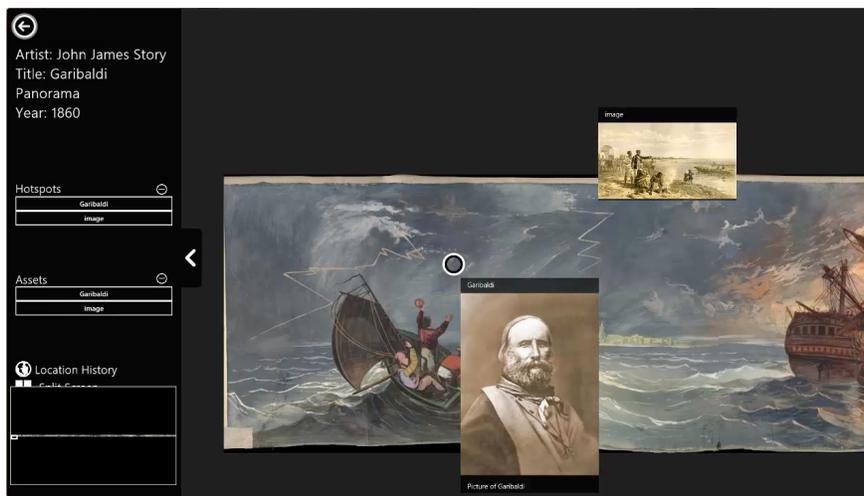


Two Pen/Touch Computing Applications for the Humanities

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Effective digital humanities tools can sharpen researchers' focus, augment their capabilities, extend their reach, and multiply their impact. Two such tools from Brown University are Touch Art Gallery (TAG) and the WorkTop hypermedia framework.

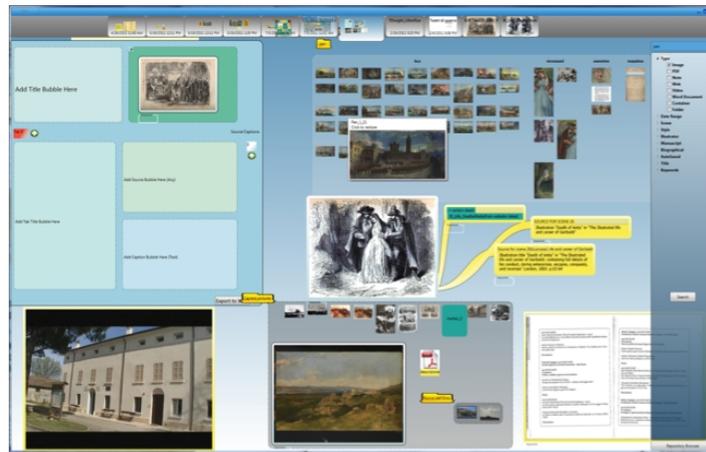
Touch Art Gallery (TAG)



Touch Art Gallery (TAG) is a Windows 8 Metro Application that enables museums to showcase exceptionally large, fragile, or otherwise difficult to display artworks. It uses Microsoft's DeepZoom technology to smoothly load portions of images at different resolutions, allowing a user to zoom in, for example, from the entirety of the 370 foot long "Garibaldi Panorama" to the brushstrokes on the ocean in one square inch. TAG is a touch-first system that can run on devices ranging from the handheld Microsoft Surface tablet to an 82" interactive whiteboard.

An organization can host TAG content either online or on-site within an institutional network. Audiences anywhere in the world can view artwork that they access from the cloud in a fast, agile manner - or viewers may have controlled access to the art, as dictated by licenses and other constraints. Content authoring gives curators full control over the display of artworks, exhibitions, and "guided tours" in the style of Ken Burns "pan-zoom" narratives, as well as the metadata, style, and branding of the entire application. It features intuitive touch-centric controls that make it easy to create interactive narratives that combine multiple views of art objects with other assets, such as text documents, audio, related images, and digital ink for annotation and highlighting. The authoring system also makes it easy to add dynamic movement to the digital artwork display by zooming, panning, and dissolving from one subject to another. Simplicity of operation has been the key design goal for both viewers and curators.

WorkTop



Humanities research requires frequent transitions between document-focused activities that range from searching and reading to writing and publishing. Despite technological advances, researchers who work with digital humanities are often hampered by inefficient and complicated transitions between tasks. The current desktop model enforces separation between different "silos"/applications. Researchers have to view individual document in their application windows, without being able to link related content or coerce free-form spatial mental models and visual data into rigid structures.

The WorkTop hypermedia framework, developed in partnership with the Brown University Library and Professor Massimo Riva, chair of the Italian Studies Department at Brown, is an integrated development environment (IDE) for humanists. It permits users to interconnect and annotate collections of documents, ranging from PDF and MS Office files to audio, video, and browser files, in an unbounded 2D workspace. Users can save, and later restore, time-encoded snapshots of the 2D layout, thereby being able to capture different points of view and levels of detail in their workflow.

WorkTop enhances the ability of students and scholars at all levels to perform fundamental scholarly tasks more efficiently while simultaneously providing new opportunities for collaborative learning. The system consists of the following elements:

- * A rich set of document viewers, including PDF, video, image, and webpages
- * Faceted search visualization based on metadata analysis
- * Pen and multi-touch input
- * Bi-directional, fine-grained hyperlinks between regions in any type of document, whether text, image or video
- * Multi-user, shared document repository
- * Publishing templates for creating new documents
- * Unbounded workspace that facilitates pattern-seeking through panoramic visualization
- * A tool that makes it easy to save, resume, email, and move among workspaces

By providing a unified workspace, the WorkTop system reduces the technological barriers to capturing, displaying, and linking heterogeneous documents or document fragments from different workspaces. Users can apply keywords to entire documents or specific locations within documents for easy retrieval. A variety of different types of hyperlinks - including the commonly used unidirectional links in addition to more exotic forms such as bi-directional and typed links - can be created between images, videos, notes, PDF files, and webpages. Also, users can add rich-text annotations in the time it takes to write a note.

WorkTop offers a variety of structured workflow tools, including templates for publishing collected materials (for example, stylized multimedia webpages) and search operations that can persist as smart folders.

WorkTop Website: <http://www.cs.brown.edu/research/ptc/worktop>