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JavaScript

Bugs in a Cross-Browser World

Once Upon a Time...

...Script

LiveScript
JavaScript
JScript
ECMAScript
ActionScript

Internet Explorer 5.0

Internet Explorer 5.5+

Mozilla 1.0+

Opera 7+

Safari

Flash 8.5

DOM

“Stupid,” in Dutch

Why, Bugs?

ECMAScript

DOM

(Stupid!)

Syntax Errors

```
{foo: "bar", bar: "camp",}
```

or

```
{foo: "bar", bar: "camp"}
```

```
{bar: function camp() {}}
```

Mozilla:

camp && foo.bar

camp != foo.bar

Opera:
!camp && foo.bar

Safari:
SyntaxError - Parse error

Implementation
Caused

IE 5.0:
(new Array()).push("hey")

Not supported
`Array.prototype.push()`

Possible Implementation

```
Array.prototype.push = function() {  
  for(var i = 0, s = this.length; i < arguments.length; i++, s++)  
    this[s] = arguments[i];  
  
  return this;  
}
```

Fix implementation bugs by
implementing missing functionality.

DOM Bugs

Internet Explorer:
`!document.importNode()`

Implementation bug

Safari < 1.3

```
var text = document.createTextNode("hello world");  
var body = document.getElementsByTagName("body")  
[0];  
body.appendChild(text);
```

Safari wouldn't repaint the
window!

Check this:

```
var text = document.createTextNode("hello world");  
var body = document.getElementsByTagName("body")[0];  
body.appendChild(text);
```

```
body.innerHTML += "";
```

innerHTML usually saves you
from DOM trouble

Memory Leaks

In Internet Explorer

JScript and DOM Engine

Circular References

(JScript-DOM-JScript)

Caused by closures

```
var body = document.getElementsByTagName("body")[0];
body.onclick = function () {
    alert("You clicked on " + body.nodeName);
}
```

Make sure to remove the events
on unload.

Also in Safari < 1.3, although I'm not
sure of the explanation.

It Ain't Working

```
javascript:[0,1;2];
```

Safari

SyntaxError - Parse error
(Line 1)

Mozilla

Error: missing] after element list

- Source File: javascript: [0,1;2]
- Line: 1, Column: 5
- Source Code: [0,1;2]

Opera

```
javascript:[0,1;2]
Javascript URL thread: "javascript:
[0,1;2]"
Syntax error while loading: line 1 of
unknown script :
1;2]
---^
```

Internet Explorer

Line: 1

Char: 5

Error: Expected "]"

Code: 0

URL: about:blank

Debugging

Mozilla: Venkman
IE: MS Script Editor

Lumberjack
fvlogger
Mozilla DOM Inspector
Web Developer Extension
JavaScript Shell
IEDocMon

Unit Testing

Test.Unit (script.aculo.us)

JsUnit (Edward Heatt)

JsUnit (Jörg Schaible)

Thank You

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