



當代網頁設計

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決戦日

AJAX

Asynchronous JavaScript And XML

Asynchronous

JavaScript

And

~~XML~~

Asynchronous

JavaScript

And

XML

Asynchronous

JavaScript

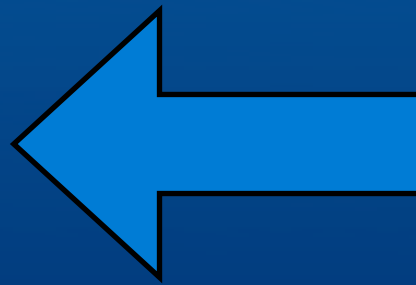
And

XML

Asynchronous

JavaScript

And



XML

Asynchronous

JavaScript

JavaScript

- 監控動作 / 引發互動 (event)
- 建立溝通 / 接收訊息 (connection)
- 更改資料 (innerHTML, DOM, ...)

XML

XML

- **HTML**
- **JSON**

優點

優點

操作容易

maps.google.com

優點

一氣呵成

flickr.com

優點

旅行良伴

netvibes.com

例

表單互動

del.icio.us

自動完成

深層目錄

地址

用戶溝通

http://www.modernmethod.com/sajax/sajax-0.12/php/example_wall.php

投票+評等

<http://digg.com/>

<http://reddit.com/>

缺點

缺點

JavaScript

maps.google.com v.s. urmap.com

缺點
親和零分
螢幕閱讀機

缺點

打破慣例

網址列, 倒退鍵, 存書籤

google://ajax+back+button

news.google.com

缺點
設計不良

設計

AJAX?

我可以做 v.s. 我應該做

設計 視覺暗示

gmail.com

設計 程式碼

程式大小 = 下載速度
= CPU time = 慢

設計 介面革新

99% 都是錯的

(N): http://*****

(Y): <http://blogus.xilinus.com/pages/javawin/>

UI Designer

rules!

實作

```
var req = new  
XMLHttpRequest();
```

```
var req = new  
ActiveXObject  
("Microsoft.XMLHTTP");
```

```
if(window.XMLHttpRequest) {  
    try {  
        req = new XMLHttpRequest();  
    } catch(e) {  
        req = false;  
    }  
} else if(window.ActiveXObject) {  
    try {  
        req = new ActiveXObject("Msxml2.XMLHTTP");  
    } catch(e) {  
        try {  
            req = new ActiveXObject("Microsoft.XMLHTTP");  
        } catch(e) {  
            req = false;  
        }  
    }  
}  
}
```

```
if(req) {  
    req.onreadystatechange =  
processReqChange;  
    req.open("GET", url, true);  
    req.send("");  
}
```

readyState

0 = uninitialized

1 = loading

2 = loaded

3 = interactive

4 = complete

```
function processReqChange() {  
    //only if req shows "loaded"  
    if (req.readyState==4) {  
        //only if "OK"  
        if(req.status==200){  
            //... processing  
        }else{  
            alert("error:" + req.statusText);  
        }  
    }  
}
```

開發

時間

沒有

時間

加速

流程

library /
framework

communication libraries

Sarissa

<http://sarissa.sourceforge.net/>

範例程式: <http://antony.lesuisse.org/qweb/trac/wiki/AjaxTerm>

SAJAX

<http://www.modernmethod.com/sajax/>

prototype

<http://prototype.conio.net/>

- `$()` - `document.getElementById()`
- `$$()` - CSS Selector
- `$F()` - input field
- `$A()` - to Array
- `$H()` - to Hash



Prototype
Version
ScriptFragment
emptyFunction()
k()

Object
inspect()
extend()

Function
bind()
bindAsEventListener()

Try
these()

Class
create()

Number

Abstract

Abstract.Insertion
initialize()
contentFromAnonymousTable()

Insertion

Insertion.Top
initializeRange()
insertContent()

Insertion.Bottom
initializeRange()
insertContent()

Insertion.After
initializeRange()
insertContent()

Insertion.Before
initializeRange()
insertContent()

String
sub()
scan()
truncate()
strip()
gsub()
times()
stripScripts()
extractScripts()
evalScripts()
escapeHTML()
unescapeHTML()
toQueryParams()
toArray()
camelize()
inspect()
parseQuery = toQueryParams()

\$R()
Creates an ObjectRange

ObjectRange

Template
Pattern
initialize()
evaluate()

Enumerable
each()
all()
any()
collect()
detect()
findAll()
grep()
include()
inject()
invoke()
max()
min()
partition()
pluck()
reject()

\$()
getElementById

\$A()
Creates an Enumerable/Array

Array
from()
_reverse()
_each()
clear()
first()
last()
compact()
flatten()
without()
indexOf()
reverse()
shift()
inspect()

\$\$()
Returns an Enumerable/Array of elements

\$H()
Creates an Enumerable/Hash

Hash
_each()
keys()
values()
merge()
toQueryString()
inspect()

Document
getElementsByClassName()

Position
prepare()
realOffset
cumulativeOffset()
positionedOffset()
offsetParent()
within()
withinIncludingScrollOffsets()
overlap()
clone()
page()
clone()
absolutize()
relativize()
includeScrollOffsets

Event
element()
isLeftClick()
pointerX()
pointerY()
stop()
findElement()
_observeAndCache()
unloadCache()
observe()
stopObserving()
observers()
KEY_BACKSPACE
KEY_TAB
KEY_RETURN
KEY_ESC
KEY_LEFT
KEY_UP
KEY_RIGHT
KEY_DOWN
KEY_DELETE

\$F()

Ajax

<http://www.snook.ca/archives/000531.php>

PeriodicalExecuter
initialize()
registerCallback()
onTimerEvent()

Selector
initialize()
parseExpression()
buildMatchExpression()
compileMatcher()
findElements()
toString()

Abstract.TimedObserver
initialize()
registerCallback()
onTimerEvent()

Abstract.EventObserver
initialize()
registerCallback()
onElementEvent()
registerFormCallbacks()

map = collect()
find = detect()
select = findAll()
member = include()
entries = toArray()

Toggle
display()

Element.ClassNames
initialize()
_each()
set()
add()
remove()
toString()

Field
clear()
focus()
present()
select()
activate()

index()
show()
remove()
update()
getHeight()
classNames()
hasClassName()
addClassName()
removeClassName()
cleanWhitespace()
empty()
childOf()
scrollTo()
getStyle()
setStyle()
getDimensions()
makePositioned()
undoPositioned()
makeClipping()
undoClipping()

getElements()
getInputs()
disable()
enable()
findFirstElement()
focusFirstElement()
reset()

Form.Observer
getValue()

Form.EventObserver
getValue()

getValue()
Form.Element.Serializers
input()
inputSelector()
textarea()
select()
selectOne()
selectMany()

Form.Observer
getValue()

Form.EventObserver
getValue()

Form.Element.EventObserver
create()

Ajax.PeriodicalUpdater
initialize()
start()
stop()
updateComplete()
onTimerEvent()

register()
unregister()
dispatch()
onCreate()
onComplete()

Ajax.Base
setOptions()
respondsSuccess()
respondsFailure()

Ajax.Request
initialize()
request()
setRequestHeaders()
onStateChange()
header()
evalJSON()
evalResponse()
respondToReadyState()
dispatchException()

Ajax.Updater
initialize()
updateContent()

GUI Libraries

RICO

<http://openrico.org/>

<http://www.mirimar.net/mailbrowser/>

Script.aculo.us

<http://script.aculo.us/>

Yahoo UI Library

<http://developer.yahoo.com/yui/>

...etc

Behavior

<http://bennolan.com/behaviour/>

整合到 prototype

羽量級

moo.fx

<http://moofx.mad4milk.net/>

<http://moodom.mad4milk.net/>

<http://www.mad4milk.net/entry/moo.ajax>

評比

<http://ajaxian.com/archives/ajax-libraries-how-portable>

[警告]

開發

順利

實用

注意

demo

Q&A



(裏)當代網頁設計

快樂設計師
薛良斌

時間：半年過後

經驗值: 1000 小時+



1. 用戶

相簿網站

盲人, 色弱, 老人

書籤網站

新聞網站

平等 瀏覽器

1. 80 / 20

2. 降級支援

AJAX

不是必需品

別為AJAX而AJAX

信用

別把用戶當笨蛋

你會永遠失去他們

2. 驗證器

valid

so WHAT?

昂貴的100%

24K金, 99.9999.....999999%

XHTML? no

mime-type: application/xhtml+xml

document.write, innerHTML don't work.

例

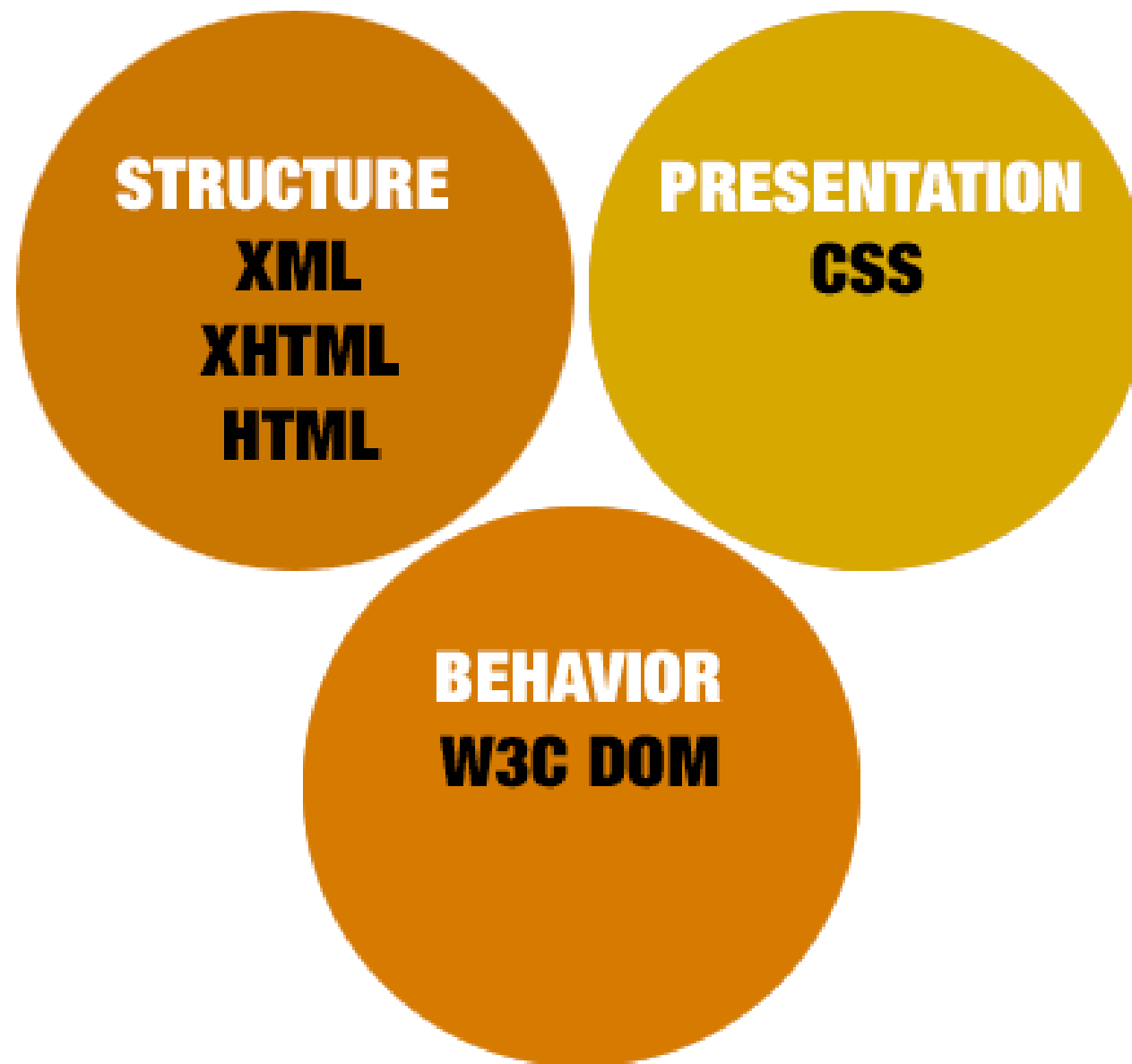
RSS, ATOM

例

innerHTML,
document.write()

真世界

真義





Q&A

