



Задача №1

заменим браузерный спелчеккер



Grammarly Spell Checker & Grammar C...

offered by grammarly.com

★★★★★ (4430)

Productivity

2,185,414 users

ADDED TO CHROME



X

OVERVIEW

REVIEWS

RELATED

G+1

1.9k



Perfect your grammar.

Misused a preposition? Missed an article? No worries.

Grammarly corrects your writing for 200+ writing types.

Решение

Most of **students** do their homework.

Missing article before plural noun

CORRECT WITH GRAMMARLY

IGNORE



Compatible with your device

Spell check and grammar check as you type online. Boost your credibility everywhere you write!

The free Spell Checker & Grammar Checker by Grammarly helps you write clearly and confidently on Gmail, Facebook, Twitter, LinkedIn, Tumblr, and nearly anywhere else on the Web. With Grammarly, you can always be sure that your words are mistake-free and say what you mean.

★ Contextual spell checker

Correctly spelled words used in the wrong context mean embarrassing mistakes for

! Report Abuse

Version: 4.515.201

Updated: November 18, 2015

Size: 1.75MiB

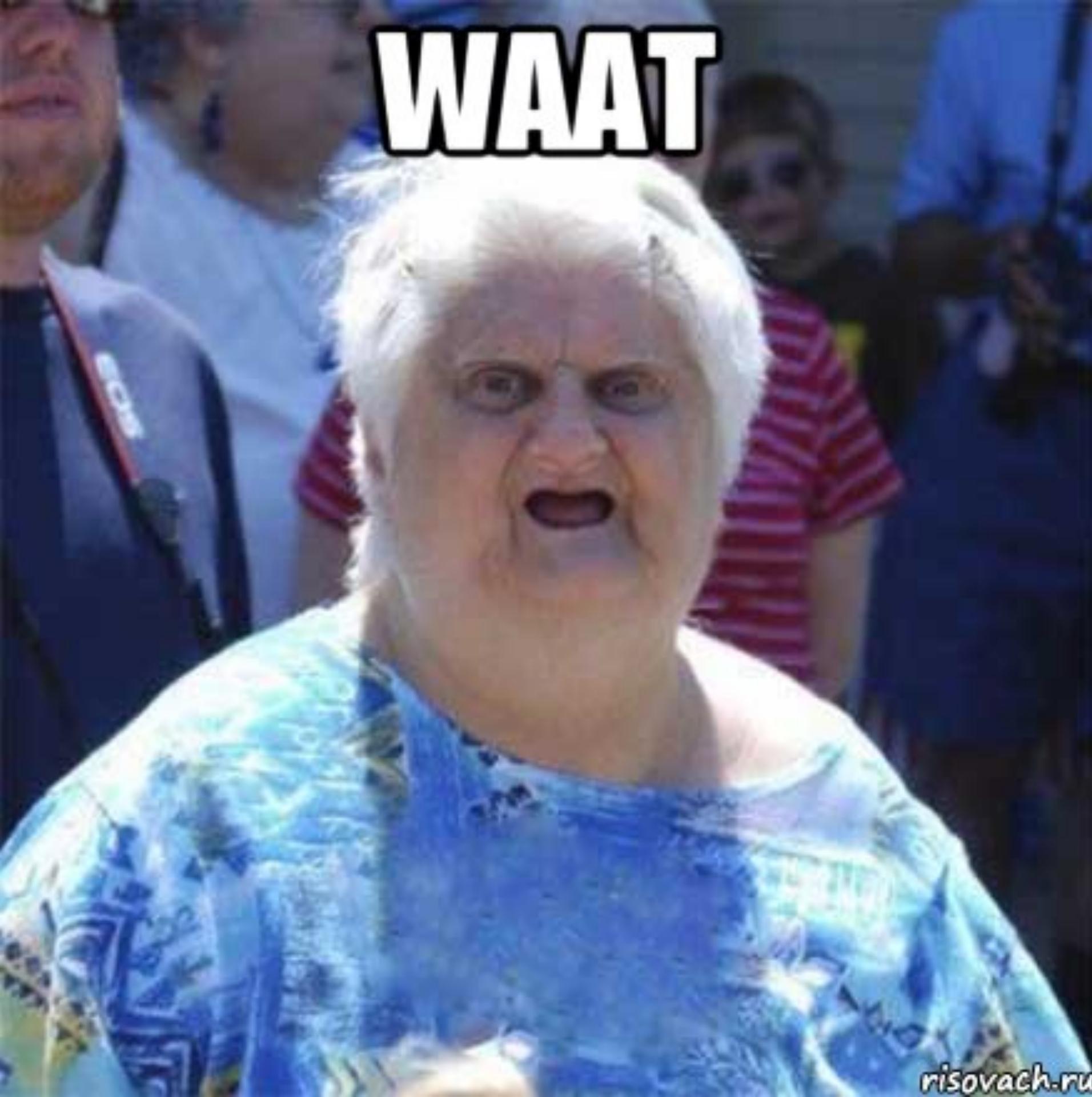
Language: English

Решение

```
function checkText(element) {
  var text = (element.tagName == 'INPUT' || element.tagName == 'TEXTAREA') ?
    element.value :
    element.innerText //contenteditable

  var result = someTextApi.checkText(text)
  for (var i = 0; i < result.length; i++) {
    var marker = window.createTextMarker()
    marker.setStart(result[i].start)
    marker.setEnd(result[i].end)
    marker.classList.add('css-class')
    marker.addEventListener('mousemove', function(e) {
      marker.classList.add('hover-class')
      showSuggestions(result[i], marker)
    })
    element.addMarker(marker)
  }
}
```

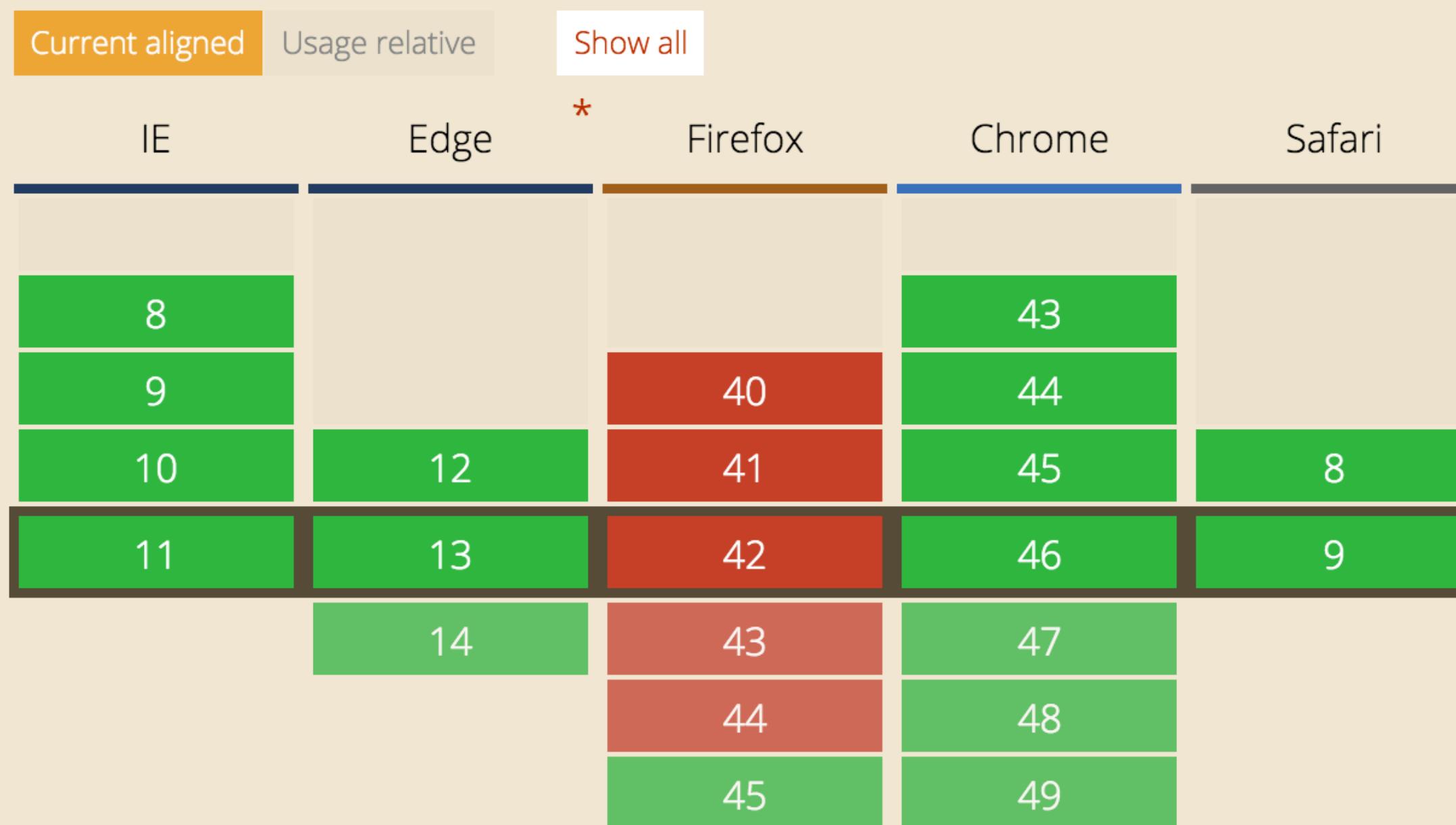
WAAT



innerText

Node.innerText - UNOFF

A currently-nonstandard property representing the text within a DOM element and its descendants. As a getter, it approximates the text the user would get if they highlighted the contents of the element with the cursor and then copied to the clipboard.



innerText

```
<p class="feature-description">  
  A <span>currently-nonstandard </span>  
  property representing the <i>text</i> within  
</p>  
  
> element.innerText  
> "A currently-nonstandard property representing the text within"
```

А сделаем-ка
свой innerText



Найвно

```
// из https://github.com/vorushin/jsHtmlToText/blob/master/jsHtmlToText.js
html = html.replace(/<\s*br[^>]*\/?\s*>/ig, '\n');

html = html
    // Remove all remaining tags.
    .replace(/(<[^>]+)>)/ig, "")
    // Trim rightmost whitespaces for all lines
    .replace(/(^[\n\S]+)\n/g, "\n")
    .replace(/(^[\n\S]+)$/, "")
    // Make sure there are never more than two
    // consecutive linebreaks.
    .replace(/\n{2,}/g, "\n\n")
    // Remove newlines at the beginning of the text.
    .replace(/^\n+/, "")
    // Remove newlines at the end of the text.
    .replace(/\n+\$/,"")
    // Decode HTML entities.
    .replace(/&([^\;]+);/g, decodeHtmlEntity);
```

А что если?

white-space: pre-wrap

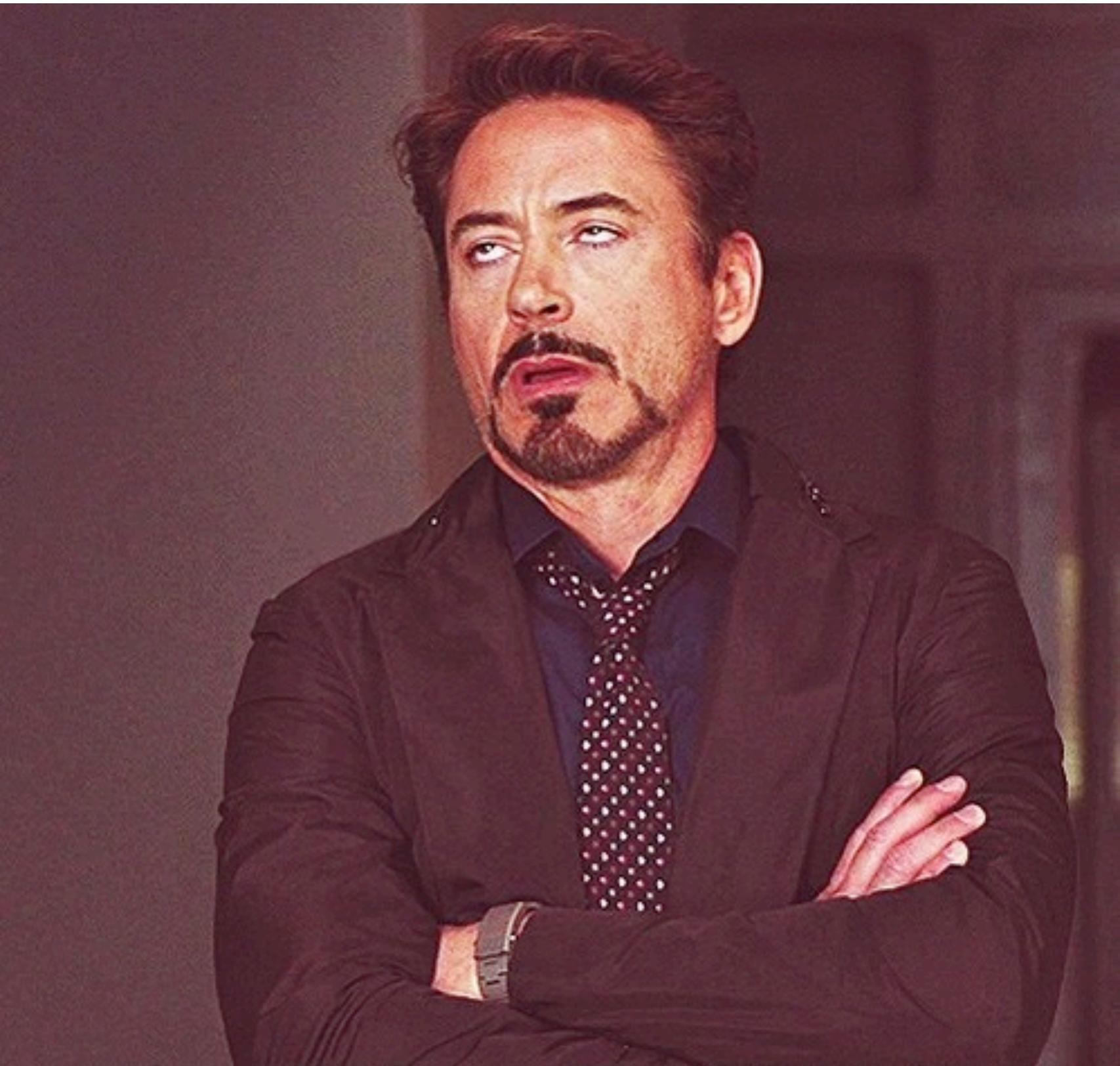
или

```
<div>
    some content
    <customElement style="display: block">here</customElement>
</div>
```

textContent



Так это же одна
фигня с innerText



Нет

textContent

HTML

el.innerText

el.textContent

```
<div>___Cheat sheet</div>
```

"Cheat sheet"

"___Cheat sheet"

```
<div style='white-space:pre-wrap'>    "___Cheat sheet"  
    ___Cheat sheet  
</div>
```

"___Cheat sheet"

"___Cheat sheet"

```
<div><br>___Cheat sheet</div>
```

"\nCheat sheet"

"___Cheat sheet"

```
<div><br><p></p><div>  
Cheat sheet  
</div></div>
```

"\nCheat sheet\n"

"Cheat sheet"

textContent → innerText

- идем по текстовым нодам элемента
- считываем textContent и обрезаем пробелы по бокам
- расчитываем переносы строк

```
function isBr(ni) {
  var result = false
  if(ni.nodeIsBlock && ni.nodeWithContent && ni.nextIsElement && !ni.prevIsBrWithinNode) result = true
  if(!ni.nodeIsBlock && ni.nodeWithContent && (ni.nextIsBlock || ni.nextIsBr)) result = true
  if(ni.nodeIsBlock && ni.nodeWithContent && ni.nextIsBlock && !ni.prevIsBrWithinNode) result = true
  if(ni.nextIsBr && !ni.nextIsLastChild && ni.nodeWithContent) result = true
  if(ni.nodeIsBr && !ni.parentWithContent && ni.nodeIsLastChild) result = true
  if(ni.nodeIsBr && ni.nextIsBr) result = true
  if(ni.nodeIsBr && ni.nodeIsFirstChild && !ni.onlyOneChild) result = true
  if(ni.nodeIsBr && ni.nextIsElement && !ni.prevWithContent && !ni.prevIsBr) result = true
  if(ni.nodeIsBr && ni.nextIsBlockWithContent && ni.prevIsBlockWithContent) result = true
  if(ni.isRoot) result = false
  if(ni.preWrap && ni.node.textContent[ni.node.textContent.length-1] == "\n" &&
  (ni.prev ? ni.prevIsBlock : true) && (ni.next ? ni.nextIsBlock : true)) result = false
  if(ni.isTextNode && nodeBetweenTags(ni)) result = false
  if(isTableCell(ni.node))result = false
  return result
}
```



А что же Фаерфокс?

https://bugzilla.mozilla.org/show_bug.cgi?id=264412

Reported: 2004-10-14 13:14 PDT by
Paul_Adams

11 лет тикету



Юра Зайцев
@kangax



The poor, misunderstood innerText

Update: half a year later

It's been half a year since I wrote this post and few things changed for the better!

First of all, [Robert O'Callahan](#) of Mozilla made some awesome effort — he decided to [spec out the innerText](#) and then implemented it in Firefox. The idea was to create something simple but sensible. The proposed spec — only after about 11 years — is now [implemented in Firefox 45](#) :)

I've added FF45 results to [a compat table](#) and aside from couple differences, FF is pretty close to Chrome's implementation. I'm also planning to add more tests to find any other differences among Chrome, FF, and Edge.

Оказывается
можно менять
браузеры!



```
function checkText(element) {
  var text = (element.tagName == 'INPUT' || element.tagName == 'TEXTAREA') ?
    element.value :
    element.innerText //contenteditable

  var result = someTextApi.checkText(text)
  for (var i = 0; i < result.length; i++) {
    var marker = window.createTextMarker()
    marker.setStart(result[i].start)
    marker.setEnd(result[i].end)
    marker.classList.add('css-class')
    marker.addEventListener('mousemove', function(e) {
      marker.classList.add('hover-class')
      showSuggestions(result[i], marker)
    })
    element.addMarker(marker)
  }
}
```

window.createTextMarker есть?

Нет

Нарисуем
ошибки внутри
contenteditable



Наивно №1

```
el.innerHTML = renderErrors(el.innerText)
```

- форматирование
- структура
- скорость

Наивно №2 (свой парсер)

```
el.innerHTML = renderErrors(el.innerHTML)
```

Все проблемы прошлого подхода, кроме того что не сработает.

Фантазия на тему текстового диапазона

```
var error = {start: 0, end: 10}
var range = document.createTextRange()
var errorNode = document.createElement('span')
errorNode.textContent = el.innerText.substring(error.start, error.end)
range.setStart(el, error.start)
range.setEnd(el, error.end)
range.insertNode(errorNode)
```

Почти не наивно

```
el.innerHTML = renderErrors(el, errors)
```

Бежим по узлам

```
function renderErrors(el, errors) {  
    //....  
    child.innerHTML = wrapNode(child, childPos, error)  
}
```

- childPos вычислить сложно из-за переносов
- структура

А что, если?

```
<div>Some miss<em>take</em></div>
```

Надо же деликатно вставить

Было:

```
<div>Some miss<em>take</em></div>
```

Стало:

```
<div>Some <error id="1">miss</error><em><error id="1">take</error></em></div>
```

Деликатно

```
function replaceRange(node, start, end, newNode) {  
    var range = document.createRange()  
    range.setStart(node, start)  
    range.setEnd(node, end)  
    range.deleteContents()  
    range.insertNode(newNode)  
}
```

А каретка?



```
var selStart = div.selectionStart,
```

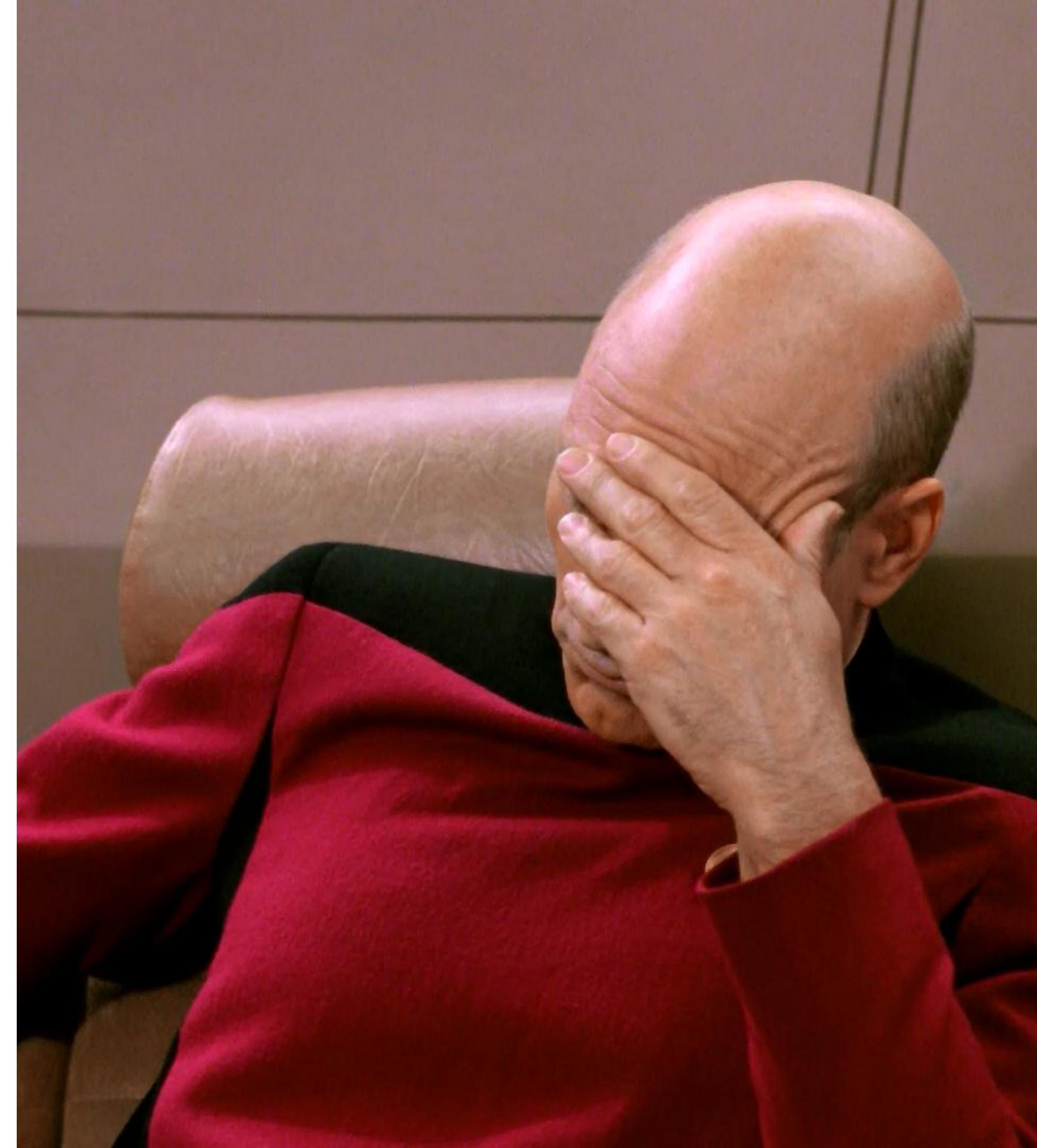
```
selEnd = div.selectionEnd
```

```
renderErrors()
```

```
div.selectionStart = selStart
```

```
div.selectionEnd = selEnd
```

Не сработает!



```
function getCursorPos(el) {
    var sel = el.ownerDocument.getSelection()
    if(!sel.anchorNode) return {s: -1, e: -1}
    var s = getPosInText(el, sel.anchorNode, sel.anchorOffset)
    var e = sel.isCollapsed ? s : getPosInText(el, sel.focusNode, sel.focusOffset)
    return {s: s, e: e}
}

function setCursorPos(el, pos) {
    var sNi = getNodeByTextPos(el, pos.s)
    var eNi = pos.s == pos.e ? sNi : getNodeByTextPos(el, pos.e)
    if(!sNi || sNi < 0 || eNi < 0) return
    setRange(sNi, eNi, el.ownerDocument)
}

function setRange(sNi, eNi) {
    var doc = sNi.node.ownerDocument
    if(!eNi) eNi = sNi
    var sel = doc.getSelection()
    var range = doc.createRange()
    range.setStart(sNi.node, sNi.offset)
    range.setEnd(eNi.node, eNi.offset)
    sel.removeAllRanges()
    sel.addRange(range)
}
```

Запомнить позицию в тексте

```
function getCursorPos(el) {  
    var sel = el.ownerDocument.getSelection()  
    if(!sel.anchorNode) return {s: -1, e: -1}  
    var s = getPosInText(el, sel.anchorNode, sel.anchorOffset)  
    var e = sel.isCollapsed ? s : getPosInText(el, sel.focusNode, sel.focusOffset)  
    return {s: s, e: e}  
}
```

Вернуть на место

```
function setCursorPos(el, pos) {  
    var sNi = getNodeByTextPos(el, pos.s)  
    var eNi = pos.s == pos.e ? sNi : getNodeByTextPos(el, pos.e)  
    if(!sNi || sNi < 0 || eNi < 0) return  
    setRange(sNi, eNi, el.ownerDocument)  
}
```



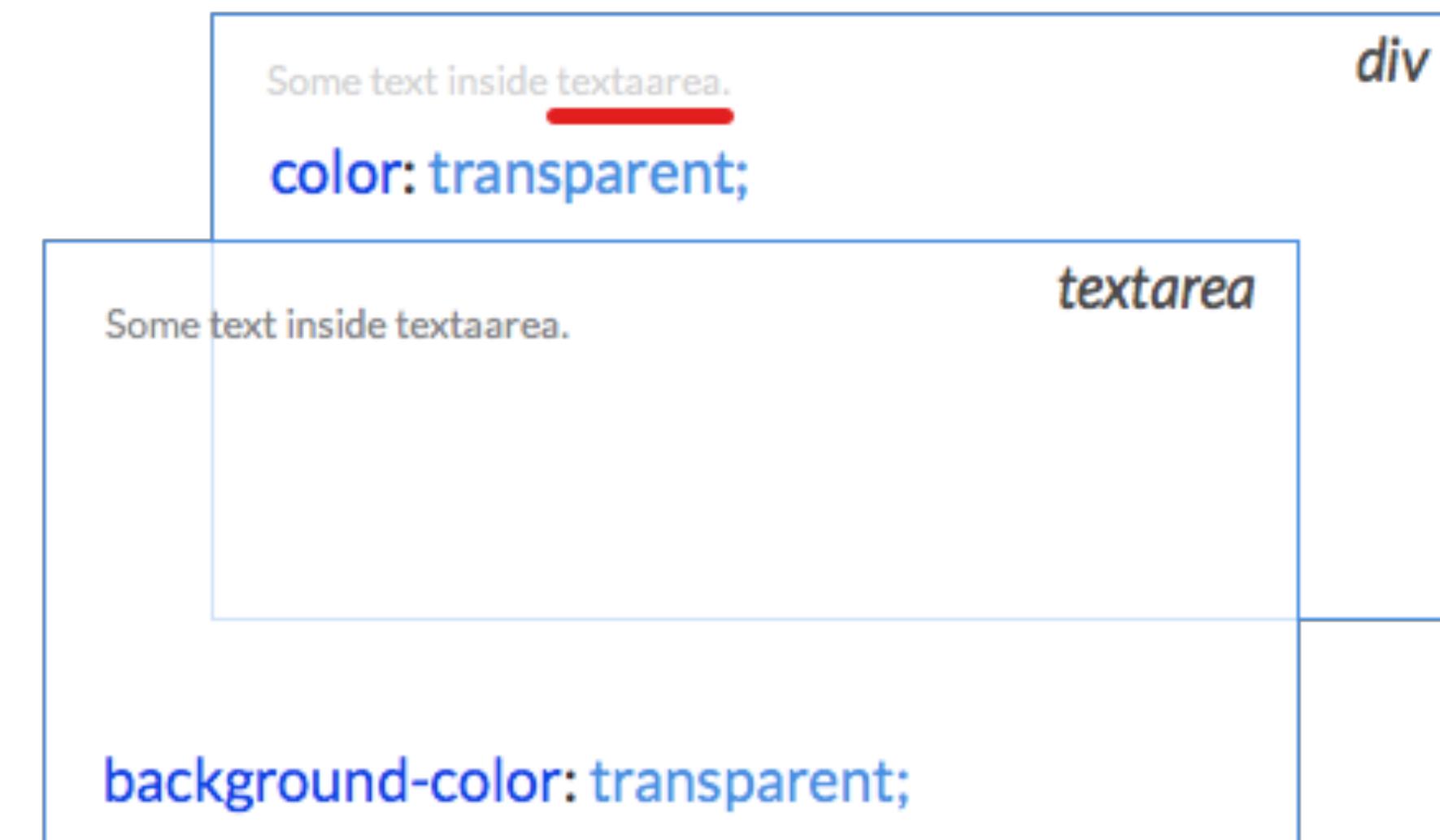


А как же textarea?

Наивно

Попробуем как-то абсолютно спозиционировать
подчеркивания

Решение



Переносы не совпадают

```
.ghost {  
  color: transparent;  
  white-space: pre-wrap;  
  position: absolute;  
}  
.ghost-text {  
  display: inline-block;  
  white-space: pre-wrap;  
}  
  
<div class="ghost" contentEditable="true">  
  <span class="ghost-text">Some <error>texxt</error>.</span>  
</div>  
<textarea value="Some texxt."></textarea>
```

Не спрашивайте

```
function checkText(element) {
  var text = (element.tagName == 'INPUT' || element.tagName == 'TEXTAREA') ?
    element.value :
    element.innerText //contenteditable

  var result = someTextApi.checkText(text)
  for (var i = 0; i < result.length; i++) {
    var marker = window.createTextMarker()
    marker.setStart(result[i].start)
    marker.setEnd(result[i].end)
    marker.classList.add('css-class')
    marker.addEventListener('mousemove', function(e) {
      marker.classList.add('hover-class')
      showSuggestions(result[i], marker)
    })
    element.addMarker(marker)
  }
}
```

Нужен стандарт



Упоминания

 [Update Status](#) |  [Add Photos/Video](#) |  [Create Photo Album](#)

 **Yura Bogdanov** mention somebody **Igor Kononuchenko**

     Only Me (+) ▾ Post

Метки

Sloth Bear ✕ Polar Bear ✕ Giant Panda ✕ |

American Black Bear

Asiatic Black Bear

Brown Bear

Giant Panda

Sloth Bear

Sun Bear

Polar Bear

Spectacled Bear

Правописание

Some mistake in the **texxt.**



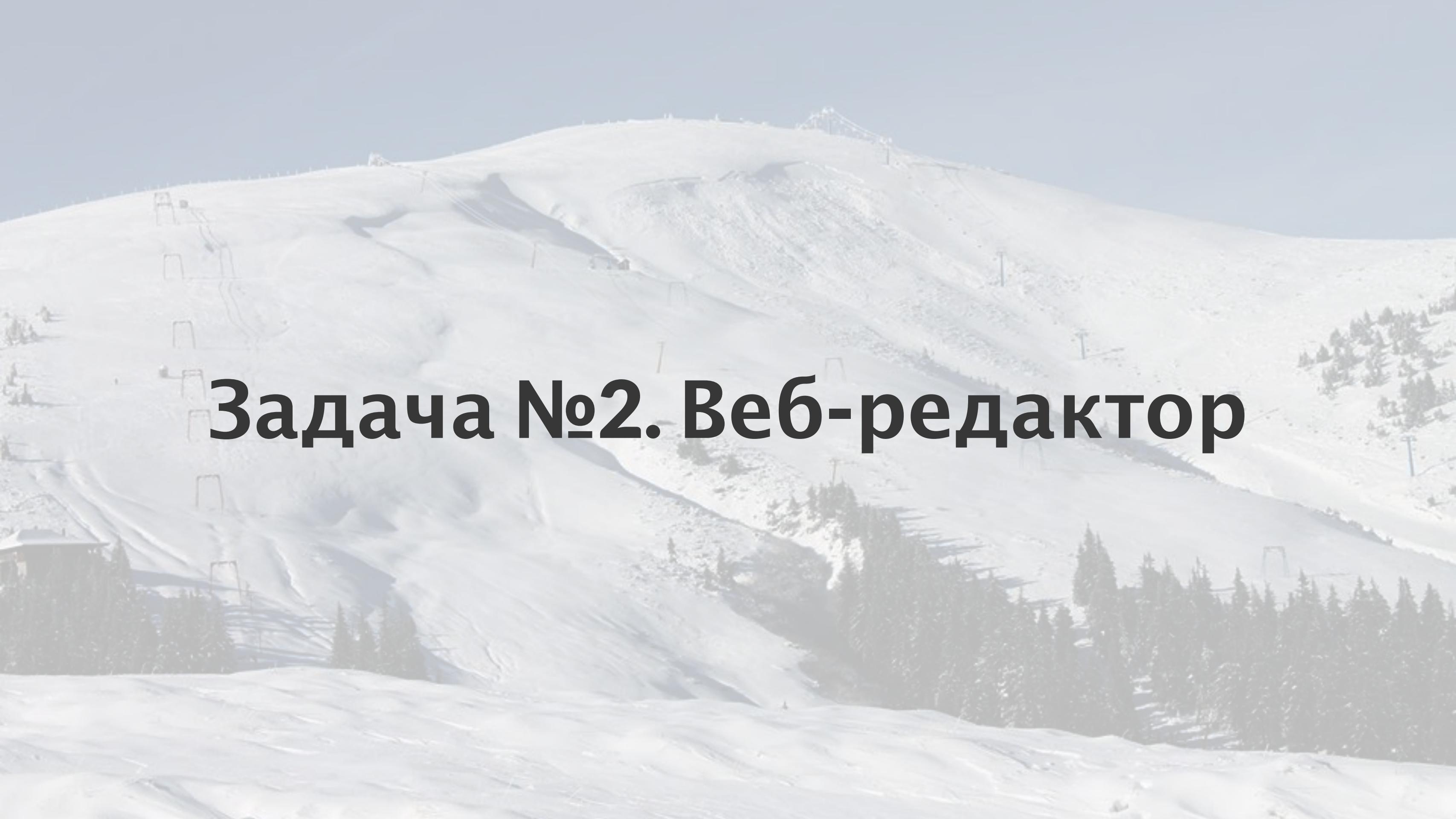
The Editing Task Force



Вы не поверите

But what if we exposed something like
addCompositionMarker(range, color, thickness, backgroundColor)

– *Johannes Wilm ([from w3 list](#))*

A black and white photograph of a snowy mountain landscape. In the foreground, there's a building and some trees. A ski lift with several gondolas is visible on the left side of the mountain. The mountain itself is covered in snow and has some rocky patches. The sky is clear and blue.

Задача №2. Веб-редактор

Джентельменский набор

- форматирование
- большие документы
- коллаборативный
- мобильные устройства

Наивно

Contenteditable:

- тормозит
- неконсистентный в браузерах
- нет контроля над разметкой
- нельзя убрать, добавить каретки

Производительность в Хроме

Поставьте, пожалуйста звездочку

[https://code.google.com/p/chromium/ issues/detail?id=544357](https://code.google.com/p/chromium/issues/detail?id=544357)

e.net/efsf0aua/3/

date Fork TidyUp Collaboration Share ▾

rc="https://facebook.github.io/react/js/jsfiddle-integration-babel.js"></script> HTML

container>
This element's contents will be replaced with your component

| the Register button immediately when pressed to prevent double-submit
in AJAX indicator while registration is being processed

| the Register button until both username and fullname have been entered

feedback after registration

availability checking while the user is still typing the username
in AJAX indicator while this check is being performed

feedback on unavailable username

| the Register button in case the username is unavailable

| the Register button while the check is being performed

.

Form = React.createClass{

state: function() {

: '',

: ''

Timeline Profiles Resources Audits Console

sion" value="3" id="id_version">
ug" name="slug" value="efsf0aua">
style="width: 49.8255%;">
panel_html" data-panel_type="html" style="height: 15.1149%;">...</div>
horizontal" style="top: 60px;"></div>
d="panel_js" data-panel_type="javascript 1.7" style="height: 84.8851%;">
rows="10" cols="40" name="code_js" style="display: none;">...<textarea>
style="opacity: 0;">JavaScript 1.7
s-default CodeMirror-wrap" contenteditable>
(indicator while registration is being processed</div>



Компромиссный

Textarea с подложкой. Grammarly

- Быстрый с оптимизациями.
- Без форматирования.

Contenteditable

- своя модель документа
- переопределим все что можно

ProseMirror

Hackpad

Trix

Ленивый (составной) contenteditable

Quip
Notion.so

Some text in paragraph 1.

Some text in paragrap

div[contenteditable]

Some text in paragraph 3.

Some text in paragraph 4.

div

div

div

Contenteditable как источник ввода

div[contenteditable] focused invisible

- доступность
- одна страница в памяти
- очень сложная реализация

Google docs

Pages (svg)

Office 365

Rendered content (html or svg)



The Editing Task Force



[https://github.com/grammarly/
contenteditable](https://github.com/grammarly/contenteditable)

Возможное будущее

contentEditable value	Fires events	Draws cursor	Mutates DOM	Formatting
minimal	yes	no	no	no
minimal-with-cursor	yes	yes	no	no
minimal-with-mutation	yes	yes	yes	no
true	yes	yes	yes	yes

Домашка



Дано: textarea с текстом, справа снизу кнопка.

Требуется: как только текст пересекает (при прокрутке или печати) кнопку, ее нужно спрятать.

The screenshot shows a rich text editor interface. At the top is a toolbar with various icons for bold, italic, font style, alignment, and other document operations. Below the toolbar is a menu bar with tabs: Links, Images, Styling/Headers, Lists, Blockquotes, Code, and HTML. To the right of the menu bar is a link to "advanced help". The main content area contains a large block of text. A red box highlights the number "6" in the bottom right corner of the content area, likely indicating a comment or revision count. The text in the content area discusses a bug related to execution time and memory limits during debugging.

EDIT : a bit more information. Everything seems to work fine (php.ini commented or not) until i add a breakpoint in eclipse and ask for debugging my page. Once i add a breakpoint, the infinite loop occur, and i get stoped by the maximum execution time or maximum memory limit. I tested it with a small file (20KB), and it seem to work, debugging or not, and a bigger one (750KB), and it fail. While stepping, i can definitely see that my key \$k does not get updated after the 2nd iteration.

@kigorw

Итоженька

- мы можем влиять на стандарты
- contenteditable, – плохо, но есть движение