DIGITAL HUMANITIES AT THE GETTY: CHAMPIONING A ROOM FULL OF EXPERTS

Jack Ludden[a,] and Emily Pugh[b]

[a] Web & New Media Development, The J. Paul Getty Trust, Los Angeles CA, USA, jludden@getty.edu; [b] Getty Research Institute, Los Angeles, CA, USA, epugh@getty.edu

ABSTRACT: Libraries, archives, and museums have embraced digital technologies because of their power to transform and extend research and education in the cultural heritage sector. However, the potential of these technologies can be limited when content specialists—scholars, researchers, curators, conservators—do not understand how or why they may get used. Thus, when building complex application systems and presentation tools for the GLAM field, it is critical that all experts are involved. Success depends on it. Content specialists, front- end developers and technical architects each have a unique point- of- view that is absolutely essential in answering questions like: What applications or features are needed by content specialists? What are these specialists' current research and publication workflows, and how might a front-end developer and a software architect fulfill these needs? Listening to our core users is absolutely essential, but the collaborative, listening process must also include our peers and colleagues who are building and sustaining these digital humanities applications.

1. INTRODUCTION

Computing technologies offer enormous potential to the field of cultural heritage research, scholarship, and exhibition. However, such technologies can also represent a considerable disruptive force. Along with the possibilities they offer for analyzing cultural heritage objects and communicating information about them to diverse audiences, such technologies present considerable organizational challenges. Working in new ways with new tools often means staff members working in new ways. This could mean need for collaborating with people from different fields than your own, who might use different or unfamiliar terminologies or employ different standards of practice. Or, it could mean departments interacting with one another for the first time, necessitating new workflows and processes. It can also mean reaching audiences of users whose needs and expectations are rapidly and continually evolving.

Such challenges can be particularly thorny at a place like the J. Paul Getty Trust. Not only does the Getty unite in one place a museum, a conservation institute, and a research center containing a library and archive, it unites the expert staff who work in each of these programs, including curators, librarians, archivists, art historians, software developers, semantic engineers, and conservation scientists.

However, when building complex application systems and presentation tools for the GLAM field, it is critical that all experts are involved. Success depends on it. Each of the experts listed above has a unique point- of- view that is absolutely essential in answering questions like: What applications or features are needed by content specialists? What are these specialists' current research and publication workflows, and how might a front- end developer and a software architect fulfill these needs? Thus, the presence of so many experts at the Getty, while at times challenging, has also presented us with a tremendous

opportunity for leveraging their expertise in the design and implementation of digital humanities projects.

In this paper, Jack Ludden (Assistant Director, Head of Digital Experience & New Media Development) and Emily Pugh (Digital Humanities Specialist) will discuss the importance of good UX (user experience) practices in learning from experts and building applications that will meet their needs. After providing a brief explanation of the principles of UX research and design, we will provide examples of projects at the Getty in which we have sought to realize these principles: the Ed Ruscha' "Streets of Los Angeles" project and the project to remodel the Getty Provenance Index™ (GPI).

2. UNDERSTANDING USERS

The basic principles of user experience or UX research are understanding the user's needs. At the core of this research activity is to evaluate and then react to all the collected feedback so that we can improve the experiences of our products. Of the many user research activities that we use at the Getty, there are two UX research practices that have been highly effective: personas and journey maps. By crafting personas and drafting journey maps, we have not only improved our user's experience, but we have made our internal processes more effective. Our project teams are more efficient and are more aligned with our organizational goals and expected outcomes.

Of course, the constant onslaught of technological innovation can make it difficult for a cultural organization to set priorities and be able to articulate what success might look like. At the Getty, user research coupled with project management best practices has given us a good balance between our audience needs and our organizational goals. Unfortunately, silos of information still tend to exist among project team members. Well-articulated business strategies provide a foundation for a team to embrace their organizations' goals, but how do we best champion the needs of our audiences? A production team needs to find balance between the organizations goals and the expectations of the user. Journey maps and personas effectively unify both sets of goals and expectations. Coupled with these UX best-practices, design thinking and agile project management methodologies also help build a

creative and productive work environment. In addition, the design thinking process as well as journey maps are very useful as project teams iterate ideas and possible product options. During the arc of a project, a team will receive countless suggestions about changes to a product design and build. This activity should be embraced and the team should constantly cycle through listening, learning, and creating. With each iteration, the team will learn something new and make improvements. It is important to remember with digital products, things can be modified even after a project has launched. By defining user needs and the interactions that they want to have with a product early in production, technology and design modifications can be less costly and easier to implement.

It is no coincidence that personas and journey maps are both highly visual and easily accessible informatics. Each visualize important data about our users. We have found that multiple experts with varied points-of-view better understand and respond to the user expectations after using the rich resources. Journey maps and personas both act as a bridge between user needs and the application feature set determined by our experts. A persona is a semi-fictional representation of the ideal customer based on market research and real data about existing customers. (Sam Kusinitz, The Definition of a Buyer Persona) At its core, a persona is an aggregate of user research data. These profiles help personalize and conceptualize users. The gathering of this information is done through data mining, interviews and user testing. Typically, a persona includes demographics, behavior patterns, and motivations. Also, there are usually a few different types of personas. Each persona represents a different user types - each with a different point-of-view.

At the Getty, we are considering a significant redesign to getty.edu and our entire digital ecosystem. As we begin to construct our vision for a project, we will leverage (and refine) our existing personas. We can ask ourselves some very basic question, when looking at our personas, that will help us frame our goals and expectations. Some example questions are: (1) What are the needs of a user who wants to visit the Getty and see an exhibition? (2) What are the expectations of a scholar who want to use our open access images? (3) How might a student use our social media channels to share

our collection? Asking these kind of questions while referring to a specific persona is extremely useful because it unifies stakeholders. Early in the production cycle, personas help us ask questions that enable us to establish clear priorities and identify KPIs (Key Performance Indicators). For a project as large and complex as a website redesign, it is essential to have broad, aggregated user profiles to help establish primary objectives and provide unity in the project's intent. If nothing else, personas help all experts at the Getty better understand audience expectations as well as how their own professional work directly impacts the user's experience.

Equally helpful and useful are journey maps. Organizations often build several journey maps to encompass the various scenarios and paths that customers may take when engaging with them. Journey maps create more tangible examples about how people interact with cultural institutions. It is not just data points; its stories being told that demonstrate who audience members are and what journeys they seek to take. While it requires a commitment to create journey maps, they give your institution a more nuanced and sophisticated understanding of your audience and where their virtual touchpoints are. Because a journey map is a visual reference, it can be easily shared across an entire organization and can become an effective way informed visitor touch points to all colleagues. A journey map is not just about when users are using a product, but also includes activities before and after using the product. At the Getty, we use a journey map that includes eight (8) phases:

Phase 1: Discover

This is the user's first contact with your product. How are they being introduced to your organization or your product? Easy access to useful, high-level information that gives context for the user.

Phase 2: Educate

Once a user is on the radar, it is time to initiate contact. Ideally, you want to turn your contacts into a user. During this early stage, identifying user motivations is very useful. This phase is all about giving information about a product and how it helps a user do their work. Users are still in a "search and understand" mode.

Phase 3: Engage

The key to success in this phase is focusing on the relationship with the user and not just the product. An organization wants to be a bit more personal. This is the phase where the user may begin to use (or install) your product and want to access demos or hear from an existing expert.

Phase 4: Involve

It is easy for a user to leave and never to return. That is why a strong connection is important. It can be useful to think about how are users sharing or learning about your product. These types of touch points change along their journey. As their journey continues, you want to be prepared for two-way conversations.

Phase 5: Advocate

The goal is to get your users up and running as soon as possible. It's during this phase where product UX and the application performance both become critical. The prior phases were about easy access to product understanding. Now users are beginning to actually use and interact with the product.

Phase 6: Involve

At this point, the user is well entrenched in using the project, in their work. They are focused on their work. There are directly using the product. Ideally, services and functions are seamless and elegant.

Phase 7: Retain

In a perfect world, every single user you acquire would make it to this stage. At this point, the customer is completely satisfied with your product. Towards the end of their journey, project documentation, retaining materials and the ability to follow up in the future becomes important.

Phase 8: Captivate

The ultimate goal is to have your users become brand ambassadors; someone who praises and advocates on your behalf. They see your product (your organization) as a critical resource.

At the Getty, we have found that applying user needs (from our personas) on each of the eight phases of our journey map provides insights that unify our experts regarding user needs and expectations. As users' needs change from the

early phases of their journey to the end of their journey, we can ask questions like: (1) How might their digital experience change? (2) Does the UI and application functionality shift along their journey? Our personas and journey map give us a great opportunity to listen, respond and react to the growing and changing needs of our users.

Currently, we are evaluating our mobile experience, *GettyGuide*. *GettyGuide* is an in-house mobile App that is only available on-site. Even with limited distribution, more than two hundred thousand visitors use it each year. The mobile App performs well and the interpretative content is award winning, but the iOS applications and content workflow is very dated. It takes a great deal of time, energy and effort to support our out-of-date devices and antiquated processes. Personas, and most notably journey maps, have helped staff better understand the needs and expectations of our GettyGuide users. Our research tells us that most users prepare for their on-site visit by going to getty.edu to find out more about exhibitions and events. As visitors arrive, getting oriented and using maps for wayfinding become essential. Once in the galleries, visitors want to explore and find ways to better connect with our rotating exhibitions and collection. And, as visitors leave, there is a desire to rate and share experiences as well as find recommendations for new, upcoming events. Plotting these needs and expectations onto a journey map has been invaluable as we embark on a *GettyGuide* rebuild.

2.1 "STREETS OF LOS ANGELES" AND REMODELING THE PROVENANCE INDEX

At the Getty, both mobile web and App development have both reinvigorated our commitment to an audience –first (mobile-first) vision. It has had a remarkable impact on our user interfaces, user experiences as well as our entire content strategy plan. Future, large-scale projects, such as our effort to digitize hundreds of thousands of Ed Ruscha photographs and our project to remodel the Getty Provenance Index™, will not only benefit from our current personas and journey maps, but they will inevitably help modify and enhance these new resources.

Ed Ruscha's "Streets of Los Angeles" archive comprises over half a million images to date—

including hundreds of contact sheets and the complete production archive for *Every Building on the Sunset Strip* (1966)—and is the result of the systematic and ongoing effort by one of the best-known living artists to document the architecture and thoroughfares of Los Angeles. Tracking the distinctive street signage and billboard culture of the city, the project spans five decades and records many of its major streets, including Hollywood Boulevard and the iconic Sunset Boulevard. Although Ruscha's book on the Sunset Strip is well known, the larger photographic project came to light only when the archive entered the Special Collections of the Getty Research Institute in 2012. The GRI is digitizing these currently inaccessible images, which are for the most part negatives stored on motion picture film reels, in an effort to make the archive available to researchers for the first time. The digitization process will ultimately yield about 130,000 images.

An important audience for Ruscha's "Streets of Los Angeles" are the scholars for whom the archive may be an important resource for researching, for example, the work of Ed Ruscha or the history of Los Angeles. Thus, as part of the user research for the Ruscha project, we plan to gather a small group of scholars working on research projects that focus in some way on the archive. Critically, we are not only interested in scholars of art or architectural history. Rather, we are hoping to gather a diverse group of researchers who may be allied with fields such as cultural geography, economic history, or urban planning history. We want to explore the many research potentials of this archive and, thus, the needs of scholars from a wide variety of disciplines. In fall 2017, we will circulate a call for proposals, inviting scholars to submit their ideas for projects focused on Ruscha's archive. The goal is to have this small group of four to five scholars produce new scholarship using the archive, which we hope to publish digitally, but to engage them in the user research and design activities for the project as a whole. These researchers could, for example, be tapped for interviews, could review and test wireframes, or could help with usability testing of prototype applications.

In a similar way, we have relied on researchers and experts in the study of provenance art markets, and collecting in one of the largest technology-research projects currently

underway at the Getty Research Institute: the project to remodel the Provenance Index or GPI. The GPI is a set of databases containing almost two million records gleaned from source documents that cover primarily Western European art from the sixteenth to the mid-twentieth centuries. These databases include information culled from archival inventories, auction catalogs, and stock books of art dealers, such as Goupil & Cie and M. Knoedler & Co.. The project seeks to export the data from the various databases in which they are stored and transform them into a single linked data repository, accessible through application programming interfaces (APIs) as well as through public user interfaces. An important first step of this three-year project, which began in July 2016, was to conduct extensive user research in order first to understand the needs of current users: how do they use the current GPI? What information are the looking for and how do they use it once they find it? In learning more about the system's current users, we also wanted to anticipate their future needs. This is particularly important since the field of art market and provenance studies is currently undergoing a rapid expansion, in part because of technologies like linked data.

The first step in our user research plan was a design thinking workshop, led by Dana Mitroff of Designing Insights. This workshop was critical in not only jumpstarting user research activities, but also in helping the project team understand what was entailed in user research: what the various steps are and why we were undertaking them. By the end of the two-day workshop, the project team as a whole had a clear conception of the project's goals and were thinking much more from the perspective of GPI users. Following the workshop, Ms. Mitroff, working closely with with Kristen Carter, GRI User Experience Designer and user research lead for the PIR project, conducted 15 one-hour interviews with GPI users, both in-person and remote. Of these, five were "Contextual Inquiry studies," in which Ms. Mitroff and her team met with users at their workspaces, taking note of their working environment and observing them as they performed their research tasks. The information and insights gathered from these interviews has deeply informed the initial design of wireframes for the public user interface. For example, as Ms. Mitroff wrote in her report:

Our research also revealed that the GPI is one touchpoint in a larger ecosystem of people's time-crunched, resource- constrained lives. From curators to grad students, GPI users are overloaded with too much information, buried with work and responsibilities, and inundated with distractions. To compensate for this, they rely upon a blend of less-than-ideal tools and resources and their own personal work-arounds, rituals, and idiosyncratic processes. These work-arounds and processes give users a sense of satisfaction and control, and can be surprisingly enjoyable to them.[1]

The PIR project team continues to rely on these interviewees for feedback as we refine the design of the user interfaces. Moreover, we are using the insights from this process in other GRI projects, such as initiatives related to the development of computer-based scholarly workspaces.

We should emphasize that hearing from users about what they need or want from an application does not necessarily mean that the project team builds them what they ask for. However, knowing more about users' expectations and needs, as well as thinking from the perspective of the users generally, helps the teams working on these processes to prioritize their goals and to balance users' needs and goals with those of the institution. On digital humanities projects in particular, user research can also serve to bind the scholarly goals of a project with the technological goals for it, ensuring that the needs of scholarly users are taken into account by the technology experts who are building the applications and interfaces.

3. CONCLUSION

Both the Ruscha and PIR projects demonstrate the need to coordinate the knowledge and efforts of a wide variety of scholars, and the various means to achieve this goal, from active research projects, to interviews, to usability testing. More cultural organizations than ever are experimenting with complex technologies in pragmatic and successful ways. It is critical that we remain attentive to the needs of our experts while embracing our users' expectations so that both shape and guide our goals and priorities. Cultural heritage audiences (from scholars to the general public) are incorporating technology more and more into their experiences. Our physical locations must co-exist with our digital destinations. We

must move away from one-way conversations directed at our audience and transform ourselves into an industry that continuously listens to, responds to and interacts with its audience. There is a growing need for us to embrace transmedia experiences and tell our stories (to do our research) on all the various platforms and technologies that are available to us and our constituents.

Key business practices such as design thinking and leveraging user research with visual informatics like personas and journey maps help create an organization that is built upon a sharing economy that promotes cultural scholarship, education, and preservation. Within a university setting, library environment or in a museum, we are surround by experts (scholars, curators, software architects, registrars, copyright lawyers, etc.) We do not want our experts in silos and user research is the key. We want everyone connected and committed to the same goals and expectations. We want to build the most successful products and experiences possible.

4. ACKNOWLEDGMENTS

5. REFERENCES

[1] Mitroff, Dana and Lee, Ahree, "Remodeling the Getty Provenance Index for the Digital Future User Research Findings and Personas," February 14, 2017.