White Paper Report

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Introduction
Ashes2Art (www.coastal.edu/ashes2art), an interdisciplinary and inter-university collaborative project, inverts the traditional pedagogical model in the humanities with a heuristic approach to art history. With faculty supervision, undergraduates build 3d digital models of ancient monuments, write essays, design interactive maps, compile primary and secondary source bibliographies, build and populate databases, create educational and flythrough videos, write extensive lesson plans in accordance with U.S. National Standards (with supplemental Powerpoint presentations for each), and design intuitive Java and Flash-based websites to house and support the materials.

The program/project/course is offered for upper-level credit in Art History at Coastal Carolina University and Arkansas State University each spring (at Coastal, it also is crosslisted with Art Studio, and will be crosslisted with Computer Science and History beginning in spring 2010). The current stage of the program focuses on 4th century BCE Delphi, Greece. Faculty and selected students travel on-site during the summer to collect Geographic Positioning System (GPS) data, study physical remains,

and shoot immersive panoramic photographs. These materials then are used to build models and to supplement the resources on the website.

In Ashes2Art, the inherent value of 3d models and other technologies is more than a means of enhancing static images or engaging viewers. They are the active, catalytic platforms of the learning process, with the end product available online, free of charge, worldwide.
The project began in fall 2005 at Coastal Carolina University under the direction of Arne Flaten (Art History) and Paul Olsen (Graphic Design), but the conceptual framework was developed in the eighteen months preceding its launch. As a test case to gauge its potential in an undergraduate classroom, the charge was simple: incorporate various technologies into a collaborative lab that blurs the lines between teaching and learning, between lecture and laboratory formats, and between art history and art studio. Renaissance Florence was chosen as the site because a) it is Flaten’s area of expertise, and b) Olsen and Flaten would be in Italy in summer 2005 to shoot digital panoramas. That fall, students stitched digital panoramas (using Panoweaver and Tourweaver), wrote topical essays, collected images, designed skins to house the panoramas, and developed a Flash-based website in Dreamweaver. Digital models were not part of the program. Midway through that first semester one student, Greg Schultz, began work on an interactive animated map of Florence in 3ds Max on his home computer. The flat map tilted as it rotated, and small “Monopoly”-type buildings grew from the map surface to highlight three piazze (Piazza del Duomo, Piazza Santissima Annunziata, Piazza della Signoria). With that map, the vision of the course and project changed dramatically. Olsen and Flaten took students to Greece the following summer (2006), shot panoramas in Athens and Crete, considered shifting the focus of the program to a Greek site, and re-negotiated the original mission of the project to include reconstructive models.

During the same summer, an NEH Summer Institute at UCLA investigated “Models of Ancient Rome.” Coordinated and run by professors Diane Favro and Sander Goldberg, the seminar examined the integration of complex digital models with other information paradigms. At the Institute, Flaten met Alyson Gill, an art historian at Arkansas State University whose specialty is ancient Greece. Flaten,
Olsen and Gill agreed to collaborate on the Ashes2Art project between their respective universities and to focus on Delphi, Greece. That fall, the program directors applied for a Digital Start Up Grant from the National Endowment for the Humanities (NEH), requested permission to shoot panoramic photographs at various archaeological sites from the Hellenic Ministry of Culture through the American School for Classical Studies in Athens, and laid the framework for the inter-university collaboration.

Ashes2Art was offered at both universities in spring 2007. With support from the NEH and permission from the Hellenic Ministry of Culture, faculty and selected students traveled to Greece to shoot digital panoramas that summer at Delphi, Epidauros, Nemea, Olympia and Aegina (student travel paid by internal grants). The course was offered again the following spring semester at both schools, and again students and faculty flew to Greece in the summer to continue work with digital panoramas, shoot high-resolution photographs, and to collect GPS data. The course continues to be offered at both schools in the spring, and has been generously supported by institutional grants from Coastal Carolina University (Academic Enhancement grants, Research Enhancement grants, Student Travel grants, Scholarship of Teaching and Learning grants, ITS grants) and Arkansas State University (Faculty Research Committee award, a SURF/SILO award, Friedrich Stoll Endowment award, ITS grants).

**NEH Start Up grant**

a. **Project Activities**

Since summer 2007, when our Digital Start Up grant began, the Ashes2Art project has accomplished more than we had envisioned. Having already secured permission from the Hellenic Ministry of Culture through the American School for Classical Studies at Athens, project directors Arne Flaten, Alyson Gill and Paul Olsen traveled to Greece with students in summer 2007 (student travel paid by internal grants). While there we shot a total of 36 panoramic images (36 x 2@180° each) at Delphi, Olympia, Nemea, and Epidauros from inside the actual monuments. We also shot hundreds of detailed high-resolution
photographs to aid in our digital reconstructions. That fall, on their own time, students began organizing the photographs and stitching together the digital panoramas.

In spring 2008, Ashes2Art was offered for course credit at Coastal Carolina University and Arkansas State University. During that semester, two Ashes2Art webpages for Delphi were designed and populated. Coastal Carolina’s is online and continues to be updated (www.coastal.edu/ashes2art); Arkansas State’s original page was replaced in 2009 with a different version (www.digitaldelphi.org). At CCU: Digital models of the tholos of Athena Pronaia were completed and posted online; two video flythroughs of the tholos were rendered and posted online; a six minute educational video was posted online, as were two 360° panoramas of the digital tholos model; a draft model of the Athenian Treasury was posted online; 10 lesson plans in accordance with U.S. National Standards were posted as .pdf files; a glossary was built and uploaded; a bibliography built and posted; an interactive map of Delphi designed and posted; numerous photographs and essays posted online. At ASU: digital models of the gymnasium and plunge bath were posted online; a resource for primary sources started; a bibliography was compiled and posted online; numerous photographs (some with permission from the Museum of Fine Arts, Boston) and essays posted online.

In summer 2008, we again traveled to Greece (student travel paid with internal grants), returned to Delphi to take photographs and collect GPS data. We also traveled to Delos to shoot digital panoramas (with permission from the Hellenic Ministry of Culture), collect GPS data, and evaluate whether Delos would be our next focus.

In spring 2009 (after our original grant deadline, but the grant was extended until 3/31/09), we continued work on Delphi. At CCU: a model of the temple of Apollo was completed, a model of the stoa of the Athenians was almost completed; a digital flythrough of the marmaria was completed; a new Ashes2Art webpage designed and posted online; new essays and photographs posted online. The models, flythroughs and additional essays are to be posted online in summer 2009. At ASU: a new Digital Delphi webpage (right) was designed and posted, new photographs posted; new models of the xystos, gymnasium, and temple of Apollo built, new essays added. Materials are to be posted online in summer 2009.
To facilitate our work, the administrations at both universities funded 3d modeling labs in fall 2007, outfitted with 10 desktop systems (CCU) and 12 desktop systems (ASU), totaling over $150K. For modeling software, we added to SketchUp Pro with 3ds Max and Mudbox. To stitch panoramas together, we shifted from our older platform (Panoweaver and Tourweaver) to RealViz 4.0.

The only thing that we had hoped to work on during the period of our NEH Start Up grant that did not see any fruit was the establishment of an online resource for vetting digital models and the websites that post them worldwide. The reason for this is simple: Bernie Frischer at the Institute for Advanced Technologies in the Humanities (IATH) at the University of Virginia had already laid the groundwork for a similar concept. He invited Drs. Flaten and Gill to be on the Advisory Board for SAVE (Serving and Archiving Virtual Environments) and we spoke on a SAVE panel at the Computer Applications and Quantitative Methods conference in Budapest, 2008.

b. Audiences

Our audiences have included those in attendance at various lectures (40-300 attendees per venue), newspaper and magazine readers in two states, subscribers to Campus Technology, Coastal Carolina University’s Alumni magazine, Tempo, radio listeners to KASU, television viewers for Coastal Today and Southern Style (Time/Warner), readers of our articles in journals, conference proceedings, books, and online, and visitors to our site. Coastal Carolina’s Ashes2Art website averages 28,000 visits per year based on the past 30 months of data (ASU data unavailable). Our site has been posted (without our consent or foreknowledge) on numerous blogs, computing websites, university resource pages, and on the Wikipedia site for Delphi. In addition to local and regional presentations, we have presented or chaired sessions at the following conferences:

- Session chairs (Flaten and Gill): Digital Humanities and Pedagogy; Envisioning the Past: Virtual Reconstructions of Archaeological Sites (6 sessions, 18 papers), Computer Applications/Quantitative Methods in Archaeology annual meeting, Williamsburg, March 2009
- Flaten, “Ashes2Art as Pedagogical Model”
  Gill, “Chattering in the Bath, The Urban Greek Bathing Establishment and Social Discourse in Classical Antiquity”
  Session chairs (Flaten and Gill): Virtual Environments and Pedagogy; Visualizing Ancient Spaces (6 sessions, 18 papers)
  Workshop presenters: The SAVE Project (Serving and Archiving Virtual Environments), Computer Applications/Quantitative Methods in Archaeology annual meeting, Budapest, April 2008
• Session chairs (Flaten and Gill): Continuous Crossroads: Research & Pedagogy, Problems & Opportunities with Digital Models, Archaeology and Art History, College Art Association annual meeting, Dallas, Feb. 2008
• Session chairs (Flaten and Gill): Visualizing Ancient Spaces: The Impact of Three Dimensional Virtual Reconstructions on Research and Pedagogy (12 papers), Computer Applications and Quantitative Methods in Archaeology annual meeting, Berlin, April 2007

We have published the following:
• Arne R. Flaten, “Ashes2Art as Pedagogical Experiment,” in Peer-reviewed Proceedings of Computer Applications & Quantitative Methods in Archaeology 36th annual meeting, Budapest; accepted
• Alyson A. Gill, “’Chattering’ in the Baths: The Urban Greek Bathing Establishment and Social Discourse in Classical Antiquity,” in Peer-reviewed Proceedings of Computer Applications & Quantitative Methods in Archaeology 36th annual meeting, Budapest; accepted
• Flaten and Gill, “Virtual Delphi: Two Case Studies,” in The ISPRS International Archives of the Photogrammetry, Remote Sensing and Spatial
Continuation of the Project

Ashes2Art will continue indefinitely. We have support from our university administrations, student interest is high, scholarly reviews of our work have been positive, and we still have much to do. We will not stay at Delphi forever, and our next phase of the project is uncertain. Various institutions nationally and internationally (Egypt, Israel, and U.S. universities) have expressed interest in our work and the idea of expanded collaborations has been broached. As the program grows, we anticipate Ashes2Art to be an umbrella for a wide range of digital humanities projects, from local archaeology to sites in the Near East.