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An RSS Headline Reader

• In the previous set of Ajax notes, we developed a wrapper class to deal with the XHR object to handle the request/response to the server.

• We then looked at an example that returned the contents of a text file on the server to the client’s browser window using the asynchronous nature of Ajax.

• In this example, we’ll look at the data coming from the server, not as text, but as XML data.

• Unlike, the text data, which does not require parsing to deal with on the browser-side, we’ll need to parse the XML data in order to do something with it on the browser-side.
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• XML data is made available on the Internet in many forms. One of the most popular is the RSS feed, a particular type of XML source usually containing news or other topical and regularly updated items.

• RSS feeds are available from many sources on the Web, including most broadcast companies and newspaper publishers, as well as specialist sites for all manner of subjects.

• We’ll develop an Ajax application to take a URL for an RSS feed, collect the XML, and list the titles of the news items contained in the feed.

• A typical RSS feed might look similar to the one shown on the next page.
CNN.com - Top Stories
syndicated content powered by FeedBurner

FeedBurner makes it easy to receive content updates in My Yahoo!, Newsgator, Bloglines, and other news readers.

Learn more about syndication and FeedBurner...

Subscribe Now!

...with web-based news readers. Click your choice below:

+ [MY YAHOO!](#)
+ [FEEDLY](#)
+ [BLOGLINES](#)
+ [NETVIBES](#)

...with other readers:

(Choose Your Reader)

Current Feed Content

Ex-KGB agent's death to be probed
Posted: Tue, 22 Jul 2014 14:04:00 EDT
The UK Home Office will hold an independent public inquiry into the 2006 death of Russian spy Alexander Litvinenko, it announced Tuesday.

- Email this  - Add to del.icio.us  - Digg This!  - Share on Facebook  - Stumble It!

Gynecologist took pics; hospital pays
Posted: Mon, 21 Jul 2014 17:08:15 EDT
Johns Hopkins Health System has agreed to pay $190 million to settle the case of a gynecologist who secretly photographed and recorded his patients.

- Email this  - Add to del.icio.us  - Digg This!  - Share on Facebook  - Stumble It!

What if you only worked 3 days?
Posted: Mon, 21 Jul 2014 20:15:58 EDT
Mexican billionaire Carlos Slim has proposed a 3-day work week. We asked New Yorkers what they thought.
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- Notice that the RSS feed shown on page 5 is using RSS version 2.0.

- The versions of RSS differ quite a bit, but for the purposes of our example RSS reader, we only care about the `<title>` elements for the individual news items. This element remains essentially unchanged from RSS version to version.

- Our page will need to contain an input field (read form) for the user to enter the URL of the RSS feed and a button to instruct the application to collect the data.

- We’ll also use a `<div>` element in which to display the parsed data.

- This part of the markup is shown on the next page.
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```html
</script>
<body>

<h3>An Ajax RSS Reader</h3>

<form name="form1">

URL of RSS feed: <input type="text" name="feed" size="50" value="http://"/>
<input type="button" onClick="getRSS()" value="Get Feed"><br><br>
<div id="news" class="displaybox"><h4>Feed Titles</h4></div>

</form>

</body>
</html>
```
An Ajax RSS Reader

URL of RSS feed: http://

Feed Titles
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• Much of the actual RSS reader JavaScript is very similar to that which we developed in the previous set of notes, so I won’t put all of that code in the notes. Instead, I’ll focus on the parts which are different and involve the XML and server-side helper function.

• This time, since we are not using the `responseText` property of the XHR object, we’ll be using the `responseXML` property.

• We’ll use the data in the `responseXML` property to modify the DOM of our HTML page to show the new item’s titles in a list within the page’s `<div>` element. We’ll put each title into its own paragraph element, which we’ll construct dynamically and append to the DOM.
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• The callback function in this case; will perform the normal duties of checking the XHR object readyState and status properties, but we’ll also task it with the following responsibilities:
  – Clearing out any elements displayed in the <div> from a previous request.
  – Parse the incoming XML to extract the title elements.
  – Construct the DOM elements to hold and display the results.
  – Apply the CSS to these new elements to change how they are displayed in the browser.
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- To remove the DOM elements installed by a previous request, if they exist, we’ll identify the `<div>` element by using its `id` and then use the `hasChildNodes()` DOM method, looping through and deleting the first child node from the `<div>` element each time until none remain.

- Next, we’ll process the `<title>` XML elements. To parse the XML content to extract the item titles from the RSS feed, we’ll build an array `titleNodes` from the XML data stored in the XHR object’s `responseXML` property.

- The code snippets for both of these tasks are illustrated on the next two pages.
function cbgetRSS() {
  if (http.readyState == 4) {
    if (http.status == 200) {
      // first remove the child nodes presently in the DM
      while (document.getElementById('news').hasChildNodes()) {
        document.getElementById('news').removeChild(document.getElementById('news').firstChild);
      }

      var titleNodes = http.responseXML.getElementsByTagName("title");
      var descriptionNodes = http.responseXML.getElementsByTagName("description");
    }
  }
}
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```javascript
var descriptionNodes = http.responseXML.getElementsByTagName("description");
var linkNodes = http.responseXML.getElementsByTagName("link");
for(var i = 1; i < titleNodes.length; i++) {
    var newtext = document.createTextNode(titleNodes[i].childNodes[0].nodeValue);
    var newpara = document.createElement('p');
    newpara.className = "title";
    var para = document.getElementById('news').appendChild(newpara);
    newpara.appendChild(newtext);
}
</script>
```
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• Because of security constraints built into the XHR object, you cannot call an RSS feed directly. More generally, the XHR object does not allow you to load content from other servers. Rather you must use a script having a URL on your own server, and have this script collect the remote XML file and deliver it to the Ajax application.

• In this case, we don’t require the server-side script to modify the XML file, but simply route it back to us via the responseXML property of the XHR object.

• The server-side script is acting as a proxy because it is retrieving the remote resource on behalf of the Ajax application.

• The next page illustrates this PHP script.
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```php
<?php
    $mysession = curl_init($_GET['feed']);
    curl_setopt($mysession, CURLOPT_SSL_VERIFYPEER, false);
    curl_setopt($mysession, CURLOPT_RETURNTRANSFER, true);
    $out = curl_exec($mysession);
    header("Content-Type: text/xml");
    echo $out;
    curl_close($mysession);
?>
```
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- The PHP script uses the cURL PHP library. This is a set of routines for making Internet file transfer easier to program. Note that this library is not automatically installed in most PHP installations, so you will need to activate this library manually. (See the next page.)

- A description of cURL is way beyond what we want to get into here, suffice to say that this short script first retrieves the URL of the requested RSS feed by referring to the `feed` variable sent by the Ajax application.

- The two lines that call the `curl_setopt()` function declare, respectively, that we don’t want the headers sent with the remote file, but we do want the file contents.

- The `curl_exec()` function then handles the data transfer.

- Once that’s done, we simply add an appropriate header using the PHP `header()` command and return the data to the Ajax application.
To load the curl extension library in PHP, edit your php.ini file and locate this line and activate it by removing the semi-colon (the comment delimited). Then restart your Apache server.
An Ajax RSS Reader

URL of RSS feed: http://rss.cnn.com/rss/cnn_topstories.rss

CNN.com - Top Stories

Ex-KGB agent's death to be probed

Gynecologist took pics: hospital pays

What if you only worked 3 days?

Arrest mom for leaving girl, 9, at park?

Cops: Model left kid, pup in hot car

Cops: 3 teens killed homeless

Hot air balloon crash caught on cam

Huge sinkhole opens near homes

Deaf boy slept as fire raged, then
Cyclinnews.com top stories RSS feed.
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URL of RSS feed: http://www.nhc.noaa.gov/xml/TWOAT.xml

Atlantic Tropical Weather Outlook

Atlantic Tropical Weather Outlook

National Hurricane Center fee for Atlantic Tropical Updates