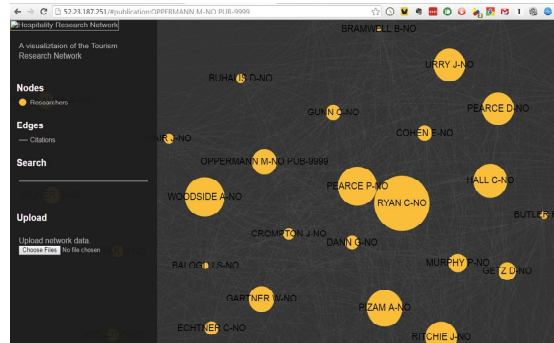


Network Visualization Tool

May 1, 2016 (<http://52.23.187.251>)

Technical review

The web app allows the user to upload a node connection file and displays in using d3.js. The force directed layout is generated using the Gephi toolkit.



Software flow

Main landing page
-> Standard Django url routing

View Module
-> /htmt/views.py
Loads:
/static/htmt/htmt_index.html

Html
-> css, js, d3
-> Loads json network from:
/static/htmt/data/network.json

Upload & processing
Requires a few steps of file conversions for server-side rendering

View Module
-> /htmt/views.py
-> process_file_render()

Raw file to gml file
-> rawtxt2gml()

Gml file to jython Gephi
- Runs Gephi toolkit using java
-> /pygephi/gephi.py
-> Outputs: /out.gexf file type

Gexf file to json
-> jgraphml2json.py
-> Outputs network.json

Steps to refresh server code:

```
Local code push
git pull
git add --all
git commit -m "change comments"
git push
Server login & refresh
52.23.187.251 (putty config'd w/ key file)
bitnami
sudo -s
cd /home/bitnami/apps/django/django_projects/Project/Project
git pull
apachectl -k graceful
Edit/view error log:
vi /opt/bitnami/apache2/logs/error_log
```

Requirements Installation

Steps to install jython on linux:

- java
- apt-get install openjdk-7-jre-headless
- sudo apt-get -y install jython

Research and Similar Notes

<http://brendangriffin.com/blog/gow-programming-languages>

<https://github.com/bgriffen/griffsgraphs>

<https://blog.ouseful.info/2012/07/03/mapping-how-programming-languages-influenced-each-other-according-to-wikipedia/>

BEST gelphi tutorial:

<https://blog.ouseful.info/2012/07/03/visualising-related-entries-in-wikipedia-using-gephi/>

<http://exploringdata.github.io/vis/programming-languages-influence-network/>

<https://github.com/jsundram/pygephi>

Github source

<https://github.com/fatiherikli/programming-language-network>

Gephi Notes

G = nx.read_graphml('test.graphml')

<https://gephi.org/tutorials/gephi-tutorial-toolkit.pdf>

<http://www.programcreek.com/java-api-examples/>

[index.php?api=org.gephi.io.exporter.spi.GraphExporter](http://www.programcreek.com/java-api-examples/index.php?api=org.gephi.io.exporter.spi.GraphExporter)

<http://stackoverflow.com/questions/10205811/how-to-iterate-over-graphml-file-with-lxml>

<http://stackoverflow.com/questions/17002594/processing-xml-file-with-networkx-in-python>