White Paper Report

Report ID: 104217

Application Number: HD-51403-11

Project Director: Scott Hamlin (hamlin_scott@wheatoncollege.edu)

Institution: Wheaton College

Reporting Period: 9/1/2011-6/30/2014

Report Due: 9/30/2014

Date Submitted: 9/30/2014

Final Performance Report and White Paper

Grant: HD-51403-11

Developing a User Experience for TAPAS

Scott Hamlin, Director of Research and Instruction for Library and Information Services

Wheaton College

Submitted: September 30, 2014

Introduction

Background on TAPAS

Origins and Mission

The idea for TAPAS (the TEI Archiving, Publishing, and Access Service) emerged from a TEI workshop held at Wheaton College in 2008. Many of the scholars, librarians, archivists, and technologists at the workshop, particularly those from small liberal arts colleges, expressed frustration in their inability to present or share their encoded texts. Recognizing a common need, several of the institutions applied for and received an IMLS National Leadership grant to plan a service for preserving, publishing, and working closely with TEI data. Two further grants (a National Leadership Grant from IMLS and the Digital Humanities Startup grant from NEH on which this report is focused) have allowed us to create that service. A recent award from NEH's Preservation and Access Research and Development program will now enable us to extend the features of the service. The goal of TAPAS is to provide TEI publishing and repository services at low cost to those who lack institutional resources: faculty, students, librarians, archivists, teachers, and anyone else with TEI data who wants to store, share, and publish it. This service will launch on October 1.

Goals of this Grant

The goal of the work funded through the NEH Start-up grant was to focus on the development of a "User Interface, User Experience, and work flow model" for TAPAS. All along, we intended for this user experience to be uniquely tailored to the needs of TAPAS's target audience. "Given that the intended audience for this service generally has limited technical expertise or support," we wrote in the original proposal, "a clear, simple user experience is critical to the efficacy of the tool." Our plan was to develop this interface for the Drupal content management system with the following features: "1) manag[ing] encoded texts and related materials stored in a TAPAS Fedora repository, 2) publish[ing] those materials on the web, and 3) allow[ing] for the greater scholarly community to interact with those published texts."

At the same time that we received the NEH grant, TAPAS also received an IMLS grant with funds to hire a developer to create the web application and TEI repository. Initially, we planned to do much of the work in Drupal through consultants hired under the NEH Start-up grant, but the IMLS grant allowed us to shift much of this work to the IMLS-funded position, enabling us to focus our efforts in the NEH grant more firmly on interface design. Consultants funded through the NEH Start-up funds were used to help create and enhance important facets of the interface for the web application: the graphic design, the workflow, the overall architecture of the site, and the TEI reading interface. The remaining money in the NEH grant funded important planning and interface design meetings and activities that invited constant feedback from the TAPAS user-community at critical steps of the design and development process. So, the two grants complemented each other in very productive ways. The IMLS grant established a full-time position devoted to developing the TAPAS application. The NEH start-up grant not only enabled us to focus on the design of the application, but it also was invaluable in creating a more

thoughtful, collaborative, and inclusive process for the design than would have otherwise been possible. TAPAS is a much better application for the TEI community as a result.

Project Activities

Our interface design and development work for this project was guided by several basic working principles. First, we adopted a process of iterative design and prototyping that would enable us to test our ideas about work flow and usage during the design process. These principles are commonly accepted in digital humanities project development but were especially important for TAPAS because of the evolving nature of the project and its user community. To guide this iterative design process, we also used the concept of "user stories" adapted from agile software development as a way of formalizing specific kinds of desiderata and exploring their consequences for the interface as a whole. Finally, we conducted regular user testing, including small focus groups and larger site-wide beta-testing, with follow-up evaluations whose results were used to guide succeeding phases of development.

Our first challenge in the interface development work was to conceptualize the various work flows or usage narratives that the TAPAS service would need to support. TAPAS is a complex service that offers several quite distinct layers, including:

- the "reader" layer through which members of the public can freely explore and search the TAPAS collection, learn about projects, and read texts from their collections;
- the "contributor" layer through which TAPAS members can create projects and collections, upload TEI data and metadata, and configure the options through which their materials are exposed to view; and
- the "administrative" layer through which TAPAS staff and other administrators can manage membership information and user options, control the behavior of schemas and stylesheets, and perform other administrative activities.

In addition, for each of these types of users there are several distinct kinds of activities they might conduct, including:

- registering for membership and managing their membership options;
- creating and configuring TAPAS projects and collections;
- uploading and managing TEI data and metadata;
- exploring and interacting with TAPAS as a whole;
- reading and interacting with individual TEI texts.

Considered individually, these basic types of activities are all intelligible and even familiar as user interactions; many DH publication and information-sharing frameworks (such as Omeka, DHCommons, centerNet) include some subset of these activities. In the case of TAPAS, however, what complicated the workflow design was the fact that TAPAS seeks to support both a representation of individual user identity (the "member" or "contributor" and to a lesser degree the "reader"), a representation of institutional presence (the "project"), and a representation of a unit of publication and interaction (the "collection"). These concepts come into play within the user interface in a necessary sequence. In some cases this necessity is guided by logic: one has to have a user account before one can undertake user activities such as setting up a

project. In other cases, it is guided by the exigencies of specific systems: because of the way TAPAS components are expressed in Drupal, one has to create a project before one can create collections within that project, and one has to have at least one collection in order to upload TEI files to populate it. Considered in retrospect, these dependencies feel natural but the process of developing both the concepts and the nomenclature to describe them required significant work and several iterations to get right.

With these concepts in place, we were then able to develop a set of wireframe designs exploring actual sequences of user actions and the information users would need to see and provide at each stage of the various work flows. These wireframes were first developed on paper and then using a variety of sketching tools as a sequence of images that could be examined and annotated. These were accompanied by detailed written narratives explaining each work flow and its logic. Once these were sufficiently refined we were then able to hand them over to the Drupal developer for implementation.

This workflow development process was also in large part an exercise in establishing the kinds of user needs the service would address, and (by extension) the kinds of users we were trying to support. Although we began the project with a broadly conceived understanding of our user community—people working with TEI but without the institutional resources to publish or archive it on their own—we needed to break that broad category down into more precise components and explore the specific needs and expertise levels we expected. To accomplish this, we adapted the mechanism of "user stories" from the practices of agile software development (see Wikipedia's article, http://en.wikipedia.org/wiki/Agile_software_development, for a helpful overview). The user story is a lightweight mechanism for describing a specific need or function that an interface or tool needs to fulfill, using a scenario that describes the specific kind of user and the specific outcome desired. In the TAPAS development meetings, we found it helpful to frame the user stories at first in fairly specific terms. (For instance, "Lindsay is a graduate student working with a project team to set up a TAPAS project. She needs to be able to upload TEI files to the project on behalf of the team.") This specificity enabled us to explore the imaginative space of the user experience with a bit more realism than would be possible with a sparer story (e.g. "As a project team member, I want to be able to upload TEI files to a TAPAS project"), since the stories collectively also helped us remember that users have widely varying levels of technical expertise, project authority, duration of affiliation, attention span, and so forth. The details also made the user stories more memorable, which was a helpful side effect when working in short, intensive project sprints. Once we had developed user stories that covered all of the scenarios we could think of, we organized them around specific interface areas or functions, and then used these groupings to start planning the development of specific work flows. At this point we could also begin to abstract away from the details of the individual stories: for instance to observe that all team members at all expertise levels would need to be able to upload files, but that some would need step-by-step instructions and others would want the process to be as efficient as possible (leading to the development of a bulk data upload feature).

Finally, with the basic framework of the service in place, we focused on the graphic design and typography for both the overall site and for the reading interface through which the TEI texts

would be exposed. For the site-wide design and typography, we hired a designer who customized the Drupal theme and established a consistent look and feel for the service. The reading interface posed greater challenges because of the potential diversity of TEI data we would need to present. Our reading interface needs to provide basic styling to cover a very wide range of anticipated data at a minimal level, while also offering more specific functions for common TEI elements that offer opportunities for higher functionality. Thus for example there are a wide range of common TEI elements that can be formatted through a small repertoire of styles (paragraph-like elements; heading-like elements; inset block-like elements), and a smaller set that require more specific handling (notes, dramatic speeches, textual variants and revisions, editorial interventions, glossed names). For this latter set, we created a specification describing basic behaviors. For instance, in the case of a <persName> linked to a biographical listing, the name should be styled as a link to the listing. These stylings together constitute a "generic" TAPAS display stylesheet which is used as the default. Additional stylesheets offering more specialized formatting for specific text genres will be added over time (and can be developed and contributed by specific user communities). In a future iteration of TAPAS, users will be able to upload their own CSS to provide project-specific styles (and will be able to share those stylesheets with other TAPAS users).

Development Meetings

The majority of the interface design and development work was done at a series of face-to-face meetings held at the TAPAS partner institutions at three- to six-month intervals. These development meetings were the core of the work funded by this grant and an essential part of the process of creating the user interface for TAPAS. The meetings were designed as working events rather than as project updates, and in addition to providing a time for intensive collaborative work they also served an important function in the overall evolution of the project as a partnership and a working community. At each meeting we sought to bring together a group that could represent the varied user community whose needs had brought TAPAS into being: faculty at small liberal-arts colleges, instructional technologists interested in supporting local TEI projects, independent scholars, TEI specialists and trainers, staff from digital humanities centers. The goal of this diversity was partly to ensure that these perspectives were all represented in the actual design process, but we also treated these meetings as an opportunity to build relationships and habits of consensus and collaborative planning that could strengthen the virtual communication mechanisms on which we relied the rest of the time. This may seem somewhat sentimental but in fact we found that these meetings produced a high degree of mutual trust which has been extremely valuable in facilitating communication and decision-making.

All five of the meetings were designed to be collaborative, inclusive, and focused; each meeting involved voices from multiple institutions and stakeholders and with a range of expertise and perspectives. The core development group included librarians, technologists, designers, and the lead developer and had representation from several institutions: Brown University, Hamilton College, The University of Virginia, Wheaton College, and eventually Northeastern University being the most constant institutions in attendance. The meetings were also held at a range of locations, to diversify the context for discussion and spread the logistical burden equitably.

Meeting 1: January 2012, Wheaton College

Our first face-to-face meeting was held at Wheaton College in January 2012. The group included librarians and technologists from Brown University, Hamilton College, the University of Virginia, Willamette University and Wheaton College, totaling seven participants in all. The goal of this initial meeting was to develop a skeletal paper prototype of the TAPAS application on the basis of our prior work on user stories and functional requirements, and to produce a concrete framework that would help a developer begin the work of actual coding.

In preparation for the meeting, we created an initial set of user stories and planned a series of focused exercises that would transform this list of abstract user requirements into a series of more or less concrete application visualizations. Through a collaborative process, these user stories—with additions during the course of the meeting—were numbered, printed on individual pieces of paper, and then sorted into groups representing functional areas. We then discussed each area to get a more precise sense of its scope and priority within the current development effort, noting that some TAPAS features will need to be deferred until a later phase of the project. Finally, we considered each story and where necessary fleshed it out or translated it into a specific software function that could be mapped onto a wireframe. In some cases, stories were merged or moved around as our discussion revealed unseen dimensions of the information flow or user interactions.

During this phase, a number of interesting and useful discussions arose regarding the implicit assumptions and models that each participant brings to the project. For example, how many different kinds of entities does TAPAS need to provide for in its authorization model? Do we envision “individuals,” “projects” and “organizations” or is this too complex? To what extent can we assume that relevant metadata will live inside the TEI document, and to what extent should it be maintained in separate metadata records?

In the final part of the meeting, we created a set of abstract wireframes for each functional area of the TAPAS site and service. This process was extremely useful in revealing assumptions about both work processes and information models, some of which required further attention and input from the TAPAS community as we continued to develop the service. Following the meeting, members of the group continued to work on producing a more polished set of wireframes with an accompanying narrative.

Meeting 2: April 2012, University of Virginia

The core TAPAS team met for a second time at the University of Virginia in April 2012. While there, we conducted virtual focus group meetings to get reactions from the greater TAPAS community regarding a draft of user interface wireframes. The draft was organized into three scenarios describing the reading and management interfaces for TAPAS, and it was circulated to focus group participants in advance of the meeting. It was also been made available on our website (http://tapasproject.org/) here:

https://docs.google.com/a/wheatoncollege.edu/document/pub?id=16nIVI2lYW4IB08CBi7nttPsz2jCvtynaf64UzG41kbA

In all, we held eleven focus group interviews with ten institutions. One was a face-to-face interview at the University of Virginia and the other interviews were held within a virtual

environment, provided by UVA. We took extensive notes during the interviews and summarized the primary issues with some preliminary thoughts about how to address them in this document (which was also been posted to our project website):

https://docs.google.com/document/pub?id=1RS3MXmSnfn4QU1Q2fUsmBBhdqvk6_TikOPjpaBl2FAs

The TAPAS team began revising the wireframes based on the feedback we received during the focus group interviews and also developing a glossary of terms to be used in TAPAS.

Meeting 3: December 2012, Wheaton College

In December 2012, the TAPAS development group met for a face-to-face meeting at Wheaton College, hosted by Scott Hamlin. The goal of the meeting was to review the alpha version of the user interface and develop more fully realized designs for the user interface, building on the testing done earlier in the year. We developed more detailed user stories describing the TAPAS work flow and from these stories we derived and prioritized a set of further features for development. At this meeting we also discussed the project's governance structures.

Meeting 4: May 2013, University of Virginia

In May 2013, the TAPAS development group met for a face-to-face meeting at the University of Virginia, hosted by Rafael Alvarado and SHANTI. The emphasis of the meeting was to look at feedback from our beta testers, and the meeting was timed to follow the first beta-testing period. Before the meeting we produced summaries of the beta-testing feedback to provide analysis of particular topics and areas of the service: 1) exploring TAPAS as a reader, 2) setting up a user account, 3) establishing a project, and 4) adding collections of TEI materials.

One area that received special attention was the tools for exploring TAPAS. In the beta version that users tested, this included both a "Search" interface (with some faceted refinement of results) and also a "Browse TAPAS" interface that attempted to give users an overview of TAPAS projects, collections, and texts. From the feedback we received, it was clear that a more advanced and functional search mechanism was needed, and also that the "Browse" capability needed to provide a better exploratory environment, one that can continue to provide meaningful browsing mechanisms as TAPAS scales up to include hundreds of projects and thousands of texts.

In addition to the discussion of testing and the prioritization of tasks, we included two development sessions in which the group split up to focus on making progress on a few key areas. One group tackled a set of user-interface issues that were straightforward to fix. Another group worked on user documentation, including the instructions provided on the interface itself and also a draft "Quick start" guide to orient new users. At the end of the meeting, we prioritized the next steps for development over the coming months. These included implementing a more advanced search and exploration interface using SOLR and further developing the reading interface (including the development of a better set of stylesheets).

Meeting 5: December 2013, Brown University

The TAPAS development group met again at Brown University in December 2013 for a two day face-to-face meeting to review progress on the site, create a list of final development tasks, and plan for the lead-up to a launch of the service. During the meeting, the development team determined that much of the site was in good shape and planned out the remaining work to be done on improving the site's performance, creating documentation and user help, clarifying workflows, and creating a better reading interface.

One major outcome of the meeting was a timeline for the launch process. After a final round of beta testing, we planned for a two-stage launch: a soft launch with access by invitation, and a formal public launch at which the project will be available for general use by TEI members.

Accomplishments

TAPAS was able to complete a significant amount of work through the various activities funded through this grant, and move the project forward productively, so that we are now ready to launch at the beginning of next month. We made strides forward in creating, revising, and enhancing the application's workflow and interface design. The activities also helped build a community of users and contributors. And through various publications and presentations, TAPAS has been able to promote the service and contribute to the scholarly conversation about the value of using encoding for analyzing, publishing, and preserving humanities texts.

Creating a workflow for publishing materials in TAPAS that's clear, easy to use, and also robust enough to meet the needs of many kinds of TEI data was challenging and necessary for successful future use of the application. Drupal's strengths as a content management system helped with the creation of this workflow in many cases, especially in defining the architecture for TAPAS. Through our iterative development activities, which were heavily informed by our user community, we used the Drupal hierarchy to create an architecture that would make sense to those working in digital humanities: TAPAS is divided into Projects, which contain Collections of encoded texts.

There were several occasions where we needed to work with our developer to make adjustments to Drupal so that the workflow for publishing TEI files was better defined. To make the architecture of TAPAS clear, for example, we had to rename or hide Drupal naming conventions: Groups became Projects, Nodes became Collections and Texts. We also added a sequence to the publication process: a series of steps a user goes through to put materials into TAPAS. The user creates and describes a project, then defines at least one collection, and begins populating that collection with texts. Each part is described succinctly and visually as the user steps through the workflow with links to appropriate documentation when necessary. Appropriate metadata, as well as access and permissions at each level (project, collection, and text) were carefully considered and defined and had to be adjusted within Drupal. Certain metadata fields are required, controlled vocabularies are used for other fields, and during the steps that involve uploading and describing TEI files, crucial metadata is extracted from the TEI header. And finally, because Drupal does not publish TEI files, the final steps of creating a readable version of the TEI text had to be developed and added to Drupal.

For the reading interface through which TEI data would be formatted and published, we had several clear design goals. The first was that the reading interface should eventually offer multiple formatting options, since different genres and editorial approaches would provide very different kinds of markup and also different desired textual presentations. The second was that the styling should provide a clear demonstration, wherever possible, of the informational value of the underlying TEI markup, to help demonstrate to readers why the investment of time and effort in creating TEI data was worthwhile. As an initial model for the reading interface, we looked to TEI Boilerplate, an open-source tool developed by John Walsh (Indiana University) that encloses a minimally modified version of the TEI file in an HTML5 wrapper for viewing in a browser, and provides user-customizable display stylesheets. During the testing and prototyping period we used TEI Boilerplate as a place-holder in the TAPAS interface, while working on developing a more fully-featured reading interface that would take greater advantage of the TEI markup. The TAPAS reading interface at the conclusion of this grant includes handling of variant readings, working links to personography entries and notes, and appropriate formatting of manuscript revision encoding. It also includes minimal accommodation of page images and figures (as icons that can be clicked for access to a full-size image).

All of the efforts put towards workflow development and interface design have paid off. Our beta-testers and early adopters have evaluated TAPAS as clearly laid out, understandable, and well-documented.

A final area of achievement under this grant has been the creation of a TAPAS community of developers and users, and the successful promulgation of the project through conference presentations, articles, blog posts, and social media. The direct TAPAS community now includes an extended group of developers and project personnel, beta-testers and contributors of test data, early adopters, and followers of the project who have expressed plans to participate following the public launch. The Appendix includes a bibliography of publications, presentations, and other outreach materials.

Audiences

The TAPAS service was originally imagined as a way of serving a distinctive user community bound together by a common need. In recent decades with the increased visibility of TEI as a core tool for digital humanities research, and with the increased availability of TEI workshops and other learning opportunities, there has been a rapid growth in usage of the TEI by individual scholars and small projects. The TEI itself is comparatively easy to learn, since it provides an expression of scholarly concepts that are already familiar to researchers. However, the technical infrastructure for publishing TEI-encoded materials is more difficult to develop and thus far there are few user-level tools available, and none that offer a full-scale publishing system that individual scholars can realistically maintain on their own. There is thus a large and growing community of TEI practitioners who lack the technical expertise and institutional resources to make full and effective use of their TEI data. These scholars represent the core audience for TAPAS. They come from a variety of institutions; although scholars at small liberal-arts colleges are most likely to be in need of this infrastructure, there are also many larger universities which

do not offer the necessary infrastructure to support long-term TEI publishing and archiving. They also come from a very wide range of disciplines, and they represent the full spectrum of professional roles including faculty, students, library and IT staff, independent scholars, archivists, governmental organizations, and many others.

Since that time, the TAPAS audience has continued to expand in size: every year, new cohorts of scholars begin using TEI for research and teaching, many without any institutional support structures. The audience has also expanded in scope in several ways. First, the TAPAS infrastructure is being designed so that the TAPAS repository can be accessed via an application programming interface (API) to enable users to extract and remix TAPAS data in external publications. This makes the service potentially valuable for more advanced projects that have technical expertise but need a secure long-term home for their data. Furthermore, as TAPAS is adopted by the TEI community, it has the potential to become a kind of TEI data commons, supporting research on TEI usage patterns and encoding methods. It thus becomes valuable as well to users who want their data to be visible within that commons, and who want their projects to be visible to the TEI community. As an extension of this visibility, we anticipate that some users may choose to use TAPAS purely for the community contact. Although the TEI maintains a vibrant and long-standing discussion list (TEI-L), the TAPAS user forums may provide a space where questions relating to the use of TEI and TAPAS can be discussed and where collaborations can be formed and supported. Finally, we have seen an emerging audience for TAPAS among those who want to use TEI in their teaching, with TAPAS serving as an experimental space where students can see their TEI data in action.

In addition to these audiences of TAPAS users (or “contributors” as they are termed in TAPAS), there is a further audience of “readers.” We understand readership in two ways. TAPAS is first and foremost a publication platform through which contributors can create publications, and these publications all have their readers. These readers may be scholars in specific subjects, or students for whom a TAPAS collection is assigned reading: anyone with an interest in the specific content represented by the project. In addition, we anticipate that there will be readers who are interested in the entire TAPAS aggregation, particularly once that aggregation reaches a certain critical mass. Some of these readers may be interested in performing text analysis on a large collection of TEI data, and for these we will need ultimately to develop a corpus-building interface that permits them to select and group collections for analysis. Others—perhaps the TEI itself—may be interested in studying the markup, and will need specialized tools for that investigation.

Evaluation

Assessing the final results of this project is challenging because the project’s goals continued to evolve during the development process, and because (as noted above) we were fortunate to have an additional grant award from another agency to complement this start-up grant. We have fulfilled the spirit of all of the original goals outlined in the grant proposal, and have done so more fully than we had originally anticipated: being able to implement a working version of the service instead of a mere prototype has given us much greater scope for the interface design and development process.

Assessing our results against the final products and outcomes projected for this project:

- **A prototype user interface using Drupal, to include text submission, collection, search, transformation, and publication tools.** This goal was fully met and exceeded. We developed a prototype user interface using Drupal that supports a full work flow including membership management, text submission, project and collection development, search, transformation, and publication tools. We also developed a production-level version of this interface, also in Drupal, which is now implemented in the public version of TAPAS.
- **At least one tool built into the prototype that allows for advanced methods of transformation (e.g. analysis and visualization tools)**. This goal was met, although not in the precise way described in the proposal. The TAPAS interface includes an "Explore TAPAS" interface that offers a map, timelines, and tag clouds as ways of visualizing the TAPAS collection or a set of search results. These tools operate on metadata stored in the TAPAS system. We do not yet offer the ability to perform transformations or visualizations directly on the uploaded TEI data.
- **Plugins or modules for Drupal that will work with the API**. This goal was postponed, because of changes to the underlying architecture of TAPAS after the submission of the grant proposal. We had originally planned to use Islandora (which couples a Drupal front end with a Fedora repository back end) for the TAPAS service, but experimentation revealed that it could not support some essential functions of TAPAS. Instead, we have done the initial development of the service in Drupal and are now building the Fedora back end under a separate grant. The implementation of the API will be part of that development work; as a result it did not make sense to put effort into a Drupal API, knowing that we would have a more effective API mechanism fairly soon.
- **A white paper on the use of group-driven development processes in the creation of digital humanities applications.** This goal was met.

Public Response

TAPAS has sought and received input from the public at intervals, and overall the response has been both positive and constructive. The TEI community has taken a strong interest in the project and has had substantive suggestions and critiques, which we have taken seriously during the development process. In particular we have held two public forums during the course of this grant, one at the TEI 2012 conference at Texas A&M University, and one at the TEI 2013 conference at the University of Rome. In these forums we presented information about the project and requested ideas, comments, and discussion from the TEI community.

The specific dimensions of the positive response to TAPAS have reflected its goal of serving the TEI community and in particular users who lack institutional resources. The following points are of particular interest:

- The public discussion has confirmed our understanding that the TAPAS service is very much needed, there is a dearth of resources and services for publishing and archiving TEI, and such a service will be of significant benefit to the TEI community.
- The service has significant value for teaching as well as publication and storage.

- The service holds value for the TEI community in particular as a way of studying TEI data and the ways projects and scholars use the TEI Guidelines.
- TAPAS has been invited by a TEI developer group to participate in the creation of a tool for modeling and visualizing TEI schema modifications, for which TAPAS data is an excellent resource.
- The TEI consortium has offered financial support for the project.

These public discussions also offered some critiques and concerns, which we are taking seriously. In particular we note:

- There is concern that the TAPAS service is centered in North America, and does not yet reflect the full global profile of TEI users; TAPAS needs to expand to include Europe and Asia, particularly in offering services such as workshops and consultation.
- TAPAS needs to accommodate images; in our original discussions we had been reluctant to shift the focus too far from TEI data, but it is clear that images are an important component of many TEI projects and we have in fact altered our designs to support their use.
- The TEI community is interested in finding ways to build peer review mechanisms into TAPAS, as part of the publication work flow. We are now considering community-driven peer review mechanisms that would focus first on validation tools; we may also explore partnerships with organizations like DH Commons, which are specifically aimed at providing peer review.

User Testing

User testing and feedback has been an important part of TAPAS's development, and we have used several different methods for structuring the testing and feedback process.

The first phase of testing was a set of online focus group sessions held in 2012 during our second face-to-face meeting (University of Virginia, April 2012) using scenarios and wireframes. During these sessions, members of the TAPAS development team met with small focus groups and observed as members of the groups simulated following each scenario using the wireframe mockups, following the process of performing specific tasks using the TAPAS interface. These sessions provided critical feedback on the emerging TAPAS work flow and its organizational paradigm of projects, collections, and texts.

The second phase of testing consisted of two formal beta-test periods, the first in April and May 2013 and the second in March and April 2014. Prior to the first test we sent out a public call for beta-testers to the TEI community, and received approximately 50 responses representing expressions of interest. From that group, 27 individuals from 25 institutions and 8 countries agreed to participate in our first beta-testing period, with a slightly smaller group participating in the second testing period. In each of the tests, we had users focus on the basic features of the site, including:

- reading and browsing projects, collections, and documents;
- creating user accounts and projects;
- creating collections and uploading TEI files;
- configuring TAPAS publications; and

- reporting bugs and making feature requests.

For both tests, we developed a detailed script of instructions to guide users towards certain activities and to focus their attention on specific points where we wanted feedback. (A copy of the script is included in the Appendix.) We also set up discussion forums with distinct threads for each testing activity, with the goal of encouraging the testers to discuss their experience with the interface in more detail; we hoped by these means to glean more specific information about how users responded to specific features. All testers could see each other's comments and would often communicate with each other about the different aspects of TAPAS. The feedback from the first testing period was reviewed at a face-to-face meeting in May 2013 and led to several changes to the user interface design, most significantly to the searching and results display. The second testing period revealed fewer issues but was valuable in confirming the usability of the site and did yield some suggestions for refining the interface further.

In addition to the formal beta testing periods, we have also conducted several less formal tests during the final year of the grant. We held one classroom test at Wheaton College, where students uploaded TEI files to TAPAS at the end of an assignment they completed. We also held face-to-face focus group sessions, where members of the TAPAS development team observed users as they interacted with TAPAS. Finally, we performed a series of "stress tests" in which we asked our entire beta-testing community to interact with the service simultaneously for a brief period, to ensure that it will perform well under load once the service is formally launched. Study of the resulting server log files revealed areas where we were able to improve efficiency by streamlining certain processes and improving indexing and caching for faster response time.

The final testing and evaluation of the TAPAS service has been conducted during the months preceding the project launch, in which we have recruited a set of early adopters to create formal publishable projects within TAPAS. This process has enabled us to test the service under real-world conditions and has yielded a number of further insights both into the types of data contributors are working with, and into the kinds of publication goals they bring to the effort. In a sense this process has begun to reveal the "long tail" of exceptional needs that are a feature of any software development project but are particularly characteristic of scholarly data. For TAPAS this effect is especially acute since we are aiming the service at individual scholars and smaller projects, who by their nature are more likely to be working in highly distinctive areas including specialized genres and uncommon languages.

Evaluation of Work Process

In addition to evaluating the TAPAS service and interface, during the course of this grant we also conducted evaluations of our own work processes. This evaluation was done during our face-to-face meetings and took two forms. The first was a concluding plus-delta exercise following each meeting, in which we discussed the points we felt had gone well at the meeting and also the areas where we could have done better or worked more productively. Although informal, these exercises did yield helpful insight and self-reflection and helped reinforce the atmosphere of trust that characterized the working relations within the group. In addition, at two of the face-to-face meetings we reviewed the work and communication processes guiding the technical development of the project. This project operated under what we realize in retrospect

were extraordinarily challenging conditions including the geographic dispersal of the project team, major institutional moves by key project personnel, a tiny development staff with minimal project management overhead, and a rapidly evolving technical design. These challenges all put strain on the communication mechanisms we had initially set in place, and we had two substantive discussions in which we discussed those strains and agreed on procedures to address them.

Continuation of the Project

As a project aimed at providing long-term repository and publishing services, TAPAS is designed with a long future in mind, and has already secured very significant funding in addition to the startup funds represented by the grant described in this report. Concurrently with this grant, as described above, the project has held a National Leadership Grant from the Institute of Museum and Library Services that funded the first phase of infrastructural development for the TAPAS service, resulting in an implementation of the service in Drupal that will be launched in October 2014. In March 2014, the project received a Preservation and Access Research and Development grant from the NEH to fund the second phase of infrastructural development, which supports the development of an XML-aware repository back end using Fedora and an XML database. We are now planning subsequent developmental phases of the project to fund further schema and stylesheet development, development of additional interface tools, and training workshops.

The project's long-term stability has been further solidified by two important partnerships. The first of these is with the TEI Consortium, which has accepted TAPAS as a benefit of TEI membership and is providing funding to TAPAS in recognition of this benefit. The TEIC is also handling TAPAS's financial and membership administration. This relationship has been formalized through a memorandum of understanding between TAPAS and the TEIC. The second is with Northeastern University, which has agreed to provide support for TAPAS repository services for the very long-term future, a relationship, which has also been formalized in a memorandum of understanding.

Finally, TAPAS has developed a governance structure that includes an international advisory board and a long-term plan to achieve self-sustainability based on income from workshops, consulting services, and TEI membership revenue.

Long-term Impact

The long-term impact of TAPAS is focused on several key goals. The first of these is to transform the TEI publishing options for small projects and individual scholars by offering a low-cost publishing and repository infrastructure. The second is to establish the TAPAS Commons as a TEI reference corpus; this is an area of strong interest within the TEI community and would enable the comparative study of TEI data and encoding practices, supporting the emerging visibility of TEI as a tool of digital scholarship. The third goal is to support teaching of the TEI and teaching with TEI; as the digital humanities become an increasingly important aspect of humanities pedagogy, TEI gains visibility as an important pedagogical tool, but infrastructure is lacking in this area as it is in publishing and repository services. Finally, we seek to build TAPAS

into a key service of and for the TEI community. Taken together, the achievement of these goals will result in a profoundly changed landscape for digital humanities, in which scholarship that engages with carefully modeled data has a strong and visible publication venue.

Grant Products

This grant has produced or contributed to the following important TAPAS products:

- A set of XSLT and CSS stylesheets for transforming and styling TEI data; these are made publicly available via GitHub.
- The interface of the TAPAS service itself.
- The final white paper for the grant, reporting on the development process and the technical details of the TAPAS service.

Appendices

- Appendix A: Bibliography of Publications, Outreach, and Conference Presentations
- Appendix B: Beta-testing Script
- Appendix C: List and Descriptions of Early Adopter Projects

Appendix A:

Bibliography of Publications, outreach, and conference presentations

Julia Flanders. “TEI and Scholarship (in the C{r|l}o{w|u}d).” Keynote presentation at the TEI 2012 conference, Texas A&M University. http://juliaflanders.wordpress.com/2013/08/31/tei-and-scholarship-in-the-crlowud/.

Julia Flanders and Scott Hamlin. “TAPAS: Building a TEI Publishing and Repository Service.” *Journal of the Text Encoding Initiative* 5 (June 2013). http://jtei.revues.org/788.

Julia Flanders, Scott Hamlin, Rafael Alvarado, Elli Mylonas. “Building a TEI Archiving, Publishing, and Access Service: The TAPAS Project.” Poster presentation at Digital Humanities 2012, University of Hamburg. http://www.dh2012.uni-hamburg.de/conference/programme/abstracts/building-a-tei-archiving-publishing-and-access-service-the-tapas-project.1.html

Julia Flanders and Scott Hamlin. “TAPAS: Publishing and Archiving TEI.” Blog post in dh+lib, February 19, 2014. http://acrl.ala.org/dh/2014/02/19/tapas-publishing-and-archiving-tei/

Julia Flanders, Syd Bauman, Elena Pierazzo. “TAPAS and the TEI: An Update and Open Discussion.” Panel session at the TEI 2013 conference, University of Rome. http://digilab2.let.uniroma1.it/teiconf2013/panelsround-tables/abstracts-panel#C171.

Scott Hamlin and Kathryn Tomasek. “Discipline-Specific Learning and Collaboration in the Wheaton College Digital History Project.” *The Academic Commons*, August 25, 2014. http://www.academiccommons.org/2014/08/25/discipline-specific-learning-and-collaboration-in-the-wheaton-college-digital-history-project/

Patrick Rashleigh, “A Video Description of TAPAS.” Video presentation prepared for the 2012 NITLE Symposium, “Inventing the Future: Innovative Models and Practices in Liberal Education,” April 2012. http://www.youtube.com/embed/tJRwZK1Q-3E

Appendix B: Beta-testing Script

The TAPAS User Experience: A Preliminary Snapshot

20 April 2012

CONTENTS

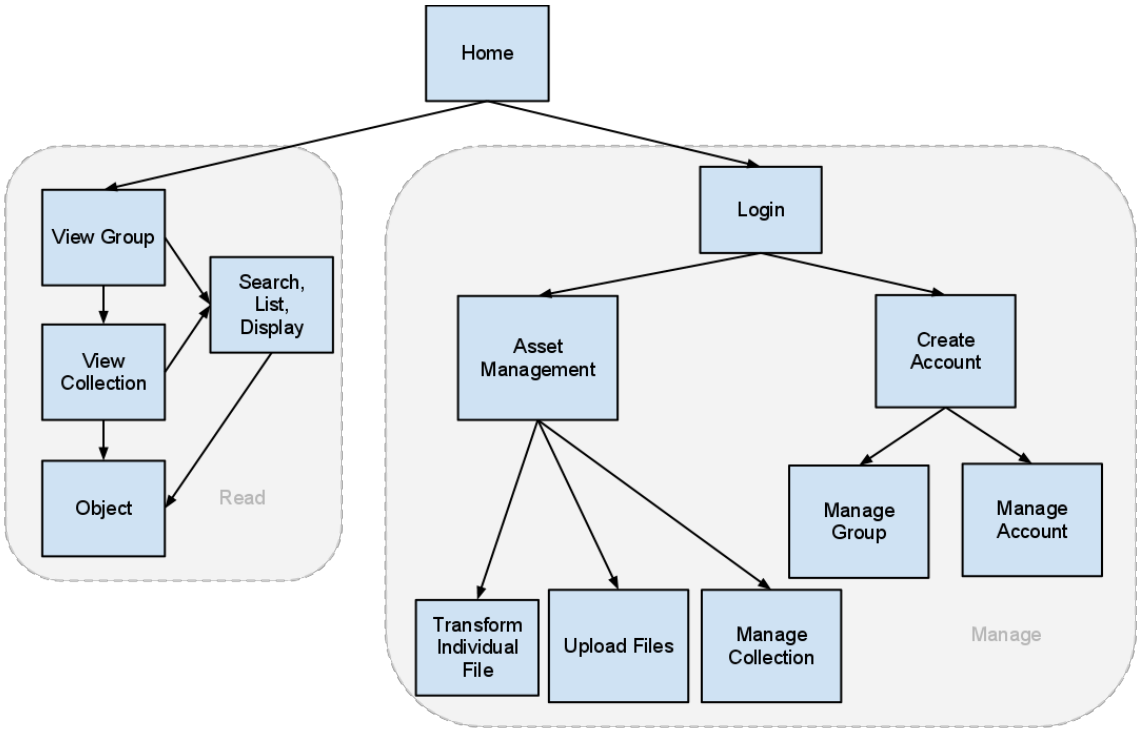
- Purpose
  - Overview
- Scenario A: Somebody hears about a collection, and goes to the collection website
  - Scenario overview
  - 1. Collection home page at http://laughingmonkey.tapas.net
  - 2. Search for content
  - 3. Project group information page
  - 4. Not included in this document
  - Questions
- Scenario B: New user creates a new project and account, and uploads a TEI file
  - Scenario overview
  - 1. Account creation
  - 2. Welcome to TAPAS screen
  - 3. Enter the file management area and upload a file
  - 4. File upload
    - File type
    - Dublin Core
    - Collection
    - Sharing
    - Tags
  - 5. File management area
  - Questions
- Scenario C: Transforming documents
  - Scenario overview
  - 1. User selects a file in the file management area
  - 2. Add a TAPAS-provided publishing output
  - 3. Define a new publishing transformation process
  - 4. Apply user-defined transformation to selected documents
  - Questions
- General Questions

Purpose

This document presents a design overview of the TAPAS publishing platform as it stands currently (February 2012). It is an internal interim report to present the major ideas that emerged from the UI design meeting held at Wheaton College in January 2012. It does not document finished ideas, but a series of initial sketches that are being submitted to our colleagues in the TAPAS project for feedback.

Overview

The high-level architecture of the TAPAS system is illustrated in the following diagram:



Each blue box is an activity that roughly maps to a page. The arrows suggest a workflow or a conceptual association, but are not strict; they are suggestive, but not prescriptive. For example, one could imagine a user uploading a TEI document (the “Upload files” box) and then clicking on their user name to change their profile picture (the “Manage Account” box).

Note that the system is roughly divided into two aspects, or views – a scheme that users of Wordpress or Drupal will quickly recognize:

1. the “Manage” view, on the right, is the part of the site that *manages the collection of assets and the people that manage them.* It is private to the members of projects.

2. the “Read” view, on the left, represents the “public” view shown to the web-at-large; it is, essentially, a read-only view of the TEI data or a transformed version thereof.

This document will present the draft wireframes (approximately one per box in the above diagram) through a series of user scenarios.

Scenario A: Somebody hears about a collection, and goes to the collection website

Scenario overview

Somebody gets wind of the “Laughing Monkey” collection at a conference, and decided to check it out. They copied down the URL as http://laughingmonkey.net and now enter that URL into the browser …

> *This is the simplest scenario, in which somebody has a URL for a project or collection that is hosted on TAPAS, and explores the collection online. This scenario provides an overview of the “read” portion of the application.*

1. Collection home page at http://laughingmonkey.tapas.net

The user points their browser to http://laughingmonkey.net, and are presented with the following webpage:

This page provides information about the collection (although it could be any content that the collection's owners deem appropriate), has some branding (including a logo), a linked list of objects in the collection, and contact information for the collection's associated project.

The collection list, on the right, featured linked thumbnails and titles. Some objects have several "versions" available - some include a "raw" version (which links to TEI), some a "brochure" or "poster" version (which link to PDF documents). Some collection members are simply another webpage.

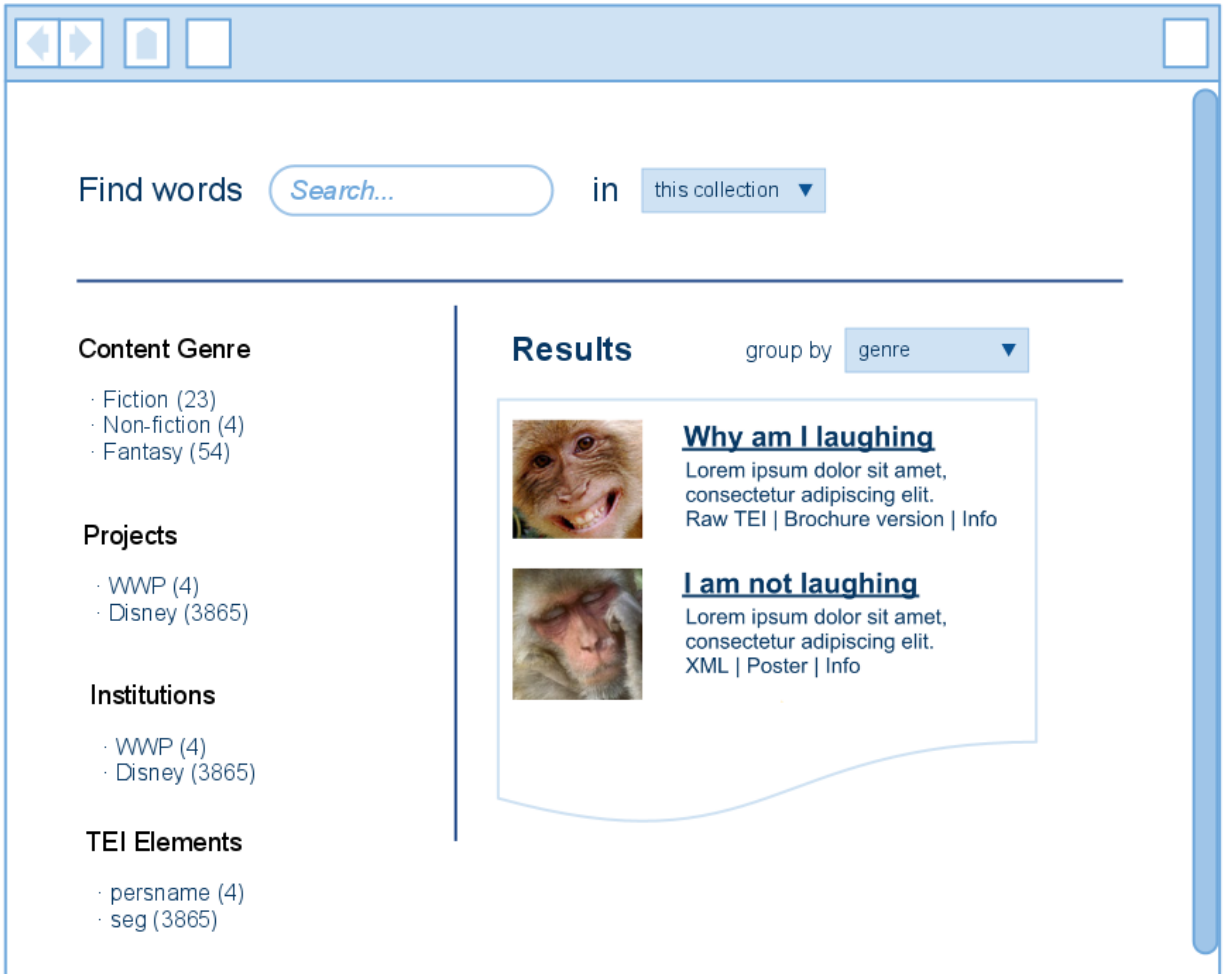
> *Note that the page is marked up in very generic XHTML, which gives ample opportunity for collection owners to significantly customize their page design using user-defined CSS stylesheets; see CSS Zen Garden for a dramatic demonstration.*

2. Search for content

The user doesn't see what she is looking for or can't be bothered to open up all the documents), so she goes to the search form at the top and enters "Baboon." In the dropdown menu next to the search field she selects "in this collection" (but note the other options, which allow her to search the TAPAS community):

In its initial implementation, TAPAS will index the document full text, Dublin Core metadata fields and projects and institutions. Search may also include selected TAPAS TEI elements.

She enters her search and receives the following results screen:



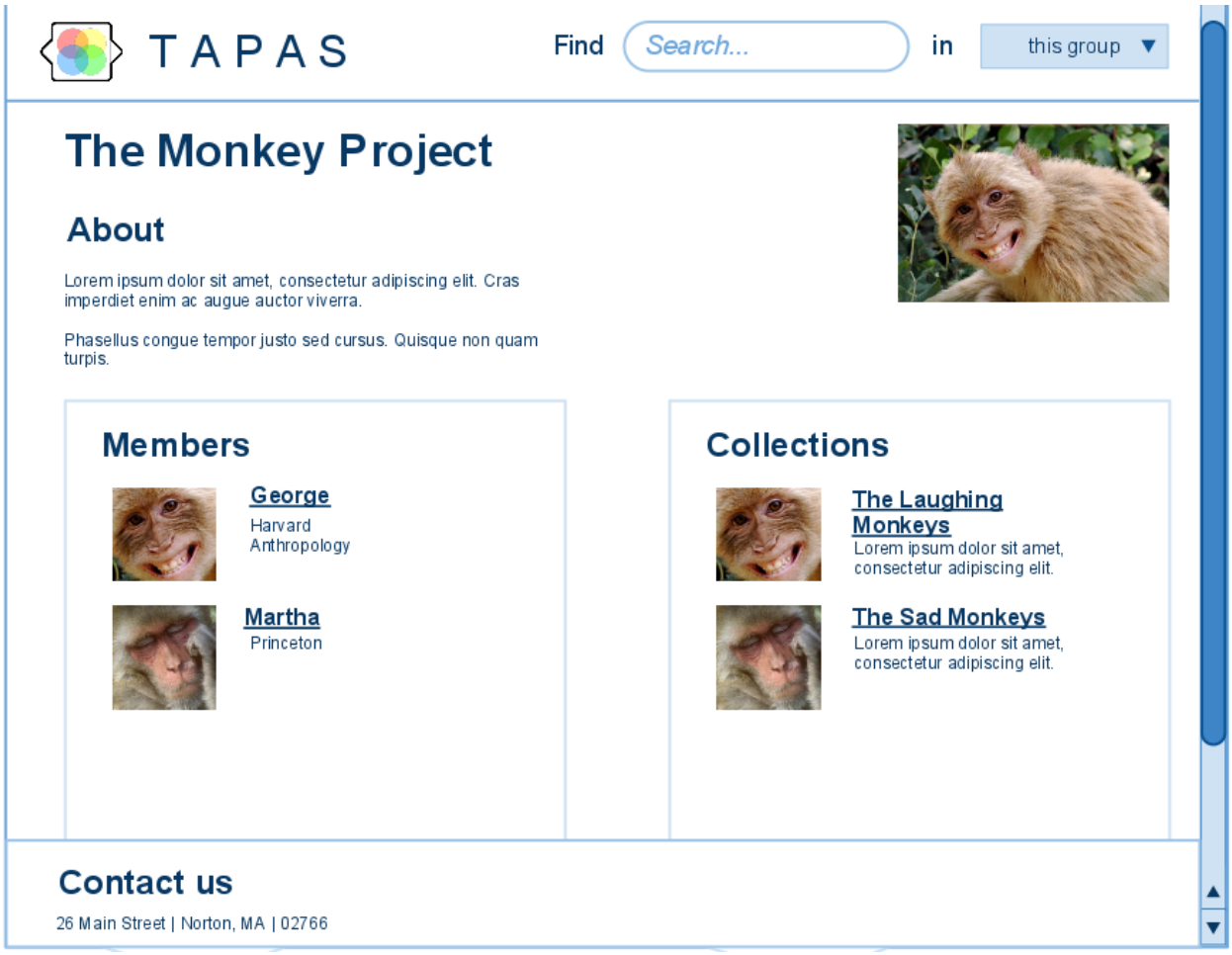
The search can be further refined by clicking on the facets listed on the left; for example, clicking

on the “Disney” facet limits the results to only those associated with the Disney TAPAS institutional group.

> *Note that the facets listed are not fixed, but suggestive. The question of what metadata facets to include is an open one. Information on facet browsing*

3. Project group information page

The user, having found out about the collection and viewed some documents from the collection, wants to find out about the project behind the collection – she clicks on a link to the project group (not pictured) and finds herself here:



Note that the URL for this page should read something like: http://laughingmonkey.net/project

Here, our intrepid user finds information about the project, the members of the project, and the collections associated with the project (including the laughing monkey project).

Clicking on a participant name takes the browser to a user profile:

TAPAS

Sandy D. User
Hypothetical College

Sandy D. User

Assoc. Prof. of English
Hypothetical College

Projects

- Collected Papers of Johnny Appleseed
- The Poems of Seinfeld
- The Genius of Jerry Lewis

Shared resources

- Transformation 1
- Ode_to_the_Cosmo.xml
- TEI2JSON

more

Research Interests

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam lectus lacus, ullamcorper at commodo auctor, mollis ut sem. Suspendisse potenti. Cras luctus orci vel risus mattis adipiscing. Nullam ut dui in mi ultrices rutrum tincidunt in risus.

Suspendisse ornare enim nec nulla rutrum eget vulputate quam dapibus. Nam ullamcorper eleifend varius. Maecenas porttitor erat diam, in interdum felis. Praesent at euismod velit. Donec porta consequat odio eget auctor. Nunc eleifend pharetra purus vitae pharetra. Donec mi massa, hendrerit in porttitor sed, sollicitudin eu nunc. Ut quis condimentum nibh. Phasellus elit orci, adipiscing sed porta eget, tristique vel sapien. Proin elementum interdum augue, nec placerat lacus sodales ut.

4. Not included in this document

Some pages have not been mocked up, but are forthcoming:

- **a TAPAS front page**, which be a “front door” for those interested in the TAPAS project as a whole (as opposed to a specific member collection, as in our scenario above). Of course, it would include various ways to access the projects and collections hosted by TAPAS.

This concludes our scenario of the public user who is investigating a specific collection.

Questions

1. Do the words Project and Collection in this context make sense to you? What do these terms suggest about how content is organized on the site?
2. What other kinds of information do you as a reader want or need to see on the project page -- or any other pages?
3. What information do you need to see as a potential contributor to TAPAS?

Scenario B: New user creates a new project and account, and uploads a TEI file

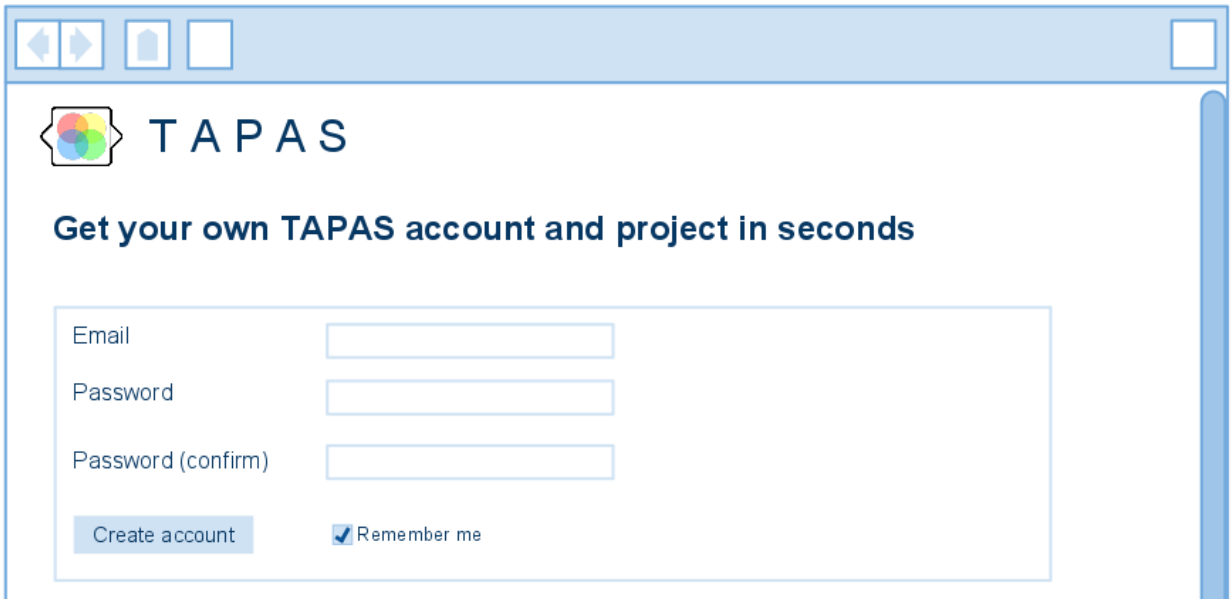
Scenario overview

Word of TAPAS has gotten around, and a scholar with interest in TEI decides to try out an account and deposit a sample TEI file.

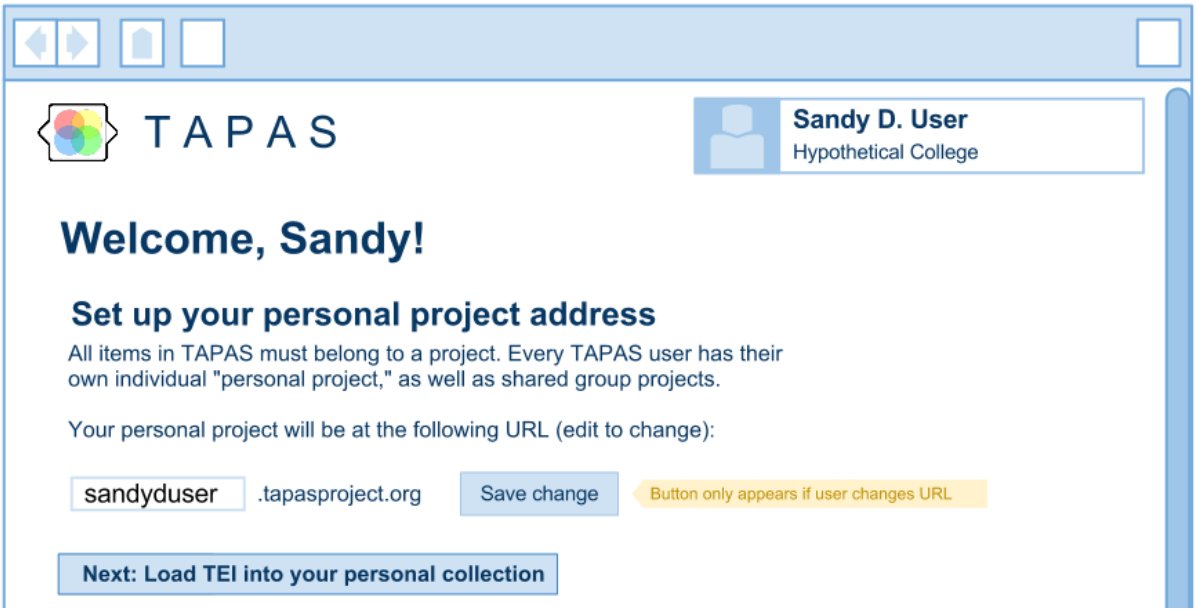
1. Account creation

They point their browser to http://www.tapasproject.org, and on the main page (not shown) click on “Sign up.”

This page appears:

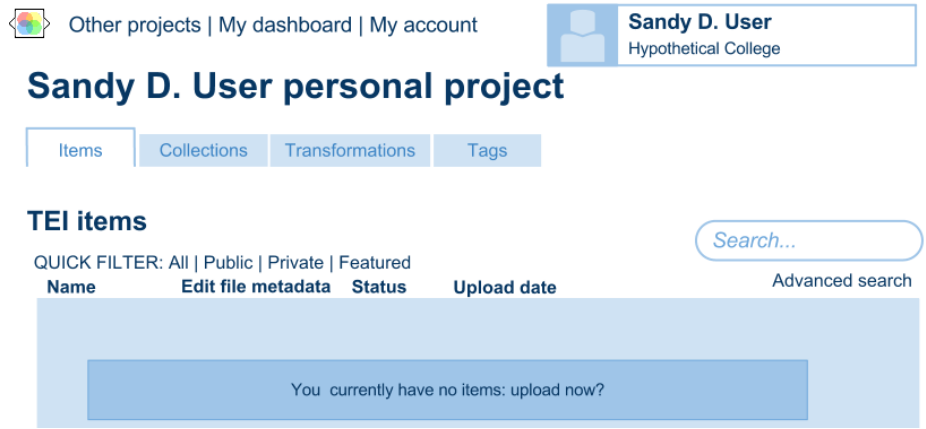


2. Welcome to TAPAS screen



The system automatically creates a URL that is associated with the new user's webspace. If the user chooses to override the suggested URL, a "save change" button appears.

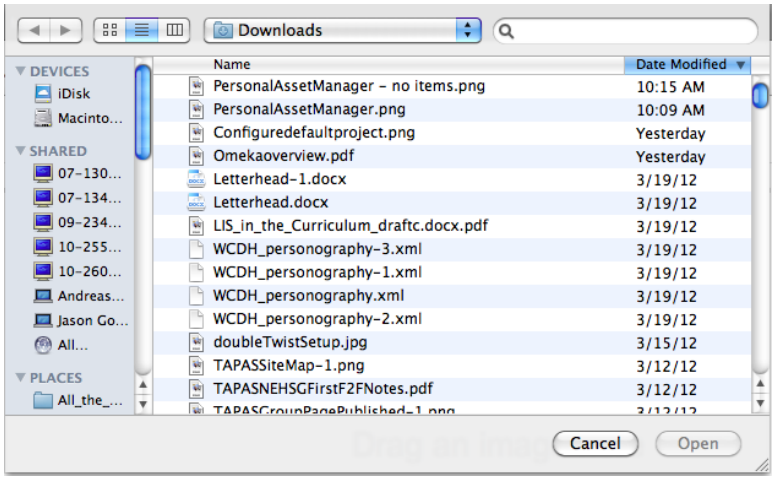
3. Enter the file management area and upload a file



The user is now in their personal project, and (having no items) is prompted to upload. The user confirms that they want to upload a file.

4. File upload

The user now uploads a file into their space.



Once the file has been uploaded, a variety of metadata and ingestion processes can be applied.

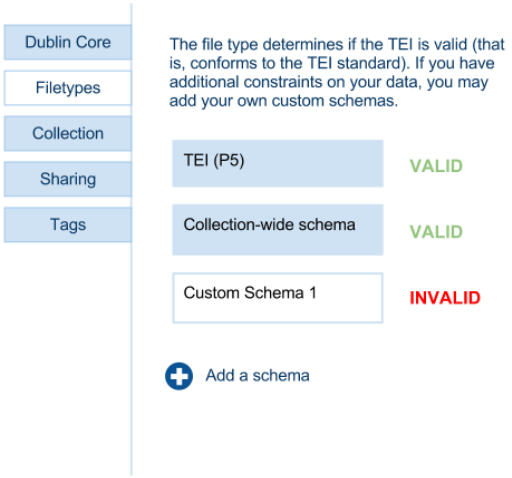
> *Note: This is a big area, typically filled with Dublin Core fields, and a variety of options. Many archival systems have developed these screens; rather than reproduce them all here, the screenshots will focus more on TAPAS-specific aspects of the file upload area.*

The subnavigation for file upload leads to the following parts: Dublin Core, File type (contains validation info), Collection, Sharing, Tags.

File type

The user may specify the filetype by way of a schema – they are all (P5) TEI documents, so that validation is a given. If the user so chooses, additional schemas may be applied. As soon as a schema is applied, its validation status is indicated.

> *Some schemas cannot be turned off: the TEI schema and any schemas applied at the collection level can't be turned off at the item level.*



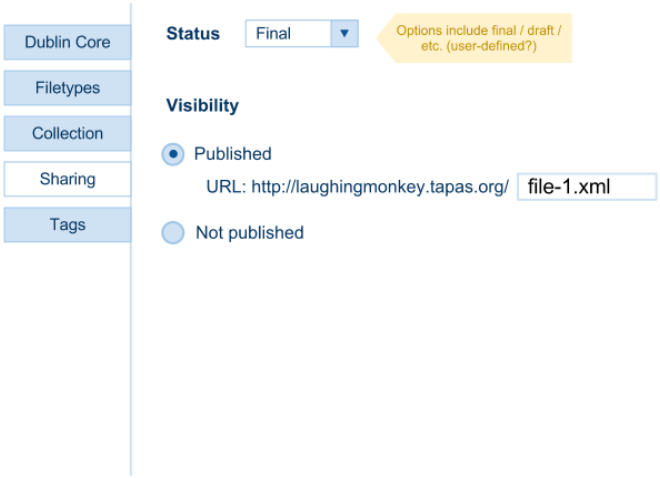
Dublin Core

> *No screenshot here, but Omeka has the following fields: Title, Subject, Description, Creator, Source, Publisher, Date, Contributor, Rights, Relation, Format, Language, Type, Identifier, Coverage.*

Collection

> *No screenshot here, but the user assigns the item to a collection that has been set up, or can create a new collection (via a link to a "Create Collection" page).*

Sharing

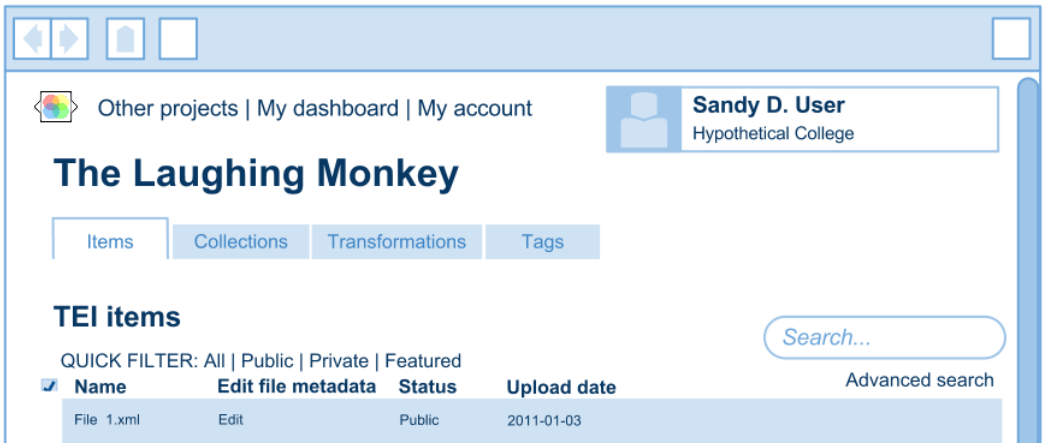


Tags

No screenshot here, but the user has the opportunity to attach tags to TEI docs. Apart from collections, this is the primary mechanism for organizing docs.

5. File management area

The file is saved, and returns us to the file management area, where this is what we see:



Questions

1. Does the process of account creation seem clear and complete?
2. Does the process of file uploading seem clear and complete?

3. As collection administrator, what information do you need to be able to enter in order to organize your files effectively?

Scenario C: Transforming documents

Scenario overview

A user takes documents in a project initially published as raw TEI and introduces a (TAPAS) transformation to one of them, then a user-defined transformation using an XSLT stylesheet.

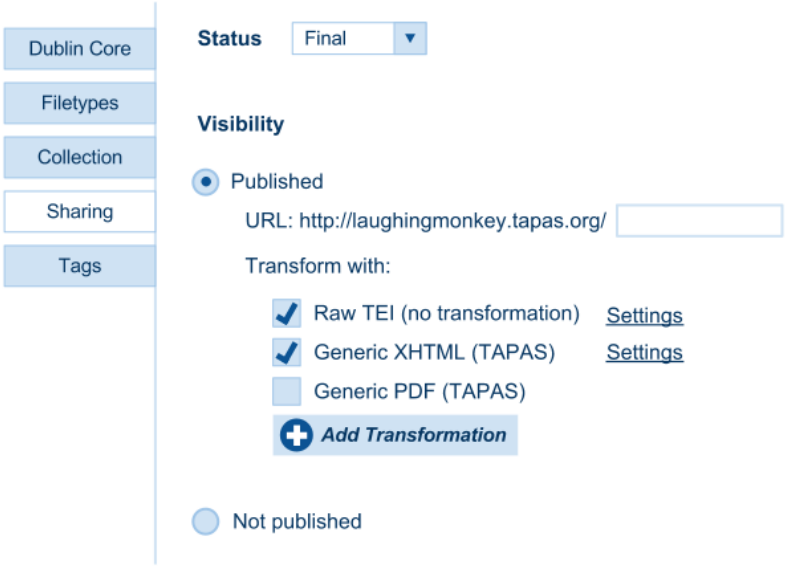
1. User selects a file in the file management area

Having logged in, the user proceeds to the file management area of their project, where there are several existing TEI files:

Once the items are selected (using the checkboxes on the left), the user clicks “Edit selected items,” which leads to the **Batch Edit** screen.

Although the full batch edit screen is not illustrated, it’s basically the same as the metadata

screen for the single item, but changes made here are applied to multiple files. Under the “sharing” tab is an option to transform the TEI file prior to publication. This is pre-loaded with a number of standard options. We hope to provide the user with the ability to define the transformations for individual files, groups of files and entire collections. This illustrates the transformation feature applied to an ad hoc group of files.



The user selects “Generic XHTML” as an option.

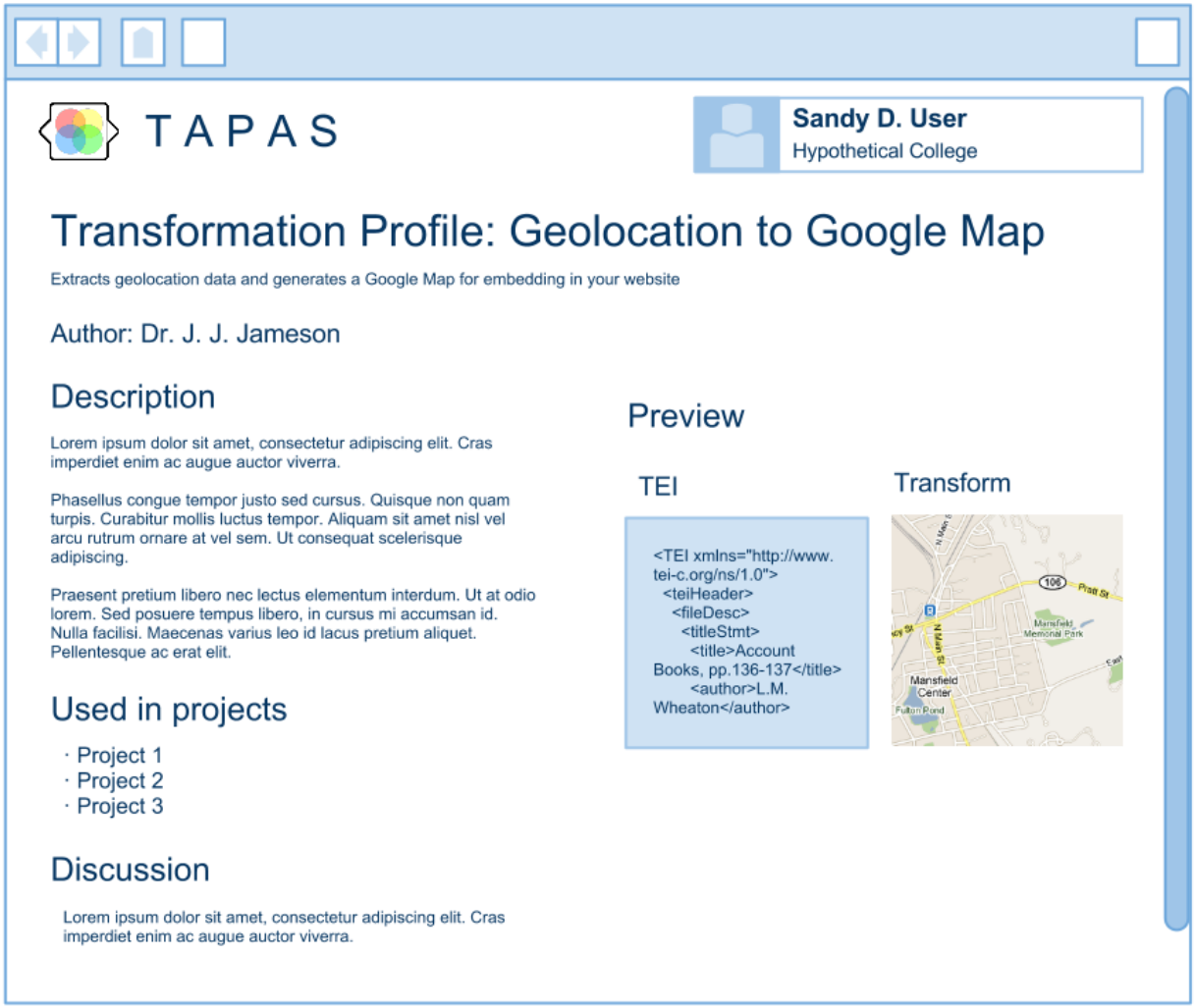
But are there any other transformations available? The user clicks “Add Transformation” – this takes the user to the “transformation” tab.

2. Add a TAPAS-provided publishing output

An important goal is to offer access to TAPAS-supplied transformations and user-contributed transformations (XSLT-based). For those willing to experiment, community-provided transformations may also be available. By selecting a transformation from the list on this screen, the user makes that transformation available to published items in the collection.

Transformations can have associated documentation, or “transformation profile.” The TAPAS-maintained transformations have a profile by default, but for the community offerings, the profile is optional.

Associated with each transformation listing will be a link (not pictured above) to the profile page:

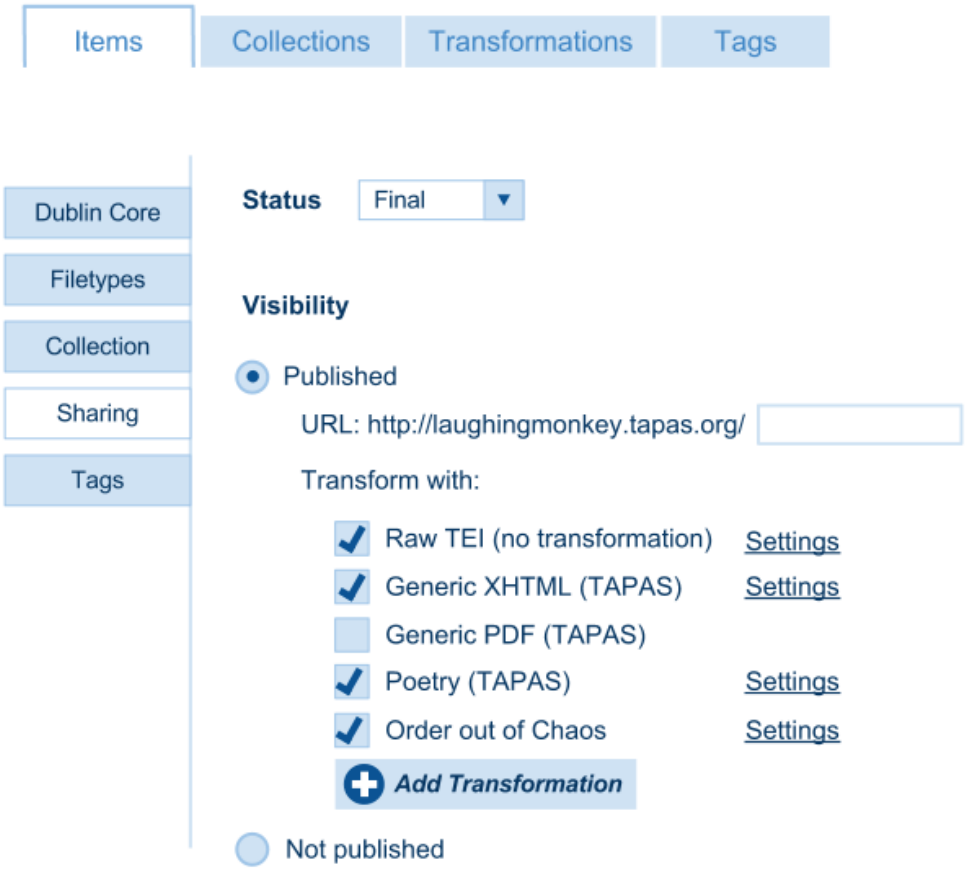


3. Define a new publishing transformation process

Users will also have the ability to add their own transformations (XSLT-based). In this example, the user clicks on “define a new process” link in the available transformations screen above and then uploads her transformation file. She can now add the new transformation to her collection.

4. Apply user-defined transformation to selected documents

Once transformations have been configured for the collection, they can be used to publish, and the transformations appear as options in the sharing tab of the item metadata.



Questions

1. Does the method of selecting a transformation for a document make sense to you?
2. What publishing options would you want to have? What formats would you want to be able to convert your data to?
3. What kinds of preview functions for your files would you like to have? Where should that feedback take place?

General Questions

1. Do all of the components currently included seem useful and necessary?
2. Are there any major activities that are currently not described or supported?
3. Are there any activities that are described in a way that seems counterintuitive or confusing?
4. Is the site organized coherently?
5. Does the site feel logistically welcoming? Do you feel that your materials fit in comfortably within this framework?

Appendix C:
List of TAPAS Early Adopter Projects

TAPAS Commons (http://tapas.neu.edu/tapas-commons)

The TAPAS Commons is an open project space for the TAPAS community for uploading and sharing TEI data at the community level. The TAPAS Commons project and TAPAS Commons collection are a test space as well for new or future users to test-drive the TAPAS services.

Bérardier de Bataut (http://tapas.neu.edu/berardier)

Under development by Eliot West and Christof Schöch (Department for Literary Computing, Würzburg University, Germany), the Bérardier de Bataut project focuses on *Essai sur le récit, ou Entretiens sur la manière de raconteur (1776)*, by François-Joseph Bérardier de Bataut. West and Schöch offer a brief history of the text's reception, and a current need for scholarly attention, in the project description. The Bérardier de Bataut project currently includes one collection, "Essai sur le récit," which contains thirteen TEI files, one for each chapter of the primary document. The project makes use of external linking to the following materials:

- Essai sur le récit: 2010 online edition (berardier.org)
- Essai sur le récit: 1776 edition digital facsimile (BSB Munich)
- Bérardier de Bataut, biographical entry (French Wikipedia)
- Bérardier de Bataut, biographical entry (German Wikipedia)

Digital Dinah Craik (http://tapas.neu.edu/digitaldinahcraik)

Under development by Karen Bourrier (University of Calgary), the Digital Dinah Craik project focuses on the letters and diaries of Victorian novelist, Dinah Mulock Craik. The project seeks to increase accessibility to a corpus of "over 1,000 letters and 14 years of diaries" about or by the author, held within U.S. and UK archives. Currently, Bourrier is developing the "Mulock Family Papers at the University of California at Los Angeles" collection, which will offer TEI editions of the 200 letters from the Mulock Family Papers. Bourrier argues this collection will be important to the study of the crossover between Craik's personal life and career as a novelist. The project also links to the external reference "Sally Mitchell's Dinah Mulock Craik on the Victorian Web."

Dorr Rebellion Project (http://tapas.neu.edu/dorr-rebellion)

The Dorr Rebellion is a project under development by a team at Providence College (Hailie Posey, Marc Mestre, and Mark Caprio) to compose a digital collection of the Thomas Wilson Dorr letters. The TAPAS version of this project currently includes the "Dorr Letters" collection (http://tapas.neu.edu/dorr-rebellion/letters-collection/15802), which proposes in it project narrative the creation of two accompanying collections: "The Road to Rebellion," which will focus primarily on letters of Dorr's education and career as a lawyer, politician, and reformer; and "The Road not Taken," which will focus on letters that reflect critical responses to Dorr's reform policies. This second collection, the project argues, also facilitates research and teaching with the Dorr letters by including contextual introductions and guiding questions to each of the encoded letters. The "Dorr Letters" collection currently includes three example encoded documents:

- Samuel Adams Dorr to Thomas Wilson Dorr (http://tapas.neu.edu/dorr-rebellion/samueladamsdorrtothomaswilsondorranelectronctranscription/15803)
- Jason Whitman to Thomas Wilson Dorr (http://tapas.neu.edu/dorr-rebellion/jasonwhitmantothomaswilsondorranelectronictranscription/16023)
- Lydia Dorr and Sullivan Dor to Thomas Wilson Dorr (http://tapas.neu.edu/dorr-rebellion/lydiadorrandsullivandorrtothomaswilsondorranelctronictranscription/16029)

Mixtepec-Mixtec Corpus and Lexicography (http://tapas.neu.edu/mixtepecmixteccorpusandlexicography)

Developed by Jack Bowers, a scholar in computational linguistics (formerly of San Jose State University), and supported by Millie Nieves, Geremaia Salazar, and Tisu Salazar, the Mixtepec-Mixtec Corpus and Lexicography project focuses on the Mixtepec-Mixtec language variety (iso: mix) (Sa'an Savi). Bowers argues while "spoken by roughly 9,000-10,000 people in the Juxtahuaca district of Oaxaca, Mexico[, the MIX language] is scarcely described in any published linguistic literature." Bowers seeks to document the lexical and grammatical features of the Mixtepec-Mixtec language through the formal semantics of TEI markup, with the output of creating an open-sourced textual corpus of the MIX language, which includes interviews, multimedia transcribed materials, and scholarly works of or about the language. The Mixtepec-Mixtec project currently offers visitors three notable collections dedicated to the MIX language:

- Mixtepec-Mixtec Lexicon, which includes, "records, inventories and descriptions of all original (project internal) MIX language data and metadata created and collected over the course of this project"

- SIL-Mexico Mixtepec-Mixtec Publications, which includes,
  "i) TEI-XML markup of documents that supports reuse and extension within this project and/or for other interested parties;
  ii) Annotation and glossing of lexical information and structures in documents; tasks include;
  iii) Classification of Document Types and Ontology Linking"
- Academic Papers, Articles, and Publications, which includes, "TEI encodings of any and all academic articles about any topic related to the Mixtepec-Mixtec language."

Thalaba (http://tapas.neu.edu/thalaba)

Under development by Elisa Beshero-Bondar (University of Pittsburgh at Greensburg), the Thalaba project is a digital edition of "Thalaba the Destroyer" (1801 edition), by Robert Southey. The primary focus of the project, Beshero-Bondar argues, is "to investigate the juxtapositioning of worldly and mythical location in this unconventional epic text." Beshero-Bondar is developing the "Thalaba Collection," which she explains will offer, in addition to a marked up edition of the poem, either a collection of "epic poems by Southey and his contemporaries" or "European epics and travel literature from past centuries referenced in Thalaba." The "Thalaba Collection" currently includes a marked up edition of the text.

A Narrative of the Proceedings of the Black People (1794) (http://tapas.neu.edu/proceedingsofblackpeople)

Under development by Molly Hardy (American Antiquarian Society), the A Narrative of the Proceedings of the Black People (1794) project focuses on two published editions of Absalom Jones and Richard Allen's pamphlet by the same title. Hardy asserts the import of this document (and its editions) as "the first time that African Americans claimed federal copyright and also arguably the first piece of African American protest literature." The project includes the "A Narrative of the Proceedings of the Black People" collection, which offers a scholarly historical framing and summary of the pamphlet as well as a marked up version of the London edition (1794).

Hawthorne's Celestial Railroad: A Social Edition (http://tapas.neu.edu/crr)

Under development by Ryan Cordell (Northeastern University), and currently assisted by Max White (Northeastern University) and Tabitha Kenlon (Northeastern University, Hawthorne's Celestial Railroad: A Social Edition is a project that focuses on the publication history of Nathaniel Hawthorne's once popular and "most beloved works," "The Celestial Railroad." The project currently offers two separate collections: the "Reprints of 'The Celestial Railroad'" collection, which has eight marked up editions of contemporary reprints of the text; and the "'Celestial Railroad' Reception Items," which includes materials on contemporary responses to Hawthorne and the text. The project also makes use of the "Period" and "Publication" timeline visualizations in TAPAS.

Eliza Wheaton Papers (http://tapas.neu.edu/elizawheatonpapers)

Under development by a team at Wheaton College, the Eliza Wheaton Papers project focuses on the writings of Eliza Baylies Chapin Wheaton, the founder of the Wheaton Female Seminary of Norton, MA. The project is creating four collections that will include Wheaton's travel journal, pocket diaries, correspondence, and financial records. Currently, the project offers two collections: the "Eliza Wheaton's 1862 Travel Journal" and the "Eliza Baylies Wheaton Line-A-Day Pocket Diaries."

Native Americans and Quakers (http://tapas.neu.edu/fhl)

Under development by a team at the Friends Historical Library of Swarthmore College, the Native Americans and Quakers project focuses on a "collection of handwritten journals that document contact between Quakers and Native American groups in Pennsylvania, New York, and Ohio, mostly in the period from 1793 to 1801." The project currently includes a collection titled "James Cooper Journal, 1796 Content," which offers a marked up edition of James Cooper's journal documenting "his visit to Oneida, Stockbridge, and Brotherton Indians."

PROJECTS COMING SOON TO TAPAS

TEI Pedagogy
(http://tapas.neu.edu/teipedagogy)

This project has been created by a group of TEI scholars and educators who have organized a working group around the topic of TEI Pedagogy and the role of TAPAS in facilitating the teaching and learning of TEI.

The Early Caribbean Digital Archive ()

Under management by Elizabeth Hopwood (Northeastern University), the Early Caribbean Digital Archive is using TAPAS to publish TEI editions of pre-20 Century Caribbean literary texts. The project proposes to develop a series of collections on topics that will include embedded slave narratives, foodways narratives of the Caribbean, and Obeah in the Caribbean.