

ViMM

Thematic Area 2: Directions

Working Group 2.1: Technology and Tools

Topics: Interaction Design and User Experience

ArtLens at the Cleveland Art Museum

Keywords

UI/user interface design, UX/user experience, app, touchscreen-free interaction, wayfinding technology, museum, high definition image, augmented reality, interactive real-time map, AR navigation, fast download, immediately updated, image-recognition software, gallery, interaction design, iPad, iPhone, motion-tracking technology, interactive video wall, user interaction, multimedia installation, mobile application; interpretive interactive installation, augmented reality, interior wayfinding, art museum, intergenerational learning

Abstract

ArtLens in the Cleveland Museum of Art has a clean and elegant UI (User Interface Design), which is exceptional for museum mobile applications. It is a real-time AR collection app, structured concerning multiple experiences and interaction of the visitor with VM. Interface is designed on a basis of being easily accessible and on a high level of user experience and user interaction. Technologies and tools are segmented on several different levels of user interaction. On-site gallery is a multifaceted, innovative experience that allows visitors to look closer, dive deeper and discover the museum's collection using up-to-date digital technology and being engaged with masterworks of art and touchscreen-free interactive elements at the exhibition. A visitor's creation of his/her own original artwork using cutting-edge technologies and connection with the museum's world-renowned collection at the interactive video wall, by using ArtLens App, is possible to save preferable artworks and photos taken during an experience, and then to map a visit throughout the museum using the application's responsive way-finding technology.

Introduction

ArtLens 2.0, Cleveland Museum of Art's collection app for iOS and Android devices, provides current information about the more than 4,100 objects that are currently on view, as well as guidance through the galleries for browsing the collection and both museum produced and visitor-created tours. While in the galleries, museum visitors can scan artwork marked with the ArtLens iris logo to reveal additional interpretive content. The ArtLens app also allows museum visitors to connect with the award-winning Gallery One Collection Wall to collect their favorites. ArtLens features more than nine hours of video content, including conversations and other recordings.

Description

Main objective

The redesigned interface (June 2017) is clean and intuitive and the wayfinding map is more responsive, now using iBeacons throughout the museum, and outside, to improve accuracy and eliminate the need for paper maps. ArtLens now uses Bluetooth to connect to the museum's iconic ArtLens Wall rather than using RFIDs, making synchronization seamless. Improvements to the maps and new descriptions of each gallery make finding the information or artwork easier for visitors. ArtLens may be used on-site or from anywhere in the world.

Description of the example

The ArtLens App is available for free download to iPads or iPhones running iOS9 or higher, or an Android device (4.4+), from the iTunes App Store or Google Play. Once ArtLens is downloaded, simply launch the app. The museum has iPads and iPod Touches available for rental. An iPad, iPhone, or Android device is not required to experience many aspects of the ArtLens Gallery.

The Gallery One experience consists of ten interactives: the Collection Wall, three interactives designed for children and located in Studio Play, and six interactive displays (lenses). In addition, there is a museum-wide app, ArtLens, and at the lobby entrance to Gallery One is the Beacon, a 4-by-4 array of 55-inch Edgelit 1080p LED displays. It plays a looping, non-interactive program displaying both dynamic and pre-rendered content. At the exhibition, visitors can dock their devices with the ArtLens app at the interactive stations in ArtLens Exhibition to automatically save all the artwork they learn about and all photos taken during game play. Artwork saves to "You" in ArtLens and photos save to a photo album. The new ArtLens Exhibition field on the object page contains additional content about all artwork found in the Exhibition interactives.

The most significant changes to ArtLens are in the *Galleries* feature with updates to the maps, content, wayfinding and nearby objects. *Galleries* are color-coded and grouped thematically to facilitate easier navigation. Tap any gallery number to see what type of art is on display in that location or find gallery descriptions by tapping the gallery name. A visitor can create a path to explore artworks, finding an exact location in the museum, then search an artwork and tap the gallery number to find exactly what they are looking for and how to get there.

All artworks on display are identified and findable in ArtLens, with additional multimedia content, including more than 1,500 videos, available for selected artworks. New content is generated on an ongoing basis. Changes to any object on view are dynamically and immediately updated from the backend systems across the app and throughout the museum.

Nearby artworks that might be of interest are suggested based on the artwork selected. Using innovative image-recognition software, ArtLens seamlessly recognizes a selection of two-dimensional artworks and provides additional curatorial and interpretive content.

Favorite artworks by tapping the heart icon on the ArtLens Wall or on individual artworks in the ArtLens App. All favorites are saved under *You*. Favorites can be used to create personalized tours, find specific artworks in the museum or share on social media. Artworks learned about in the ArtLens Exhibition are automatically saved under *You* if a device is docked. Search by artist's name or by keyword to discover corresponding works on view in the museum, finding the exact location of an artwork identified on a map with a quick tap on the gallery number.

A visitor can select from both museum-curated and visitor-created tours. The mapping feature locates specific artworks and navigates the entire tour. An option of choosing to create a personalized tour that may be added to *visitor-created tours* and shared with the world. ArtLens uses Bluetooth to connect to the ArtLens Wall making synchronization seamless, as well as the interactive activities in the new ArtLens Exhibition. A possibility of exploring the museum's dynamic list of visitor favorites, as well as curators' top picks of must-see artworks.

How it was created

Listening to user feedback, the Cleveland Museum of Art ensured that the new ArtLens has enhanced its usability. ArtLens is now faster and more user friendly, and the app download time has been reduced to 30 seconds. Improved optimizations have reduced the size of the app making ArtLens comparable in size to popular social media apps like Snapchat.

CMA: Jane Alexander (Lead, Chief Information/Digital Officer), Tom Barnard (Senior Designer), Bethany Corriveau (Audience Engagement Specialist), Stephanie Foster (Interpretation), Adam Gall (Project Manager), Emily Hirsch (Project Manager), Tom Hood (Director of Technology Operations), Kevin Kelly (Interpretation), Niki Krause (Director of Application Services), Jeffrey Streaun (Director of Design and Architecture), Mary Thomas (Graphic Designer), Lori Wienke (Associate Director of Interpretation).

CMA collaborated with Local Projects on the ArtLens App. Local Projects is the firm that takes the app to the next and highest possible level of technical fidelity, ensuring a rapid initial download, optimizing the interactive, real-time wayfinding maps and streamlining the design.

From Local Projects: Ethan Holda (Director of Technology), Keeli Shaw (Project Director), Karen Vanderbilt (Senior Graphic Designer), Danny Well (Visual Experience Designer), Edward Blake (User Experience Designer)

Future Prospects

Sustainable and up-to-date upgrade of a fast and user-friendly design with a 30 second download time and reduced app size, the new versions of ArtLens enables a quick and easy way to immerse a visitor in the museum's world-class collection while visiting the museum or from home. Additionally, visitors who want to connect to the museum's collection wall can do so via Bluetooth, making the synch seamless. ArtLens 2.0 includes

a reconceived museum map with galleries grouped and color-coded by theme, and an overview for each space. Visitors will be able to push the “Find Me” button at any time to find any artwork’s exact location in the museum, making museum navigation a breeze. ArtLens 2.0 includes a high-definition image and object information about every artwork on display in the museum, updated in real time. New content is possible to add on an ongoing basis and will now suggest nearby artworks that might be of interest based on the artwork selected.

Conclusions

The usability together with the high quality of technical solutions makes it a best practice case that can be exemplary for European museums. A collaborative creation, ArtLens combines the most current technology and innovative design with a wealth of interpretive content provided by the museum’s curatorial and interpretation teams. ArtLens includes a high-definition image and object information about every artwork on display in the museum and is updated in real time, ensuring that users have access to the most accurate information available. ArtLens enhances the visitor’s museum experience by providing the option to design individual tours, offering tools to better understand artwork through augmented reality, and guiding users with interactive real-time maps.

Ultimately, the Gallery One project (ArtLens being one of the many features) project has successfully reinvented the museum experience for visitors of all ages and has promoted active engagement and personal discovery throughout the museum. From its initial inception, the museum considered the original Gallery One to be more of a “proof of concept” than an endpoint. It was always the plan to improve and update each of the components. The last four years have provided an excellent opportunity to gather information: to interview visitors, track usage, and evaluate the effectiveness of each component. Using that feedback, successful new redesigns have been completed for the ArtLens Studio (opened June 2016), the ArtLens App (launched June 2017), and most recently the exhibition portion of ArtLens (opened June 2017)—the truly unique area in which a sophisticated and unprecedented integration of art and immersive technology provides interpretive content right alongside the artwork.

ArtLens Studio uses cutting-edge technology to give families the opportunity to use movement and play in order to connect to the collection. Reveal and Zoom is a large 4k video wall where visitors use their bodies to reveal artworks or zoom into an artwork in great detail. The Create Studio, which allows visitors to create their own artworks, consists of four stations: Pottery Wheel, Collage Maker, Portrait Maker, and Paint Play. These installations use a combination of time-of-flight depth cameras, custom C++ software, and real-time graphics to create interactive experiences that allow visitors to play with traditional artistic techniques in a playful, gesture-based way. Visitors may save creations by sharing them on the museum’s Tumblr site. ArtLens App has been upgraded to tie together the ARTLENS Gallery experience. All artworks that a visitor learns about during their Exhibition game play will be saved to a visitor in ArtLens, and all photos taken during game play will be saved to visitors' photos and appear on the Beacon at the entrance of the Gallery. After saving artworks in the Exhibition or at the Wall, visitors can

use the ArtLens App as their digital map around the museum. Content from ArtLens Exhibition is re-iterated in the App's new ArtLens Exhibition field.

References

Links:

<http://www.clevelandart.org/artlens-gallery/artlens-app>

<https://itunes.apple.com/us/app/artlens/id580839935?mt=8>

<https://vimeo.com/60862707>

<http://mw2013.museumsandtheweb.com/paper/transforming-the-art-museum-experience-gallery-one-2/>