May1618: Graphalyzer

<u>**WEEKLY REPORT #6**</u>　　　　　**Date: 2/15-2/21**

Group number and Name: May1618
Client/Advisor: Ross Hendrickson/Simanta Mitra
Attendees/Role:

- Andrew Bowler - Webmaster
- Al Gomez-Estrada - Communications
- Michael Sgroi - Key Concept Holder
- RJ White - Key Concept Holder
- Taylor Welter - Project Leader
- Simanta Mitra - Advisor
- Eric Olson - Client
- Blake Wilson - Client
- Sean Strickland - Client

<u>**Past week accomplishments**</u>

❖　Two huge features, one for the UI and one for greatly increasing scalability:
  - ❖ Graph filtering - Can now filter out nodes in the graph that lack a user specified property, or perform numerical comparisons on one property, such as filtering out all nodes that have a property value less than or greater than a specified value.
  - ❖ Chunking - Can now load the graph data in chunks. This greatly benefits scalability, as chunks of a large graph can be streamed over and drawn while simultaneously querying the next chunks of data.

- ❖ Additional smaller UI features, such as a reset button to clear all loaded data
- ❖ Added more logging to the new features

Plan for coming week

- ❖ Work with Workiva on getting the server set up.
- ❖ Meet with Mitra and demo current iteration
- ❖ Look into compressing the graph data streamed over to the client, and compare running times to other techniques (unmodified, chunked)
- ❖ Speed up UI performance by using a loading bar to hide the physics engine when the graph is drawing
- ❖ Speed up UI performance by clustering nodes by level of detail (zoom level)
- ❖ Update the project website with new screenshots and more details, now that the UI has implemented basic node filtering.
- ❖ Look into more filtering use cases, such as pattern filtering or multiple filter conditions (and, not, or - etc.)
- ❖ Refactor Python code dealing with neo4j to more easily write unit tests, configure Travis for when we get the server
- ❖ Finish up JavaScript unit testing
- ❖ Gather extra test data from IRL, such as social media graphs or others

Pending issues

❖ Workiva did not have the server ready for us nor did they make any progress as we anticipated they would. We plan on getting this all figured out next week, as this is prohibiting us from running with larger graphs, or really testing the REST interface in its proper environment.

Individual contributions

❖ Andrew
- ❖ Finished node filtering, small UI improvements - **7 ½ hours**
- ❖ Finished file chunking with RJ - **3 hours**
- ❖ Met with team on Thursday - **½ hour**
- ❖ Met with client, sprint planning with team - **1 hour**

❖ Michael
- ❖ Started node filtering - **4 ½ hours**
- ❖ Met with team on Thursday - **½ hour**
- ❖ Met with client, sprint planning with team - **1 hour**

❖ Al
- ❖ Finished unit testing setup - **4 hours**
- ❖ Met with team on Thursday - **½ hour**
- ❖ Met with client, sprint planning with team - **1 hour**

❖ Taylor
- ❖ Met with team Thursday - **½ hour**
- ❖ Met with client, sprint planning with team - **1 hour**
- ❖ Brushed up on regular expressions - **1 hour**

❖ RJ

      ❖   Met with team Thursday - **½ hour**

      ❖   Met with client, sprint planning with team - **1 hour**

      ❖   Worked on Improving Chunking - **4 hour**

      ❖   Added/Cleanup data in DB - **5.5 hour**

Individual hourly contribution

NAME	Hours this week	HOURS cumulative
Andrew	12	37.5
Michael	6	32
Al	5.5	20
Taylor	2.5	13
RJ	11	31