Overview:

The Virtual Jamestown grant has worked on two tracks—to build materials in electronic form for a digital archive and to engage in collaboration with other institutions to build up digital resources more broadly. The two extensions proved critical to our success with this project. We were able in the final year to meet all of our goals for materials development and at the same time to find private funding in order to secure federal matching funds.

The final result of the work is a major web site, titled Virtual Jamestown. The web site receives about 1,000 unique individual visitors each day. The url is:

http://www.virtualjamestown.org

The site has been redesigned and updated several times. All materials within the site have been produced to standards of scholarly editing and information architecture. All textual materials include TEI headers and are marked up in XML (see example below). The text is served via the University of Virginia Library’s Etext Center. XML text has a modernized spelling version which has worked well for K-12 education. The databases are served via PostgreSQL. Here is an example of the header page for a first hand account:

First Hand Accounts of Virginia, 1575-1705  
[Original Spelling Versions]  
From the Virtual Jamestown Project

A True Relation of Such Occurrences and Accidents of Note as Hath Hapned in Virginia Since the First Planting of that Colony, which is now resident in the South part thereof, till the last returne from thence.
Written by Captaine Smith one of the said Collony, to a worshipfull friend of his in England

The also project brought online a database on over 13,000 indentured servants from the records of Middlesex, Bristol, and London. Programmers created an interface for these large databases that permits a search of all records by name, occupation, and place of origin and destination for both agents and servants. Here is an example of a search on the occupation “spinster”:

<table>
<thead>
<tr>
<th>Servant's Occupation</th>
<th>Servant's Destination</th>
<th>Servant's Date of Indenture</th>
<th>Servant's Ship</th>
<th>Servant's Gender</th>
<th>Agent's Name</th>
<th>Agent's Place of Origin</th>
<th>Agent's Occupation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laborer</td>
<td>Virginia</td>
<td>October 2 1656</td>
<td></td>
<td>female</td>
<td>Anne Man</td>
<td>Priston, Somerset</td>
<td>spinster</td>
</tr>
<tr>
<td>Spinster</td>
<td>Barbados</td>
<td>February 13 1657</td>
<td></td>
<td>female</td>
<td>Anne Smith</td>
<td>Bristol</td>
<td>spinster</td>
</tr>
<tr>
<td>Spinster</td>
<td>Barbados</td>
<td>July 15 1660</td>
<td></td>
<td>female</td>
<td>Mary Roberts</td>
<td></td>
<td>spinster</td>
</tr>
<tr>
<td></td>
<td></td>
<td>December 6 1658</td>
<td></td>
<td>female</td>
<td>Mary Davis</td>
<td></td>
<td>spinster</td>
</tr>
<tr>
<td>Tailor</td>
<td>Barbados</td>
<td>December 6 1658</td>
<td></td>
<td>male</td>
<td>Ann Culme</td>
<td></td>
<td>spinster</td>
</tr>
<tr>
<td>Spinster</td>
<td>Barbados</td>
<td>December 22 1658</td>
<td></td>
<td>female</td>
<td>Joane Webb</td>
<td></td>
<td>spinster</td>
</tr>
</tbody>
</table>

The results of our outreach efforts have been similarly successful. Virtual Jamestown has secured a Andrew W. Mellon planning grant that builds, in part, on the work done within the Virtual Jamestown project. The Virginia Center for Digital History will continue to develop the site and we will begin new initiatives in the area of Atlantic studies. A range of secondary schools throughout Virginia and colleges and universities throughout the nation and internationally have benefited from the Virtual Jamestown grant, as the project director, advisory board members, and the staff of the Virginia Center for Digital History have traveled, worked with, and made presentations to teachers and faculty all over the world.

Research:

The Virtual Jamestown site research included materials development for a wide range of sources. We assembled a staff to survey the major archives on Colonial Virginia. We transcribed sixty-eight rare first-hand accounts, marked them up, annotated each document, and placed them in a full-search text database by date and subject. During the late phase of the project, we received permission to bring online Philip L. Barbour’s Complete Works of Captain John Smith, 3 volumes, and began work on the Records of
Several sample contracts, a largely formulaic process, illustrate the terms of indentured servitude. Enumerations of the seventeenth-century population of Virginia were rare and historians consider the 1624/1625 muster of deaths, food, arms, livestock, and buildings a valuable resource. The project created a database of this muster and programmers developed an interface to make it searchable. We tabulated other census-like information from the first-hand accounts on the first settlers and resupply groups. Graduate students in the University of Virginia’s Curry School of Education created K-12 teaching strategies from these and other records on the site. Another unanticipated database came to the project when a scholar volunteered his database to us on Christ Hospital. Christ's Hospital opened its doors in 1552 as a school to train orphans in reading, writing, and arithmetic. After the children finished their training they were apprenticed to various merchants, ship captains, and planters around the growing English empire. The Christ's Hospital Project focuses on tracking those apprentices that made their way to the North American colonies during the seventeenth, eighteenth, and nineteenth centuries.

Maps and images brought online include many rare materials from the seventeenth-century, including the well-known “Map of Virginia” created by the travels of John Smith throughout the Chesapeake Bay area. Staff programmers used Smith’s map to produce a remarkable interactive map in which Smith’s map was overlaid on a modern map of Virginia. It provides the earliest ethnographic gazetteer of Colonial Virginia. Perhaps the most extraordinary set of images to be brought online are the remarkable watercolor drawings of the Algonquians, made in the 1580s by John White on his voyage to Roanoke Island. Not published until 1964 and never before seen on the World Wide Web, these images provide access to the earliest and many say most authentic representations of these “Americans.” In addition, on the same Web page, the project placed the engravings of the White watercolors by Theodor De Bry who took certain liberties with White’s drawings and thereby created differential views (and a remarkable teaching resource) of early Americans through two sets of English eyes with different purposes in mind. Through the courtesy of the University of North Carolina Press, the project also created hypertext links to the highly esteemed descriptions of these images which accompanied the 1964 publication of White’s watercolors by Paul Hulton and David Beers Quinn.

**Indian Woman and Baby of Pomeiooc**

- [Comparison of watercolor and engraving](#)
- [Large Watercolor](#)
- [Large Engraving](#)
- [Description of Images](#)
The visual record of the first permanent English settlement in America has been enriched with archaeological material courtesy of the *Jamestown Rediscovery®* project of the Association for the Preservation of Virginia Antiquities. A private grant of $25,000 with matching NEH funds made possible this phase of the project. The project brought online a selection of about 25 artifacts, chosen to represent the global context of Jamestown’s founding, displayed them in 3D, and annotated each artifact to give historical context. The marriage of history and archaeology begun with this work continues with surveys of archaeological sites in the Jamestown area, now made possible with Mellon Foundation funding. Here is an example of the content on archaeology:

**Jamestown Artifacts**

All historic artifacts provided by [Jamestown Rediscovery](https://www.jamestown Rediscovery.org), except the Jamestown Model Fort, which was provided by the Colonial National Historical Park, National Park Service.

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**Chinese Porcelain Wine Cup**

Jamestown Rediscovery's archaeologists excavated this nearly complete Chinese porcelain wine cup from a ca. 1610 context within the fort. This cup probably was part a shipment of goods that the Dutch purchased in the East and then sold in England. A gentleman at Jamestown either purchased the wine cup or received it as a gift. He might have drank aqua vitae (an alcoholic beverage that was part of each colonist's supplies) from the cup or used it as an indication of his status as a gentleman.

[Large Image] [Rotating Image]

**William Strachey’s Ring**
A colonist named William Strachey wore this ring during the year that he was at Jamestown. Strachey was one of the colonists who left for Virginia on the Sea Venture in 1609. This ship encountered storms on the voyage across the Atlantic Ocean and was wrecked on Bermuda. Strachey and the Sea Venture's other passengers did not arrive in the colony until 1610. He left Virginia in 1611. Strachey wrote an account of his voyage to Virginia—The Historie of Travell into Virginia Britania (1612). Some scholars believe that William Shakespeare based his play, The Tempest, on Strachey's account.

Large Image

Silver Ear Picker

The silver ear picker is in the shape of a "sea rhinoceros" or dolphin. This cosmetic implement has an ear scoop on one end and a tooth/nail cleaner on the other end. The owner of this ornate ear picker might have used the loop to hang it from a girdle or a chain around his neck as an indication of his status. It is possible that the owner was a gentleman who spent several years sailing across the Atlantic Ocean before he settled at James Fort. Surgeons also used ear pickers (made of either bone or a cheaper metal) in the sixteenth and seventeenth centuries.

Large Image

In collaboration with the Virginia Runaways Project, the project created a digital database of 18th-century Virginia newspaper advertisements for runaway and captured slaves and indentured servants. The project presents full transcriptions and images of all runaway and captured ads for slaves and servants placed in Virginia newspapers from 1736 to 1790. Additional funding from the National Endowment for the Humanities is extending this database. The “Geography of Slavery project at the Virginia Center for Digital History is in the process of compiling advertisements well into the nineteenth century. In addition, the project offers a number of other documents related to slaves, servants, and slaveholders, including court records, other newspaper notices, slaveholder correspondence, and assorted literature about slavery and indentured servitude.

“Jamestown Interactive” has been the latest area of Virtual Jamestown’s growth. We had to wait on developments in this area until we secured the matching funds. The project developed virtual reality views of James Fort and John White’s watercolor of “Pomeiocc,” an Algonquian village. We also reconstructed Building Number 160 on the original site from the ground up (using autocad) with a sub-contract to a faculty member.
and graduate students of the University of Virginia’s School of Architecture. We plan to develop this “virtual building” later and integrate text, image, mapping, and artifacts. Further work in this area will continue with future funding to develop entire landscapes that integrate and link (via hypertext) artifacts, documents, and images into information-rich virtual reality environments. A virtual reality version of White’s watercolor of Pomeiooc appears as follows:

Watercolor drawing "Indian Village of Pomeiooc" by John White (created 1585-1586). Licensed by the Trustees of the British Museum. ©Copyright the British
Outreach, Dissemination, and Feedback:
The project commissioned seven original scholarly essays on the Jamestown experience which were published on the Web site, each on a different topic: Warren Billings on Governor William Berkeley; Dennis Blanton on the environment; Kathleen Brown on women at Jamestown; Thomas Costa on the labor of slaves and indentured servants;
James Horn on the social backgrounds of indentured servants; Karen Kupperman on the Indians and English; and James Whittenburg on Jamestown after the fort until the capital moved to Williamsburg.

The Virtual Jamestown grant has enabled collaborations with the Virginia Center for Digital History, the University of Virginia’s Curry School of Education, the Association for the Preservation of Virginia Antiquities, the National Park Service at Jamestown, and faculty from the College of William and Mary and the University of Virginia to work closely with teachers and others in the region and beyond working on digital history projects.

During the Summer of 2000, the project director and director of VCDH co-taught a highly successful NEH Seminar for Teachers on Jamestown. From that seminar, the idea for the Virtual St. Augustine project grew. We took two trips to Florida to assist the project and both trips led to additional private funding. Virtual St. Augustine recently received a Florida Humanities Council grant and continues to develop as another VCDH digital history project. The project director serves as consultant to Virtual St. Augustine and another project in digital history, Virtual Savannah. In addition, one teacher from Pennsylvania later scheduled a distance learning session with her class and the project director at Virginia Tech.

Collaboration with the University of Virginia’s Curry School of Education produced ten “teaching strategies.” Each of these provide suggestive ways to use the Web site in the classroom and links to national and Commonwealth of Virginia teaching standards (see Appendix 2). The project director made several presentations in Norfolk and Roanoke to conventions of public school teachers to demonstrate the site and show how it can be used in the classroom.

During the Fall of 2001, we began discussions with a program officer of the Andrew W. Mellon Foundation. Initially, the program officer suggested a discretionary grant application. Further discussions produced a recommendation that we apply for a planning grant in order to develop a strategic plan for future development of Virtual Jamestown into an Atlantic studies project. In September 2002 we received the Mellon planning grant and formed an advisory board to help draft the plan for the next phase of the project.

Feedback on the site from public school teachers and students and college and university faculty is made possible via a “Comments” invitation on the Web site. Teachers, students, and faculty frequently write with questions and even more often give their assessments and make suggestions for improvement. The project director answers these queries and comments promptly and thoroughly.

Staff:
An excellent staff included both graduate and undergraduate assistants, as well as professional designers and programmers, from the Virginia Center for Digital History, the College of William and Mary, Virginia Polytechnic Institute and State University, and the Royal Melbourne Institute of Technology (Craig Bellamy). Staff met regularly during the grant period to review progress, plan initiatives, and consider technologies.

Graduate Researchers

Kevin Butterfield
Wayne Graham
Louisa Parker Mattozzi
Georgianna Lee Dandy
Andrew Morris
Timothy P. Grady
Ginger S. Hawkins
John Mooney
Sarah Taylor
Tom Snediker
Matthew Parrott

Undergraduate Researchers

Christie Padgett
Emily Gibb
Sarah Parnes
Majorie Webb

Digital Archivist

Kimberly Tryka

Programmer

Jennifer Muter

Web Designer

Craig Bellamy

Project Managers:

Julie Richter
Jeney Morsman
Amy Murrell

The graduate student project managers and the undergraduate researchers participated actively in the design and development of the Virtual Jamestown site. They met with the PI regularly throughout the course of the grant period. The staff for the project included several undergraduates from the University of Virginia’s Woodson's Emerging Scholars Program (ESP). The ESP is intended to foster minority students who might go on to careers in academe and scholarship. Several of the project managers have been selected for national fellowships and for teaching positions at other universities and colleges.

Conclusion:

The Virtual Jamestown project addressed in every aspect of its work the problem of access to rare historical materials of our nation’s history and the use of technology to enable greater access. The goal of the grant was to make materials more accessible to
teachers, genealogists, students, and the public, as well as to create materials for teaching about Jamestown’s legacies, the formation of American culture, and other themes. The project put these goals as the highest priorities. For example, the project director worked for over a year to get the British Museum to provide Web access to the John White watercolors. Eventually, the Museum agreed to grant access for five years at a cost that limited the number of images but still allowed access. Similarly, we pursued permissions for copyrighted material, in some case very recent material such as the learned commentary on White’s watercolors (1964) and the Complete Works of Captain John Smith (1986), all in the interest of providing greater access to some of the nation’s rarest historical treasures.

The Virtual Jamestown grant has laid the groundwork for future development of digital history on Early America. It has inspired projects like Virtual St. Augustine and Virtual Savannah. It is developing into a broad strategic plan for research and publication in Atlantic studies. The Mellon Jamestown Advisory Board is planning cross-disciplinary partnerships in architecture, archaeology, history, and environmental science, all enhanced by the application of advanced technologies. In the future, Virtual Jamestown will become more “internationalized” and a model project for e-Atlantic studies.

Appendixes:
1. User statistics
2. A Teaching Strategy
Appendix 1: Server Statistics, Virtual Jamestown

Day of 9/25/2003

Important Totals

<table>
<thead>
<tr>
<th>Item</th>
<th>Accesses</th>
<th>Bytes</th>
<th>Visits</th>
<th>Charts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Hits for jamestown</td>
<td>13,341</td>
<td>2,263,094,229</td>
<td>2,378</td>
<td>View Chart</td>
</tr>
</tbody>
</table>

Executive Summary

The web site received 2,378 visits. A typical visitor examined 5.71 documents before leaving the site. A typical visit lasted for 3.12 minutes. The longest visit lasted for 148 minutes.

Visitors came from 1,573 distinct Internet addresses.

The web server delivered 371 unique documents one or more times each.

7 distinct types of documents were delivered.

The web server was visited by 0 distinct authorized users. Authorized users are required to log into the web server with a specific name and password.

0 distinct Internet web sites were accessed via the proxy server.

There were 6,015 requests for documents which did not exist on the web server. The web server was linked to by 1,163 distinct pages on other web servers.

The web server was linked to by one or more pages found on 284 distinct web sites.

509 distinct search keywords were used to locate documents on the web server via Internet search servers, such as Altavista(tm) and Yahoo(tm).

7 distinct Internet search servers were used to reach the site.

Visitors used 69 distinct web browsers and other web access programs to reach the web server. Visitors used 317 distinct operating systems on their computers. Visitors followed a total of 1,987 distinct, non-trivial "trails" among the documents found on the web server.

**Historical Totals**

<table>
<thead>
<tr>
<th>Item</th>
<th>Total Accesses</th>
<th>Total Bytes</th>
<th>Total Visits</th>
<th>Average Accesses</th>
<th>Average Bytes</th>
<th>Average Visits</th>
<th>Latest Accesses</th>
<th>Latest Bytes</th>
<th>Latest Visits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Hits for jamestown</td>
<td>4,030,493</td>
<td>195,661,561,926</td>
<td>986,961</td>
<td>3,611</td>
<td>175,323,980</td>
<td>884</td>
<td>0.00</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Produced by Wusage 7.0
Appendix 2: Example of a Teaching Strategy

Discipline: U.S. History

Specific Lesson Topic: Daily life and events in the Jamestown colony

Methodology: Primary Sources

Objectives:

- Research a chosen Jamestown issue using the on-line materials at Virtual Jamestown and the Jamestown Rediscovery Project.
- Develop beginning skills in historical analysis, including the ability to analyze records and data and to formulate historical questions.
- Synthesize findings through writing a newsletter article that describes their Jamestown issue.

Materials:

- A networked computer lab with an Internet connection
- Several dictionaries

Procedures:

1. Introduce students to the following sites:

   - Jamestown Rediscovery
   - Virtual Jamestown

* These sites, as well as the topics link below, will open in a new window. To return to this page, close the new window by clicking on the X in the upper right corner.
2. Give students a few possible topics for their stories. Encourage them to think about what settlers would want and need to read about in a newsletter.

3. Have students look for pictures or graphics to accompany their story.

4. Using a basic word processing program that will allow graphics and or pictures to be inserted, have students work together to design a newsletter that incorporates the entire class’ stories. It is useful to divide students into groups with specific tasks, e.g. naming the newsletter and designing a graphic, laying out the articles and images, checking for grammatical and spelling mistakes.

**Assessment for K-12:**

Once students read their completed class newsletter, have each person write a letter home to their family in Britain that synthesizes several of their peers' stories from the newsletter. Encourage them to draw some generalizations about life in Jamestown.

**Standards:**

*National History Standards: Standards in Historical Thinking*

- Standard 2: Historical Comprehension
- Standard 3: Historical Analysis and Interpretation
- Standard 4: Historical Research Capabilities