Jamestown Planning Proposal
Final Report: Jamestown in the Atlantic World -- http://www.vcdh.virginia.edu/jita/
Crandall Shifflett, Executive Director
January 16, 2006

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1. Overview

In 2002, Virtual Jamestown at Virginia Tech, the Center for Digital History, University of Virginia, and the Association for the Preservation of Virginia Antiquities, Jamestown Rediscovery™ began a multi-year project called "Jamestown Planning Proposal" (JPP) funded by the Andrew W. Mellon Foundation. The project was directed by Crandall Shifflett, Professor of History at Virginia Tech and the founder of the Virtual Jamestown project.

Over the course of the planning period, we identified a number of closely related problems that confront digital archives, centers, libraries, imprint presses, and scholarly communities. Various proprietary, administrative, technical, and institutional issues must be disentangled. We did not solve all of the problems we identified. Resolution of some problems will require fundamental changes in how collectors and producers identify, assemble, digitize, present, publish, and preserve digital work. Some solutions will require paradigmatic shifts, such as mainstreaming of digital techniques within traditional disciplinary boundaries, changes in the professional reward structure, greater incentives for crossing institutional borders, and the development of common tools for exploiting datasets across a variety of projects.

Over the course of the planning grant period, we made adjustments to the original proposal to take advantage of unanticipated opportunities for realizing initial goals. For example, instead of hosting a final summit on the project, as proposed in the JPP, the project director participated in the University of Virginia's Digital Technology Summit, organized by Bernie Frischer and the Institute for Technology in the Humanities. As another example, the JPP proposal also expressed the intent to found at Virginia Tech a new center for digital history with a focus on the Atlantic World. Instead, the project director accepted an appointment as Interim Director, Virginia Center for Digital History, where support for research and development of digital history has enthusiastic institutional support.

Taking the long view, the Mellon funding for planning has generated enormous synergy and given us the support needed to build alliances and seek out partners for exciting work in digital history. We built bridges of trust and collaboration between history, architecture, and archaeology, took steps to share ownership of intellectual property between institutional stakeholders, laid the foundations for new partnerships in using revolutionary technologies to produce scholarship, and demonstrated the analytical power of advanced technologies for analyzing and exploiting resources in historical work.

An Advisory Board of scholars, archivists, and stakeholders from England, Ireland, and the United States (see below) made two broad suggestions for future development: 1. use advanced technology to build "lost landscapes" of the Atlantic World; 2. work together with Virginia stakeholders to survey and make available in digital format the records of the Dutch in Colonial

Virginia, i.e., a Dutch Colonial Records Project similar to the Virginia Colonial Records Project in 1957. As the William Thomas, III, Chairman of the Board noted, "Our planning process coincided with the steepest budget cuts in the history of the Library of Virginia, whose entire digital program was dropped. For the University of Virginia and other state institutions these cuts were numbingly severe. Few board members could offer partnership or commitment in these circumstances." Nevertheless, the project director's outreach efforts to the Dutch and the discussion of this initiative in the JPP advisory board meetings generated momentum for a survey of research and records on the Dutch in the Atlantic World that will be pursued by the Federal 2007 Planning Commission.

The JPP proved very productive in providing opportunities to experiment with innovative techniques for recovering lost landscapes, such as connecting architectural, geometrical, and textual forms, informed by the archival and material culture records, to envision a virtual world as a technique for research and scholarship. Historians, architects, geographers, and archaeologists combined to create virtual models of buildings not seen since the seventeenth century. New interrogations of the past, previously unimagined, arise when the archival, artifactual, cartographical, and visual/graphical records converge and challenge prevailing assumptions. Not only did collaboration during the planning grant demonstrate the merits of applying advanced technology to the study of the past, it also highlighted the limitations of the the printed publication to capture that past. Digital history requires new approaches to exploit and disseminate the insights that advanced technology has made possible.

While pioneering these complex partnerships between academic institutions, a private foundation, a digital history center, libraries, and individual scholars, the Jamestown Planning Proposal gave us a deeper understanding of and insight into the possible pitfalls but, more impressively, the merit of what has been labeled "new model scholarship" (used here interchangeably as digital history or digital scholarship). The integration of history, archaeology, architecture, and technology that the Mellon funding made possible has lead to further dialogue between the Virginia Center for Digital History, the Association for the Preservation of Virginia Antiquities, the University of Virginia's FEDORA project, the University of Virginia Rotunda Imprint series, and the Institute for Advanced Technology in the Humanities on two related initiatives: tools building for scholars and producing digital scholarship. The Virginia Center for Digital History plans a dramatic refocus of its mission, from that of a center for scholar-led Web projects towards assuming a leadership role in the publication of digital scholarship. Partnerships with tool builders, imprint publishers, research libraries, humanities centers, and digital journals will be combined with those alliances forged in the JPP to bring the Virginia Center for Digital History into the forefront of electronic publication.

2. Objectives
The initial goals of the JPP were to

1. create strategic partnerships to build a virtual collection of historical and archaeological data on Jamestown in an Atlantic Studies context
2. survey needs and resources of scholars as a prerequisite to designing an institutional and intellectual framework for future distribution of a virtual collection

3. collaborate on prototypes for cross-institutional archiving, searching, and indexing of a virtual collection repository

3. Key Personnel

Mellon funding allowed the project to bring together top people in their fields of expertise to do what they do best:

Dr. Mark Freeman
Mr. Scott Gillespie
Mr. David Givens
Dr. William Kelso
Dr. Earl Mark
Ms. Carole Schmidt
Dr. Crandall Shifflett
Dr. Julie Solometo
Dr. William Thomas,
Dr. Kimberly Tryka

After starting his career in teaching, **Mark Freeman** worked for twelve years for a software company dealing with archaeology, museum and library collections management. Specializing in digital archaeological information, Mark has given papers at several regional and national archaeological conferences. For the last five years Mark has run his own company, Stories Past, developing educational web components for archaeologists and museums.

Scott Gillespie is the Project Manager/ Programmer at The Virginia Center for Digital History. At VCDH his primary role has been to redesign the Virtual Jamestown site, assist with getting more primary documents online for the Geography of Slavery, and work with Crandall Shifflett to produce the Jamestown in the Atlantic World site. He has 10 years experience in developing educational software and websites.

David M. Givens is a staff archaeologist with the Jamestown Rediscovery Project. Mr. Givens specializes in archaeological Geographic Information Systems. His job involves the linking of volumes of spatial data and archaeological information into a viable and sustainable digital archive. He provides nearly fifteen years of knowledge in Chesapeake and Virginia archaeology and history to the group. David manages the *Jamestown Rediscovery®* website, a successful educational interface between the Rediscovery excavations and the public.

William Kelso, Chief Archaeologist, Association for the Preservation of Virginia Antiquities, *Jamestown Rediscovery®*. He discovered Jamestown Fort and directed the archaeological team for this project. He supported the project with access to archaeological site data, service on the advisory board, a conference presentation, and advice on Web presentation. He continues to make new discoveries at the Jamestown Island site.

Earl Mark serves as Chief Technology Officer and Director of Information Technology within the School of Architecture, and as Associate Professor of Architecture. Prior to this appointment, he was a lecturer at the MIT Department of Architecture, a senior teaching fellow at the Harvard Graduate School of Design, and visiting lecturer at the Swiss Federal Institute of Technology, ETH Zurich. He holds a Ph.D. in Architecture with a Minor in Cognitive Science from Harvard University, a Master of Science in Media Technology from the MIT Media Lab, a Master of Architecture, and a BA in Architecture and Mathematics. In spring 1998, Earl Mark was the Thomas Jefferson Visiting Fellow at Downing College and a Visiting Associate of the Martin Centre, of the Department of Architecture at the University of Cambridge. In addition, he was a senior software engineer at Computervision Corporation. Mark is also actively involved in private practice at Johnson, Craven, and Gibson Architects in Charlottesville. Prof. Mark is responsible for directing the development computer based curriculum and facilities. He teaches, performs research, and has published in the areas of computer aided design, digital moviemaking and animation, and design research.

Carole Hamner Schmidt is a management consultant to the nonprofit sector. As a member of the Jamestown Planning Proposal team, Carole advised the project on governance issues including board structure, intellectual property rights, and business plan development. She drafted sample bylaws, memoranda of understanding, and copyright policies for university legal council to review. Through individual interviews with all stakeholders, she identified potential strengths and challenges to the collaboration and recommended strategies to negotiate differences. Carole brings more than a decade's experience in nonprofit management and leadership development to her work with educational institutions and community-based organizations. Before establishing her consulting practice, Carole was Deputy Director of the Pew Partnership for Civic Change, a civic research organization founded by The Pew Charitable Trusts. While with the Pew Partnership, Carole directed strategic communications for grant-making and research initiatives exceeding $15 million in investment by the Trusts. She was also the principle author of the LeadershipPlenty® training program currently adopted by a host of national organizations.

Crandall Shifflett, Professor of History and Interim Director, Virginia Center for Digital History, created and manages *Virtual Jamestown*. He wrote the "Jamestown Planning Proposal," hired the staff, and directed the project. He is currently Interim Director, Virginia Center for Digital History, working on a book manuscript on Virginia's first Africans and the origins of slavery in America, and forging partnerships for the practice of digital history.

Julie P. Solometo is an Assistant Professor of Anthropology at James Madison University. She received her PhD in Anthropology from the University of Michigan in 2004 with a dissertation on the archaeological study of war, supported by six seasons of fieldwork on prehistoric fortifications in Arizona. Dr. Solometo is the Director of the Chevelon Archaeological Research Project, which involves students in the examination of prehistoric
Pueblo cultures. Her work with the Mellon Project involved assembling and interpreting available materials on the archaeology of Native American settlement in the greater Chesapeake

Bay region and presenting this information through a demonstration web-site
(http://www.virtualjamestown.org/paspahegh/siteMap.html).
The website uses the well-excavated archaeological site of Paspahegh to examine aspects of
Powhatan life and culture at the time of European contact, including architecture and material
items such as ceramics and copper. The website also compiles available historical information on
the interaction of the Paspahegh people and the English colonists. Dr. Solometo also examined
current representations of native peoples and cultures by visiting several museums and other
outlets that present narratives of English colonization.

Kimberly A. Tryka was the Associate Director of the Virginia Center for Digital History
(VCDH) from January 2001 through June 2005 and is currently the Project Manager for "The
South". As Associate Director at VCDH she was responsible for guiding the technical aspects of
VCDH projects and making sure the projects conformed to established library (or professional)
standards, as appropriate. She is also the Reviews Editor of "Digital Humanities Quarterly"
(DHQ), an open-access, peer-reviewed, digital journal covering all aspects of digital media in the
humanities published by the Alliance of Digital Humanities Organizations (ADHO).
Her work with the Mellon project included guiding the creation of and setting up controlled
vocabulary terms to be used with the Atlantic World Online Resources database
(http://www.virtualjamestown.org/awresources/) and working closely with Julie Solemeto to
create a demonstration web-site related to the Paspehegh
(http://www.virtualjamestown.org/paspahegh/siteMap.html). Additionally she participated in
meetings of stakeholders in the project, attended a seminar to determine what college instructors
might want from an Atlantic World website, and consulted with members of the APVA about
how their data might be used within an Atlantic World website.

William G. Thomas, III, is the John and Catherine Angle Professor in the Humanities,
University of Nebraska and former Director, Virginia Center for Digital History and Associate
Professor, Department of History, the University of Virginia. He chaired the Mellon Jamestown
Advisory Board and led its meetings. In addition, at the Virginia Center, he supported the
project's requirements for graduate research assistants, Web presentation, and technical work.
His interest in the project and advice during Board discussions led us towards the most
promising and potentially productive pathways of digital history. (See Appendix 8 for Thomas'
summary and report on the project).

4. The Advisory Board and Its Impact

The planning process in the Advisory Board's deliberations "had a wider impact than expected
(see William Thomas' Report in Appendix 8)." The Advisory Board included the top people in
their fields, although the membership changed over the course of the project (see Appendix 2 for
a list of the members and their affiliations). At first composed, as the Chairman of the Board
noted, "almost exclusively of key stakeholders, such as directors of libraries, centers, programs,
and projects," membership shifted as the agenda moved in the direction of research and
scholarship. After the initial meetings the board gradually incorporated more scholars in Atlantic
World Studies who represented the leading institutions in the U.S., Ireland, and England. New
board members "gravitated toward the problems of visual representation of data and to the

collaboration between historians and archaeologists. The outcome of these early meetings was an overall commitment to sponsoring and building prototypes of integrated visual models of the James Fort and other sites. As the Director of the Virginia Center for Digital History recalls, the 'lost landscapes' ideas became the guiding strategy for work at [our Center] on prototype development that would integrate APVA field data, visual models created with Earl Mark's group in the Architecture School, and the textual record in Virtual Jamestown."

5. What We Did

The work and accomplishments of the planning grant included

- presentations, demonstrations, and feedback on future plans
- a census of online collections on Atlantic studies of the sixteenth and seventeenth centuries
- a survey of archaeological sites in the Jamestown area
- building virtual models of the Jamestown meeting house and statehouse and an Indian village
- bringing together historians and archaeologists in a 2007 conference
- establishing a dialogue on governance and intellectual property issues, leading to a Memorandum of Understanding between the Virginia Center for Digital History, the University of Virginia, and Virginia Polytechnic Institute and State University
- proposing a digital Dutch Colonial Records Project for 2007 and beyond
- plans for sustaining new model scholarship on Jamestown in the Atlantic World
- raising additional funds of $100,000 to support projects on Africans and Indians in Jamestown history
- designing a new "Jamestown and the Atlantic World" web site to summarize the outcomes of the planning grant and coordinate and chart future development

Each task is elaborated in some detail below.

5.1. Demonstrations and Lectures

Presentations and demonstrations to groups of scholars, digital archivists, and other guests were made at two Library of Congress conferences, New York University (Professor Karen Kupperman's class), Oxford University (England) (symposium on digital humanities), Council on Library and Information Resources, Brookings Institute Symposium, and the Omohundro Institute of Early American History and Culture conference on "Virginia and the Atlantic World" (see the timeline in Appendix 1 for more details).

5.2. Census of Online Resources On Atlantic Jamestown

While we did not attempt to produce the digital equivalent of the 1957 Virginia Colonial Records Project, we did make an extensive survey of online resources on Jamestown in the Atlantic World of the sixteenth and seventeenth centuries, whether in the form of individual scholar projects, library and museum collections, or other online sources. The results of that survey are briefly described here and more extensively given in Appendix 3.

From the census of electronic collections, we created a database of online resources relating to sixteenth- and seventeenth-century European colonization in the Atlantic World. These resources include a variety of materials, such as travel accounts, promotional literature, missionaries' accounts, legislation, maps, and images, as well as modern reports of archaeological research on various sites in the Atlantic rim, whether Spanish, French, Portuguese, Dutch, or English. The URLs listed in the database direct users to the main webpage. A keyword list was developed, in consultation with Karen Marshall, a subject librarian at the University of Virginia Library, basing the list on her previous work with the Mellon-funded American Studies Database at the University of Virginia, and modified by adding or deleting terms to fit Atlantic Studies interests. We annotated each collection so that users have some idea of what type of materials to expect when they visit the listed web-site. The database currently includes 105 records (see Appendix 3 for the content of the database).

5.3. Survey of Jamestown's Archaeological Sites

Jamestown Rediscovery™ planned to survey 26 archaeological sites in the Jamestown area. But the survey proved too ambitious to complete for a variety of reasons. Part of the problem was the lack of a systematic approach to surveying site contents by previous archaeologists and the disorganized and incomplete state of much of the existing data. Hurricane Isabel (2003) and a personal tragedy for the archaeological survey team caused unanticipated delays on the Mellon-funded survey and required the hiring of another archaeologist and a request for a one-year extension of the planning grant. The 2007 event also proved to be a time-consuming and understandably diversionary activity for the archaeologists who had to devote much time to that event. Another challenge for the archaeology/history collaboration required getting archaeologists to communicate in laymen's language to those outside their professional field. We learned that much more effort will be required to close the communications gap between archaeology and history but we also broke new ground in this endeavor (see "History and Archaeology: A Promising Partnership" below) and hope to build upon the momentum for the history/archaeology/architecture collaboration that this project engendered.

5.4. Prototypes for Integrating Cartographical, Textual, Archaeological and Visual/Graphic Data in a Virtual Collection

Historians, an architect, and archaeologists worked together to construct model sites that would be the basis for prototypes to integrate textual, cartographical, graphic-visual, and archaeological data. The project experimented with recreations of specific structures and sites, such as James Fort, the meeting house and statehouse at Jamestown, Paspahegh -- site of the first Indian contact group at Jamestown -- and a "virtual" Pomeiocc, an Indian village sketched by John White. Using AUTOCAD™, visualization and 3D modeling, we wanted to test these robust techniques for their potential to enhance teaching and research. Although we found recreations of lost landscapes to be labor-intensive and costly, the benefits included bringing technologists, archaeologists, geographers, architects, and historians together to create compelling visualizations of historical structures that can be examined and compared to the textual record. When artifacts found on the site are added to the visualization, another level of information can be analyzed on subjects like function, behavior, relationship, and use of buildings, people,

rooms, and other issues of spatial history. To discuss the benefits of blending history and archaeology, the Society for Historical Archaeology planning committee for the next annual conference will invite well known historians in Atlantic Studies to the conference. As a result, the 2007 annual conference of the Society for Historical Archaeologists will open with a plenary session of historians and archaeologists to reflect upon the integration of history and archaeology and how scholars in these two areas might collaborate more extensively in rewriting the Jamestown story.

From the work of scholars such as Dr. Earl Mark, Associate Professor of Architecture at the University of Virginia, and William Kelso, Chief Archaeologist, Jamestown Rediscovery™, on the Jamestown meeting house and statehouse, we created small modules that integrated archaeological, textual, cartographical, and image data, applied a variety of technologies to them for analysis and presentation, and stitched individual modules together with timelines and historical context. Warren Billings, Distinguished Professor and Historian of the Supreme Court of Louisiana, University of New Orleans, and author of a 2004 Library of Virginia book on the statehouse, wrote a brief essay to accompany the statehouse presentation.

Mark Freeman, an archaeologist, and David Givens, Jamestown Rediscovery™ Conservator, worked on an interface for the Jamestown prototype (see link or URL:) entitled "Stories of the Past." Archaeological sites are located on a Chesapeake landscape, a brief historical sketch is provided, artifacts found at the site are described, and links are made to documents, images, and maps from the Virtual Jamestown digital archive.

An on-line module has been created to present this data, with each piece of information displayed within a spatial hierarchical structure. Other contexts have been added through the creation of animations and further temporal and thematic contexts can be applied as more sites are added. For an explanation of the technology, see Appendix 5.

The module serves twin purposes.
- **As a Resources Gateway**: making available the extensive related resources that are associated with these archaeological excavations.
- **As an Educational Tool:** presenting the archaeological information on-line, structured for multiple audiences.

While the Jamestown in The Atlantic project features 26, seventeenth-century sites around the Chesapeake, the initial focus for the module has been on two buildings on Jamestown Island. **Building 160**, a "mud and stud" building, was one of the earliest structures on the island. The **Statehouse**, built later in the century in five phases, was a large brick structure. Archaeology has played a large part in the understanding of these buildings, and it is hoped that this module will help present the evidence supporting the current level of knowledge concerning them.

Despite the limited development focusing on just two buildings it is important to recognize that the intent is to complete a number of early seventeenth-century sites to the same level of detail. While the existing structure can accommodate the 26 targeted sites, some further development work remains to be done to enable comparative analysis between sites.

Technology
The module has been created using Macromedia Flash MX Professional edition. The XML files are currently manually manipulated though derived from database files managed in a separate environment.

Module Structure
The screen is organized into three main areas:

Navigation

The navigation section includes three elements. On the left the **Context** tab presents a tree view showing the hierarchy of the available information. This is fed by an XML file (for technical details, see Appendix 5). Selecting an element populates the features, resources and central resource. The tree component allows easy movement around the parts of the site, as well as a visual reference to what components are completed.

On the right is a two-part form. The **features** tab shows the elements that lie within the existing level. The top level presents a list of sites, within this are presented buildings, or other site features, then features (post holes, cellars etc.) , excavation units, and finally artifacts. Selecting an element populates the text boxes in the bottom section for the specified item.
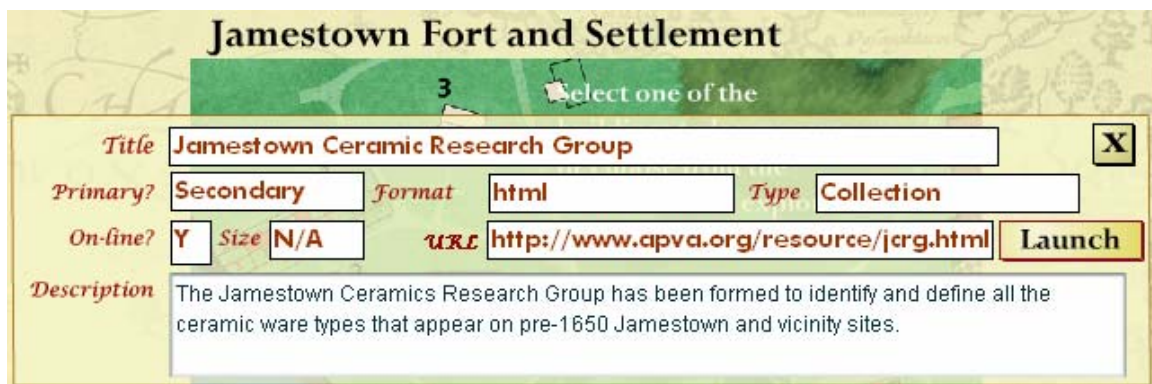
The **resources** tab gives a list of all related external material. This includes primary and secondary sources, broken down by type. Selecting an element brings up more information in a pop-up box. This includes a location field, showing the html link for on-line resources. For other resources this will show the physical location of the resource.

Currently these resources include web pages, ASCII delimited text, PDF documents, and images. The location for the off-line documents references the collections of the APVA at Jamestown Island.

Resource Animation
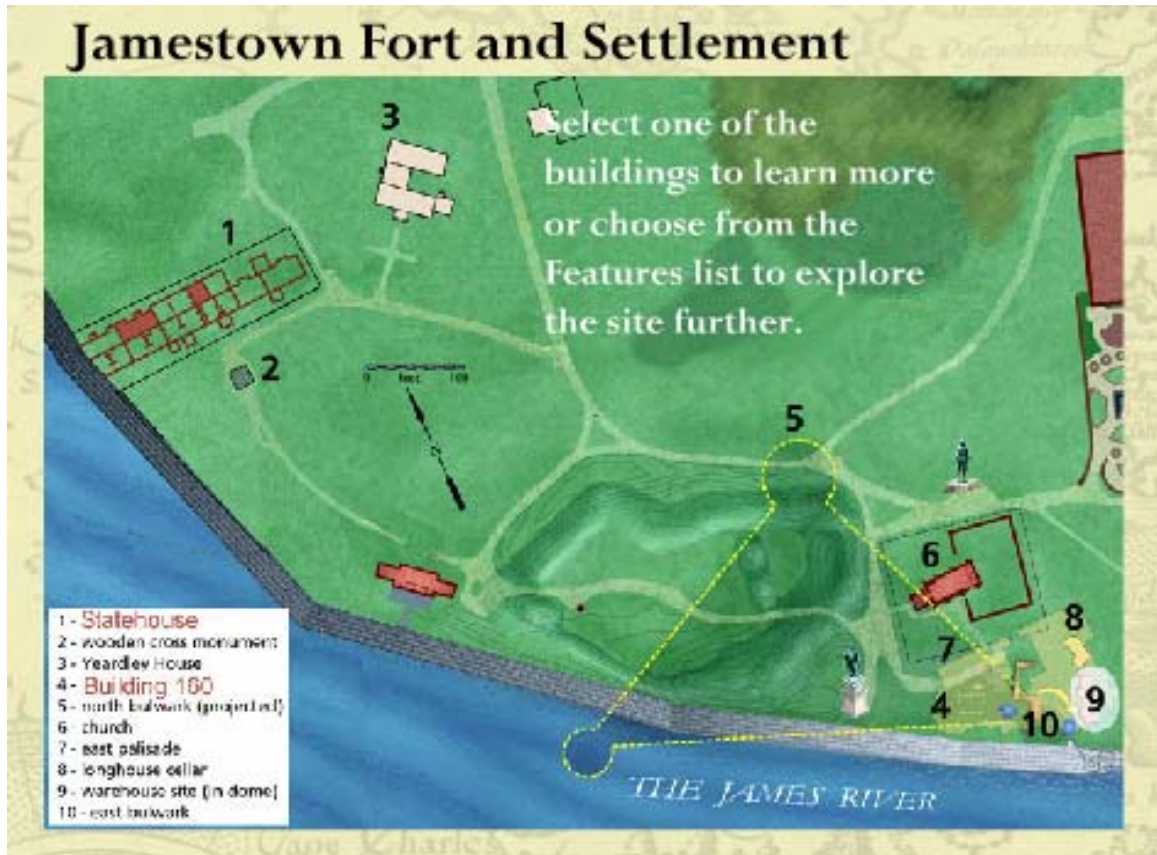
This section contains a visualization of the resource. At its simplest level (including presentation of artifacts) it will show a single image. For other resources, it will show an animation of the construction of the structure over time or other temporal/spatial constructs. Elements within the animation are selectable and populate the bottom detail section.

The initial animation presents a map of the different seventeenth-century Chesapeake sites showing their appearance and disappearance over the course of the century.
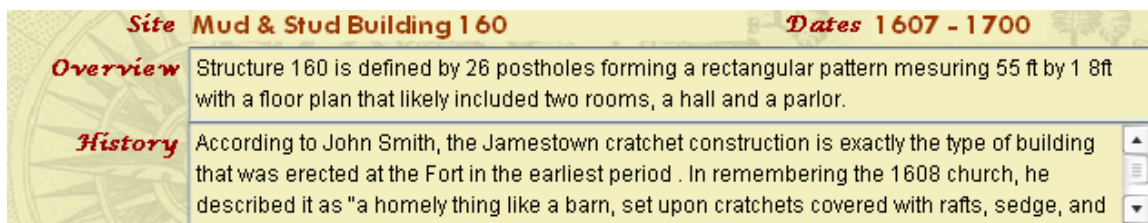
Detail Section

The final, bottom section, provides textual information on the selected item. It is populated from the features tab, or from clicking on an item within the resource animation.

Other Module Components
The module includes a loading animation to ease use on the Internet. Since most of the resources are loaded as required it remains fairly small (1.6 meg), though as more animations are added it will grow in size.

A help button on the screen brings up a panel describing the basic navigation.

Future Work
The addition of other sites would come from the creation of new associated XML files. Updating the overview XML file would mean these sites would be immediately available in the module. This could be done without further work on the Flash interface though, unless a simple image was supplied, each resource would need an additional resource animation.

To properly manage the addition of multiple sites it would be desirable and more flexible if the associated XML files were generated dynamically directly, rather than crated statically. This could be achieved by moving the source files into a database. The current structure would remain the same, except that the XML files would be dynamically created from a call from the Flash module to the database. The promise of examining multiple contexts could then be supported by thematic queries, and it would be possible to more easily pursue cross-site analysis. Artifacts or features could be examined over time, within geographically similar regions, or within thematic groupings. It would also be possible to expand the scope of the module to other New World settlements. Along with this change would be the addition of tools within the module, allowing for saving private sets of information for individual users and queries across sites.

Reconstruction of Structure 144, The Jamestown Statehouse

The digital reconstruction of the Jamestown Statehouse, structure 144, was developed under the close guidance of the Jamestown Rediscovery Team using Bentley Systems commercially licensed Microstation Architecture Triforma software and under contract to the architectural firm of Johnson, Craven and Gibson. The initial reconstruction was based upon a published Report to APVA , Jamestown Rediscovery, titled "Description and Analysis of Structure 144" developed by, Cary Carson, Willie Graham, Carl Lounsbury, and Martha McCartney, Colonial Williamsburg Foundation Research Division, 20 August 2002. This report developed a

reconstruction from the physical evidence on site and seventh and early eighteenth century brick construction in England.

The report noted that a " Rediscovery team in 2000 and 2001 provided some new evidence that clarified the history of the development of Structure 144, but did not go far enough to substantiate or disprove" a prevailing theory, such as first developed in 1903 by Colonel Samuel Yonge with specific emphasis on House five. The new report concluded that there are several areas (particularly in Houses 3 and 4) that have not been touched by previous excavations, which may promise to answer some questions. The report asserted that the current speculation would need to be further tested against future evaluations and evidence.

A reconstructed version of the model developed in the report was first put forward by Johnson, Craven and Gibson which provided a stronger development of architectural detail. This effort was led by Earl Mark, Associate Professor at the School of Architecture at the University of Virginia in association with Duncan Morton, R.A. of Johnson, Craven and Gibson. The Jamestown Rediscovery Team led by Archeologist Bill Kelso reviewed this reconstruction and made key suggestions regarding the color of doors and windows, the possible composition and change over time of roofing materials, the size and detailing of windows, the likely arrangement of gables, and the sequence of houses one through five. Apart from the English precedents cited in the "Description and Analysis of Structure 144" report the Jamestown Rediscovery Team asserted the particular relevance of Bacon's Castle, an AVPA property, which offered some local precedent for a potential model of interior spaces, window details, and masonry.

A visit by the Curator of the City Museum for London helped to critique the first reconstruction presented as a five staged development after the reconstruction report, but with a greater speculation on architectural details. Further discussions with the Jamestown Rediscovery Team led to the formulation of a completely revised five staged model, more in keeping with ideas about the water table, the change in roofing materials that is presumed to have occurred over time, the likely disposition of gables, and a prospectively more plausible size and arrangement of windows. The model is developed to the extent allowed by inference from existing information, but is completely undeveloped with respect to interior spaces. It provides a visual "straw man" against which further speculations can be developed. It reflects the character of materials found on site. Its connection to the processes of archeological discovery is a form of argument making. The firm of Johnson, Craven and Gibson, very familiar with architectural detailing of classical buildings in Virginia, lent its expertise not to a validation of archeological findings, but rather to provide a consistent architectural reasoning against assertions made by the Jamestown Rediscovery Staff.

The current three-dimensional digital model is developed in five stages following the timeline suggested in the Reconstruction of Structure 144 report, but modified according to the speculations of the Jamestown Rediscovery Staff. The model depicts some aspects of window details, roofing materials, wood finish, and also various seasonal lighting conditions. A collage of the model on the site of the excavated foundations is also developed as a part of this speculation. One aspect of the model which might call for greater scrutiny is the color of the trim, less likely to be a "white" paint as suggested by the model, and most probably an off-white gray, red or cream color. The brick was also probably painted red. However, this is merely a

point of speculation based on local architectural precedent, and is not necessarily supported by a specific evidence trail.

Future work on the model might provide greater development of interior details and structure. A depiction of site conditions especially as related to speculation about the James River shoreline would add to the contextual understanding. A more completely rendered series of studies of surrounding structures and site uses may help to test and further the current speculation. This work may be viewed in Powerpoint:

statehouse.ppt

Dr. Julie Solometo put together one model on the Indians of Paspahegh, the first contact group to meet the English in 1607. Her report is in Appendix 9. The results of this work can be viewed at http://www.virtualjamestown.org/paspahegh/paspaheghHome.html

5.5 Governance, Copyright, and Intellectual Property

Complex issues of governance, copyright, and intellectual property confronted the project and Carole Schmidt, the project consultant on these matters. Currently, University of Virginia and Virginia Tech legal counsels are exploring a Memorandum of Agreement aimed at facilitating speedier approvals of noncommercial, educational, research, cultural or charitable uses of the Virtual Jamestown material through the Principal Investigator and the Virginia Center for Digital History at the University of Virginia. Additional materials are being developed to assist contributors to the Jamestown and the Atlantic World site to understand rights regarding presentations, distribution, and permissions for use of jointly-created project deliverables.

Ms. Schmidt also produced an outstanding midstream "Data Audit" for the project with a set of recommendations (see Appendix 4). Some of these recommendations we have followed while others are still being considered.

Market niche, target audience, and sustainable funding built upon a business model composed the essence of the recommendations. The market niche and target audiences for Jamestown and the Atlantic World are the community of scholars, teachers, and students of higher education. The Jamestown and the Atlantic World web site, devised for the purpose of coordinating and presenting the outcomes of the project will morph into a web site that serves that market with the digital publication of the latest research. In addition, the new site will also continue to develop the Jamestown landscape as a joint endeavor of historians, architects, GIS and relational database specialists, using new tools and visualization techniques.

We have viewed sustainability as comprising related issues of intellectual impact/longevity and library preservation, more than simply a financial issue. A dialogue has been opened with the

University of Virginia's Alderman Library initiative "Sustaining Digital Scholarship" on whether to bring Virtual Jamestown into the library as a repository project. Since the site continues to develop, it will be another year or more before it is ready as a repository. Meanwhile, Jamestown and the Atlantic World will develop as a site for scholars engaged in the latest endeavors to publish their research as "new model scholarship," and to disseminate it among scholars and teachers in higher education.

5.6 New Funding

During the period of the planning grant, the project generated $100,000 in new money. A private donor gave $50,000 for two initiatives: 1. an oral history project on Virginia Indians and Jamestown 2007; 2. a new "wing" on the Jamestown site on first African Virginians. Both of these initiatives are underway. In addition, Verizon Communications gave $50,000, which I have asked to be spent in the following ways: 1. $10,000 for redesign of Virtual Jamestown and the development of additional content for K-12; 2. $20,000 to support the annual conference in January 2007 of the Society for Historical Archaeologists and the inclusion of historians in the conference; 3. $20,000 to be used for applying advanced technology to develop further the integrated prototypes in the form of additional 3D images, interactive maps, G.I.S. databases, and visualization models. In addition, I completed a GIS training seminar at the Polis Center, Indiana University-Purdue University Indianapolis.

6. What We Learned

The JPP provided the funding we needed to identify future areas of growth, assess the potential for interdisciplinary and multi-institutional collaborations, and build models of data integration to leverage further research and scholarship on Jamestown and the Atlantic World. The Advisory Board, initially chaired by the project director and then by William G. Thomas, III, examined all phases of the project, provided critiques of the content of Virtual Jamestown, and made suggestions for Jamestown 2007 and beyond. Digital archivists, center directors, library and historical society presidents, a national park historian, well-known historians in Atlantic Studies, foundation administrators, and college and university faculty composed the board (see "Key Personnel" above). Four meetings of the Board and a day-and-a-half retreat provided ample commentary. A Virginia Tech graduate student recorded the most important sessions and took detailed notes. The project director summarized the outcome of each meeting and organized an agenda for the subsequent meeting (see Appendix 1: Timeline of Jamestown Planning Grant for meeting times, brief summary of content, and a list of attendees). Early meetings involved discussions of the project's objectives, identifying most desirable outcomes, and listening to different proposals. Meetings three and four and the retreat produced meaty exchanges and more consensuses, especially on two fronts: 1. recapturing lost Atlantic World landscapes; 2. a Dutch Colonial Records Project as an initiative to launch in 2007.

6.1. Opportunities and Limitations of Digital Archives

The project director's presentations of the project's goals to historians and archivists and solicitations of their feedback provided some interesting and sometimes disquieting perspectives on the state of digital history in the profession. Archivists and scholar-teachers do recognize the

great pedagogical potential of digital technology for the classroom. They find sites like Virtual Jamestown invaluable as digital archives that place rare documents, maps, images, artifacts, and other resources at the ready disposal of instructors and their students anyplace in the world with an Internet connection. On the other hand, in the areas of research and scholarship, many historians and even some archivists tended to be critical of digital technology, uninformed about its potential, and cynical about its future. Although search engines like scholar.google.com will likely change some attitudes, traditionalists seemed skeptical of the Internet, convinced that researchers must go to the archives, and understandably unwilling to trust the electronic archive to provide them with everything they need for their own research. In short, scholars want to see more than just another web site before they "commit" to digital history. They must see its potential to produce scholarship that is as good or better than the printed word and validates its approach to history.

6.2. History and Archaeology, A Promising Partnership

During this planning grant period, the Association for the Preservation of Virginia Antiquities Jamestown Rediscovery™ project partnered with Virtual Jamestown, Virginia Tech, and the University of Virginia's Center for Digital History to implement a comparative historical and archaeological research venture called *James Cittie and Beyond* and an educational initiative within Virtual Jamestown.

The archaeological part of this venture has required an analysis of specific data from past excavations on Jamestown and other Virginia sites selected from criteria established over the years by a consensus of Chesapeake area archaeologists. Historical archaeologists and curators began in the summer of 2002 to amass the technical and historical data utilizing ArcView GIS as the locus for the data. Data collection has been converted to a web based user-interface, hosted by the Association for the Preservation of Virginia Antiquities, and made accessible to Chesapeake scholars who will produce comparative studies. The Virginia Center for Digital History has been taking the lead in the overseeing and linking of the data, both textually and visually with educational programs catering to the kindergarten through graduate level within the Virtual Jamestown website. VCDH has facilitated the technical aggregation of APVA and Virtual Jamestown data through the creation of a common Web face. The site will integrate the databases and supply scholars with a tool for queries across and among the datasets. Ultimately, Chesapeake scholars will present major juried papers based on the compiled data at The Society for Historical Archaeology Conference to be held in January 2007 in Williamsburg. The conference will be one of the major events in the kickoff year of the 400th anniversary of Jamestown. The James Fort collection analysis will ultimately be a part of the larger project as well as data from 24 other previously excavated seventeenth-century Virginia sites.

At the beginning of the planning grant, the goal of bringing historians and archaeologists under the same tent had broad support among stakeholders and appeared relatively easy to accomplish. Scholars readily acknowledged the value of collaboration and how material culture could fill the gaps left by incomplete written records or correct the potential biases of archival material that presents Indian and African-American experiences exclusively through the perspectives of outsiders. Untrammeled cooperation turned out to be a naïve assumption, confirmed by a

conference of historians and archaeologists at a conference at Monticello in 2005. At the conference, many of these scholars pointed out the difficult divide that persists between these two professional groups, some claiming it was unbreachable. The Jamestown Rediscovery™ archaeologists and historians who have worked together on this project came to an entirely different understanding of the problem while at the same time gaining a growing appreciation for the value of collaboration. Much of what archaeologists do and the presentation of results of their work has been written for circulation among themselves in a highly technical language only fully understood by other archaeologists. In creating integrated prototypes for this project, archaeologists have been forced to "translate" their findings from the expert language of archaeology to laymen's terms. Similarly, some historians have recognized the value of a dialogue with archaeologists and the necessity to show how material culture informs, reinforces, or challenges the prevailing wisdom of the textual record.

Both the Paspahegh Indians and the meeting house-statehouse prototypes show how technology might be exploited to infuse postholes, rare sketches and drawings, and dormant texts with intuitive power that transports researchers back into time and enables them to analyze visually and understand better lost worlds of the past. In the creation of visual models, researchers see more clearly what they know and do not know. From both pedagogical and research perspectives, immersive, photorealistic environments invite participatory observation that leads to discovery and new interpretations. When harnessed to the classroom, visualization has tremendous potential, both pedagogically and cognitively, to engage everyone in the practice of history. For most historians, the efficacy of 3D models as cognitive tools designed to assist student learning and as platforms to display research findings is terra incognita, but increasingly shown to be efficacious in recent educational studies at all student levels (see for example, John Bonnett, "New Technologies, New Formalisms for Historians: The 3D Virtual Buildings Project," *Literacy and Linguistic Computing*, 19:3 (2003); H. Innis, and C. Gaffield, "Primary Resources, Historical Thinking, and the Emerging Redifinition of the B.A. as a Research Degree," *Facsimile*, 2001).

To summarize, detailed photorealistic representations possess four qualities that aid in the "doing of history."   They:

1. allow researchers to see things they have not seen or imagined before
2. provide new analytical tools for data manipulation
3. join together different categories of data to produce multiple perspectives on the same phenomena
4. arouse us to the humanistic content of the distant past

But despite its pedagogical and cognitive potential, only if visualization leads to new model scholarship perhaps will this approach likely have broad impact, be "accepted," or become part of the mainstream in the profession. We see viusalization as a breakthrough technology in digital history.

6.3. Seeding Digital Scholarship and the Issue of Sustainability

To begin, it is important to define digital scholarship. An early but increasingly inadequate definition is scholarship that is "born digital and constitutes an important resource for present and future research and teaching." (See Abby Smith, "New Model Scholarship: How Will It Survive," Council on Library and Information Resources, March 2003). More precisely, it is the fund of knowledge and learning aided by the application of digital technologies and published in electronic format. An essential corollary, digital history raises and answers questions inconceivable without the tools and perspectives of these technologies and publishes the results in digital format. A variety of tools and techniques qualify as digital resources and the list, as Jerry McGann has noted, will grow apace "as [we make] the migration from paper-based to digital platforms and networks." (McGann, NINES, http://www.nines.org/about/index.html). Examples of digital techniques in history include textual analysis, temporal and spatial modeling, and a variety of visualization methods (GIS, 2-D, 3-D, and 4-D), all made possible by the computer. Since the lingua franca of the computer is naturally digital and visual, visualization will be a breakthrough technology for digital scholarship.

The planning process educated us on the needs in digital history for leadership in the move from print to electronic publication. A vacuum exists in the humanities for the publication and dissemination of research results that take advantage of new opportunities in applying advanced technology to the analysis, interpretation, and publication of history in a digital format. Print on demand publishers, etext centers, and books online fill important niches in electronic dissemination. Over the past five years, the American Council of Learned Societies has collaborated with learned societies and a select group of university presses to assist scholars in electronic publishing of high-quality works in history. The project has resulted in digitizing approximately 500 full-text books.   Presenting previously printed work in a digital environment, however valuable in widely distributing scholarship, is a limiting and limited definition of digital history. This approach will not meet the future needs of researchers and scholars who seek to explore and use technologies to exploit their data sources and present the results outside the fences of print format.

Each year at dozens of conferences, scores of scholarly essays circulate only in small groups of select audiences, many of which never get wide distribution or publication. Scholars in archaeology, history, American studies, Atlantic studies, English literature, and foreign languages in America hold their own separate conferences. Specialty seminars, such as Bernard Bailyn's seminar on the Atlantic World at Harvard University each Fall invite half a dozen or more scholars to make presentations. European scholars have their own thematic conferences where papers are presented that touch on the Early Modern Atlantic World. During the period of this planning grant, we invited European scholars to serve on the board. Nicholas Canny, Chair, Department of History, University of Ireland at Galway, and David Peacock, Director, *Virtual Norfolk*, the University of East Anglia were associated with the project briefly but long enough to show the value of international collaboration in the forms of contact with the work of foreign graduate students and scholars doing research and writing on a variety of topics of comparative and relevant importance to digital history in the Atlantic World.

Digital history offers a medium to circulate the results of the latest research in a timely fashion with broadly distributed context and in a format that electronic scholarship will require. Presently, except for a few scholar-authored web sites, little of the vast outpouring of Atlantic Studies research and scholarship has a digital outlet and an immense amount of it will never even see the light of day. Some would argue that this "survival of the fittest" situation means we are guaranteed that the best scholarship will find its way into circulation. What this condition really guarantees is planned obsolescence, elite access, unnecessary and duplicatory research, and some interrupted careers of promising scholars. Full access to timely research has always been one of the crown jewels in the realm of academe. But high-priced journal subscriptions, parsimonious state education budgets, and professional snobbery that assigns high prestige to only a very small number of publishers who take years to put research in print (at some top scholarly journals, only ten percent of the submissions make it into print, in some cases up to 18 months after first submission) has high-jacked direct access to timely research findings (See Bernard Wysocki Jr., "Peer Pressure: Scholarly Journals' Premier Status Is Diluted by Web --- More Research Is Free Online Amid Spurt of Start-Ups; Publishers' Profits at Risk --- A Revolt on UC's Campuses," *Wall Street Journal*, A1, 23 May 2005). That such a condition exists in an age where advanced technology offers solutions to these problems is a product of our own failure to collaborate, to bring together the rich resources and talents of institutions and individuals, and create a process for creating scholarship in a digital-friendly manner.

We already have impressive models of digital scholarship. Recent articles by Edward Ayers, William Thomas, Robert Darnton, Philip J. Ethington, Jack Censer and Lynn Hunt, for example, in the *American Historical Review* and the *Journal of American* History, clearly demonstrate the potential, value, and reach of digital history (See William G. Thomas, III and Edward Ayers, "The Difference Slavery Made: A Close Analysis of Two American Communities," *American Historical Review* 108 (December 2003). http://www.historycooperative.org/journals/ahr/108.5/thomas.html; Philip J. Ethington, "Los Angeles and the Problem of Urban Historical Knowledge," *AHR* 105 (December 2000), http://www.usc.edu/dept/LAS/history/historylab/LAPUHK/; Robert Darnton, "The New Age of the Book," *New York Review of Books*, March 18, 1999; Darnton, "An Early Information Society: News and Media in Eighteenth-Century Paris," *AHR* 105 (February 2000), /journals/ahr/105.1/ah000001.html; Imaging the French Revolution: Depictions of the French Revolutionary Crowd. The American Historical Review 110.1 (2005): 19 pars. 9 Nov. 2005 http://www.historycooperative.org/journals/ahr/110.1/censer.html.

Ideally, to become more mainstreamed, digital history will require a mixture of digital humanities faculty, graduate programs, and centers of advanced technology expertise (expert domains), working with institutional decision makers to produce it from the ground up, from basic research to published scholarship. We will need to train graduate students, provide technical assistance where needed, organize and host scholarly conferences around new model scholarship, and publish in electronic format the kind of work that "proves itself" digitally.   This is scholarship which should demonstrate how advanced technology leads to interpretations of history unimaginable and immeasurable without its application, and incapable of being adequately understood in printed format.

In organizational terms, one might imagine a consortium composed of a digital history center at the core with vital partnerships to include: an imprint publisher, a regional humanities center, digital journal, and a tools/workshop/training laboratory, all built on a collaborative foundation and on a "best of kind" practice where the individual components need not all be under one roof but managed by a board of participating members. The Virginia Center for Digital History is well-positioned to provide the institutional leadership and support for such a consortium. The University fully supports the digital humanities. The College of Arts and Sciences at the University of Virginia is developing an M.A. degree in Digital Humanities. The University of Virginia Press has in its Rotunda series an established imprint publisher. The Institute for Advanced Technology in the Humanities has built a cutting-edge visualization laboratory on a collaborative model. The headquarters for South Atlantic Humanities Center, a regional center covering Virginia, North Carolina, South Caroline, Georgia, Florida, Puerto Rico, and the Virgin Islands, is at the nearby Virginia Foundation for the Humanities provide additional opportunities to disseminate digital scholarship.

One limitation or – depending upon one's point of view – opportunity for seeding digital scholarship is that various venues comprise expert domains for specific techniques. Rarely can every need be satisfied in a single location. Hence, collaboration on all levels will be essential to the growth and development of digital history. Scholars will need to identify the expert domains for training themselves and their graduate students in the use of the tools they need for their work In other words humanities will need to use the laboratory model of engineering and the sciences to work together in research and dissemination of the results. Huge economies of scale await those who can solve the problems of "accountability, support structures, and other organizational apparatus" that defy quick solutions. (Donald J. Waters, "Building on success, forging new ground: the question of sustainability," *First Monday*, http://www.firstmonday.org/issues/issue9_5/waters/)

Multi-institutional collaboration also raises formidable questions of ownership, as we learned in this project. According to Donald Waters: "…one of the most demanding challenges facing creators of useful and sustainable scholarly resources is the need to respect and protect intellectual property rights, while also taking advantage of the power of digital technologies to advance knowledge and education by linking and providing access to materials in new and unique ways" (Waters, "Building;" see also, Lawrence Lessig, *The future of ideas: The fate of the commons in a connected world*. New York: Random House, 2001; and Lessig, *Free culture: How big media uses technology and the law to lock down culture and control creativity*. New York: Penguin Press, 2004).

Waters points out the challenges of multi-institutional collaboration in these words:

> One of the persisting problems with digitizing projects in libraries, and particularly those in the humanities, is that they rarely build on, enhance, or otherwise connect with work across institutions. Even though many projects are individually quite powerful in their intellectual reach and rigor, and some do reach across institutions, it is hard to look at them collectively and see more than a disconnected jumble. And I fear that this is a problem that cannot be addressed simply by building collection registries that will make it possible for users to

> build ad hoc connections as the need arises… Nor can it be fully addressed by composing objects in these collections at 'recombinant' levels of granularity that would allow different parts to be readily combined and reused with different materials in different instructional or research contexts…. And where are the long–awaited means of federating distributed collections that do not require some form of expensive lockstep investment in common software platforms?….I doubt that we should hold our breath (Waters, "Building").

Venues for publication and a process for seeding, enhancing, and vetting digital scholarship will become critically important steps in producing digital history. *Southern Spaces* at Emory University is an example of a journal dedicated to publishing in the digital medium. The *American Historical Review* and the *Journal of American History* also publish digitized abstracts of more extended articles. The Rotunda Series, the University of Virginia Press, is an imprint division series aimed at larger digital publications on founding leaders. Besides these examples, other specialized outlets exist for digital publication, but few venues provide a satisfactory pipeline for scholarship in a purely digital format across broad fields of history.

Sustaining new model scholarship will require scholar-led, cross-institutional, multidisciplinary partnerships "at a scale and level of generality that will attract a broad audience of users and have such an impact on scholarship that their disappearance is not an option". (Waters, Building"). National- and even international-level partnerships will be needed to build this kind of auto-sustaining structure. It is a great challenge – and a great opportunity – and it will require massive levels of funding. Electronic scholarship will continue to develop without the advantages of economies of scale and shared expert domains, but at a much more protracted pace. (I am developing these ideas in Crandall Shifflett, "Digital History as New Model Scholarship," in draft).

6.4 Next Steps
How might this project begin to harvest new model scholarship from the vast outpouring of research and writing on Jamestown, Atlantic Virginia, or Colonial America and related themes of colonization?

In January 2007, the Society for Historical Archaeologists annual meeting will include opening day plenary sessions of archaeologists and historians of national and international repute. The sessions will be devoted to open discussions on the need for archaeologists and historians to collaborate in the production of new model scholarship on Jamestown in the Atlantic World. Each scholar will be asked to put together a session during the conference and their expenses will be paid in part through the gift of Verizon Communications to Virtual Jamestown. In addition, conferees will be invited to ready their essays for digital publication and submit them to the Center for Digital History. Clearly, our goal is not to continue to concentrate on information-oriented web sites, or online collections, or bibliographies. Rather we hope to lead the development of interpretive scholarship that uses the power of advanced technology to publish history in new ways.

On December 16, 2006, representatives of four major humanities centers in the United States met in Charlottesville, Virginia, and formed the **National Consortium for New Model Scholarship**

in the Digital Humanities. Members so far include the University of Virginia Center for Digital History, the Indiana University Polis Center, West Virginia University's National Geospatial Development Center/Geography, the University of Nebraska Digital Humanities Center, and Florida State's Center for Religion and Emotion (unable to attend). This initiative will be called Project Nemos (new model scholarship) and will be governed by representatives of the charter institutions.

Project Nemos has the following goals:
1. Create a series of summer institutes to seed and enhance digital scholarship
2. Build a multi-institutional structure to realize economies of scale and expertise in the production of digital scholarship
3. Develop a federated venue for publication of the latest digital history research on a national and international scale

In order to develop projects that seed digital scholarship and provide expertise and training to tenure-track faculty and graduate students, Project Nemos will hold a series of rotating summer institutes, to begin at the University of Virginia in summer 2006. Each institute will focus upon a specific area of scholarship and a core digital project(s) that will serve as a model teaching tool(s) and expert domains for the institute. The areas and projects will be as follows:
Institute 1:
Global Studies: Jamestown in the Atlantic World
Virtual Jamestown/Geography of Slavery/Valley of the Shadow
Virginia Center for Digital History, University of Virginia, Charlottesville, 2006
Institute 2:
Religion Studies: Religion in the Atlantic World
Religious Atlas of the U.S.
The Polis Center, Indiana University, Indianapolis, 2007
Institute 3:
Science and Technology Studies: Railroads and the Roots of Modern America
Aurora
Nebraska Humanities Center, University of Nebraska, Lincoln, 2008

In Project Nemos, we hope to launch a national initiative for developing digital history as new model scholarship.

Appendix 1: Timeline of Jamestown Planning Grant

27 September 2002: Award of $219,000 to Virginia Polytechnic Institute and State University for a virtual collection of scholarly resources for the study of the history of Jamestown

18 October 2002: First Stakeholders' Advisory Board Meeting, Charlottesville, VA

(William Obrochta, Virginia Historical Society; Kip Campbell, Library of Virginia; Andrew Chancey, Virginia Foundation for the Humanities; Crandall Shifflett, Project Director; William G. Thomas, III, Director, Virginia Center for Digital History; and Kimberly Tryka, Digital Archivist and Associate Director, Virginia Center for Digital History). What's been funded? Goals? Recommendations for additional board members?

16 January 2003: Carole Schmidt, former Deputy Director, Pew Partnership for Civic Change, hired as Mellon Jamestown Consultant. She participated in all advisory board meetings below.

12 February 2003: Presentation by Crandall Shifflett to nine conferees at Library of Congress Conference, "Seascapes, Littoral Cultures, and Trans-Oceanic Exchanges," Washington, D.C. Planning session and discussion of how Web sites can facilitate the research, scholarship, and teaching interests of Atlantic World scholars. Where do you go for online resources? What do you need to do your scholarship and teaching? Do you use online resources? Attending the presentation were:

James Armstrong, Library of Congress, Overseas Division
Alan Gregor Copley, University of the West Indies, Bridgetown, Barbados
Jennifer Gaynor, ABD, University of Michigan
Linda Heywood, Howard University, Washington, D.C.
Alan Karras, University of California, Berkeley
John McNeil, Georgetown University
Gifford Prosser, Library of Congress
Carole Schmidt, Project Consultant
John Thornton, Boston College
Kim Tryka, Project Digital Archivist
Kerry Ward, Rice University
Larry Yarak, Texas A&M

20 February 2003: Advisory Board Meeting, Charlottesville, VA. Shifflett report on Library of Congress Conference; Shifflett report on planned Census of Electronic Resources; William Kelso report on "James Cittie and Beyond" and plans for 26 site survey. James Horn, Director, Rockefeller Library, and David Peacock, Director, Virtual Norfolk, joined the board. William Thomas was named Chairman of Advisory Board.

29 April 2003: Presentation by Crandall Shifflett and William Kelso, New York University to class of Professor Karen Kupperman on plans for the project

30 May 2003: Advisory Board Meeting, Richmond, Virginia. Board members present were Kip Campbell, Library of Virginia; James Horn, Director, John D. Rockefeller Library, Colonial Williamsburg Foundation; William Kelso, Chief Archaeologist, Association for the Preservation of Virginia Antiquities; David Peacock, Director, Virtual Norfolk, University of East Anglia; Julie Richter, Research Historian, Colonial Williamsburg Foundation; Carole Schmidt, Project Consultant; Crandall Shifflett, Project Director; William G. Thomas, Director, Virginia Center for Digital History; and Andrew Veech, archaeologist (for Karen Rehm, Chief Historian, Colonial National Historical Park, Jamestown). Suggestions were made to add Joseph Miller, T. Cary Johnson, Jr. Professor of History, University of Virginia; and Karen Kupperman, Professor of History, New York University; Nicholas Canny, Chair, Department of History, and Director of the Centre for Human Settlement and Historical Change, National University of Ireland, Galway; Ronald Hoffman, Professor of History and Director of the Omohundro Institute of Early American History and Culture; and Jane Landers, Associate Dean, College of Arts & Science, Associate Professor of History, Vanderbilt University. Shifflett explained the three important final products required by the grant: 1. a census of digital collections; 2. a sweeping survey of 26 archaeological sites and a database of their holdings; and 3. a strategic plan for collaboration, production, governance and use of a future Web site. Thomas led discussion on "what will be the defining rationale for the future strategic plan?" "Visualization of Lost Atlantic World Landscapes" was discussed extensively as the bases for future production. Landscapes suggested included Jamestown, an African village, an Algonquian village, an English parish, a Virginia plantation, St. Augustine, a West Indies port, and others in South America, Canada, Brazil, Spain, and the Netherlands. Discussion called for a scalable model to visualize lost landscapes.

14 July 2003: Presentation to invited participants, summer research seminar for community college faculty at Library of Congress, Washington, D.C. Attended by 14 participants. Shifflett presented overview of Virtual Jamestown, plans under Mellon Planning Grant, and opened discussion on question of how the application of technology in history might enhance research and teaching of Atlantic World Studies. Participants were eager to use anything for teaching purposes but seemed uncertain as to how technology and Internet could enhance their research. Some expressed unease at using technology in the classroom. Attendees were:

Dr. Jerry Bentley, University of Hawaii
Dr. Anna Blume, Fashion Institute of Technology/SUNY
Dr. Wilson Crone, Hudson Valley Community College
Dr. Jim Davis, Mt. San Jacinto
Dr. Karen Kupperman, NYU and Mellon Jamestown Advisory Board
Dr. Harry Phillips, Central Piedmont Community College
Ms. Debbie Roberts, Yavapai Community College
Ms. Fatima Rodriguez, Reedley College
Dr. Neela Saxena, Nassau Community College
Ms. Carole Schmidt, Mellon Jamestown Consultant
Ms. Barbara Shifflett, Radford High School
Dr. George Sussman, LaGuardia Community College, CUNY
Ms. Naomi Thompson, Rich Mountain Community College

Dr. Rita Wirkala, Shoreline Community College

14 October 2003: Presentations by Crandall Shifflett, Project Director, William G. Thomas, III, Director, Virginia Center for Digital History; William Kelso, Chief Archaeologist, Jamestown Rediscovery™, Association for the Preservation of Virginia Antiquities; and Earl Mark, Associate Professor of Architecture, University of Virginia. Oxford Workshop on Digital History, Oxford University, England. Planned workshop at the University of East Anglia had to be cancelled due to elimination of position of David Peacock, the director.

22-23 October 2003: Advisory Board Retreat, Williamsburg, VA. Areas of focus were research, governance, and publication. Shifflett, "Update and Overview of Jamestown and the Atlantic World, 1550-1700;" discussions on identifying research roles and mapping research assets; small group discussions on identifying governance issues and concerns; working lunch on "prioritizing research plans and determining resource needs;" next steps. Attending the retreat were Kip Campbell, Library of Virginia; Andrew Chancey, Virginia Foundation for the Humanities; Richard Holway, University of Virginia Press (by invitation); James Horn, Rockefeller Library; William Kelso, Jamestown Rediscovery™; Karen Kupperman, New York University; Jane Landers, Vanderbilt University; Annaleigh Margey (graduate student representing Nicholas Canny, Chair, Department of History, University of Ireland at Galway); Joseph Miller, University of Virginia; Karen Rehm, National Park Service; Carole Schmidt, Project Consultant; William Thomas, Virginia Center for Digital History, and Chair Mellon Jamestown Advisory Board

27 October 2003: Midyear report, Andrew W. Mellon Foundation by Crandall Shifflett

3 March 2004: Planning Grant extension approved to November 30, 2005 with final report due December 31, 2005

4 March 2004: "Session 3: Recapturing Lost Landscapes of the Emerging Atlantic World," Conference on The Atlantic World and Virginia, 1550-1624, Williamsburg, VA. Presentations by William Thomas, William Kelso, and Crandall Shifflett on Mellon Jamestown Project.

13 April 2004: "Jamestown and the Atlantic World," invited lecture, CLIR (Council on Library and Information Resources) Symposium, Brookings Institute, Washington, D.C.

23 July 2004: Meeting Charlottesville, VA. with David Seaman, Director, Digital Library Federation, Barrie Howard, Administrative Assistant, Digital Library Federation, Carole Schmidt, Project Consultant, and William Thomas, Director, Virginia Center for Digital History on potential collaboration between DLF and Virtual Jamestown. David Seaman presented our proposal (see Appendix 6) at the next board meeting of DLF which declined to collaborate with a single project.

8 October 2004: Advisory Board Meeting, Richmond, VA. Shifflett presented summary of what had been accomplished to date and what we learned in the planning process. Thomas led discussion on "What we have accomplished," "what we propose to do," and "what we need further advice on." Roy Ritchie, Director, Huntington Library; Ronald Hoffman, Director, Omohundro Institute of Early American History and Culture; and Warren Billings, Distinguished

Professor and Chairman, Department of History, University of New Orleans, joined the board for this meeting. In addition, members present included James Horn, Kip Campbell, William Kelso, Karen Kupperman, Joseph Miller, Karen Rehm, and William Thomas. The Board was unable to gets it mind around a digital archive or the suggestion to seek an electronic imprint press for the project. Instead, the Board recommended that the project director pursue the idea of a Dutch Colonial Records Project, similar to the Virginia Colonial Records Project in 1957.

Appendix 2: Advisory Board Members

The Mellon Jamestown Advisory Board changed in composition over the course of the project. Some invited members never participated such as Tom Davidson, Jamestown-Yorktown Foundation and Philip Morgan, Johns-Hopkins University. Others like Charles Bryan Jr., Virginia Historical Society, and Andrew Chancey, Virginia Foundation for the Humanities came to initial meetings only. David Peacock, Director *Virtual Norfolk*, University of East Anglia, had his position at the university eliminated. Late but enthusiastic additions included Ronald Hoffman, Director, Omohundro Institute of Early American History and Culture; Roy Richie, Director, the Huntington Library; Nicholas Canny, Chair, Department of History and Director of the Centre for the Study of Human Settlement and Historical Change at National University of Ireland, Galway; and Warren Billings, Distinguished Professor and Historian of the Supreme Court of Louisiana, University of New Orleans.   Notable contributions came from Will Thomas who served as Chairman of the Board, Kip Campbell, James Horn, Karen Kupperman, and Joseph Miller.

Warren Billings, Distinguished Professor and Historian of the Supreme Court of Louisiana, University of New Orleans

Charles Bryan, President and Chief Executive Officer, Virginia Historical Society

Edward Campbell, Director, Collections Management Service, Library of Virginia

Nicholas Canny, Chair, Department of History and Director of the Centre for the Study of Human Settlement and Historical Change at National University of Ireland, Galway

Andrew Chancey, Associate Director, Virginia Foundation for the Humanities and Public Policy

James Horn, Director, John D. Rockefeller Library, Colonial Williamsburg Foundation.

William Kelso, Chief Archaeologist, Association for the Preservation of Virginia Antiquities

Karen Kupperman, Professor of History, New York University.

Jane Landers, Associate Professor of History and Associate Dean of the College of Arts and Sciences, Vanderbilt University

Joseph Miller, T. Cary Johnson, Jr. Professor of History, University of Virginia

Dave Peacock, Director, Virtual Norfolk, University of East Anglia

Karen Rehm, Chief Historian, Colonial National Historical Park

Crandall Shifflett, Executive Director, and Professor of History, Virginia Tech

William Thomas, Director, Virginia Center for Digital History, and Associate Professor of History, University of Virginia

Appendix 3: Jamestown Census of Online Resources in Atlantic World Studies

(http://jefferson.village.virginia.edu/vcdh/jamestown/awresources/)

Overview

We have created a database of Web-based resources relating to sixteenth- and seventeenth-century European colonization of the Atlantic World. These resources include primary documents such as travel accounts, promotional literature, missionaries' accounts, legislation, maps, and other images, as well as modern reports of archaeological research on Atlantic World sites. Our initial focus was the English settlement at Jamestown, but the project grew to include a preliminary survey of documents relating to other European settlements, including those established by the Spanish, French, and Portuguese, around the Atlantic rim.

Searchable Database

The database currently includes 105 records. They were located using a variety of World Wide Web search engines to search both by general keyword, for example "Jamestown," and by the names of specific individuals or texts, such as "Raleigh." Our intent was to include only those websites that appeared reputable and likely to persist over time. Some exceptions to the persistence criterion were made in cases where websites established by university faculty, for a specific class, contained texts not readily available elsewhere Each of these exceptional sites is flagged internally to alert future database managers of the need to check these sites regularly and confirm that they still exist. We did not include resources that were only derivative of other sites in the survey (for example, we would not include a college-level syllabus that merely linked to the *Virtual Jamestown* site). Although we were unsure whether we would include sites in the ".com" domain, we decided that there were a number of important resources available only through these websites. In cases where access is limited to subscribers, we have included that information in the annotation (which will be discussed further below).

The URLs listed in the database direct users to the main webpage of relevant projects although in some cases, where we located resources that might not be easy to locate from a project's main page, we included links that would take the user directly to a particular location within a site.

To assist in the search process, we tagged each entry with relevant keywords. We began our keyword list in consultation with Karen Marshall, a subject librarian at the University of Virginia Library, basing the list on her work with the Mellon-funded American Studies Database at the University of Virginia (UVA) (http://infocomm.lib.virginia.edu/cgi-info/dbbrowse). That work was continued with the help of Gary Treadway, also a subject librarian at UVA. We added, and removed, keywords from the American Studies list to target themes unique to Atlantic World texts. Such new keywords include "piracy" and "tobacco" as well as a number of references to countries involved in colonization such as "The Netherlands" and "France." This list of keywords is available as a drop-down menu to database users.

Prominent People and Places

Additionally we decided that it would be helpful to users to have a separate searchable list of prominent persons associated with this era who are referred to in these resources. To aid this we created a separate keyword field for personal names so that each person would be referred to in a standardized manner. Feeling that geography was also an important consideration we similarly added a field for place names in the database. The lists of personal names and geographic names are available as drop-down menus to users of the database.

Due to the international and multilingual nature of the census, we have included a field designating the language, or languages, in which the resources on each site appear. Again, this list of languages is made available as a drop-down menu.

Annotations

Most importantly, we have annotated each of the database entries so that users have some idea of what type of materials to expect when they visit the listed web-site. We hope that this annotation will help people determine whether a particular site has resources that they are seeking, and will help reduce the frustration of having to visit many locations which seem to promise the information that is sought, but which do not contain the information. The database search includes an option that allows users to perform a full-text search on the annotation attached to each entry.

As scholars and students use the site and more teaching and research institutions digitize their projects and collections, we plan to update the list of sites to be included in Atlantic World Studies, to make it an ever more powerful research tool.

Keywords

African Americans	Indentured Servants
Agriculture	James II
Archaeology	Jamestown celebrations
Architecture	John Rolfe
Bacon's Rebellion	Captain John Smith
Charles I	Journals
Charles II	Labor and Class
Commerce	Law
Lord De La Warr	Letters
Diaries	Maps
Environment	Military
Exploration	Native Americans
Food	The Netherlands
France	Piracy
Geography and Landscape	Pocahontas
Georgia	Powhatan
Government	Public Records
Historiography	Religion
Immigration	Settlement Patterns

Slavery
Spain
Thomas West
Tobacco
Trade

Virginia Company
William Berkeley
Williamsburg
Women

Personal Names

Alvar Nunez
Cabeza de Vaca
Jesuits
Richard Hakluyt
Sir Walter Raleigh
Christopher Columbus
Thomas Hariot
Sir Francis Drake
Sir Edwin Sandys
Captain John Smith
Inca
Garcilaso de las Vegas
James I
John Rolfe
Samuel Argyll
Nathaniel Bacon
Thomas West
Lord de la Warr
Robert Beverley
John Cabot
King Ferdinand
Queen Isabella
Iroquois
Ralph Lane
John White
Sir Humphrey Gilbert
Elizabeth I
Samuel de Champlain
Henry Hudson
George Calvert
Lord Baltimore
Charles I
Sir David Kirke
Sir Edmund Andros
William Penn
William Bradford

Gottlieb Mittleberger
Arawak
Taino
Battista Agnese
Diego Gutierrez
Joan Blaeu
Alexis Hubert Jaillot
Johann Homann
Pocahontas
Thomas Sully
William Sheppard
Theodor De Bry
Phillip II
Pedro Menendez de Aviles
Powhatan
Charles II
James II
John Winthrop
Thomas Dudley
Phineas Pratt
Reverend Francis Higginson
Captain Roger Clapp

Locations

Caribbean	New Jersey
Barbados	New Netherlands
Bermuda	New York
England	North Carolina
France	Roanoke
The Netherlands	Pennsylvania
Portugal	Rhode Island
Spain	South Carolina
North America	Virginia
New England	Canada
Connecticut	Labrador
Florida	Newfoundland
St. Augustine	Central America
Georgia	Argentina
Maine	Bolivia
Maryland	Chile
Massachusetts	Mexico
Cambridge	Panama
Plymouth	Peru
Salem	Venezuela
New Hampshire	

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Appendix 4: Data Audit for the Jamestown and the Atlantic World Proposal Preparation Process

Big Picture
The proposal and business plan for Jamestown and the Atlantic World ideally should articulate a vision which moves the concept of Virtual Jamestown from that primarily of a web site to that of an international, multi-faceted research initiative. The proposal process is an opportunity to demonstrate that Virtual Jamestown is:

- a significant contribution to the field of seventeenth-century history, Atlantic World studies and the legacy of Jamestown in the history of the United States.
- a pioneering model of collaboration between research institutions, individual scholars and isolated disciplines.
- a state-of-the-art demonstration project wedding cutting-edge digital technology to rigorous historical methodologies.
- the product of a deliberative analysis of market niche, target audience, marketing strategies, sustainable funding and operational structure.

The planning activities to date have been enormously fruitful for moving toward these ambitious goals. This data audit focuses on the information that will strengthen the proposal by demonstrating that the project design has emerged from a thorough analysis of market niche, target audience, dissemination strategies, sustainable funding and operational structure. While much of this information may be intuitive to you, it is important to demonstrate that the project design is the result of deliberative study. My sense is that a graduate student familiar with Atlantic World scholarship could efficiently collect most of the raw data for the lists discussed below. This data could then provide a matrix against which potential concepts for project content are evaluated. This accurate and detailed information, when synthesized with flair into a comprehensive proposal, will in turn, create a substantive situational analysis and convincing business plan.

Data Audit

All aspects of the proposal—from the scholarly contribution to the nuts-and-bolts business aspects—demand specific data for: 1) establishing the universe of the study; 2) analyzing the market niche of the program; and 3) identifying target audiences.

Establishing the Universe of the Study
If the proposal is going to move Virtual Jamestown from the concept of "web site" to the concept of "international research initiative," it needs to demonstrate a deliberative analysis of analogous organizations and/or competitors in the field. I recommend developing an annotated list of approximately ten to twenty interdisciplinary history research centers evaluated by the following criteria:

- extent of institutional and interdisciplinary collaboration
- excellence of and exploitation of digital technology
- commitment to dissemination of research and teaching (as evidenced by, for example, conferences held, fellowships awarded, curricular tools developed, etc.)

The purpose of this annotated list, of course, is to make a case for Virtual Jamestown and the Virginia Center for Digital History as outstanding in each of these criteria where other prestigious research centers fall short. For example, if the project were still exploring the possibility of a slavery focus, it could include the The Gilder Lehrman Center for the Study of Slavery, Resistance, and Abolition at the Yale Center for International and Area Studies in this list. While this center is a helpful resource for the interdisciplinary investigation of slavery in the Atlantic World, it includes no digital resources and thus fails to offer the scholar access to new primary documents. While embracing national and international aspirations, the center, in reality, is primarily as resource for Yale students.

This list also might include some international centers, such as the Institute of Historical Research at the University of London to demonstrate the global reach of the project. In sum, the analysis of this data could demonstrate the unique assets that Virtual Jamestown marshals by combining the best of traditional academic research activities with cutting-edge, cost-effective digital technology and "virtual" convening of scholars.

Second, the universe of the study should include a brief annotated listing of the major initiatives exploring digital approaches to study of the humanities. My sense is that many of these initiatives, such as those at the Library of Congress, are scholarly endeavors without the day-to-day engagement with undergraduate and graduate education that the Virginia Center for Digital History offers. Also, I imagine that the digital architectural reconstructions which Earl has created with Association for the Preservation for Virginia Antiquities data are phenomenally innovative compared with the activities of these centers. This section, therefore, will demonstrate the unique partnership of Virtual Jamestown with the Virginia Center for Digital History and all that it promises: an educational institution that is setting the standard for digital protocols and methodological rigor while educating the next generation of scholars.

Finally, the universe of the study needs to develop an annotated list of the top ten or so research initiatives investigating Jamestown and the Atlantic World. The aim of this list, in part, is to resemble a "Who's Who" of the Virtual Jamestown Advisory Board. This section can demonstrate that virtually all of the major players in Jamestown and seventeenth-century scholarship are involved in the Virtual Jamestown collaboration.

The analysis of this raw data: interdisciplinary research centers, digital humanities initiatives and Jamestown/Atlantic World scholarship in turn creates a matrix against which the evolving plans for site content and focus can be evaluated. What angle is both

most unique, considering the other "players" and most needed, considering the priorities and interests of current scholarship?

This data will form the basis for a strong "Situational Analysis" demonstrating that the plan is the fruit of nuts-and-bolts data gathering, deliberative study and pioneering scholarship. From this study of existing programs, a multi-dimensional initiative, building a national and international presence through conferences, fellowships, and publications can be crafted.

Target Audience
The next step to moving the needle of the program concept from that of a web site to that of a comprehensive initiative is to identify target audiences, which are the building blocks of a sophisticated marketing and dissemination strategy. This data is crucial to designing effective marketing and dissemination strategies for the products of the program, such as specific digital collections, fellowships, conferences, curricula, publications, etc.

I recommend first developing a list of the professional associations of scholars whose research the digital archives have the potential to transform. This list should be ambitious and interdisciplinary, but not verging on the impossibly infinite. Developing a target audience demands discipline. The temptation, in the heat of the moment, is to identify everybody and his brother. After all, what scholar at all involved in interdisciplinary historical research wouldn't be interested in such phenomenal resources! The trouble with this approach is that identification of audiences quickly becomes meaningless if the market segment identified is so large that it mocks the staffing and resource allocations that the project can realistically devote to dissemination efforts. A more constructive approach is to prioritize which audiences are crucial to the project in its early stages and concentrate marketing efforts there, while at the same time planning a comprehensive, long-term strategy that identifies expanding circles of "Phase II" and "Phase III" audiences as the project matures.

For the first phase of the project, an audience identification strategy that reinforces the interdisciplinary and global thrust of the collaboration will enhance the business plan. I recommend identifying the professional associations of the three to seven academic professional groups most directly connected with the research and approach that Virtual Jamestown is promoting. I suggest starting by identifying specific subsets of historians and archeologists whose research focuses on Atlantic World studies, seventeenth-century history, interdisciplinary approaches, and "technology-and-the-humanities" (or whatever the current buzz words are for that beat). The other primary target audience to investigate would be academic librarians. (Kim Tryka, no doubt, would be an excellent resource on Who's Who in the library circles most engaged in scholarly digital archives.)

Once the professional associations are identified, the following information would be helpful to flesh out specifics of a marketing and dissemination strategy:

- publications and other communication vehicles of the professional association, including web sites, journals, newsletters, and member directories. Information about their frequency of publication and means of dissemination (print and/or online) would also be helpful.
- conference topics and dates throughout 2004-07.
- fellowships that might compete with or complement those to be offered by Virtual Jamestown.
- scholarly and curricular products that might compete with or complement those to be offered by Virtual Jamestown. (Of course these will overlap with the first bullet point, "publications". But what I'm thinking about here are specific "how-to" instructional products, such as curricula, that the association might have developed and be marketing.)

It is important that the list include some professional associations of international colleagues in England, Africa, or other parts of the Atlantic World to which site content is dedicated. This communicates the global scope of the initiative and the innovative collaboration made possible by its technological sophistication. In addition, any leading scholarly journals in the field that may not be affiliated with a specific professional association should be included. These specifics, in turn, form the building blocks for a detailed marketing and dissemination plan.

Finally, the marketing plan could include an "A list" of ten to fifteen trade publications, which are not associated with any particular professional association, and select university presses, which would be vehicles for reaching the target audience and generating wider interest in the project. For example, the Times Literary Supplement, New York Review of Books and the Smithsonian Magazine would be excellent sources for disseminating research and raising the profile of the project. A potential collaboration with the University of Virginia Press (or other academic "print" publisher) would help make the case for an initiative that reaches out to include and transform traditional organs of academic dissemination.

Business Funding and Sustainability
A diverse funding model for a research initiative housed at a major university would include the following sources:

- private and corporate foundations;
- individual donors;
- federal and state support, such as NEH, DOE grants;
- in-kind support from the host institution, including infrastructure, administrative support, and staffing/benefit allocations;
- income sources, such as technical assistance and subscription fees.

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I would like to explore with you and Will Thomas the possibility of technical assistance, fee-for-service activities to generate *program* (as opposed to personal) revenue within the university structure. A number of nonprofit organizations with which I have worked have basically set up a consulting shop whereby they generate revenue for their programs through technical assistance. For example, the executive director of a remarkable rural community and economic development program found herself continually stretched to the limits by invitations to visit other communities and share her revitalization strategies. Developing a fee-for-service consulting arm of the project has enabled that nonprofit organization to generate revenue for itself. As a funding source, it does double duty: as well as providing actual dollars, the technical assistance income is a fantastic leveraging point demonstrating to funders the entrepreneurial savvy and effective program strategies of the organization.

In other university disciplines (architecture, business, law, etc.), fee-for-service consulting is par for the course. Why not digital history? Why should VCDH always give away its expertise for free? I think that this question is an important one to raise in that it exposes a contradiction at the intersection of the "open access" and the "venture philanthropy" movements. On one hand, "open access" leaders deplore any barriers whatsoever to information access, be it technological, financial, institutional. On the other hand, venture philanthropists exhort nonprofit and academic organizations to be more business-like, develop sustainable funding sources, and generate revenue. Well-- it's difficult to have it both ways. Being business-like includes a rigorous accounting for all project assets, including putting a dollar value on human resources and individual expertise. How might VCDH "spin off" a consulting branch whereby it fund program activities through fee-for-service technical assistance?

If you would like to pursue this revenue-generation strategy, some areas for further research would be:
- Demonstrating the market demand for VCDH technical assistance by documenting all the ad hoc technical assistance VCDH (and its program partners at APVA and Virtual Jamestown), have been providing through conference presentations, institutional networking, peer discussions, etc.
- Exploring the organizational and governance structures for creating a consulting entity that would generate program income within the University of Virginia bureaucracy.
- Estimating the amount of funding such consulting could realistically generate.

Another possible source for revenue is subscription fees. The identification of primary audiences, especially academic librarians, will provide data to help demonstrate the institutional demand for the products and services that Virtual Jamestown will be offering and therefore what kind of revenue could be generated from possible library subscription fees. I will research the pricing structure of subscriptions to online databases, such as those in the UVA "Virgo" system. Are there other institutions besides academic libraries

that are possible subscribers to these types of digital archives? Once potential institutional subscribers have been identified, I can research how decisions are made and resources allocated within specific institutions and use this information to design a model for client outreach and subscription marketing.

While it is unrealistic to think that this sort of initiative will be entirely self-sustaining financially, the inclusion of entrepreneurial revenue-generation strategies in the business plan demonstrates the fiscal ingenuity necessary to sustain a project in lean times. Foundations like to think that they are funding something new and encouraging innovation among nonprofit institutions. Some creative revenue-generation strategies could be excellent selling points for leveraging additional funding, aside from the actual dollars they earn.

Governance, editorial, and copyright issues
The planning process has made great headway in these areas. It has developed a governance structure, bylaws, and fair use agreements. Once the research emphasis is refined further, it would be appropriate to revisit governance structures and develop more specific editorial policies for vetting research priorities and projects.

Technical Considerations and Production Platform
Finally, the model business plan for the open access journal devoted a section to technology considerations and production platform (Chapter 7, pp. 19-21). Clearly, VCDH has a great deal of expertise about these issues. It would definitely enhance the planning efforts for someone with this expertise, such as Kim Tryka, to review this section of the model plan with an eye for any data needed to adapt it to the Virtual Jamestown proposal.

Summary
This information audit has identified specific data needs to determine the market niche, target audience, and sustainable funding models for the Virtual Jamestown proposal. The collection and analysis of this data lay the foundation for a strong proposal and comprehensive business plan based on deliberate study and convincing evidence of market viability.

Appendix 5: File Structures and Jamestown Rediscovery® Technical Details

Overview XML file

The module is driven by an XML files called overview. This file drives the navigation of the site, shows what resources are available for review and dictates the subsequent XML files that are used for display. Each node contains sub-nodes indicating the elements that lie within it. Excavation units and artifacts are represented by a single element for ease of display.

Nodes contains three attributes: the first shows what displays on the tree view for this element, the second (movie) sets the name of the Flash movie and features XML files to be used. The last (res) sets the name of the resource XML file.

Example: <node label="Buck" movie="Buck" res="Buck"/>

Features XML file

The first node contains an initial attribute (mclass) that sets whether a Flash animation or an image is to be displayed. The first child node gives the field labels for the display.

Example:
<Features mclass="item">
   <cell>
<Data >Site</Data>
<Data >Dates</Data>
   <Data >Overview</Data>
   <Data >History</Data>
   </cell>
</Feature>

The first node in the XML file contains the field labels so, while the number of elements must remain the same the labels on the screen can vary. Site and data are fixed display length fields while both overview and history populate scrolling text fields.

Most of the source information is currently in a propriety database system called Re:discovery Software. It is developed using Microsoft Visual FoxPro. Though its Import/Export tool a template has been created to select certain fields and

exported them to ASCII and (via Excel) to XML. This is done in multiple screens (or forms) as the information is kept in multiple files.

Sites Database (sites.dbf database file in the Re:discovery Software system) for information on the Chesapeake sites.
Master Context (master.dbf database file in the Re:discovery Software system) for information on buildings, structures and other 'macro' features. This file, however, does not currently support multiple hierarchies, and not all 'features' are cataloged in this system. Currently therefore the XML file will have to be manually created.
Context Database (context.dbf database file in the Re:discovery Software system) for excavation units including post holes).
Artifact Database (artifact.dbf database file in the Re:discovery Software system) for individual objects.

The underlying database files contains more information was used for the resultant XML file.

Resources XML file and underlying database.

Again the first child node gives the field labels for the display. The value of the on-line field determines whether location is presented as and active link (URL) or as a physical location.

Nodes	
Title	Short resource identifier
Identifier	Unique identifier
Description	Long description
Type	Resource Type
Type Designator	The physical or digital manifestation of the resource.
Format	Format of resource
Size	Size indicated the size of electronic resources (for downloading)
On-line	Whether resource is available on-line (Yes/No)
Location	URL or physical location

The resources were also cataloged in Re:discovery software. The fields were established based around standard Dublin Core and again exported from the software to a delimited ASCII file before creating an XML file.

Appendix 6: Building and Distributing Resources in Atlantic World Studies

A Proposal for Collaboration
Digital Library Federation and Virtual Jamestown

Summary

The Virtual Jamestown project is interested in pursuing a partnership with the Digital Library Federation. Under a planning grant from the Andrew W. Mellon Foundation, the project has created a database of online resources in Atlantic World Studies. Some of these collections are still being developed, such as the John Carter Brown Library Archive of Early American Images, many are already online. Some are online text databases, like the National Library of Canada, and others allow searches for maps of early Virginia, such as the Beinecke Rare Book and Manuscript Library at Yale University. Still others, such as the University of Kansas, AMDOCS: Documents for the Study of American History, serve as a portal to significant digitized documents: Columbus's journals; the Constitution of the Iroquois Nations; Richard Hakluyt, Ralph Lane, Thomas Hariot and John White from the Roanoke colony; links to early Virginia legislation; and other British colonial documents.

The Virtual Jamestown census of online collections found about 110 online sites with resources on Atlantic World Studies. We created a search engine to permit searches by keyword, place, people, site name, and by any word entered into the annotation category. The Atlantic World online resources database already includes at least four member institutions of DLF. In addition, some non-member institutions, such as the John Carter Brown Library, Huntington Library, and the British Museum with whom Virtual Jamestown has collaborated might also be brought into the DLF consortium. It just makes sense for Virtual Jamestown to build upon this database to include Atlantic World resources at DLF institutions and to include the capability of harvesting all the resources for those related to Jamestown.

A partnership with DLF would be a great asset in creating an Atlantic Studies Digital Archive (ASDA). Such an archive would have enormous impact on scholarship because it would permit scholars, especially in fields of Spanish, Dutch, Portuguese, English, and French history, access to a documentary, cartographical, archaeological, and visual/graphical database of immense value to global and comparative history. The ASDA would emancipate Jamestown studies from the narrow Virginia history focus to which it has been held captive and move it into the transatlantic world context where it was born, allowing scholars to assay Jamestown's significance and place in American and world history.

Common Pursuits

I see three areas where we have common pursuits:

- collections building
- tools development
- shared access to collections

Collections Building

The combined resources of DLF member institutions, Virtual Jamestown, and the Virginia Center for Digital History would collaborate in the building of an Atlantic Studies Digital Archive, pooling the vaults of content from member institutions of DLF and the existing Jamestown database of online resources into a large databank. The archive might then serve as a laboratory for developing common tools to harvest online collections and distribute the content according to guidelines and procedures mutually agreeable to all parties involved. Instead of just a few online collections now available through the Virtual Jamestown database, the DLF partnership could pull together under one umbrella the major corpus of material on Atlantic Studies from archives around the world.

Tools Development

DLF could take the lead in asking content providers to conduct a census of materials important to Atlantic Studies to be made available that are already digitized or those that institutions need assistance in bringing online. DLF would be the lead institution in brokering exchanges of existing datasets. The Virginia Center for Digital History, DLF, and specialists on the Virtual Jamestown project would work together to assemble the archive and experiment with tools development and infrastructure work. DLF could also broker the assembly of grabable content into a federated tool that might exploit it or make it behave in ways researchers and teachers require for their work. Tools might be developed in collaboration with the providers who have already experimented with strategies to exploit their own collections with in-house tools that have potential for broader application, such as for example the "Scholar's Box" at the University of California, Berkeley. Another example is the CHART database that the Virginia Center for Digital History has created to facilitate the work of researchers interested in digitizing their material for the classroom or electronic publication. Scholars and teachers need a toolbox for exploiting content with features commonly recognized as essential but rarely integrated into a seamless ware for data manipulation and exploitation. The Atlantic Studies Digital Archive toolkit would provide the tools for such tasks as:

- searching
- note-taking
- creating databases for texts
- image manipulation
- map generation
- text annotation

Funders are far more likely to support tools development generously if they understand that the benefactors include all the major research libraries in the nation, instead of just those in Jamestown studies. A partnership in tools development would provide technical support to scores of scholars otherwise limited to the meager digital resources of their own institutions.

Enhanced Access

Once the Atlantic Studies Digital Archive is complete and tools for its use have been developed, all academic libraries who are content providers would share the distributed content with faculty and students at their respective institutions. There is nothing comparable to this kind of archive in the humanities. Imagine being able to send students to documents, maps, or images on population diasporas, indigenous-settler relations, the international slave trade, disease epidemics, or trade and consumerism where comparisons can be drawn, for example, from Africa, Canada, or South America under French, Dutch, Spanish, or Portuguese hegemony. Virtual Jamestown aspires to such universality and comparability, but could never achieve it on the scale that would be possible via a DLF partnership.

Contributions

Both Virtual Jamestown and DLF have developed funding sources, licensing agreements, and advisory boards of scholars and archivists. Again, it would make sense to combine these efforts and build upon the experience in grant writing, licensing, and governance.

Funding

Virtual Jamestown is already committed to a funding proposal that will include as key features support for collections building, technical assistance, and fellowship support on Jamestown and the Atlantic World. Potential funders include the Andrew W. Mellon Foundation, National Science Foundation, and the Institute of Museum and Library Services. As part of the proposal, Virtual Jamestown has raised donor funds of $50,000 to leverage its proposal to collaborate with teams of scholars in building electronic archives.

Licensing Agreement and Governance

A management consultant for Virtual Jamestown has made substantial progress in reaching consensus on issues of intellectual property and governance. In addition, the DLF has a model licensing agreement that could be extended to all institutions under this collaboration. An advisory board of prominent national and international scholars, digital archivists, and a management consultant meets four times a year to advise the project director, Dr Crandall Shifflett, Professor of History at Virginia Tech, and Dr. Will Thomas, Chairman of the Board, Director of the Virginia Center of Digital History and Associate Professor of History at the University of Virginia. We will meet in October to discuss a draft funding proposal and a business plan to maintain the Jamestown archive in perpetuity.

I hope we can talk soon about common goals and how we can combine our joint interests in collections building, tool development, and shared access to digital resources in Atlantic World studies.

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Appendix 7: Proposal for a Dutch Colonial Records Project

Purpose
The purpose of this project is to provide a global and comparative context for research, teaching, and scholarship on the English colony of Jamestown, Virginia, between 1550 and 1700 by focusing upon Anglo-Dutch relations in North America. To this end, we propose to collaborate with the Royal Netherland Institute of Southeast Asian and Caribbean Studies (KITLV), the Institute for Dutch History, and Virginia stakeholders to build a digital research guide for the Internet on current projects, specialists, and organizations and to survey and prepare a digital archive of Dutch records on Colonial North America to be presented through a distributed metadata platform.

Prelude
Between the summer of 1599 and the end of 1605 around 770 Dutch ships sailed to the Venezuelan coast to obtain salt. By the mid sixteenth century Dutch traders dominated the trade in Brazilian sugar exports and in the early seventeenth century established settlements in Surinam, Demerara, Berbice, and Essequibo in northeastern South America. Slaves followed sugar and the Dutch forces captured the town of El Mina on the Gold Coast of Africa in 1637 and took Angola four years later. Dutch forays into North America began in 1609, when Henry Hudson and Dutch merchants sent ships across the Atlantic and up the Hudson River each year to trade for furs with the Indians. By 1614, the Dutch traders established a year-round presence on the upper Hudson with the founding of Fort Nassau (later relocated and renamed Fort Orange). Within ten years the Dutch founded the town of New Amsterdam on Manhattan Island and secured one of the finest harbors on the Atlantic seaboard. With the creation of the Dutch West Indian Company in 1621, populous Dutch settlements arose on the lower Hudson and soon competition between the English and New Netherland ventures led to armed conflict. In 1619 John Rolfe noted the arrival at Jamestown of a Dutch man 'o war bringing "20 and odd Negroes." In the 1640s, ten or more ships each year carried away Virginia tobacco to Amsterdam. In the 1650s and 1660s, the Dutch and English became "violent rivals" in global commerce. English sea captains took the floor in Parliament to proclaim, "the Dutch…refused to sell us a hogshead of water to refresh us at sea, and call us 'English Dogs,' which doth much grieve our English spirits." The English countered with a weapon that would grieve colonial spirits later with Navigation Acts in the 1650s, 1660s, and 1670s, leading to three "wars," fought mostly at sea, culminating in a peace treaty and the renaming of New Amsterdam as the English colony of New York.

Rationale for a Dutch Colonial Records Project (DCRP)
Despite their commercial primacy and mercantile prowess in the transatlantic trade of the seventeenth century, the Dutch record did not form part of the Virginia Colonial Records Project (VCRP) in the 1950s. The VCRP was a special survey to celebrate the 350th anniversary of Jamestown's founding and it created a massive archive, over 950 rolls of microfilmed, initially unindexed, of English records. For 2007, we propose a Dutch Colonial Records Project (DCRP) on the Dutch presence in Colonial North America, especially during the seventeenth century, the years of Jamestown's rise and fall (1607-1699). These were years of substantial and largely ignored interactions between the Dutch and English in Virginia.

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In addition, the DCRP aspires to survey holdings beyond just the record of the Dutch in Virginia.
Indeed Dutch manuscripts, when mined by scholars, promise to shed new and valuable
comparative perspectives on Anglo-Dutch models of colonization, the economic, demographic,
and cultural factors that conditioned choices of trade and settlement, and the consequences for
native peoples, women, labor, and all other migrants to Colonial North America. To see
Jamestown as part of a global quest for empire that included the Dutch, English, Spanish, and
French is to point the way to a better understanding of American history, particularly
Jamestown's role, largely underestimated, in the formation of American society.

Specific Objectives
The DCRP will accomplish three objectives:
•   enhance research, teaching, and scholarship through discovery, identification, and digital
        archiving of metadata on primary source collections
•   apply advanced technologies, not available in the Fifties, to building a digital archive by
        employing the latest tools, techniques, and standards for access, searching, Web
        presentation, and preservation
•   promote digital history, i.e., born-digital work where the technology is integral to the
        infrastructure and efficacious to its presentation

The Virginia Center for Digital History (VCDH) will act initially as a service provider,
identifying and employing tools to harvest metadata from repositories in The Netherlands and the
United States on the Dutch in Colonial America. The archive will include both already exposed
metadata and new metadata created by the survey on textual and physical objects from museums,
archaeological sites, universities, archives, and any other digital repositories. Harvested metadata
will then be annotated by scholars from both sides of the Atlantic and served as a repository to
advance the authoring of digital scholarship. Virginia research libraries will direct the creation of
the archival repository, i.e., the annotated archive. VCDH will promote digital history through
graduate student fellowships, internships, and invitations to submit born-digital work that uses the
DCRP.

Four component features of the digital archive will be surveying, harvesting, annotating, and
validating. Digital tools will be employed for each component based upon the Open Archives
Initiative which has developed an interoperable, scalable protocol for sharing metadata: the OAI-
PMH.

Partner Institutions – International
The DCRP is an immense undertaking that will require collaboration between institutions in the
United States and the Netherlands. Fortunately, a mutual heritage project to survey Dutch records
has been underway for about two years. "The Atlantic World and the Dutch, 1500-2000" is a
project directed by Han Jordaan of the Royal Netherlands Institute of Southeast Asian and
Caribbean Studies to identify and inventory Dutch records, researchers, and archives on the
Dutch colonial presence in the Atlantic. New funding will allow continuation of this project and
include the Institute for Dutch History. The overlapping objectives of the KITLV project and the
DCRP provide an opportunity to collaborate in mutually beneficial ways. The following outline
of KITLV activities, timeline, and objectives will be mapped to a proposed DCRP outline to
illustrate the advantages of collaboration and how the DCRP might contribute to and be aided by
the KITLV initiative.

According to their timetable, The KITLV initiative proposes to accomplish the following tasks:

1. 2005: complete a digital research guide for the Internet on current projects, specialists, and organizations (archives, universities, museums, etc.). The guide will be interactive, allowing for continuous additions, corrections, and updating.
2. 2006: survey and prepare a database of detailed information on records in the Netherlands and elsewhere.
3. Summer 2006: hold a series of local satellite workshops (in Ghana, Guyana, the United States, Suriname, Brazil, Aruba, and the Netherlands Antilles) to survey needs and wishes of individual countries.
4. Fall 2006: conduct an Atlantic conference in the Netherlands to discuss options for a follow-up project.

With these objectives in mind, the DCRP proposes a partnership with the KITLV/Royal Netherlands Institute of Southeast Asian and Caribbean Studies and the Institute for Dutch History on the Dutch in Colonial America, 1600-1700. The DCRP be a two- to three-year project (2006-2009) to:

1. collect and contribute information to the guide on the Dutch in Colonial America
2. acquire funding to launch the DCRP and collaborate with KITLV on the records survey in the Netherlands and the U.S. on the Dutch in Colonial America
3. host a satellite workshop at the Center for Digital History, the University of Virginia, in the summer 2006
4. send representatives to the planned conference in the Netherlands in the Fall of 2006 to make a presentation on the DCRP and plan the next steps

DCRP as an Open Archive Initiative
The DCRP would be an Open Archive Initiative employing the OAI Protocol for metadata harvesting. In the case of already digitized collections, the harvester would pull in the metadata from these collections and all machine-readable records. For records created by the KITLV and Virginia stakeholders' survey, each digital object would be identified in the Dublin Core format. The Center for Digital History at the University of Virginia would be a service provider for the DCRP and would use tools to harvest metadata from repositories in The Netherlands and the United States on the Dutch in Colonial America. All records in the survey would then be annotated by scholars on both sides of the Atlantic and served up by repository providers (Virginia stakeholders). Repositories would provide scholars around the world with annotated primary sources and the digital research guide.

Partner Institutions – Virginia
The DCRP will require strategic partnerships with Virginia stakeholders. The following list of institutions includes colleagues who have long been partners with Virtual Jamestown, a digital archive of teaching and research resources on the founding of Jamestown and its legacies. Under a three-year planning grant from the Andrew W. Mellon Foundation, this project has been served by an Advisory Board of Atlantic World scholars and digital archivists to make future plans for an enlarged archive on Jamestown and the Atlantic World. The Board enthusiastically recommended a Dutch colonial records project as the best way to create a legacy for 2007 and

contribute towards a better understanding of Jamestown and its place in the formation of American society. In my final report to the Mellon Foundation, due in December 2005, I hope to support this proposal and present a plan to carry it out. The support of each of the following stakeholders will be demonstrated by additions to the entries below indicating what each institution will contribute to the DCRP. This draft will be circulated among the stakeholders to edit their descriptions and add their commitments with budgets to support recovery costs. All stakeholders should share in the deliverables of the project.

What you see below is the general description of each Virginia institution as it appears on the Internet. In addition, the VCDH entry includes the commitments of VCDH to the DCRP funding will be sought to cover the costs of pledges of support. For this reason, it would be helpful to have a rough budget of what your institution will need to cover its commitments. Finally, I will need letters of support, contingent upon outside funding to cover all costs, and budgets by 1 September 2005.

•   Virginia Center for Digital History, University of Virginia

The Virginia Center for Digital History (VCDH) is an independent center within the College of Arts and Sciences at the University of Virginia. At its founding VCDH was charged with creating new forms of historical scholarship and with performing public service and outreach. In these roles VCDH is home to a number of digital projects spanning the range of American history, from the Jamestown settlement, to the Civil War, to the Civil Rights movement.

Resources

VCDH will support the DCRP with a project manager, student research interns, grant proposals to cover project costs, technical assistance, conferences, and Web presentation.

Dr. James La Fleur has the kind of credentials we are seeking for Project Manager. He is a lecturer in the Corcoran Department of History at the University of Virginia, where he teaches courses on Africa, the Atlantic Era, and food in World History. He returned to the University of Virginia in 2004 – where he earned undergraduate and graduate degrees (BA 1991, MA 1994, PhD 2003) – after eight years living in the Netherlands. While living there he learned modern and historic forms of the local language, conducted research in European archives and libraries, worked in the Dutch university system (most recently as a visiting lecturer in the Department of African Languages and Cultures at the University of Leiden), and started a bilingual family. In 2000, his critical edition and translation of a Dutch merchant's handwritten logbook was published by the Hakluyt Society as *Pieter van den Broecke's Journal of Voyages to Cape Verde, Guinea and Angola, 1605-1612*. He is currently revising dissertation research on culture and technology in the Afro-Atlantic world for a book manuscript entitled *The Culture of Crops on the Gold Coast (West Africa) from the Earliest Times to circa 1850* and for journal articles on plantains, pellagra, and historical linguistics.

Noah Gelfand, a New York University graduate student, would be an ideal research assistant for the project. He knows Dutch and spent a year in Amsterdam working in the colonial records in the various archives there and in other parts of the Netherlands. He has been an assistant to the Leisler Papers project at Ney York University several times and the project director has indicated that he considers his contribution to be invaluable. He knows Jaap Jacobs and other researchers

in the Netherlands who work on the colonial period extremely well.

Other research assistants who have worked on the Virtual Jamestown project, such as Tom
Goyens, a native Dutch speaker and careful researcher, as well as graduate assistants here at
VCDH would also be available to the project.

VCDH Budget, 2006-2008:

Project Manager -- $40,000/yr x 2	$80,000
Project Director – release time $10,323 x 2	20,646
Programmer/OAI-PMH specialist – ½ time $30,000/yr x 2	60,000
Student Interns – 3 x $6,000/yr x 2	36,000
Web design	2,000
Workshop (2006) for 10 participants (7 domestic, 3 international)	13,000
Travel $10,000 x 2	20,000
Software, telephone, supplies -- $5,000 x 2	10,000
Total	$241,646

- APVA/Jamestown Rediscovery

Jamestown Rediscovery is investigating the remains of 1607-1698 Jamestown on the Association
for the Preservation of Virginia Antiquities property on Jamestown Island, Virginia.

Virtual Jamestown has collaborated closely with JR to integrate history, archaeology, and
technology to tell the story of the Jamestown settlement and show how archaeology and history
inform one another.

- Library of Virginia

The Library of Virginia serves as the library agency of the state, the archival agency of the
Commonwealth, and the reference library at the seat of government.

- John D. Rockefeller, Jr. Library

The opening of the John D. Rockefeller, Jr. Library in April 1997 represented the
culmination of a forty-year-old dream at Colonial Williamsburg: to collect at a single
location all of the foundation's various information resources on the history and culture of
colonial British America, the American Revolution, and the early United States. Through
its specialized collections of books, journals, manuscripts, visual resources, and online
services, together with its fellowships and conference programs, the Library supports and
encourages research in seventeenth- and eighteenth-century colonial British America, the
revolutionary era and early republic, colonial Chesapeake, African American studies, the
decorative arts and material culture through 1830, archaeology, architectural history, and
historical preservation. The Library serves scholars, advanced students, the Foundation's
staff, and the public.

Funding

The DCRP will require substantial funding probably from multiple sources. Stakeholders may
recommend additional funding sources beyond those mentioned here. Grant proposals will

include figures drawn from institutional budgets to cover each institution's costs for the project. The Andrew W. Mellon Foundation would likely be interested in this project. It is a natural follow-up to the Jamestown planning grant. Additional potential sources of support include Verizon which recently contributed $50,000 to the Virtual Jamestown/Jamestown Rediscovery project with an indication of further interest. Private donors who have contributed to Virtual Jamestown will also be solicited. Between $750,000 and $1,000,000 might be a rough estimate of what will be needed to do the survey and build the repository.

Appendix 8: Summary and Report of William G. Thomas, III

UNIVERSITY *of* VIRGINIA
VIRGINIA CENTER *for* DIGITAL HISTORY

June 13, 2005

Mr. Randy Shifflett
Department of History
431 Major Williams
Virginia Tech
Blacksburg, VA 24061

Dear Randy:

I write to summarize and report on the activities of the Virginia Center for Digital History and the Advisory Board for the final report to the Andrew W. Mellon Foundation. You have described in detail the work of the various parts of the project in your final report and I do not wish to repeat those data here. I hope that my perspective is useful to this process and to the work that you will be doing on Jamestown in the future.

As I reflect on the Mellon proposal and your initial ambitions for it, I am impressed with how much was accomplished. Your goals were significant: to make connections between textual and archaeological materials, to build new visual models for scholarship, and to create a sustained collaboration between archaeologists and historians. All sorts of barriers existed to these plans, but in retrospect the social and institutional ones loomed largest. Your progress on this front has been both heartening and exciting. Both VCDH and the Advisory Board played a role in this evolution I think, and I am grateful to have been a participant in this important effort at scholarly communication.

The key change in this planning phase, it seems to me, is in the trust and working relationship you have built with the Association for the Preservation of Virginia

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Antiquities and with the lead historical archaeologist, Dr. William Kelso. We are now as a final stage of the planning process creating visually integrated access to Kelso's data on two buildings at the Fort--the state house and building #160. The inclusion of this proprietary data is not the only sign of our hard work at relationship building. The APVA is also raising money for the project, and with Verizon support has enabled the next step in scholarly communication--a joint conference of historians and archaeologists.

The Advisory Board met four times in the course of the planning process. As Chairman I set agendas for the meetings that attempted to build partnerships, consider governance issues of digital resources, establish scholarly priorities for 2007, and finally educate all parties to the landscape of digital scholarship. As the Board's makeup changed over the course of the planning process to include more scholars, the Board took on a different cast. At the first meetings the group consisted almost entirely of key stakeholders, such as directors of libraries, centers, programs, and projects. These board members gravitated immediately toward the problems of visual representation of data and to the collaboration between historians and archaeologists. The outcome of these early meetings was an overall commitment to sponsoring and building prototypes of integrated visual models of the James Fort and other sites. These "lost landscapes" ideas became the guiding strategy for work at VCDH on prototype development that would integrate APVA field data, visual models created with Earl Mark's group in the Architecture School, and the textual record in Virtual Jamestown.

Some of the substantive highlights from these meetings include the following directions recommended by the Advisory Board:

May 2003--Board overwhelming favored "lost landscapes" as models of integrating archaeological and textual records and building communication between disciplines. The Board recommended nested projects on: tobacco, disease, architecture, London and communication, Indian memory, African trade, Chesapeake environment. Board members enthusiastically agreed to contribute time and resources to building research materials for these prototypes.

October 2003--Board overwhelmingly favored heavily promoting the field of Atlantic Studies, new areas of research in the field, and drawing new participants into the process. It put emphasis on integration of disciplines and interconnection of material and agreed that the existing categories in the scholarly narrative make interconnectivity of the Atlantic World difficult to approach. Board approved continued experimentation with "lost landscapes" and visual models for communicating the elements of the Atlantic World network and Jamestown's place in it.

October 2004--Board overwhelmingly favored a future Dutch Colonial Records project as the most significant engine of future scholarship. Board advised concentrating on seventeenth century and on a traditional textual approach to create a digital thematic

research archive. The Board sought an archive of primary source materials for 2007 aimed at the scholarly audience but had few suggestions for leadership. The Board rejected consideration of digital imprint or more elaborate digital new model scholarship (including the visual models already under development at VCDH) in favor of a records project approach. Board recommended beginning a project in 2007 at the time of the anniversary events.

Over time as the Board grew to include traditional historians, the emphasis shifted. The scholars, all extremely highly regarded in the discipline, remained either uninterested or ambivalent about the digital technologies available for communication and scholarship. The Board as a group had the least traction on these important issues, despite careful planning and presentations by the key stakeholders. The scholars wanted instead to concentrate on the production of a new collection effort, a colonial records project. In the end they recommended a Dutch Colonial Records Project as the key to a new generation of scholarship on Jamestown and the Atlantic World.

In addition to these substantive issues, we discussed many matters related to governance and partnership, and the results were understandably incomplete. Our planning process coincided with the steepest budget cuts in the history of the Library of Virginia, whose entire digital program was dropped. For the University of Virginia and other state institutions these cuts were numbingly severe. Few board members could offer partnership or commitment in these circumstances. Only APVA, it seemed, could actively contribute staff time and other resources in this process. Board meetings indicated that the key stakeholders would consider numerous models of sustainable partnership and were willing to discuss these issues. The board recommendations included some commitments for ongoing work and partnership.

It is clear to me now that both the early Board recommendations and the later Board directions are worthy. We should promote "new model scholarship" and we should pursue a big colonial records project on the Dutch. The latter would open critical information for scholars on slavery's origins, the political independence of the colonies, and the growth of trade and commerce. These are the three most important aspects of both the development of the Atlantic World system and the growth of the American republic.

The planning process, it seemed to me, through the Board's deliberations had a wider impact than expected. Board members represented the leading institutions in the U.S., Ireland, and England. Their discussions were deep engagements with the questions of scholarship on the seventeenth- century Atlantic World as well as the complexities of digital technologies. I sincerely hope that the Jamestown project can continue to follow these recommendations of the Board and that future funding might sponsor both a series of new model scholarship and a large-scale colonial records project.

Sincerely,

William G. Thomas, III
Director
Associate Professor

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Appendix 9: Paspahegh Final Report

J. Solometo

My task was to develop a website within Virtual Jamestown which presents the archaeology of site 44JC308, also known as the Paspahegh site. Given the history of the site, Paspahegh ideally suited the overall goals of the presentation developed in meetings with Dr. Shifflett, Dr. Kelso, and other members of the Virginia Center for Digital History team, which was to provide general information about the Powhatan Indians and the archaeology of Virginia's Coastal Plain in the early Contact Period. The Paspahegh site, excavated in the 1990s, is a Native American village that was occupied during the first years of English settlement at Jamestown. It is likely that the village was one of several belonging to the Paspahegh Indians, the nearest neighbors and frequent trading partners of the residents of Jamestown. It is also likely that the occupants of 44JC308 were driven from the area at the outset of the First Anglo-Powhatan War in 1610. In order to create the website I conducted background research about the site and the archaeology of 16th and 17th century Virginia. I also examined how the culture and history of the Powhatan is presented by the various organizations that tell the Jamestown story. My objective has been to provide information not widely available on the web that is of interest to the public but also of relevance to researchers. I have tried to remain true to the spirit and strengths of Virtual Jamestown, emphasizing the importance of the ethnohistoric record in the interpretation of archaeological data.

In order to learn more about 44JC308, I visited the Virginia Division of Historic Resources (VDHR) in Richmond to determine what archaeological research had been conducted there. I also determined which early Contact Period sites in eastern Virginia have had substantial archaeological investigations; these sites are good candidates for future expansion of the Virtual Jamestown/Paspahegh project. While at VDHR I also examined the artifacts recovered from the site. After centuries of plowing, the artifacts have been broken into small pieces, so only a small sample of artifacts will ultimately be displayed on the Paspahegh website. While meeting with VDHR's curator, Keith Egloff, I also learned about restrictions in the depiction of the burial goods found at 44JC308, which include numerous ornaments manufactured on European trade copper.

After determining the titles of the archaeological reports relevant to Paspahegh, I next contacted the cultural resource management firm (James River Institute of Archaeology) that conducted the primary work at 44JC308 to request copies of their reports, including the various maps depicting the site and its features. Happily, the report describing the final stage of archaeological investigations at 44JC308 is excellent and provided much of the primary information needed to interpret the site. It is to our great fortune that the report authors also took great pains to link their archaeological findings to the many descriptions of Powhatan settlements, houses, and material culture found in the ethnohistoric documents. They furthermore provided an excellent summary of ethnohistoric accounts of the Paspahegh Indians, the likely occupants of 44JC308. This has made it easy to link the Paspahegh material to other areas of Virtual Jamestown, including both the White and DeBry illustrations and the text of the primary documents themselves. The work of the James River Institute of Archaeology forms the backbone of the Paspahegh website.

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I also explored how the Powhatan Indians and Powhatan archaeology are currently portrayed to the public. This involved reading available books about Powhatan ethnohistory and archaeology, reviewing websites produced by the APVA, VDHR, the Werowocomoco project, the Mariner's Bay Museum and others, and visiting Jamestown to view the museum displays produced by the APVA, NPS, and the Jamestown-Yorktown Foundation. I have also spent hours talking with Dr. Jeff Hantman of the University of Virginia and my James Madison University colleagues about Coastal Plain archaeology. While in Jamestown, I was able to determine what aspects of Native American culture and history were stressed and which were omitted in the displays most commonly encountered by the public. My experience in Jamestown and in my survey of current websites highlighted the importance of telling the story of the early Contact Period from a more explicitly Native American perspective at a sophisticated level.

In Jamestown I also met with Rhyannon Berkowitz and other members of the team responsible for the new NPS/APVA Jamestown visitor center to learn more about how they plan to present the Native American experience in the Contact Period. Ms. Berkowitz is in the process of helping us to present our work to the Virginia Council of Indians.

The creation of the website itself has been a lengthy process. It involves creating text and graphics and then submitting them to Kim Tryka of VCDH to format them from the web. The resulting website then requires revision to ensure that text and graphics "flow" and have the greatest impact on the reader. Balancing text and graphics has been a challenge, as I struggle with the desire to maximize information yet create attractive, easily interpreted pages.

I think that the Paspahegh website is an important addition to currently available material about Contact Period Virginia. First, it unapologetically presents the story of contact from the Native American standpoint. The website's timeline of Paspahegh-English interaction, although created by assembling references to the Paspahegh in English documents, nonetheless provides a unique view into the experience of this group, documenting each known encounter. The ultimate fate of the Paspahegh and likely the coincident abandonment of 44JC308 makes the presentation all the more effective. I think the website makes it clear that Paspahegh is an exemplary Powhatan village, first transformed, then destroyed, by the English presence. Second, the website makes the important archaeological work at 44JC308 available to a wide audience. Information on the site is currently available only by visiting the VDHR archives, by requesting and purchasing a copy of the report from the excavators, or can be obtained in summary form in the appendix of a recently published scholarly book. The website also allows us to juxtapose site maps, text and visuals in a way that is extremely valuable (and not possible in an archaeology report or scholarly text). The number of visuals on the site, in particular the number of maps and drawings of actual archaeological data, far exceeds the number available elsewhere on the web. I think that the site gives a much better picture of exactly the kinds of information archaeologists find in Coastal Plain Virginia.

The material presented on the Paspahegh website will be of use to teachers throughout the state. I have used my work with the Paspahegh and Powhatan materials to enrich my own teaching. I used the Jamestown/Paspahegh material as a substantial case study in "Culture Contact in the Americas," an upper level undergraduate class taught for the first time in Fall 2004. We looked at the prototype of the Paspahegh site in class and used

Virtual Jamestown extensively. Several students used Virtual Jamestown for their final research papers. Based on the reaction of students and other faculty, I plan to offer the course annually and it may have an important role to play as JMU's Department of Sociology and Anthropology considers adding a Global Studies masters program. I have also displayed the new website and other Jamestown/Powhatan-related websites in my Introduction to Archaeology course. Students from Virginia are particularly interested in the history of Native American settlement and respond positively to graphic-intensive presentations.

I think that the Paspahegh website should be expanded to include profiles of other important, but little known archaeological sites dating to the Contact Period. There are few sources, scholarly or otherwise, which document the spatial distribution and inventory the characteristics of sites from this important time period. I think that archaeological data dramatically demonstrates the ties of native peoples to the land. Understanding how the Powhatan and other Native American groups lived before and during the English presence at Jamestown is an important story to tell and offers a necessary counterpoint to the narratives that will be emphasized in the 2007 celebrations.