DIGITAL

Digital Storytelling in Museums: Observations and Best Practices
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Abstract  The museum landscape has changed dramatically over the last 20 years. Technology has made possible new kinds of interactions, visitor expectations have broadened, competition for time and resources has become increasingly intense, and the buildings serve ever-more-complex roles. As a result, interactive designers, including those of us at Second Story, have evolved our skills and approaches to keep pace. This article summarizes many of our observations while sharing some of the best practices that we have evolved to create engaging interactive installations, websites, and experiences. Despite changes in technology and user behavior, a core focus on great storytelling should drive interactive design and serve as the critical element for museums communication and connecting with their visitors.

CHANGING EXPECTATIONS

Museums have often been unique venues, places where—yes, you went to find information—but also places where you went to have a special kind of experience. Museums were able to deliver context and sensory experiences in a way that other places could not. There are probably no full-scale blue whale models or enormous Jackson Pollock paintings in your hometown, unless your hometown is Manhattan. While much of the information offered by museums has become readily available through alternate means, the total experience—environment, destination, and information—still hasn’t been replicated elsewhere.

Over the past decade, much has changed in culture regarding the sanctum of information—its source, its authorship, and how people consume it. We used to have to seek it out, and the search was a part of the experience. We had to really act to find out anything. If you wanted to know the fourth billed actor in Butch Cassidy and the Sundance Kid, or you wanted to know who played third base for the Washington Senators in 1948, then you had to find a reference book, even take yourself to a library. (Answers, by the way: Strother Martin and Eddie Yost, respectively.)

The proliferation of multiple sources of content throughout our lives has changed the relationship between people and knowledge. Many, if not most, now expect hyper-contextual information, and they expect it as quickly as it can reach their computer or mobile device. Context can be delivered in a variety of ways, while content and knowledge frequently become non-linear. Within moments, no matter where you are, you can understand very quickly (if not as viscerally) how big a blue whale is\(^1\) or you can see, in fine-grained detail, the \textit{Birth of Venus}\(^2\).

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Along the same lines, if people are looking for an opinion from a trusted source, Twitter and Facebook (not to mention Quora, Ask Metafilter, and many, many other sites) are there to provide information relevant to them. The information might not be entirely reliable, but at least people know the source, and can calibrate their reaction and expectations.

The notion that people no longer read—recently asserted by Steve Jobs—is patently false, as evidenced by the incredible volume of prose being delivered to billions of people every day. True, it is in multiple forms and across multiple devices and technologies, but it is being consumed, nonetheless. As a result, people are becoming different types of learners. There are innovative new paradigms of consumption. Consumer comfort increases with this diversity. We have to ask: how can museums accommodate this rapid pace of change?

The sheer number of modes of communication is staggering. It’s not about tone anymore, or even design, but about multiple vectors in an experience. But how can museums design an experience that will not only capture attention and convey complex information, but also use modes of interaction that will not seem outmoded next Thursday? How do museums best learn from the world around them while still maintaining their traditional role and experience?

CHANGING CONTENT

The museum’s approach to storytelling has evolved. What was once primarily a voice of authority speaking to the public through exhibition display and publications has dramatically turned, in many places, into a multi-faceted experience that invites conversation and interaction with visitors. This has been a direct response to an increasingly diverse audience; much of current new media planning aims to grow new audiences without alienating traditional visitors.

In the same way that the telephone was once unpopular in relation to hand-written letters, today we see Facebook and Twitter messaging being met with inherent skepticism in some circles. Museums should view these new technologies as complementary to interactions they already have. If a museum embraces the idea of interactions between curators and visitors in the public space, then it is relatively straightforward to implement a social media presence and, more importantly, to sustain the effort.

Museums often express concern about losing a sense of traditional authority in these new venues and forms of communication. This is a reasonable skepticism, especially if an organization is used to having potential conversations in carefully designed forms and places—through exhibits, publications, and other formal presentations. If one is heading into a room full of people who speak a different language, it is difficult to be comfortable with what you have to say or even to know how to respond.

The reality, however, is that showing up for the conversation is half the battle. Museums convey authority through their existence. We cannot claim that trust in the institutional voice (of the curator or the museum storyteller) has eroded, necessarily. People still believe in the experts. But the voice of the expert exists in a much louder world, information-wise, and that din has been brought into the once-sacred realm of the museum. The only real change in this new forum obliges us to go where these conversations are taking place rather than waiting for them to come to the museum.

Museums are not simply collections of rooms and words and things. The expanded view of the museum embraces the fact that the digital presence of an organization is just as
extensive—and expected—as the physical manifestation. This overall view of the museum focuses on the core strengths and values of collection, content, and storytelling. These things can appear anywhere—online, in an exhibition, part of a publication, as part of a mobile experience—because they are counterparts of the same core strengths. In reality, this digital presence is part of the overall firmament of the organization, but the thinking is still new for many and extra attention is required to see the evolution. Tate was an early exemplar of this approach by treating the online space as the museum’s fifth gallery; the museum is now progressing to a more integrated approach that reflects this understanding.

The big question is not whether or not people are interested in stories. Now, more than ever, it is evident that people want and will consume content. The resulting question really is simple: how can a museum best frame content to make it desirable?

CHANGING SPACES

Museum spaces are also changing. Artists, curators, exhibit designers, and media specialists are increasingly challenged by newly constructed museum spaces with radical geometries, varied lighting conditions, and complex spatial attributes. These spaces are a significant departure from familiar forms. At the same time, these spaces pose practical problems during creation and planning, but the intervention of technology makes them possible, and we see a glimpse into the future of architectural exploration. Add to this mix the increasing variety of uses we find for these spaces and the equation becomes even more complex. As content has sometimes become less didactic, the tools we use to deliver it in the physical space have become more diverse.

As Suzanne Mulder points out in her excellent introduction to Engaging Spaces (2010), the medieval cathedrals of Europe are extremely sophisticated and developed narrative spaces that integrate deep content with visceral and emotional spaces. These places used to be the height of what could be meant by a narrative space, engaging their visitors on many levels. What we mean by “interactivity” has changed a great deal in the intervening thousand years, but the core is there: the idea of mixing content and physical space is hardly a new discipline. In this discussion of integrated media environments, it is good to remember some history.

In the evolving question of the triangular relationship between the media, the space, and the visitor, how does the addition of a layer of immersive media add to or detract from the spatial effects of a particular gallery? How limiting or freeing are intensely unique spaces, and how can interactive experiences be used without conflict between presentation, the space, and the visitor? The increasing diversity of museum spaces has added to the palette of possible experiences, and enriched the conversation around all of these questions. The days of the lonely kiosk in the darkest corner of the gallery are, hopefully, behind us.

The discipline of integrated media and interactive experiences has followed a path parallel to work in installation art. Where artists find success experimenting with the creation of immersive microcosms, the developers of integrated media environments have taken note. We see this approach both in terms of the kinds of technology we use to deliver content, and in terms of the increasing role of content in shaping the overall visitor experience.

An area of special interest has been the role of already existing environments in this new world (as opposed to new spaces designed for integrated media). As in architecture and urban
planning, the stitching together of the old and new presents a series of open challenges. Media can be deployed in a way that preserves the past and yet meets the needs of modern visitors, curators, and artists. Careful attention to where the old meets the new is key. Sometimes the medium will require framing, other times it needs to be freed to bleed out into a space, or to function as an experiential overlay. Importantly, senses other than sight play a big role when mediating between old space and new content. Real sensitivity to all the attributes of an existing gallery space means new forms of media are more than just projections on a wall. Consideration is made to the way sound works, the texture and feel of surfaces, and the overall sense of the visitor in the space.

The strategy of a deeply integrated media experience is the same regardless of the venue. The goal is to create an experience. Every design problem will have the same basic ingredients: content, visitors, and space. Equal attention to all three will be required for a successful result.

CHANGING TECHNOLOGY

Presentation of content in museums has often been straightforward, focusing on design and exhibit techniques rather than technology to inspire and innovate visitors. There are standout moments—the Mathematica exhibition by the Eames Office,7 a duplicate of which is at the Museum of Science, Boston, is a benchmark of excellence. Yet as visitors, we cringe when we see exhibits with old technology, in part because we assume the content to be equally outdated.

The complexity of the consumer tech market has given our visitors and audience significant new capabilities and deepened their sophistication and technological literacy. A multi-touch screen was a novel idea four years ago; now the popularity of the iPhone has made it commonplace for visitors to walk up to a traditional touch-screen and use two fingers to try and expand an image. Similarly, WiFi is becoming pervasive in museum galleries, and the Internet has become the new dial tone. Hardware is increasingly specialized and the Internet becomes the bonding glue behind the scenes, allowing software layers to interact with each other outside of the device. The practical implication is that the actual technologies and hardware used in exhibits become less important over time because they’re no longer the real containers of the content.

There is also a trend towards personal devices and personal interactivity. Technology moves with the visitor through the proliferation of powerful computers in small form factors (mobile devices and tablets). These new form factors are a significant evolution from the multi-function computers on our desks, and frequently offer a more effective, contemporary version of the kiosk experience.

This next generation of devices and computing platforms encourages users to focus on the experience through a single rich application at a time. There is a new paradigm at work here that signals an important shift in how people are using new technologies. Despite devices that may be less capable in brute functionality, there’s a perception of a more capable and focused experience because much of the underlying complexity has been removed for the casual user. The distractions of file locations, nested folders, windows, and panels of settings are starting to disappear. Users directly engage and interact—they touch instead of click—with content, resulting in a more visceral experience.

The question is how to leverage new forms of technology while ensuring that they don’t detract from the power and significance of
stories and content. The march of technology will continue. When we allow museum experiences to diverge from everyday reality, or prevent our visitors from engaging in content as they are accustomed, we create a false choice of either experiencing new technology everywhere or not at all. Instead, we should accept the future, be mindful of traditions, and seamlessly merge them in natural ways. We can do this by letting technology disappear from view and reassert content and experience as the focus for the visitor. Technology is a facilitator in the storytelling of our content and when used effectively, it is rarely noticed.

Toward this end, we need to be disciplined in our creative efforts and think fundamentally about our goals rather than the technology. Rather than saying “Let’s create an iPhone app for kids to explore art,” ask the question, “What is the best way to show the artwork in this exhibition to a younger audience that does not come to the museum?” The answer may be the same, but when we ask the core question, we often find simpler (and possibly better) solutions.

SUGGESTIONS

Engaging with these realizations on a day-to-day basis, we have identified a number of strategies and tenets that have guided our work throughout this evolution. There are exceptions to many of these ideas, but understanding the innate intent in each informs when and how to break the rules.

Strategic Thoughts

Have a Vision. Above all else, identify a strong, clear vision for a project in the very earliest stages. For example, “This installation should allow visitors to viscerally experience the eruption of Mt. St. Helens.” This vision will provide overall guidance and be later coupled with specific tactical goals. The implementation should only veer away from the vision for very good reasons. If a project does not have a vision, stop until it does.

Embrace multiple kinds of authority in the organization. A single authoritative voice presents a monolithic view that does not represent the multitudes of interaction that diverse audiences represent. Where museums wish to maintain their role as primary sources of knowledge, they need to show up in new communication channels, and perhaps most importantly, engage. It may not be perfect to start, but even a stumbling voice that finds its rhythm is better than no voice at all.

Use a little technology well, not a lot of technology poorly. We all understand the compromises that we make in budgets, staff, and time; resources are never infinite. However, rather than trying to spread technology too thin or treat projects as an initial experiment or prototype for later expansion, it is frequently better to simply choose to do one or two things and do those incredibly well. It is difficult to make choices, but ultimately the constraints make your focus stronger and the end result is going to be more compelling, engaging, and memorable for visitors.

Take more chances with design and experience. Most projects are an opportunity to question or validate assumptions, try new variations, or learn something new. When teams get used to being experimental, it is easier to take leaps of faith and seize real opportunities when they present themselves. The required corollary is to cast a frequent critical eye on a project and course correct before things progress too far. This gets easier with practice.

Break out of the traditional models of exhibit development. Traditional exhibit design approaches content top-down and often
turns interactive installations and other technologies, such as mobile experiences, into an afterthought. Instead of focusing on the physical space, then content and associated detail, and finally supporting media assets, have the smallest elements push back up the food chain and inform the overall design. Create pockets of compelling experiences and resolve the larger design in response. This two-way look at implementation creates a stronger feedback loop that strengthens the overall experience.

Good storytelling requires good editing. Not everything that can make it into an interactive experience should make it into an interactive experience. Think about what serves the story first and foremost. Being open to the process and evolution of ideas involves selective pruning.

Technology is a last resort. With powerful technology comes great responsibility. If a piece of content is equally served by a simple graphic panel, that’s likely a better (and more cost-effective) solution. Changes in scale, dimension, quantity, time, and complexity all lead towards technology. Technology used as a container for the content that could not make it into an exhibit is a poor use of technology.

Social media needs to be social. Social media opportunities should focus on sharing and giving visitors a voice and should not automatically be included in every new project. We strongly believe in user contribution but only when it is a natural extension of the way the organization already engages with its visitors.

Complexity costs money. It seems obvious, but the greater the quantity of information, the greater the levels of technology involved, the greater the kinds and complexity of user interface and interaction, the more expensive a project is going to be. It is entirely reasonable to simplify some components to invest in a select few more complex components.

Create multidisciplinary teams. The juxtaposition of different ideas often leads to great moments of inspiration. It is easy to look at things with a jaded eye, and being exposed to a new interpretation of the same circumstances frees up one’s habitual thinking. The potential trade-off is in efficiency, so teams need to be focused and have specific tasks to resolve in a given time frame.

Look for inspiration from outside the museum field. This parallels creating multidisciplinary teams. Not only does having internal talent from other disciplines prove useful, other fields often solve similar problems in different ways. Conferences and peers focused on different problems give new insights into new solutions.

Tactical Thoughts

Use technology as a design element. Second Story approaches interactive experiences as integral to the overall form of an exhibition. The technology is another form to be integrated into the space and user experience, with space following function and function sometimes following space. This arrangement positively challenges our assumptions about how interactive experiences should work.

Give meaning to technology interactions. The ways that people interact with technology can also provide meaning. Giving careful consideration to how people use technology can provide a more deeply satisfying experience. For example, sitting on a chair could trigger a projected display—the presence and action of the visitor has provided deliberate meaning.

Scale the content and experience to the technology and the environment. We are living through a rapid proliferation of content delivery methods—exhibits, books, Web browsers, tablets, smart phones, and more. Recognize
how a user will engage with the content (or consider how the content makes demands on how the user engages with it). A deep, long, or complex experience works best in a seated or contemplative environment. Quick, simple, transient interactions often work well in simple delivery forms.

The inherent difficulties of a space or experience can often be a strength. Rather than fight geometry in a space, determine how it can be used to create a point of interaction or divide an experience. In every project where we embraced the difficult, after the initial pain, the execution has become a source of pride.

Group dynamics require different design than individual user experiences. The fundamental design of interacting with a group is not simply scaling up or adding a series of individual experiences. The fundamentals of emergent and suggested group dynamics need to be considered as design elements of the user experience.

Choose a consistent content approach. Content is frequently formatted and delivered in parallel forms when there are many narratives to tell. We build approaches that “scale” across a particular form of content being delivered for consistency and user expectation. Two common approaches are a few single deep stories or many shallow stories. Neither is better than the other, but mixing multiple approaches can significantly increase the complexity of the experience.

Remove barriers to content and experience. Visitors feel more satisfied when there are fewer barriers between them and the content. In practice, this means flattening hierarchies of information (fewer steps to get to content), simplifying user interfaces, and removing unnecessary introductions and instructions. We want to see people get hooked on the content and experience and then add additional context and information. They will stay longer and go deeper.

Use multiple layers to present a story. A multi-layered approach to a story creates multiple tiers of experience and makes it easier for visitors to find the tier at which they want to engage. Sometimes simply presenting similar components of a narrative in alternate forms positively reinforces the content and adds a sense of staging and sequencing.

Move into production sooner. An internal mantra of our studio over the last year has been “Get Real Sooner.” As we begin real development, we frequently learn that many of our early assumptions about the content, usability, and experience need to evolve. This process requires a hard look at resources, features, and experience, but the payoff is often a more cohesive and elegant approach to the experience. What we learn as we begin the process informs the future.

Streamline the process, make mistakes, be prepared to iterate. We try out a lot of ideas. Some work, some do not, but no idea is too sacred, and they can frequently be improved. Teams should be constantly evolving concepts and ideas instead of aiming for absolute final perfection. This way, milestones become a byproduct of the ongoing effort, and constant progress is possible. But we also have to be strong in calling an end to ideation in order to focus on completing the work.

Focus on the goals of an experience, not on specific means of delivery or key technologies. This boils down to “do not design for the shiny thing you saw last week.” When thinking about technologies, there are a number of elegant and interesting possibilities. Part of the process is to leverage the qualitative elements of other experiences, but to understand what makes them good and to possibly apply that knowledge to the next experience. Identifying the technology before understanding the goals and content can quickly lead to a solution that doesn’t feel natural or appropriate.
CONCLUSION

The transformation brought about by digital technologies has been intense, and we can safely assume that it is just getting started. But after 17 years and hundreds of projects—CD-ROMs to websites to interactive installations and environments—it is evident to us at Second Story that what makes great experiences are the very things at which museums excel, namely content and story. Of course, we love the complexity that comes with new technologies and when we combine the cutting edge with the tried and true, we have the ability to achieve magic. But technology can be seductive, and we must constantly remember the core stories and the visitors who crave them. This is a process we go through on every project. We hope that sharing some of our practices in the paragraphs above will prove helpful to others and make the process a bit easier for everyone.

END

NOTES


REFERENCE