# ACCESSIBILITY

Curators and game designers should prioritize universal design - the principle that from the earliest planning stages, an event will be accessible to all, without adding accommodations as an afterthought or placing the burden of seeking out accommodations on the people using them. There is much to consider outside of physical ability, including age or language. Aim to create events and games that are inviting to everyone, no matter who they are.

Gamified social platforms, streaming festivals, and open-world galleries that feel like MMOs have sprung up to fill a social void during the 2020-21 global pandemic. Virtual experiences like these have made art more and less accessible. Remote, asynchronous programming may make some events and venues more approachable, but many custom applications do not include or support basic assistive technology, like text-to-speech features.

Games that are designed to be played in physical venues and gamified virtual experiences alike face easily addressable accessibility issues. Whether you are making games or curating them, consider implementing, looking for, or requiring these important assistive settings in games and interface design that can make gamified virtual platforms more accessible to all:

## Text

Closed Captioning is especially useful if it includes descriptive text in Plain Language. Plain Language orders information logically using common words, with important details first. (Harvard Plain Language resource: https://accessibility.huit.harvard.edu/use-plain-language) Game designers and virtual exhibition developers can implement customizable and resizable fonts/text colors, add text-to-speech functionality, provide real-time translation, and implement Alt-tags.

## Color

How much does your game or event rely on color distinction? For people with colorblindness, a setting that alters red and green tints so they are more distinguishable can be extremely important. It is even better to consider this from the start - design physical signs at events or UI and assets in games in a way that is legible to people who see color differently.

## Mobility and Physical Interaction

When planning events offline, consider how people will access spaces and featured projects. According to the ADA, wheelchair ramps must have a 1:12 slope ratio and a 5×5 flat area at the top and bottom of the ramp. Wide pathways and allocated spaces to sit will also be important for an accessible event. It is good practice to inform your attendees of these options prior to the opening of your event.

Game developers can explore innumerous methods for obtaining input, like voice control, eye movement, or blinking, touch, and more. Some gamers experience tremors or reduced mobility, making controllers and keyboards more difficult to use (button mashing in general is not comfortable for many people). To help with this, PC and mobile games alike can include modes with larger hit-

boxes and reprogrammable controller buttons. In AbleGamer's 2012 accessibility guide, *Includification*, Steve Spohn (author, advocate, and COO of AbleGamers Charity) wrote, "Assistive technology is great, but its limitation is that the more buttons you program, the more complicated they are to use". An accessible game doesn't need to be stacked with built-in options — it should be at least playable with the fewest controls, or better yet, a few customizable controls. For example, some people will not be physically able to button mash. If this mechanic is the minimum requirement to play a game, an accessible version of the game could involve programming one button press to register 10 presses. Can this someday become a standard expectation for games on exhibition floors? For people with limited mobility, it can be imperative that a game includes a setting that prevents the game from ending if motion controls are not used with the required dexterity. Otherwise, a setting that will reroute motion controls to a button-based controller is helpful. (AbleGamers https://ablegamers.org/ founded in 2004 by Mark Barlet and Stephanie Walker.)

## VR, Immersive Platforms, and Accessibility

Unfortunately, VR is still a generally inaccessible platform for many reasons. Headsets present physical and logistical problems in exhibition spaces — some people may not be comfortable standing for long periods of time or performing repetitive tasks, with the added emotional pressure that others may be queued and waiting for a turn. In her 2020 article for Medium's Debugger publication, *The Oculus Go Wasn't Designed for Black Hair*, Arwa Michelle Mboya describes her 220-participant study on the topic and delves into the problematic logistics of wearing Oculus straps (a design that has since carried over to the newer Oculus Quest II) over black hair. (She also prototypes her own new design.)

Despite the ever-shrinking cost of new Oculus models, the price or availability of a headset is still prohibitive for anyone interested in casually dropping in on your virtual exhibition in VR. Meanwhile, VR games for Rift or tethered Vive models will require a gaming machine. VR can have a serious dizzying effect on participants, and headsets may not accommodate all types of eyewear. And, everything considered, it may be a while before it is safe to share forehead sweat with a stranger.

As much as I love VR, I believe that browser-based 360 video, AR, and "3DoF" VR for cheap Cardboard-style headsets deserve support. Seriously consider programming, making, or building virtual platforms for mobile devices! Browser-based collections like Radiance and with.in, or curated mobile VR applications like the 2017 New Museum x Rhizome project, Artists' VR are on the right track — these implement technology that most people have in their pockets.

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