MAKING A FOAF FILE

A Linked Data Primer

WHAT DO YOU MEAN "FOAF FILE?"

- FOAF - Friend of a Friend
- A way to talk about yourself and friends using Linked Data.
  - Can describe yourself (name, age, likes, dislikes), but...
  - Can link to your friends' FOAF files...
  - Who link to their friends...
  - Who link to their friends...
  - See how it becomes "Linked Data?"

MAKING YOUR 1ST FOAF FILE

- We COULD get down to the nitty-gritty (code everything)...

- Or we could let something else do it for us!

BUT FIRST THINGS FIRST: YOUR URI

- Since this is Linked Data, we need to identify you.

- We identify things using URIs
  (e.g. http://www.lingvoj.org/lang/en IDs the English language)

- URIs often help us find more information about that thing
  (Go ahead! Try visiting that HTTP URI!)

- So your URI should be a place you put your FOAF file online.

FOAF-A-MATIC DEMO
(http://www.ldodds.com/foaf/foaf-a-matic)

TABULATOR

- An RDF utility, extremely useful for looking at linked data.

- Firefox extension for viewing RDF.

- Available on the course resource page: http://dig.csail.mit.edu/2010/LinkedData/res.html

- If you haven't yet installed it, do so and try visiting http://dbpedia.org/data/Linked_Data.rdf

NOW I HAVE A FOAF FILE... NOW WHAT?

- Well, the FOAF file you have right now is pretty bare-bones.

- We can try extending it a bit.

- But that means we need to know a little about what that code SAYS.

- To look at this, we're going to change it from XML to N3

CONVERTING TO N3

- XML is a rather clunky syntax
  (although you should remember that it exists!)

- We change it to N3, which is a lot more understandable.

- There are a number of programs we can do this with.

- We'll use cwm
  (http://www.w3.org/2000/10/swap/doc/cwm.html)

- But an online version for those of you without Python:
  (http://www.mindswap.org/2002/rdfconvert/)

ALRIGHT, I'VE GOT RID OF THOSE ANGLE BRACKETS...

- So what does it mean?

  - Well, a lot of it will be explained later this afternoon...

  - Rest assured that it still has all the information you put in your FOAF file.

- So let's try something a little more adventurous...

SOMETHING MORE ADVENTUROUS YOU SAY?

- Let's actually PROPERLY link some people
(like the people at your table)

- Get their URIs (e.g. http://www.example.com/#me)

  - Note that Foaf-a-matic automatically adds a "#me" to the file URI to create your URI.

- Add the line "`foaf:knows <THEIR-URI>;`"
below "`:me a foaf:Person;`"
(e.g. "`foaf:knows <http://www.pipian.com/people/pipian/card#me>;`")

- We can always convert it back to RDF/XML with cwm.

- Upload the changed file and take a look!

EVEN MORE ADVENTUROUS

- We've linked to our friends...

- But what about all this Linked Data already out there?

- An example: Interests.

- Let's add our interests to our FOAF file!

FIGURING OUT WHAT WE WANT TO SAY

- Can identify interests through Wikipedia pages.

- DBPedia is a Linked Data source that uses Wikipedia...

- Your Wikipedia URIs can (almost always) be turned into DBPedia URIs (linked data!)

  - http://en.wikipedia.org/wiki/Computer_science
    - → http://dbpedia.org/resource/Computer_science
  - http://en.wikipedia.org/wiki/Baseball
    - → http://dbpedia.org/resource/Baseball

HOW TO SAY WHAT WE WANT TO SAY

- Get the DBPedia URI for an interest.

- Add a line "`foaf:interest <DBPEDIA-URI>;`" below "`:me a foaf:Person;`" (e.g. "`foaf:interest <`http://dbpedia.org/resource/Baseball`>;`")

- Upload the changed file and take a look!

EXTENDING FOAF

- FOAF can't say everything, but we can make up ways to say what we like.

- An example: Countries you've visited.

- An extension to FOAF, the Visit vocabulary, can help.

USING VOCABULARIES

- Additional vocabularies can be "imported" into your FOAF file with "`@prefix NAME: <VOCAB-URI>.`" at the top.

- Example: `@prefix visit: <http://purl.org/net/vocab/2004/07/visit#>.`

- We can then use terms from the vocabulary like "`NAME:TERM`" as properties.

- Example `:me visit:country <http://telegraphis.net/data/countries/US#US>.`

AROUND THE WORLD IN 80 LINKS

- Find the country's ISO-3166-1 alpha-2 code:
  http://en.wikipedia.org/wiki/ISO_3166-1_alpha-2

- Add the @prefix at the top:
  `@prefix visit: <http://purl.org/net/vocab/2004/07/visit#>.`

- Add "`visit:country <http://telegraphis.net/data/countries/CODE#CODE>;`"
  below "`:me a foaf:Person;`"
  (e.g. "`visit:country <http://telegraphis.net/data/countries/US#US>;`")

- View it in Tabulator!

WHERE TO GO FROM HERE?

- There are many other things you can say with extensions to FOAF

  - Location you're currently based near
  - Languages you understand
  - Books you've read
  - Resume/CV information

- Not everything that you might want to say has a way to say it, but RDF and Linked Data are extensible enough to say it. (You'll hear more about this this afternoon)

WANT TO LEARN MORE?

- FOAF is described in more detail at http://www.foaf-project.org/

- Several FOAF extensions:

  - BIO: http://vocab.org/bio/0.1/.html

  - lingvoj (languages): http://lingvoj.org/

  - Visited Places: http://www.wasab.dk/morten/2004/07/visit

  - DOAC (Resume/CV): http://ramonantonio.net/doac/

QUESTIONS?