White Paper Report

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Project Director: Stephen Railton (sfr@virginia.edu)

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Final Performance Report|White Paper

Grant Number: HD-51-774-13

Title of Project: Digital Yoknapatawpha

Name of Project Director: Stephen Railton

Name of Grantee Institution: University of Virginia

Date Report is Submitted: 16 June 2014

Submitted by: Stephen Railton (Prof of English, Univ of Virginia)

Narrative Description

The Digital Yoknapatawpha (DY) project is intended both to provide scholars, students and teachers of the work of William Faulkner with an unprecedented resource and to explore and model new ways of displaying and searching works of literature. It was first created in the summer of 2011 by Stephen Railton in collaboration with technologists from the University of Virginia's (UVA) Digital Media Lab (DML) and Science, Humanities and Arts Network of Technological Initiatives (SHANTI). In 2012 main responsibility for the project's technological development shifted to UVA's Institute for Advanced Technology in the Humanities (IATH). At present seven nationally prominent Faulkner scholars serve as DY's Advisory Board, and a team of twenty-two Faulknerians (from twenty different colleges and universities; see Appendix 1) are working with Railton (PI) and the project's three Co-Directors (CDs), Dotty Dye, Julie Napolin and Theresa Towner, in editorial teams to transform Faulkner's Yoknapatawpha fictions into a set of databases and interactive visual resources such as deep maps and various kinds of timelines. During the grant period May 2013 to April 2014, the NEH DH Level II Start-Up grant enabled DY to move in significant ways from vision to proof-of-concept toward its ultimate goal of re-presenting all of the fourteen novels and fifty-four short stories that Faulkner set in his own piece of virtual reality, that "postage stamp of native soil" he called Yoknapatawpha. To describe that progress, this report divides the grant year into three seasons.

Summer 2013

The largest single item in our budget was funding for a 2-day meeting at UVA to bring together the project's collaborators: the Faulkner scholars and the technical team. This was held on Friday-Saturday July 12-13 at UVA's DML, and was a great success. Pre-meeting work was

completed almost exactly on the schedule outlined in the proposal's Month-by-Month. All the collaborating editors were polled about what issues needed to be addressed, after which the PI drew up a detailed agenda for the meeting. The teams that were working on 7 short stories (almost) finished their work so that the PI and the technical team could enter all the new stories into project's prototype, and the tech team members from DML, SHANTI and IATH could prepare their presentations for the second day of the meeting. IATH also built a basic version of a new prototype, replacing DY's original Flash-based dynamic display with an HTML5 version. This version was ready in time for the meeting, at which it provided a focus for extensive discussions about the interface. By late June the PI put the detailed agenda online, where participants could continue to make additional advance comments in preparation for the meeting. That online resource, with those comments and other enhancements, can be viewed at http://people.virginia.edu/~sfr/DYMeeting.html And to prepare DY for the work of the grant period, the PI recruited three Co-Directors (CDs) from the collaborators to share responsibility for designing the project and adding the new novels. This new structure also helps to ensure long-term sustainability for DY.

19 Faulkner scholars from fourteen different states and one foreign country (France) attended along with 7 members of the UVA technical team (plus the project's cartographer, and a graduate student RA funded by the English Department). One expected collaborator could not make it, because weather cancelled flights from Nova Scotia. Even so, this was a larger meeting than we had budgeted for, but through careful (some would say miserly) spending we were able to cover all travel, lodging and catering expenses under the budgeted amount.

The two days of meeting were long, but very productive – confirming the proposal's belief that, while "tele-presence" is a great means of communication, there is no substitute in a

project like this for face to face to face contact. Sticking closely to the agenda, we were able to agree on a wide range of refinements to the editorial policies and new fields for the database, to consider a number of new possibilities for the project, to straighten out some of the inevitable misunderstandings inherent in a collaboration of this size, and to begin working actively on the next phase of data entry. The RA took notes of the proceedings, including all the decisions that were made; these notes were sent to the participants afterwards. One issue that persisted involved consistency, trying to have all the editorial teams using the same definitions for categories like "Character class" or the same scope and vocabulary for categories like "Event keywords"; this problem is being addressed as we go forward, but it promises to be one of the most difficult issues to resolve. It is one major reason why the DY collaborators must continue to meet in person regularly over the coming years. It also still requires consistent oversight of each team of collaborators, first by the Co-Directors but ultimately by the PI.

At the end of the meeting the newly organized teams for editing four new novels met under the direction of the PI and CDs to begin making plans for editorial tasks over the rest of the grant year. After the meeting the Instructions for entering DY data were revised to include all the new refinements and additions (https://faulkner.drupal.shanti.virginia.edu/), all seven short stories were completed and entered into the evolving online prototype (http://faulkner.iath.virginia.edu/prototype) and the teams went to work retrofitting the data sets to incorporate the changes that had been agreed to at the meeting (that work was completed by the PI and others during the fall; see below).

Fall 2013

As explained in the grant proposal, DY will continue to recruit additional Faulknerians as collaborators for at least the next several years. As word of DY continued to spread among the community of Faulkner scholars (including at the University of Mississippi's annual Faulkner & Yoknapatawpha conference, which took place almost immediately after our UVA meeting), three additional scholars contacted the PI to join the project. Each of them was trained in DY's methods by editing a new short story in partnership with an experienced collaborator. Those new stories were completed by the beginning of 2014. Two of these new participants are currently finishing work on a fourth new short story, while the third has joined the team working on one of the four new novels. All this was in addition to the work we described in the project plan we submitted to NEH.

The work that was described in our application can be divided into two categories: editing Faulkner texts (data entry by the collaborating scholars) and developing the display and search functionalities of the project's technology (software design and development by the project technologists). As processes these are completely inter-related, and the work in both areas is undertaken with continual feedback between the scholars and the technologists under the direction of the PI, but for clarity this report will discuss each category separately.

Editing the Novels. When we described our plans to add four new novels (*The Sound and the Fury, As I Lay Dying, Sanctuary* and *Light in August*) to DY during the grant period, our MonthXMonth schedule assumed teams could begin entering data almost immediately. In practice that wasn't possible. The hour we set aside during the July meeting for the novel teams to discuss the particular challenges that their novel posed was not enough time to work through the many questions that arose once the teams went to work in the fall. Nor is it clear that more time in July would have saved time in the fall: many of the conceptual questions that the novels

raised came into focus only after the teams began work with the details of the texts. It also took longer than anticipated to work through the challenges raised by collaboration within the teams, especially at a distance. A lot of energy had to be spent to get everyone on a team to reply to emails from the CD in charge. Frankly, only a fraction of the data entry that was scheduled for the fall was actually done, which was a disappointment after all the enthusiasm and momentum that had been built up during the July meeting. There seem to be several reasons for this and several lessons to be learned from it. One reason that doesn't need to be belabored in a report to the Digital Humanities division is the uncertain status of digital scholarship within the profession. Several of the home institutions of the DY collaborators provided real support such as course relief, but in most cases collaborators felt compelled to defer work on the project to other activities that would matter more on their annual reports. At the same time, it is now clear that the PI and team leaders did not adequately anticipate the amount of effort that would be required to keep the other collaborators on task. When this did become clear by the end of the fall, we became more aggressive in our communications with each other and with teams. Given the number of collaborators, it is not surprising that there are still difficulties getting everyone working at once in the same direction, but by the first of the year the project began to recover its momentum (see below).

It also looked for a while as if we would only be able to work on three novels rather than four. The PI spent much of the fall editing and retro-fitting the seven short stories that had been worked on the spring before: there were unanticipated problems with inconsistency that required both time and tact to resolve with many of the short story teams. And it was not clear how actively the PI would have to work with the CDs on their three novels. For this reason, when he wrote the semi-annual report to NEH, the PI said that DY would only enter three novels during

the grant period. But once the teams began moving forward again, the PI felt it was possible to add that fourth novel to the workload, and it is far along at this point.

To sum up the fall: while less demonstrable progress was made on the four novels than we expected, several major conceptual concerns were addressed and resolved by the PI and the CDs, and the project's leadership team learned what steps to take to put the project back on track.

Developing the Prototype. Throughout the fall the PI met regularly with the technical team at IATH. The first goal was to extend the display functionalities that had been created for the meeting, and to begin designing and constructing the project's search functionalities. Based on the discussions at the meeting, a number of enhancements were also added to the prototype, including: a system allowing users to view the texts chronologically as well as narratively (a key to appreciating, for example, the role of "the past" in Faulkner's world, and a valuable pedagogical resource for teachers trying to get students to apprehend his more difficult works); a way to view events one at a time as well as serially; augmented capacity to view Character data alphabetically; improved visuals for displaying data about Locations, Characters and Events; and others. (You can see the progress for yourself by comparing the c2013 Flash-based VisualEyes model, at http://www.viseyes.org/show/?id=70028, with the current HTML5 prototype, at http://faulkner.iath.virginia.edu/prototype/.)

Additional Progress. Because the government shut-down cancelled the scheduled NEH presentations in October, and because UVA's College of Arts & Sciences was willing to forego the grant money marked for the PI, in mid-fall the PI realized there was enough money available to address DY's acute need for new maps to replace the one map that we'd been using for all the

texts. Accordingly, the PI and UVA requested permission to add a category to the grant budget for material acquisition, and to re-allocate about \$3000 of the budget to that purpose. It took a while to get this change approved, but by 2014 the money became available (see below). In addition, at the end of the fall IATH and several of the CDs applied to both the international Digital Humanities consortium and the Digital Americanists division of the Association for American Literature (ALA) to give panel presentations on the project (see below).

Spring 2014

Editing the Novels. Not surprisingly, additional conceptual issues continued to arise, and several new data fields and categories were added to the project (which required two revisions in the Instructions for entering data). The campaign to be more aggressive with collaborators and deadlines, which through the spring included regular Skype meetings among the PI and CDs as well as phone calls and emails within and across teams, was successful enough to get us close to the original schedule for editing the four novels. At the end of the grant period the work can be quantified as follows: 60% of the Location, Character and Event data for *The* Sound and the Fury has been created; 40% of the data for As I Lay Dying; 50-60% for Light in August; 66% for Sanctuary. The end of the grant period came just before the teams finished their spring semesters; since then the teams have remained hard at work (see Postscript below). The revised deadline we gave ourselves was to have all the novel data entered by the end of June, so that the PI and the technologists at IATH could integrate the novels into the prototype in time for the scheduled presentation of DY to the large audience of Faulknerians who will be present at the annual Faulkner & Yoknapatawpha symposium hosted by the University of Mississippi. Having the novels in DY for that presentation is an important goal, since we hope to recruit several more Faulknerians as collaborating editors and, in a new development, to enlist at least several

classroom teachers (high school and college) who are willing to use DY with their students during the coming year. It is time to take this important step, to get feedback from a real user community to help us continue to improve and, where necessary, revise the prototype and its functionalities. (Several of the project's participants have already begun incorporating DY into their teaching, and more have already expressed the intention to do that next year.) It is not safe to say that that goal, having all four new novels fully operational by the end of July, will be completely met, but it definitely seems possible, and at least two or three of the novels will be "finished" on that revised schedule. (The quotation marks are there because, of course, digital humanities work inevitably involves ongoing changes, and the DY data in particular will continue to be revised and/or retrofitted over at least the next several years.) Currently the database contains 1 novel and 14 short stories, not including the 4 novels and 1 story still being edited. More specifically, for those texts at the end of the grant period it contained 469 Location records, 1009 Character records and 839 Event records.

Developing the Prototype. The main visualization interface, the series of textual maps and timelines, remains a work in progress. It was enhanced several times during the spring and will continue to be expanded and improved for several years, at least. But during the spring the work of the PI and IATH's technologists shifted to designing and implementing the multi-textual search and display functions. It is this part of DY that holds the most promise for scholarly research. Figuring out the best way for it to work both systematically and for users among the humanities scholars required us to take a wide range of variables into account. But by the end of the grant period we succeeded in establishing the feasibility of our plan for intertextual search functions, and arrived at a working concept for organizing and visualizing search results for the three main categories of DY data, i.e. Locations, Characters and Events. The earliest version of

these search engines are working (see Appendices), but there is a long way to go before they will be fully operational.

Additional Progress. In addition to the re-allocated grant funds for maps, the PI secured a grant from UVA Arts & Sciences that provides enough money to acquire maps of all sixteen Faulkner texts currently in the development prototype, as well as a "generic Yoknapatawpha" map that will be used to display search results. Since January the PI and the project's cartographer, Rick Britton, have been collaborating on the design and creation of these maps, based on actual topographical data from Lafayette County, Mississippi (the source for Yoknapatawpha), Faulkner's own two maps of Yoknapatawpha, and (in every specific case) the descriptions in each text. Because the collaborative nature of DY meant that early drafts were shared with the CDs and the Advisory Editors, the map-making process has also been protracted, but all the input from the participants has been valuable; after a series of visions and revisions the maps are now in regular production. The goal of having them all in place by the July Faulkner & Yoknapatawpha symposium is very attainable.

In addition, as part of the dissemination of DY: The applications to both this summer's *Digital Humanities* conference in Switzerland (July) and the Digital Americanists session at the national ALA meeting in Washington, D.C. (May), were accepted. IATH's Worthy Martin will be leading both presentations, with participation by CD Julie Napolin and collaborating editor Joost Burgers at ALA, and CD Dotty Dye at DH. And DY has been contacted by two publishers – Oxford UP and Mississippi UP – who heard about the project and are interested in discussing the possibility of doing companion books of some kind, a collection of essays about the way Faulkner's fiction and digital humanities can illuminate each other and/or a sophisticated user's manual. It is too early in the project's development to make specific arrangements with either or

both, but discussions have been proceeding with both – and their interest is a great sign of the kind of visibility and value DY has already achieved.

Postscript: Progress since April 30

Since the NEH grant period did not quite align with the rhythms of an academic year, I wanted to add this brief account of what the DY team has done between the first of May and the last draft of this report to finish the work we outlined in the proposal. *Sanctuary* and "Mule in the Yard" have been fully edited, and work on the other three novels is much closer to being ready for presentation at the Faulkner&Yoknapatawpha conference in July. The seventeen new maps have been finished and all but three are already online with the texts they illustrate. One more new Faulkner scholar has joined the team, and is currently working with the PI on a short story.

Looking Backward and Forward

DY remains closer to its beginning than to its completion, but the grant enabled us to move forward in ways that would have been impossible without the support. Several important lessons were learned during this Start-Up period. One the one hand, for example, it has been easier than we thought to recruit participants into the project, either as collaborating or advisory editors. On the other, it was harder than anticipated to get the large team all moving forward in the same direction – too much time was spent waiting for responses to email messages. It has also turned out to be even more crucial than we anticipated to find ways to ensure consistency with data entry. Drupal's pull-down menus, for instance, restricting the range of choices, and the availability of instructions at the specific point of data entry via a system of HELP buttons have been very effective, but given all the points at which editors have to use their judgment, and the

way in which humanists have been trained to value originality over conformity in their professional lives, there is no way to ensure consistency except a sequence of reviews, by team leaders and the PI. At the same time, it is important to respect each collaborator's expertise and contributions, which means editing the work of the editorial teams has to proceed transparently and often through a series of negotiations. All of this has made progress take longer than planned. One other possible lesson concerns the size of the editorial teams. The original collaborations on short stories involved pairs or teams of three, but because the novels are so much more complex, we decided to edit them in teams of six. This larger group was supposed to allow for division of labor, but it may also have inadvertently allowed individual participants to feel less responsibility for getting their tasks done in a timely way. The ideal size of an editorial team is something the PI and CDs are actively discussing. It is almost certain that the novel teams for the 2014-2015 year will contain 4 or at most 5 collaborators. It may also be time quietly to put the least responsive collaborators on leave from the project; waiting for the 4-5 least reliable collaborators to reply to an email or finish an appointed task has caused a lot of the delay this past year, and has been a disservice to the work of the majority of committed and conscientious scholars.

DY will need continuing grant support over the next, implementation stage of its development. In September, the PI and IATH applied for but did not receive an NEH DH Implementation grant. Following this, we applied to NEH's Collaborative Research division, and will learn the fate of that application in August. In February the PI applied to IATH for the Resident Fellowship, which would have included enough funding for the next two years to continue to acquire maps and other materials and to arrange several face to face meetings between the PI and the CDs, but he was not given that award. (He remains an IATH Associate

Fellow, which provides technical but no financial support.) The collaborators as a whole remain enthusiastic and motivated, and by the end of the grant period have become very fluent in the project's protocols; frankly, however, without financial support, especially to make it possible for the entire group to meet as close to annually as possible, it seems likely that the development of DY will be seriously impaired. If we don't receive an NEH CR grant, we'll almost certainly re-apply to the DH division for an Implementation grant.

At this point the schedule for further development includes moving to four additional novels, recruiting several additional editorial collaborators, expanding the scope of the project in the direction of pedagogy by recruiting new participants and at least one more Advisory Editor to represent the concerns of the people who teach Faulkner at the secondary school level. Feedback from teachers and students about DY in the classroom will help us continue to shape it to best serve its users. Technically, while enhancing the current visualization schema and search protocols, we plan to add several new layers to the maps (to give users access, for example, to Faulkner manuscripts; to historical photographs, maps and other representations of the real places from which Yoknapatawpha was derived – allowing them to see when and how Faulkner transforms "reality" into his imaginary world; to audio files of Faulkner himself talking about the texts; etc.). And at the center of the PI and the technologists' attention will be further development of the search protocols. We want to enable users to search the Yoknapatawpha fictions, for example, through the lens of Faulkner's career as well as in terms of the Locations, Characters, Events and themes they contain. One of the most interesting aspects of the larger story of "Yoknapatawpha" as the place to which Faulkner's imagination continuously returned, as a set of seventy interlinked texts written between the mid-1920s to the end of the 1950s, is how Faulkner's world and imaginative preoccupations changed to reflect both the imperatives of

his own creative and moral development, and the changing landscape of American culture over those decades. A major goal of DY is to provide 21st century students, teachers and scholars with robust, creative, thorough, illuminating and perhaps even transformative ways to explore that process.

Appendix 1: The Digital Yoknapatawpha Participants

Director: Stephen Railton (University of Virginia)

Dotty Dye (Arizona State University)

Associate Directors: Julie Napolin (New School)

Theresa Towner (University of Texas, Dallas)

John N. Duvall (Perdue University)

Robert W. Hamblin (Southeast Missouri State University)

John Padgett (Brevard College)

Advisory Editors: John T. Matthews (Boston University)

Hortense Spillers (Vanderbilt University) Melanie Benson Taylor (Dartmouth College) Jay Watson (University of Mississippi)

Johannes Burgers (Queensborough Community College)

James Carothers (University of Kansas)

Robert Coleman (University of South Alabama)

John Corrigan (Emory University) Elizabeth Cornell (Fordham University) Ren Denton (University of Memphis) Peter Froehlich (Penn State Hazelton)

Taylor Hagood (Florida Atlantic University) Chad Jewett (University of Connecticut)

Jennie Joiner (Keuka College)

Collaborating Editors: Steven Knepper (Erskine College)

Cheryl Lester (University of Kansas)

Garrett Morrison (Northwestern University)

John Padgett (Brevard College) Erin Penner (Asbury University)

Sarah Perkins (Stanford)

Ben Robbins (Freie Universitaet, Berlin) Dorette Sobolewski (University of Glasgow)

Bill Teem (Independent Scholar)

Cartographer Illustrator: Rick Britton

Collaborating Technologists (University of Virginia)

<u>Institute for Advanced Technology in the Humanities</u>:

Worthy Martin Robbie Bingler Sarah Wells Daniel Pitti

Sciences, Humanities and Arts Network of Technological Initiatives:

Rafael Alvarado Bill Ferster

Digital Media Lab:

Jama Coartney Will Rourk Arin Bennett Kristy Haney

The National Endowment for the Humanities

Funding: The Department of English, UVA

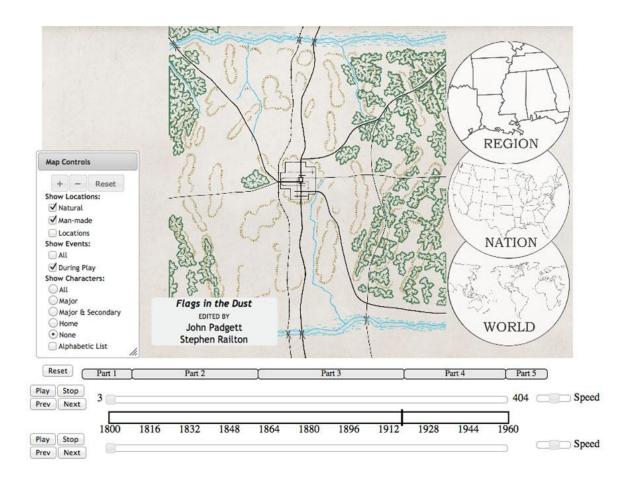
The Office of the Dean, College of Arts & Sciences, UVA

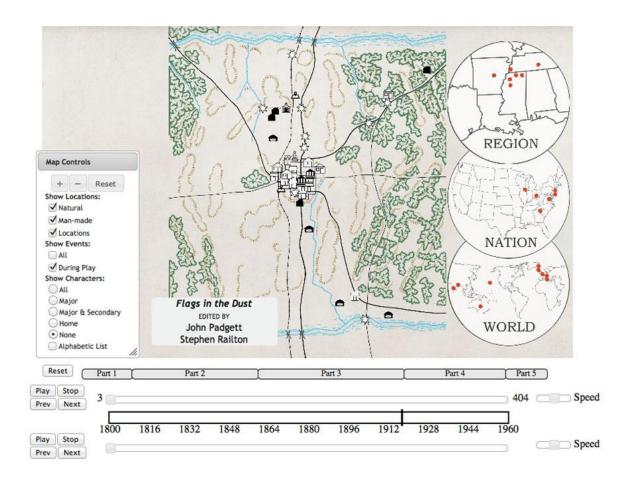
Appendix 2: Selected screen shots from Digital Yoknapatawpha

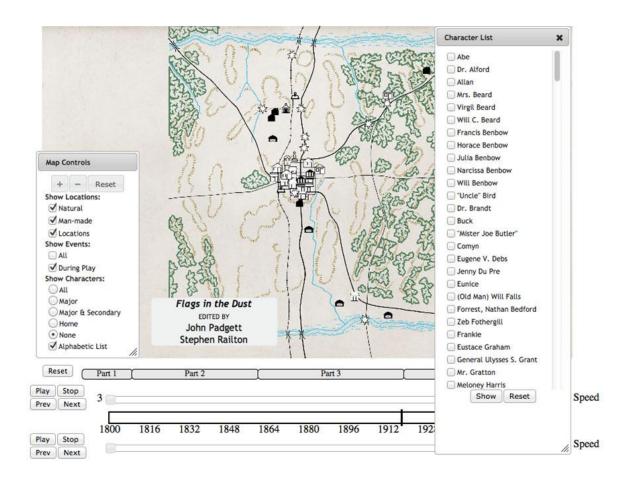
[NB: All of these reflect the prototype as of 31 April 2014; it is very much a work in progress. The sequence of images represents some of what a DY user can do by employing the various controls, i.e. see the way each text re-creates Yoknapatawpha as a physical space; see each text's Locations, Characters and Events at varying levels of information; "play" the text in either of two orders – narrative and chronological; search the data base for multi-text comparisons and patterns. It's more informative to view DY live, which you can do at "http://hero.village.virginia.edu/~rwb3y/faulkner/"]

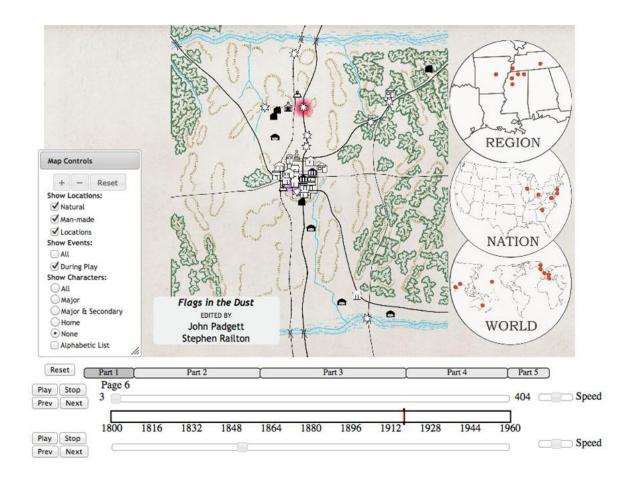
A Collaboration of Paulkner Scholars with the Institute for Advanced Technology in the Humanities, the Digital Media Lab and SHANTI at the University of Virginia Punding Provided by the National Endowment for the Humanities

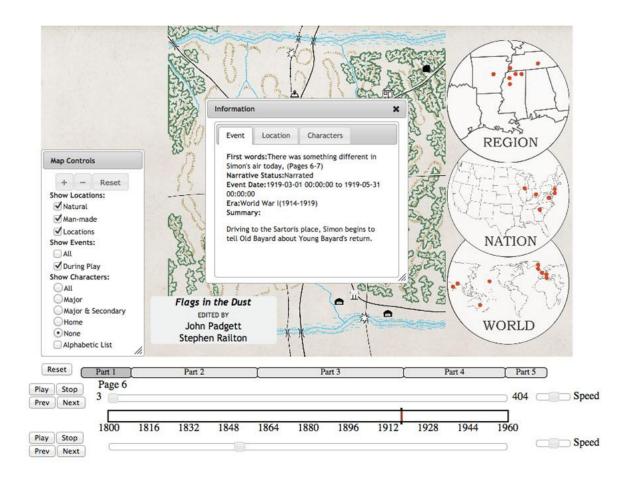
Image 1: The project homepage

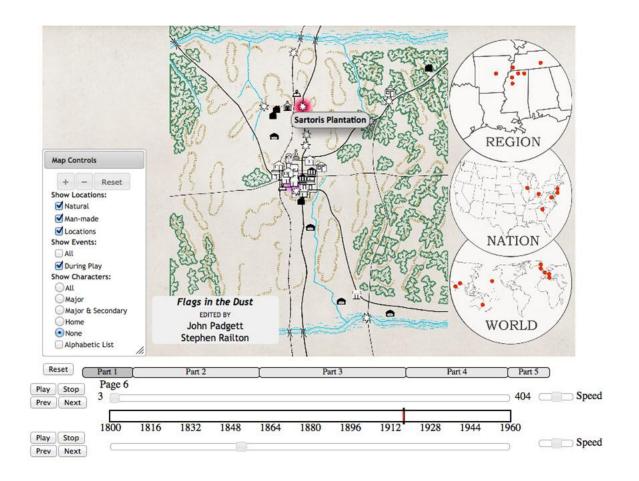


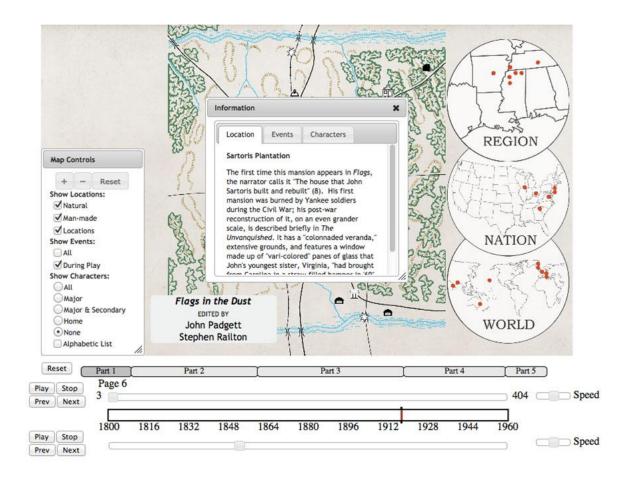


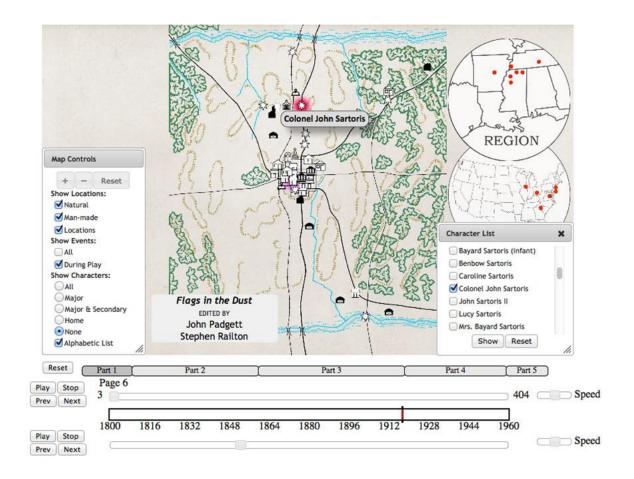


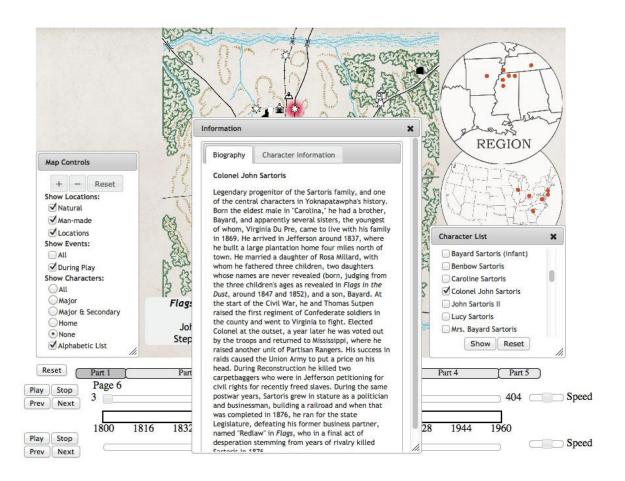


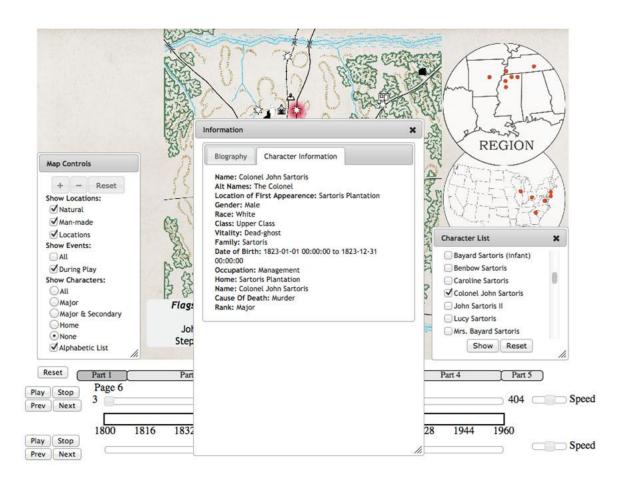


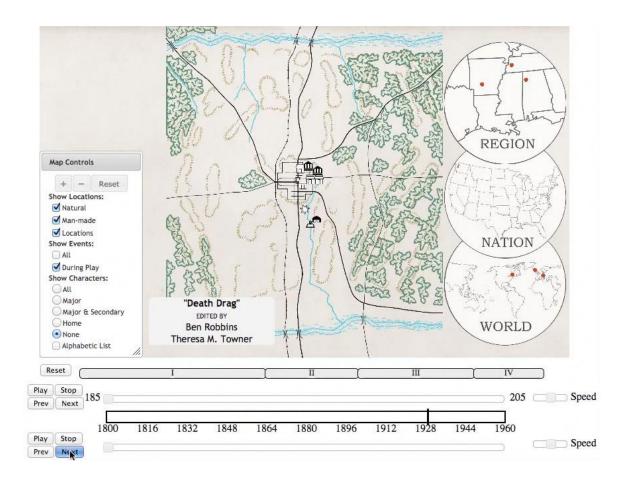












Characters Search

Text:	\$
Name:	
Family:	\$
Race:	\$]
Gender:	\$
Class:	\$
Vitality:	\$
Occupation:	\$
Search	

Characters Search



Flags in the Dust

(Carolina) Bayard Sartoris

(Old) Bayard Sartoris

(Young) Bayard Sartoris

(Young) John Sartoris

Bayard Sartoris (infant)

Benbow Sartoris

Caroline Sartoris

Colonel John Sartoris

Colonel John Sartoris' Mother

John Sartoris II

Lucy Sartoris

Mrs. Bayard Sartoris

Narcissa Benbow

Unnamed Aunt of Bayard Sartoris

Unnamed Daughter of John Sartoris(1)

Unnamed Daughter of John Sartoris(2)

Unnamed Earliest Carolina Sartoris

Unnamed Grandfather of Old Bayard Sartoris

Characters Search



Flags in the Dust

Caroline Sartoris
Colonel John Sartoris' Mother
Lucy Sartoris
Mrs. Bayard Sartoris
Narcissa Benbow
Unnamed Aunt of Bayard Sartoris
Unnamed Daughter of John Sartoris(1)
Unnamed Daughter of John Sartoris(2)

Sanctuary

Narcissa Benbow Sartoris

"There Was a Queen"

Mrs. Sartoris Narcissa Sartoris Unnamed Sartoris Children

