Project 02 Proposal: WhatAreWeDoingQuestionMark

Emmitt R Johnson, Makiah Merritt, and David Shingai Ntuli

Abstract— Duis autem vel eum iriure dolor in hendrerit in vulputate velit esse molestie consequat, vel illum dolore eu feugiat nulla facilisis at vero eros et accumsan et iusto odio dignissim qui blandit praesent luptatum zzril delenit augue duis dolore te feugait nulla facilisi.

1 Related Papers

1.1 Paper 01: *VisDock: A Toolkit for Cross-Cutting Interactions in Visualization* [4]

1.1.1 Paper Description

Prepared by Jungu Choi, Deok Gun Park, Yuet Ling Wong, Eli Fisher, and Niklas Elmqvist, Senior Member, IEEE; this paper reviews a tool the team created to provide "a core set of cross-cutting interaction techniques for visualization" [4, p. 1]. The tool, VisDock, was created as a plugin library using JavaScript to interact with visualizations based on SVGs; upon completion of the tool, the team released it as Open Source. A qualitative study with four developers and 11 end-users "found the tool usable and efficient" [4, p. 2].

1.1.2 Project Value

In their future work section, one area of interest is the implementation of data-level interactions for "filtering, searching, and drilling down into the data" [4, p. 12]. Along these lines we could investigate ways to provide interactions allowing quick manipulations of the graph based upon data selections of the user. For example, supposing the user would like to find similar elements in the data set based upon a selection, we could look into developing a way to generate visual changes to make those elements stand out. Problems we may encounter mainly surround picking up and applying the VisDock. Although documentation and examples will be available, being open source there is no guarantee that it will be plug and play. Furthermore, the implementation of VisDock is that of a plug-in, meaning we will need to start the visualization another visualization tool such as D3 and figure out the extent of VisDock's manipulation capabilities.

1.2 Paper 02: *HindSight: Encouraging Exploration through Direct Encoding of Personal Interaction History* [9]

1.2.1 Paper Description

Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua.

1.2.2 Project Value

Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua.

1.3 Paper 03: *PROACT: Iterative Design of a Patient-Centered Visualization for Effective Prostate Cancer Health Risk Communication* [5]

1.3.1 Paper Description

Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua.

1.3.2 Project Value

Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua.

2 Referenced Papers

1. *Vega-Lite: A Grammar of Interactive Graphics* (2016), Arvind Satyanarayan, Dominik Moritz, Kanit Wongsuphasawat, and Jeffrey Heer [11]

2. *Embedded Data Representations:2016* (2016), Wesley Willett, Yvonne Jansen, Pierre Dragicevic [3]

3. *The Attraction Effect in Information Visualization* (2016), Evanthia Dimara, Anastasia Bezerianos, and Pierre Dragicevic [1]

4. *Immersive Collaborative Analysis of Network Connectivity: CAVE-style or Head-Mounted Display?* (2016), Maxime Cordeil, Tim Dwyer, Karsten Klein, Bireswar Laha, Kim Marriott, and Bruce H. Thomas [7]

5. *A Study of Layout, Rendering, and Interaction Methods for Immersive Graph Visualization* (2016), Oh-Hyun Kwon, Chris Muelder, Kyungwon Lee, and Kwan-Liu Ma [6]

6. *Small Multiples with Gaps* (2016), Meulemans, W., Dykes, J., Slingsby, A., Turkay, C. and Wood, J. [2]

7. *CUBu: Universal real-time bundling for large graphs.* (2016), Matthew van der Zwan, Valeriu Codreanu, and Alexandru Telea [10]

Acknowledgments

The authors wish to thank the authors of the referenced papers for their work upon which we will attempt to expand upon.

References

[1] E. D. A. Bezerianos, and P. Dragicevic. The attraction effect in information visualization, 2016.
[2] M. W. D. J. S. A. T. C. and W. J. Small multiples with gaps, 2016.
[3] W. W. Y. J. P. Dragicevic. Embedded data representations, 2016.
[4] J. C. D. G. P. Y. L. W. E. Fisher, and N. Elmqvist. Visdock: A toolkit for cross-cutting interactions in visualization, 2014.
[5] A. H. L. H. A. O. N. W. C. G. P. K. J. Han, and R. Chang. Proact: Iterative design of a patient-centered visualization for effective prostate cancer health risk communication, 2016.
[6] O.-H. K. C. M. K. Lee, and K.-L. Ma. A study of layout, rendering, and interaction methods for immersive graph visualization, 2016.
[7] M. C. T. D. K. K. B. L. K. Marriott, and B. H. Thomas. Immersive collaborative analysis of network connectivity: Cave-style or head-mounted display?, 2016.
[8] M. Merritt. Cs458 - information visualization: Project repo, May 2017.
[9] M. F. C. D. E. M. Peck, and L. Harrison. Hindsight: Encouraging exploration through direct encoding of personal interaction history, 2016.
[10] M. van der Zwan, Valeriu Codreanu, and A. Telea. Cubu: Universal real-time bundling for large graphs., 2016.

- *Emmitt R Johnson. E-mail: johnemmi@oregonstate.edu.*
- *Makiah Merritt. E-mail: merrittm@oregonstate.edu.*
- *David Shingai Ntuli. E-mail: ntulid@oregonstate.edu.*

[11] A. S. D. M. K. Wongsuphasawat, and J. Heer. Vega-lite: A grammar of interactive graphics, 2016.