MCN2015

NOVEMBER 4 • WEDNESDAY

Breakfast  Case Study  Ignite  Keynote  Lunch  Networking  Reception
Sessions: Accessibility  Sessions: Big Thinking  Sessions: DAMs - Collection Management
Sessions: Emerging Tech  Sessions: In-Gallery-Education  Sessions: Leadership-Strategy
Sessions: Open-Participatory  Sessions: Project Management-Evaluation  Sessions: Publishing-Production
Sessions: Social Media-Mobile  Tour  Workshop

9:00am – 12:30pm  W  Building Authentic Connections with Visitors through Design Thinking

Speakers: Susan Edwards, Dana Mitroff Silvers

This workshop will combine tools and methods from the design thinking process with theories and strategies from game design. Design thinking is a human-centered process for problem solving and innovation. The process emphasizes learning by doing and in this workshop, participants are introduced to design thinking through a hands-on, highly interactive experience. Participants will play games, create prototypes, and test them, all while building empathy for the needs of users and breaking out of "Museum Think."

9:00am – 12:30pm  W  Cutting-Edge 360 Virtual Reality

Speakers: Dennis Biela

This workshop would cover the hardware and technics use to create 360-degree VR images both still and video as well as how to create 3D image content. Attendees would gain a basic understanding of, hardware, software and workflow needed to create this type of VR and 3D VR content.

9:00am – 12:30pm  W  Dabble with Microcontrollers: Part 1, Small-Scale Hacking for Beginners

Speakers: Chris Evans

Have you heard about things like Arduino and wanted to get your feet wet? Here is your chance! Maybe you want to learn how to integrate physical computing into your exhibits. In this first half of a full-day workshop, we will get acquainted with microcontrollers, circuits, input (buttons and sensors), output (sound and light), and soldering.

9:00am – 12:30pm  W  Storytelling in Video: Aspects of an Engaging Production

Moderators: Sarah Wambold

Speakers: Andrew Mandinach, Andy Underwood-Bultmann, Sarah Waldorf

Telling great stories in video requires good execution on many fronts. Museum professionals—some filmmakers in their own right—discuss various aspects and considerations for making the most in the medium.

9:00am – 12:30pm  W  Transform Your Museum with Agile

Speakers: Andy Cummins, Andrew David, Angela Johnson, Gavin Mallory, Meaghan Tongen

Agile is transformational for digital projects in a museum. In this half-day workshop we will introduce participants to Agile, specifically Scrum, and the benefits it provides in terms of delivering projects that meet user and stakeholder needs.

The Minneapolis Institute of Arts and Cogapp will come together to share our experiences working with Scrum. We’ll provide an overview of Agile principles, how we work, and how to apply this methodology for meaningful change. Our goal is to offer participants a better understanding of what it means to be "agile" and how to approach this way of doing work in a museum environment. We will share specific examples and offer practical methods to apply in your own operation.

This will be a hands-on workshop with activities and exercises that will give us a chance to get out of our seats, collaborate, iterate, and learn from each other.
9:00am – 4:00pm  T Tour: A Day in St. Paul  
There's a lot happening in Minneapolis, but some of the really cool museums are across the river in St. Paul. This tour will start with a scenic bus ride across the Mississippi River and along Summit Avenue, St. Paul’s boulevard of historic mansions, ending at the Minnesota History Center [http://www.minnesotahistorycenter.org/]. Here, you'll get a behind-the-scenes tour of some of the museum’s hands-on and immersive multimedia installations and interactive video conferencing studio, as well as have the opportunity to try your hand at Play the Past [http://www.mnhs.org/playthepast], the History Center’s mobile gaming experience for 4th-6th graders. After lunch at the History Center’s Cafe Minnesota you’ll head down the hill to the Science Museum of Minnesota [http://www.smm.org/] to experience unique media installations like the Giant Astronaut featuring a video booth where visitors can record themselves and then see their face projected on the helmet of this three story sculpture, as well as a behind-the-scenes tour of the exhibit production shop where the museum builds custom media and electronic installations for clients around the country.

1:00pm – 4:00pm  T Tour: The Bakken Museum  
The Bakken Museum (3537 Zenith Avenue South Minneapolis, MN 55416-4623) Bakken [http://www.thebakken.org/] staff will lead you on a tour of a one-of-a-kind museum, named after Earl Bakken, co-founder of Medtronic and inventor of the first wearable pacemaker. The Bakken's exhibits, library, collection and programs focus on the history of electricity and magnetism and their roles in the life sciences and medicine. Enjoy the beautiful and distinctive building and grounds located on Lake Calhoun in Minneapolis and learn about new interactive exhibits in development.

1:00pm – 4:00pm  T Tour: Walker Art Center  
Explore a rich world of media presentation, innovation and production at the Walker Art Center. Tour the new Mediatheque [http://www.walkerart.org/moving-image/mediatheque] space, which allows users to access, explore and queue, for playback, films from the Ruben/Benston Moving Image Collection utilizing an innovative app and cutting-edge hardware. Hear from the architect of the interface and Moving Image Collection staff about challenges and solutions in launching this very popular tool that allows users to browse available titles by director, title, genre, period and keywords. You’ll also get a behind-the-scenes look at the Walker’s cinema, which boasts the latest 4K and Dolby 3D projection equipment while maintaining 35mm capabilities and is considered one of the finest independent cinemas in the country. Staff will discuss the Walker’s high-capacity, restrictive-budget production capability for promotional videos, archival and event capture and an expanded usage of event live-streaming utilizing multi-camera setups.

1:30pm – 5:30pm  W Computational Photography Techniques for Cultural Heritage: Photogrammetry and Reflectance Transformation Imaging (RTI)  
Speakers: Carla Schroer, Charles Walbridge  
Minneapolis Institute of Arts (2400 3rd Ave S, Minneapolis, MN 55404, United States)  
Through lectures and demonstrations, this workshop will provide a comprehensive overview of computational photography and its application to cultural heritage. The workshop will offer an intensive means to get introduced to or updated on the technologies, software, photographic equipment, and methods for Reflectance Transformation Imaging (RTI), and Photogrammetry. These techniques are being applied to a variety of art objects and artifacts. RTI is particularly useful for documenting low-relief surfaces like paintings and engravings. New research techniques using these data sets will also be presented. Photogrammetry creates accurate and measurable 3D models in a wide range of scales. It can be used for documenting sculptures, monitoring changes to historic sites or objects, and a wide range of other uses. The workshop will include demonstrations and ample time for discussion and Q&A, including presenting the required and optional equipment involved. There are no prerequisites. Anyone from novice to expert is welcome. The workshop will take place in the Visual Resources
Outcomes for Participants

1. Clear understanding of these computational photography imaging techniques, how they are used, what they can show, and what is involved in adopting them in museum practice.

2. The RTI software tools are open source, with freely available User Guides and other supporting materials. Participants will be updated on available materials and software, and also where to find all the resources.

3. Photogrammetry image capture is independent of the software you use to process it. The most complete software for photogrammetry is currently commercial, though there are several available options. The focus in the workshop will be on the overall concepts and the software independent image capture. Discussion will use the Agisoft Photoscan Pro software. Some discussion of software options will be included.

4. Updates about the latest software for all techniques, especially RTI including planned and in-progress software work.

5. The workshop will include demonstrations and ample time for discussion and Q&A, including presenting the required and optional equipment involved.

1:30pm – 5:30pm  W Create Your Own Audio Guide, Using Free and Open Platforms

Speakers: Alex Palin

This session will cover different aspects of using open platforms for publishing content from museums, employing modern mobile technologies – as well as give a workshop on creating high-quality content for mobile audio guides that can be used anywhere later on: in the app, on the web, on social media.

1:30pm – 5:30pm  W Dabble with Microcontrollers: Part 2, Coding for Beginners

Speakers: Chris Evans

Last year’s workshop was a smash success, but attendees craved to learn code. The second half of our full-day workshop is designed to give you just that. Our skilled facilitators will guide participants further into the language of Arduino, helping you through the basics of coding an interactive Arduino project. This hands-on workshop aims to empower makers interested in learning to code by providing multiple entry points to participants of any skill level.

1:30pm – 5:30pm  W Experiencing the Visitor Experience

Speakers: Kate Haley Goldman, Ed Rodley, Bruce Wyman

Deconstruct the visitor experience at the Science Museum of Minnesota with 15-20 colleagues. The group will look at physical spaces, how content is featured, interactive experiences, content, storytelling, object display, engagement techniques, lighting, and audio components to see what succeeds, for whom, and how. Along the way, colleagues will be encouraged to briefly explore on their own before coming back together to debate, debrief, and review. At the conclusion of the tour, the group will have a facilitated discussion on the overall experience. Members from the Science Museum will be on hand to discuss the context, process, and decisions that led to the current visitor experience.

1:30pm – 5:30pm  W Introduction to Linked (Open) Data

Speakers: Duane Degler, Neal Johnson

Using LOD to expose and strengthen invisible architectures of meaning: Interest is rapidly growing in how linked data could address both internal and external needs for enhancing the management and access to cultural heritage information. But the real focus of this workshop is to help you grasp the value propositions offered by linked data as a tool to expose the hidden conceptual architectures between disparate data and information resources. It is about its application in cultural institutions in service to the core institutional mission of connecting people with ideas.
### MCN Digital Publishing Studio

**Speakers: Greg Albers**  
Great Lakes A2 (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

Digital book publishing, digital production of any kind, is not an isolated act. It is not about a particular format or tool. It is a collaborative, physical, emotional and intellectual endeavor. While this has been true for centuries in print book publishing, digital publishing is about bringing the publishing process to a wider range of potential collaborators. It is about making that process faster, easier, more open, and more universal. It is about creating networks of people acting in concert across geographies toward a common end.

"Trade publishing is by nature a cottage industry, decentralized, improvisational, personal; best performed by small groups of like-minded people, devoted to their craft, jealous of their autonomy, sensitive to the needs of writers and to the diverse interests of readers." —Jason Epstein, 2001

So, we're publishing a digital book about MCN2015! An actual book. Start to finish. In four days. Together. The process starts in this half-day workshop, where we'll set up and name our publishing house, decide what our book will be about and in what digital format or formats we're going to publish it in, assign tasks, give ourselves titles, and set out. As a highly distributed guerrilla group of publishers, participants will gather and submit content for the book throughout the course of the conference. We'll keep in touch and on task by email, text, project app or over drinks at the hotel bar. The project will culminate in our book's final publication, announced at the conference plenary and probably read and celebrated for centuries to come.

Our goals for the MCN Digital Publishing Studio are for participants to:

- Consider the qualities that may distinguish digital books from other digital projects. Qualities like pause, permanence, authorship and objectness.

- Learn the processes print and digital books go through in getting made, from editorial and design, to marketing and distribution.

- Review and put to use some of the many tools available for creating digital books, with an emphasis on those that are free, open source and sustainable.

- Experience what can be accomplished with just a few days, zero dollars and a dispersed but engaged group of like-minded people.

### Ignite MCN 2015

**Moderators: Koven Smith**  
**Sponsors: Mailchimp**

MCN's signature welcome event, Ignite MCN showcases a series of rapid-fire, five-minute talks from some of the most provocative thinkers in the museum field. The talks follow the "Ignite" format, in which presenters have five minutes and 20 slides (which advance automatically every 15 seconds) to enlighten, entertain and inspire. Joining us this year, 8 courageous and visionary speakers to share their experiences in a wide variety of disciplines.

- Elissa Frankel & Carol Bossert: The Conversion Model of Museums
- Trish Oxford: "Doing It" With Their Ghosts: The Uncertain Future of the Historic House Museum
- Nikhil Trivedi: Towards an Anti-Oppression Museum Manifesto
- Brad Baer: 10 Storytelling Takeaways from Serial
- Claire Blechman: I'm DAM Creative!
- Sina Bahram: Our Accessibility Journey
- Chad Weinard: The Endless Immensity of the Sea
- Ed Rodley: What We Talk About When We Talk About Digital

Meet in the Hyatt Regency lobby to board buses at 5:30pm.
Check out last year’s Ignite sessions [HERE!](https://mcn2015.sched.org/print/all).

Generously sponsored by MailChimp.

### NOVEMBER 5 • THURSDAY

**8:00am – 9:15am**  
**B Breakfast / Exhibit Hall Opening**  
Exhibit Hall (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

**9:15am – 10:30am**  
**K Keynote**  
Great Lakes C  
*Speakers: Liz Ogbu*  
A designer, urbanist, and social innovator, Liz Ogbu is an expert on social and spatial innovation in challenged urban environments globally. From designing shelters for immigrant day laborers in the U.S. to a water and health social enterprise for low-income Kenyans, Liz has a long history of working with communities in need to leverage the power of design to deliver social impact. She is founder and principal of Studio O, a multidisciplinary design and innovation firm, as well as adjunct faculty at UC Berkeley and Stanford’s d.school. Previous roles include first-ever Scholar-in-Residence at the Center for Art & Public Life at California College of the Arts, Innovator-in-Residence through the inaugural IDEO.org Fellowship, and Design Director at the nonprofit Public Architecture. Her projects have been featured in museum exhibitions and received numerous design awards globally. She has also written for and been profiled in publications such as the Boston Globe, Metropolis, Core 77, and the Journal of Urban Design. Her honors include Aspen Ideas Scholar, Next City Vanguard, Senior Fellow of the Design Futures Council, and one of Public Interest Design’s Top 100. She earned architecture degrees from Wellesley College and Harvard University.

**10:45am – 12:00pm**  
**N Speed Networking!**  
Great Lakes A1 (1300 Nicollet Mall, Minneapolis, MN 55403, United States)  
*Speakers: Elizabeth Bollwerk, Mandy Kritzeck, Scott Sayre*  
The goal of this session is to help people meet and interact with others who they might not ordinarily get a chance to connect with. The set-up includes multiple round tables. The 60 minutes is divided into multiple rounds. During each round people interact with others at their table. At the end of the round they get up and move to a new table. These short meetings will create connections that people can then follow up on at other points during the conference. We will need to set up multiple round tables where 5-10 people can sit (last year it was tables of 10). When the session begins, each person will have 1 minute to introduce themselves, where they work, and why they came to MCN. Each table will also have a person who is the timer (everyone in the past has used their phones). After about 10 minutes a bell rings, signaling the end of the round. Everyone seated at a table will then get up and go to a different table. The purpose of having multiple rounds is to allow people to move around and meet different people during every round. For the past two years this session has had great attendance, we hope to continue that streak!

**12:00pm – 1:15pm**  
**L Lunch with the Exhibitors**  
Hyatt Regency Minneapolis  
Join us to kick off the two-day Exhibitors and Sponsors Hall with a luncheon where you can mingle and get to know industry vendors.

MCN is making a private meeting room available for you to schedule meetings with vendors. Reservations must be made to conference@mcn.edu. Please indicate the vendor you would like to schedule a meeting with. First come, first served.

**1:15pm – 1:45pm**  
**One Publisher, Many Platforms**  
Nokomis (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)
Speakers: Lauren Makholm, Joseph Mohan

Much like many of our peer institutions, the Art Institute of Chicago has been focused on publishing digitally for many years now. We are interested both in finding a digital home for existing content (out of print titles, collection information, exhibition brochures, etc.) and finding a reliable and flexible way of publishing future content. Unfortunately, many of the digital publishing solutions and platforms that are useful for mainstream publishers are not well-suited to museum publishing. The department of publishing at the Art Institute of Chicago has embarked on various digital publishing initiatives. Some have been internal experiments while others have been large ambitions such as our online scholarly catalogues. During this presentation, we will discuss our various experiences with multiple established platforms such as iAuthor, Mag+, and Adobe DPS as well as custom web-based applications such as the OSCI-Toolkit. We’ll cover not only the pros and cons of our experiences, but also the advantages of one institution exploring various digital platforms.

1:15pm – 1:45pm

A Small Museum Goes Global

Moderators: Dana Allen-Greil

Speakers: Tamsen Young

At any given moment, somewhere in the world, a city is hosting a fashion week event. Global Fashion Capitals (June 2 - Nov 14, 2015) examines the fashion cities around the world and explores the factors that enable emerging cities to rise to global prominence.

The Museum at FIT is continually experimenting with new ways to engage visitors with digital content in our galleries. For the exhibition Global Fashion Capitals we collaborated with a couple of partners to create digital initiatives that attempt to bridge the online/onsite museum visitor experience.

We worked with Microsoft cloud services to implement a digital style map which is both an interactive platform and visual projection. It uses Instagram to aggregate tagged content that is delivered as city “clouds” on the map. A visitor to the gallery can either watch the projection or use iPads to select a specific city and view street style and runway images that reveal each city’s unique identity. The project was aimed to integrate information from multiple sources in an automated way using basic scripts and code.

The museum accepted an international fellow from Helsinki, Finland to create an electronic publication to engage global fashion bloggers from around the world in order to contribute insight and perspective about the local fashion culture of their city. This collaborative project connects diverse international voices -- whether through video, narrative essay, or interview -- and integrates research, fashion, and digital media to provide meaningful networking and sharing of knowledge.

Many social media platforms will be employed during the run of Global Fashion Capitals. However, Instagram is the invisible architecture that supports the global style map. Specific keywords and usernames aggregate meaningful content. A Fashion Week Map (powered by Google maps) will provide easy discovery of the abundance, location, date, and patterns of global fashion weeks as they have emerged and flourished over time.

1:15pm – 2:15pm

Making the Invisible Visible: Museums & Cultural Agency

Moderators: Adrianne Russell

Speakers: Porchia Moore

Museums are shared information environments where the architecture of culture—that is, the planning, designing, technological, space and ambience—reflect the functional, technical, social, environmental and aesthetic values of cultural heritage. Museums are places where material culture provides opportunities for museum professionals to act as a kind of information architect. Therefore, meaning-making for our visitors can be made more culturally congruent, accessible; and thereby, more visible to our visitors when we employ 21st century literacies which reinforce these new perspectives. Many museums are reluctant to directly address race and ethnicity for various reasons yet provide community-based outreach and design exhibitions and programs that engage these topics directly and indirectly. Without addressing internal structures that often perpetuate oppression and increasing cultural competency, museums lack the authenticity required to steward material culture and meaningfully serve and partner with diverse audiences. Presented in roundtable format, this presentation will draw upon critical race theory, museology, and community engagement theories, and will present hands-on approaches to increasing the cultural competency of museums and those who work with them.
**Digital Asset Management Systems & Museums: Connecting Experiences to Build Success**

**Moderators:** Danielle Knapp  
Minnetonka (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

**Speakers:** Nik Honeysett, Layna White, Deborah Wythe

This session focuses on the current landscape of museum DAMS and the need for more museums to share their DAM experiences with the field.

The session will follow the attached itinerary:

A. Danielle Knapp, John F. Kennedy Graduate, will begin and mediate the session introducing the purpose of the session and her thesis “Digital Asset Management Systems & Museums” findings. The thesis findings will outline the survey and interview results and produce a "snapshot" of the current landscape of DAMS in Museums for the audience. Closing with the overall trends and themes presently in the field. Approximately 10-12 minutes.

B. Each of the 3 panelists will discuss four major themes all museums encounter. First, each panelist will discuss their institution’s "Need" for a DAMS. Second, the problems each institution was aiming to resolve with a DAMS. Third, the barriers each institution encountered and finally the lessons learned from their DAMS implementation experience. (Approximately 10-12 minutes each).

C. The last 10 to 15 minutes will be spent discussing what the museum field can do as a professional community to build more effective DAMS tailored to museum’s needs, mission, and long-term goals. The overall need for more museums to share their DAM experiences with the field and answering questions from the audience.

**A Full Spectrum of Leadership: Museums and the Digital Public Library of America**

**Moderators:** Amy Rudersdorf  
Calhoun (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

**Speakers:** David Henry, Aaron Isaacs

The Digital Public Library of America brings together the riches of America’s libraries, archives, and museums, and makes them freely available to the world. It is built upon a network of partners who together provide access to over 10 million digital objects. Two museum partners, the Missouri History Museum and the Minnesota Streetcar Museum, play two different, but important, roles in this network. The Missouri History Museum preserves St. Louis and Missouri history through exhibitions, programs, research, publications, archives and permanent collections. The Minnesota Streetcar Museum’s mission is to preserve Minnesota’s streetcar history through the restoration and operation Minnesota streetcars and the preservation, interpretation and display of historic photos and other artifacts.

As a DPLA Service Hub, the Missouri History Museum plays a leadership role in its state, bringing together cultural heritage resources from a variety of institutions—including their own—and making them available on a national scale in DPLA. As a Service Hub, they are working to grow the network and build a community of practice in their state. The Minnesota Streetcar Museum is one of 150 contributing institutions in Minnesota that makes its resources available to the Minnesota Digital Library Service Hub, and subsequently to DPLA. An early contributor to DPLA and to the Minnesota Digital Library, the MSM has seen significant impact on visibility and collections usage from these partnerships. After a brief introduction to the DPLA and the valuable role that museums play in this national platform by Amy Rudersdorf, David Henry (Missouri History Museum) and Aaron Isaacs (Minnesota Streetcar Museum) will discuss their museums’ roles in DPLA, and the impacts that participation has had on their institutions and collections. Moderated audience Q&A will follow the brief presentations.

Outcomes: Attendees will gain a better understanding of the DPLA as a national platform and the growth and impacts that museum participation can engender.

**Using Customer Data**  
Great Lakes A2 (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

**Speakers:** Tom O’Connor, Matt Tarr, Micah Walter

As the technology museums use to process admissions, manage memberships and cultivate donors continues to evolve, so do the opportunities to understand, engage with and learn from the individuals who visit and support museums. Visitors who used to represent anonymous transactions are increasingly willing to share individual data at every point of purchase or with every interaction. In turn, their expectations about how organizations communicate with them are changing. An enterprise-wide customer relationship management (CRM) system that aggregates data collected at every touch point provides invaluable information and creates real opportunities for
enhancing customer interaction and for building lasting relationships.

The performing arts have a long tradition of building comprehensive views of their customers and then using this data to cultivate deepening relationships with individuals, bringing them along from first-time ticket buyers to repeat attendees to subscribers and donors. The aggregated data collected over time also offers insights into trends, patterns, and behaviors that inform decisions of all kinds from marketing campaigns, to guest services to offer, to programming.

In this session, we will use two case studies as the basis for exploring the opportunities for institutional advancement created when data is collected in a CRM system. Micah Walter, Acting Director of Digital and Emerging Media, Cooper Hewitt, Smithsonian Design Museum will discuss how Cooper Hewitt is thinking about the patron data collected through the use of its “Pen” and how that data will inform its CRM strategy. Matthew Tarr, Director, Digital Architect, American Museum of Natural History will present on ANHM’s progress toward using CRM to create an integrated digital/physical experience for visitors. Tom O’Connor, Director, Tessitura Network Enterprise Consulting will provide contextual best practices for the use of CRM in each case study and moderate discussion with the presenters and workshop attendees.

The goal of the session will be to offer best practices for utilizing CRM data on an individual basis to deepen engagement and enhance relationships, as well as on an aggregated basis to provide insight and to inform decisions.

1:45pm – 2:15pm

**APIs: Crossing the Boundaries of Distance, Hardware, and Technology**

*Speakers: James S. Vitale*

Nokomis (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

APIs, more formally known as Application Programming Interfaces. We hear this expression all the time, but what are they? When do they matter? Why do we need them? How should we use them? This presentation will provide a candid, informational discussion that addresses all of these questions using timely and relevant examples. It's appropriate for all technical levels and should be particularly thought-provoking to technology and information professionals and strategists in any museum/art/cultural organization interested in the many exciting ways to provide greater access to their institution's own data or to use their data in partnership with others in ventures that have the potential to enrich the ongoing efforts of artists, conservationists, researchers and others.

If you’re a casual reader of any of the popular Tech Blogs, SIG publications, or developer newsgroups, it’s quite likely that you’ve come across references to the acronym, "API". The discussion on the topic broadens as adjectives such as "Open/Closed", "Public/Private" or "Web-based/Mobile/Restful" begin getting inserted in-front of this acronym so that we start seeing such interesting variants as:Public, Open Web-based APIsPrivate, Closed, Restful APIsPublic, Commercial Mobile APIsClosed SOAP-based SOX-compliant Web-based APIs…..and so on. Yet the question remains, what is an API? When is it purposeful to use one? How do I go about deciding which API is most appropriate for my project’s needs? What are the advantages of an organization building and maintaining its own APIs vs. leveraging existing ones already available? A number of very reasonable questions can quickly surface and before long it can all seem very, very overwhelming. This presentation will begin with the fundamentals in order to establish a foundation of knowledge and understanding that is suitable for an audience of all technology levels and experience.

1:45pm – 2:15pm

**Life beyond Social Media: Technology and Leadership**

*Moderators: Dana Allen-Greil*

Harriet (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

*Speakers: Elissa Frankle, Victoria Portway, Chad Weinard*

In days of yore, it was the youngest person at the organization who was assumed to be the social media ninja and asked to create a social media presence for the organization. But then social media grew up—and so did we. As social media becomes more prevalent and valued in our organizations, they go from being shunted off to the side to being central to communications, marketing, and often educational strategies, and are increasingly run by professionals from outside the museum field.

For those of us who came of age as social media professionals, the time has come for us to begin moving on, moving up, or moving around our organizations. So what happens to the skill sets we've cultivated by carrying on conversations with our online communities 24 hours a day? Social media managers bring a unique perspective on
audiences and our museums as a whole that does not disappear when we move on from social media. On the contrary, these understandings help us drive the museum to a more integrated and holistic view of our visitors, both online and offline, and our responsibilities toward them.

By considering the possible career moves that social media managers might make after they have moved on from their time as Chief Tweeter, we can also consider how the conversations begun as front-line staff take on new life and import when translated into leadership positions or work in other areas of the museum.

Rather than technologists moving out of the field beyond a certain level of leadership, what do we stand to gain by maintaining this brain trust in our organizations? What does the museum of the future look like when social media professionals grow into department heads, or even museum directors? The panelists, all formerly in positions involving day-to-day social media management, will facilitate a series of roundtable discussions that consider how social media experience can shape the future of audience engagement, digital strategy, organizational change, and museum leadership.

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<th>2:15pm – 2:30pm</th>
<th>Networking Break</th>
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2:30pm – 3:00pm

**Embracing CollectionSpace with LOVe (Linked Open Vocabularies extensions)**

Moderators: Piotr Adamczyk  Minnetonka (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

Speakers: Richard Millet, Chad Nelson

Today’s collections management systems cannot stand alone from other technologies used by museums and other collecting organizations to connect and interact with their audiences.

CollectionSpace was designed from the outset to be connected with other open-source tools and efforts such as digital asset management and preservation systems, federated search harvesters, linked open data repositories, and virtual shared collections.

In this session, Richard Millet, Technical Lead and Chad Nelson, Developer will provide an overview of the CollectionSpace technical platform and discuss how the application architecture facilitates integrating linked open data such as the Getty Research Institute’s Art and Architecture Thesaurus (AAT)(r).

The CollectionSpace program team working closely with three partners that represent the contemporary art practice community – Oakland Museum of California, Museum of the Moving Image, and The Watermill Center – are collaborating to define functional and interaction requirements, test technical development, and implement the proposed solution at their institutions. The goal of the project is to provide cataloguers, curators, registrars, and collection managers who use CollectionSpace with linked open data powered controlled vocabularies within their local environments the opportunity to share data sets and collectively present their collections in unique ways.

Controlled vocabularies support search and retrieval of information from collections management systems. They are active resources, constantly updated and modified to reflect new knowledge. Museums either license and import controlled vocabularies into their collections management systems or manually build local lists. Drawbacks to these approaches include lack of access to the most updated terms between imports, lack of standardization, and the excessive size of some lists. Linked open data makes it possible to have a live link to a controlled vocabulary, allowing access to the most up-to-date information on an as-needed basis, while greatly reducing the amount of reconciliation needed as vocabularies are updated. It also makes it easier to access and share controlled vocabularies across multiple applications that may be in use in the museum or affiliated operations such as libraries and archives, supporting federated searching across collections. Improving access to controlled vocabularies via linked open data improves the museum’s ability to properly describe collections, enables the museum to benefit from participation in shared resources, and advances scholarship in the museum community via contribution to these shared resources.

We are a community-driven collaborative, generating transformative change in the way we manage collections and use information technologies to support our work. Working together, CollectionSpace members are building a new solution for collections-holding institutions that is efficient, effective, customizable, intuitive, and affordable. C...
Which Came First, the Data Structure or the Website? Lessons Learned in Building a New Collections Website with Existing Collections Data

Moderators: Scott Sayre
Speakers: Ellice Engdahl

The Henry Ford has gone through several distinct historical phases with its collections data and related media:

The Dawn of Time (c. 1929): All collections information lived on paper.

The Stone Age (c. 1980s): We began to use tools—like electronic databases. We made up rules to follow, but we were the only ones who saw the data, and therefore we were the only ones who knew how carefully we were following the rules.

The Industrial Revolution (c. 1990s): New tools became available! The Internet was born! We scanned photos and letters and documents. We took pictures of objects, got back electronic files, and threw them onto LaserDisc or one-off websites—how easy it was to create a website when you wanted one! We really went crazy, but we still didn't have to be too careful with how we tracked things, or being standard from one project to the next, as we were still the only ones who saw the raw data and media—and those websites the public did see, let us tell you, looked super-slick and awesome! Production of “stuff” skyrocketed.

The Progressive Era (c. 2011): We needed to get this train back on the rails. We needed to hunker down and really figure out this “digitization” thing that everyone else was already doing. We needed one comprehensive collections website, where users could find all of our digital collections records. We needed to establish standards, protocols, workflows—to productionize the whole process of making our collections information available. So we did. And it was great.

The Information Age (c. 2015): We decided to build a new collections website. And we began to discover how far we still had to go. This presentation will focus on that last period: the process we’re currently in to totally rebuild our collections website, and what that’s showing us about our “standard” collections metadata and images. With nearly 40,000 objects from our collection digitized, we’re looking at what else we need to do to ensure robust and reusable data going forward—and considering the possible need to go back and modify those 40,000 records as well. For example, just one new feature, automated ecommerce for collections images, requires a complete overhaul of the way we format, edit, organize, and deliver images (as well as video and audio). Building support for new types of multimedia (3D models, 360-degree photography) requires yet further data structure and workflow extensions, and redesigning collections records brings up additional questions. Are our object titles too long? Can credit lines be appropriately displayed in a visual-forward presentation? How do we support multimedia at appropriate varying resolutions for phone, tablet, or desktop users?

This presentation will take the challenges The Henry Ford faced in using its existing collections data structure to create a completely new collections website, and distill those into advice (and cautions) for other institutions that may be looking to overhaul their digital collections sites.

"Content" and Its Discontents

Speakers: Jennifer Foley, Jeffrey Inscho, Ed Rodley

The use of the word content to universally describe everything from videos and interactives to labels and code has become widespread in museums and beyond. But what do we actually mean when we use this word?

What are we signaling to colleagues, visitors, and even to ourselves, when we carry titles like "content developer" or "content strategist"? How does it influence our work and our practice as mission-based museum professionals when we frame our artwork, objects, data, narratives or multimedia simply as content?

This roundtable discussion will investigate questions and issues around the language we use when communicating our work. We’ll look intensely at the word content, in addition to rampant buzzwords like engagement, digital and strategy. The panel will also examine why talking through the semantics of what we do is more than just semantics, but has real impact on the meaningful subject matter museums create.
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<th>Moderators/Speakers</th>
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| 2:30pm – 3:30pm | Enhanced Visualization of Cultural Heritage through Computational Imaging and 3D Modeling | **Moderators:** Dan Dennehy  
**Speakers:** Seth Berrier, Gary Meyer | Once again, in the practice of cultural heritage imaging, we find ourselves on the cusp of enormous change. Today very much feels like it did 15-20 years ago when we put away our film and began embracing the new digital medium. If you look around the studio now, you see more and more sophisticated equipment, for capture, for lighting, for processing, all requiring a greater degree of training and skill to operate. With the adoption of computational and 3D imaging techniques, we have the opportunity to share far more detailed information about our collections for research, education and public enjoyment. This of course calls for sophisticated viewing tools to deliver rich, dynamic experiences to our audiences in the gallery or online. To achieve success in such complex endeavors requires ongoing support and development from a team of technicians, engineers, scientists and researchers (not to mention significant financial resources). More and more we will need to look beyond our own walls to find partners who can bring specialized knowledge to projects that advance common goals. Over the past two years, Minneapolis Institute of Art (Mia) has been fortunate for the opportunity to partner with Professors Gary Meyers and Seth Berrier, of the Universities of Minnesota and Wisconsin respectively. Working with content generated at the museum, they have developed computer graphic software that adds value to current photogrammetry methods by improving color appearance and surface information of 3D models. Using surface light field renderings and environment mapped based lighting techniques, they have improved ways to simulate a variety of specular enhancement used to compare and analyze cultural objects. The panel will discuss their ongoing collaboration, show recent examples and take questions from the audience. |
| 2:30pm – 3:30pm | “Digital Learning” in Museums: New or Passing Trend? | **Speakers:** Eve Gaus, Barry Joseph, Heather Schneider, Jennifer Sly | Many museums have formed “Digital Learning” departments within their institution. Managers of new and more established digital learning groups at four museums, the American Museum of Natural History, the John G. Shedd Aquarium, the Field Museum, and the Minnesota Historical Society, will explore the goals of forming these groups. Questions explored will be: What IS “Digital Learning”? Why form a “Digital Learning” department? What advantages to such groups provide to museums and their audiences? How do these groups fit within their larger institutions? The panel will explore how new “digital learning” experiences actually use “digital” components to extend and connect with the physical. Examples include using the virtual to bridge two different physical locations such as museum spaces and the classroom. The digital is also used to connect people traditionally inaccessible to each other bridging content experts to students, creating citizen scientists. Or, how digital design and 3D printers can create physical objects. Ultimately, the group will explore how the digital and the physical combine to create 21st century learning experiences for young people and people of all ages. |
| 2:30pm – 3:30pm | Money, Money, Money: Turn Great Ideas into Funded Projects | **Moderators:** Douglas Hegley  
**Speakers:** Susan Chun, Charisse Gendron, Nik Honeysett, Mary Mortenson | Technology and digital projects - for all of the awesome capacity to engage and inspire, to empower and enable, |
and to provide effective tools for organizations - don't come cheap!

This session brings fundraising professionals from the museum sector to the MCN conference to share practical, real-world tools and strategies for turning your great ideas into funded projects AND for finding innovative ways to fund ongoing activities.

Fundraising isn't typically part of the core skillset for technologists and/or digital media producers. In this session, attendees will learn how to "translate" tech speak into terms that inspire potential donors to get involved; professional fund-raisers will describe their processes and methods for raising money, illustrating both with real-world successes and "not-yet-successes"; and the challenges of funding ongoing activities and/or innovation will be explored, with practical suggestions on how to move forward.

3:00pm – 3:30pm


*Moderators: Piotr Adamczyk* Minnetonka (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

*Speakers: Kate Blanch, Neal Johnson, Shane Richey*

Invisible architectures are not restricted to the people, knowledge, data, and systems of a single cultural institution. They also exist...as pent up, latent potential...between all of these resources across organizations. This latent meaning and potential utility is mostly inaccessible unless institutions work together to implement meaningful conceptual connections between them. We understand that we're missing out on potentially powerful insights and serendipitous discoveries without the support of connective structures that could make our currently disparate collections of data and information appear as one holistic graph of cultural knowledge.

Challenges arise when attempting to build these connections between information resources and the systems that manage them. Traditionally, the heterogeneity of system interfaces, data schemas, and vocabularies is a barrier. How might we solve this problem, creating visible conceptual architectural connections between our disparate resources? How do we create and sustain the collaborative partnerships required to accomplish this work through persistent and consistent attention over the long term?

The American Art Collaborative (AAC) was established to pursue the potential of Linked Data to solve critical aspects of this connection challenge. Through the commitment of the project's fourteen partner institutions, AAC is navigating the challenges of leveraging newly maturing technologies, standards, and tools while working at the appropriate level of scale for both institutions and information resources.

3:45pm – 4:15pm

American Paintings to 1945: The Collections of The Nelson-Atkins Museum of Art Legacy Catalogs Online

*Nokomis (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)*

*Moderators: Andrew Lewis*

*Speakers: Doug Allen, Kate Crawford, Matt Pearson, Stacey Sherman*

In 2007, the American Art Renewal Fund supported the publication of American Paintings to 1945, the award-winning comprehensive catalogue of NAMA's American paintings collection. Among the priorities funded by the grant was making the catalogue's extensive information about the American paintings collection widely available and visible through both nelson-atkins.org and the internet at large.

A 2014 team guided stakeholders through decision-making regarding digitization, partnership with the Internet Archive, and rights agreements. Curatorial staff collaborated with the museum's rights and reproduction coordinator on developing a process and timeline for clearing new use agreements, leveraging Confluence wiki spaces and JIRA project tracking. Imaging staff developed an easy, streamline process for digitizing the printed catalog that would yield high-quality scans suitable for text extraction and online viewing. In this presentation, we will discuss the processes, the technical and cost advantages, plus lessons-learned.

3:45pm – 4:15pm

Museums beyond Meatspace: User Generated Museums in Virtual Worlds (and What We Can Learn from Them)

*Harriet (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)*
Moderators: Scott Sayre  
Speakers: Jen Tobias
Remember the hype about Second Life? The hype may be over, but virtual worlds are not.

Hundreds of millions of people worldwide engage daily in creation, exploration and interaction within thousands of massive multi-user virtual worlds, user-generated worlds in which the presence of museums is pervasive. The overwhelming majority of these museums are created not by professional museum entities but by users not otherwise affiliated with museums.

Offering an astounding array of topics ranging from mermaids to Willy Wonka’s chocolate factory to the Marquis de Sade to a variety of less easily classifiable spaces, these user-generated museums may often feature the familiar marble columns of a traditional museum, but their function has been radically redefined to serve their unique cultural needs. In a world in which reproducibility is infinite, physical authenticity is meaningless, socialization is anonymous, physicality is representational and content is peer-generated, what role do museums play and how does it apply to their physical counterparts?

3:45pm – 4:45pm  
What’s a National Platform Strategy and Where Do Museums Fit?  
Speakers: Sandra Narva, Minnetonka (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)  
Trevor Owens, Amy Rudersdorf, James Shulman
In 2014 - 2015, the IMLS developed a strategy to support a national digital platform -- the combination of software applications, social and technical infrastructure, and staff expertise used by libraries, museums, and archives to provide online content and services to all users in the United States. Since last year’s convening on this topic, IMLS has incorporated the national digital platform as a strategic priority and funded National Leadership Grants for Libraries around this topic.

Four National Leadership Award grants were made in March 2015 in support of this strategy. Two of those grants will be relevant for museums: One was for $2,000,000 to the Digital Public Library of America, Stanford University, and Duraspace to develop a Hydra based repository that will foster a greatly expanded network of open-access, content-hosting "hubs" that will enable discovery and interoperability, as well as the reuse of digital resources by people from this country and around the world. At the core of this transformative network are advanced digital repositories that not only empower local institutions with new asset management capabilities, but also connect their data and collections. The second grant, to Artstor in collaboration with the El Paso Museum of Art, the Museo de Arte de Ponce in Puerto Rico, the Philadelphia Museum of Art, the Staten Island Museum and the Digital Public Library of America (DPLA), will build on the existing Shared Shelf platform to enable museums to contribute digital image collections for open public access (for no fees). The project will lower barriers to museum contributions to the DPLA by producing enhanced metadata tools, intellectual property rights decision support tools, and a direct-to-DPLA publishing capacity.

The session, led by Trevor Owens and Sandra Narva of IMLS, Amy Rudersdorf (DPLA), and James Shulman of Artstor will review the April 28, 2015 IMLS Focus session on the various components of the potential National Digital Platform and lead a discussion of the potential possibilities and challenges for the two recent National Leadership Grants in working to collaborate with museums to facilitate participation in DPLA.

3:45pm – 4:45pm  
About That Definition of Insanity: Museum Business Models and New Revenue Streams in the Digital Economy  
Speakers: Kaywin Feldman, Nik Honeysett, Elizabeth Neely, Merete Sanderhoff, Koven Smith
Along with the music industry, newspapers, and Hollywood, museums have seen their business and revenue models irrevocably impacted by the Internet and new digital economies. Yet here as in so many areas, the cultural industry has been slow to change; even the adoption of digital technologies by museums has outstripped their adaptation to 21st century financial realities.

Aiming to provoke a lively debate and brainstorm new approaches to institutional sustainability, this panel opens with the premise that the dominant museum business models are broken: overly dependent on the largess of a dying breed of individual philanthropists and unable to demonstrate their impact and social value to younger, civic-minded audiences, museums risk sinking into public oblivion as well as bankruptcy. Are the commercial, visitor
attraction models so often promoted by corporate-minded trustees the only way forward? Or are there other approaches being pioneered in the non-profit sector that can be applied to museums and cultural sites? From paying with data to community sourcing and marketing partnerships, we’ll unpack new ideas in the field in an attempt to stop doing the same fundraising thing over and over again while expecting different results.

3:45pm – 4:45pm  The Constant Transformation and Evolution of Information Management and Technology

Speakers: Brian Dawson, Carolyn Royston, Jeff Steward, Janet Strohl-Morgan, William Weinstein

Great Lakes A1 (1300 Nicollet Mall, Minneapolis, MN 55403, United States)  
Great Lakes A2 (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

Many organizations are implementing strategic plans that rely on the increased use of digital tools in all aspects of their institutions work. Each organization is approaching this differently but it is clear that information and technology departments have a leading role in the process. The process has caused museum IT departments to think broadly about the notion of institutional digital transformation and evolution and their role in it.

This panel will continue and expand on the discussions started in 2013 during the MCN panel "Any Way You Slice "IT": Managing Technology in the 21st-Century Museum and the 2014 panel discussion A Whole New World: Opportunities and Challenges in the Digital Age. Carolyn Royston, former Head of Digital at Imperial War Museums, UK and now a consultant working with cultural organizations in the UK and internationally, will join this year’s panel to discuss her work with a number of institutions and what it really takes to transform into digital-first thinking organizations and how to manage that transformation process.

We will check in with Princeton University Art Museum, Harvard Art Museums, the Philadelphia Museum of Art, and the Canada Science and Technology Museums on the progress of their strategic plans and what digital transformation looks like in their institutions by exploring these fundamental topics:

- **Collaboration:** How do we work together to accomplish our institutional goals?
- **Technology foundation:** How do we keep pace with the demands of a public and internal audience that expects the same consumer experience at home and at work?
- **Fundraising:** How can we affect funder’s perception of digital projects as only a collection of end products?
- **Philosophy behind transformation:** What are the institutional drivers? What does transformation mean for each of us?
- **Relevance:** How does technology help museums remain relevant in the Digital Age?

Attendees will get an overview of how museums of different size, strategy and organizations are addressing these fundamental issues.

3:45pm – 4:45pm  How Did I Become the Ringmaster? The Art of Juggling Digital Projects

Speakers: Scott Gillam, Laura Hoffman, Jennifer Schmitt, Susan Wigodner

Great Lakes A2 (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

Welcome to the circus! Whether a project manager by title or by accident, many of us who plan, coordinate, and deliver projects for museums receive little, if any, formal training in project management. Still, we juggle varied goals and, in collaboration with internal and external stakeholders, learn what works—and doesn’t—as we go. Even when we may feel as though we’re balancing on a tightrope, our communication tools, including scheduling management, spreadsheets, to-do lists, budgets, and reminder emails, form the invisible architecture of how projects reach their (sometimes rescheduled) launch dates.

Digital projects present unique challenges—whether it’s pressure from a director to develop an app or persuading a more traditional board of the importance of social media engagement—within an ever-changing environment. How do we manage expectations when digital is the elephant in the room? How do we identify target audiences and objectives, as well as stay true to them throughout the process? How can we collaborate across our institutions and help to increase digital literacy across all departments? How can we take a cue from professionals doing similar work in the for-profit sector and work in more agile ways while facing non-profit time and budget constraints?
In this session, we’ll bring together emerging and seasoned professionals who have played ringmaster to a range of digital initiatives, from small-scale, short-term projects to the opening of new museums. Members of this group have launched redesigned museum websites, managed digital resources for educators, produced mobile apps, and created in-gallery interactives. This session will include representatives from diverse institutions, including the Canadian Museum for Human Rights, deCordova Sculpture Park and Museum, The Field Museum, National Gallery of Art, and The Phillips Collection. Presenters will share about their current projects and processes, then participate in a round-table discussion with questions introduced by both the members of the panel and audience members.

Planned Panelists:
Meagan Estep, Social Media Manager, National Gallery of Art
Scott Gillam, Manager, Digital Platforms, Canadian Museum for Human Rights
Laura Hoffman, Manager of K-12 Digital and Educator Initiatives, The Phillips Collection
Jennifer Schmitt, Head of Information Technology and Electronic Communications, deCordova Sculpture Park and Museum
Susan Wigodner, Web and Digital Project Manager, The Field Museum

**4:15pm – 4:45pm**

**Making Meaning with Online Collections: Ten Top Tips**

*Moderators: Andrew Lewis*  
Nokomis (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

*Speakers: Gavin Mallory*

Until recently a major challenge faced by many museums was getting their collection online. Now many collections are online, the next challenge is how to tell the stories behind the collection and deeply engage users (and occasionally curators!) This talk will share ten top tips for telling the tales behind your collection: unlocking the secrets in your archive and helping your users find content and keep them engaged long-term.

Tips will include:
- Ways to simply integrate your collection with your website content to create meaningful stories
- Techniques to engage your curators (without them even knowing about it!)
- How to give users what they actually want, not what you think they need.

The session will include examples from MoMA, National Portrait Gallery (London), Virginia Historical Society and The Metropolitan Museum of Art. We will encourage delegates to share other examples in advance, developing an online resource that can be included as part of the session, adding to the resource throughout the conference. The resource will be shared with everyone in the MCN and wider museum communities. At the end of the session, delegates will have practical tools and techniques that they can use on their own projects, inspiration from others, and a pool of people with similar challenges to share experiences with.

**4:15pm – 4:45pm**

**Visitor Experience with Augmented Reality in a Museum Exhibit Setting**

*Moderators: Scott Sayre*  
Harriet (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

*Speakers: Diana Marques*

Augmented Reality is a recent subject of curiosity and experimentation from the museum community and considered a tool for museum innovation. It is the promise of an advanced natural interaction between visitors, collection objects and their data, putting action and unique personal experiences at the core.

We base our discussion on a research project taking place at the Smithsonian’s National Museum of Natural History, using the mobile app Skin & Bones as a case study. The app was released in January and promotes visitors interaction with the skeletons on display at the Bone Hall. This is the institution’s oldest exhibit, a Victorian-age relic that contains close to 300 skeletons, with most specimens collected during the 19th century; the current display dates from 1964. By downloading the app to their mobile devices, visitors can enjoy 10 3D AR experiences, 32 short videos and 4 activities. This content is structured according to the IPOP theoretical framework and explores scientific concepts underpinning the exhibit, introduces scientists and their personal experiences, presents the roles the animals play in the environment, showcases their unique anatomical features, and promotes haptic interactions with the device.
The purpose of creating Skin & Bones was to change the visitor experience from passive to active, to increase the enjoyment and memorableness while connecting to the objects behind glass, and to do this without touching the physical exhibit. Skin & Bones was recently the recipient of a Gold MUSE Award in the category Games and Augmented Reality and has received the attention and praise of the media, museum professionals and users overall.

The research project to be presented at MCN 2015 collects data from visitors using the app in the Bone Hall, through interviews, surveys, observation and tracking, and app content selection analysis; it also examines data provided by integrated analytics. It is an in depth study that intends to establish valuable guidelines regarding the use of this promising technology in museums, and to compare visitors preferences and behaviors with the predictive framework that was used to structure the content.

During the presentation we will briefly cover the design, content production and software development process for the app; and share for the first time in a conference setting the interpretation of the research results and conclusions gathered.

**NOVEMBER 6 • FRIDAY**

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<td>4:45pm – 5:30pm</td>
<td><strong>Help Us Plan MCN's 50th Anniversary!</strong>&lt;br&gt; In 2017, MCN will celebrate the 50th anniversary of its founding in 1967. Join MCN's Board, staff and SIG Chairs to help plan and organize this momentous occasion with fresh ideas, events and community building opportunities that will take MCN on the road to the future.</td>
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<td>6:00pm – 9:00pm</td>
<td><strong>Opening Reception at the Minneapolis Institute of Arts</strong>&lt;br&gt; Join us for a lovely evening and Minneapolis Institute of Arts (2400 3rd Ave S, Minneapolis, MN 55404, United States) to celebrate Minneapolis Institute of Arts' 100th birthday.</td>
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<td>8:00am – 9:00am</td>
<td><strong>Breakfast</strong></td>
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<td>8:15am – 9:00am</td>
<td><strong>Annual Business Meeting</strong>&lt;br&gt; After stopping by the Exhibit Hall to pick up breakfast and visit a booth or two, please join the MCN Board of Directors for our annual business meeting. This is a great chance for MCN members and other interested conference attendees to hear the latest about the organization from MCN's leaders. Following brief presentations, there will time for your questions to the board.</td>
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<td>9:00am – 9:15am</td>
<td><strong>Accessibility for Digital Products: Tips from the Met App Case Study</strong>&lt;br&gt; <em>Speakers: Sina Bahram, Liz Filardi</em>&lt;br&gt; Many of us are responsible for delivering accessible digital experiences—products and services that all people, including those with disabilities and special needs can access. But too few of us have practical experience in meeting accessibility goals. This session will provide a few general tips to turn such goals into an achievable set of requirements, and fulfill them on your next digital project. Along the way, we will present challenges faced and key insights learned while working together on the Met app, the flagship mobile app for the Metropolitan Museum of Art.</td>
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<td>9:00am – 9:15am</td>
<td><strong>Don't Redesign: Realign! The Fine Arts Museums of San Francisco's Website Makeover</strong>&lt;br&gt; <em>Speakers: Tricia Robson</em>&lt;br&gt; Website redesigns are expensive and time consuming, so if you need to refresh your institution's online presence, don't redesign—realign! The Fine Arts Museums of San Francisco (FAMSF) recently addressed this challenge with its websites for the de Young Museum, the Legion of Honor, and the FAMSF parent organization. The FAMSF web team recently realigned its websites in response to changing trends and user feedback.</td>
<td>Harriet (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)</td>
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This presentation outlines the steps taken to update the look and functionality of the FAMSF websites without committing to a full redesign effort and working within existing brand guidelines. Instead of overhauling the institutional branding of FAMSF, a traditionally costly endeavor, the web team set about refreshing the information architecture of the website. Updating the menu bar items, design, and page structure would set the foundation for future branding redesigns and provided a cost-effective solution to improving the user experience—and the SEO and functionality—of the website.

The project was accomplished in three stages. First, the web team upgraded to Drupal 7 for greater functionality and security. Second, the basic web design of the three websites was refreshed, based on existing brand guidelines and site structure. And, third, the navigation was rearranged based on institutional goals, user feedback and research in order to generate a better experience and tweak the user interface in response to navigation. Implementing these incremental changes to the design and navigation of the website, rather than conforming to the macro-evolutionary idea of redesigning it, proved a great way to extend our investment while keeping our website updated, user friendly, and functional. This presentation seeks to unpack the technical process and reasoning behind this example of technical evolution, an effective and important strategy for non-profit institutions to employ.

9:00am – 9:15am  Grasping Cultural Heritage: Engaging Museum Visitors with History and Culture through Tangible Interaction Technologies  
Calhoun (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)  
Speakers: Jean Chu

We identify a broad opportunity to develop an understanding of how digital technologies that provide tangible interactions can be effectively used in museum environments that engage cultural heritage. Tangible interaction couples computational media with physical objects embedded in a physical environment.

Our goal as researchers is to better understand how tangible interaction technologies can be designed and situated within the museum context in order to improve visitors’ understanding of historical and cultural concepts. We introduce here a tangible tabletop installation piece for an exhibition titled Mapping Place: Africa Beyond Paper, which contrasted Western and African notions of mapping history and place. Under the guidance of professor Ali Mazalek, students from Georgia Tech and Ryerson University collaborated to create the installation between 2013 and 2014. The Mapping Place exhibition took place from February 28 to June 6, 2014 at the Robert C. Williams Paper Museum in Atlanta, GA, and was part of the Africa-Atlanta 2014 initiative.

The design of Mapping Place was inspired by the Lukasa, a hand-sized wooden tablet studded with beads and shells and carved with ideograms. The beads, shells and carvings are used to represent pieces of stories and thus serve to record the history, genealogy and cosmology of the Luba peoples in Central Africa. With the authentic Lukasa inside a glass case in the Mapping Place: Africa Beyond Paper exhibition, our piece aimed to give students a tangible way to explore symbolic and non-linguistic mapping concepts that are central to the Lukasa. The installation consists of a multi-touch tabletop with multiple tangible shells and two wall mounted projections. By placing a tangible shell on the tabletop display, seven icons appear as a circular “menu” around it, representing possible components of a story about family and place. The visitors can assign meaning to the digital beads by dragging them onto the menu icons, and a corresponding animation begins to play on a wall adjacent to the table. The entire tabletop becomes the group’s digital Lukasa, holding multiple visitors’ stories. Through the shared practice of storytelling, our design enabled visitors to create a personal connection to the historical and cultural practices of the Lukasa. The Lukasa-inspired interactive installation demonstrates one way in which emerging digital interaction technologies can be used to support historical and cultural concepts in ways that are tangible, embodied, and performative.

Our observations and our user study of the museum visitors show that grounding the tangible experience in contextualized knowledge can enhance visitors’ comprehension of abstract concepts and subject matter. As illustrated in this project, we believe that bodily interaction is a viable way to remediate cultural heritage and support learning goals. The openness of the interactive experience invites visitors to reflect on their experience, actively part...
HEIR is a crowdsourcing project developed by Keepthinking for the Department of Archaeology of the University of Oxford. Historic photographic images are vital for understanding some of the most pressing current research issues and HEIR is an important new resource for a wide range of studies, from tracking environmental and climate change to understanding human impact on the planet; from identifying endangered landscapes and endangered archaeology to reconstructing lost buildings and habitats. http://www.heirtagger.ox.ac.uk

Over 40,000 images from 1890 to 1930 need to be tagged and elements in them identified. HEIR asks people that are passionate about history and archaeology to help unlock the potential of these photographs, by keywording or ‘tagging’ them to gather as much information about them as possible. We are tapping into the Zooniverse user-base. The project includes a website where people are asked to Tag images, based on pre-defined categories as well as a mobile app with which the worldwide community can rephotograph sites and show how they are today. This presentation will explain the ideas behind HEIR and show how its model can be reproduced to classify any type of visual resource.

9:00am – 9:15am  Building a Multi-Site Calendar

Moderators: Crystal Mulry  Minnetonka (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

Speakers: Meleck Davis, Morgan L’Argent

Facing a rapidly approaching deadline to replace aging technology and needing to produce a calendar that delivers event information for 26 historic sites and museums, the Minnesota Historical Society created a custom solution that combined existing tools and new ideas.

In about 2003, the web team built a custom solution that allowed the marketing team to manage event data without much assistance from the technical side. The calendar had a few glitches, but served MNHS well for years.

However, at the end of 2014, the tools being used were aging out and a new solution needed to be found, requiring quick action and cooperation among a wide number of departments with sometimes competing interests.

MNHS implemented a solution, mnhs.org/calendar, that combines its existing website content management system (Drupal) and a custom API for data storage and access. The new calendar provides an updated look, responsive design, filtering, and promotional space as well as a new admin interface. A welcome outcome was the cooperation and teamwork among departments that emerged when facing a tight deadline.

9:00am – 9:15am  #MobilePhotoNow Instagram Exhibition at Columbus Museum of Art

Speakers: Jennifer Poleon  Great Lakes A2 (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

Columbus Museum of Art’s #MobilePhotoNow was a large-scale participatory art project and Instagram exhibition highlighting the emerging art form of mobile photography, and the power of social media and smart phones as a means of creative expression and connection. Four photo challenges inspired by CMA’s renowned Photo League collection generated more than 45,000 Instagram submissions from 5,000 photographers across 89 countries. Through social media sharing and major international press coverage #MobilePhotoNow reached nearly 200 million people around the world.

This presentation will examine how social media can be used to help build a global, creative community, connect people to art and each other, drive both online and onsite participation and engagement, and drive a multi-generational mix of new audiences to the museum.

9:15am – 9:30am  The Bruegel Box: An Immersive Art Project by the Royal Museums of Fine Arts of Belgium

Speakers: Jennifer Beauloye  Calhoun (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

Will new technologies offer a viable alternative to temporary exhibitions? That’s the question that we’ll try to answer through the Bruegel box, an immersive art project by the Royal Museums of Fine Arts of Belgium.

Thanks to the support of GDF-Suez, an installation of high-performance projectors will be placed permanently in one of the rooms of the museum and short HD animations will be displayed on the walls to introduce some of the key works and emblematic masterpieces of our collections. The one that will inaugurate the series is The Fall of the Rebels Angels (1562) by Pieter Bruegel the Elder - that has been the subject of recent scientific researches.
If The Fall of the Rebels Angels is already available in high definition on Google Art Project, it will again be highlighted through this immersive space. This device will allow the viewer to truly enter into the painting and the world of Bruegel. Its phantasmagorical work will come to life under the eyes of the visitor. With this advanced multimedia device, the visitors will be powered at the heart. He will dissect each element of its composition. Repelled by Saint Michel, he will follow the rebels’ angels into their fall, beyond the limits of the frame.

If for this first painting, the animation is rather narrative, we already can imagine the possibilities that this display can provide us for others kinds of works. We could explore in successive layers the color theory of the French Pointillist, Georges Seurat, or decompose / accelerate the movement of the Italian Futurists and even dematerialize the form by the light in the Impressionists landscapes. Each proposition would be adapted to every highlighted masterpiece. But every one of them would be shown in very high definition images projected on three walls, from the ground to the ceiling. In parallel, a mobile application will be available to guide the visitor through the museum to the original work of art. Links with other works of our collections by the same artist or a similar theme, will complete this visit. Explanations will also be provided to explain why in terms of conservation the physical artwork could not be moved close to the "box".

This project is the concretization of a deep reflection on the changes taking place in the field of museology. In this digital age, the Bruegel box (or any other painter's box) will enable us to explore new possibilities and will become the setting for a new museum space. The technology will serve the art, facilitating its access when physical transportation becomes increasingly binding. It also allows us to expand the museum experience and the meeting with the art pieces, by exporting the project abroad when the work itself can’t be loaned overseas anymore. After an introduction of the project, from the original ideas that initiated it to its actual production, we will share our experience with the delegates. We will review both the technical and human difficulties that were faced throughout its producti…

**9:15am – 9:30am**

**Planning an Audience-Centered Digital Collection**  
*Speakers: David McKenzie*  
Minnetonka (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

Looking to build a digital archive based on user needs?

For the 150th anniversary of President Abraham Lincoln’s assassination, Ford’s Theatre launched Remembering Lincoln, a digital collection connecting end users with digitized personal, institutional, and public responses to that monumental event from around the United States and world. Building the collection involved working with over two dozen institutions that contributed seldom-displayed materials.

Meanwhile, the functionality of the website housing the primary source materials—including the ultimate choice of Drupal as the content management system—was determined through a six-month audience evaluation and planning process. The process led to an engaging digital interface for audiences to connect with collection items from a wide range of institutions.

This presentation will cover an audience research process we hope will help other institutions looking to create audience-friendly digital archives, including:

A two-day planning meeting with advisors and partners, with definition of preliminary outcomes and user personas for four primary user groups (teachers, students, scholars, enthusiasts); Logic models that plotted steps to achieve those preliminary outcomes; Focus groups and surveys to test those outcomes and learn more about both what content and what functionality would interest each audience group; Formulation of a Product Definition Document based on the data from the focus groups and surveys; A RFP process for a web developer using the Product Definition Document as a checklist of specifications.

In this presentation, we will share detail about what worked—and didn’t—in the process, and lessons learned for future projects of a similar nature. We also hope that other institutions will share what worked for them so that everyone can learn about creating an audience-friendly digital archive collaboratively.

**9:15am – 9:30am**

**Simply Mobile: (Working on) Simplifying the Mobile User Experience**  
*Speakers: Heather Hart*  
Nokomis (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)
This case study will focus on how we at The Broad are focusing on making a museum app that offers the user exactly what they need. Instead of replicating the mobile web experience, we are attempting to use context and location awareness to present the user with both a beautiful and useful mobile experience. Tying closely together with our ticketing system, we surface tickets just when the user needs them, then shift the focus to digital tour and other collections-related content when in the galleries. Where should we go from here? How can we improve this experience further?

### Building a Map for the Met App
**Speakers:** Spencer Kiser, Subathra Thanabalan

Great Lakes A1 (1300 Nicollet Mall, Minneapolis, MN 55403, United States)

Wayfinding is a common problem among museums, and you might think it's necessary to spend a lot of time and resources to devise the perfect solution. The floorplan at the Met is quite complex, so when we set out to build a map feature for the Met App, we knew it would be a formidable challenge. If that weren't enough, our small team had only a short period of time to design and develop a mobile map that could be used on two native platforms, and, most importantly, would be useful for our visitors.

Instead of spending months building a product that we think our visitors want, we decided to build a minimum viable product (MVP) that our visitors could be using sooner rather than later. We then used a build-measure-learn feedback loop to iterate and perfect the Map to improve the day to day experience of our visitors. We will discuss the process behind building the Met App Map, and we'll share what we learned along the way.

### Instagram as an Interpretive Tool? A Case Study
**Speakers:** Brooke Rosenblatt, Margaret Sternbergh

Great Lakes A2 (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

Social media platforms, and Instagram in particular, are becoming a vital method of engagement between museums and their visitors. But, how might museums harness these applications in new and inventive ways? Can, and should, social media be used as an in-gallery interpretive tool?

Man Ray: Human Equations, a recent special exhibition at The Phillips Collection in Washington, DC, explored a little known element of the artist Man Ray’s career: his photographs and paintings of academic mathematical models which examined the intersection of art and math. Working collaboratively with curatorial and communications colleagues, educators at the Phillips sought a participatory experience that would allow visitors connect Man Ray’s artistic to their own creative photographic practice. Using 3D printed mathematical models, a few iPods, and Instagram, InstaManRay was created. Accessible through their own mobile device or an iPod in the gallery, visitors frame their composition, snap a photo, apply a filter or add other effects before posting their creation with #InstaManRay. Visitors using their own devices can post to their personal social media accounts, and those using in-gallery iPods can post to an Instagram account created for the special exhibition and managed by Phillips Collection staff, InstaManRay2015.

This session will explore the successes and challenges of using a social media platform as an in-gallery interpretive experiences. Presenters will share ways they implemented and evaluated InstaManRay as well as possible applications for the future. This case study will offer a new way of looking at a well-explored social media app, providing ideas for creating digital in-gallery experiences in new ways.

### Piloting a Pilot Project: Lessons Learned as the First US Museum to Use Guidio, an Audio Tour App Created for European Museums
**Speakers:** Pamela Martin, Teemu Oksanen

Harriet (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

In April 2015, the Albright-Knox Art Gallery in Buffalo, New York, entered into a pilot project with the Finnish company Silencio to leverage their museum audio tour app Guidio to produce a beacon-driven audio tour of the Albright-Knox’s Collection galleries. The Guidio app has been used by several museums throughout Finland and other countries in Europe, but the Albright-Knox will be the first museum in the United States to use the product.

Museum visitors will be able to access the Albright-Knox’s tour through the Guidio app on Apple devices, including iPhones and iPads. Users can either follow a path presented in the app, which will lead them from one artwork to
the next, or explore on their own. In both cases, content about select artworks will surface in the app as the user approaches the artworks, triggered by beacons placed near the works.

Audio content about the artworks will be available in English and Spanish, with specially designed content available for children and adults who are blind or partially sighted. Text-based content will also be available for the museum's café, shop, and buildings.

This pilot project will be live from July through September 2015. During this time, the Albright-Knox will actively solicit feedback about users’ experiences with the app. The AK will synthesize and share this feedback with Guidio halfway through the pilot, in mid-August, and after the completion of the pilot, in early October, so that decisions can be made about how well the app is working for American audiences and what, if any, changes should be made to the framework of the app moving forward. In this case study presentation, I plan to share information about the planning and implementation of this pilot project, and how it was received by the Albright-Knox’s visitors. I will share an analysis of the feedback we collected from visitors who used the app, and the overall lessons that we learned from the project. I will also discuss whether I feel that the Guidio app is a good fit for other American museums to use in their own institutions, weighing the risk of using someone else’s technology against the significant cost savings that Guidio offers over custom-built solutions.

9:30am – 9:45am  Digital Accessibility and the Senses
**Speakers: Lesley Kadish**  
Great Lakes A1 (1300 Nicollet Mall, Minneapolis, MN 55403, United States)

This case study lays out the theoretical foundation of a project conducted through the Smithsonian Accessibility Program to explore “sense chords”: the complex interplay of simultaneous sensory input.

In a normative understanding of the senses, each sense note is tied to a body part: noses smell, ears hear, eyes see, etc. But the smell of a rose is inseparable from the color of petals on the lips or the sound of a siren passing during the moment of inhalation. Our surroundings are always striking sense chords—although we are often unaware of what we are experiencing or how it affects us. The same is true in museums, where visuality dominates. When engaged, the “other senses” tend to be solitary notes in service of the visual.

Through considerations of accessibility for people who are blind and have low-vision, this project examines alternative approaches to the senses, wherein sight is decentered as the primary “voice” of museums. We pose the questions: how might experiences of the disability community inform new sensory considerations and trigger new modes of engagement; what digital accessibility practices can museums employ to rebalance the senses for all people? This case study will provide an overview of the methods, the background research, and the findings to date.

9:30am – 9:45am  When Being There Isn’t Possible: Using Immersive Technologies to Increase Cultural Literacy and Extend Museum Outreach Efforts
**Speakers: Larissa Bailiff**  
Calhoun (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

Woofbert democratizes access to museums, freeing visitors from limitations of geography, socioeconomics, age, and physical condition. Wb collaborates with art institutions and other cultural heritage sites around the world to expand their reach via leading-edge digital technology. With Woofbert, anyone can visit museums, architecture, and cultural sites from the classroom, workplace, or home. Join us as we demonstrate how Woofbert’s technology, content, and curriculum are being used in the classroom. We will review how teachers are incorporating our virtual reality experiences at school as a tool to encourage inquiry and open creative pathways.

In today’s diverse world, Woofbert enriches the experience of arts education in a way that is inclusive, interactive, and ultimately transformative. It allows users to “go” anywhere their curiosity and creativity takes them. Woofbert (Wb) is an arts education media and technology company that allows subscribers to virtually tour museums and major cultural sites from anywhere in the world, from any computer or mobile device. Woofbert uses advanced laser scanning technology to make precise, high-resolution 3D models of a site’s interior spaces and exhibitions. When the user puts on the sophisticated head-mounted display, the Woofbert experience begins; the individual is now immersed in the three-dimensional space: a museum gallery, church nave, or other cultural destination that he or she can “walk through.” Importantly, Woofbert can “freeze time” by scanning temporary exhibitions as well as endangered cultural sites, making these experiences forever accessible. The technology likewise allows for efficient responses to ongoing curatorial changes.
Mn Artists’ Relaunch: How Rebuilding a Digital Community Served to Reboot a Real Community  
**Speakers:** Jehra Patrick  
Nokomis (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

Mn Artists is a community of artists, their activities, and conversations; it is a digital community that is also a functioning panorama of the Upper Midwest’s real art community. Housed within the Education and Public Programs department of the Walker Art Center, the autonomy of this program enables it the hybrid space within the intersection between institution and the artistic community, creating welcome environment where working artists, their digital assets, arts publishing, and live programs are hosted by the museum, and serve to reciprocate audiences of both constituencies.

The software infrastructure and taxonomy of mnartists.org are organized such that the site mirrors both the cultural content and sub-communities of a real arts scene. mnartists.org offers browsing filters for content types (i.e. Articles, Artists, Artwork, Events, Opportunities, Organizations) that make it possible for artists to insert themselves in and pursue all aspects of an artistic career with the support of this museum-created platform - from producing and sharing work, to applying to opportunities, to attending events, to reading review and topical issues, to meeting with other artists in person and then bringing those aspirations to the studio to start the cycle over gain. Just like in real life, we know that artists aren’t limited by one artistic discipline, and the new mnartists.org is built with community and content filters to be used in combination, allowing for browsing that more accurate to conventional artistic disciplines.Mn Artists’ programmatic structure allows for a fluid oscillation between online and offline offerings. Starting in January 2015, Mn Artists introduced a new live series in five event formats that, together, delve into issues of digital participation, arts journalism, as well as practical and topical issues pertinent to working artists. These programs bring artists and cultural producers together to talk candidly about issues relevant across artistic fields, asking questions like, ‘What’s the difference between and community and a network?’ ‘Do artists need a digital strategy?’ ‘Does the documentation of work in the arts have a life of its own online?’ ‘Does the local matter when you’re writing for a borderless, digital audience?’

Intrinsic to Mn Artists programs, is our commissioned arts journalism, which brings topical issues and real conversation occurring in our arts community to a nationally visible, digital platform. The arts writing published by mnartists.org incorporates a wide range of voices, from respected critics and academics to emerging artists and writers, who have opportunity to craft their published pieces and build a voice with the benefit of in-depth, hands-on editorial support. Our articles offer in-depth coverage of relevant issues in artistic practice and offer insights into the region’s cultural life to a wide audience of readers, by way of thoughtful reviews, features, profiles, and topical columns. A digital ecos…

Spatial Evolution of the State Historical Museum: Bringing the Physical and the Digital Together  
**Speakers:** Anna Mikhailova  
Minnetonka (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

My PhD research is focused on the spatial history of the State Historical museum (Moscow, Russia). With 5 million objects in its collection it is one of the largest museums in the world. Being located in the city centre, more precisely, on the Red Square, it could become the most popular in Moscow, however, it is far from it. What are the reasons? And can the digital media somehow help?

Today the SHM and its departments are located in four historical buildings (including the iconic St Basil's cathedral), which makes it quite challenging to explain this complex structure to our visitors and followers. We have three interconnected pages on Facebook, two Instagram accounts, and a Twitter account, where we promote the buildings and describe the surrounding areas, so that people can navigate between these departments.

In order to promote the SHM and its interiors, we invited popular Russian Instagram bloggers to take part in the #empty project. Here you can find some of the photos. My PhD research is still in progress, and one of my current tasks is to develop content for a mobile application that reveals the stories about spatial transformations thus helping visitors to engage with the museum interiors. We are going to use the following methods to bring the physical and the digital together: provide noticeable, yet minimalistic in-gallery signs about SHM social media accounts develop a series of engaging posters to involve people in online conversations about the exhibits by using special hashtags create a mobile app which will explain the complex history of museum space thus helping to understand its certain elements. As it can be seen from the past MuseumNext 2015 and Museums and the Web 2014 conferences, spatial transformations have become a new topic to be discussed within the museum...
sector. I hope that by presenting the case study from Russia I can make a contribution to the international museum practices.

9:30am – 9:45am  
**#ReynoldaBuffalo: How to Convert and Measure Online Buzz to Onsite Attendance**

*Speakers: Trish Oxford, Sarah Smith*

Reynolda House made a bold institutional decision for a mid-size museum in 2014 to dedicate personnel resources to expanding and enriching its online audience, but knew little about how directly its online efforts would influence onsite visitation. In the first year after this strategic sea-change, the museum’s social media followers increased by 38% and website traffic increased by 74%.

Despite the apparent correlation of increased online engagement and actual Museum attendance, evidence of a direct causal relationship between the digital follower and physical visitor was elusive. So, the Reynolda House Communications department set out to create for the opening weekend of its 2015 exhibition, George Catlin's American Buffalo, a digital marketing campaign designed to directly measure the conversion of online buzz to onsite attendance.

The #ReynoldaBuffalo campaign fundamentally fused the physical and digital by deliberately tying a concrete action, place, or experience to all its digital messaging. Leveraging Instagram, targeted Facebook posts, directed Twitter chatter, and strategic email marketing, the four week social media campaign hinged on four primary components that consciously straddled the digital and physical worlds.

First, the Museum preparator built a lifesize buffalo out of foam, the #ReynoldaBuffalo, that was strategically inserted into online conversations of highly engaged social media followings of popular local establishments like restaurants, bars, and coffee shops that attracted our target demographic. By taking the buffalo to these physical locations, the Museum photographed, tagged, and engaged these digitally active populations.

Second, the messaging centered around an “Opening Weekend Package” that not only included actual items that a visitor had to physically retrieve from the Museum, but touted an exclusive Opening Weekend experience that included “priority admission,” a discounted meal at a landmark restaurant, a “buffalounge” with refreshments, and photo opportunities with the #ReynoldaBuffalo himself.

Third, the package included a limited-edition, custom t-shirt designed by a local design firm with a fanbase and recognizable style. The design itself was simple - a buffalo silhouette with “#ReynoldaBuffalo” largely inscribed inside it with a much smaller subline, “at Reynolda House.” The design worked twofold: it spoke directly to a demographic that understood the language, but also became a shareable digital commodity when photographed and tagged in visitor’s respective social media profiles.

Finally, the true conversion of the Museum’s digital follower to the onsite visitor occurred at the point of purchase, which was solely promoted and exclusively available online. Therefore, we could literally track where these visitors linked from and captured their email addresses, which we later leveraged to survey their overall experience and demographics. In the end, the #ReynoldaBuffalo campaign resulted in the highest attended ...

9:30am – 9:45am  
**Second Canvas: How an Awesome Art Experience Using Gigapixel Images, Storytelling, and Social Participation Can Surpass the Best Games and Sport Apps**

*Speakers: Iñaki Arredondo*

Through Second Canvas Museo del Prado we’ll analyze how a cultural, art and paid app has been able to go beyond the standard user-target for museums reaching the universal user and becoming #1 overcoming even games or sport apps. We’ll show and discuss how to connect physical and digital to involve our audiences offering a new way to experience art.

Attendees will learn about Gigapixel images, cinematic storytelling and social participation, and tips on how to create such a experience at home and at the museum, also as an educational tool in the classroom.
Speakers: Meredith Ferguson
When you visit a museum with a loved one or friend you share the experience of exploring the space together. Not only are you able to converse, but subtle information, that which lies just under the line of consciousness, is also communicated through facial expressions, gestures, changes in the other person’s breath and even heart rate, all with the potential to heighten the shared museum experience.

But is it possible to have this type of shared experience if two people are at different museums? Or could there be threads of connection felt between colleagues or friends as they experience their favorite object in separate collections? The “Museum my Heart Project” explores these questions.

In this physical/digital project, we created a small pillow that is able to beat in tandem with the heart of someone wearing a heart rate monitor. By having people in different museums hold their partner’s heart beat pillow in front of a favorite object the two visitors are able to remain connected to one another. The hope is to create an invisible bond between pairs of people for a deeper and more meaningful museum connection.

Museum my Heart is built in Processing using Dan Julio’s Heart Rate Monitor Interface (HRMI). The heart rate is taken from a chest strap monitor and transmitted wirelessly to a USB HRMI. Processing reconstructs the heart rate in audio form and outputs it to a low-frequency speaker embedded in a pillow. Future versions could explore the technology used in heart rate sensing applications for smartphones or the apple watch.

9:45am – 10:00am  
Innovations in Accessibility  
Speakers: Juan Sanabria  
Great Lakes A1 (1300 Nicollet Mall, Minneapolis, MN 55403, United States)

The National Park Service recently commissioned a pilot program to produce a mobile guide for vision impaired users at the Herbert Hoover National Historic Site visitor center in West Branch Iowa. iBeacons were used to trigger audio descriptions of nearby exhibits while users browsed through the space. We would like to share our experience and learning points and how we solved challenges related to designing a UI exclusively for accessibility purposes and triggering via iBeacons.

The process of designing the UX for an audio description-only interactive became a science unto itself and it meant letting go of conventional design aspirations in favor of a singular focus on voiceover interaction. Now what did we learn? We’ll share insights into the design, testing and iterating process as we refined the guide to provide an appropriate way of integrating manual navigation with automatic triggering. We’ll also share our approach for solving the technology riddles to make iBeacons work in a room where exhibits were spaced out by only 2-3 meters. As of May 2015 the project is still in beta but will be finished in June and we will have ample feedback and post-release learning points to share in time for November.

9:45am – 10:00am  
Student Collaborations and the Museum of the Future  
Speakers: Emily Croll, Mark Thompson  
Nokomis (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

Interactive exhibit design for museums is expensive. In a field where budgets are increasingly tight, the pressure is also mounting to innovate new, more effective interpretations. It’s becoming ever more challenging to balance visitor engagement, educational outreach, patron interest, and budgets. At the same time, students are finding it increasingly difficult to obtain the real-world experience necessary to compete effectively for design positions following graduation.

In this case study, we present the results of an ongoing program at The College of New Jersey, where students in the Interactive Multimedia Department are developing interactive exhibit prototypes in partnership with local museums. The goal of the program is to give hands-on interactive exhibit design experience to students, while allowing museums to inexpensively explore alternative exhibition approaches and enhance collection interpretation through emerging technologies.

The program is entering its third year, and, after two successful iterations with TCNJ’s own Sarnoff Collection in 2013 and 2014, we are piloting the program with the New Jersey State Museum in fall 2015. The program consists of an advanced level, one-semester interactive exhibit design course during the fall followed by a winter on-site student project showcase. Following the showcase, students who have created exceptional projects are
invited to continue development for inclusion in long-term exhibitions.

Experts from the local museum and exhibit design community also participate in the process as guest lecturers, field trip hosts, and critique jurors. The student showcase is open to the community at large, with the general public, museum professional and patrons, college administrators, faculty, students, friends, and family all provided the opportunity to experience the projects in the museum setting.

Previous iterations of the program have yielded the following results:
- Students gain hands-on experience working with museum collections and creating interactive exhibits with emerging technologies
- Students gain familiarity with the functions and processes of a real-world design studio
- Students receive guidance and feedback from museum professionals, as well as museum patrons
- The museum acquires knowledge about the latest interactive multimedia technologies through collaboration with college faculty and design professionals
- The museum inexpensively explores new approaches to interpreting its collections and exhibitions, with the option of developing the best solutions further
- The museum develops a new talent pool from which it can hire
- The museum gains new forms of community engagement and extends its educational outreach
- The community gains increased knowledge and awareness of the museum, its collections, and the college
- Potential museum benefits we will explore in fall 2015 include using student prototypes to more clearly specify planned exhibits for vendors, possibly streamlining vendor selection and...

9:45am – 10:00am  Watermill Center: Library of Inspiration
Speakers: Deb Verhoff  Minnetonka (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)
The Watermill Center was founded by the American artist Robert Wilson as a Laboratory for Performance. Resident artists and scholars create experimental works in a unique environment, living and working alongside a collection of art and artifacts spanning the history of humankind.

We borrow language from the science laboratory to describe what happens here – incubate, experiment, research. Our new library design supports these dynamic pursuits. A new building will expand our fluid research, exhibition, and performance spaces. A robust digital library will support and amplify this multidisciplinary environment where artists and visitors learn by doing.

Our digital initiative describes projects created on site within the context of: a collection of global art and artifacts; a digital archive documenting new works created on site; the archives of artist Robert Wilson and his collaborators; and a supporting research collection of books, media, and online databases. The Watermill Center itself operates as a work of art, one that is constantly changing as new objects are added to the collection and rearranged. In this site-specific installation, many unexpected narratives arise. We aim to promote this experience of discovery and surprise in our organization of the library online.

Rather than silo the information describing each of these collections, we are creating dynamic links to allow for creative relationships and exploration. To this end, we have developed local ontologies and are testing tools for discovery. We describe both performance works and objects in CollectionSpace, an open source collection management system. Community feedback has contributed a new scheme which allows us to track the use of collections. From CollectionSpace, we are syncing to a rich collection of digital images which amplify the works described. These are managed within Piction, a digital asset management.

We are still working in the data and systems design phase of our project. A future goal is to add an interactive design layer to allow participants to arrange and annotate content. Visual browsing and associations will be our normative method of search. At The Watermill Center, there is a clear and formal structure. Within that structure, everything changes. Everything is possible.

9:45am – 10:00am  Doodling the Museum: Using the Pencilicious App to Engage and Inspire a Social Audience
Speakers: Marta Snow  Harriet (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)
Imagine an iPhone/iPad app with beautiful responsive digital ink, easy "paint-bucket" fill, vector-like manipulation and anytime editing. This is what the Pencilicious app is. Now imagine your museum attendees creating and...
sharing on social media doodles about what they are seeing, experiencing, thinking during their visits. Pencilicious provides site-specific digital content packages of custom made digital sticker sprites, branded digital papers, and pre-populated direct social media links. Museums’ online and mobile presence has never been more creative, collaborative, engaging and dynamic.

I am thrilled to present how Pencilicious has been used at early adopter museums and art events. We work directly with museums and artists to develop the content included in their branding packages distributed via a digital code provided at physical and virtual sites to patrons. A virtual community and conversation grows from a shared audience experience in the physical museum. The experience can be brought home and accessed anytime to foster continued creativity and engagement with a museum’s programming. Providing this engagement on an ubiquitous public forum invites an even larger audience into the creative conversation. Pencilicious is an intuitive digital platform to foster the creativity sparked by a visit to a museum and effortlessly share it with the world.

9:45am – 10:00am

Geneva: Going beyond Museum Walls and Creating Synergy in the City

*Speakers: Alex Palin*  
Great Lakes A2 (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

The mobile technology revolution forces cultural institutions to consider development of mobile apps in order to provide travellers with diverse multimedia information. Museums, cities, archaeological sites spend millions on the development of the apparently similar apps. izi.TRAVEL claims that: cultural institutions do not have to spend resources on technological development, but on the high quality content, which could be uploaded to the free and open platforms like izi.TRAVEL, TourML, etc. cultural institutions should co-operate with each other in order to utilize the synergy of a unified city-wide experience, when travellers could use one app for all stories of the city and its museums. cultural institutions should remain owner of its content and be able to and control its content themselves. Proposalin the city of Geneva izi.TRAVEL has reached the level of synergy which could be demonstrated during the conference as an example of such city-wide experience.

The challenge of the technologies in the XXI century is to bring it all together, delivering museum visitors’ outstanding quality via free and open platforms and services. But izi.TRAVEL goes one step further: we merge not only technologies. We unite providers of cultural heritage stories of the whole world into one free platform, which would provide any app in the world with free storytelling feed.

10:00am – 10:15am  
B Networking Break

10:15am – 10:45am

Service Design: Designing for Visitor Needs at the Interface of the Digital and the Physical

*Speakers: Laura Mann*  
Nokomis (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

If you always do what you always did, you always get what you always got. - Albert Einstein

How can we design successful digital offers in complex organizations with multiple stakeholders who have different levels of comfort with innovation and risk? What if we thought less in terms of digital products and more in terms of visitor needs? How does starting from the user need rather than a chosen platform affect the things we make?

Service design places the visitor at the center of the experience and it reflects the reality of the visitor experience in our museums: digital forms only one part of a larger continuum of experience that includes both the digital and the non-digital. Designing services can also help us find new collaborative ways to work with both internal teams and external suppliers. This presentation will present insights from recent research and service design efforts at the Van Gogh Museum, the Metropolitan Museum of Art and the V&A.

The presentation will include processes and tools for capturing and understanding the entire visitor journey: recorded visits, interviews, observation, in-gallery usability testing. We’ll show how the research informs and shapes the service design process and finally, what the outcomes and results are for the visitor and for the museum.

10:15am – 10:45am

IIIF: The International Image Interoperability Framework

*Speakers: David Beaudet, Andy*  
Harriet (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)
The International Image Interoperability Framework (IIIF) is an evolving set of APIs for image delivery. First created in 2011, it has seen rapid adoption by international libraries and archives, and in this talk we will explain how it can also benefit museums.

Using IIIF provides the twin advantages of flexible image delivery, and interoperability with a growing range of viewers and tools that promote digital scholarship and reuse. We will provide a brief overview of what IIIF is, followed by a guide for how to implement it (both in terms of processes and software options), followed by details of how to take advantage of its many features, which include on-the-fly generation of images at any size, zoom level, crop area or rotation, as well as the ability to use multiple different image viewers to surface metadata and relationships between images.

Finally, we will give real-world examples of how supporting IIIF can directly benefit your organisation, from the ease of updating website presentation formats, via the advanced features that can easily be supported, and concluding with some ideas for how IIIF can lead to innovative new ways to present and analyse your collection images.

### Mentoring in Museums

**Great Lakes A1** (1300 Nicollet Mall, Minneapolis, MN 55403, United States)

**Speakers:** Jana Hill, Elizabeth Neely, Carolyn Royston, Jennifer Schmitt

**Panelists:**
- Jennifer Schmitt, Head of Information Technology and Electronic Communications, deCordova Sculpture Park and Museum
- Jana Hill, Digital Engagement Manager, Amon Carter Museum of American Art
- Carolyn Royston, Executive Board, MCN, Independent Consultant
- Liz Neely, President, MCN, Harwood Museum of Art

Panelists will speak about their experiences with mentoring in museums, either as mentor or mentee, or comment on the desire for more direct/structured mentoring programs. In the last year, the conversation about mentoring in museum has moved to the forefront. Invisible architecture can be interpreted as the unseen digital infrastructure, but it also includes the intricate human relationships that move the museum forward. With a number of shifts in the upper leadership of the museum community, where do mid-career museum professionals go for guidance and role models? What can we do within and across institutions to help support each other?

This panel will discuss their personal experiences including their role as mentors, mentees, and how to bridge the gap when feeling isolated in your own museum. Jenn Schmitt and Jana Hill will discuss their experiences with the Getty Leadership NextGen program and the idea of peer mentoring. Jenn can discuss cross-departmental mentorship and her experience working with deCordova’s Head of Marketing and PR. Carolyn Royston will address how she participates in more formal structured mentoring programs, and how those relationships can be successful using digital communication as well as physical proximity.

Topics may include: Is mentorship about subject matter and teaching? Or relationships and leadership? How does this lack of mentoring affect the digital transformations we are striving for? Does risk taking become more of a struggle when there feels like less support?

Following this the panel will open up the discussion to the audience to brainstorm with the panel. What does the MCN community want? What would they find helpful as we envision building a more structured program? Liz Neely and Carolyn Royston will be representatives of the MCN Board, and can speak to the goals for an MCN-led program going forward.

Potential Additional Activity: Speed Networking: Mentorship Edition - Have attendees write down a subject they’d like to mentor and/or a subject they want to be mentored in so they can connect more easily.

### How Will Museums Change with the Application of Indoor Location Technology?

**Speakers:** Leifur Björn

**Calhoun (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)**

Björmsson, Luigina Cioffi, Alin Tocmacov
Here are some of the questions that have risen in context with the new Bluetooth Low Energy beacons and how designers of museums, galleries, and other content providers will apply this new technology. Panel participants will share their experience and ideas.

The panel will discuss these questions:
- Is BLE a revolutionary technology for museums, shops and galleries?
- BLE, Wi-Fi, Gyro, compass, GPS, NFC, LED -Are all these technologies applicable for museums and galleries?
- Are they deployed in isolation or together for the future design of museum venues and exhibits?
- How practical is the use of Bluetooth Low Energy beacons for providing indoor location information to Smartphones and tablets for museums?
- Will this change the way venues are designed?
- How does the use of an automatic museum guide device change the museum experience and perception for the guest?
- How will the roles of content provider change with more interaction of guest for indoor location based games and for providing other direct information?
- There are many technologies available for indoor and outdoor locationing of the user. The discussion will revolve around these technologies and how they can benefit museums.

10:15am – 11:15am  Social Media Extravaganza: A Mini Unconference
Speakers: Dana Allen-Greil, Phillippa Pitts, Jennifer Poleon, Margaret Sternbergh, Jessica Warchall
UPDATE! Check out the slides and recap of our great discussion here.

The people who dream up, collaborate on, and implement social media initiatives in museums rarely have an opportunity to gather with their peers in one room. This session is our chance to see each other face to face and WORK.

We'll start out with a quick #musesocial year in review. You don't want to miss this recap of the top hashtags, trends, and challenges from the recent past.

Next, we'll break out into a mini un-conference based on social media topics YOU select for smaller group discussion. Let's take this chance to debate, discuss, and find ways to work together!

Finally, we'll regroup to discuss some of the key threads from our breakout groups with a focus on resources, solutions, and project ideas for us to collaborate on in the coming year.

Join us and let's get social together!

10:15am – 11:15am  You Aint Heard Nothing Yet! Unleashing the Power of the Audio Tour
Speakers: Sina Bahram, Kate Haley Goldman, Jason Reinier, Leonard Steinbach
Minnetonka (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

This session will make a provocative and persuasive case that audio tours have an unrealized, yet viable, potential for creating a new level of meaningful and memorable visitor experience. While many valuable augmentations to traditional audio and mobile tours have been developed in recent years, the true potential of high resolution, wide spectrum, spatially oriented and surround sound audio, in direct service of museum education and mission, has yet to be realized. Indeed, the quality of the personal museum audio experience lags well behind what is experienced and valued in home and movie theaters, and in the virtual worlds of video games. The possible outcomes of a superior audio experience include more deeply embodied experiences; stronger and more emotional connections leading to deeper and more generalizable long term learning and behavior change; less audio fatigue; more time spent with a tour on more objects; and, unleashed improvements in accessibility for the visually impaired. In other words, a better museum experience for everyone and increased use of a well accepted museum commodity. A pilot study evaluating these hypotheses is expected to be unveiled.

This session will bring together voices from the fields of psychoacoustics, cognitive science, audio engineering and equipment design, vr and gaming, useability design, museum interpretation and programming; accessibility; and, program evaluation into a concise, informative session. It promises an aural awakening guaranteed to
generate great discussions and ideas during the session, and in conversations to follow.

| 10:45am – 11:15am | **From Scratch: Building a Foundational Digital Ecosystem for Excellent Visitor Experience**  
**Speakers:** Heather Hart  
Nokomis (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)  
At The Broad we had the privilege, and the overwhelming task, of building a museum's digital (not to mention physical) infrastructure from scratch. How would you best serve your visitors, achieve your mission, and work efficiently if given the opportunity to start with a clean slate? Do you take the benefits of integration with the complexities it creates or do you keep things simple? How do you anticipate the needs of a living institution before it exists? We will present on how we tackled this challenge/opportunity at The Broad, integrating customized ticketing, CRM, mobile, web, and marketing, choosing an untraditional visitor services management model, and focusing intensely on overall user experience, both physically and virtually. |
| 10:45am – 11:15am | **The Architecture of Open Innovation: Inbound and Outbound Paths to Museum Innovation**  
**Speakers:** Haitham Eid  
Harriet (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)  
Due to economic and political motives, museums have been encouraged, and sometimes pressured, to embrace innovation. As a result, innovation has rapidly become an important topic in many museum conferences, workshops, publications, and social media discussions.

This trend has made museums more interested in innovation and inspired them to model innovation in their practice. Within this context, the proposed article utilizes Henry Chesbrough's Open Innovation theory and a case study at Cooper Hewitt, Smithsonian Design Museum to provide a framework for museum innovation. The paper will introduce the structure of Open Innovation focusing on the role of inbound and outbound paths in advancing the organization’s innovation capabilities. Chesbrough (2003) defines Open Innovation as; “a paradigm that assumes that businesses both can and should use external ideas as well as internal ideas, and internal and external paths to market, when seeking to advance their technology”. 

Empirical data derived from surveys and semi-structured interviews with members of the digital team at Cooper Hewitt, Smithsonian Design Museum has shown the existence of four Open Innovation paths including; Open Sourcing, Self-reflection, Collaboration, and Conferencing. Each path is explained with practical examples. Additionally, the research shows that the four identified Open Innovation inbound and outbound paths at Cooper Hewitt appear to be interconnected, and should probably be viewed as a whole rather than in isolation. It is noted, however, Open Innovation inbound and outbound activities can significantly differ from one museum to another. Each museum can plan their tailored Open Innovation strategies that allow the museum to innovate and effectively achieve its mission.

Finally, the paper concludes and provides some helpful tips for museums to develop an Open Innovation mindset. |
| 11:30am – 12:00pm | **Making Meaning in a Multilingual World**  
**Moderators:** Piotr Adamczyk  
**Speakers:** Tristan Roddis  
Harriet (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)  
Only 17% of the world's population speak English, and even in the largely anglophone USA, only 80% of the population have English as a first language. Because of this, it is vital that museums learn the techniques of communicating in a polyglot world.

In this presentation, I will explore a range of bilingual and multilingual projects and discuss some of the challenges of developing digital systems in this way. For example, recent bilingual Arabic/English projects for Qatar Museums and for the British Library demonstrate that bilingual sites do not have to compromise in terms of aesthetics and usability. And a bilingual Chinese/English interactive installation at the Tate Modern allowed artist Ai Weiwei to interact with his audience in both languages.

Many of our multilingual projects have been in Drupal. I will talk about the choices for approaching multilingualism in Drupal 7 and how it will change in Drupal 8. I will also discuss how an effective translation workflow enables digital services to be continually provided in a range of languages, on a range of platforms and devices, and mention the strangest multilingual brief we have ever worked with: to provide animated Welsh-speaking singing aliens for the BBC. |
11:30am – 12:30pm  The Art of Listening: Creating Authentic Stories in Sound  
*Speakers: Sofie Andersen, Minnetonka (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403) Suse Cairns, Daniel Davis, Natalie Marsh, Christine Murray*

Audio is having a moment. People are tuning in to on-demand radio in their millions. New podcasts are popping up every week. NPR’s “Serial” became a global phenomenon - the first podcast to be awarded a Peabody, as well as becoming Apple’s most popular podcast ever. Audio – more than words on the page - can make you feel something for someone, or something, totally unfamiliar. Barriers go down when people just listen. And it helps you – look, feel, remember.

This talk-show style panel will show how audio is having a new lease of life in the mix of in-gallery media, websites, apps and other mobile tech in museums. Audio is more than a tired old ‘interpretation’ friend and can be used in innovative ways to communicate and learn. As a medium, it offers a singularly direct connection with the listener, creating a sense of presence and intimacy that can be hard to achieve in a museum environment or with screens alone. Yet audio storytelling in a museum context often struggles to go beyond ‘talking catalogues’, with it’s didactic messaging. This panel will offer worked examples of how audio can be a more effective tool when authentically expressed, and as an extension of the drive towards authentic communication, emotional engagement (E. Munro, 2014) and visitor participation in museums, breaking down barriers between institutions and audiences. Just as social media and our online lives have pushed the boundaries in museums beyond formal interactions with the public (MW2015,Provocations in art: engendering art debate on social media), so too can audio help museums to connect with visitors.

We’ll examine the impact of audio as a supplemental layer to the visual or as the leading primary experience, and how new directions in audio storytelling employ plot-driven narrative approaches, as well as challenge the visitor with responsive, immersive and theatrical experiences, including using viscerally charged binaural techniques to tell the story. As a 2012 study by Emma Rodero has shown, dramatized audio in particular can stimulate the imagination, create vivid mental pictures and generate more emotional arousal and interest, and the use of sound effects and sound shots increases the level of listener’s mental imagery, and also helps them to pay more attention.

The session will be a talk-show style panel with brief introductions to worked examples including installation based and responsive mobile and location-aware technologies, followed by a series of questions to prompt discussion among the panelists. Slides will be limited and audience questions actively encouraged. The goal of the session will be to share innovations in audio design and storytelling both in museum contexts and outside, to build an understanding of authentic communication styles and to provide tangible examples of how these can be applied in a variety of in-gallery and mobile applications.

Panelists from The Smithsonian Museum of American Indian, The Baltimore Museum of Art, the National Mus…

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11:30am – 12:30pm  Experience, Traverse, Inhabit: Bringing a Sense of Place to Digital Navigation  
*Moderators: Emily Lytle-Painter  Calhoun (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403) Speakers: Greg Albers, Rob Stenzinger*

What does it mean to navigate a digital space? Museums have long considered ways in which we can guide people through our physical spaces. Since the first museum websites of the late 1990s, digital platforms have given us a set of new “spaces” for our visitors to explore.

In this session, we will discuss various digital experiences through the lens of how people move through them and how they are related—or not related—to similar physical experiences. How do we define these digital spaces and open them to our visitors? What will they do while they are there? What will their experience feel like? Who will they encounter?

Greg Albers, Digital Publications Manager at Getty Publications, will consider the visual and physical terrain we cover when we read, the objects (words) we encounter there, the markers we use in mapping our way through long texts, and how journeys like these might be supported when we design texts for digital reading.

Emily Lytle-Painter, Sr. Digital Content Manager at LACMA, will share insights about observing exploratory and
non-didactic visitor experiences in physical museums, and examine how museums might create atmospheric online spaces and invite visitors to spend time beyond simply seeking information.

Rob Stenzinger, UX Designer, Coder, Facilitator on Target’s EGI Team (Enterprise Growth Initiatives, the team responsible for building disruptive innovation ventures), will share several projects from the retail sphere and discuss how discovering the goals and intent of a guest can inform the feedback we offer in a digital space, which in turn provides a sense of place and accomplishment.

The session will be conducted as three short presentations, each followed by discussion and Q&A.

11:30am – 12:30pm  **The Promise and Practice of Digital Storytelling**

*Speakers: Annie Pollland*, Great Lakes A2 (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

*Phillip Tiongson*

Museum experts have acknowledged that “books on a wall,” even when crafted by the most scholarly experts in a given field, sometimes fail to engage audiences. Storytelling, on the other hand, is a powerful way to express humanity’s interpretation of art, science, design, and history to a wide range of museum audiences. Now, “Digital Storytelling” is in the air, upping the ante and promising to enhance these connections, to tell more stories, and, perhaps, allow a more diverse audience to derive multiple interpretations of those stories. Museum professionals feel they should be exploring Digital Storytelling, but what, exactly, is Digital Storytelling, and why do we need it? Is it an app, a website, an interactive, a video? Does it need to span an entire exhibit or can it punctuate and co-exist within a more traditional exhibit? Can it truly prompt different interactions with museum spaces and other museum visitors? And if so, are there best practices that you can use as guidelines? Most importantly, how can museums ensure that their Digital Storytelling enhances humanities themes, in ways that drive deeper engagement, as opposed to distracting from them?

At the Lower East Side Tenement Museum, storytelling is our bread and butter, and we’ve used it to bring to life the histories of ordinary, working-class immigrant families. Woven into the family stories are humanities interpretation of the broader contexts our families faced. Events such as the Panic of 1873, the Triangle Shirtwaist Factory Fire, the temperance movement, or the 1869 St. Patrick’s Day parade reach our visitors through the family stories. In creating our 2012 exhibit Shop Life, in collaboration with Potion, we aimed to keep our traditional storytelling while incorporating digital technology. The interactive, in the form of an interactive shop counter, allows our visitors to experience one space in three different time periods, and enables them to directly explore primary sources on shopkeepers from those periods. Shop Life won the Gold AAM Muse award and was critical to the museum’s growth in exploring a new kind of visitor engagement, and to its very conceptualization of space and exhibits. While there is no clear-cut definition of Digital Storytelling as it applies to museums, conversations with museum professionals have emphasized the critical importance of working with the right partners. The very process of creating the digital storytelling exhibit must be well conceived. This is not simply a matter of handing over content to the design team, but it’s a shared, iterative experience in which partners explore the content and experiment with different ways to convey it. Further, formative testing of exhibits allow the designers and curators to assess whether the humanities themes resonate with visitors, and whether visitors enjoy the various aspects and elements of the exhibit. While the excitement over new tools and formats has sometimes led museums to add technology for the sake…

11:30am – 12:30pm  **Getting $*IT Done: Implementing Your Digital Strategy**

*Moderators: Jane Alexander*, Great Lakes A1 (1300 Nicollet Mall, Minneapolis, MN 55403, United States)

*Speakers: John Gordy, Douglas Hegley, William Weinstein*

Over the last few years, museums have developed strategic plans to leverage technology in support of goals such as community engagement, institutional alignment, scholarship, media production and artistic excellence. Multiple museums have created Digital Strategies (or other tools such as Road Maps or Guiding Principles) to guide these efforts. Museum technology departments have been reorganized and comprehensive back-end strategies and museum wide processes created to activate their world-class collections, connect art with people, and drive on-site and online attendance. HOWEVER, the big questions remain: How are museums implementing these strategies? What processes do they use to support and approve digital initiatives? How do they measure success? How do they keep strategies current and top-of-mind? How do they get support from management and donors? What works and more importantly what doesn’t?
This session will look at how The Cleveland Museum of Art, Minneapolis Institute of Arts, The National Gallery and Philadelphia Museum of Art are approaching digital strategy and implementation. Panelists will explore the scope and core elements of each museum’s digital strategy; staffing requirements and the interdepartmental steering team put in place to guide digital strategy; the backend systems put in place to support flexible access, both in theory and practice; and the effort required to pull everything together. As an added bonus, panelists will describe any missteps along the way and how hurdles were overcome effectively. Purpose and objectives - attendees will learn several different but overlapping approaches to digital strategy, with the pros and cons of each. Learn specific methods for thinking and acting strategically to deliver digital and technology initiatives. Learn practical approaches to developing a meaningful technology and digital media strategy. Learn communication skills and how to develop buy-in across the organization. Plus: plenty of opportunities for questions and answers. Format: Multi-presenter panel, with Q&A woven in throughout the session. Theme: Leadership

11:30am – 12:30pm  Empathy at Play: Social Media Game Jam  
Moderators: Seema Rao  
Speakers: Susan Edwards, David Schaller  
Nokomis (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

Games are often social experiences. The social aspect of games can be seen as a spectrum of social experiences from someone looking over your shoulder as you kill it at Two Dots to learning incredible insights about your relatives when playing Cards Against Humanity.

Immersion is also an important aspect to many games. Some games invite players to inhabit an alternate experience zone, gaining insight born of emotional impact. With their inherent social and emotional capacity, games can be the ideal tool to teach empathy and inclusion. Social media offers new tools for the game developer. There is near universal diffusion of mobile technology globally. The numbers for social media employment are staggering. There are more 300 million users for both Twitter and Instagram. Facebook boasts more than 1 billion users. Given the scale of use, social media can be an excellent tool in game development for the museum sphere. These consumer interfaces are well-known to users, and as such, they need no orientation to the interface. Additionally, employing consumer products is cost-effective.

Developing social games has its challenges. Game play, in controlled settings, can be uncomfortable for some people. Many people are averse to games that involve roles. Part of these challenges are born when games are developed without initial audience evaluation feedback about attitudes and behaviors. Forced social and emotional experiences can turn off participants. When done right, social games can also offer important emotional impact on players. In a conference setting, a collectively created game focused on empathy, can increase the power of the conference for its participants as a whole. Sharing a game experience creates bonds that survive long after the game is finished.

This session is formatted as a collaborative, though structured, work-session, featuring a panel of professionals engaged with game development on a variety of levels to create a conference-wide experience. Together, participants and panelists, will work actively to create a social media game, in real-time, to be played at the conference that focuses on empathy. Taking aspects of a game jam, this session will allow the professionals and the participants to consider how to employ readily accessible digital materials to invite performative engagement.

The panelists will offer the framework for game development, with its goals (enhance empathy) and audience (the conference goers.) The participants will begin by gauging their own behaviors and attitudes, brainstorm possible gameplay modes, and eventually help create the game. Careful planning on the part of the panelists, and structured group work during the hour, will ensure a workable game will result from the panel session. Participants will be invited to reconvene after a day of game play to make iterative changes. Participants will gain practical insight into collaborative game planning, prototyping, and iteration. The collaborative creation will …

12:00pm – 12:30pm  Overcoming the Digital Infrastructure Divide: Open Source Solutions to DAMS  
Moderators: Piotr Adamczyk  
Speakers: Kate Blanch, Andrew David, Joshua Lynn  
Harriet (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)
Do you struggle with managing your digital assets? trying to provide access on a limited budget? Ever wonder how to get your metadata to stick to your assets? Come learn the very different methods of two similar organizations implementing the same open source Digital Asset Management system, and how it has changed their lives. We'll share how both institutions have customized ResourceSpace, integrated it with other applications, and utilized a community of developers, making a real difference in our individual implementations of the DAM.

The Minneapolis Institute of Arts’ Enterprise Content Management (ECM) project – funded by the IMLS and under the strategic direction of Douglas Hegley, Director of Media and Technology – aims to store, organize and make accessible the museum's vast amount of intellectual property in all digital formats including video, audio, image, and documents. Our new (to us), open-source DAM – ResourceSpace – joins an existing enterprise DAM and provides the means to gather our currently dispersed digital assets. An Application Program Interface (API) ties all our collections-related systems together and serves a unified search interface with an Elasticsearch backend.

The open source system, Elasticsearch index, and API-driven approach provide the project lynchpins, allowing MIA users to retrieve deep information about the collection and digital resources from across multiple repositories, using keywords and other associated cues. A new, MIA-authored metadata specification ensures longevity and access to the asset data from an array of digital formats. The API will also provide a direct content feed to the galleries and visitors via the MIA’s TDX digital experience project and website collection resource pages. The MIA has undertaken all project development work in-house with museum and contract staff using an Agile methodology that involves extensive stakeholder input.

The Walters Art Museum in Baltimore implemented ResourceSpace two years ago to house a growing repository of nearly 300,000 assets. ResourceSpace is the center point for digital assets related to both the museum collection and many other facets of museum activities. While the Walters has primarily focused on mapping custom metadata to standardized schemas and integrating their collections management database, the real success has been in creating a digital asset management “experience” for staff that makes the searching and retrieval of digital assets easy, explorative and intuitive. It was with some apprehension that the Walters replaced a vendor-driven (and chronically broken) 3-year old DAMS with an open source application; after all, the Walters has a small IT staff and no in-house developers. The open source community helped our decision in several ways. First, there is the broad community of ResourceSpace users, ranging from developers, DAM managers or simply enthusiasts who are eager to share their experiences and knowledge. Secondly, the low implementati...

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<th>12:30pm – 2:00pm</th>
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<td>2:00pm – 2:30pm</td>
<td><strong>Access for Everyone: Implementing CollectiveAccess in a Museum Setting</strong></td>
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<td><strong>Moderators:</strong> Rosanna Flouty</td>
<td>Hamlet (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)</td>
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<td><strong>Speakers:</strong> Ray Barker, Cale McCammon</td>
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Situated on 200 acres of land in Maryland, Glenstone seamlessly integrates contemporary art, architecture, and landscape into a contemplative environment for visitors. Since Glenstone's founding, the museum library, archives, and art collections was un-automated and in desperate need of a management system an overhaul to effectively maintain the growing collections. The management system for the art collection was inadequate; archives content was managed in Excel spreadsheets; and the library collection was tracked through an insufficient database.

In 2012, Glenstone began searching for information management systems for the library, archives, and museum collections. After evaluating different proprietary products designed for individual departmental needs, Glenstone decided to break away from the traditional Integrated Library System (ILS) model and adopt CollectiveAccess, a customizable open source system designed to be interoperable across departments. By creating linked relationships between record entities, CollectiveAccess formed a seamless, integrated discovery platform for users. Since launching CollectiveAccess in early 2015, Archives, Library, Museum Collections, and IT have worked collaboratively to introduce this tool to other staff--through group trainings and one-on-one sessions--while creating and refining workflows within our departments.

The first portion of our presentation describes the state and condition of the Archives, Library, and Curatorial records prior to launch, as well as outline the state of the information architecture at that time. The second-half of the presentation discusses how the launch itself was managed. A handful of staff knew the tool intimately through the nearly two-year long project, leaving approximately 50 staff members--from the Operations staff, Landscape...
crew, and upper administration--completely unfamiliar with CollectiveAccess and the resources contained therein.

We will discuss anticipated and unanticipated challenges and successes, and outline our next steps as we continue to implement and share this resource with our present colleagues and future users. We will share the goals, successes, and challenges faced throughout the different stages of the project, including: 1) User Needs Assessment 2) Design & Development, 3) Usability & Functionality, 4) Beta Testing, and 5) Implementation. The 20-minute presentation will include a demonstration of the database, highlighting the back-end functionality for internal staff and the front-end functionality for users.

Presenters will include: Ray Barker, Chief Archivist/Librarian, Glenstone; Jason Hedges, IT Coordinator, Glenstone; Cale McCammon, Assistant Archivist, Glenstone; Tessa Brawley-Barker, Assistant Librarian, Glenstone.

2:00pm – 2:30pm  Taking Citizen History Seriously

Moderators: Rosanna Flouty

Great Lakes A2 (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

Flouty

Speakers: Elissa Frankle, Michael Haley Goldman

Museums and archives have experimented with crowdsourcing and citizen history for almost a decade. While much creative and productive work has been accomplished, we ask - do these projects truly involve making meaning with people, collections, and information? Much of the focus of existing projects - including some of our work at the US Holocaust Memorial Museum - has been on the collections themselves. Our starting point has been: how do we better describe and make accessible these unique objects from our collections?

While better describing and making accessible artifacts is important and appropriate in an archival context, we hold museums have a greater charge to keep to their visitors. Museums are places about and for people, and exist for the shared experience of the audience with the content of the museum as well as with one another. At their best, citizen history projects unite museum staff and our audiences in a common goal of meaning-making by not only bringing them into direct contact with our collections but also by asking them to take part in conversation on the ideas and questions at the heart of our institutions.

But to live up to this potential is not easy. Institution-led citizen history projects that are authentic and meet the needs of their audiences demand the commitment of valuable resources and staff. To make our investment worthwhile, citizen history needs to be taken more seriously. The institution must place the value of working collaboratively with the public at the center of our mission - breaking down the walls between public and private, internal and external, staff and visitor. This move does not deny the museum staff their expertise but instead repositions the audience as an integral part of the meaning-making process.

As part of our endeavor to take citizen history seriously, staff at the US Holocaust Memorial Museum has undertaken a new pilot process. During the last year, twelve staff members produced six crowdsourcing prototypes with zero budget as part of our effort to better understand the possibilities of citizen history. Through these prototypes and early pilot projects, we have improved staff understanding of the practical and conceptual practices of creating a citizen history project. But more importantly, we have begun to see how these activities can achieve our larger institutional goals around co-creation and meaning-making. What activities best lend themselves to true engagement not only with materials, but with one another? What goes into creating and co-creating an authentic experience? How do we create environments that move participants beyond interacting with collections and into a sense of shared humanity?

While we don’t have all the answers to these questions, we seek to broaden our discussion with the Museum community by offering the results or our exploration.

2:00pm – 3:00pm  Video beyond the Visual: How Captioning and Description-Writing Make Us Better Producers

Moderators: Anna Chiaretta Lavatelli

Minnetonka (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

Lavatelli

Speakers: Sina Bahram, Jonathan Munar
This panel of experts will discuss approaches to creating a video experience that builds a stronger and more inclusive narrative.

First, a walk through of processes for transcription editing, captioning, translation, and writing good audio description. This establishes a platform for the second part, the bigger question—How does the process of transcribing voice to text and describing the visual throughout a production improve the quality of our videos? Writing in video production can be an undervalued part of the process in museum production and many times is relegated to an after thought in context of captioning. Through examination of past productions and self-directed exercises the panelists will share learnings and techniques, gathered through an ongoing conversation about production tactics and accessibility in video, that can be brought back to your own practice.

Sina Barham (Prime Access Consulting) will kick off the discussion, explaining the basics of accessibility in video with insightful examples that specifically address captioning and audio description techniques. Producers Jonathan Munar (Art21) and Anna Chiaretta Lavatelli (Museum of Contemporary Art Chicago) will share their methods developed to create more inclusive content and demonstrate the use of writing in their production processes.

The second half of the panel will be dedicated to revealing how their work with Sina actually builds on the core principles of production to make videos that are not only more inclusive but, as the panelists propose, are also of better quality holistically.

2:00pm – 3:00pm

State of the Art: Creative Technology and the Museum

Speakers: Jason Alderman, Meredith Ferguson, Chad Weinard

Museum technology demands creativity.

Design, user-experience and user interface require an artful creativity, but it doesn't end there. There's a Sherlock sort of analytical creativity required to write and troubleshoot code and a MacGyver-like creativity in finding off-the-shelf solutions to solve unique problems. There's creativity in recombining existing parts and in connecting existing projects to new ideas. A scientific creativity is needed to experiment and fail. And there's an all-important storytelling creativity required to sell an idea, or a solution, or a process, and convince stakeholders of its value.

Sustaining a creative process in the museum setting can feel like swimming upstream. Many museums celebrate artistic innovation and creativity; few encourage it internally. Most sustain a powerful inertia and are wary of change. Museum technologists are often left on their own to develop creative approaches, or nurture their creative side on their own time.

This panel will explore the space between artist and technologist from three perspectives: the museum, the museum technologist, and the audience. It will be presented in a creative format including short panel presentations, a project demonstration and a unique audience Q&A session.

The Museum:

How do museums approach creative digital work? When a curator wants a unique way to express an exhibition theme, who gets the call? When is an artist commissioned or an outside firm brought in? When does the in-house digital expert get the nod? We've found that the capacity (or tolerance) for creative (even artistic) digital experiences depends on the kind of museum. For example, a science museum may welcome the creative technologist while the art museum may find comfort in an artist commission. More broadly, how can museums encourage creativity in their digital teams? (Or, how can the roadblocks to creativity be removed?) What would happen if the processes that are required to keep a digital team creative and innovative are actually taken to other areas of the museum?

Demo: Self/Reflection This interactive installation started as a prototype, developed into an educational interactive, and ended as a work of art in a photography museum. This project hits many aspects of musetech creativity.

The Museum Technologist:
How can creativity be developed in museum technology projects? During this section we will discuss broadening your toolsets—including frameworks built for creativity, experimentation, and tight, iterative feedback loops. We will address the importance of building features into your code to allow for quick experimentation during runtime. We’ll explore ways to gain outside experience and diversify your social networks (vibrant parallel communities thrive around interactive installation art, creative coding, information architecture, and more). Our field is enriched by cross-pollination; we need to bring personal passions to work (and not leave them at the door.)

**Demo:** Museum my Heart

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| 2:00pm – 3:00pm | **Museums Are from Mars, Visitors Are from Venus: Three Strategies for Interstellar Communication**  
**Moderators:** Jessica Milby  
**Speakers:** Ellice Engdahl, Jana Hill  
Collection information isn’t always written in the language of the people, and interpretive tools require the human touch. Bringing your collection resource into the 21st century is a long road. Even more tricky is rallying an entire institution around these goals—and there are multiple approaches.  
Do you take the path of overall restructuring? Do you empower a group of cross-departmental leaders? Do you bring in leadership from outside? How do you build a better collection resource—one that fuels online collections, in-gallery interactives, and internal research? What sort of strategies can position you to improve a resource that everyone, including the visitor, should own? How does an institution take advantage of digital tools to bring the visitor closer, without sacrificing core projects?  
Three digital collections and information managers will tell their institutions’ stories on using their digital collections and content to seed change within an institution. Overall restructuring can place your digital collections in the administrative realm of public engagement. Empowering cross-departmental leaders can direct you to bridge the museum-visitor communication gap with data. Leadership from outside can shake up approaches to content management and distribution to new audiences. We will tell the story of three different institutions’ strategies for overhauling collection resources strategically with the visitor and the museum’s future in mind. |
| 2:00pm – 3:00pm | **Going Beyond SETUP.EXE: Strategically Planning for Success!**  
**Moderators:** Tim Rager  
**Speakers:** Rebecca Menendez, Gary Wise  
Sponsored by the Information Technology SIG  
From technical requirements to internal politics, implementing systems can be a rather daunting prospect. Our presenters share their trials, tribulations, and successes in dealing with technical and non-technical aspects of implementations. If you’re struggling with system adoption and success (or want to make sure you don’t!), this session may be worth attending. This round-table discussion will be lead by three technology leaders who have struggled, or want to minimize the struggle, for technology success. Via group facilitation, the presenters will engage the audience to discuss their success stories, as well as their lessons’ learned. Tim will be presenting some ideas and current progress on strategic planning to increase new CRM system adoption and buy-in, Rebecca will be telling the story of the process of turning several disparate and unrelated plans for digital asset management into a single strategy that will meet multiple needs across the institution, and Gary will be leading a discussion on creating a Digital Assets Management plan from a producer’s point-of-view, and creating a coherent and unified management of digital assets from multiple departments within the institution on a very limited budget. |
| 2:30pm – 3:00pm | **Be Excellent to Each Other: The Future of Provenance Research**  
**Speakers:** Tracey Berg-Fulton  
Provenance research is difficult, slow, and constantly changing. Many museums are behind in their research due to barriers of access and resources. How does the research process get better, and how can museums improve the quality of the data? |
This paper will explore ways the web can enable us to, in the words of Bill and Ted's Excellent Adventure, “Be excellent to each other.” Sites like Internet Archive, HathiTrust, and Gallica have made provenance research easier than ever. However most information is still trapped in archives, non-circulating books, and distant repositories. Few museums can afford to send a researcher to a remote library, in a likely futile search for information.

To build a provenance community, researchers must be connected with resources. GitHub has been used as a civic issues tracker, so why not use it for research? If a researcher in Pittsburgh needs a specific reference from the British Library, an issue ticket could connect a person with a BL reader’s pass to the requestor to pull the book and share the information. Further, academics have used the tag #ICanHasPDF to request articles from academic journals which they cannot access. Those with access find and share the article. Could #ICanHasProvenance be just as effective? This person-to-person network is critical to building a provenance community. Connecting people to resources builds relationships, and encourages museums to explore their own data.

Further, museums should publish provenance online, and not just works that fall under the Nazi-era mandate. By publishing this data, the names and places involved in provenance are indexed and easier to find and researchers can then connect names, dates, and citations. Many fear publishing this data because of the perceived risk, and the possibility of a restitution claim. However, museums enjoy a great deal of trust from the public, so if a patron challenges the provenance, the chances are the information be worth evaluating. This also demonstrates a commitment to transparency. Museums should make a finding aid of their provenance materials available online to enable researchers to make better requests. Staff are then able to more quickly assist the requestor, saving all parties time and thus, being excellent to each other. While some have indexed their libraries through WorldCat, most provide no external guide to their institutional holdings. By publishing library information, researchers can connect to materials that may not otherwise be available to access via interlibrary loan. If we want to be even more excellent to each other, making digital copies of provenance material available online would be best, but the cost and time barrier to this is palpable.

Finally, training people to write provenance, and to do digital provenance research must be a priority. Most professionals have a high degree of technical literacy, but provenance research not only requires creative search skills, but the ability to evaluate the information...

2:30pm – 3:00pm  
Scaffolding User-Centered Digital Public History for Small Cultural Heritage Institutions  
Speakers: Sharon Leon  
Great Lakes A2 (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)  
The work of public history calls for taking good history scholarship into the world to meet the needs and interests of a non-academic audience. While much of that work has traditionally happened in face to face encounters and at physical sites, increasingly public historians are encountering their audiences through digital means, such as social media, blogs, exhibit sites, collection and archives sites, mobile applications, and digital simulations.

The possibilities for doing sophisticated digital public history work have expanded significantly since the first cultural heritage organizations began to create web presences in the mid-1990s. At the same time, the core elements and challenges of doing rigorous public history work have not changed all that much. As a result, the best digital public history work requires a blend of applied technical skills, targeted engagement strategies, disciplinary ways of knowing, and content knowledge.

Unfortunately much of the existing work on digital public history fails to take the necessary blend of concerns into consideration. A proliferation of work on digital humanities, and museum and archive computing issues have flooded the publishing landscape in recent years. By dwelling in necessarily interdisciplinary spaces, these collections cannot speak to the disciplinary distinctions that separate history from the other humanities, to say nothing of the ways that the work that takes place within public history institutions is different than that which occurs in art museums, children’s museums, and science centers. This work mostly fails to provide the practitioner with a comprehensive overview of what is required to plan and execute rigorous digital public history work. Public historians in cultural heritage institutions need a practical introduction to doing digital public history that speaks to their theoretical and methodological commitments while offering clear guidance on preparing for, executing, and sustaining vibrant projects.
This presentation will offer a formulation of support structures, tools, and frameworks to support the creation of user-centered digital public history work in small organizations. Bringing together the core areas of expertise in applied technical skills, targeted engagement strategies, disciplinary-specific ways of knowing, and historical content knowledge, the presentation will introduce the concept of user-centered digital public history, and then offer an outline of support materials for planning (research, strategy, and infrastructure creation), executing (building digital collections, creating rich interpretive content, and creating engaged communities around that work), and sustaining (frequent evaluation, ongoing outreach campaigns, and attention to issues of digital preservation) digital public history projects.

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<th>Time</th>
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<tr>
<td>3:00pm – 3:30pm</td>
<td>Networking Break</td>
<td>Hyatt Regency Minneapolis</td>
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<tr>
<td>3:15pm – 3:45pm</td>
<td>The MediaLab at the Met: Building a Space for Experimental Thinking</td>
<td>Calhoun (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)</td>
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<td><strong>Speakers:</strong> Marco Castro, Don Undeen</td>
<td>Roadside (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)</td>
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<td>The MediaLab is a small team within the Creative Development Group in the Digital Media Department.</td>
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<td>Our job, broadly speaking, is to explore the impact that technology can have on the museum experience. More specifically, we do this by working with New York's creative technology community, to develop prototypes and proofs-of-concept that we share with Met staff to get feedback and fuel conversation. We run an ambitious internship program, bring in volunteers, collaborate with local schools, and partner with startups that see a benefit in working with our amazing collection, incredible staff, and vast space. Our projects are low-budget, open-source, and rapidly iterated.</td>
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<td>The MediaLab's work looks at the relationship between culture and technology through a variety of lenses: The application of new technology to the in-gallery visitor experience. The influence of the arts on the practice of creative technology. Hands-on, collaborative learning enabled by digital tools. Building a community of creative interaction with our collection.</td>
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<td>Museum content and expertise as raw material and inspiration for new media art. The development of digital tools to aid in scholarly practice.</td>
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<td>The goal of this presentation is to provide useful, actionable tips on how to bring some &quot;MediaLab Thinking&quot; into your own museum. With limited time and resources, how can your institution encourage diverse perspectives, attract technical talent, and generate useful ideas that have value to both the museum and our visitors? What expectations should we have for our prototypes, and how do we take them to the next level? How do we expand our definition of what a museum can be, while preserving and elevating our core principles? We'll share some of our successful projects, but also the processes, constraints, and opportunities that led to them. We also hope to listen to our audience, to discover ways that our MediaLab can better serve the broader museum community.</td>
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<td>3:15pm – 3:45pm</td>
<td>Museum Collections and the Personalization of Education</td>
<td>Harriet (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)</td>
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<td><strong>Speakers:</strong> Darren Milligan</td>
<td>Harriet (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)</td>
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<td>In the fall of 2015, the Smithsonian Center for Learning and Digital Access will launch a minimum viable product of a platform for the discovery, adaption, creation, and sharing of classroom resources based on museum collections.</td>
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<td>The Smithsonian Learning Lab (learninglab.si.edu) is the result of a substantial rethinking of how the diverse digitized collections and digital resources from across the Smithsonian's 19 museums, nine research centers, the National Zoo, and more, can be used together, for learning. It is a big dream, an aspiration to make these resources more accessible and more useful to teachers, students, parents, and anyone on a lifelong quest to learn more. It hopes to deliver the Smithsonian in ways that make learning joyful, personal, and shareable.</td>
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|            | The Learning Lab will be a web-accessible digital platform that enables the discovery of millions of digital assets from the Smithsonian's galleries, museums, libraries, and archives as well as platform-authored learning resources presented in highly-adaptable and easily-shareable formats. It combines these assets (1.3 million digitized collections, articles, video and other rich media; and more than 2,000 learning resources: previously not available in a unified way) with tools that allow for object- and collection-level annotation and assessment. It too,
we hope, will become a community, both within the Smithsonian and around the world, who collaborate, create, and share with each other new resources for learning.

The Smithsonian now receives many more digital than in-person visits, a trend likely to continue across the museum sector. We are committed to understanding and serving the unique needs of these diverse digital visitors and enabling them to access and use our content. While the Learning Lab’s features are anchored in three years of research (published in a peer-reviewed paper by Museums and the Web in 2015) and best practices in both K–12 and museum education, as well as national needs and trends in education, what we are beginning to observe is users demonstrating use of the collections in ways our own educators might never imagine. As research has shown, these uses (often characterized by format and subject disambiguation) may not be wholly novel for how our collections and the information around them have traditionally made their way into the classroom (a space more and more, in the United States dominated by pressures for alignment to core standards), however with the data provided by the Learning Lab, the Smithsonian can now observe, quantify, and understand these behaviors, such as how cross-disciplinary resources are aggregated, how non-Smithsonian resources are used in conjunction with our own, how assessments are used alongside collections, and how students demonstrate understanding through teacher-led and autonomous resource creation.

This MCN presentation will share how insights gained from initiatives, like the Learning Lab, can improve our institution’s ability to c…

3:15pm – 3:45pm

The Future Is Static: Building Future-Proof Digital Publications at the Getty

Moderators: Amy Heibel
Minnetonka (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)
Speakers: Eric Gardner

Museum technologists occupy an uncomfortable intersection between two very different timeframes. The pace of technological change is constantly accelerating, while museums are concerned with preserving the past. This problem is thrown into sharp relief when we talk about digital publishing in art history and related fields.

Scholarly discussions unfold over decades — but when is the last time you have used a 20-year-old piece of software? How many of the files and formats currently in use will be accessible to scholars 20, 30, or 50 years in the future? One potential solution may sound paradoxical: in order to ensure future accessibility of our content, we should look back to the roots of the Web as it was originally envisioned: a linked collection of static, human-readable documents constructed according to a set of open standards.

In this talk, I hope to outline how a modern digital publishing workflow can utilize the benefits of current technology while delivering content in a format that should remain accessible decades from now.

This “invisible architecture” for publishing includes the following tools:

- The Markdown syntax for semantic, presentation-agnostic content
- Jekyll, an open-source tool for generating static websites, dynamically
- Git, open-source version control software
- Octavo, a new tool created by Getty publications to streamline this process and generate digital books in multiple formats from a single source

By ditching proprietary software (Adobe, Microsoft, Apple, etc.) in favor of open-source tools, I believe we can best serve authors and readers of future generations, while still providing a dynamic and engaging experience for users right now. For digital publishing in the museum world, the future is static.

Libraries, Archives, and Museums: Points of Contact and Divergences in Cultural Heritage

Information

Moderators: Stefano Cossu
Great Lakes A2 (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)
Speakers: Niki Krause, David Wilcox

Libraries, museums and archives — so-called memory institutions — are undergoing intense technological transformations in the way they catalog, preserve and publish cultural heritage information. The timeline, scope,
and outcome of this technological advancement seem to be very different in these fields, due to the different mission and structure of these institutions. However, some of the underlying tools, specific goals, methodologies and data models seem to be shared among most of the cultural institutions who are invested in technological advancement. In this informal, open discussion and Q/A among the panelists and with the audience, the participants will engage in an exchange of use cases in their own specific fields, trying to find a common ground where cultural heritage institutions can collaborate to establish standards that are valid for all cultural expressions.

**Physical and online space**

**Q:** Which role does the physical space of libraries, archives and museums play in a social context, in contrast with their online presence? (see related article)

**Q:** How does the online LAM experience relate with the on-site experience and how are they both evolving? How can on-site technology aid or hinder a visit?

**Mission: scholarly vs. broad audience**

**Q:** How can LAMs fulfill their role of information providers by offering the highest quality information possible as well as reaching out to the broadest audience possible?

**Materials collected**

**Q:** Museums have publications, and sometimes libraries within them, as well as archives; libraries have special collections made up of unique or limited-edition objects. Are the two institutions closer than we think in terms of what they collect and how they catalog it?

**Data harmonization efforts**

**Q:** Efforts to harmonize concepts between libraries and museums, i.e. map terms that are common to both, are underway (e.g. FRBRoo). Also, portals such as Europeana and DPLA are aggregating resources from libraries and museums alike, providing generic repositories of cultural heritage. Who is implementing this at an institutional level?

**Q:** How can physical cultural heritage items be cataloged and published along with conceptual (immortal, born-digital) ones? Are today’s tools adequate for the task or are they still relying on a pre-1970s concept of culture?

**User experience**

**Q:** How important is visualization for LAMs, especially in regard to Linked Data and complex data sets? Which online and on-site efforts are most notable? What can we learn from non-cultural sectors?

**Q:** Image delivery is probably one of the main points of contact between LAMs. The interest around IIIF and related tools confirms this. Could this be one common ground for all CH institutions?

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**3:15pm – 4:15pm**  
**Critique: Leadership Meet Digital, Digital Meet Leadership**

**Moderators:** Carolyn Royston  
Great Lakes A1 (1300 Nicollet Mall, Minneapolis, MN 55403, United States)

**Speakers:** Anita Kassof, Alice Rubin, Deborah Schwartz

Sponsored by the Digital Strategies & Transformations SIG and Information Technologies SIG and Moderated by Carolyn Royston, independent consultant focused on digital transformation.

MCN traditionally has had a difficult time engaging leadership to participate in the conference resulting in too much preaching to the choir (for attendees), and not enough face to face discussions with decision makers. This program hopes to end the stalemate by inviting non-digital executives, open to change, a chance to present ideas that could use direct input from experts in our community “for free.” We’ll get face to face time with influential leadership, helping all of us think more holistically and strategically about integrating technology in our organizations.

The MCN community can help cultural executives plan how digital can best serve the needs of their individual organization. We know that this should start as they imagine or initiate projects, not after the ideas have been set in stone. We’ll advise them on the most effective solutions to their questions, whether enhancing digital components or streamlining an over-designed proposal.

Some of the potential people and problems for review include:

Anita Kassof, the new Executive Director of the Baltimore Museum of Industry, is helping reimagine the decades old organization. With a robust school attendance, but aging infrastructure, it’s time for a change. She has
countless ideas, but she’s not sure yet what makes the most sense given BMI small staff and budget.

Annie Polland, V.P. , the Tenement Museum, has successfully produced a MUSE award-winning stand-alone digital project, but as an institution committed to storytelling through docent-led tours, finding the right balance between technology and the personal experience is still challenging. This year the Museum begins developing their new historic site tour and exhibition space that would tell the stories of immigrants who settled in New York City after 1945. They have a grant to incorporate technology, but what's the best approach?

3:15pm – 4:15pm  Irreverent Storytelling: Ups & Downs of Unorthodoxy in Social Media
Moderators: Phillippa Pitts  Nokomis (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)
Speakers: Alie Cline, Cara Egan, Pamela Martin, Victoria Saltzman
Where is the line between out-of-the-box and off-mission? From memes to Buzzfeed lists, a debate has emerged over what constitutes acceptable use of museum collections.

This session features panelists who have experienced the ups and downs of projects that embrace pop culture, internet memes, and other trappings of viral content. In doing so, they insert their museums into current events, model unconventional approaches to viewing art, and open up space for visitor voices in the galleries and online. This one hour panel will include the staff behind the Blanton Museum’s Snapchat and the Portland Art Museum’s Museum Makeover Project, as well as the multi-institutional projects #ArtMadness and #MuseumBowl.

Each presenter will speak candidly about not only their project’s goals, successes, and failures, but also the hurdles they encountered, both internally and externally, in the process. The presenters’ institutions range widely in size, location, and mission and the panelists themselves come from the diverse perspectives of Education, Marketing, Public Relations, and Publications.

These case studies will be a jumping off point for a Q&A and open discussion of four larger issues: Are these kinds of ventures useful and creative forms of engagement, or distracting and even disrespectful? How can museums structure digital projects in order to put forth educational or outreach missions—and can those goals coexist with simply trying to go viral? How are we teaching visitors to see art through digital efforts and how does that translate to how they behave in the galleries? Does our digital presence match in the in-gallery experience—or is it a bait and switch experience for visitors?

3:45pm – 4:15pm  Let’s Move All the Museums Out to the Airports (or, at Least Just the Smithsonian)
Speakers: Aaron Cope  Calhoun (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)
A rhetorical investigation in to the idea that in order to fulfill the dual and sometimes competing mandates of access and preservation, in addition to meeting our fiduciary responsibilities, perhaps the physical and conceptual architectures best suited to the needs of the cultural heritage sector are found in the contemporary airport. From SFO to Amsterdam to Mumbai to Taiwan more and more airports are starting to not just to look like museums but to act like them too.

Does the sector’s present focus on buildings-as-a-spectacle hijack the longer-term mission of its collections and can we look on the systems and infrastructures required to operate and maintain airport facilities as both a provocation and a guide towards a sustainable future?

3:45pm – 4:15pm  Digital Collections in the Classroom: Teachers and Museums Working Together
Moderators: Shana Crosson  Harriet (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)
Speakers: Craig Roble
Museums have lots of stuff: objects, maps, photos, documents. History teachers love to show this “stuff” to students to help them understand their place in history. But getting the stuff to the students and actually using it can be tricky.

Websites and online collections repositories have made it easier to bring these primary sources into the classroom. However, many teachers are still not accessing them. We asked why and started collaborations with teachers to learn more about how teachers are -- and are not -- using digital primary sources. We talked to teachers at conferences, focus groups and trainings. We asked questions like how do teachers find these
resources? what's do they do once they find it? what makes an online repository useful to you?

We quickly realized that while there are power digital primary source users, many teachers are starting at a very basic level when it comes to using these amazing resources. It became clear that teachers want and need more support in finding and using these resources. It also became clear that we needed to work with teachers in order to understand how they used these sources and how they wanted them delivered. The collaboration with teachers has increased as we realized that museums and teachers working together will expand access and ensure that digital collections are contributing to younger generations' knowledge of history and critical-thinking skills. Watching teachers use digital primary sources in the classroom has been an excellent learning tool. MNHS staff have created an informal project collaborating with individual teachers to provide them with exactly the sources they want, and then watching how the sources are used with students.

This session will discuss findings of research with teachers about their skills in finding and using digital primary sources, and, more importantly, will have a teacher demonstrate how he uses these resources in his classroom. The presenters will discuss their ongoing collaboration, including the recent publication of an iBook for teachers about using digital primary sources in the classroom.

3:45pm – 4:15pm  
**WordPress as Museum Web CMS: Development and Content Strategy**  
*Moderators: Amy Heibel*  
Minnetonka (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)  
*Speakers: Marty Spellerberg, Sarah Wambold*

A look at three Museums using WordPress as their primary web CMS. Glance under the hood at implementations for the Museum of Contemporary Art Chicago, the Santa Cruz Museum of Art and History, and the Clyfford Still Museum.

Panelists will discuss how the each institution's needs are manifested in code. What's the same and what's different; what's off-the-shelf, and what's custom? We'll also consider WordPress' impact on content strategy. What workflows does it enable; and what approaches fit with different institutional structures?

4:30pm – 5:00pm  
**Archives as First Class Digital Citizens**  
*Moderators: David Newbury*  
Great Lakes A2 (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)  
*Speakers: Katherine Barbera*

Initiated in 1970, Carnegie Museum of Art's Film Section was among the first programs to focus on the moving image as a medium for art within a museum and it played an essential role in the promotion of experimental film until the department's dissolution in 2003. As part of Phase II of the Time-Based Media Project, CMOA has begun a multi-year project to preserve and digitize the photos, letters, audio & video recordings, posters, and other documents created by the department. These archival materials have deep links both to accessioned works in CMOA's collection and with historical events that took place at the museum and partnering organizations throughout the city of Pittsburgh.

As part of CMOA's focus on event-based digital storytelling, we are integrating these historical elements directly into a new collections website. Traditionally, digitized archival materials are not integrated with artworks on museum collections websites. The digital component of the CMOA Department of Film and Video archive will be a working prototype of a new type of collection website, one that treats events, objects, and people as first class digital citizens, regardless of whether they related to accessioned works or archival materials. The site will use Linked Open Data to highlight the connections between the events, people, and the objects that make up the story of the department, both within our institution and across the digital world.

What does it mean for the institution to treat our archival materials as first-class citizens within a museum's collection website? How can we use those archival materials to enhance the public’s understanding of the works in our collection, the history of the institution, and the artists, staff, and other people involved throughout the department's history? What insights can we gain ourselves?

4:30pm – 5:00pm  
**Moving on from Flash: How to Use HTML5 to Build Engaging In-gallery Media Experiences**  
*Moderators: Leifur Björn Björnsson*  
Harriet (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)
Speakers: Bryan Kennedy
If you entered a museum 10 years ago, you could make a pretty safe bet that most of the in-gallery interactive media experiences had been developed in Flash. Today, Flash has entered in its dotage. New developers are not likely to be familiar with its systems, and its developer, Adobe, has refocused the tool as an animation suite instead of an application development environment. So what's a museum developer to do? Fortunately, developers today are faced with a bevy of new tools, previously reserved for the web alone. These often get discussed under the moniker HTML5, but represent many specific technologies such as HTML, CSS, Javascript, and NodeJS, to name a few.

In this presentation we will review the technical challenges in using these technologies to drive engaging museum kiosks, digital signage, and media theaters. We will feature examples of open source technology used by the Science Museum of Minnesota in its own exhibitions, and in the media it develops for partner museums around the country. This presentation won't teach you how to program in these languages. Instead, it will focus specifically on the ways that these tools can best be used in the unique technical landscape of the museum environment.

Kiosking the browser:
One of the key principles of using web technologies, is that the visitor is using the application through a browser. The majority of popular browsers developed today (Chrome, Safari, Firefox) are not ideal for a focused museum media presentation. We will discuss options for building kiosk-able browser experiences, highlighting several options including SMM's own open source tool, Stele (https://github.com/scimusmn/stele), which is built on top of the Chrome web-browser; Electron, a cross-platform app builder for HTML and Node Webkit.

Custom interface devices:
When thinking about using HTML5 it's important that we don't limit ourselves to the staid old mouse and keyboard. Museum visitors expect immersive experiences where media is driven by unique interface devices including: touch screens, buttons, and even interaction with room based sensors. In this section of the presentation we will discuss techniques for using simple keyboard encoders and Arduino microcontrollers to interface with HTML5 applications to engage the visitor through these unique interfaces.

Design and animation:
For HTML5 to be a successful Flash successor it must be as an expressive design tool. We will discuss some of the libraries for Javascript and CSS that give designers the ability to create beautiful museum media, highlighting displays developed utilizing the D3.js visualization library, and showcasing some animation using animate.css. And, we will even talk about how Flash can still be a useful part of the equation.

Opportunities for museum research and evaluation:
One of the key elements of the modern web is access to rich user analytics. We know how many times elements of our websites have been clicked, and often by who. However, we often don't ha…

4:30pm – 5:30pm

The Agile Museum: 21st-century Leadership
Moderators: Douglas Hegley

Great Lakes A1 (1300 Nicollet Mall, Minneapolis, MN 55403, United States)

Speakers: Kaywin Feldman, Mike Mouw

Leadership is changing, and innovation today is being driven by new management practices, described by terms like Lean, Agile, and Radical. In this session, the panelists will present both theory and practice as applied in the cultural heritage sector.

Based on the work of influential thinkers such as Eric Ries (The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses) and Stephen Denning (The Leaders Guide to Radical Management), the panel will lead the attendees through a fast-paced session that includes the following topics:

- Why change leadership approach?
- Change how?
- Importance of defining workplace culture and value proposition
- Staff: hiring, on-boarding, empowerment

Agile/Lean methodologies for leadership
- Self-organizing teams
- Organizational and project structures
- Iteration and cycles of continuous improvement
- Radical transparency
- Conflict resolution

Impact
Examples from the MIA, High Museum, and sister institutions

Moderator & Presenter:
Douglas Hegley, Director of Media and Technology, Minneapolis Institute of Arts

Panelist:
Kaywin Feldman, Director and President, Minneapolis Institute of Arts
Mike Mouw, Director of Multimedia Technology, High Museum of Art

4:30pm – 5:30pm

Invisible Architectures: Supporting Public-Facing Technologies

Moderators: William Weinstein
Nokomis (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

Speakers: Jane Alexander, Brian Dawson

Technology has become a common aspect of the museum visitor experience. Kiosks, mobile apps, ticket sales, signage, etc. combine to create the integrated experience our visitors expect. In order to provide this experience, these systems can no longer be developed and maintained as separate parts. It is necessary for interactive systems to share data and media, point of sale systems to share visitor data, and signage systems to link to event scheduling.

Supporting these systems has a significant impact on the museum's technology infrastructure and systems. Networks have to support ubiquitous Wi-Fi for visitors, deliver streaming content to kiosks and apps, and support location based technologies. Collection Information and digital asset management systems have to be adapted to provide content to support interpretive projects in galleries and online. Multiple visitor information systems have to be integrated to provide the personal experience the visitor expects. All of this technology has to be kept running and updated.

Panelists will discuss specific projects at their institutions and how they are addressing these challenges followed by a QA session. Jane Alexander, Chief Information Officer, The Cleveland Museum of Art will present “Beyond Beta - CMA's iBeacon Technology is Live” which describes how iPad, iPhone and Android smart devices engage 270 Bluetooth iBeacons that triangulate visitor location within one meter offering a seamless and rich experience of each work assimilating art history and education with intuitive essential video, audio, text and still-image content. Jane will also discuss how CMA’s analysis of visitor engagement and changing tastes and trends in visitor experience, guide exhibit layout and support materials as well as shape next iterations of CMA’s app ware.

Brian Dawson; Chief Digital Officer, Canada Science and Technology Museums Corporation will present ‘Digital Reboot: Building and Invisible Architecture from the ground up.” The Canada Science and Technology Museum is closed for major renovations until 2017, in which the museum experience is being completely rebuilt. The museum is undergoing a digital transformation, including a complete “reboot” of the digital experience. Brian will outline the approach taken by CSTM in rebooting the museum experience, highlighting lessons that should be broadly applicable to other institutions.

Bill Weinstein; The John H. McFadden and Lisa D. Kabnick Director of Information and Interpretive Technologies, Philadelphia Museum of Art will present “0 to 60 in no time” which describes how the IT department has had to adapt and grow the infrastructure and back end systems to accommodate to the increased usage of technology in the galleries. Bill will discuss the development of hardware standards for interactivity, installation of supporting infrastructure, development of databases to track usage and how these projects affect budging and fundraising....

4:30pm – 5:30pm

ANATOMY OF AN INTERACTIVE: An exclusive look at selected mobile projects

Speakers: Simon Dale, Jeff Hunt
Nokomis (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

John Simoniello, Michael Suswal

In this presentation—tailor-made for MCN—panelists will lift the veil to reveal the aspects of the development...
process for a handful of exciting interactive projects and offer a no-holds-barred tutorial on how your museum can create its own interactive. We'll offer candid observations and revelations about what worked and what didn’t, what we'd do again or not—as the case may be—from the practical to the pie-in-the-sky.

Love them or hate them, BLE beacons continue to be an important tool to consider when planning your on-site mobile strategy. We will take a candid look at their relative successes and shortcomings across a number of projects we have developed and implemented. Included in the discussion: how beacons be used to increase and assist accessibility as well as be one of the primary triggers for content. Using 3-5 active mobile apps in which we have implemented beacons as examples, we will provide insights on how to plan for their inclusion (and installation), how to optimize their effectiveness, how they can affect and enhance narrative strategies, and some additional pros and cons.

Using discussion of beacons as the point of departure, we will then present an in-depth look at The Hunger Games: The Exhibition. Lionsgate Entertainment and Acoustiguide teamed up to create a mobile tour experience for the traveling exhibition of set re-creations, costumes and other artifacts from the blockbuster Hunger Games franchise. Like any museum exhibition, it faced the challenges of how to communicate with visitors, create content with a cohesive narrative flow and move people through the exhibition smoothly. It all had to be presented in the kind of shiny package HG fans would expect and let them share it on pretty much any social media platform.

With everything on the table from personalizing the tour, to Augmented Reality and Image Recognition, to high-end video, to games and quizzes, to hidden content – all triggered by BLE beacons - the sky was the limit. But then a funny thing happened… everyone took a step back to think about how all these things fit together.

Panelists will discuss the collaborative process and how technology and narrative interact, the ever-elusive balance between heads-up and heads-down engagement, as well as the in-gallery versus “real world” appeal of mobile apps. By the time of this presentation we hope to share some of the reactions from the visitors. Presenters will include Jeff Hunt, Creative Director, and Simon Dale, Chief Software Architect, Acoustiguide Interactive; John Simoniello, Senior Producer and Michael Suswal, Head of Strategy and Development, Entertainment, Acoustiguide, Inc.

5:00pm – 5:30pm  
**Beyond 2D: Utilizing 3D Scanning for Enhanced Collection Access**

*Moderators: Kyle Jaebker*  
*Great Lakes A2 (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)*

*Speakers: Bernard Frischer*

Utilizing photogrammetry to model collection objects provides unique ways to access three dimensional objects in a museum collection.

The Indianapolis Museum of Art (IMA) in collaboration with the Indiana University Virtual World Heritage Laboratory (VWHL) is utilizing these techniques to provide visitors with new ways of experiencing artworks online. Utilizing best practices in photogrammetry and learning proper workflows is essential to creating a successful 3d model.

This session will detail these best practices, highlighting imaging techniques, processing software, and how to integrate the finished product into museum systems. The outcome of these processes is a 3d model that can offer new ways of experiencing objects in digital form. Using examples from the IMA and other works done by VWHL we will look at how 3d models can be utilized in museums. From online collections to in-gallery interactives these models have many uses that can take your collection to the next level.

5:00pm – 5:30pm  
**Follow the Pen: Exhibition Metrics at Cooper Hewitt. Now What?**

*Moderators: Leifur Björn Björnsson*  
*Harriet (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)*

*Speakers: Micah Walter*

In December 2014 Cooper Hewitt, Smithsonian Design Museum reopened after a three-year renovation with a redesigned and reimaged dynamic twenty-first century design museum within an historic landmarked structure. Our vision was to create an environment in which design could be fully available and actively engaged in. Together, museum staff and the nine design teams embarked on a collaborative process to reimagine Cooper Hewitt, not only the Andrew Carnegie Mansion, but the entire campus, our brand, our education programs, and our exhibition strategies. Groundbreaking technology has shaped our transformation, and in March 2015 our electronic Pen was launched. It encourages visitors to explore and engage the riches of Cooper Hewitt’s
collection and the depth of its exhibitions in ways that are only possible with technology.

The Pen is a rubberized wand with a pen-shaped tip at one end and an NFC antenna at the other. Not only does it work as a capacitive stylus on all of the digital tables newly installed in our galleries, but it can be used around the museum: each item on display at the museum that now has an NFC tag next to it (behind each object label). When you find something you like, or want to read more about later, just tap the back of the pen to the “collect” icon on the label, which sits on top of the tag. Lights on the Pen illuminate and a slight vibration confirms that the item's been recognized. You're essentially building your own personal collection as you browse the museum, and you're given a URL when you leave that lets you access that collection (or add to it when you return).

The content for this experience is drawn from the museum's collection and delivered through the museum's Application Programming Interface (API). Our TMS database holds all content for all object records, constituents, and links to other assets. A stylus combined with a vast museum collection database means that the museum is no longer just a few hundred objects inside our heritage building, but it is an experience that can follow you anywhere. The metrics gleaned from the Pen and our API promises to be a treasure trove. It is this moment in the museum’s journey, and mine as well, that I will focus on in my presentation. After two months we’ve surpassed 110,000 physical visitors, xxxx number of Pens have been dispensed, xxx,xxx objects have been saved with the Pens to personal visitor accounts, xxxx new personal accounts have been set up; and we can slice and dice the metrics in any number of ways.

So now what? As the head of cross-platform publishing—charged with developing all print and digital publications, exhibition didactics, and digital table content—I’m interested in making sense of this digital data by supplementing it with visitor response data. I am going to get out of the lab, and conduct user research. I plan to begin with sorting the data for the top most collected objects and then conducting in-gallery visitor research to inquire: What do you expect?

### NOVEMBER 7 • SATURDAY

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<tr>
<th>Time</th>
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<tr>
<td>8:00am – 9:00am</td>
<td><strong>Breakfast</strong></td>
<td>Hyatt Regency Minneapolis</td>
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<tr>
<td>9:00am – 9:15am</td>
<td><strong>Creating Interactive Media as Dynamic as the Web</strong></td>
<td>Great Lakes A2 (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)</td>
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<td><strong>Speakers:</strong> Bradley Baer</td>
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<td>The evolution of the internet happens daily (if not hourly) thanks to easy access, the ability to quickly iterate, and a large number of people contributing to the overall ecosystem. As a result, websites and web-based apps tend to be the go-to source for multi-sensory storytelling. The good news is that this doesn't mean the world of in-museum interactives has to lag behind.</td>
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<td>This session will explore web-based interactives that are more flexible, updateable, and responsive. We’ll focus on two successful examples: The first is a project by the Florida Humanity Council which connects small-town museums around the state as part of the Smithsonian’s Museums on Main Street Program.</td>
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<td>The second example is a series of digital orientation stations for Chicago’s Field Museum which allow visitors to create customized itineraries based on the day’s offerings and sync them with their phone. Both interactives are built on open-source content management systems like Wordpress and Drupal. and show how web-based back-ends are the future of museum touchscreens, interactive experiences and environments.</td>
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<td>9:00am – 9:15am</td>
<td><strong>A Multimedia Guide for When It’s 95 Degrees in the Shade</strong></td>
<td>Nokomis (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)</td>
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<td><strong>Moderators:</strong> Juan Sanabria</td>
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<td><strong>Speakers:</strong> Tiffany Glick</td>
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<td>The Holocaust Memorial of Miami Beach recently commissioned a mobile guide that triggers content via iBeacons as users browse the 50+ granite panels and sculptural arm that together tell the story of some Holocaust survivors. While the Memorial is not a museum, it’s one of the few cultural sites in Miami’s South Beach and attracts a diverse set of visitors. They include a broad mix of international and domestic first time visitors along with local repeat visitors who lost family in the Holocaust. For those with a personal connection, it’s a sacred space where they can come to remember those who were lost. A majority of the first time visitors, however, simply want to learn more to better understand how the Holocaust happened.</td>
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Since the Memorial's opening, Holocaust survivors have given most of the docent tours but soon, many of them will no longer be capable of walking visitors through. The Memorial wanted to find a way to expand interpretation opportunities and the mobile guide was created as a vehicle that could offer both survivor stories and historical material.

The UX challenge has centered on how to create an effective guide that balances the intention of the Memorial, a place for quiet reflection, with the desire of visitors to engage with interpretation about the history and meaning of the Holocaust. We’ll review the larger goals of the project as well how we solved issues with the UX and other technical details relating to using iBeacons as a triggering mechanism. We’ll also discuss the experience of how we got content providers (who could write an encyclopedia on the subject) to buy into short, digestible pieces of media.

As of May 2015 the project is still in beta but will be finished in July and we will have ample feedback and post release learning points to share in time for November.

9:00am – 9:15am  
**Art Doppelgangers**  
Calhoun (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)  
*Speakers: Charles Walbridge*  
The Minneapolis Institute of Arts is celebrating its 100th year throughout 2015 with Birthday Year events and surprises, both in the galleries and in the greater community. In the fall of 2014, Birthday Year specialists at the MIA went to the MIA’s master framebuilder to ask a question: could he make realistic-looking frames for reproductions of four of the MIA’s most iconic paintings?

Frame maker Kurt Nordwall and Lead Collections Photographer Charles Walbridge hatched a plan: they could make 3D scans of the paintings’ frames and have a local maker cut the reproduction frames on a large CNC machine, which in this case uses a computer-controlled router to carve shapes into wood. Kurt would then finish the raw wood frames with primer, paint, wax, and dirt.

The finished frames (and the art in them) look amazing! The four reproduction artworks have popped up around Minneapolis at local restaurants and other businesses. Rembrandt’s Lucretia was installed at a busy gas station and convenience store; Chaim Soutine’s Side of Beef was installed at The Strip Club, a local steakhouse.

The Case Study presentation will include:- scanning the frames in-galley with free photogrammetry software (123D Catch)- cleaning up the scans for CNC routing- making the reproduction art and frame blanks- carving the frames at Nordeast Makers- finishing the frames- the art out in the world

9:00am – 9:15am  
**Making Digital Loss Less Painful: Lessons Learned from the Removal of Historypin’s Mobile Application**  
Minnetonka (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)  
*Speakers: Kelly Carpenter*  
The Albright-Knox Art Gallery in Buffalo, New York, has made significant strides over the past few years in using various web and mobile platforms to make the museum’s Fine Art, Digital Assets, Library, and Archives Collections more accessible to our on-site and online audiences.

Instead of investing time and resources into creating our own mobile application, in late 2012, the Albright-Knox leveraged Historypin—a free, simple, and effective web and mobile platform—to create several self-guided walking tours exploring objects in the museum’s Collections, including the outdoor sculpture on the museum’s campus. The Historypin platform offers a unique way to showcase digital and physical materials and gives our audiences—who may not have the time, money, or desire to visit the interior of our museum—the ability to interact with these interesting resources for free using a computer, smartphone, or tablet, wherever they are. Unfortunately, even the most effective digital tools don’t last forever. Like all software, Historypin’s mobile application required constant maintenance to keep it working well on the most current versions of smartphones and tablets. On April 22, 2015, Historypin made the disappointing decision to remove its mobile application from the Apple and Google Play Stores. This abrupt loss of a valued resource and key digital tool has left Albright-Knox staff members wondering what steps we can take moving forward to make a digital loss less difficult.

I know members of the Albright-Knox staff are not alone. Digital loss is happening to cultural institutions all of the time and it is an important issue to discuss with fellow MCN attendees in this age of technology.
Although I don't have all of the answers at this time, I hope to be able to address the following questions in my case study presentation, this fall:

- What does this loss of a valued resource mean for our content?
- How will our on-site and online audiences be affected?
- How is hard work justified after a loss?
- Moving forward, should we invest in and develop our own technology instead of taking on the risk of relying on someone else's technology, even if it is free?
- What tools can we utilize in order to make this content available elsewhere for our on-site and online visitors?
- How can we adapt to make a loss like this less painful in the future?

9:00am – 9:15am

Conference as Publishing, or Expanding a Digital Arts Journalism Conference Online

*Speakers: Emmet Byrne, Paul Schmelzer*

Harriet (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

In late May 2015, 300 art critics, bloggers, journalists, artists, publishers, and art enthusiasts will convene in Minneapolis for Superscript: Arts Journalism & Criticism in a Digital Age, a conference presented by the Walker and Mn Artists. As an institution heralded for its publishing efforts—from exhibition catalogues to our virtual Living Collections Catalogue, the regional arts site Mn Artists to the editorially focused Walker homepage—the Walker is creating this gathering as a forum to consider the current challenges and possible futures for online arts publishing.

In planning a gathering explicitly about the Internet, we've been grappling with a question: how can we prize our audiences—both onsite and online—so that we create both a dynamic, engaging, and important conference and a robust, accessible, ongoing discussion for audiences online? In short, how can Superscript transcend its "conferenceness" to become something more? And what if we conceive that "more" as part of a broader publishing endeavor?

For an MCN case study, I'd like to present the results of our efforts, including:

* Live webstreaming of all conference events, plus searchable video archive of events following the conference.
* Responsive blogging: the Superscript Blog Mentorship program, presented in partnership with Hyperallergic, will feature three emerging bloggers, selected from an open call, who'll create live reports on Superscript—from conference proceedings to interviews with speakers or attendees, commentary from attendees to issues pieces inspired by conference presenters. Guided by three professional editors, bloggers will create posts for publication on the Walker blogs and at Mn Artists, and each writer will create an in-depth piece for publication on Hyperallergic.
* Twitter Q&A: whether on-site or online, audience members can participate in dialogue with presenters through Twitter.
* Live stenography: For journalists and the hearing impaired, a stenographer will record the entirety of the conference in an ever-changing live document.
* Virtual/actual film premiere: Walker-commissioned short films by artists Moyra Davey and Jim Richards will see their world premieres at Superscript, with synched screenings in the Walker Cinema and online on the Walker Channel, as well as a live Q&A with the artists.
* Open Facebook group: We're running an open group, both as a platform conference attendees can use to familiarize themselves with each other and with Superscript's ideas, and as a way to invite interested non-attendees into an ongoing conversation about the present challenges and possible futures for digital arts journalism and criticism. We hope the page will live beyond the conference as a locus of thinking (and linking) about how the Internet is changing the ways we view, understand, report on, and critique the arts.
* Superscript Reader: We've commissioned a diverse array of writers and thinkers to create 10 online essays on themes related to the conference, but fe...
social media as illustrated through the #ArtAtoZ initiative.

Every two weeks, the Gallery explores a new topic in art (i.e., asymmetry, brushstroke, color, and drawing) across multiple social media platforms (Facebook, Twitter, Instagram, and Pinterest). This focus on broad topics allows the Gallery to leverage its extensive permanent collections as well as draw upon a diverse array of staff expertise including curatorial, education, archives, conservation, and horticulture. The “A to Z” concept also affords museum staff the ability to plan up to a year ahead, as the set of 26 topics is set at the beginning of the year. The added benefit of this structure is the ability to collaborate with other institutions and build momentum over time. From the perspective of the social media user, one is invited to dig deeply into a given topic over the course of two weeks rather than receive seemingly random bits of information each day.

Social media followers are encouraged to engage with the broad theme in myriad ways included guided looking, guessing games, and challenges to respond creatively. I will share findings from ongoing evaluation of the initiative, including what we’ve learned about optimizing content in order to generate the most conversation, sharing, and other engagement.

**9:15am – 9:30am**

**Stories and Song: Using Digital Storytelling to Develop Exhibition Content**

*Speakers: Natalie Marsh*  
Nokomis (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

In 2016, the National Music Centre (NMC), in Calgary, Alberta will open the home for music in Canada. Driven by a “music festival experience” approach to exhibition development, NMC is also taking a radical approach to content development. Rather than using curators, NMC is pulling from a variety of experts across the country, each with their own perspectives on the story of music in Canada.

In order to capture that varied perspective on music, NMC developed the Stories and Song project. Stories and Song is an initiative that engages a different kind of expert, from kindergarteners to pivotal musicians. Using digital storytelling, oral histories, and a storytelling mobile app, NMC is gathering the stories of music through multiple platforms in order to guide and broaden the scope of exhibition content.

To keep the presentation within the 10-minute time limit, this case study focuses on one such group of experts, K-12 youth. In one facet of Stories and Song, NMC is using digital storytelling to encourage students to become interviewers, journalists, sound engineers, filmmakers, and documentarians to collect the stories of music and sound in communities across the province. NMC provides the resources and technology for students to create digital stories through a travelling road case and, in turn, the stories are collected and shared with NMC for use in exhibitions and archives. This project not only embodies how students should learn in a 21st century classroom, but also how a museum should engage audiences in a 21st century society.

As a first time attendee to MCN, we are excited to network with other, like-minded, folks in the museum and technology world and have the opportunity to share our experience with this project, which is still very much in progress. NMC will share tips on how to engage the non-technology teacher into a technology-based project; how this approach has evolved including results, lessons learned, and plans for moving forward; and how community-based digital storytelling provides exhibitions with unique perspectives. In turn, NMC hopes to gather ideas and engage in conversations with MCN delegates to better understand where this project can continue to grow.

**Exploring Cusco**

*Speakers: Daniel Davis, Jim Spadaccini*  
Great Lakes A2 (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

The ancient city of Cusco was the heart of the Inkan civilization which ruled over much of the South American Andes in the 15th and 16th centuries. The Smithsonian National Museum of the American Indian (NMAI) and Ideum are collaborating on the development of a multiuser interactive exhibit which contains a 3D reconstruction of this capital city as it was before the Spanish conquest. This exhibit is at the heart of the exhibition, The Great Inka Road: Engineering an Empire. By presenting this interactive exhibit on an Ideum 84” multitouch table, we expect to create a social experience that allows groups of visitors to explore videos, image galleries, interactive panoramas and an innovative 3D model tour element side by side. The exhibit will open at the museum in Washington DC on June 26, 2015.

In this presentation, we will share the unique development process that involved researchers and consultants in Spain, Peru, and the United States as well as the potential of building the interactive experience using the Unity3D
gaming platform. We will also present a preliminary evaluation of how successfully this large interactive table provides a deeper, social experience by allowing users to learn from one another and better understand the exhibit's main messages.

9:15am – 9:30am  
**One Small Step: Transforming the Exhibition Process and the Digital/Physical Connection**  
*Moderators: Victoria Portway*  
Calhoun (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)  
*Speakers: Sarah Banks, Jennifer Levasseur*  
One Small Step: Transforming the Exhibition Process and the Digital/Physical Connection

How early is digital visitor experience considered in the exhibition design process? Is it integrated from the start or added on at the end? How does digital experience become viewed as an important element of the overall museum visitor experience? Digital transformation may not happen overnight, but every now and then a project comes along that serves as a catalyst for digital transformation in exhibition practice.

This case study builds off a recent project at the National Air and Space Museum, a temporary exhibition entitled “Outside the Spacecraft: 50 Years of Extra-Vehicular Activity,” and how it became a positive example of collaborative practice and integrated digital and physical exhibition design. Following on the heels of a newly developed digital engagement strategy, at a time of renewed openness to change, the project brought together a team of forward-thinking, motivated staff who collectively considered the digital visitor experience to be an integral part of the exhibition process. This allowed the team to consider audience and learning objectives across digital and physical contexts, embracing the unique ways in which visitors consume content and engage with museum exhibitions depending on where they are and the platforms they are using.

With the digital experience accomplished, a small budget and tight timeline may be subtle, the positive impact on internal practice continues to resonate. For cultural heritage professionals hoping to advance the digital experience, this project demonstrates how focusing on process, internal culture, team dynamics, and an integrated digital/physical approach from project start can be critical to success.

9:15am – 9:30am  
**Rewriting Art History with Art Detective**  
*Speakers: Cristiano Bianchi*  
Minnetonka (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)  
Art Detective was launched in June 2014 to help UK collections uncover mysteries in their works of art. Art Detective aims to improve knowledge of the UK’s public art collection. It is an award-winning, free-to-use online network that connects public art collections with members of the public and providers of specialist knowledge.

Through BBC Your Paintings, any member of the public can start a discussion that involves a work of art - challenging attributions, subjects, places or events depicted or more. The website promotes active and lively discussions among people that are expert in their field - although not necessarily traditionally trained art historian. Everyone can contribute knowledge and help uncover important facts.

This is a different form of crowdsourcing - one which aims at scientific and founded precision in the field of art history. Within less that nine months, over 40 discoveries have been made, changing painting attributions, naming sitters and more. The website was overall winner of Best of the Web at Museums and the Web 2015 and recipient of a Silver MUSE award at AAM 2015. This presentation will explain the concepts behind Art Detective, how it works and how it could potentially be adapted and reproduced in different contexts to help museums professionals in their curatorial efforts. [http://www.thepcf.org.uk/artdetective](http://www.thepcf.org.uk/artdetective)

9:15am – 9:30am  
**Making Hidden Collections Visible: Artists’ Books Canada**  
*Speakers: Nicole Lovenjak*  
The special collections of an institution, Harriet (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403) including archives, rare books, artists’ books, ephemera, and permanent collections, unless regularly on display, are often hidden and locked away from visitors. The forthcoming digital map and reference tool, Artists’ Books Canada, hopes to reach, engage, and educate audiences about the amazing book art collections close to home and across the country. Artists’ books are an increasingly popular collecting area for institutions. However, these works of art realized in the form of a ‘book’ also pose considerable challenges in the areas of cataloguing, access, and promotion. Consequently, for
users, these collections tend to be relatively unknown and difficult to access, brought about by cataloging inconsistencies and inaccessible physical browsing. Artists’ Books Canada is a comprehensive online resource that maps and describes artists’ books collections that each Canadian museum, library, gallery, centre, etc. provides access to. It offers a chance to acknowledge, promote, and offer greater visibility to the oft-hidden and difficult-to-navigate artists’ books collections across Canada.

Designed to deepen an understanding of what our institutions have to offer, the tool will include general information about each collection, collection focus, search techniques for locating these materials, what visitors should expect when they visit, as well as contact information and additional links. While this case study focuses on a digital tool for artists’ books, this strategy can be used for many types of collections. I will explain the motivations of creating this resource, the goals of the project, and my progress to date. I hope to share my experiences and challenges of creating this type of interactive research tool with the intent of stimulating discussions on outreach strategies for special collections.

9:15am – 9:30am  
Twitter: From Followers to Co-creators  
Speakers: Anna Mikhaylova  
Great Lakes A1 (1300 Nicollet Mall, Minneapolis, MN 55403, United States)  
My talk is dedicated to the history and behind-the-scenes work that my colleagues and I do for museum marathon Twitter project. That was born after SHM’s unsuccessful attempt to participate in #AskACurator day: the public’s responses were scarce and there was an obvious need to learn how to communicate with audiences on Twitter. After a series of experiments, such as, for instance, museum salon, came #?. The Russian segment of Twitter is fraught with potential pitfalls for any public figure or institution trying to reach the audiences via this medium. On the one hand, there is a danger of talking to yourself, as if the content is not interesting/accessible, it will not strike up a conversation. On the other hand, there is a possibility of a too heated discussion, since it is a typical platform for uncensored politically charged debates. Keeping these possibilities in mind, initially we formulated 2 goals for the project: to promote Russian museums on Twitter; to reach new audiences, mainly from outside Moscow. At the very beginning we ran #???????????????????? each day, which itself was quite challenging. We were looking for our voice on Twitter, and quite soon we came up with the idea that it had to be an interactive micro-lecture about one particular museum, each time a new one (not the SHM, although published by the official SHM Twitter account) and a typical set of elements that had to be covered during the session: museum history, museum building, collections, exhibitions, current Internet projects. Each session lasts for 30-60 minutes, depending on the information available, and ends with this tweet: ‘When you start following museum @..., the person who runs its account smiles. Let’s spread smiles!’ It usually works. The very first session took place in March 2014, and since then we’ve “visited” 120 Russian museums. At the moment there are approximately 200 Russian museums on Twitter, so we’ve covered at least half of them. After a month of intense everyday posts we switched to a more comfortable few times a week schedule. We were gradually building an audience (it was visible from the organic reach, comments, and retweets), so we started asking them which cities in Russia they wanted to visit, so we could tell stories about museums in those cities. Sometimes followers shared their own stories and pictures about the museum in question as a reply to original tweets. There were two outcomes that we didn’t foresee from the beginning: the project provoked conversations among museum professionals who run Twitter accounts, thus helping to establish a community both online and onsite (at conferences and meetups); we found several really dedicated followers who were ready to run sessions of #??????????????????? by themselves. Now sometimes the sessions are hosted by the accounts of other museums, each with their unique voice and perspective. There is also a Facebook group where professionals working on the project share ideas for upcoming sessions. #????????????????? has become…

9:30am – 9:45am  
OMGWTFIGN  
Speakers: Aaron Cope  
Nokomis (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)  
In 2014 the Getty made public their Thesaurus of Geographic Names (TGN) dataset under the Open Commons Data Attribution License. This was an unqualified good thing and an example for the rest of the cultural heritage sector to follow. Unfortunately the data was released as “Linked Open Data” (LOD) and more specifically, in the case the complete dataset, a single 17GB RDF file thus rendering the data if not unusable then beyond the technical and infrastructure related means of almost anyone who might use it. This talk aims not to take the Getty to task but to use the release of the TGN dataset as an example for talking about the problems with Linked Open Data as it continues to be implemented in the cultural heritage sectors, tools and strategies for working with these datasets and alternative approaches going forward.
9:30am – 9:45am  **Putting Your Raspberry Pi Project Back on Track**  
*Speakers: Jason Alderman*  
Calhoun (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)  
What do you do when your project breaks down completely, once it’s installed in a gallery?

Two days before opening, after weeks of collaboration with electricians and electronics gurus, our installation for the San Diego Model Railroad Museum's Centennial Railway Garden was off the rails. Our three credit-card-sized Raspberry Pi computers were mysteriously dropping off the wireless network; the Node.js server running on them was sluggish; and sometimes the setup failed to trigger lights and sounds on the model, hanging completely until the iPads timed out and forced a reload.

Over the next day and a half, we turned the whole thing around—rewiring the Raspberries, overhauling the network setup, and learning a tremendous amount about the command line and Linux configuration files in the process. Not only was project back on track, but it’s been a hit among the patrons who have visited in the short time that it’s been open.

In this fast-paced case study, we’ll break down everything we learned into clear audience takeaways so you can get rolling with the cheap Raspberry Pi, from initial provisioning to startup scripts to WiFi shibboleths. We’ll cover the joys of Node.js and websockets for quick prototyping, and discuss best practices for using it and maintaining in your gallery projects. Finally, we’ll switch tracks to project management for emerging technologies, exploring ways you can properly budget for cataclysmic derailment on a shoestring, and find problems sooner rather than later.

Working with electronics can be scary, but it doesn’t have to be. We’ll have you running full steam in no time.

9:30am – 9:45am  **When You've Got It, Flaunt It: Enhancing Discoverability through Wikipedia**  
*Speakers: William Blueher*  
Minnetonka (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)  
Thomas J. Watson Library, the central research library at The Metropolitan Museum of Art, has been collaborating with Wikipedia for three years to enhance access to our Digital Collections. In this time we’ve added citations to over 2,000 relevant Wikipedia articles that link to items in our Digital Collections. While this number sounds large, it has not been a particularly labor intensive project, distributed amongst both staff, graduate assistants, and interns. The impact, though, has been huge. In March 2012, we had just over 6,000 pageviews; by March 2015, we had over 118,000. This represents more than a 1,800 percent increase in pageviews. As a result, 2014 was the first year we had over one million pageviews. Perhaps most impressive of all, Wikipedia now drives over 50% of the traffic to our Digital Collections, which is an increase from literally 0% four years earlier. The project now has its own GLAM-WIKI page, which can be viewed here. This case study provides an easily replicable model for other institutions to adopt.

9:30am – 9:45am  **The Death of the Enhanced Publication Has Been Exaggerated**  
*Speakers: Robert Weisberg*  
Harriet (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)  
No, 1995 didn't just call and want its "digital future of the book" back. The term "enhanced publication" has never really shrugged off the stigma of the CD-ROM with a book's text paired with some videos and maybe a game or two. More recent attempts to create digital versions of print publications have been dismissed as not mobile enough, skeumorphic, whatevs. But what if the problem wasn't technology but the right institutional mindset? Any technology, applied with the right internal connections and external partnerships, can help a museum bridge old and new audiences and make its stories relevant now and in the future.

The Met's newest digital publication, an enhanced version of its still-popular quarterly print Bulletin, is more than just a print product crammed into a digital container. It represents a long effort to preserve the spirit of print but the connections of digital--connections to our audiences, our members, and between departments inside the institution. The two project leads will present the enhanced digital Bulletin as the visible tip of a framework of connection and partnership spanning the museum and its wide-ranging visitorship and membership as well as a gateway to link the print and digital products that our audiences want. Sometimes the best connections are already happening inside your building.
9:30am – 9:45am  
**Internet of Things, Emerging Technology, and “Unconventional” Social Media for Museums**

*Speakers: Paige Dansinger*  
Great Lakes A1 (1300 Nicollet Mall, Minneapolis, MN 55403, United States)

Digital Artist and visionary tech developer, Paige Dansinger will demonstrate in this 30-Minute Presentation how IoT, or Internet of Things, emerging new mobile technology and “unconventional” social media sites can be used to share art history in fun, playful and new ways by creating social museum games, interactive public artwork for museums that create massive opportunities within an exhibit and out of the museum for global participation for social good.

The Public is being exposed to new smart-technology and in the future will expect to tweet to artwork and have it respond. Learn about artwork while donating to social causes and experiencing intimate experiences alone or with others with art objects represented in museums. Participating in new art experiences happening right now on our mobile phones in the city streets, the classroom, the home and the bedroom - creating stimulating new museum experiences.

Paige will present how museums may use new M2M, or “Machine to Machine” mobile sensors that enable many new forms of engagement. Including, being able to tweet to artwork, have artwork or galleries communicate with each other and share new forms of storytelling directly to one’s mobile device. These emerging technologies can lead new forms of social gaming and museum education. Smart-devices for environmental and personal wearable sensors such as Reemo and iBeacon and QR codes have the ability to transform museums into global experience centers and the public and private realm into a museum.

Paige will also demonstrate how “Unconventional” Social Media sites like Snapchat, Tinder and DrawSomething, Vine and LiveStreaming apps may be used in fun new ways to engage the public in unexpected, unconventional places to create new museum audiences and bring the museum into their personal lives. This Presentation will demonstrate new emerging technologies and Unconventional social media sites to engage new museum audience in the places The People are with technology they deserve.

9:45am – 10:00am  
**The JFK Challenge**

*Speakers: Rebecca Sherman*  
Calhoun (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

Through a series of fun, enriching games geared to ages 8–12, The JFK Challenge app turns players into NASA and Peace Corps trainees ready to accept President Kennedy’s charge to accomplish great things and make a difference in the world. Bluecadet was thrilled to work with the John F. Kennedy Presidential Library and Museum on their first app, made possible by a grant from Disney. JFK Challenge takes advantage of the full suite of the iPad’s capabilities, incorporating touch, drag, swipe, the camera, and the accelerometer. Apple expressed early interest in the app, and we worked with Apple to ready The JFK Challenge for promotion in the App Store leading up to its release. Bluecadet also collaborated with The John F. Kennedy Presidential Library and Museum in support of a comprehensive marketing campaign. The JFK Challenge is an innovative way to introduce President John F. Kennedy’s life and legacy to a generation born many years after his presidency. The app features two missions, based on two of JFK’s most important presidential initiatives: Space Race and Peace Corps. Bluecadet developed a sequential game format, with timed activities and points to motivate users to continue through the levels—learning more as they play. To emphasize the hard work and training that was involved in becoming an astronaut or Peace Corps member, and to teach users the gameplay techniques, each mission starts with a series of training games. Players progress through Space Race and Peace Corps challenges using skills they learned during training.

9:45am – 10:00am  
**Transforming Curriculum: Building a Digital Textbook**

*Speakers: Shana Crosson*  
Harriet (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

The exploding world of technology in schools has changed how schools access content and curriculum. How do you turn a successful physical print textbook for 6th graders into an interactive digital experience that works on all devices?

This was the issue faced by the Minnesota Historical Society (MNHS) as we prepared to publish a Revised Second Edition of the popular textbook, Northern Lights, designed for 6th grade Minnesota Studies classes. The print book had been very successful over the last 20 years, and the revisions were exciting. Yet, we knew we had to move towards a digital delivery of the curriculum. School districts were asking for more and more digital...
content as they quickly started to incorporate technology in the classrooms.

The print book was published in 2013, but the process of developing the Northern Lights Interactive eBook started well before that with more than three years of research and development. MNHS staff research how schools were integrating technology, including device choice, digital curriculum products, and pedagogy. Staff investigated the K-12 business model, which is very different than the consumer market. We researched and prototyped numerous delivery platforms, weighing our requirements, which included key pedagogical features based on teacher input, level of technology expertise required to build, ability to fit the business model, and could be completed in a very short time frame. The first phase of the project launched in August, 2014. The eBook was updated in July 2015 with new content and revisions based on teacher and student input.

This Case Study presentation will walk through the factors that went into the platform decision and demonstrate key features that significantly enhance the content that are possible only in a digital space. We will also discuss ongoing evaluation, technical issues, content updates and teacher support.

**MuseTech in Space: Building the Giant Astronaut**

*Speakers: Bryan Kennedy*  
Great Lakes A1 (1300 Nicollet Mall, Minneapolis, MN 55403, United States)

In January of 2015 the Science Museum of Minnesota (SMM) opened its newest traveling exhibit, Space: An Out-of-Gravity Experience. To complement this exhibit we worked with Poetic Kinetics to hang a 3 story tall astronaut sculpture in the center of the museum which had featured previously at the Coachella Music Festival [1] [2]. To customize this sculpture the SMM Exhibit Media Team built a system of computers, monitors, and projectors, that allows visitors to project a recording your face on the astronaut’s 10’ tall visor and customize the astronaut with your personalized name-tag. We will demonstrate how we developed the custom media systems that allowed you to virtually “get inside” the astronaut.

This presentation will touch on some key elements of the astronaut system that correspond with relevant trends in museum technology: HTML5/JS kiosks, projection mapping, networked communication between systems, and usage analytics. HTML5 kiosks. We will review the ways to use a kiosked version of the Chrome browser and NodeJS to build a video recording booth. We will describe some key technical issues that others can avoid in their efforts.

Projection mapping. We will describe the use of Resolume, a projection mapping software package, and the Navistar hemispherical projection lens to map a flat recording onto a spherical projection surface (the astronaut’s visor). We will describe why we chose Resolume as a projection mapping system.

Networked communication. We will demonstrate how we use NodeJS to transmit information between multiple computers allowing visitors to send a “digital nametag” to monitors embedded in the astronaut’s chest. We will show how NodeJS make networking simple to build into your museum media.

Usage analytics. We will show how we used Keen.io to track usage analytics, recording the number of recording sessions per day, popular names, and other usage metrics. We will describe how other can easily build these sorts of analytics into their applications.

The session will feature direct links to our open source documentation and code which can be found on our GitHub repository for the project [3]1 - https://www.flickr.com/photos/etban/16942142636/2 - https://twitter.com/hashtag/GiantAstronaut?src=hash3 - https://github.com/scimusmn/jts-astronaut

**Networking Break**

**How a Botanic Gardens Used Technology to Share Its Hidden Scientific Research**

*Speakers: Gavin Culbertson*  
The Denver Botanic Gardens  
Harriet (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

The Denver Botanic Gardens connects visitors to its researchers at the new Science Pyramid building and interactive exhibit. The Gardens not only provides a beautiful landscape of plants to enjoy, but also a laboratory for DNA investigation, an herbarium for decades of specimen collections, and a living museum that engages in research around the world. Sadly, most visitors never knew this! The solution became the realization of a futuristic vision: a combination of stunning
physical design, and creative digital interactives. Suddenly, the behind-the-scenes work was brought to the forefront and visitors were connecting directly with researchers, and seeing the garden around them through a scientific lens.

At the MCN presentation, the Gardens’ Digital Content Specialist will share the exhibit team’s style of digital storytelling, and specifically how they transform data, research papers, and field work into an exciting exhibit. One other incredible detail is that the entire exhibit is bilingual in English and Spanish. This was a first for the Gardens, and the challenge was not only in translation for the new text and audio, but also in adapting existing digital interactives to match and provide the same, easy bilingual switching (a Science On a Sphere globe with a very 1990’s menu had to go!). Discussion will also examine the cross-disciplinary approach, where multiple departments (research, exhibits, interpretation, IT, and more) worked with an outside vendor to develop the new exhibit space.

Highlights include environmental lighting driven by the weather, a user-controllable topographic table that shows ecosystem ranges and expandable content, exploratory audio and video content that encourages visitors to look at things differently (like a scientist), and an area for demonstrations that integrate objects and personal interpretation into the otherwise high-tech space. The content management system makes it possible for the science to come alive for the visitors. The practical capability to swiftly change, update, and provide relevant content into the permanent, physical exhibit features provides a lively feeling and immediacy to visitors. This combination now provides the unique opportunity for the researchers to interact with the public, both in the content and in the space. Sharing new and relevant information about where Gardens visitors live and inspiring and training them to participate in real-world, citizen science initiatives has spawned a continued cycle of discovery, education, and action that supports the organization’s mission. The Gardens exhibits team would encourage other museums with traditional visitor experiences to step beyond the normal venues of presentation, allow a creative vision to form, and embrace what modern technology can provide for visitors.

**Evaluating Storyteller WWI: Love & Sorrow at Melbourne Museum**

Moderators: Becky Sui Zhen Freeman  
Minnetonka (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

Speakers: Scott Brewer

In this presentation Becky will discuss the mobile application "Storyteller" made to accompany the World War One themed "Love & Sorrow" exhibition at Melbourne Museum. Opened in July 2014 the mobile application was an ambitious project telling the stories of eight people and the way their lives were impacted by the First World War. Designed to work across both iOS and Android devices, with limited content upon download and an unlocking of character content only available once the visitor made it onsite to Melbourne Museum not only did the application have to provide a dense amount of multimedia content it also had to work with onsite infrastructure, indoor location and content arriving from multiple management systems within the Museum's intranet.

As digital producer on the project Becky will share her insights from creative inspiration, collaborating with third party developers (Art Processors) and technical challenges that were overcome. After being live for over twelve months now she will also look back at the reception post launch. From a technical perspective this presentation will discuss working with external developers, working with multiple internal departments within the Museum, iOS and Android application development and deployment and Raspberry Pi hacking.

**What Can Photogrammetry Do for Your Museum? Practical Information and Case Studies**

Speakers: Richard House, Carla Schroer, Charles Walbridge

Photogrammetry refers to the practice of deriving 3D measurements from photographs.

Recent technological advances in digital cameras, computer processors, and computational techniques, such as sub-pixel image matching, make photogrammetry a portable and powerful technique. It yields extremely dense and accurate 3D surface data. It can be generated using a sequence of photos and captured with standard digital photography equipment, in a relatively short period of time.

The purpose of this session is to present practical information about the use of photogrammetry for 3D capture of
museum objects. There is increasing interest in collecting 3D data about museum material to meet a variety of objectives including monitoring changes to objects over time, comparing similar objects, documentation of installations, measurement of features in an object or series of objects, 3D printing of replicas for exhibition or sale, public engagement, and many more uses.

This full panel proposal includes four presenters (see below). Three are working with museum collections and are experienced applying photogrammetry in their institutions. They will each present short case studies (8-9 minute) about current projects. The fourth presenter is an imaging specialist with experience across a broad range of photographic based capture techniques for scientific documentation of cultural material. She will present for ~20 minutes on the current state of practice, along with information about equipment needed, software options, some basic tips for getting started, and will also touch on metadata and archiving. ~15 minutes will be reserved for discussion.

The panelists:
Carla Schroer, Founder & Director, Cultural Heritage Imaging
Rich House, Senior Photographer, Yale Art Gallery
Dale Kronkright, Head Conservator, Georgia O’Keeffe Museum
E. Keats Webb, Imaging Specialist, Museum Conservation Institute, Smithsonian Institution

The Fourth Platform: The People Part

Moderators: Susan Chun
Speakers: Eric Bruce, Rosanna Flouty, Pat Fraser, Heather Hart

For the past two decades, museums have embraced the technology revolution by producing ever-smarter and more effective digital tools for interpretation and visitor engagement. However, in our zeal to make smart digital tools that serve our audiences, many museums have neglected the very best visitor engagement and informational resource we have: people.

A museum’s public-facing staff--its “fourth platform”--has the potential to be as important as print publications, web and mobile resources, and gallery walls for telling museum stories, sharing knowledge, and creating empathetic and personalized experiences for guests. Projects such as the Dallas Museum of Art’s Friends initiative--lauded for the groundbreaking technology platform that provides the DMA and its partners with rich data about visitor behaviors and preferences--rely heavily on the human touch to support and encourage participants, representing a pendulum swing away from digital-only practices and toward the thoughtful and strategic use of human talent.

Borrowing technology and tools from the hospitality and retail industries, as well as from successful private-sector organizations such as Disney, museums are getting serious about the role of public-facing staff in both welcoming and educating our guests. In this session, attendees will hear about a range of new approaches to combining technology with visitor service from an outstanding panel that includes musetech veterans as well as fresh faces new to the sector. The panel will discuss new methods for onboarding and training staff using tools such as learning management systems, free-choice video, and tools for visitor observation; provide tips and tricks for engaging and training underused resources such as security, restaurant, and store personnel; and engage with attendees in an open discussion of current and future best practices in the use of technology to support public-facing staff.

Let’s Talk about Open Images and Your Museum

Speakers: Gray Bowman, Melissa Fournier, Rob Lancefield, Alan Newman, Merete Sanderhoff, Stanley Smith

How can you lead your museum to offer truly open access images of collection objects in the public domain? Sharing open images enables people to make new kinds of meaning from museum collections by freely using images as accurate representations of physical objects, or digital raw material to be transformed, or some creative mixture of both. This participatory session is for you if you want to open up your museum’s images, or you already have, or you’re just plain interested in open content. Please bring a question on the topic so you’ll be ready if we ask you!
We’ll play with MCN’s new 60-minute format by having super-brief presentations and then a longer conversation with everyone. After a brief introduction to the topic by Rob Lancefield, each panelist will speak for one or two minutes on how we led our museum to open up images—with a close focus on the “how,” especially in regard to cultivating institutional buy-in. We’ll speak in order of public launch of truly open images at our museums: the Yale Center for British Art (2011), National Gallery of Denmark (2011), National Gallery of Art (2012), Davison Art Center, Wesleyan University (2012), J. Paul Getty Museum (2013), and Indianapolis Museum of Art (2015). Most of our time will then be an open conversation driven by your questions, obstacles, and dilemmas. We’ll tap the panel’s experience while keeping the focus on your concerns and how you might resolve them. This will build on recent discussions of open images, while not presupposing knowledge of them. Please join us, join the conversation, and lead your museum to join the move toward open images.

10:15am – 11:15am  

**Putting the Social in Social Media: The Rise of Social Media Museum Associations**

*Moderators: Andrew Mandinach*  
Calhoun (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

*Speakers: Nicholas Griffith, Adrienne Russell, Lisa Worley*

For many institutions, social media is an extension of their marketing department.

While there is no shortage of #museumlove amongst museum professionals online, heritage organizations as a whole tend to struggle with working together to engage communities. Provoking dialogue during major current events and truly engaging broad audiences through social media are not tasks we’ve historically excelled at. Happily, this trend is changing, as more and more museum associations and social media groups form.

Looking to fill a void, these groups all share one common value: museums are undoubtedly stronger together and the more collective online efforts we push forward, the better we all do. We (Andrew, Nicholas, and Lisa) will talk about the problems our particular museum communities face, the museum associations we’re a part of, and the work we’ve been doing. We believe that social capital is the dominant currency on social media, and the only way to earn it is through quality content and responsive dialogue.

Moderated by Adrienne Russell, co-founder/organizer of #MuseumsRespondToFerguson, our panel will address the responsibilities of institutions to respond to events like we’ve seen in Ferguson, Indiana, and Baltimore. Forming associations is only the first step, and with opening the gates of communication on social media comes great responsibility - some that many aren’t willing to face. We will address the ways to move beyond using social media as a marketing tool and the benefits of engaging with people in honest and open discourse as a way to make institutions more accessible.

The goal of the panel is to explore the idea that museums can and should talk - regionally, nationally and internationally. Most museum missions have the idea of reaching broad audiences and serving their local publics, but what if institutions start talking across city/county/state lines? We can start reaching much broader audiences and connect our visitors to the missions, stories and collections of other institutions and vice versa. It’s not a marketing thing but a global community thing.

10:45am – 11:15am  

**Using Qualitative Methods to Evaluate Digital In-Gallery Experiences**

*Speakers: Cathy Sigmond*  
Harriet (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

As in-gallery interpretation continues to evolve with the integration of screens (including mobile devices, touch tables, and touch walls), so does museums’ ability to capture digital data on visitors’ experiences through these platforms—and with the ability to capture so much data digitally comes the tendency to do so. Without question, these data sets yield a wealth of new insight into visitors’ museum experiences. But digitally-captured quantitative data only tells half of the story. What about the insights that can only be gained by observing and talking with visitors?

Drawing on a series of formative evaluations conducted by Randi Korn & Associates, Inc. (the FuturEnergy Simulation games [on multi-touch tables] at the Museum of Science and Industry, Chicago, IL, the CENTC Multi-touch Table at the Liberty Science Center, Jersey City, NJ, and the Recollections touch-tables at the Museum of Jewish Heritage, New York, NY) this presentation will examine the efficacy and value of using qualitative methods to collect data when evaluating digital in-gallery components and experiences.

I will discuss findings from these studies that were uniquely captured using qualitative methods, the strengths and
weaknesses of different methods for collecting qualitative data, and the importance of being rigorous when collecting and analyzing qualitative data. Using these studies as a basis for discussion, I will also consider some key questions related to using qualitative methods to evaluate digital in-gallery components and experiences. For instance, when might qualitative data actually yield the most insight into what your visitors are thinking, doing, and feeling? What is important to think about when considering using qualitative methods to evaluate digital components and interactions? And considering the wealth of data that museums are now able to collect digitally, what is the continued value of using traditional qualitative methods when evaluating digital in-gallery experiences?

You will leave this session armed with an understanding of the importance of and systematic approaches for incorporating qualitative methods into evaluations of digital in-gallery components and experiences at your institution.

10:45am – 11:15am In Next Week’s Episode…: Serializing the Online Exhibit

Speakers: Elizabeth Hansen, Minnetonka (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

Madeline Moya

Although user-generated content continues to be a buzzword in online exhibition, it often amounts to nothing more than a glorified talkback board. Comments or stories are collected, but they are rarely integrated with curatorial content. We say we want to involve the public in telling their own stories, but by the time we give them an opportunity to participate, we’ve already written their story, printed the panels, designed the website, etc. However, the public often holds valuable information that could improve or even change the narrative of our exhibitions.

How can we create a more inclusive approach to historical storytelling? How can we better integrate user-generated content into our exhibits? How do we find these users? How do we sustain interest in project that may need time to change or evolve?

In trying to determine answers to these questions, consultant Elizabeth Hansen is partnering with the Texas Archive of the Moving to explore new approaches to the online exhibition of film. Using an episodic approach, the organization plans to roll out thematic content on a weekly basis allowing users to contribute and change the exhibit story as it develops.

Although these stories will have a global reach, a series of on-the-ground activities and events will work to sustain local interest in the stories and to discover new contributors. Locals will encounter the exhibit in places outside the web through the distribution of artworks, record albums, public performances and other curiosity building activities as well as partnerships with local media.

In this presentation, Elizabeth Hansen (Elizabeth Hansen Museum, Media and History Services) and Madeline Moya (Texas Archive of the Moving Image) will share their approaches to the projects, the tools they will be utilizing and their progress thus far. They will also be looking for input from the MCN community on how to improve the unfolding project.

11:30am – 12:00pm More than a Museum: Digital Transformation at The Warhol

Speakers: Jeffrey Inscho

Museums, like nearly all organizations across public and private sectors, are acknowledging the enormous impact emerging technologies have on their missions, operations and business models. The evolving digital landscape promises benefits that touch virtually all areas of a museum’s internal-facing processes and external-facing initiatives. How, then, can an institution with finite resources make the most of this vast digital promise? In what ways can we leverage technology for the largest institutional impact?

The Andy Warhol Museum is tackling these questions head-on with its first formal digital strategy. More than a Museum: Digital Strategy 2015-2017 is designed to be a living document that can evolve as technology rapidly alters the surrounding world. The strategy is published as an open source document on Github under a Creative Commons license.

In this session, Jeffrey Inscho will discuss the philosophy behind The Warhol's open strategy; how the museum was able to overcome its own institutional inertia to collaboratively draft, publish and implement the document; and the organizational change the strategy has triggered in its first six months of use.

11:30am – 12:00pm Lo(o)se Your Structure! Flexibility in Teen Programming
One-size-fits-all solutions are getting ever further away from the reality of our museums today. It's evident with all of our audiences, and when you run education programs for teens, you have a chance to get immediate feedback on what works and what doesn't.

This presentation highlights some of the ways the Brooklyn Museum has been approaching new teen programming. While we have several long-established, much-tweaked, and proven-successful teen programs, we have also spent the last few years exploring alternative models we might offer the ever-increasing pool of teens who express interest in joining us. We will use this session to highlight two of those programs, which offer two different models of flexibility and adaptation.

NYC Haunts was a summer program focused on digital game design in the Museum's galleries. Students spent their time exploring the galleries, learning the basics of game design, and creating a mobile game to help visitors uncover a (fictional... or IS IT?) mystery by closely examining collection objects for clues. This program is a successful part of Global Kids’ Online Leadership Program and has been run in collaboration with schools and libraries. The Brooklyn Museum collaboration (run by a team of Global Kids and Brooklyn Museum staff) was the first time this program expanded to a museum setting, as well as the first time the game design software (TaleBlazer) was used to create an indoor game. Adapting the program to these new parameters required some creative thinking, problem solving, and iterative testing, all of which were also part of the game design process itself.

The program design and execution itself became a model of the principles the program sets out to teach teens. BKM Digital Artizens: Feminist Project is the newest on the Brooklyn Museum's roster of teen programming. It is a grant-funded, three-year program with a dedicated coordinator who is creating the program from the ground up. The program will put a feminist lens on how art history, politics, and pop culture combine and offer teens a chance to explore the Brooklyn Museum (home to the Elizabeth A. Sackler Center for Feminist Art) collections. The participants will be the driving voice to create a digital guide to all these issues, but how that will play out is still to be discovered. The outcomes of this program are yet to be seen. So are the outputs. It is a program purposefully built with an inherent reliance on flexibility and adaptation.

Our museum's mission includes phrases like "the unique experience of each visitor", "the primacy of the visitor experience", and "drawing on both new and traditional tools of communication, interpretation, and presentation". This presentation will offer a glimpse into some of the varying ways we're letting that mission guide our teen programs.
available the entire wall text of the exhibition leverages the principles of universal design. There will not be a
version of the app or this tour created for blind users, rather an inclusive tour for all visitors that encourages
participation by vision-impaired and non-English speaking visitors. With this project, we hope to provide a model
for use in any museum.

The goal of Digitally App is to create an opensource solution for museums that increases accessibility to
collections by adding to the museum’s body of accessible mobile content through crowdsourcing verbal
description, American Sign Language video content, and translations of other spoken and signed languages.
Funded by a grant from the IMLS, educators, technologists, accessibility professionals, and artists from the
Smithsonian Institution, the John F. Kennedy Center for Performing Arts, the Peabody Essex Museum, the
Baltimore Museum of Art, the Indianapolis Museum of Art, Prime Access Consulting, and Halsey Burgund
comprise the Digitally App team that are developing the app utilizing universal design principles. Members of the
Digitally App team have successfully prototyped a mobile app based on an open-source audio platform Roundware
(Roundware.org). Roundware is a flexible, distributed framework that collects, stores, organizes and re-presents
audio co…

11:30am – 12:30pm  **Code of Best Practices in Fair Use for the Visual Arts: Panel Discussion**

*Moderators: Melissa Fournier*  
*Speakers: Peter Jaszi, Nancy Sims*

In early 2015, the College Art Association (CAA) published the Code of Best Practices in Fair Use for the Visual
Arts, a set of principles addressing best practices in the fair use of copyrighted visual art material, and the result
of an effort initiated by CAA in 2012. The code was developed through discussions with visual arts professionals
including artists, art historians, educators, museum professionals, and editors, and reflects areas where
consensus exists across these communities. The code elaborates on the application of fair use in broad areas of
the visual arts, including museum uses (print and online exhibitions, catalogues, and related activities) and online
access to archival material. Join the lead facilitators of the code, Peter Jaszi and Patricia Aufderheide, along with
copyright specialists in the library, archive and museum space in a discussion about development of the code, its
reception, and its application. How does the code differ or expand upon earlier efforts that museums have looked
to when applying fair use to digital access to visual art material, including the AAMD Policy on the Use of
"Thumbnail" Digital Images in Museum Online Initiatives (2011) and the VRA’s Statement on the Fair Use of
Images for Teaching, Research, and Study (2011)?

11:30am – 12:30pm  **Designing Evidence: Planning the Data You Track to Capture Specific Behavior**

*Speakers: Andrew Lewis*  
*Keywords: Google Analytics, customised metrics, Tag Manager, event tracking, data-driven decision-making*

**Summary**

This session gives you all you need to obtain user-data specific to the unique design of your individual services. It
shows you how to get data that accurately reflects how your audiences are using the features you intended them
to, beyond standard analytics data. It is illustrated with real-life examples implemented in live V&A services and
describes step-by-step how to achieve it yourself when you get back.

**Who should attend this session?**

You, if you are responsible for designing, developing or managing digital services and want to gather user-
behaviour evidence that is tailored to your specific service, beyond simplistic page views, sessions and so on.
This session shows you how to get subtler stuff using well thought-out event-tracking. With the techniques
described, you can do things like: compare prior motivation with actual onsite behaviour; compare the relative use
of different interface elements such as navigation; review gestural interaction on touch devices to how much
people scroll, zoom or tap on specific content.

**Prior knowledge**

This session assumes a basic working knowledge of Google Analytics (GA), but does not require expert level. It
shows how carefully designed event-tracking in Analytics can give you data that is represents audience usage of
your services, and shows how to implement this within the construction of your specific services. The focus is on web features and apps, but the principles and approach apply to any format. Prior experience of GA event-tracking is not required. You'll pick up enough to show you how it's done. Why should you attend this session? This session will show you how you can decide what evidence you capture. You will see how to get the data you really need, to make decisions based on user-behaviour evidence, not personal opinion or preferences.

What practical skills or transferrable knowledge will you take away from this session?
This session will help you understand how to get useful, hard evidence of how people really use your digital services, by pre-planning the data you need to capture at the service design stage. You will learn how to analyse your service interface and how you expect audiences to use it, to plan the reporting you will need later, and then implement data-capture that delivers the specific data you need. The takeaways from this session will be most effective when used in the service design process. However we all manage existing services too. The techniques covered here can be applied retrospectively to your already-live services.

Format
Some theory, some pragmatic technique and some audience participation… This session briefly discusses how Google Analytics event-tracking allows customisable capture of data, illustrated with examples of real-life services. It describes the advantages and limitations of the event-tracking data model. It shows how predicting how you will have to r…

11:30am – 12:30pm  
Digital Publishing: Taking the Plunge and How to Keep Swimming  
Speakers: Susan Edwards, Jacques Haba, Ahree Lee, Lauren Makholm, Tina Shah, Kris Thayer
Digital publishing is not just a trend anymore but now an everyday reality that many institutions are tackling on various levels and in various forms. Four museums will come together and talk about their transformations into the digital publishing world, presenting a variety of perspectives and projects, from choosing the platform that's right for your institution to measuring success after the project is launched in addition to challenges and changes in workflows.

About each presentation:
Nasher Sculpture Center: This year the Nasher Sculpture Center decided to publish its first digital-only publication. With a lean staff and no designated publishing department, the shift proved to be challenging. We were full of questions - How do we manage this transition from print to digital? What new content opportunities will it present? Will our target audience be receptive? We mitigated the obstacles by deciding to start small before scaling up and exploring the current state of digital publishing. It led to the discovery of a few platforms like OSCI (Art Institute of Chicago) and Verso (MIA). With trailblazing institutions and existing platforms to choose from which proved to be the best fit for our staff and our audience at this momentous time?

The Getty: In April 2015, the Getty Research Institute published its first born-digital scholarly publication, Pietro Mellini's Inventory in Verse, 1681. The design for this publication is bespoke, in part because it is among the first of its kind, and because it explores an idiosyncratic object. During the process of creating this publication, we asked ourselves if we could reuse any of the methods for future publications. No one wants to reinvent the wheel, but in digital publishing the wheel hasn't been fully invented yet. We will discuss how we used user experience (UX) approaches to test prototypes with scholars, and iterate in order to ensure the publication met the audience's needs. We will also discuss challenges of editing born-digital content, and explain how we used a hybrid editorial process that was between print publication and web content development methods.

The Art Institute of Chicago: By November 2015, the Art Institute of Chicago (AIC) will have published 5 digital scholarly catalogues. The publications were born out of the Getty Foundation’s Online Scholarly Catalogue Initiative (OSCI) in 2009. The AIC published their first two beta catalogue entries in 2011 and their first two full catalogues in the summer of 2014. Now, six years after first launching our digital scholarly catalogue program, we are in the process of evaluating the success of this initiative. How do our initial goals compare to our current measurements of success? Our publications are out there, free and available to anyone, but how do we recruit readership and create a marketplace for our publications? And in terms of readership, how do we ensure a quality user experience when it comes to scholarly research in the digital realm…
12:00pm – 12:30pm  No Dollars, All Sense: Digital Adaptation at the Blanton Museum of Art  

Moderators: Koven Smith  
Speakers: Alie Cline, Mary Myers  
Great Lakes A1 (1300 Nicollet Mall, Minneapolis, MN 55403, United States)

In late 2014, the Blanton Museum of Art began to step up its digital game by embarking on a multi-year internal transformation plan. This plan, which we came to call "digital adaptation," involves the adoption of core digital values across the entire Museum rather than instantiating them in a single department. By focusing on building internal capacity rather than investing heavily in technology, the Blanton is beginning to realize impact on its audience that is disproportionate to its size. This presentation will model, explain, and critique the Blanton's approach for attendees looking to adopt a similar "no dollars, all sense" approach to digital adaptation at their own museums.

Topics covered will include:
- Why building a Digital Media department probably isn't a good idea
- Why testing a program quickly in real time is better than having 327 meetings about it
- How to turn one-off experiments into sustainable programs
- Why most of your "website visitors" don't actually exist
- Why usability is more important than functionality
- How to re-design your website without using any damn Post-It notes

Specific use cases will be demonstrated and we will dissect stuff that didn't work with the same abandon that we will celebrate stuff that did. Throughout the session there will be an emphasis on ideas and concepts that attendees will be able to implement quickly at their own museums.

12:30pm – 2:00pm  

BIG SIG Lunch  
Exhibit Hall (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

Join the MCN Board and Special Interest Group (SIG) Chairs for an informal lunch and networking session. Get to know others working in your field and learn more about how our SIGs keep the conversation going year round!

Run by MCN members, the SIGs provide a space for like-minded professionals to pursue niche interests related to MCN's overall mission. They're a great way to connect with peers who share your passion and to develop your professional relationships. New to MCN? Don't yet belong to a SIG? No problem! This annual SIG Lunch welcomes everyone.

2:00pm – 2:30pm  Give Those Paper Files Legs! Planning and Prioritizing Curatorial Research for Digitization, Discovery, and Interaction  
Minnetonka (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

Speakers: Kate Blanch

A two-year NEH HCRR Foundations grant facilitated planning, assessment, and pilot digitization activities related to the Walters' curatorial research materials that span from the early 1900's to the present day.

The content of these materials provides expanded meaning of the origins of the collection and strengthens our understanding of the people it has engaged over time. The main goals were to gain intellectual control over the contents of curatorial paper files and related archival resources (scrapbooks, accession cards, etc.), identify the value to the humanities, prioritize materials for future digitization, and evaluate the technical requirements needed for digitization and public access. Over two years, archives and digital resources staff counted, considered, and re-imagined the gems and junk that have accumulated in filing cabinets for nearly 100 years. Tough questions were asked about the changing validity of research materials over time, and how to activate this kind of supporting documentation so it can be meaningful and relevant (or at least referenced) in our modern, digital world.

This presentation will focus on the white paper that resulted from the planning grant. It will aim to share the experiences obtained through all the phases of planning, from completing a physical inventory, defining and prioritizing content types for digitization, creating a CIDOC-CRM data model, and finding ways to provide access to the public.

2:00pm – 2:30pm  Digital Ambition: iBeacons, Universal Design, and the Visitor Experience at the Canadian
**Museum for Human Rights**

*Speakers: Scott Gillam*

The Canadian Museum for Human Rights (CMHR), located in Winnipeg, Manitoba, opened to the public in September 2014. This is Canada’s first national museum created since 1967 and the first national museum located outside of the National Capital Region, Ottawa.

The over 47,000 square feet of digitally rich, mixed-media Installations explore the subject of human rights, to promote respect for others and to encourage reflection and dialogue. Dialogue is a key word at the CMHR, as this word is a metaphor for the Museum’s approach to experience design – a reciprocal relationship where the Museum informs the visitor but the visitor also informs the Museum.

The entirety of the Museum and exhibits were built with inclusive design and accessibility in mind. The CMHR’s opening day was only the beginning, and we continue to look for ways to improve the experience of visitors. Scott will present innovative concepts developed for in-gallery, mobile, and remote endpoint solutions for the CMHR; including the integration of iBeacons to deliver accessible content to over 120 universal access points inside the museum.

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**Skyways Bridging Silos: Content and Production Strategy for a Cohesive User Experience**

*Moderators: Jesse*  
*Speakers: Alexander Bortolot, Mandy Kritzeck, Jim Ockuly, Meaghan Tongen*

The landscape of content channels, tools, and opportunities for communicating to and with the public is evolving at a rapid pace. This presents new challenges and opportunities for content creation and use from both public and internal user experience perspectives. In the typical siloed institution, it is often difficult for staff in individual departments to step back and look at their institution as it appears in totality to the public.

In his 2013 article “Designing for Services Beyond the Screen,’ Andy Polaine wrote, “...even if your “job” ends at the design for a specific channel, your users’ experiences don’t. Your website or mobile app might be wonderful on its own, but customers experience services in totality, and base their judgments on how well everything works together. This means the transitions between channels and over time become crucial.” This session will explore three institution’s approaches to moving toward a more cohesive user experience across all content channels, particularly new and evolving digital channels.

In 2013, Minneapolis Institute of Arts established a cross-functional team, the Communications Working Group, to collaborate, iterate, and strategize around content. This team helped to clarify editorial workflows (both in print and online), identify priorities for a multitude of communication channels (from mailings to screens in the lobby), and reach consensus across departments. It was in this group that an editorial workflow within WordPress was proposed, tested, and implemented with great success. The group is a place to raise questions and try new approaches.

Moving forward, the goal will be to align content across channels. With an enhanced set of tools for constituent relationship management (CRM) and integrated access across platforms with enterprise content management (ECM), the Minneapolis Institute of Arts will continue to learn what kind of content resonates most with visitors and work to deliver that in a consistent and efficient manner.

The Corning Museum of Glass enlists a cross-departmental group of staff to manage web content and actively monitor areas of the museum’s website and public digital projects. This group, called the Power Users, not only manage content in their areas, but also provide feedback based on what they learn about users’ experiences and identify opportunities for improvement and ideas for new content creation across all museum digital channels.

This formalized role for staff engages them in the day-to-day web content that makes up the museum’s website, blog and social media. In turn, we’ve garnered support for overarching digital initiatives across the institution and, with help from the Power Users, increased collaboration between departments on digital projects including the recently launched GlassApp.
In 2014, the Minnesota Historical Society formed a cross-departmental group called Strategic Content Management to establish best practices, standards, and tools that support agile an…

2:00pm – 3:00pm  **Women in Tech**  Harriet (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

*Speakers: Meredith Ferguson, Emily Lytle-Painter*

Following the talk generated at the Women in Technology event at MCN2014, and continued at MW in Chicago, we propose to continue discussions about supporting women working in technology in the museum sector. Similar to last year, we are open to a variety of formats, and hope to be able to expand the discussion this year to include the subject of the acquisition of new skills. Specifically we would like to give an introduction to finding the right resources for learning about the semantic web, HTML, CSS, JavaScript and inviting interested museum professionals to take part in an online challenge that will take place between MNC2015 and MW2016.

Our goals for a women in technology event at MCN2015:
* Inspire- featured short talk by a prominent woman in the field
* Network- time to meet new people and build support system
* Challenge- opportunity to build skills and extend network of support

2:00pm – 3:00pm  **New Museum Technology Leaders Reflect on Their Adventures**

*Moderators: Douglas Hegley*

*Speakers: Doug Allen, Anne Bennett, Tim Rager, Richard Scott, Bryon Thornburgh*

In the past 18 months, the museum sector has seen an influx of new, experienced technology leaders. Five of these professionals will participate in a moderated discussion to share their fresh perspectives on technology in the museum and cultural heritage arena. Each brings a unique set of experiences and a deep knowledge base to their new posts. Let’s find out what they’ve observed, how they are applying their skills, and what the future holds for all five at their new organizations.

This session will be a moderated discussion that includes discussion around the following questions: Why did you join our field? How did you get recruited? What sold you on the job? What sector(s) did you come from, what do you bring from that experience into your new field? What should museums be integrating/implementing that you have experience with in your previous stop(s)? What have you observed in our field so far? What surprised you – did anything really make your jaw drop? What’s giving you the biggest headaches so far? What do you see as most-entrenched in museums? How does it differ from your past experience? Okay, honestly, did you think it would be “easy”? Has it been? How could we be “more popular” with the commercial sector - get on their radar, get better services? Are we really under-resourced? How do we compare to your previous stop(s)? Any advice for us? Please! What questions do you still have? What will you be digging into next? Plus: plenty of opportunities for questions and answers

Moderator: Douglas Hegley, Director of Media and Technology, Minneapolis Institute of Arts

Panelists - alphabetical order:
Doug Allen, CIO, Nelson Atkins Museum of Art
Anne Bennett, CIO, Toledo Museum of Art
Tim Rager, Director of Technology, Seattle Art Museum
Richard Scott, Director of Information Services, Detroit Institute of Arts
Bryon Thornburgh, Director of Technology, Denver Art Museum

2:30pm – 3:00pm  **Cloudy with a Chance of Success**

*Speakers: Jim Coleman, Joseph Rheume*

The Center for Creative Photography at the University of Arizona is one of the preeminent research and exhibition centers for photography in the world. It has an active program to digitize its fine print collection of more than 150,000 items, as well as archival holdings in excess of 5,000,000 items. Its digital content now comprises more than 17TB of archival images, audio, and video files, and is growing at the rate of more than 2TB a year.

Creating, managing, storing, and exposing its digital collections has proved challenging. As part of a change in reporting relationships, the Center has had to look to the central IT organization to help it rearchitecture how it
does its business of digital asset creation and management. The presentation will focus on how the Center has been moving its assets from locally hosted storage to a combination of local and cloud-based vendors, including Amazon and others. We will try to lay out the full problem set and explain how the Center is using and planning to use cloud-based services to meet its organizational and collection management goals in service of the University and its customers.

We will look at how the Center addressed a number of issues: content discovery -- how much do we really have content management -- do we know where your resources are and how objects related to each other and the collection vendor selection considerations -- what did the Center need from a vendor? What can you do yourself, what resources are necessary, and what did the Center have done for it? Operationalizing the entire process -- we will show how the Center has created workflows that encompass all of these aspects on the basis of digitizing items from the Center's Edward Weston archive cost containment and management -- getting to real costs and long(er) term strategies in using local and cloud-based vendors and rethinking file formats for immediate and archival use.

**Indoor Positioning Is not about the Blue Dot, It's about the Visitor**

*Speakers: Matt Tarr*  
Calhoun (Hyatt Regency Minneapolis 1300 Nicollet Mall Minneapolis, MN 55403)

There is a lot of highly contentious discussion swirling around the cultural space regarding the indoor positioning problem. The obvious promise of pinpointing our visitors' exact location is so self-evident that very few organizations pause to consider what they will do once they can get sub-meter accuracy. At the American Museum of Natural History we were forced by historical precedent to seek to leverage indoor positioning in support of wayfinding. But that is just the beginning. As we've assembled a system from the best, currently available technologies (BLE) we've also gone back to the drawing board (and the analytics and the visitor surveys) to address the indoor positioning from a visitor-first perspective.

As I literally walked the half-million square feet of public museum space placing more than 700 BLE "beacons" onto the walls of 25 buildings of varied construction materials and methods I was not just thinking about "coverage" or "RF interference", I was thinking about interpretive media and what we would say to a visitor that we'd identified as "being in this place." The answer, more often than not, didn't dictate sub-meter resolution from the indoor positioning system but could be handled by simply knowing what quadrant of a gallery the visitor was in. By using overlapping, cascading interfaces (both automated and manual) an experience can be crafted that can provide delightful interaction with Museum content. What does it mean to define the contextual visitor experience first? Wayfinding to Hall/gallery introductions to object-specific interpretation, how close do you need to get. What does overlapping / cascading interfaces mean? Can the user correct an erroneous position? How specific does the app need to be in assuming that it knows what object the visitor is "near" or "interested in."

The answers to these questions need to be in place before selecting an indoor positioning system in order to prevent cultural institutions from wasting money on unused gimmick.

**Closing Plenary - Looking towards the Future: NMC Horizon Report**

*Speakers: Suse Cairns, Alex Freeman, Nik Honeysett, Carolyn Royston*  
Every year, the MCN conference draws together professionals working at the cutting edge of museum practice to examine the current trends facing the sector. Similarly, the NMC Horizon Report > 2015 Museum Edition (go.nmc.org/museum2015), guided by the input from a panel of over fifty international museum experts, helps museums and universities set priorities for technology planning, research, & practice. Responding to the needs of the sector, the 2015 Museum Edition added new sections that outline the implications of trends and challenges for policy makers, museum leaders, & practitioners.

In this conversational, talk show style discussion, presenters (and the audience) will together explore the synergies between #MCN2015 and the current Horizon Report. We will draw links between topics featured in the report and the major themes and conversations that surface during the conference, including topics like cross-museum collaboration, emphasis on online audiences, location-based services, increasing focus on data collection, and more.

The session will conclude by looking towards the future and asking "What do we think we'll be talking about in 2016, and why?"