Bugs & Wish list

Tables of Contents (maketoc) can be broken when headings call plugins (such as ANAME and FOOTNOTE) | Tiki Wiki CMS Groupware :: Development

Tables of Contents (maketoc) can be broken when headings call plugins (such as ANAME and FOOTNOTE)

Status

● Open

Subject

Tables of Contents (maketoc) can be broken when headings call plugins (such as ANAME and FOOTNOTE)

Version

6.x

12.x

14.x

15.x

18.x

Category

- Conflict of two features (each works well independently)

Feature

Wiki Plugin (extends basic syntax)

Wiki Syntax (text area, parser, external wiki, etc)

Resolution status

Confirmed

Submitted by

EmmArrBee

Lastmod by

Philippe Cloutier

Rating

(0)

Description

Calling plugins in headings in pages where maketoc is used can cause breakage. For example, this happens when calling the ANAME or FOOTNOTE plugins.

Effect on ANAME

Although Tiki generates anchors for all headings automatically, I find using ANAME is a great way of creating manageable and easily memorable Anchors for otherwise unwieldy headings

If a heading within a tiki page is coded as follows

1. Tiki Source Code snippet

```
!! Fourth and Even More Forgetful Heading{ANAME()}Quick4{ANAME}
```

then Tiki generates the following HTML code

2. Generated HTML snippet

```
<h3 class="showhide_heading" id="Fourth_and_Even_More_Forgetful_Heading">  Fourth and Even
More Forgetful Heading<a id="Quick4"></a></h3>
```

which can be exploited by

3. Tiki Source Code snippet

```
{ALINK(aname=Quick4)}Link to Fourth Heading by its Quick4 Anchor{ALINK}
```

All the above works flawlessly.

However, add MAKETOC to the page above the source line where ANAME is last used and it breaks the ANAME anchor(s). For this example, the maketoc is restricted to level 2 headings only as {maketoc levels="2"} which makes the generated HTML a little more compact.
Tiki generates the following HTML in response to the inclusion of maketoc

Generated HTML for maketoc snippet 3

```
<ul><li><a href='#First_Level_Two_Heading' class='link'> First Level Two Heading</a>
</li><li><a href='#Second_Long_and_Equally_Unmemorable_Heading' class='link'> Second Long and
Equally Unmemorable Heading</a>
</li><li><a href='#Third_Painfully_Difficult_Heading' class='link'> Third Painfully Difficult
Heading</a>
</li><li><a href='#Fourth_and_Even_More_Forgetful_Heading' class='link'> Fourth and Even More
Forgetful Heading<a id="Quick4"></a></a>
</li><li><a href='#Fifth_Long_and_Not_Very_Memorable_Heading' class='link'> Fifth Long and Not
Very Memorable Heading</a>
</li></ul></li></ul><!--toc--></div><br />
```

Note how the entry for the Fourth Paragraph has the anchor "Quick4" associated with it. The HTML code generated for the Fourth Paragraph heading remains identical.

The effect of this is that the tiki anchor Quick4 is now incorrectly linked to the TOC entry, being the first instance of HTML ANCHOR within the HTML file.

If the MAKETOC plugin is included below the ANAME, then the ANAME works as intended, since that is the first occurrence of the generated HTML ANCHOR statement.

I have a couple of test pages which illustrate this issue, if they are of any use in your testing.

Effect on FOOTNOTE

Calling FOOTNOTE returns an HTML A element with an id, so using that same identifier twice causes invalid HTML. Additionally, since browsers favor the first element using the identifier in such cases, the TOC's instance wins if {maketoc} precedes headings, which is not what we want.

Cause

Plugin calls are executed in parse_first(). (Calls to plugins in "html" format are replaced by alphanumeric fingerprints.) After, parse_data_process_maketoc() is called and expands "{maketoc}" to headings, so that each plugin call in a heading in the TOC has its result (or fingerprint) twice in the source. (After, replace_preparse() replaces fingerprints with the result of plugin functions (stored during parse_first's execution).)

This issue happens because maketoc therefore causes a plugin call's result to be repeated in the TOC (instead of possibly executed again specifically for TOC-s), which has 2 problems:

- plugins don't expect their output included twice in the page, so some (such as ANAME) may use HTML's id attribute in a manner incompatible with maketoc, causing invalid HTML
- plugins don't expect their output to be included in an HTML A element, so some (such as FOOTNOTE) for example generate links themselves, again causing invalid HTML

Solution

I believe there is no general solution to this. Each plugin needs to adapt its behavior when the output is to be used in a heading. For example, SUP can return the same thing, but ANAME should return nothing.

A solution could be implemented by potentially calling a plugin function twice per in-heading plugin call. With an extra parameter indicating a call for a TOC, FOOTNOTE could return just text, no link. However, if there are 2 independent calls, it would be hard for FOOTNOTE to know that it should return the same number.

wikiplugin_foo_info() could return an extra "headings" array element indicating what to do if the plugin is called in a heading. For SUP, this could be "'headings' => 'same'". For the GOOGLEANALYTICS plugin, the value could be "ignore".

Unfortunately, in order to do that, we need to distinguish headings before plugins are called. As of r66644, plugins are called (in parse_first()) well before headings are distinguished (in parse_data_process_maketoc()).

Dirty hack

The 2 patches attached provide a dirty solution which seems to work well on UTF-8 databases. These would need validation for compatibility with other encodings before being integrated.

The very same patch works verbatim against Tiki 15 too.

This is very much of a hack and may very well cause regressions.

Workaround

For ANAME, put the call on the line before or after the heading

Importance

7

Easy to solve?

2

Priority

14

Demonstrate Bug (Tiki 19+)

Please demonstrate your bug on show2.tikiwiki.org

Version: trunk ▼ Create show2.tikiwiki.org instance

Ticket ID

4235

Created

Tuesday 29 May, 2012 13:08:17 GMT-0000
by EmmArrBee

LastModif

Thursday 25 April, 2019 18:26:48 GMT-0000

Comments

Philippe Cloutier 08 May 18 19:16 GMT-0000

This is visibly related to issue Hotwords and WikiWords are parsed to links in Table of Contents (maketoc) entries, breaking HTML.

Philippe Cloutier 10 May 18 15:32 GMT-0000

My impression is that fixing this is non-trivial. While there are clearly cases where plugin calls should be ignored in the TOC (such as ANAME, indeed), there are also plugins whose calls should be considered, such as SUP.

I guess a first step would be to decide which behavior makes more sense in general.

Philippe Cloutier 06 Jun 18 21:32 GMT-0000

This also affects the FOOTNOTE plugin. Calling FOOTNOTE returns an a element with an id, so using that same identifier twice causes invalid HTML. Additionally, since browsers favor the first element using the identifier in such cases, the TOC's instance wins, which is not what we want.

So in this specific case, there is no easy solution either way - we do want a link to the footnote in the TOC, but we don't want it to hijack the id, so we would need it to use different HTML. The HTML could be the same without the id, but I don't see an easy way to implement that. Should we call the plugin twice, once with a "fake" argument so the plugin can behave differently? Or actually call a different function, like wikiplugin_footnote_toc(), which could itself call wikiplugin_footnote(), modify its return value and return that modified value?

I mention that one different approach which might avoid this dilemma would be to switch to client-side TOC generation, as discussed in TOC revamp.

Philippe Cloutier 07 Jun 18 12:59 GMT-0000

In fact, as Marc Laporte made me notice, we can't really link to the footnote from the TOC directly, since the TOC entry already links to the section, and text can only link to 1 target. Even putting an A element without id would be invalid HTML.

I guess in the FOOTNOTE case we would want to just display "x", linking to the section as the rest of the line, so a user who wants to see the FOOTNOTE might click on the TOC's footnote number, be moved to the section, then click on the "actual" footnote number and be moved to the footnote.

Philippe Cloutier 07 Jun 18 22:17 GMT-0000

For FOOTNOTE, there's also the possibility of not displaying references in TOC-s. And that is Microsoft Word 2013's behavior...

Philippe Cloutier 03 Jul 18 19:25 GMT-0000

Note that testing this with a call to ANAME at the end of a heading will expose a regression from r56125 (invalid HTML due to a non-breaking space).

Jonny Bradley 25 Feb 21 12:55 GMT-0000

I was fixing a different issue, but this might be fixed in trunk and 22.x by 2c5a99cf maybe?

Attachments

	filename	created	hits	comment	version	filetype
	Parser_TOC_HTML_fix_trunk.diff	13 Jul 18 13:59 GMT-0000	0	Against r66952		
	Parser_TOC_HTML_fix_18.diff	13 Jul 18 13:59 GMT-0000	0	Against r66952		

The original document is available at https://dev.tiki.org/item4235-Tables-of-Contents-maketoc-can-be-broken-when-headings-call-plugins-such-as-ANAME-and-FOOTNOTE

Show PHP error messages