Accessibility Guidelines for Presenting Research HCC Seminar

09/26/18

How to Make Your Research Output More Accessible?¹

1. Tag PDFs: Document structure is important!

- a. Tag headings
- b. Check and manually set read-order through Adobe Acrobat, pictured below, (or others) using their accessibility tools

Tools Sign Comment

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SOLAR SYSTEM SONIFICATION: EXP	LORING EARTH AND ITS NEIGHBORS	To	ouch Up Reading Order	×		
	H SOUND				•	Content Editing
Brianna J. Tomlinson ¹ , R. Michael Winters ² , Christopher Latina ² ,			Draw a rectangle around the con	tent then click	•	Pages
	Rane ² , Bruce N. Walker ^{1,4}		one of the buttons below:		E 🕨	Interactive Objects
	active Computing ¹ , Iusic Technology (GTCMT) ² ,		Text	Figure	•	Forms
School of Computer Scien	nce ³ , School of Psychology ⁴ echnology, Atlanta, USA				•	Action Wizard
btomlin@gatech.edu, mikewinters@g			Form Field	Figure/Caption	+	Text Recognition
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2 TRACT mal learning environt was (ILEs) like museums incorporate	i is largely supplementary. 6 his paper explores and expands the use of these auditory ex- periences in a planetarium show—a typically informal, passive		Heading 2 Heading 5	Cell	•	Accessibility
3 i-modal displays into their exhibits as a way to engage a wider group of visitors, often relying on tactile, audio, and visual means to accomplish this. Planetariums, however, represent one type of	learning experience that is predominantly visual. Leveraging the possibilities of spatial audio, a variety of quantitative information about each planet in our solar system was conveyed to an audience		Heading 3 Heading 6	Formula		Change Reading Options
ILE where a single, highly visual presentation modality is used to entertain, inform, and engage a large group of users in a passive viewing experience. Recently, auditory displays have been used as a supplement or even an alternative to visual presentation of as-	through sound (with some static visual anchors). Surveys collected during the show demonstrate that the show was interesting, under- standable, relatable and helpful, even to a sample audience without	se forr Lev	Backgroun	d		Full Check
tronomy concepts, though there has been little evaluation of those displays. Here, we designed an auditory model of the solar sys-	visual impairments. The results hold promise for the creation of future shows that entertain and educate through listening.	ive to				Open Accessibility Report
tern and created a planetarium show, which was later presented at a local science center. Attendees evaluated the performance on helpfulness, interest, pleasantness, understandability, and relata-	7	irve	Table Edito	or	1	🔊 Add Tags to Document
bility of the sounds mappings. Overall, attendees rated the solar system and planetary details very highly, in addition to providing open-ended responses about their entire experience.	Fication, or the use of non-speech sound to present informa- back and the spectral sector of situations and applications as a type of auditory display [10]. Even though there	tdie				Set Alternate Text
TTRODUCTION	is some precedence for using auditory displays as a way to pro- mote public interest in space and astronomy, there has not been extensive evaluation of these displays. Previous work has focused	the te ni	Show page content groups			🚨 Run Form Field Recognition
5 c engagement and prolong interaction for attendees [1, 2, 3].	on making sounds that are already collected through (radio) tele- scopes and other instruments available to the public. Harger and Hyde, and others have broadcast live sounds from radio telescopes		Page content order		1	🚫 Add Tags to Form Fields
Multi-modal exhibit design provides additional methods for pre- senting content to visitors, enhancing the experience for every- one, and allowing greater access to those with impairments [4].	over the internet and FM radio stations [11, 12]. Some work has explored using sonification and audification		Structure types			Touch Up Reading Order
Larger movements in incorporating universal design have resulted in greater development and evaluation of accessibility in these	(direct mapping of a dataset to sounds) to analyze data sets from space, such as Cosmic Microwave Background Radiation or the Search for Extra-Terrestrial Intelligence (SETI) [13]. Other recent	sit	Show table cells			💫 Setup Assistant
earning environments [5]. Descriptive audio tours and other au- ditory displays can support shared experiences for larger groups of visitors [6] and provide exploration methods for those with vi-	work includes Landi et al.'s analysis of solar wind through aud- ification of solar rotation data to explore carbon ionization [14].	en t s a	a bisplay ince clements in a single block			
tion impairment [7, 8, 9]. One example, the Aquarium Sonifica- ion created dynamic soundscapes through mapping fish charac- eristics and events within the tank, as a way to provide a unique	Ballora created more musically-composed sonifications for an out- reach film presented at the Smithsonian Air & Space Museum, but did not evaluate their success in presenting the information to at- tendees [15].	e h ork	Show tables and figures			
experience for individual exhibits [3]. On the other hand, not all LEs use multiple modalities in their presentations. As one exam- ole, planetarium shows are typically visual-only; or, if there is any	Recently, Quinton et al. developed a model for represent- ing characteristics of the Solar System [16]. Through an inter- view with a planetarium representative, they identified seven im-	ork gh ic. adi	Clear Page Structure	Show Order Panel		
	portant concepts to include in their model (density, diameter, grav-	nd	Help	Close		
		da				

Do this:

Not this:	HEARING NANO-STRUCTURES: A CASE STUDY IN TIMBRAL SONIFICATION								
	Margaret Schedel	Kevin G. Yager							
	Department of Music, Stony Brook University,	Center for Functional Nanomaterials,							
	Stony Brook, NY, USA	Brookhaven National Laboratory, Upton, NY, USA							
	mschedel@notes.cc.sunysb.edu								
HEARING NANO-STRUCTURES: A CASE STUDY IN TIMBRAL SONIFICATION									
¹ Brianna Tomlinson rocks!	Margaret Schedel	Kevin G. Yager	nt accessible.						
	Department of Music, Stony Brook University, Stony Brook, NY, USA mschedel@notes.cc.sunysb.edu	Center for Functional Nanomaterials, Brookhaven National Laboratory, Upton, NY, USA kyager@bnl.gov							

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2. Tag Word documents

a. Use the headings/style options available in word (it's surprisingly good at this)



3. Use alt-text

- a. For images, explain why something was important enough to include.
 - i. Is it a screenshot of text? Make sure to *write out ALL of the pictured text* in the alt-text.
 - i. Good alt-text gives meaning to the images.
- b. If it's a graph or chart explain it in a meaningful way!
 - i. What's the relationship between variables in the data?
 - ii. Descriptives (mean, median, mode, outliers, etc.)
- c. For papers or websites: You can set alt-text in a PDF, in a word doc, or in an image tag
 - i. You may have to reset alt-text in finalized PDFs. Always double check.

4. During presentations, describe slides out loud

- a. Read your slides out loud during the presentation
- b. Verbally describe all the images and information in your slide deck.
 - i. Avoid language like 'as you can see here.' Explain what's there instead: e.g., 'This graph represents the positive linear relationship between variable x and variable y. As one goes up so does the other.'
- c. Using these rich verbal descriptions helps everyone better understand your work

More Useful Resources

- The book A Web for Everyone: Designing Accessible User Experience is a great resource. On the website: <u>rosenfeldmedia.com/books/a-web-for-everyone</u>, you can scroll down to check out some free podcasts about accessibility.
- Yvonne So led a great workshop about accessible design at the Grace Hopper Conference in 2015: <u>www.slideshare.net/IntuitInc/accessible-design-breaking-barriers-</u> <u>between-disability-and-digital-interfaces-ghc15</u>

How to use the VM through Citrix to do PDF tagging:

You can use the Virtual Lab – Library logon to do this [you don't even have to leave your house]!

- 1. Go here for directions: <u>https://it.iac.gatech.edu/how-to/52</u>
- 2. Log into the library
- 3. Open Adobe Acrobat (it should be on the desktop by default)
- 4. Hit tools in the top left
- 5. Scroll down to this & add accessibility:

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