Grafoscopio: A moldable tool for literate computing and reproducible research

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Summary

Grafoscopio (Luna Cárdenas 2014) is a moldable (Girba, Chis, and Niertrasz 2014) tool to make reproducible research and literate computing (Perez and Granger 2015), developed on Pharo (Ducasse et al. 2017) live coding and computing integrated environment, which allow authors to intertwine prose, code, data and agile visualizations (Bergel 2016) into storytelling, and readers and coauthors can verify, collaborate on and extend the document claims and artifacts.

Grafoscopio is and integrates simple and self-contained "pocket infrastructures", that can be execute On/Off-line, from a USB thumb drive, a raspberry-Pi like computer, a modest server or any hardware in between and beyond and tries to blur binary constructs like author / lector, developer / user, document / data, binary application / source code, and has an associated permanent workshop+hackathon, called the Data Week, where diverse participants learn, extend and modify Grafoscopio, while dealing with civic issues that can be understood and expressed better using the techniques provided by literate computing and reproducible research.

References

Bergel, Alexandre. 2016. *Agile Visualization*. LULU Press. http://agilevisualization.com/.

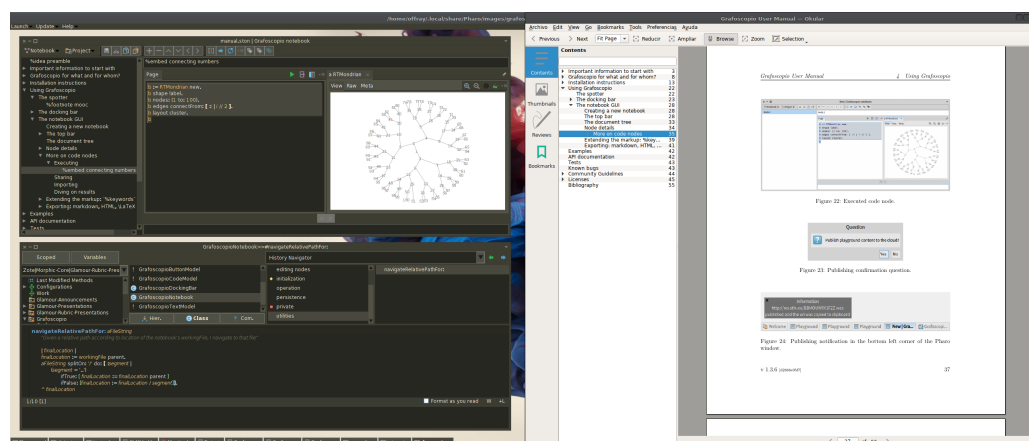Ducasse, Stéphane, Andrew Black, Oscar Nierstrasz, Damien Pollet, Damien Cassou,

Figure 1: Grafoscopio environment and a final generated pdf, side by side.

Marcus Denker, Dmitri Zagidulin, Nicolai Hess, and Dimitris Chloupis. 2017. *Pharo by Example 5.0*. Square Bracket Associates.

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Luna Cárdenas, Offray Vladimir. 2014. "Metáforas Y Artefactos Alternativos de Escritura Para Jalonar La Investigación Abierta Y La Ciencia Ciudadana Y de Garage," September. http://mutabit.com/repos.fossil/grafoscopio/doc/tip/Docs/Es/Articulos/Libertadores/bootstrapping-objeto-investigacion.pdf.

Perez, Fernando, and Brian E. Granger. 2015. "Project Jupyter: Computational Narratives as the Engine of Collaborative Data Science." *Project Jupyter*. http://blog.jupyter.org/2015/07/07/project-jupyter-computational-narratives-as-the-engine-of-collaborative-data-scie