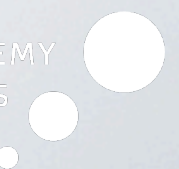


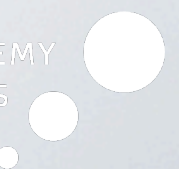
AJAX with **jQuery** *write less, do more.*

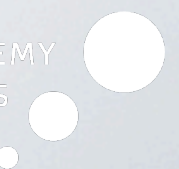
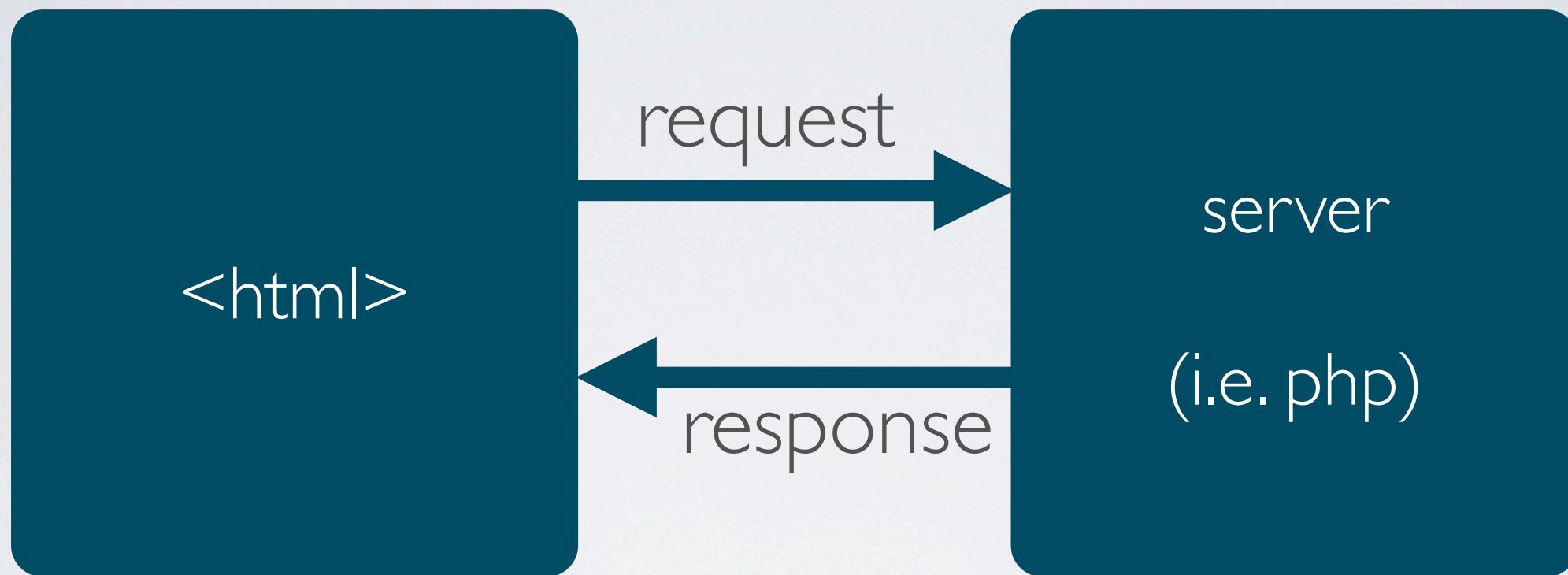


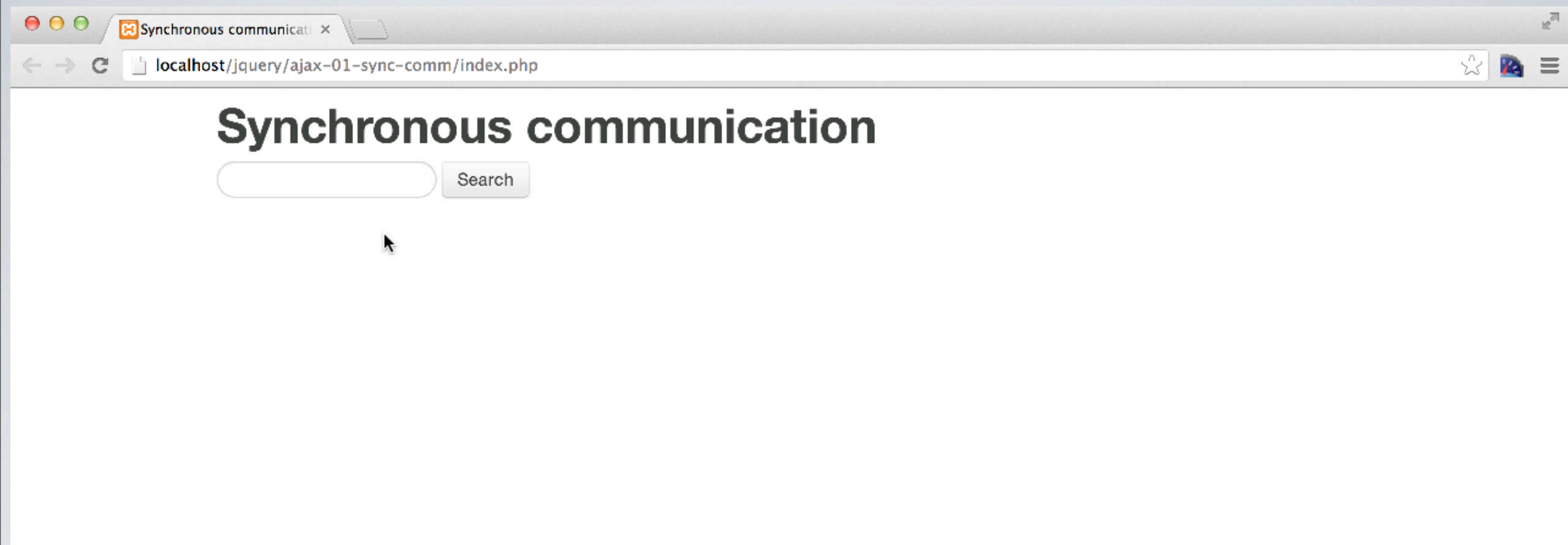
What is AJAX?

Where is it used?

How do we do it?







Asynchronous communication

XMLHttpRequest Object

Made by Microsoft in 1999

Implemented in Internet Explorer 5

De facto standard in 2004


```

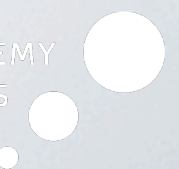
/*
  Provide the XMLHttpRequest constructor for Internet Explorer 5.x-6.x:
  Other browsers (including Internet Explorer 7.x-9.x) do not redefine
  XMLHttpRequest if it already exists.

  This example is based on findings at:
  http://blogs.msdn.com/xmlteam/archive/2006/10/23/using-the-right-version-of-msxml-i
*/
if (typeof XMLHttpRequest === "undefined") {
  XMLHttpRequest = function () {
    try { return new ActiveXObject("Msxml2.XMLHTTP.6.0"); }
    catch (e) {}
    try { return new ActiveXObject("Msxml2.XMLHTTP.3.0"); }
    catch (e) {}
    try { return new ActiveXObject("Microsoft.XMLHTTP"); }
    catch (e) {}
    // Microsoft.XMLHTTP points to Msxml2.XMLHTTP and is redundant
    throw new Error("This browser does not support XMLHttpRequest.");
  };
}

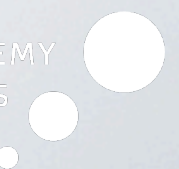
```

Cross Browser

```
function getXMLHttpRequestObject() {  
    var ref = null;  
    if (window.XMLHttpRequest) {  
        ref = new XMLHttpRequest();  
    } else if (window.ActiveXObject) { // Older IE.  
        ref = new ActiveXObject("MSXML2.XMLHTTP.3.0");  
    }  
    return ref;  
}
```

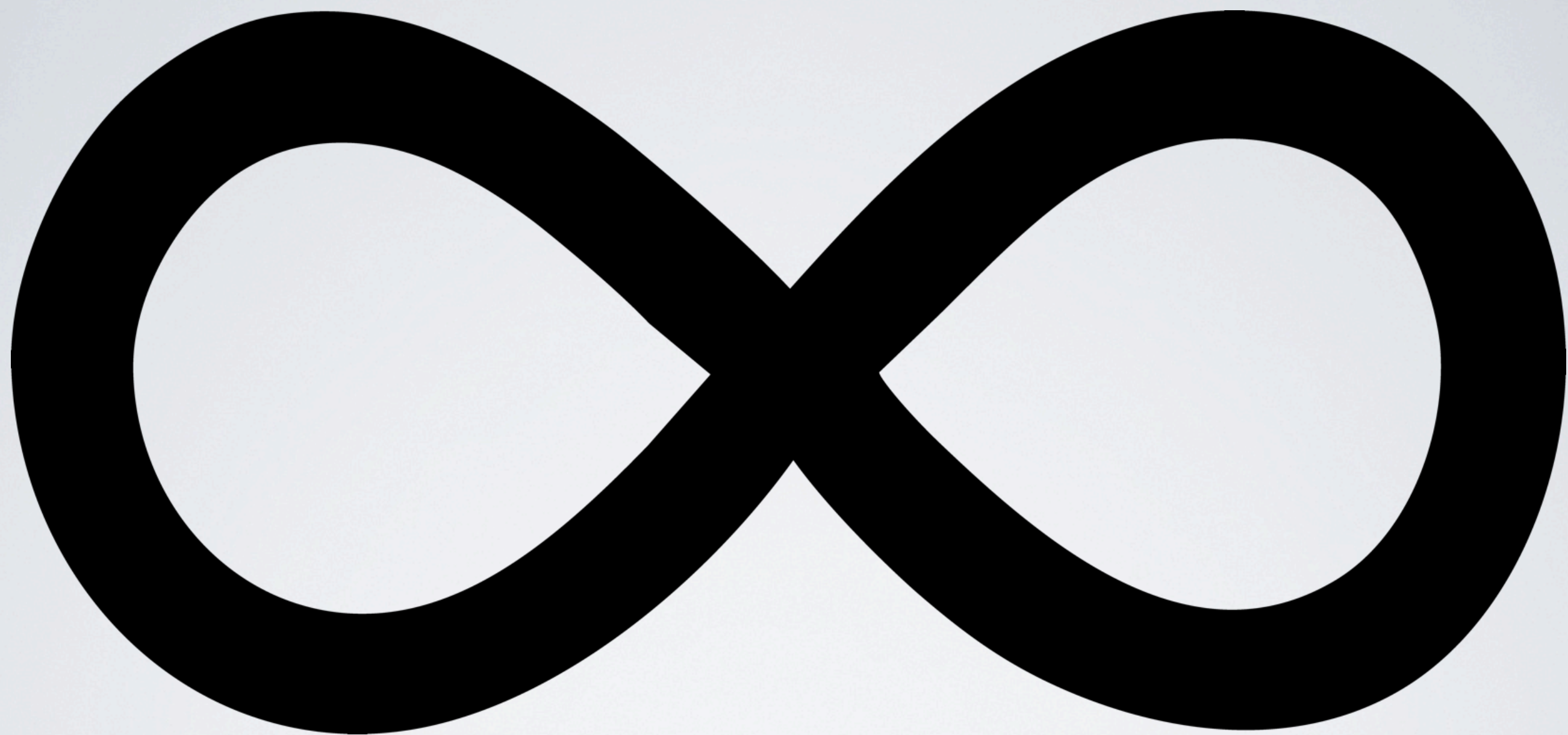


WHERE IS IT USED?
(EVERYWHERE...)



The screenshot shows a Twitter web browser interface. The browser's address bar displays "Twitter, Inc. [US] https://twitter.com". The Twitter navigation bar includes links for Home, Connect, Discover, and Me, along with a search bar and settings icon. The main content area is divided into a left sidebar and a central "Tweets" column. The sidebar features the profile of Niels Henrik Juul Ha, showing 3 tweets, 55 following, and 11 followers, along with a "Compose new Tweet..." button and a "Who to follow" section featuring Tantek Çelik. The "Tweets" column displays three tweets: one from Wired about car stories, one from Smashing Magazine about LESS utilities, and one from Creative Bloq about a Photoshop action. The network developer tool at the bottom shows tabs for Elements, Resources, Network, Sources, Timeline, Profiles, Audits, and Console. The Network tab is active, displaying a table with columns: Name Path, Method, Status Text, Type, Initiator, Size Content, Time Latency, and Timeline. The table is currently empty, and a message at the bottom of the tool states: "No requests captured. Reload the page to see detailed information on the network activity."

Name Path	Method	Status Text	Type	Initiator	Size Content	Time Latency	Timeline
No requests captured. Reload the page to see detailed information on the network activity.							



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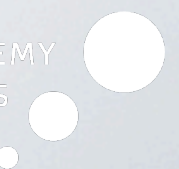


The screenshot shows a Twitter web browser interface. The browser's address bar displays "Twitter, Inc. [US] https://twitter.com". The Twitter navigation bar includes links for Home, Connect, Discover, and Me, along with a search bar and settings. The main content area is divided into a left sidebar and a right "Tweets" column. The sidebar features the profile of Niels Henrik Juul Ha, showing 3 tweets, 55 following, and 11 followers, along with a "Compose new Tweet..." button and a "Who to follow" section. The "Tweets" column displays three tweets from Salon.com, Wired, and Smashing Magazine. At the bottom, the Chrome DevTools Network tab is open, showing a table of network requests.

Name Path	Method	Status Text	Type	Initiator	Size Content	Time Latency	Timeline	306 ms	460 ms	613 ms	766 ms
timeline?composed_cou /i	GET	200 OK	text/j...	init.36e357e5C Script	893 B 58 B	766 ms 765 ms					

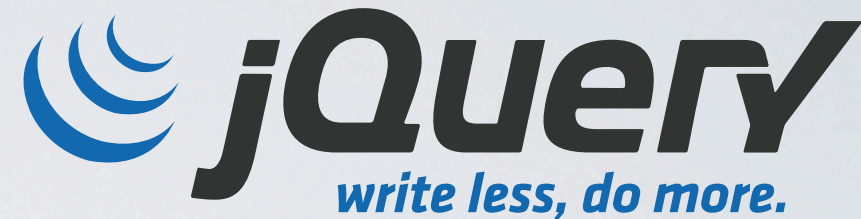
Below the table, a message states: "No requests captured. Reload the page to see detailed information on the network activity." The bottom of the DevTools window shows filter buttons for All, Documents, Stylesheets, Images, Scripts, XHR, Fonts, WebSockets, and Other.

HOW?



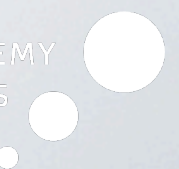
Pure JavaScript

```
var xhr = new XMLHttpRequest();
xhr.open("GET", "ajax.php", true);
xhr.onreadystatechange = function(){
    if(xhr.readyState == 4){
        console.log("We are done");
    }
};
httpReq.send(null);
```

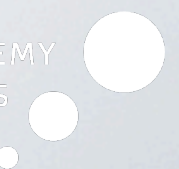


```
$(document).ready(function($) {
    $("#ajaxcall").on("click", function(e) {
        $.ajax({
            url: "ajax.php",
            data: null,
            type: "GET",
            success: function(){
                console.log("We are done!");
            }
        });
    });
});
```

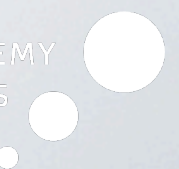

Which one is the best method?



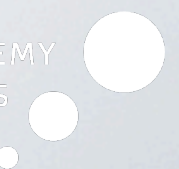
Depends



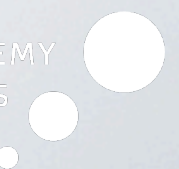
Speed... Pure JavaScript



Readability... jQuery



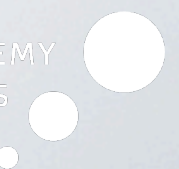
Let's have a look



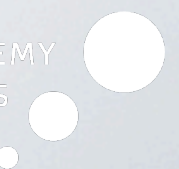
Testing synchronicity

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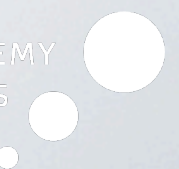
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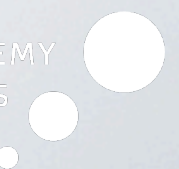
Testing asynchronicity



Data in Ajax...



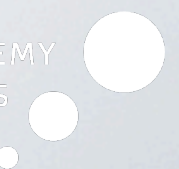
JavaScript Object Notation



JSON

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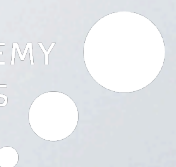
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JSON vs. XML

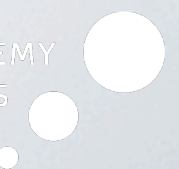
```
{books:
  {
    ISBN: "0553212419",
    title: "Sherlock Holmes: Complete Novels...",
    author: "Sir Arthur Conan Doyle"
  },
  {
    ISBN: "0743273567",
    title: "The Great Gatsby",
    author: "F. Scott Fitzgerald"
  }
}
```

```
<Books>
  <Book ISBN="0553212419">
    <title>Sherlock Holmes: Complete Novels...
    <author>Sir Arthur Conan Doyle</author>
  </Book>
  <Book ISBN="0743273567">
    <title>The Great Gatsby</title>
    <author>F. Scott Fitzgerald</author>
  </Book>
  <Book ISBN="0684826976">
    <title>Undaunted Courage</title>
    <author>Stephen E. Ambrose</author>
  </Book>
  <Book ISBN="0743203178">
    <title>Nothing Like It In the World</title>
    <author>Stephen E. Ambrose</author>
  </Book>
</Books>
```

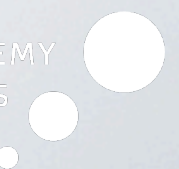


The dot notation

```
var myData = {player: "niha", score: 2000}  
console.log(myData.player + "got" + myData.score + "points");  
// Outputs: niha got 2000 points
```



Sending a form



Ajax | jQuery API Documenter x

api.jquery.com/category/ajax/

Plugins Contribute Events Support jQuery Foundation

jQuery
write less, do more.

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- Ajax
 - Global Ajax Event Handlers
 - Helper Functions
 - Low-Level Interface
 - Shorthand Methods
- Attributes
- Callbacks Object
- Core
- CSS
- Data
- Deferred Object
- Deprecated
 - Deprecated 1.8
- Dimensions

Category: Ajax

The jQuery library has a full suite of AJAX capabilities. The functions and methods therein allow us to load data from the server without a browser page refresh.

.ajaxComplete() Also in: Ajax > Global Ajax Event Handlers

Register a handler to be called when Ajax requests complete. This is an AjaxEvent.

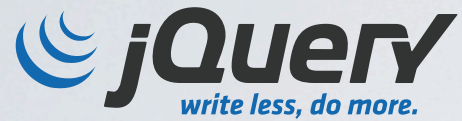
.ajaxError() Also in: Ajax > Global Ajax Event Handlers

Register a handler to be called when Ajax requests complete with an error. This is an Ajax Event.

.ajaxSend() Also in: Ajax > Global Ajax Event Handlers

Attach a function to be executed before an Ajax request is sent. This is an Ajax Event.

Resources



<http://learn.jquery.com/>

<http://api.jquery.com/>

<http://api.jquery.com/category/ajax/>

