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Jefferson's Travels: A Digital Journey Using the HistoryBrowser

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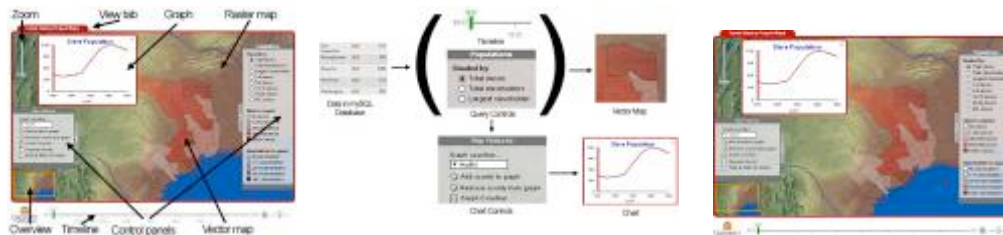
University of Virginia

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The Jefferson's Travels project goal was to develop an innovative web-based tool that would make the rich array digital resources of a number of museums, libraries, and archive accessible to historians, scholars, K-20 students, and teachers. The tool was to be tested within the context of an upper-level digital history seminar at the University of Virginia, where the resources surrounding Thomas Jefferson's travels would be identified, annotated, and databased by the seminar participants.

The funding provided by the NEH has been successful in achieving that goal:

- We developed a robust and powerful tool called the *HistoryBrowser* (www.viseyes.org) that is able to create highly interactive web-accessible visualizations that rely on primary source documents and data for interpreting and presenting historic inquiry, such as animation over time, charts, maps, data, and interactive timelines to graphically show the relationships between multiple kinds of information. *HistoryBrowser* was subsequently renamed *VisualEyes* to encourage adoption beyond historians.



- As proposed, we taught an upper-level digital history seminar at the University of Virginia during the fall semester of 2008 focused on Thomas Jefferson's travels between Monticello and his plantation retreat, Poplar Forest. We worked closely with library and research staff at the Thomas Jefferson Memorial Foundation (Monticello) and the Poplar Forest Foundation to provide the students with access to subject matter experts and the rich archival resources at those institutions. As a result, students gained hands-on experience conducting archival research and creating visual displays using the *HistoryBrowser/VisualEyes* tool. The resulting visualizations can be found at: www.jeffersonstravels.org.

Audiences for the project included dozens of University of Virginia undergraduates enrolled in digital history seminars using the tool, the hundreds of people in attendance at our presentations to various workshops and conferences, our partnering organizations and their website patrons, and visitors to the many websites now using the VisualEyes tool.



Our current class project, *VisualEyes Vinegar Hill*, focuses on the history of urban renewal in an African American neighborhood of Charlottesville, Virginia; that project has attracted new, previously underserved audiences with an interest in using the tool to tell their community's story: <http://www.vinegarhillproject.org> Recently, we presented the *HistoryBrowser/VisualEyes* tool at the opening of a community-based exhibit, "Neighborhood ReGeneration: The Evolution of Public Housing in Charlottesville," hosted by the Charlottesville Community Design Center. The exhibit included two computers that provide public access to our VisualEyes Vinegar Hill displays, using the HistoryBrowser/VisualEyes tool.



We have been actively encouraging humanities scholars at other institutions to use the HistoryBrowser/VisualEyes tool for their visualization projects.

- The Smithsonian Institution asked us to create a *HistoryBrowser/VisualEyes* visualization of their benefactor James Smithson, using materials provided by research fellow Heather Ewing, author of *The Lost World of James Smithson: Science, Revolution, and the Birth of the Science*: www.viseyes.org/show?base=smithson
- Brooks Barnes at the Eastern Shore Public Library in Accomack, Virginia, is using VisualEyes to create a visualization of the town of Parksley in 1894: <http://www.viseyes.org/show?base=parksley>
- VCDH faculty and research staff partnered with the Hagley Library in Wilmington, Delaware to create dynamic, data-driven representations of E.I. DuPont de Nemours & Co. business, ca. 1801-1912: <http://www.hagley.org/library/exhibits/brandywine>
- We collaborated with Professor Lisa Rosner at Richard Stockton College of New Jersey to visually explore the relationships between eighteenth-century medical dissertations. (Rosner's work is supported by a grant from the American Chemical Society): www.viseyes.org/show?id=49444



We continue to teach a capstone seminar to upper-level history students using the *HistoryBrowser/VisualEyes* tool. Student evaluations have been uniformly positive. Based on these classes, we are convinced that students can make a strong contribution to digital history using this tool.



We also continue to work with faculty members and graduate students interested in using the tool. There was no formal commitment from U.Va. to support development of *VisualEyes* beyond the grant period. However, a new center at the University – Social Sciences, Humanities, and the Arts Network of Technology Initiatives (SHANTI) – has provided us with multi-year funding to simplify and disseminate the tool. Bill Ferster is currently working with a SHANTI cohort of faculty and graduate students interested in learning how to use the tool to advance their teaching and research.

Infrastructure for Sustainability: Workshops for Academic Visualization

We have been encouraged by the use of the *HistoryBrowser/VisualEyes* in the undergraduate classroom, and are in the process of developing an infrastructure – *Workshops for Academic Visualization* (WAV) – to support and sustain its development across a range of university learning environments.



The workshops take three basic forms:

- *The WAV Seminar* invites students working with faculty across departments and disciplines to develop highly interactive visualizations while advancing a broadly collaborative research agenda. It combines the best of liberal arts and discipline-specific education with training in visual thinking and the application of new technologies. As importantly, it offers undergraduates an opportunity to present original research for peer review and online publication, adding value and purpose to their work.

Each seminar is designed and taught by content instructor, whose scholarly interests frame the course and help to define the research agenda, and a visualization instructor, who sets the visualization portion of the curriculum and helps realize the project's goals in a digital form. In the first third of the semester, students are introduced to the core subject matter through readings, lectures, and videos. Guest lecturers and project participants from outside the University are invited to interact with students via telecommunication technology, such as Skype.

In the second third of the course, students are encouraged to define/refine their research questions and identify/locate primary source materials that can be used to answer them. In the final third of the course, students work closely with the

instructors and their peers to organize their data and create visualizations that can reveal new insights and support arguments. At the end of the course, students make final presentations of their work to project partners and invited guests – a dynamic, interactive version of a “poster session” at a conference.

Over the course of the semester, students gain mastery of the course content, an understanding of basic academic research methodologies, and proficiency with visualization technologies. The seminar’s collaborative research environment encourages faculty mentoring and hands-on learning. For prospective graduate students, it offers a glimpse of new educational models that are transforming our disciplines and the world of academic scholarship.

We see the seminar as a great model of project-based learning and rewarding to all involved. Students have an opportunity to work closely with senior faculty members across disciplines to do authentic research using next generation tools to make real contributions to the literature. Faculty members are able to advance their research agendas in innovative ways, and the collaboration with scholarly partners enhances the university's relationship in the community.

We are also exploring the use of this as the basis of problem based learning activities for K-12 classrooms with the Buck Institute of Education, through summer professional development sessions for teachers.

- *The W̄AV Cohort* encourages scholars across disciplines to develop new ways of thinking visually and making evidence-based arguments through web-based visualizations for public display.

Supported by SHANTI (Sciences, Humanities, and Arts Network of Technological Initiatives), cohorts are small groups of five to ten faculty, graduate students, and staff to do a year-long exploration of innovative research, teaching, publication, and engagement strategies enabled by the creative use of new digital technologies. Each cohort is provided at no cost and has a specific thematic focus, and participants need have no prior digital expertise.

The current W̄AV cohort has members from anthropology, art history, education, environmental sciences, history, and religious studies departments. They meet every two weeks to discuss and receive feedback their projects, and learn how to render them in *VisualEyes*.

- *The W̄AV Partners* program makes visualization more accessible to non-profit organizations wishing to develop interactive projects with support from W̄AV faculty and students. We have successfully developed a number of projects in partnership with museums and libraries seeking compelling interactive visualizations not easily created using other methods.

For more information

www.viseyes.org

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