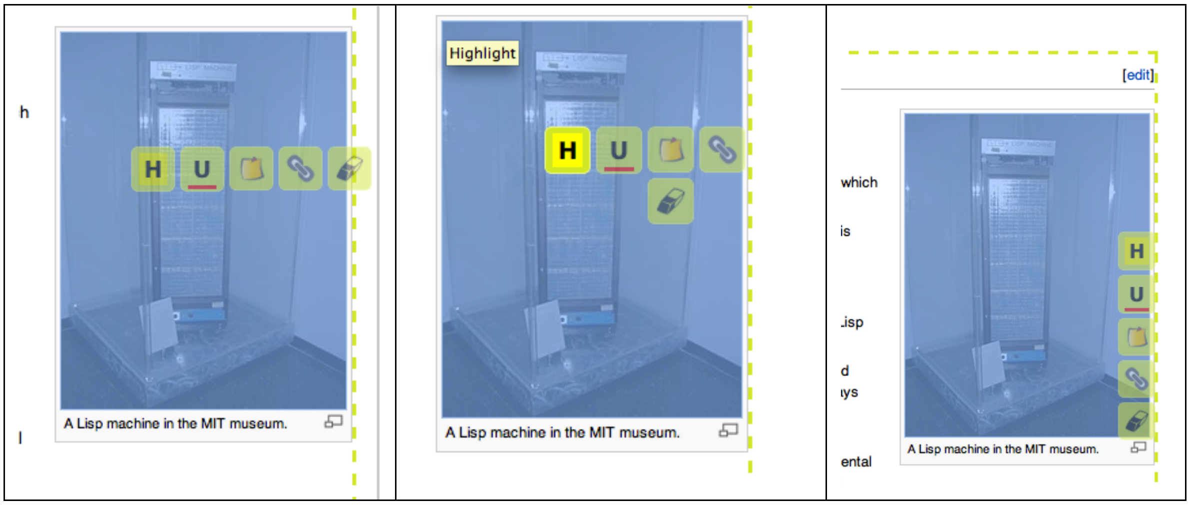
Nielsen's Aesthetic and minimalistic design
Nielsen's Consistency and Standards

Impact:

It causes some consistency problems. It is hard to predict which orientation the annotation tools are going to be displayed. As you can see in the picture there are at least 5 different orientations that are displayed at times. This can affect the user's efficiency.

Severity:

Minor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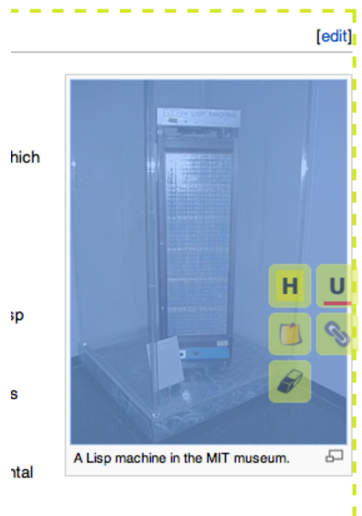
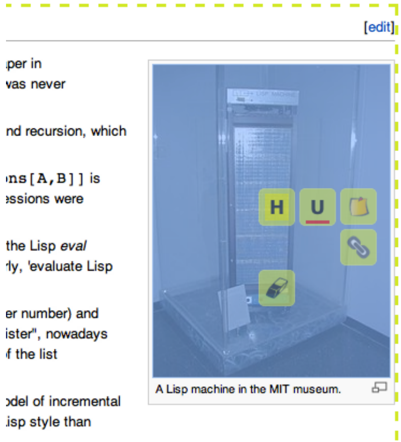


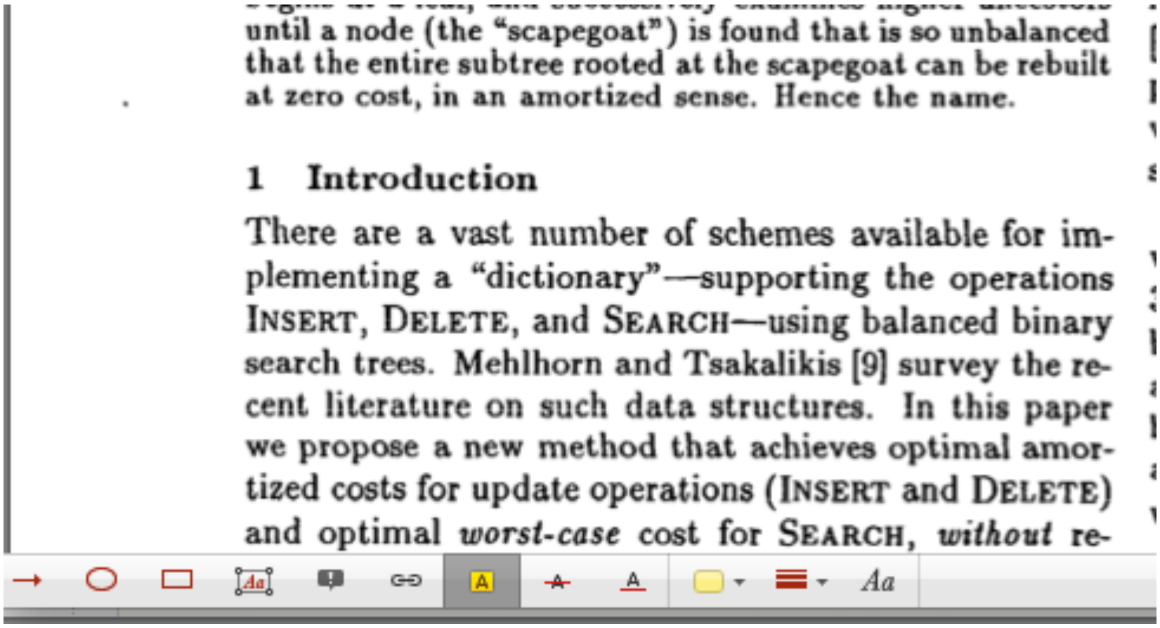


5.

Description of Problem:
Issues bringing up annotation tools. I had a good amount of trouble at the beginning to figure out what was the right way to bring up the annotation tools. I specially had trouble when trying to annotate pictures.

Usability heuristics:
Nielsen's Consistency and Standards
Norman's visibility principle

Impact:
If the whole point of the application is to make it easy to take notes on webpages, this is something that really has to be done right. I found myself double clicking on words a lot with no effect. Right now it seems that the annotation tools show up after the user selects the item they want to annotate. One other possible solution would be to always have the annotation tools at the bottom of the page. I use Preview (Mac application) a fair amount and I often annotate PDF's in it, and that is how they do it. This way, the user first selects the annotation tool (highlighter, underliner, etc) and then he selects the element that he wants to annotate. I included a screenshot of how the annotation tools are organized in Preview.



until a node (the "scapegoat") is found that is so unbalanced that the entire subtree rooted at the scapegoat can be rebuilt at zero cost, in an amortized sense. Hence the name.

1 Introduction

There are a vast number of schemes available for implementing a "dictionary"—supporting the operations INSERT, DELETE, and SEARCH—using balanced binary search trees. Mehlhorn and Tsakalikis [9] survey the recent literature on such data structures. In this paper we propose a new method that achieves optimal amortized costs for update operations (INSERT and DELETE) and optimal *worst-case* cost for SEARCH, *without* re-

Severity:
Major

6.

Description of Problem:
If someone is sharing a long annotated webpage with me, it might be hard for me to know where the notes are, and it might be easy for me to miss some of their notes.

Usability heuristics:
Nielsen's Visibility of system status
Nielsen's safety principles (mainly Error Prevention)

Impact:
Even in a medium length webpage (like the LISP webpage) it might be easy for me to miss on a note that the user has included at the end of the page. One possible solution would be to have some sort of sidebar (that the user could chose to hide) that would have links to all of the notes in the page. This way the user could go through the notes sequentially, and it would be easy for him to keep track of which notes he has seen.

Severity:
Major (for long webpages with a lot of notes)

7.

Description of Problem:
If there are several users sharing one annotated page, some notes might only be relevant for some users. As of now there is no easy way of filtering to see which notes are meant for which users.

Usability heuristics:
Nielsen's Flexibility and efficiency
Norman's Visibility

Impact:
This only becomes a problem as the number of users that are sharing an annotated webpage increases. Therefore this might not be a top priority. However, there are a few things that would fix this problem: (1) Color coding annotations by which users they are meant to (or by which users annotated them) (2) If you chose to implement the sidebar I mentioned in problem 6. it would be easy to include the information of who the note is meant to in the sidebar.

Severity:
Minor (If the webpage is not being shared by too many people)

8.

Description of Problem:
If there are a lot of users in your "Contacts" you might have some trouble recalling their usernames/emails when you are trying to share an annotated webpage with them.

Usability heuristics:
Nielsen's Recognition not Recall

Impact:
This can easily become an annoying problem if people have several emails (gmail, work, school). I think Gmail's solution which relies heavily on auto completion solves this problem rather well.

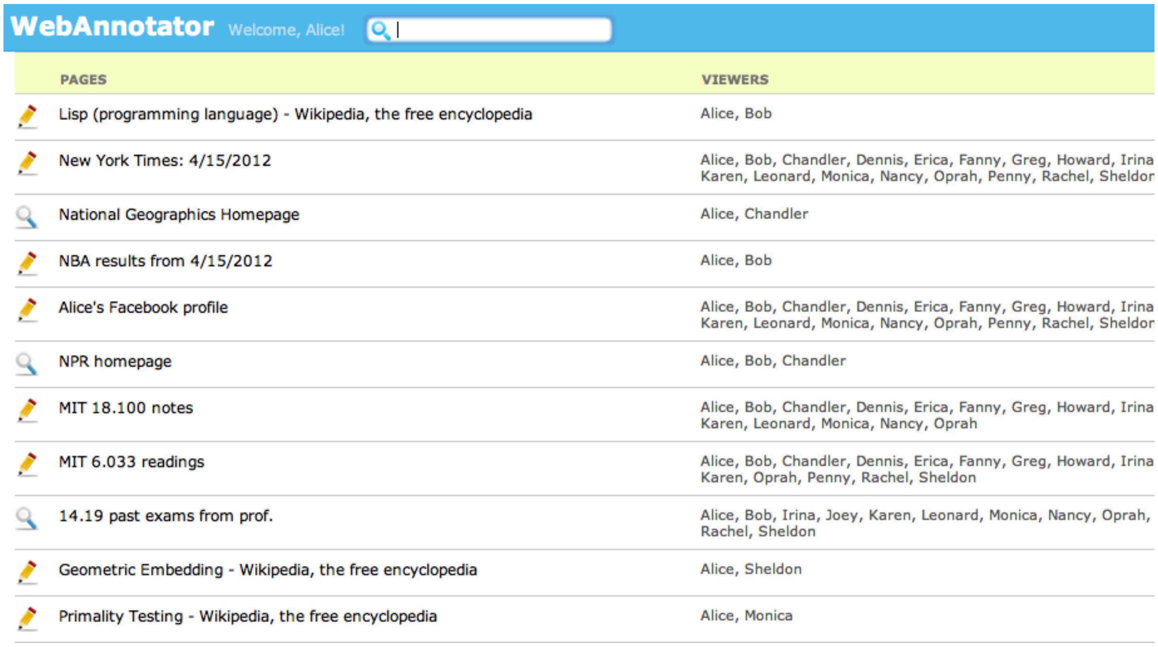
Severity:
Minor

9.

Description:
Great layout and general look of dashboard page. I really like the icons on the left side. The color choice and font also make it very glanceable.

Usability heuristics:
Nielsen's Recognition not Recall
Nielsen's Aesthetic and Minimalistic design

Severity: Good



	PAGES	VIEWERS
✎	Lisp (programming language) - Wikipedia, the free encyclopedia	Alice, Bob
✎	New York Times: 4/15/2012	Alice, Bob, Chandler, Dennis, Erica, Fanny, Greg, Howard, Irina Karen, Leonard, Monica, Nancy, Oprah, Penny, Rachel, Sheldor
🔍	National Geographics Homepage	Alice, Chandler
✎	NBA results from 4/15/2012	Alice, Bob
✎	Alice's Facebook profile	Alice, Bob, Chandler, Dennis, Erica, Fanny, Greg, Howard, Irina Karen, Leonard, Monica, Nancy, Oprah, Penny, Rachel, Sheldor
🔍	NPR homepage	Alice, Bob, Chandler
✎	MIT 18.100 notes	Alice, Bob, Chandler, Dennis, Erica, Fanny, Greg, Howard, Irina Karen, Leonard, Monica, Nancy, Oprah
✎	MIT 6.033 readings	Alice, Bob, Chandler, Dennis, Erica, Fanny, Greg, Howard, Irina Karen, Oprah, Penny, Rachel, Sheldon
🔍	14.19 past exams from prof.	Alice, Bob, Irina, Joey, Karen, Leonard, Monica, Nancy, Oprah, Rachel, Sheldon
✎	Geometric Embedding - Wikipedia, the free encyclopedia	Alice, Sheldon
✎	Primality Testing - Wikipedia, the free encyclopedia	Alice, Monica

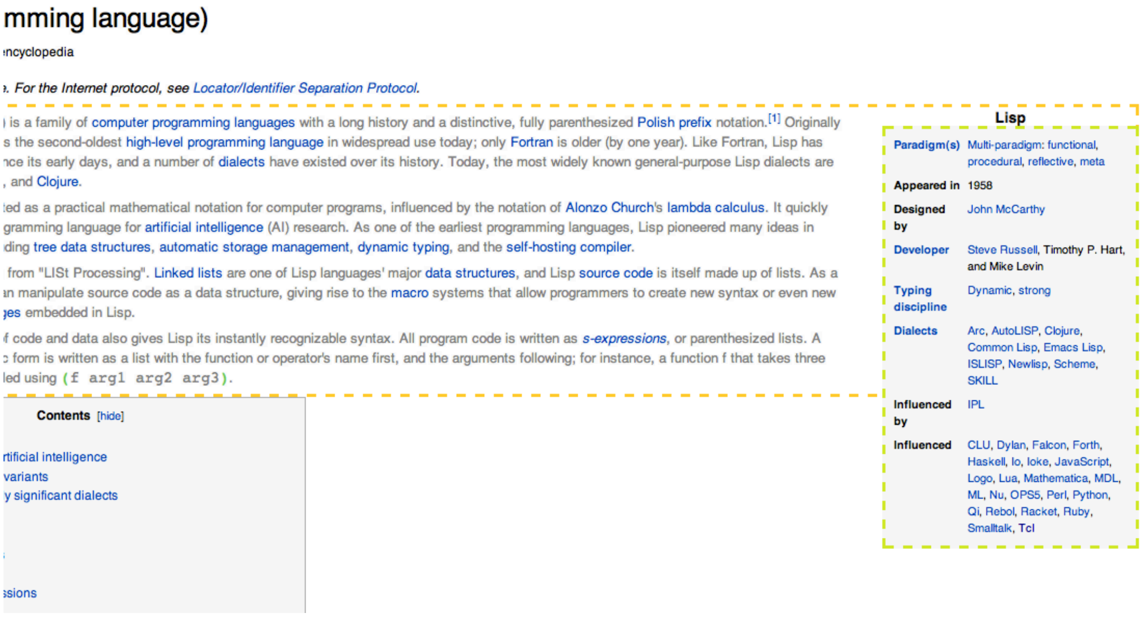
10.

Description of Problem:
When the user is annotating a page you seem to outline divs as the users hovers the mouse over things. This might be kind of random for the user. The user might wonder why for instance the Wikipedia logo is not highlighted when you hover over it.

Usability Heuristics:
Nielsen's Consistency and Standards

Impact:
Might cause some serious frustration for the user specially in pages that are not so neatly organized as a Wikipedia page.

Severity:
Minor



mming language)

ncyclopedia

. For the Internet protocol, see Locator/Identifier Separation Protocol.

) is a family of computer programming languages with a long history and a distinctive, fully parenthesized Polish prefix notation.[1] Originally s the second-oldest high-level programming language in widespread use today; only Fortran is older (by one year). Like Fortran, Lisp has nce its early days, and a number of dialects have existed over its history. Today, the most widely known general-purpose Lisp dialects are , and Clojure.

ted as a practical mathematical notation for computer programs, influenced by the notation of Alonzo Church's lambda calculus. It quickly gramming language for artificial intelligence (AI) research. As one of the earliest programming languages, Lisp pioneered many ideas in ding tree data structures, automatic storage management, dynamic typing, and the self-hosting compiler.

from "LISt Processing". Linked lists are one of Lisp languages' major data structures, and Lisp source code is itself made up of lists. As a an manipulate source code as a data structure, giving rise to the macro systems that allow programmers to create new syntax or even new jes embedded in Lisp.

f code and data also gives Lisp its instantly recognizable syntax. All program code is written as *s-expressions*, or parenthesized lists. A : form is written as a list with the function or operator's name first, and the arguments following; for instance, a function f that takes three led using `(f arg1 arg2 arg3)`.

Lisp	
Paradigm(s)	Multi-paradigm: functional, procedural, reflective, meta
Appeared in	1958
Designed by	John McCarthy
Developer	Steve Russell, Timothy P. Hart, and Mike Levin
Typing discipline	Dynamic, strong
Dialects	Arc, AutoLISP, Clojure, Common Lisp, Emacs Lisp, ISLISP, Newlisp, Scheme, SKILL
Influenced by	IPL
Influenced	CLU, Dylan, Falcon, Forth, Haskell, Io, Ioke, JavaScript, Logo, Lua, Mathematica, MDL, ML, Nu, OPS5, Perl, Python, Qi, Rebol, Racket, Ruby, Smalltalk, Tcl

Contents [hide]

11.

Description of Problem:
Highlight and notes look similar.

Usability Heuristics:
Nielsen's Error Prevention
Nielsen's Consistency and standards

Impact:
This makes annotations less glanceable and it is easier to miss annotations. This can be easily solved by changing the color scheme.

Severity:
Minor

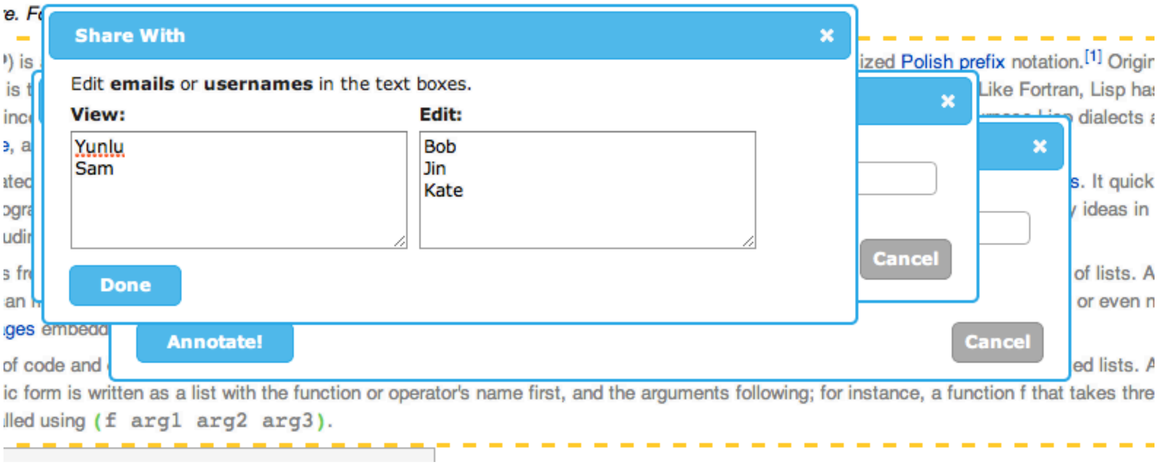
12.

Description of Problem:
Can open up several popup boxes at the same time, and can still edit the page.

Usability Heuristics:
Nielsen's Visibility of system status
Nielsen's User control and Freedom

Impact:
It is a bit unexpected that you can open several popups at the same time, the user might be a bit surprised by it.

Severity:
Minor



Edit **emails** or **usernames** in the text boxes.

View:
Yunlu
Sam

Edit:
Bob
Jin
Kate

13.

Description of Problem:
The save and new page popup both have cancel and X, the share popup does not have X.

Usability Heuristics:
Nielsen's Consistency and standards

Impact:
This is a small detail.

Severity:
Minor

14.

Description of Problem:
Cannot leave page without saving edits.

Usability Heuristics:
Nielsen's Error prevention

Impact:
I am guessing that this is just because you still don't have a fully implemented backend.

Severity:
Major

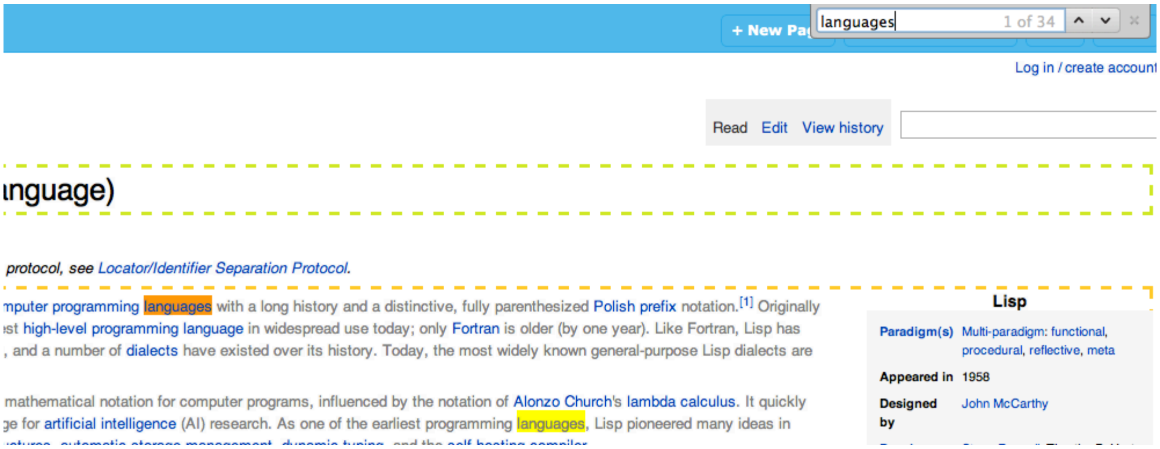
15.

Description of Problem:
Browse searching does not work exactly right. It finds the number of instances of a certain word and it highlights them, but it does not jump to the word.

Usability Heuristics:
Nielsen's Consistency and Standards

Impact:
I use browse search a lot so this could actually be a very annoying issue if the page is big enough.

Severity:
Minor



protocol, see Locator/Identifier Separation Protocol.

mputer programming languages with a long history and a distinctive, fully parenthesized Polish prefix notation.[1] Originally ıst high-level programming language in widespread use today; only Fortran is older (by one year). Like Fortran, Lisp has , and a number of dialects have existed over its history. Today, the most widely known general-purpose Lisp dialects are

mathematical notation for computer programs, influenced by the notation of Alonzo Church's lambda calculus. It quickly ge for artificial intelligence (AI) research. As one of the earliest programming languages, Lisp pioneered many ideas in

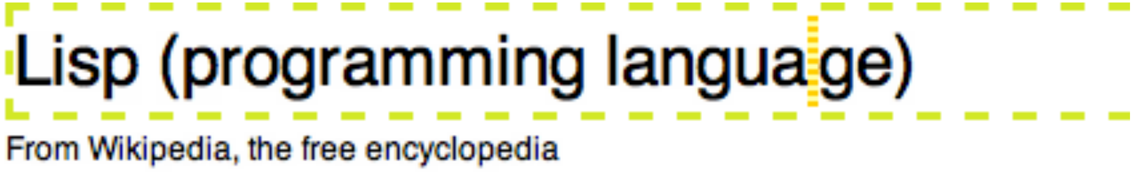
16.

Description of Problem:
Undo is buggy for notes. It does not really erase notes completely.

Usability Heuristics:
Nielsen's Consistency and Standards
Nielsen's Aesthetic and minimalistic design

Impact:
This is not a very important issue but it is definitely something you would want to fix for the next iteration.

Severity:
Minor

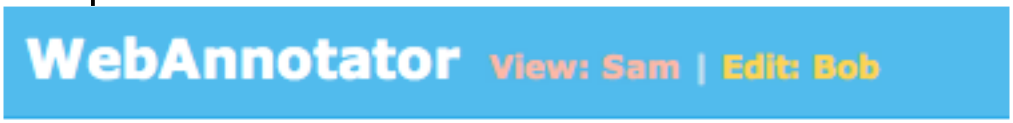


Lisp (programming language)

From Wikipedia, the free encyclopedia

17.

Description of Problem:



WebAnnotator View: Sam | Edit: Bob

This does not indicate which user I am. In addition, I am not sure it is the best choice of colors (specially for View: Sam). If the webpage has a lot of people viewing and editing it there are going to be some issues displaying all of those people in this field. Also, this might not be safe for Blue-Yellow color blind people.

Usability Heuristics:
Tog's Color Blindness Principle
Nielsen's Aesthetic and minimalistic design

Severity:
Minor

Conclusion:

I know that I did not make that many positive comments but that is because I though that it would be more useful for you guys if I elaborated on all the small little details that I noticed. However, you guys did a great job! Very professional looking. In addition I think that this would be a very useful product and I would actually use it!

Overall: Great!