



NATIONAL ENDOWMENT FOR THE

Humanities

OFFICE OF DIGITAL HUMANITIES

Narrative Section of a Successful Application

The attached document contains the grant narrative and selected portions of a previously funded grant application. It is not intended to serve as a model, but to give you a sense of how a successful application may be crafted. Every successful application is different, and each applicant is urged to prepare a proposal that reflects its unique project and aspirations. Prospective applicants should consult the Office of Digital Humanities program application guidelines at <http://www.neh.gov/grants/odh/digital-humanities-start-grants> for instructions. Applicants are also strongly encouraged to consult with the NEH Office of Digital Humanities staff well before a grant deadline.

Note: The attachment only contains the grant narrative and selected portions, not the entire funded application. In addition, certain portions may have been redacted to protect the privacy interests of an individual and/or to protect confidential commercial and financial information and/or to protect copyrighted materials.

Project Title: Annotation Studio: multimedia text annotation for students

Institution: Massachusetts Institute of Technology

Project Directors: James Paradis and Kurt Fendt

Grant Program: Digital Humanities Start-Up Grants, Level 2

NEH Application Cover Sheet

Digital Humanities Start-Up Grants

PROJECT DIRECTOR

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Field of Expertise: Humanities

INSTITUTION

Massachusetts Institute of Technology
Cambridge, MA UNITED STATES

APPLICATION INFORMATION

Title: *Annotation Studio: multimedia text annotation for students*

Grant Period: From 4/2012 to 3/2013

Field of Project: Humanities

Description of Project: Annotation Studio will be a web-based application that actively engages students in interpreting literary texts and other humanities documents. While strengthening students' new media literacies, this open source web application will develop traditional humanistic skills including close reading, textual analysis, persuasive writing, and critical thinking. Initial features will include: 1) easy-to-use annotation tools that facilitate linking and comparing primary texts with multi-media source, variation, and adaptation documents; 2) sharable collections of multimedia materials prepared by faculty and student users; 3) multiple filtering and display mechanisms for texts, written annotations, and multimedia annotations; 4) collaboration functionality; and 5) multimedia composition tools. Products of the start-up phase will include a working prototype, feedback from students and instructors, and a white paper summarizing lessons learned.

BUDGET

Outright Request	\$49,979.00	Cost Sharing	
Matching Request		Total Budget	\$49,979.00
Total NEH	\$49,979.00		

GRANT ADMINISTRATOR

Danforth Nicholas
Grants and Contracts Administrator
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Annotation Studio:
multimedia text annotation for students

A Level II Start-Up Project proposed by HyperStudio,
the digital humanities lab at Massachusetts Institute of Technology

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List of Project Participants

Fahmy, Sviatlana	Massachusetts Institute of Technology
Fendt, Kurt	Massachusetts Institute of Technology
Kelley, Wyn	Massachusetts Institute of Technology
Levinson, Deborah	Nimble Partners
Paradis, James	Massachusetts Institute of Technology
Schlatter, Tania	Nimble Partners

Annotation Studio: *multimedia text annotation for students*

A Level II Start-Up Project proposed by HyperStudio,
the digital humanities lab at Massachusetts Institute of Technology

Abstract

Annotation Studio will be a web-based application that actively engages students in interpreting literary texts and other humanities documents. While strengthening students' new media literacies, this open source web application will develop traditional humanistic skills including close reading, textual analysis, persuasive writing, and critical thinking. Initial features will include: 1) easy-to-use annotation tools that facilitate linking and comparing primary texts with multimedia source, variation, and adaptation documents; 2) sharable collections of multimedia materials prepared by faculty and student users; 3) multiple filtering and display mechanisms for texts, written annotations, and multimedia annotations; 4) collaboration functionality; and 5) multimedia composition tools. Products of the start-up phase will include a working prototype, feedback from students and instructors, and a white paper summarizing lessons learned.

Innovation Statement

At present, there is no educational platform that combines text and multimedia annotation tools with a user-friendly interface that engages students in reading, interpreting, and writing about seminal texts. Existing tools, such as TextLab, are designed to meet the needs of expert scholars. In contrast, Annotation Studio will make text analysis intuitive for students while integrating educational features such as participatory functionality and multimedia composition tools.

Humanities Significance

The proposed platform will have the capacity to engage learners in close reading and collaborative interpretation of classic humanities texts. Tapping the unique affordances of digital media and associated cultural practices, Annotation Studio will draw students into the traditional activities of humanistic scholarship: exploring sources and influences; examining historical and cultural contexts; tracing the flow of ideas across time, geography, and media; and considering multiple perspectives.

Proposal Narrative

Project description

Annotation Studio is a proposed web-based application that integrates a powerful set of textual interpretation tools behind an interface that makes using those tools intuitive for undergraduates. This innovative web application will allow students to interpret literary texts and other humanities documents by searching curated multimedia collections for relevant materials, posting comments, tagging, remixing, and sharing with other users – skills they have already acquired from the many hours they’ve spent “messing around” with peers on the Internet. Instead of skimming over difficult passages or being frustrated by them, students will use their new-media skills to open up the texts their instructors assign. Instead of passively reading, they will be discovering, annotating, comparing, sampling, illustrating, and representing – activities that John Unsworth has dubbed “scholarly primitives.”¹ In other words, students using Annotation Studio will be developing critical thinking skills as well as the basic skills of humanities research. MIT is requesting a Digital Humanities Start-Up Grant of \$49,979 to fund the interface design and programming work required to develop a working prototype of the proposed web application.

Annotation Studio will build on the success of Metamedia, an internal platform developed by HyperStudio, MIT’s digital humanities lab, and used in over 70 humanities courses.² Although it has been effective as an educational tool, Metamedia’s functionality lags far behind our vision for the proposed Start-Up project. While Metamedia supports the creation of multimedia collections and allows users to link and annotate entire texts with source and adaptation documents, Annotation Studio will do far more, offering fine-grained annotation, collaboration, comparison, composition, and multimedia editing tools that are tightly integrated and easy to use. Over time, Annotation Studio will also offer extensive curated collections of multimedia materials created by instructors and users. These collections will include multimedia source, variation, and adaptation materials linked to a growing library of digital texts.

In addition to developing a unique set of tightly integrated tools, this Start-Up project will also address issues that limit the use of existing digital humanities tools as described in a 2008 analysis commissioned by the Council on Library and Information Resources.³ According to this report, based on a survey of 32 digital humanities centers, there is a growing concern that investment in tool development is not being adequately leveraged across the humanities. All too often, tools developed in the context of a particular project may receive little use beyond the institution that produces them. In developing Annotation Studio, we will be mindful of this issue by emphasizing accessibility, usability, adaptability, and extensibility.⁴

To create this educational prototype, MIT will need to meet three fundamental objectives:

¹ In 2000, John Unsworth defined *scholarly primitives* as “self-understood” functions common to scholarly activity across disciplines, over time, and independent of theoretical orientation. (John Unsworth: “Scholarly Primitives: what methods do humanities researchers have in common, and how might our tools reflect this?”, May 13, 2000, (<http://www3.isrl.illinois.edu/~unsworth/Kings.5-00/primitives.html>), August 17, 2011)

² For a comparison of Metamedia and Annotation Studio features, please see the appendices.

³ Diane M. Zorich: A Survey of Digital Humanities Centers in the United States, November 2008.

⁴ By extensibility we mean the proposed platform’s capacity to be used with multimedia collections housed on other servers, different texts, and within other institutional environments.

1) simplifying the mark-up process essential to annotating and linking digital texts; 2) tightly integrating faceted search, annotation, collaboration, and composition tools; and 3) designing an interface that makes using these tools simple for anyone with basic computer literacy.

Prototype features

The Annotation Studio prototype will offer a unique combination of easy-to-use features including:

1. Text annotation and tagging functions that support a) comparison of base, source, and derivative texts; b) annotation collaboration; and c) grouping of media documents and annotations to create multimedia essays.
2. Media documents that are a) linked to copyright status including Creative Commons licensing; b) private or shared with the wider public depending on copyright status; and c) linkable to primary texts, source materials, and adaptations. For example, students will be able to link a passage from *Moby-Dick* to a clip from (let's say) John Huston's film version and biblical source texts.
3. Tools that make it possible for the user to link to, annotate, and display multimedia documents from Annotation Studio's central repository, the student's personal repository, or a user-group repository.
4. An advanced search function that allows students to filter (*i.e.* select for particular aims) both documents and annotations using faceting, full-text searches, or a zoomed-out view of texts with tags or relevant search terms highlighted in order to show different patterns.
5. Tools that can be used with user-downloaded and user-generated source texts.
6. Functionality that supports easy uploading of multimedia collections and documents that instructors have created outside of Annotation Studio.
7. User-driven creation of user groups with user-selectable privacy settings.
8. Tagging functionality that uses folksonomies.
9. Multimedia composition tools.

Multimedia content of the Annotation Studio prototype will include archives created at MIT to support study of Herman Melville's *Moby-Dick*, Mary Shelley's *Frankenstein*, and Oscar Wilde's *The Importance of Being Earnest*. Additional shared content will be developed by participating faculty and students during the prototyping and implementation phases. Archive curation and website maintenance will be supported by HyperStudio's core operating budget and staffed by HyperStudio team members and graduate students of MIT's Comparative Media Studies.

Through its innovative design, Annotation Studio will remove barriers to first-hand discoveries that spark interest in close reading and critical writing about literature. By enabling the user to tag texts using folksonomies rather than TEI, this educational platform will allow students to practice "scholarly primitives" quite naturally, thereby discovering how literary texts can be opened up through exploration of sources, influences, editions, and adaptations. In other words, Annotation Studio's tools and workspaces are meant to help students hone skills traditionally used by professional humanists.

Technical specifications

Annotation Studio, including all functions, will be developed as an open source web application based on HTML5, CSS, and JavaScript. In particular, jQuery (<http://jquery.com/>), an AJAX (“Asynchronous Javascript and XML”) / DHTML (“Dynamic HTML”) JavaScript library, will provide the core of the dynamic functionality. HTML5 will also ensure that Annotation Studio can be used on portable computing devices. On the server side, we will be using the open source Ruby on Rails 3 framework.

Environmental scan

Several existing products already represent one or more features of the proposed Annotation Studio application. These include commercial text annotation sites (e.g. co-ment⁵), educational text annotation tools (e.g. ecomma⁶), tools for online discussions (e.g. Marginalia⁷), social web annotation sites (e.g. Diiigo⁸), linguistic annotation tools (e.g. Callisto⁹), video annotation research tools (e.g. Anvil¹⁰), and online libraries such as Bibliomania. A few projects are also incorporating some of the more sophisticated functionalities that will be part of the Annotation Studio tool kit. For example, Hofstra’s TextLab¹¹ allows users to link text to images of manuscript leave and other source documents, compare texts as they evolve in the revision process, and gives users the ability to transcribe versions of a fluid text. Another cutting-edge tool, HRIT, supports joint annotations, has some multimedia annotation capabilities, and is linkable to other tools through APIs. TextLab, Loyola’s HRIT-CATT tools¹², and STEP (Scholarly Text-Editing Platform) all allow users to mark-up texts primarily with TEI.

As noted above, the proposed platform will tightly integrate these and other functionalities, a significant technological challenge. Even so, the most significant difference between Annotation Studio and other digital annotation projects will be its student-centered design. Other annotation tools assume user familiarity with TEI plus a well-developed understanding of the relationships between literary sources, manuscripts, editions, and adaptations. Annotation Studio, on the other hand, will make sophisticated analytic tools immediately accessible to students with no prior experience with close textual analysis or TEI.

History and duration of the project

Annotation Studio is rooted in a technology-supported pedagogy that has been developing in undergraduate literature classes at MIT over the past decade. After having been one of the initial faculty involved in MIT’s Metamedia project and co-authoring the *Teachers’ Strategy Guide for Reading in a Participatory Culture* for Project New Media Literacies, Senior Lecturer Wyn Kelley began to explore how the notion of “reading in a participatory culture” could be integrated into her literature and writing classes. She had observed that many students viewed reading and writing about classic literature as

⁵ <http://www.co-ment.com/>, August 16, 2011

⁶ <http://ecomma.cwrl.utexas.edu/e392k/>, August 16, 2011

⁷ <http://webmarginalia.net/>, August 17, 2011

⁸ <http://www.diiigo.com/>, August 17, 2011

⁹ <http://callisto.mitre.org/>, August 17, 2011

¹⁰ (<http://www.anvil-software.de/>, August 17, 2011

¹¹ <http://mel.hofstra.edu/TextLab/>, August 17, 2011

¹² <http://hrit.etl.luc.edu/>, August 17, 2011

foreign tasks fraught with difficulty and potential failure. Authorship itself seemed a remote and mysterious enterprise exclusive to elite writers and literary scholars. However, when Kelley asked her students to annotate texts by drawing on multi-media sources and adaptations, these inhibitions disappeared. Imagining themselves as editors charged with making a text understandable to others, students became more skilled readers and writers.

Kelley's experiment was informed by a wide range of theoretical and practical approaches: concepts of media literacy developed by Henry Jenkins et al in the New Media Literacies Project; John Bryant's work on interactive and collaborative fluid text editing; and new digital humanities tools for visualization, data mining, and social networking.¹³ At the heart of these different approaches lies an understanding of the mix as a central component of new media "literacies" or "competencies."¹⁴ In academic scholarship and pedagogy, appreciation for the ways in which artists borrow and rework (i.e. remix) cultural materials has energized the study of creative processes. In the classroom, reading literary works as textual remixes develops close reading and critical thinking skills while introducing students to source study.

Nearly 10 years ago, MIT's digital humanities lab, HyperStudio, developed an internal platform that supports this pedagogical approach. Called Metamedia, the platform was the first to treat all media – image, video, sound, and text – in the same way, allowing users to work across media types when researching topics or remixing sources to trigger and express new insights. This before-its-time tool integrated online collaboration, remix, and social commenting functionality well before the advent of social networking sites such as Facebook or Google+, or online sharing sites like YouTube and Flickr. As noted in the project description, Annotation Studio will build on Metamedia's educational success, updating its code base and toolset, and integrating new annotation, collaboration, composition, and visualization functionality currently being developed by MIT's digital humanities lab. Please see the attachments for a comparison of Metamedia and Annotation Studio features.

¹³ Henry Jenkins, Wyn Kelley, Jenna McWilliams, Katie Clinton, *et al*, *Teachers' Strategy Guide for Reading in a Participatory Culture* (2008). At *Project New Media Literacies* (Annenberg School for Communication and Journalism. University of Southern California). (January 22, 2011). Web. John Bryant, *The Fluid Text: A Theory of Editing for Book and Screen* (Ann Arbor: University of Michigan Press, 2002). "American Authors Archive." *HyperStudio: Digital Humanities at MIT*. (January 22, 2011). Web.

¹⁴ Henry Jenkins, *et al*, *Confronting the Challenges of Participatory Culture: Media Education for the 21st Century*. The John D. and Catherine T. MacArthur Foundation, 2006. (January 22, 2011). Web.

Work plan

Task	Staff	Completion
1. Design and build initial infrastructure to support proposed functionality (Ruby on Rails back-end framework, browser-facing front-end). <i>Please see the appendices for a breakdown of design and programming tasks.</i>	Paradis, Fendt, Kelley, Software Developer	August 2012
2. Complete initial design and programming of user interface and workspaces.	Software Developer, Interface Consultants	August 2012
3. Conduct integrated testing using the TDD (test-driven development) methodology throughout prototype development process.	Fendt, Software Developer	Sept. 2012 – March 2013
4. Integrate feedback from users to refine interface and workspace environment. Complete bug fixes.	Software Developer, Interface Consultants	Sept. 2012 - March 2013
5. Develop curation protocol for additions to the shared collections of multimedia materials.	Paradis, Fendt	Feb. 2013
6. Conduct project evaluation. Assess progress in meeting objectives. <i>Please see appendices for evaluation plan.</i>	Fahmy, Paradis, Fendt	Feb. - March 2013
7. Draft proposal for NEH implementation grant.	Paradis, Fendt	Dec. 2012
8. Publish White Paper documenting platform development and summarizing testing results.	Paradis, Fendt	April/May 2013
9. Present project results at conferences	Paradis, Fendt, Kelley	ongoing

Project Staff (for responsibilities, see work plan)

Title and Name	Time Committed to Project	Funding
1. PI: James Paradis, Professor of Writing & Humanistic Studies	MIT fully supports the academic year salary of faculty but makes no specific commitment of time or salary to this particular research project.	
2. Co-PI: Kurt Fendt, Exec. Director, HyperStudio	8.3% FTE	NEH
3. Software Developer (search in progress)	12.5% FTE	NEH

Title and Name	Time Committed to Project	Funding
4. Interface and Graphic Design Consultant: Nimble Partners	<i>See letter of commitment.</i>	NEH
5. Project Advisor: Wyn Kelley	20 hours	NEH
6. Assessment Officer: Sviatlana Fahmy	40 hours	NEH

Start-up project product and dissemination

By the end of the grant-funded period, MIT will have completed a working, open source prototype that will be freely available as a web application and as downloadable source code via a dedicated public website. The prototype will have been tested by MIT students and literature faculty, and will incorporate design refinements based on their feedback. The public site will allow any student or educator to test the prototype and provide additional feedback that will guide the subsequent implementation phase.

Project staff will co-author a traditional white paper distributed through the website as well as a multi-media, interactive report documenting development of the platform and lessons learned. To further support dissemination, the Co-PI and project advisor will present the project at a number of conferences such as Digital Humanities 2012, the annual meeting of the Modern Language Association 2013 and at other venues.

Final products will also include a proposal for a Digital Humanities Implementation Grant to build out the platform with additional features suggested by user feedback during the start-up phase and to facilitate widespread deployment in colleges and universities throughout the country.

Planned features of the fully developed Annotation Studio

During the implementation phase of Annotation Studio we plan to add visualization tools including mapping and timelining; ability to link to other online digital resources through APIs; TEI markup support for integrating new texts and exporting texts with annotations; tutorials that demonstrate uses; instructor materials; and an instructor forum for discussing classroom applications and experiences. Shared multimedia collections and digital texts added to Annotation Studio during the implementation phase will also extend its use to the study of seminal documents in fields throughout the humanities.

NATIONAL ENDOWMENT FOR THE HUMANITIES

Applicant: Massachusetts Institute of Technology

Principal Investigator: James Paradis

Project Grant Period: April 1, 2012 - March 31, 2013

1. Salaries & Wages		
PI: James Paradis	MIT fully supports the academic year salary of faculty but makes no specific commitment of time or salary to this particular research project.	
Co-PI: Kurt Fendt	8.3% of annual salary	Ex. B6
Software Developer	12.5% of annual salary	Ex. B6
Assessment Officer	2% of annual salary	Ex. B6
2. Fringe Benefits		
Co-PI Kurt Fendt	26% until 07/01/2012, 30% after	Ex. B6
Software Developer	26% until 07/01/2012, 30% after	Ex. B6
Assessment Officer	26% until 07/01/2012, 30% after	Ex. B6
3. Consultant		
Interface & Graphic Design Consultant	See quote in letter of commitment.	Ex. B6
4. Project Advisor	Honorarium of ^{Ex. B6} _____	Ex. B6
6. Travel to grantee meeting	\$150 round-trip shuttle from Boston	\$150
7. Total Direct Costs		\$31,139
8. Total Indirect Expenses	a. Rate: 60.5% b. Federal Agency: Office of Naval Research c. Date of Agreement: 7/5/11	\$18,839
9. Total Project Costs	(Direct and indirect costs)	\$49,979
10. Project Funding		
Requested from NEH	Outright	\$49,979
11. Total Project Funding		\$49,979

Participant Biographies

Principal Investigator

James Paradis is Head of Program in Writing and Humanistic Studies and Director of Comparative Media Studies at MIT. Professor Paradis is a noted scholar of literary and cultural perspectives on scientific rhetoric in the 19th century. His main fields of interest are Victorian cultural studies communications. Professor Paradis has also made significant contributions to the field of technical writing and communications. Together with Muriel Zimmerman he co-authored *The MIT Guide to Science and Engineering Communication* (1997) in order to strengthen the communication skills of MIT undergraduates.

Co-Principal Investigator

Kurt Fendt is a scholar of literary and cultural studies with extensive expertise in the application of information technologies to humanities research and education. He is Principal Research Associate and Director of MIT's HyperStudio for Digital Humanities. Since establishing MIT's HyperStudio in 1998, he and his team have developed more than 30 digital projects for a range of humanities disciplines and created two digital platforms specifically geared towards humanities education and research. Dr. Fendt is co-Director of "Berliner sehen", a collaborative hypermedia learning environment for German Studies and co-author of the French interactive narrative *A la rencontre de Philippe*. Before coming to MIT in 1993, Fendt was Assistant Professor in the Department of Applied Linguistics at the University of Bern in Switzerland, where he established the Media Learning Center for the Humanities.

Project Advisor

Wyn Kelley, a member of the MIT Literature Faculty since 1985, has taught courses on American literature, literary genres (comedy, melodrama), women writers, and writing about literature, among others. She is author of *Herman Melville: An Introduction* (2008) and *Melville's City: Literary and Urban Form in Nineteenth-Century New York* (1996). Associate Editor of the Melville Society journal *Leviathan*, she has published in a number of journals and collections, including *Melville and Hawthorne: Writing Relationship, Ungraspable Phantom: Essays on Moby-Dick, Melville and Women, "Whole Oceans Away": Melville in the Pacific*, and the *Cambridge Companion to Herman Melville*. Kelley has extensive experience using Metamedia (the proposed project's precursor) in her writing and literature classes.

Interface Design Consultants

Deborah Levinson and **Tania Schlatter** have 35 years of combined experience in the field of web and interface design. Deborah is also a MIT graduate and co-author of *The MIT Guide to Teaching Web Site Design*, published by the MIT Press in April 2001. Clients of their consulting firm, Nimble Partners, have included Massachusetts Institute of Technology, Harvard University, Cognizant, Verizon, and Napster.

Assessment Officer

Sviatlana Fahmy is an expert in organizational performance and program evaluation with a Ph.D. in Sociology from Boston University. She has also served as part-time faculty and research manager at Boston University and Boston College, and she has completed consulting projects in cooperation with Wellesley College and Northeastern University.

Software Developer

We are currently conducting a national search for a new software developer. He or she will have the requisite technical skills plus a humanities background. At a minimum, the successful candidate will have the following qualities:

- Solid knowledge of Ruby on Rails
- Advanced Javascript and CSS ability
- A test-driven development style (preferred)
- SQL (PostgreSQL)
- Familiarity with basic system administration of Mac OS X, in particular
- Ability to manage Apache, MySQL and PostgreSQL installations
- Some familiarity with PHP and Java (desirable)
- Enthusiasm for working with new technologies.

Data Management Plan for the Start-Up Phase of Annotation Studio

Data to be generated

Type of data	When shared?	Under what conditions?
Open Source computer code associated with tool, interface, and server-side components development.	At conclusion of the start-up project, when initial testing has been completed.	Code will be freely available.
User-generated texts, annotations, and electronic multi-media collections generated during the testing phase.	None of these data will be publically available until the conclusion of the start-up project.	These data will be made available at the discretion of the creator, who will control access via privacy settings. Copyrighted data will be dynamically excluded from collections and documents made available to the public.
Assessment data generated during the testing phase.	Aggregated data will be shared via the white paper and final report to NEH.	No information will be shared that could identify individuals participating in the assessment process.
White paper	After the project has been completed.	The white paper will be freely available to the public via the project website.
A multimedia report posted on the project website	After the project has been completed.	The multimedia report will be freely available on the project website.
A final report to NEH	At the conclusion of the project.	Dissemination of the final report will be the responsibility of NEH.

Period of data retention

Data will be retained for 5 years beyond the completion of the start-up phase of Annotation Studio. Reports and aggregated data will be publicly available within 1 year of project completion, via the project website, copies of the data will be stored long-term in DSpace@MIT. <http://dspace.mit.edu/>

Data formats and dissemination

Computer code will be available as open source in a publicly accessible code repository (GitHub). Reports will be made available in PDF format and disseminated via the project website and through DSpace@MIT. All metadata associated with media documents in shared multimedia collections in Annotation Studio will be freely available on the Annotation Studio website, only

copyright cleared media and text documents will be accessible to the public.

Data management and maintenance

All computer code will be stored in Github, where existing code base for Metamedia (Annotation Studio's precursor) and other HyperStudio projects and tools has been stored. <https://github.com/>.

All other data, including user generated texts and annotations, (exportable as TEI/XML files), assessment data, reports, and publications will be stored in DSpace, MIT's online institutional repository for faculty and researchers. Copyright-cleared media documents will be stored in DSpace along with their respective collection and student interaction information.

DSpace@MIT identifies two levels of digital preservation: bit preservation, and functional preservation. Bit preservation ensures that a file remains exactly the same over time – not a single bit is changed – while the physical media evolve around it. Functional preservation goes further: the file *does* change over time so that the material continues to be immediately usable in the same way it was originally while the digital formats (and the physical media) evolve over time.

DSpace@MIT insures permanent data preservation in a secure and searchable archive, and is managed by MIT Libraries.



John Bryant
DEPARTMENT OF ENGLISH
HOFSTRA UNIVERSITY
HEMPSTEAD, NY 11549

20 September 2011

Office of Digital Humanities
National Endowment for the Humanities
1100 Pennsylvania Avenue, NW
Washington, DC 20506

To Whom It May Concern:

Dr. Kurt Fendt, executive director of MIT's HyperStudio, has asked me to write a letter in support of his NEH Digital Humanities Start Up project proposal to develop a prototype for Annotation Studio. And I do so with great enthusiasm.

Annotation Studio will be a further iteration of MIT's internal pedagogical platform, Metamedia, as an open source extension accessible to all. This crucial step will consolidate various tools into a single new platform that will enable students and scholars to compare texts and multimedia files, track the similarities and differences between source and adaptations, and generate new scholarship both in the classroom and in professional humanities venues.

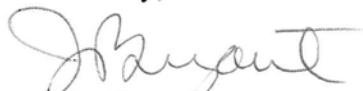
As director of The Melville Electronic Library (MEL), an NEH-funded (and We The People) scholarly edition, I will be closely following this project, which grew out of MIT senior lecturer and MEL associate director Wyn Kelley's work and response to an expressed need for something we call "Melville Remix." This projected MEL workspace, which will grow out of Annotation Studio, will interoperate with our transcription and fluid-text editing tool now under development (TextLab) and will enable users to explore the intertextuality of and cultural revisions to Melville's works.

I have visited and communicated with Dr. Fendt and his HyperStudio staff several times, shown them an early prototype of TextLab (made possible by a 2008 NEH Start Up grant), and discussed several topics of mutual interest regarding the development of MEL and Annotation Studio. Dr. Fendt's proposal for a Start Up makes an excellent case for this project not only for its technological advancements and use of folksonomy but also for its focus on opening up the otherwise arcane practices of manuscript, source, intertextual, and adaptation studies (formerly performed by those with exclusive access to arcane materials) to students, critics, other scholars, and general readers alike. In this

regard, MIT's proposed Annotation Studio is on the cutting edge of a kind of digital scholarship that will bring important critical thinking skills to bear on the otherwise unfocused mining of unreliable and incomplete internet files.

The Annotation Studio project is impressive in that it not only permits easy access to tools and activities that have already proven to inspire students but also opens to scholars ways to demonstrate how texts evolve and interact in the culture. I am excited to support this project.

Sincerely,

A handwritten signature in cursive script, appearing to read "John Bryant".

John Bryant

Professor of English

Director of The Melville Electronic Library



September 21, 2011

To Whom It May Concern:

Kurt Fendt has asked for my support for his project, Annotation Studio, and I am delighted to serve as project advisor. His plan builds on several projects with which I am currently involved—Metamedia and Miximize—and promises to develop tools and materials that will be useful to others, including MEL (Melville Electronic Library). Hence Annotation Studio will be vital to a number of enterprises, including scholarship, pedagogy, and the building of social communities around different kinds of literary and multimedia texts.

I have worked with Dr. Fendt and his staff for many years and have been inspired by their creative ideas and generous spirit of collaboration. Although their programs use the most innovative initiatives in digital technology, they are not just technical marvels; he never loses sight of the students we teach and the communities we serve. I hope to see the HyperStudio's programs continue to grow and expand into the next phase of development.

Thank you for this opportunity to speak on behalf of Kurt Fendt and the HyperStudio.

Sincerely,

Wyn Kelley
wkelley@mit.edu

NIMBLE PARTNERS

September 23, 2012

Kurt Fendt, Executive Director
HyperStudio
Massachusetts Institute of Technology
77 Massachusetts Avenue
Cambridge, MA 02139

Dear Kurt,

Nimble Partners will be pleased to provide consulting assistance to support the interface design of the proposed Annotation Studio Start-Up project, as described in your September 27 proposal to the National Endowment for the Humanities. We agree to provide the following scope of services for a total fee of ^{Ex. B6} :

1. Up to four rounds of wireframes/specifications for front-end functionality, structure, and interface appearance
2. Design simple color palette and typographic and page layout specifications

Sincerely yours,



Deborah A. Levinson
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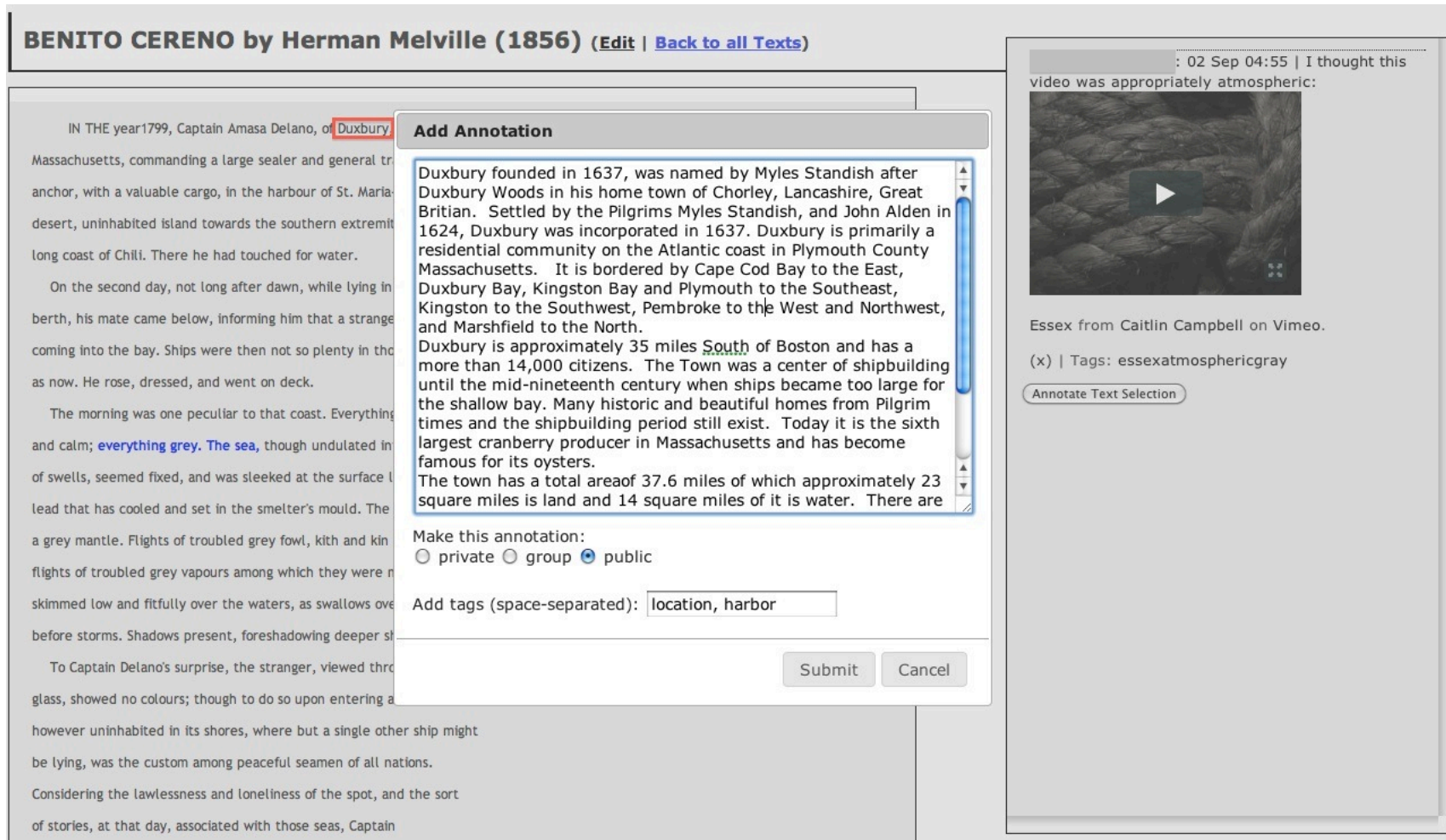
Metamedia and Annotation Studio Feature Comparison

	Metamedia	Annotation Studio
Annotation		
Can be tagged using folksonomies		New Feature
Can link two or more texts with associated multimedia files		New Feature
Facilitates comparisons	Only supports annotation and comparison of entire multimedia files.	New Feature: fine-grained annotation and text comparison functionality with tagging, flexible filtering, and display mechanisms.
Supports joint annotations	Only in online-forum format.	New Feature: Sharable multimedia essays tools based on joint annotations.
Multimedia files (images, audio, video)		
Linkable to source materials, adaptations, and primary texts.	Can only link entire documents.	New Feature: text links.
Linked to source information & copyright status including Creative Commons licensing	Dublin Core metadata only.	New Feature: links to Creative Commons and Open Content licenses to increase awareness of media reuse rules.
Private or shared with a group or the wider public.	All collections are private.	New Feature: dynamic exclusion of copyrighted materials for broader-public users. (Fair Use/Teach Act provision allows on-campus use of copyrighted materials.)
Other features:		
Linkable to other repositories	Beta version only.	New Feature: API connections.
Browser allows students to filter using faceting, full-text searches of metadata and annotations, zoomed-out views with annotations.		New Feature
Composition tools for multi-media essays		New Feature
Browser allows students to filter using faceting, full-text searches of metadata and annotations, zoomed-out views with annotations.		New Feature
Composition tools for multimedia essays		New Feature
User-driven creation of user groups with user-selectable privacy settings.	Yes	New Feature: Fine-grained access settings by document, even within groups.
Can be used with user selected or user generated source texts.	Yes	Yes
Interactive tutorials that demonstrate use		<i>To be included in fully implemented platform.</i>
Textual visualization tools		" "
TEI markup support		" "
Instructor materials and forum		" "
Ability to link to other online digital resources through APIs		" "

Sample Design for Annotation Studio

1. Adding a text annotation

The following screenshot shows how a user can annotate a word, phrase, or any user-selected portion of a base text (in this case, Melville's *Benito Cereno*). Here, only privacy settings and tag options in the annotation are displayed:



2. Displaying annotations

This screenshot displays the annotation entered in the screen above with an existing annotation by a different user, which includes an attached video. Annotated words in the base text are highlighted in blue.

BENITO CERENO by Herman Melville (1856) ([Edit](#) | [Back to all Texts](#))


IN THE year 1799, Captain Amasa Delano, of [Duxbury](#), in Massachusetts, commanding a large sealer and general trader, lay at anchor, with a valuable cargo, in the harbour of St. Maria- a small, desert, uninhabited island towards the southern extremity of the long coast of Chili. There he had touched for water.

On the second day, not long after dawn, while lying in his berth, his mate came below, informing him that a strange sail was coming into the bay. Ships were then not so plenty in those waters as now. He rose, dressed, and went on deck.

The morning was one peculiar to that coast. Everything was mute and calm; [everything grey](#). [The sea](#), though undulated into long roads of swells, seemed fixed, and was sleeked at the surface like waved lead that has cooled and set in the smelter's mould. The sky seemed a grey mantle. Flights of troubled grey fowl, kith and kin with flights of troubled grey vapours among which they were mixed, skimmed low and fitfully over the waters, as swallows over meadows before storms. Shadows present, foreshadowing deeper shadows to come.

To Captain Delano's surprise, the stranger, viewed through the glass, showed no colours; though to do so upon entering a haven, however uninhabited in its shores, where but a single other ship might be lying, was the custom among peaceful seamen of all nations. Considering the lawlessness and loneliness of the spot, and the sort of stories, at that day, associated with those seas, Captain

: 02 Sep 04:55 | I thought this video was appropriately atmospheric:



Essex from Caitlin Campbell on Vimeo.

(x) | Tags: [essexatmosphericgray](#)

: 16 Sep 20:58 | Duxbury founded in 1637, was named by Myles Standish after Duxbury Woods in his home town of Chorley, Lancashire, Great Britain. Settled by the Pilgrims Myles Standish, and John Alden in 1624, Duxbury was incorporated in 1637. Duxbury is primarily a residential community on the Atlantic coast in Plymouth County Massachusetts. It is bordered by Cape Cod Bay to the East, Duxbury Bay, Kingston Bay and Plymouth to the Southeast, Kingston to the Southwest, Pembroke to the West and Northwest, and Marshfield to the North. Duxbury is approximately 35 miles South of Boston and has a more than 14,000 citizens. The Town was a center of shipbuilding until the mid-nineteenth century when ships became too large for the shallow bay. Many historic and beautiful homes from Pilgrim times and the shipbuilding period still exist. Today it is the sixth largest cranberry producer in Massachusetts and has become famous for its oysters. The town has a total area of 37.6 miles of which approximately 23 square miles is land and 14

Breakdown of Development Tasks

Web-front end (user interface and tools) will be developed using HTML 5, JavaScript, and JQuery. Server backend functions will be developed using Ruby on Rails 3. In many cases, programming for Annotation Studio will build on code already developed for other HyperStudio projects. The bold text below indicates which functionality will be new for this project.

1. Develop annotation functionality that enables:
 - a. **Text highlighting** connected to user-created annotations including:
 - i. annotation text
 - ii. privacy/sharing settings
 - iii. copyright status of linked media documents
 - iv. linked media documents represented through thumbnails
 - v. **tagging with folksonomies.**
 - b. **Ability to highlight related text in juxtaposed documents** with all elements listed above plus automated source, core, and derivative text tagging.
 - c. Ability to embed annotations with IDs in base text.
 - d. **Overlapping annotations and their display.**
2. Develop functionality that enables global and text-specific search and filtering for:
 - a. **Free text**
 - b. **Tags**
 - c. **Users/groups**
 - d. **Combinations of above**
3. Develop functionality that enables comparison of:
 - a. **Source and core text**
 - b. **Core text and derivative text**
 - c. **Source and derivative text**
4. Develop faceted browser functionality that enables:
 - a. **Display of annotation, occurrence, tag, related media document counts.**
 - b. **Navigation mechanism for above.**
5. Develop the following user interface features:
 - a. **Integration of visual text, navigation, and media document display.**
 - b. **Display of annotation text and related tags, media documents, privacy settings, copyright status.**
 - c. **Display of in-text annotations separated by different users/tags.**
 - d. **Display of in-text annotation in global and detailed text views.**
 - e. **Ability to create different annotation sets based on filter criteria.**
 - f. **User-selectable and simultaneous display of different annotation sets and in-text annotation representation.**
 - g. **Global and detailed text navigation** (chapters, pages, lines).
6. Develop the following server back-end components:
 - a. User/ group management
 - b. Authentication/authorization
 - c. Database/repository management
 - d. Support for front-end tools
 - e. **APIs and outside server connections**
 - f. Metadata management
 - g. **TEI import/export mechanisms** (future feature of fully developed application)

Project Evaluation Plans

Project evaluation activity is designed to answer the following questions:

1. Does the prototype have all elements of the proposed functionality by the end of the start-up period? If not, what progress has been made?
2. What unanticipated difficulties arose during the development process? Were they resolved? If not, why not?
3. How did students who tested the prototype rate its ease of use? (both overall and by specific function)
4. How did faculty who tested the prototype rate its ease of use? (both overall and by specific function)
5. Which features did students and faculty find most and least valuable? Which features did they use most?
6. Did students enjoy using the prototype?
7. What improvements or additions to the prototype did testers suggest?
8. How did faculty characterize the impact of using the prototype in their classes? What evidence did they cite?
9. How did students characterize the impact of using the prototype in their classes? What evidence did they cite?
10. To what extent did prototype use have the effect the developers intended? What evidence supports this conclusion?
11. What improvements or additions to the prototype did testers suggest?

To answer these questions, we will employ the following tools:

1. Structured and unstructured faculty interviews
2. Student surveys
3. Student focus groups
4. Ethnographic observation of faculty and students using the prototype

Data will be gathered and analyzed by the assessment officer with the assistance of the research assistant. Findings will be incorporated into the final report.

COUHES approval will be obtained BEFORE any research is conducted.