CURATORIAL STUDIES PRACTICUM:

EXPERIENCES AND METHODOLOGIES IN WORKING WITH PEOPLE WITH IMPAIRED VISION TO
CREATE CONTENT FOR A VIRTUAL EXHIBITION

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INTRODUCTION

In 2020, the COVID-19 pandemic closed museums across Canada. Museums began to offer virtual, online exhibitions as a replacement. This report is a result of a project to produce a web-based exhibition fully accessible to the blind and low vision community. It includes an overview of tools to deliver non-ocularcentric exhibitions, initial concepts for solutions, and results and recommendations from consultations with people who are vision impaired (VI). Finally, based on consultations, it outlines a new format to deliver accessible web-based exhibitions.

NON-OCULARCENTRIC EXHIBITION TOOLS

Audio guides

Museum exhibition audio guides can be used to supplement a sighted person's visitor experience or guide a non-sighted visitor. The visitor is either provided with an audio device or downloads the museum's audio guide onto their personal smartphone. Some museums publish their audio guides as a podcast.[i]

Accessible audio guides can include navigation instructions or interactive prompts inviting the visitor to touch an object.

Audio experiences

Audio experiences are produced as recorded, scripted entertainment and present a virtual exhibition or tour in a linear "story-telling" format.[ii] They can use animated narration, studio engineered binaural sound effects, music, or audio-clips.

Museum websites

Museum websites conform to a variety of accessibility standards (for example WCAG2.1 Level AA), some of which make them accessible by screen readers. Responses from the visually impaired community, however, suggest that even though a website may conform to an accessibility standard it does not always offer a positive experience.

Discovery Box

A "Discovery Box" is a museum outreach pedagogy tool that consists of a collection of museum objects and interpretive programming tools for schools. In essence, they are "virtual" museums because students can access a museum's (for example, the Canada Science and Technology Museum) collection without being in-person.

MIND MAP OF EXHIBITIONS

As part of the project, a mind map was created to visually organize interrelated exhibition components. Preliminary background research into the variety of museum exhibitions categorized three types: Physical Exhibition Content; Remote Exhibition Platforms; and Purpose-Built Exhibitions for vision impaired visitors. Each category includes an overview of the variety of exhibition formats and museum objects. A mind map was used to develop the initial concepts for a web-based exhibition for the vision impaired community.[iii]

VI VIRTUAL EXHIBITIONS

The mind map identified common components for virtual exhibitions suited for visitors with vision impairments. Two concepts were to be proposed.

"Take-Out" Exhibition

The first concept was a "Take-Out" exhibition similar to a Discovery Box. It was inspired by the sophisticated take-out meals made available due to the ban of dine-in experiences as a result of COVID-19 precautions. This "exhibition" would be borrowed from the museum and contain tactile objects, audio clips, and texts. Unlike a Discovery Box, it would be an individual or small group experience and not require a facilitator. The exhibition would connect to the internet for access to additional museum content. At the end of the borrowing period, the Take-Out exhibition could be returned to the museum in exchange for another.

Accessible Virtual Exhibition

The second concept was an accessible Virtual Exhibition website would include more sophisticated alt-text descriptions, additional audio-clips, a variety of audio description types, and scripted verbal content. For this project it would convert an existing museum exhibition, *Sound by Design*, into a virtual experience.

CONSULTATION

After concepts for potential VI virtual exhibitions were generated, they were presented in through consultations. Consultations with six participants of varying demographics and vision impairments were made possible with the assistance from the Canada Council of the Blind (CCB). The intent was to gather data on participants' museum experiences as relating to their lifestyles as people with vision impairments. The second intent was to receive advice and evaluation on the two concepts: the Take-Out Exhibition and Virtual Exhibition website.

Method

One-on-one interviews were conducted over the telephone. The interview questions were informed by what other participants shared in preceding interviews — the interview questions evolved after each participant consultation. Participants also volunteered to evaluate accessible virtual exhibitions.

Comments – Summary

See Appendix A for expanded details on their comments.

"Take-Out" Exhibition concept

The initial concept for a "Take-Out" Exhibition received feedback ranging from "Anything and something is better than nothing" to "Does not interest me". These comments were valuable to prevent an "if we build it, they will come" error.

Accessible websites

Participants' evaluations of accessible websites varied greatly, which may be due to the variety of their visual impairments. There was a general consensus that there is a difference between an accessible website and one that offers a positive experience. An example used by one participant described a university website as "…functionally accessible but cumbersome and time-consuming — therefore inaccessible. They can get away with saying [it is accessible] but it is not enjoyable."

Participants commented that for a website to offer a positive experience, it must be mindful of how the accessibility guidelines are applied. This includes the photo descriptions, navigation tools, choice of content, and consistency of the interface tools.

Virtual exhibitions (websites)

Again, the variety of visual impairments played a role in the different responses. In some cases, museums are not part of their lifestyle due to previously unfulfilling in-person experiences and the effort to attend a museum outweighs the value of a visit.

When asked about web-based exhibitions, participants responded by saying they would visit an accessible virtual exhibition firstly to learn something new, and secondly for the social experience. Others indicated a virtual exhibition would be practical as the shorter time commitment would better fit their lifestyle, or because they live too far from a museum. They suggested that the virtual museum should be shareable with sighted friends and be a sit-down activity.

Participant recommendations included:
- Photos should include alt-text, audio descriptions, and artist descriptions, with the ability to choose whether to go in-depth or to skip certain content;
- The form of voice for reading digital text should be a robot voice rather than human (for text readers) and that the tone of a human voice for audio description should complement the mood of the story;

- It is better to audio-describe a visual exhibit object than create and replace it with an audio substitution (for example it is better to audio-describe the photo of a car in the exhibition than to use a sound effect of a car);
- Information that indicates what is on the website should be located at the top of the webpage. For example, the top of the page should indicate that the webpage includes interactive modules and instructions on how to operate;
- The navigation tools should be on the left side of the screen and the graphic design should be high contrast;
- Text should be on a plain background and typeface design should not be broken up.

A participant with 10% vision evaluated two virtual exhibitions that were recommended by a virtual museum developer as being good examples of accessible virtual exhibition websites. The participant's comments included praise for the website *High.org* for considering every disability including dementia and for the website *lieuxderencontres.ca* for being interactive and engaging.

Audio Experiences

Providing multimodal access to content has proven to be successful in creating an engaged museum audience [1]. The following are museum tours that use an audio format as the exhibition medium. The reviewers of the audio experiences commented on the format, touring method, and content.

A member of the "Curiosity Club", an online club organized by the Canadian National Institute for the Blind (CNIB), reviewed four audio-experiences (see Appendix B). They found that the listening experiences were well done, contained actual "description", and were informative.

https://soundcloud.com/guggenheimmuseum/sets/minds-eye-a-sensory-guide-to
https://soundcloud.com/earprint/getty-binaural-louis-xiv-tour-full
https://soundcloud.com/metmuseum/500-exhibition-introduction
http://www.pastporte.co.uk/our-work/a-walk-with-lawrence-johnston-for-the-national-trust/

His reviews provided in Appendix B were written with the intent of being shared with his peers.

Podcasts and Lifestyle

Through the interview consultations podcasts were found to be the preferred source for news and entertainment because they fit their lifestyle, offer a variety of content, and provide accessible navigation.
- "...they are portable and relaxed…"
- "I am mad about podcasts."
- "I listen to podcasts or audio-books when waiting or on the bus."
- "Absolutely!"
- "Blind people know how to use them…"
- "Podcasts are more appealing than navigating through a web-page."

RESULTS

Based on the consultations, the podcast format was found to be the optimal means of translating exhibition content into a platform for virtual exhibitions that is accessible and engaging. By building on the reputation that is already established in visual impaired community, podcasts are an ideal choice for accessible virtual exhibitions.

Participants provided a list of recommendations for a virtual museum exhibition podcast. These recommendations included:
- It should be in an interview tour format with the voices of those directly involved
- It should be as in-person as possible
- It should include binaural soundscapes for spatial presence
- It should include Image Description as part of the interview/discussion
- It should use authentic audio clips to bring the exhibit to life

- It should provide visuals, allowing the museum experience to be shared with vision-abled friends simultaneously
- It should be an entertaining and social experience

Podcast as exhibition

Podcasts organize and layer information in a similar format to the text hierarchy of an exhibition – a podcast "show" can be broken down into episodes (exhibits), which can then be further broken down into chapters (exhibit zones). The listener can choose to jump ahead, adjust the speed, skip, or rewind. This non-linear access to an exhibition is an important choice that is not available in traditional museum audio guides.

Podcasts can offer web links for exhibition images, alt-text, and screen readable text. These features are important for creating an environment that can be equally and simultaneously shared with sighted and partially sighted friends. An important component of the podcast would be good image description (ID).

Image Description

Image description is the term used to describe an object or photograph to someone with low vision. There are different techniques for image description: Audio Description (AD), Verbal Description (VD) and Integrated Audio Description (IAD). Their use depends on the form of engagement between the describer and the listener. AD and VD are specialized skills that offer interactivity with museum content and can enhance its understanding for the sighted and non-sighted [1]–[3].

Audio Description

Audio description is used in pre-recorded media such as movies, audio guides, and theatre. It is a one-way engagement.

Verbal Description

Verbal description is used when speaking with to someone. An example would be a docent who is giving a tour to a visitor with a vision impairment.

Integrated Audio Description

Integrated Audio Description is similar to AD except that the object or image description is integrated into the original exhibition content or film script.

CREATING A VIRTUAL EXHIBITION PODCAST/RADIO SHOW

The following methodology for creating a virtual exhibition podcast/radio show tour was developed in collaboration with Shelly Ann Morris, co-host and producer of the radio show "*Welcome to my World*" on CKCU, with advice from Christine Malic, co-host of the podcast "*Talk Description to Me*", and AD reference from the V&A and British Museum.

Timing
- Show – 44 minutes
- Lead in
- Advertisements
- Other

Roles and responsibilities
- Museum – content
- Curator – content
- Interviewer – writes script that includes questions, discussion, transitions, audio description – This role is the enabler of a visually impaired point of view
- Audio Describer – works with the interviewer and curator to meet AD guidelines
- Audio Technician

Framework
- Segues
- Introductions (Intro)
- Audio Description Primary (AD1)
- Audio Description Secondary (AD2)
- Curatorial 1 (CUR1)
- Curatorial 2 (CUR2)

This framework organizes the show's content. One of the benefits of a podcast is the ability for the listener to fast-forward or skip content depending on their personal interests. Much like an in-person museum exhibit, visitors can choose to skim or deep-dive. By being offered two levels of AD and CUR, the listener is given choices similar to the hierarchy of text in a physical exhibit.

The framework includes segues that act as transitions between the physical locations of the artifacts in the exhibition space. These are necessary for the listener to get a sense of the exhibition space. There can be opportunities for discussion and questions that are more spontaneous and personal. The framework is part of the storyboard/runsheet (see Appendix C)

Methodology
The methodology has 4 phases and involves the following disciplines:
The Big Idea – Show Plan – Museum and Curator
Content – Museum and Curator
Writing and Review – Interviewer, Curator, Audio Describer
Production - Interviewer, Curator, Audio Technician(s) and AD tester(s)

Content
Step 1 – The Big Idea – Show Plan
The museum determines what they would like to have highlighted and the overall message for the show. This message could hypothetically be an existing exhibition message or be new message based on a particular issue or related topic. For example, a show could be about a new acquisition to the museum collection or something topical to Canadian states of affairs.

Step 2 – Content
The museum provides the interviewer with the goal and theme of the show and the background materials. This would be discussed and negotiated with the interviewer.

Step 3 – Background Materials
The museum provides a list of objects to be highlighted in the show. The content would include background materials on the objects. The objects could be artifacts, images, audio clips or intangibles (for example, production techniques, use of object).

Step 4 – Preliminary Tour
The curator meets with the interviewer to do an in-person tour of the exhibition space and to discuss each object and overall message of the show.

The amount of time to walk through the exhibit is measured to be included as part of the segues.
The tour would also include a map to help plan the timing.

Writing and Review
Step 5 – Script writing
The interviewer creates the script for the framework parts (segue, intro, AD1, AD2,), transition and curatorial questions (CUR1, CUR2). The curator writes their script and identifies opportunities for adlib conversation.[iv]

Step 6 – Review

The curator and interviewer discuss and refine the objects' highlights and conversation, then rough-in the Runsheet.

Step 7 – Deep Dives
At this point the interviewer and the curator select which deep dive audio clips or content would be most compelling for an audio-only audience. Some of the content for the show will be available as visuals allowing for the sighted and non-sighted to share the tour experience.

Step 8 – Runsheet
The Runsheet timing is refined.

Production
Step 9 – Rehearsal
A first run-through of the interviewer/curator conversations is rehearsed, using pre-written scripts and transitions to check timing and cohesion.

Step 9.5 – Testing AD
A recording of AD1 and AD2 is created and tested for comprehension and appraisal. Adjustments are then made to the AD scripts as necessary.

Step 10 – Recording
Recording sessions are completed using separate microphones for the interviewer and curator (and audio describer, if required). Environmental sound should also be captured on location, using an omnidirectional microphone (for standard stereo mixes) or binaural microphone (for enhanced immersive audio - see endnote).[v]

Step 11 – Editing/Post-Production

CONCLUSION

The goal of this project, to create virtual (web-based) exhibitions that are fully accessible to the blind and low-vision community, began with ideas based on assumptions of visitor needs. However, the assumptions of needs did not include distinctive lifestyle characteristics. The consultation process generated recommendations for virtual exhibitions that were original and innovative. Research into how to execute the recommendations resulted in secondary explorations into operational factors such as podcast and radio show design, audio description script writing, and acoustic attenuations caused by different face mask designs [5].

The consultations and subsequent information discussions outside the interviews revealed that the blind and low-vision community is in need of museum exhibition services that are distinct to their lifestyle. Non-visual adaptations of vision-centric products, such as websites and in-person exhibitions, continue to frustrate and alienate the community. As a result, the community has often been forced to create adhoc substitutions to museum experiences that are social and engaging (for example the Curiosity Club and podcasts) for themselves. Projects like this one present an opportunity for museums like Ingenium to consult and collaborate with the blind and low-vision community to create innovative exhibition experiences that integrate more naturally and holistically into the lives of blind and low-vision people.

APPENDIX A – Summarized notes from consultation interviews

Accessible Website Experiences

1. What are your user experiences of "accessible" websites?
   - #1 Screen Reader: Make it accessible with a screen reader – text to speech
   - Label navigation – of button, links, headings, use alt text.
   - #2 Do testing: Pay attention to contrast, bold text for buttons, colour, layout vs messy, provide a preliminary "image" of the site as an introduction
   - #3 Interactivity: If there is interactivity, it should be well thought out – like images videos and questions. Include s a debrief as the beginning as a heads-up to what is on the page
   - The High.org was good because they had thought about every disability even dementia can sensory sensitivities
   - Loved the Cooper-Hewitt digital mansion
   - The indigenous website was most engaging and interactive.
   - Must be usable for people with little sight and use Zoom text and high magnification
   - There is a difference between a website being accessible and it being a good experience. Carleton's website is functionally accessible but it is not enjoyable.

2. What characteristics of a website contribute to a positive experience?
   - Accessible guidelines are great but how they are used is important.
   - Photo description – experimental vs standard. Have both audio description, alt text, and artist narrative (best). Alt text offers basic objective information. Audio Description is more subjective. Artist narrative is the best for something like art.
   - The robot voice of alt text can be sped up but not the human option is okay normal.
   - Authenticity is important. Don't do anything just for accessibility. It is better to use audio description than do a "sound" reproduction just for accessibility.
   - Right hand margins might not be seen
   - Left hand margins should contain primary information
   - Banners that jump around are bad
   - Contrast is super important
   - No broken fonts
   - No type on busy background.
   - Orient the person first and then navigate
   - Be able to look at it with High Magnification
   - Being able to track from left to right without getting lost.
   - Soundscapes are good and transcripts
   - No italic text and left justified text.
   - Use captions under picture as well as alt text
   - Hierarchy
   - "Click here" for more audio description
   - I really enjoyed the Indigenous website with its interactivity. It worked with her zoom function though the 360 function was not evident. She discovered that after.
   - Choice
   - Consistency
   - A good experience

Virtual (web-based) Exhibitions (VWE)

3. How do Omeka.org, collectiveaccess.org, rate for its user experience for someone with no vision?
4. On what occasion would you go to a VWE? (*this question will help determine the type interaction – fun or serious*)
   a. Cannot attend museum in person Yes

b. Entertainment/recreation Yes, Yes
c. Research – R , Yes Yes for Education

- S does not go to VWE.

- If you can't leave the house, if you are a caregiver, or if you are with someone who gets tired, a VWE means you can do it in spurts.

5. On what type of device would you prefer to access a VWE?
   - Anything
   - Smart phone or computer.
   - Be able to download the braille-book or screen readable text so it can be used at the same time.
   - Iphone because the screen readers are good. PC is okay.
6. On what type of occasion and how would you access a VWE with a friend (social experience)?
   - When you want to sit down and listen to something.
   - A website with others would be a date night activity or a kid's activity.
   - Yes with friends, kids, or as a group
   - Be able to share it with a sighted person at the same time.
   - I would test this with a friend before suggesting it to them.

Alternative VWE
7. If a podcasts could be used as a VWE, what kind of characteristics should it have?
   - Blind community loves podcasts
   - What is interesting is having the voices of people directly involved. Not a random person, not just audio description. Even better is to have the person directly related to the exhibit or artifact. Create it as a back-stage tour and include the physical sounds of going on a tour.
   - Feel the spatial presence. Include and add the sounds of textures that are real.
   - The Cooper Hewitt idea is great (*R had not tried it yet but I had explained the concept of dual audio description with images on an app*). Having a podcast and app and online is great. They should be in collaboration with each other and each must be stand-alone as well.
   - The Walking Tour was very good. It included an audio headset with audio describe. A positive experience.
   - Podcasts are popular in blind community. She would pick a podcast for entertainment. She would use a website for education. Podcast to have two hosts.
   - People might not think to go to a podcast for a museum exhibition but podcasts could be an option
   - Podcasts when you are doing something else – sit on a bus and listen to podcast or audio book.
   - "I am mad about podcasts"
   - Absolutely!
   - Most blind people know how to use them.
   - Some podcasts use 'chapters' or have 'episodes'.
   - You can jump ahead if you want to.
   - Websites have buttons to subscribe to podcasts.
   - Have the tour contained in one device so you don't have to jump back and forth between devices.
   - Podcast Tour with multiple feeds. Multiple episodes. Avoids extraneous content.
   - It could be organized by room or by themes.
   - Walking tour would be enjoyable. You get the feeling and the footsteps.
   - Podcasts are more appealing than navigating through a webpage.
   - Length of all the tour clips together would be an hour. Splitting it up into multiple podcasts episodes. Not bulked up into one episode.

8. "Take-out" museum, tangible objects.
   - It is like a Touch Tour. Yes to the idea. Small pieces are okay. Anything would be amazing. Anything and something is better than nothing.
   - Date night related to exhibit or with kids. No visuals
   - Interactive journal where you could have paper or electronics to record what you think about it. It could be a journal lesson that you can start or stop.
   - Not really interested - maybe as a group but not on my own. Use it as a conversation starter.
   - Not really, but it could be like borrowing books from CNIB with card to flip to return.
   - Does not interest me.

9. Live or Recorded Zoom with 'zoom' capabilities
   - Yes to the Zoom and it could play continuously like a YouTube channel.
   - Zoom tours with interaction like a live zoom session with guides who are trained in audio description. This could be done through partnering with AMI to train with someone who teaches descriptive language.
   - Zoom app is compatible with zoom function for making screen larger.
   - Yes, watching something together on Facebook as a group stream activity
   - Live recorded tour of the exhibit with a good description and then able to talk to the people afterwards would be great. You could sell tickets and also have them on the website after.
   - This is a definite NO.

Online Audio Experience
10. On what occasions should Alt text be used instead of audio description?
    - Alt text and audio description. Layer the information starting with the basic to more detailed if people want more information.
    - Would go straight to the audio descriptions.
    - Audio descriptions should be a real person speaking, not a computer reading text.

11. What would be the benefits/drawbacks of using audio clips versus Alt text? (rather than alt text saying "*this is an image of a dog*", hear a sound of a dog.)
    - The sounds have to be relevant. A good audio description is acceptable.
    - Alt text is very important for visitors who are deaf/blind.
    - S doesn't know about sound effects or using a sound description. "it's a tough one".
    - Audio description attention space would be a few sentences to add flavour.

12. What has been your experience with 3D binaural soundscapes?
    - Yes they are good and they could be helpful in the tour. We discussed headsets when watching TV and it is preferable due to the layering of sound. (*see #7*)
    - Heard one about being in a race. It was a soundscape of running - Paul Kennedy on the CBC. - Sonic Tour of a city.
    - Not a lot of experience. Soundscapes are very real and good with headphones. It would be cool to experience. Include sound effects, music of the time, things that give you the feeling
    - Binaural makes it an experience.

Converting a physical exhibition to a VWE
13. Exhibits often include objects that are not part of our daily experience. How could they be shared online with someone who is blind?
    - A good audio description. Describe the shape, colour, texture (bumpy scratchy), patterns, describe the background, what it is sitting on. I used the original synthesizer as an example.
    - Try to make the audio recording as in-person as possible. It is a "caché" to be in-person experience as possible.

Some of these questions have been answered through the questions above.

Tom's questions:

1. What do S and the group think of this online tour?
- They both liked the idea of a Podcast. It seems as though this is an important tool.
- N does not go to museums because they are inaccessible and the experience is good. But he said that he would do the virtual if it was a positive experience or the podcast.

   a) How would they navigate to the tour on their phones/computers? (i.e. how would they get to this website in the first place?)
- They suggested that if they know about an interactive component at the start of a webpage that is important.
- A link to a podcast from the website
- If the name of the podcast said who produced it, it would be easy for community to mention, share, find.

   b) Once they've arrived on the page, would it be easy for them to navigate to different sections that were most interesting to them in this virtual exhibition?
- S said that there needs to be an orientation at the beginning to tell people what is available and how to do any of the interactive elements. Also, information should be on the left.
- R said that there needs to be orientation at the top.

   c) Are they happy with the amount of descriptive audio, or -- if they never had any plans to visit the exhibition in person -- would they prefer to lose a bit of the descriptive audio and allot more time to the content of the exhibition (historical narratives, artifact descriptions, etc.)?
- Both as options. But having the descriptive audio and someone talking about the object or the meaning from a personal connection is better than a random person reading.
- Give people a choice to listen or to skip. Have a More button.
- Make the braille books and other text downloadable.
- Descriptive audio provides an experience.

   d) What are their thoughts on the lengths of the audio clips? Is 5-10 minutes ideal? Or would they prefer longer or shorter clips?
- R said that the text should be layered with the most important at the beginning and then more detailed as you go on so if you just want the basics you can skip the rest.
- For audio description, K said that there are standards for audio description. One of them is length.
- Give choices to skip or episodes/chapters.
- Audio descriptions to provide flavour. Podcasts to be broken up into episodes.

   e) If they were truly interested in the exhibition, how many clips would they likely listen to before fatiguing? In other words, how much time would they expect to "hang out" in the virtual exhibition before having enough of the experience?
- Have content organized as episodes or channels.
- Visuals to have the following hierarchy. Caption, alt Text, then audio description. Each has a bit more information.
- Channels, episodes, More button,
- Length of all the clips an hour? Splitting it up into multiple podcast episodes.
- Not bulked into one episode

   f) What are their other thoughts? Anything that they really liked about this? Anything that they found irritating or frustrating? Any way they would have improved it?
- After a podcast has been published, ask some listeners what they thought and if they understood. But get the content out there. Have a conversation with the listeners after.
- Even difficult topics like the Floyd George video they want/need to hear.
- A website can be considered accessible but the experience can still be bad.
- Netflix Original has great audio description because its the right amount of info, the tone of voice is done well and it is a kind voice.

2. In talking with S and the group, is there a way to compare/contrast this with:

a) a museum podcast? Video content on a channel like a YouTube that can keep playing but also in sections.

b) a virtual tour of another space? A Walking Tour with audio headset with audio describe was a positive experience. She likes a good walking tour.

c) any other accessible online experience they really like? (They must have their own examples of great sites they visit online on a daily basis, or have visited in the past)
Memorable experiences are ones that BRING IT TO LIFE. Using sound as part of the story.

d) any other accessible online experience they really hate, or think was terribly done?
See interview question #1. If it is not accessible with a Screen Reader. If it did not go through testing. Pay attention to contrast, bold text for buttons, colour, layout too messy, images on the site. And Interactivity needs to be well thought-out.
Really does not like the Carleton website even though it checks all the boxes for accessibility. It is not a good experience. Only reason he goes to it is because he has to.

This text was provided by Jim Hamilton who reviewed the tours as a contributor to a "curiosity club" that is organized by the CNIB (I think).

Audio/Virtual Museum Tours
Dec. 9/2020
Start:
The following 4 audio-track links were provided to Christine Malec, by a friend of Kim Kilpatrick who works in an Ottawa museum. Each of them "describe" an experience of visiting a specific internationally respected museum, or museum exhibit.
Prior to each link, you will find notes on my thoughts on each of these listening experiences. These "audio tracks" are well done, and they each have their strengths. Some of them are intended for persons who are blind/visually-impaired. And these contain more actual "description". All of them are informative.
Please note that, the new MS EDGE (Chromium), Firefox or Google Chrome, is recommended for link #4, instead of IE 11. This specific link/site calls up the "AudioBoom" app, which apparently does not get along with IE 11. However, the first 3 links use the "SoundCloud" app, and they work fine with IE 11, or any of the other browsers.
Each of these apps greatly enhances the sound quality of the respective audio pieces, and are called up when each link is activated. Also, with any of these links, "stereo" sound is advised, to feel immersed in the experience. "Of course, "surround sound" would be even more immersive.
Please check out the below information, and lose yourself into these listening experiences.

1. For the below link regarding the **Guggenheim Museum** in New York City: The enhanced audio description starts with where the museum is located, and describes what you will see/encounter as you approach the museum from what seems to be a few blocks away. This audio track has a very stereophonically immersive feeling, which continues throughout the whole track. As you are guided down the street toward the Museum, pass through the outdoor landscaping as you approach the building, then through the low-ceilinged wide entrance way, and then into the main rotunda, you get a very good stereophonic sense, from what you hear - aside from the description itself, of everything that's happening inside. This feeling continues throughout this audio experience. As such, you feel immersed, in all that surrounds you, including streetscapes - with people walking outside on the streets as you approach the museum, traffic noises, nature's sounds, fountains approaching the entranceway, and people milling around inside, as well as the "effects" of all that activity/human interaction happening in the museum's vaulted rotunda. Descriptions of the various sections of the museum, and some daily activities, were also well crafted/described.
Link #1:
https://soundcloud.com/guggenheimmuseum/sets/minds-eye-a-sensory-guide-to

2. The second video, from the **John Paul Getty Museum** in New York, is intended to provide an online "immersive experience" for all - not only for persons who are blind/visually-impaired. As such, there is not much description specifically intended for this group. The audio track is in stereo, and feels quite immersive. It follows a tour guide around the *Louis XVI Court in Versailles* exhibit. There were numerous sound effects that would make one feel part of the scenes being described as you wander through the various tableaus. As the tour progresses, sounds of the many crackling fireplaces, music, people dancing and various mingling courtiers, could be heard. One even gets a sense of some of the cultural aspects of living in the Royal Court at the time.
Link #2:
https://soundcloud.com/earprint/getty-binaural-louis-xiv-tour-full

3. This link provides an introduction to the **Metropolitan Museum** in New York. It was created in what was called a "3D sound experience" - not quite as immersive as in the previous items. The audio track did provide a lot of information through the narrator, recorded comments from current and previous staff, and several voices from the past. Various artistic pieces were discussed, but, they were not "described" in a way that would meet the needs of persons who are blind/visually-impaired. For instance, a few descriptions said a lot about what was "represented" in the artistic piece; but, there was little about the

"detail" that one would see - if one could. Don't get me wrong. It was great to hear about the history of the museum, the history of art in different cultures, and the few artistic pieces, which were more fully described than most of those discussed. But, more specific description would have been better.
Link #3:
https://soundcloud.com/metmuseum/500-exhibition-introduction

4. The last audio track presents a "walk" with Lawrence Johnston who designed, and donated to **Britain's National Trust**, the *Hidcote Manor Garden*. So, this is more of an "outdoor", than a "traditional" museum. "Recorded in 3D audio, the headphone experience transported visitors to periods in the garden's development and different scenes from Johnston's life and travels." - from the website.
The description on the website (Passporte) was quite riveting, and I was looking forward to hearing the audio track. So, I started up my browser, found the specific item, down-arrowed to "play audio", and clicked on that.
This audio track is in stereo. However, the "descriptions" are minimal at best. It was originally intended to be taken by all visitors with them around the museum, to spots where they could stop to see/hear other key features of the Garden. The following excerpted paragraphs provide more details of what visitors might expect:

"For example, visitors could listen in on a Transvaal plant hunting expedition (many of the plants Major Johnston returned with are still in the garden) or be transported to Hidcote's 1930s heyday, with socialites flitting through as they finished their games of croquet or tennis. The 3D effect teases the brain into thinking that sounds are really happening right next to you – creating a captivating (and often spooky) immersive experience.

The experience was delivered via a bespoke iOS app pre-loaded on to a number of iPod Touches that visitors could borrow. The audio guided the visitor between one point of interest and the next, but the app also provided a map for additional navigation and access to archive photographs to enhance the experience."

On its own, I found this audio track to be somewhat "rambling". Only general features were described. The only "sounds" that are heard, besides the voice of Major Johnston, are the multitude of birds singing/chirping throughout the garden. Actual visitors would get a lot more out of this audio track as they find their way through the garden with their iPod touches.
On this same site (Pastporte), there were other audio tracks. I listened to a few of them; but, they were in "monaural", and much less "immersive" than the above audio tracks. A couple of these were "interesting" but, hardly instructive, given the lack of audio description. There were also links for, "Immersive audio", "Immersive games" and more.
Anyway, I will leave the decision re whether to listen to the above garden tour, the other audio tracks available, or whatever else may be found on that site, up to you.
Link #4:
http://www.pastporte.co.uk/our-work/a-walk-with-lawrence-johnston-for-the-national-trust/

Show Plan: "Welcome to My World"

Date: _____

9:00 – 9:07 a.m. BBC News

9:08 – 9:10 a.m. Ads and announcements *legal station ids

9:10 – 9:11 a.m. Theme "What You Do With What You've Got"

9:12: - 9:14 a.m. quick intro, tell audience what they will hear on today's show

9:15: - 9:18 a.m. Play song while host gets Ray on the phone for weekly appearance (song name/artist)

9:19: - 9:24 a.m. chat with Ray about his "Ray's Pick" for the week

9:25: - 9:30 a.m. play Ray's pick while host gets guest on the phone or gets guest settled in studio

9:31 – 9:32 a.m. play legal station id at the half-way point

9:33 – 9:48 a.m. conversation with guest—if guest is a musician, have them play a song in the middle of the interview

KEEP EYE ON TIME! Around 9:45 or so, start winding down—"I wish we could talk more but we will have to leave it there….." Can you give us your contact info once more? Phone, email, website etc?

9:49 – 9:51 a.m. Say goodbye to guest

9:52 – 9:55 quick outro—say goodbye and remind people where they can contact the host

9:56 – 10:00 a.m. play outro—preferably an instrumental so that the next host can fade and start their show

Note: If station ids or ads appear in the list of things to be played from Media Touch, allow time for them to be played.

Note: These times are estimates—you can vary the time by a few minutes as interviews and conversations are unpredictable. The times are used as guidelines but keep things on track and have the show to end to allow sufficient time for the next host to settle in time for their show.

APPENDIX D – Useful References

Podcasts for Blind listeners

There are a lot of podcasts produced specifically with an audience who is blind. The following examples give an idea of the tone.

AMI Listen (https://www.ami.ca/listen)

Talk Description to Me (https://talkdescriptiontome.buzzsprout.com)

AD based events (live)

VocalEyes is a non-profit organization that trains verbal description and offers a verbal description service. The following is a website page for the events that they will be describing.

VocalEyes (https://vocaleyes.co.uk)

Legacy Circus - simultaneous audio description. This video is a recording of one of their events. What is interesting is that the describer is heard by all of the audience.

(https://www.facebook.com/LEGacyCircus/videos/2465260830360213)

Audio Guide for a museum

http://www.pastporte.co.uk/our-work/a-walk-with-lawrence-johnston-for-the-national-trust/

Accessible exhibitions - AD (in-person, experience recording)

Cooper-Hewitt

Accessible exhibition - AD (virtual experience recording)

Immersive audio-tour for a Getty museum in-person exhibition on Louis XIV

http://www.earprint.com/the-getty

MET atmospheric soundscapes

https://www.metmuseum.org/exhibitions/listings/2018/visitors-to-versailles/audio-experience

VocalEyes advice on recording AD

VocalEyes provides live and recorded AD services to cultural institutions including theatre and museums.

https://vocaleyes.co.uk/wp-content/uploads/2019/03/Recorded-AD-Guides-2019-03-29.pdf

Not all of VocalEyes advice applies to a podcast AD tour of *Sound By Design* and some of their advice contradicts what the consultants have said. For example, VocalEyes suggested that "it is not essential to mention [tactile opportunities] – some blind and partially sighted people may not be interested in tactile resources."

Verbal Description / Audio Description training

Christine Malec

CooperHewitt guidelines for Image Description

https://www.cooperhewitt.org/cooper-hewitt-guidelines-for-image-description/

ABS (Art Beyond Sight) Guidelines for Verbal Description

This is written for visual art but the concepts are applicable to the museum.

http://www.artbeyondsight.org/handbook/acs-guidelines.shtml

Diagram Center Image Description Guidelines

These guidelines provide great information about describing charts, maps, and technical images.

http://diagramcenter.org/table-of-contents-2.html

REPORT REFERENCES

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[4]   S. Rai, J. Greening, and L. Petré, "A Comparative Study of Audio Description Guidelines Prevalent in Different Countries," p. 112, 2010.

[5]   R. M. Corey, U. Jones, and A. C. Singer, "Acoustic effects of medical, cloth, and transparent face masks on speech signals," *J. Acoust. Soc. Am.*, vol. 148, no. 4, pp. 1–5, 2020.

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[7]   L. Quiroz, "Guggenheim's Audio Guide Brings The Art Museum To Listeners' 'Mind's Eye,'" *NPR*, 2020. [Online]. Available: https://www.npr.org/2020/10/30/928348744/guggenheims-audio-guide-brings-the-art-museum-to-listeners-mind-s-eye.

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[i] Bloomberg Connects app

[ii] An example is the Guggenheim Museum's collaboration with Mind's Eye. They developed a virtual tour of the museum's iconic architecture specifically for a non-visual audience [6]. This podcast also benefits sighted audiences because of its compelling verbal description brought to life by the voices of notable celebrities [7].

[iii] The following is a link to the Mind map. https://miro.com/app/board/o9J_kkWQYLE=/

[iv] See ongoing spreadsheet https://docs.google.com/spreadsheets/d/1aehy2_BfE04g1vENhBQAJx4q_-hW5OGah8lEFVh1UJs/edit#gid=0

[v] Binaural microphones are specialist microphones that capture atmospheric sound with greater spatial realism. Binaural recordings involve careful planning and advanced technique—and require that end-users listen with headphones, rather than loudspeakers, to preserve the desired spatial effect—so they are typically recommended for specialist applications (like immersive audio and VR).