# ARIA Week 9 Tutorial: Accessing & Transporting Data

Week 9 - March 26th, 2012

## PART 1: RETRIEVING & PARSING JSON:

**SUMMARY:**
We're going to use sites that provide web services like Twitter & Flickr to understand how to find, parse and view JSON data returned from an application. We'll be using the browser of your choice as well as Yahoo Pipes.

**REQUIREMENTS:**
You must have a Yahoo account to use Pipes. If you don't have a Yahoo account, please go to http://pipes.yahoo.com/pipes/ and click the "Join Now" link in the top right-hand corner.

## RETRIEVING JSON

Twitter provides three separate sets of APIs. We're going to use the Search API. You can find more information about the Twitter Search API here: https://dev.twitter.com/docs/api/1/get/search
and here:
https://dev.twitter.com/docs/using-search

1) The most basic way of using the search API is by giving it a query string. Type the following into your browser's address bar: http://search.twitter.com/search.json?q=eurovision
http://search.twitter.com/search.atom?q=eurovision

What do you see?

This URL tells Twitter to search for any tweet containing the word eurovision.

2) Try this one: http://search.twitter.com/search.json?q=eurovision%20ireland

What's the difference between this one and the previous one? Look at the query string ("q=eurovision%20ireland") and see if you can tell what it's doing.

3) Read the search documentation here https://dev.twitter.com/docs/api/1/get/search and see if

you can figure out how to get the following information by modifying the query string:

a) Tweets mentioning Eurovision but not Ireland

b) Tweets about Eurovision before March 22nd, 2012.

c) Tweets mentioning Eurovision with the name of the person who tweeted it prepended to the tweet

d) BONUS: all tweets from people in Ireland mentioning Eurovision

Test your results by using a browser debugger. For example if you are using Chrome, launch the Developer Tools and use the “Resources” tab to view your JSON results.

## PARSING ATOM WITH YAHOO PIPES

1) Go to http://pipes.yahoo.com & sign in or create an account if you don’t already have one.

2) Click the “Create a Pipe” button.

3) The list on your left is the list of sources, the middle is called the canvas & the bottom section is your debugger.

From your sources list on the left, drag “Fetch Feed” over into the canvas area. It will turn into a box with a small input section for you to add a URL.

4) This time we’re going to use Twitter’s ATOM feed instead of the JSON feed. Paste something like http://search.twitter.com/search.atom?q=eurovision into the URL box. Feel free to edit the query, but make sure it says search.atom and not search.json in the query.

5) Now click on the small blue dot in the bottom of the box & drag it to the small blue dot on “Pipe Output”, which is also in the canvas.

6) In the debugger below, there should be a “Refresh” link. Click that, and then use the triangles to expand and examine the data that was returned. Make sure it matches what you expected.

7) Once you’re happy with your pipe, click the “Save” button above and give it a name.

8) After you’ve saved your result, a “Run Pipe” link will appear in the top centre. Click it.

9) Now you can see a nicely formatted list of your results

## We're going to add a filter now using Yahoo Pipes.

1) Click "Edit Source" to go back to the creation page with the sources, canvas & debugger.

2) Expand the "Operators" section of the sources and drag "Filter" out into the canvas.

3) You will need to change the flow of the pipe, so that Fetch Feed goes next to Filter, and then Filter goes to Pipe Output. When you mouse over either of the blue dots, you should see a scissors icon that you can click to delete the existing line. Delete the one you drew from Fetch Feed to Pipe Output, and instead make Fetch Feed go to Filter, and make Filter go to Pipe Output.

4) Now you can edit the Filter box to allow or deny certain words. Make it so that it blocks anything containing "RT" (this updates it so that your results do not show any retweets).

To do this, you'll need to know the name of the property that contains the tweet's text. Use your browser debugger or the Yahoo pipes debugger to figure out which one you need (HINT: it's not item.author; item.author will refer to the name of the person tweeting).

5) Refresh your results, save again and click "Run Pipe" to make sure your results are what you expected.

## BONUS

If you've gotten this far, try creating a new Yahoo Pipe that searches for photos on Flickr given a certain keyword. You'll need a Flickr API key, which you can get here: http://www.flickr.com/services/apps/create/apply/