Data Interconnectivity: The ACM SIGGRAPH Digital Art Archive

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Abstract

This institutional presentation focuses on the ACM SIGGRAPH Digital Art Community Committee's effort to preserve past art show materials in an online multimodal interactive archive. A team consisting of Bonnie Mitchell and Jan Searleman as co-directors and Bowling Green State University (USA) undergraduate students have worked on developing the back-end infrastructure and content for this archive for nearly 4 years. They are currently adding innovative inter-connections between the data, proofing the content and finding missing materials. This presentation will showcase the overall structure of the archive and highlight how the interface enables easy access to relevant data. The project has involved formatting and adding over 8000 assets and writing code to create automatically generated pages from templates and cross connections between data. Future goals are to develop visualizations and to add additional ways to connect the data to international scholarly indexes.

Keywords

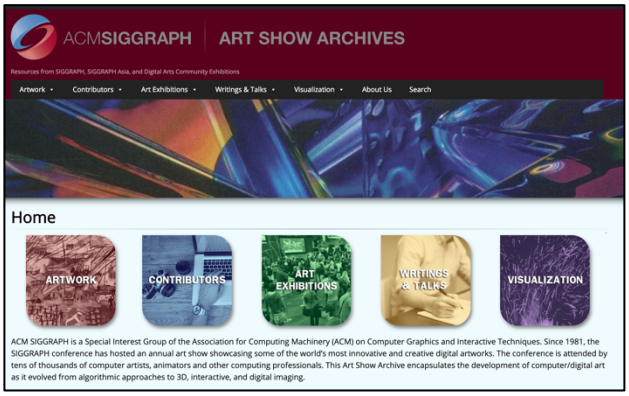
SIGGRAPH, archive, preservation, electronic arts, digital art, repository, artifact, computer art

Introduction

ACM SIGGRAPH is a Special Interest Group of the Association for Computing Machinery (ACM) on Computer Graphics and Interactive Techniques. Since 1980, the SIGGRAPH conference has hosted an annual art show showcasing some of the world's most innovative and creative digital artworks. The conference is attended by tens of thousands of computer artists, animators and other computing professionals.

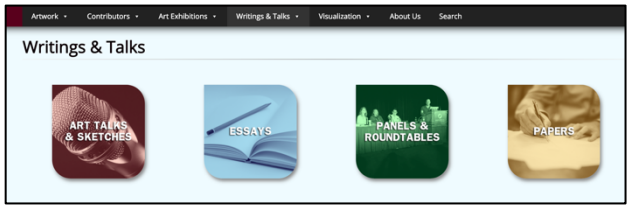
Over the past 38 years, the ACM SIGGRAPH Art Show has helped define the direction that digital art has taken. The materials presented at each exhibition showcase the current state of digital creativity. By being able to access and view all of the content in a searchable, multimodal repository, people would be able to see how digital art has evolved from algorithmic approaches to 3D, interactive, electronic and virtual reality experiences.

Bonnie Mitchell and Jan Searleman, members of the ACM SIGGRAPH Digital Art Community Committee, have been directing a team of students for the past 4 years and developing an online archive to provide access to the materials from these exhibitions. The archive contains the artworks, scholarly papers, abstracts, videos, audio and presentations from the SIGGRAPH and SIGGRAPH Asia conferences, as well as the ACM SIGGRAPH Digital Art Community Online Exhibitions. Academics, students, independent artists, and people working in visual art and animation benefit in a myriad of ways from access to these historical materials.



Research

Throughout the decades, ACM SIGGRAPH has been documenting art exhibitions and submissions through print media (catalogs) and individually-built conference websites (more recently) which contain minimal information. The older websites are now outdated. The other problem was that assets from the 1980s and some years in the 1990s were listed in printed documents and images were often not included. A major task was to locate and secure materials as well as to format over 8,000 assets to be added to the archive. Contacting primary sources became an essential but time-consuming activity. Overall the team has spent three years entering information and now we are working on proofing all pages.



Present

The ACM SIGGRAPH Art Show Archive team is currently working on creating a myriad of ways of interconnecting the data thus allowing for custom sorts and queries. We are enhancing the functionality of the archive by adding the ability to handle video and audio. We are also improving the interface, search engine optimization and speed of the site. One major improvement has been in the area of content accuracy and finding missing materials. The archive currently contains 65 exhibitions, 3800 people from around the world, 4000 artworks, and 300 writings. The site has been built using the WordPress content management system using the PODS framework and numerous customizable plug-ins. PODS enables us to create robust data types, fields, relationships and automatically generate pages using HTML, PHP, CSS and JavaScript coded templates. The magic happens through the relationships we created between the data.

Future

Although we have added embedded metadata into all content, we are also in the process of tagging each entry with keywords. We will be creating a variety of visualizations of the data including interactive keyword word clouds. Another goal is to develop an interactive timeline that enables the user to view material in unique ways. We also will be adding unique identifiers to all contributor entries to help connect the archive to the virtual international authority file (viaf.org) and other standardized identifiers used to connect scholarly material to authors. Eventually we would like to connect the content of the archive to other online digital archives.

Through funding from ACM and ACM SIGGRAPH, we have been able to develop this innovative online archive. There has been immense interest in the archive from other organizations that would like to use the SIGGRAPH Art Show Archive infrastructure to house their own collections. We have currently made clones of the site and are in the process of creating a generic template as well as modifying the code and interface to work for the ISEA Symposium Archives. ISEA is an Affiliate Organization of ACM SIGGRAPH. Mutual collaboration between the two organizations will facilitate cross-connections between each organization's data and thus provide a richer online resource for all.