

Accessibility index

Accessibility is playing an increasingly important role in the video game industry, and today many studios want to integrate accessibility into their projects. Unfortunately, the tools at their disposal, such as Game Accessibility Guidelines [1] or Xbox Accessibility Guidelines [2], although effective, are difficult to use for people new to accessibility. Conversely, one area in which developers are experts is the definition of their own game. We therefore need to provide them with a tool that can advise them on accessibility issues, based on a precise, detailed description of their project.

We could imagine a system in which a developer is presented with a checkbox system, and asked what features are present in his game (colors give essential information, there's text on the screen, you have to hold down an input for more than a second, etc.), after checking these boxes, the tool would then propose the associated accessibility features that should be integrated into the game (plan to transmit information with an additional method for color-blind people [3], add a Text To Speech [4], include a toggle/hold option [5], etc.). Unfortunately, given the constraints of video game development, such as time and money, it won't be possible to integrate all these accessibility features, so developers will have to make a choice. To help them make this choice, it would be ideal to specify which accessibility features to integrate, depending on their time constraints, in order to optimally increase the level of accessibility of their game.

However, it is currently very difficult, if not impossible, to assess a game's level of accessibility. Some specialized websites, such as CapGame and its rating system [6], or Family Gaming Database and its tag system [7], are trying to find a method. The aim is to create an accessibility index that can objectively assess the level of accessibility of any game. The work of Paola Pesántez-Cabrera et al. [8] offer a way of thinking about this issue, and simply propose a ratio between the number of accessibility features correctly integrated and the number of features that can be integrated. The main problem with this method is that it puts the importance of all possible accessibility features in a game on the same level, whereas it could be shown that this is not the case. It could easily be argued that making accessible a core gameplay action performed very regularly by holding

down a button for several seconds will have far more impact than subtitling the few dialogues present exclusively during the game's final cinematic. It will not be possible to put toggle/hold on the same level as subtitling in such a game.

So how do we assess the importance of the various accessibility features? This is just the beginning, and there are a few ideas (estimating the frequency of the feature, whether or not it's essential to progress in the game, whether it's possible to compensate for the feature's accessibility in other ways, etc.). But surely the solution lies once again with the developers. As accessibility features are associated with gameplay features, the people best placed to define the importance and hierarchy of these gameplay features are most certainly the people who develop the game.

[1] Game Accessibility Guidelines, <https://gameaccessibilityguidelines.com> (2012)

[2] Xbox Accessibility Guidelines, <https://learn.microsoft.com/en-us/gaming/accessibility/guidelines>

[3] Mateus Pinheiro, Windson Viana, and Ticianne de Gois Ribeiro Darin. 2023. Why Should Red and Green Never Be Seen? Exploring Color Blindness Simulations as Tools to Create Chromatically Accessible Games. Proc. ACM Hum.-Comput. Interact. 7, CHI PLAY, Article 380 (November 2023), 32 pages. <https://doi.org/10.1145/3611026>

[4] <https://www.readspeaker.com/blog/video-game-accessibility/>

[5] <https://gameaccessibilityguidelines.com/avoid-provide-alternatives-to-requiring-buttons-to-be-held-down/>

[6] CapGame Testing <https://www.game-lover.org>

[7] Family Gaming Database <https://www.familygamingdatabase.com>

[8] Pesántez-Cabrera, Paola & Acosta-Uriguen, Maria-Ines & Jimbo, Veronica & Sinchi, Pablo & Cedillo, Priscila. (2020). Towards an evaluation method of how accessible serious games are to older adults. 1-8. 10.1109/SeGAH49190.2020.9201655.