

Category: **Student Work**

Project: **Eye to Ear – Gallery of Audible Images**

**What was the challenge?**

Worldwide there are estimated 285 million visually impaired people of which 246 million have low vision and 39 million are blind. (cf. WHO fact sheet 2014) Inspired by interviews with visually impaired people in Austria we have taken the goal to enable art experience for those who cannot see very seriously. In terms of accessible art some museum programmes already offer haptic representations like 3D prints or tactile paper. However, it needs to have descriptions in combination to the sense of touch. In summary, without trained art educators these tools are not comprehensible and the offer of special art programmes is still rare.

**What was the solution?**

We developed a smart and easy tool which makes images perceptible. "Eye to Ear" is the first app for art experience using audio and user interaction. The iOS app combines sound design, verbal description and interaction

on the iPad. The key is a mix of linguistic description, user interaction and a sound design, which allows users to explore individual areas acoustically. The synthesis of language and sounds opens up a much broader spectrum of cognition and intuition than simple description alone. Through the combination of sound, touch and description a self-determined art experience is possible.

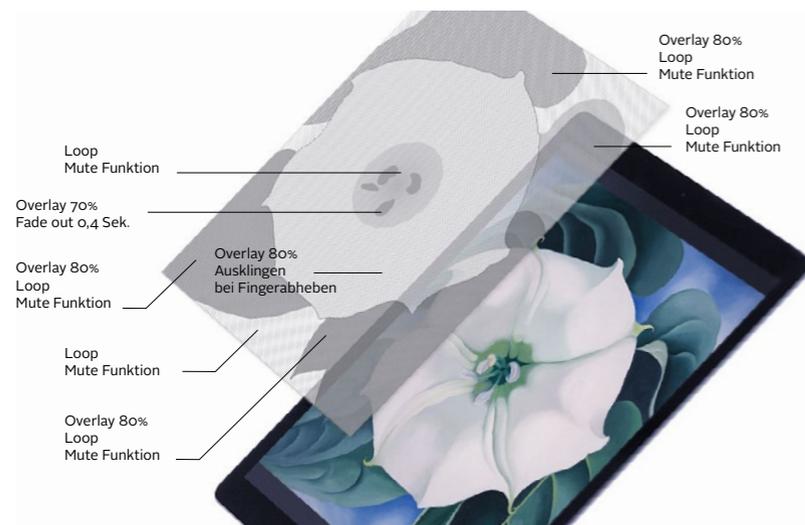
**Three levels of audio source deliver information about the artwork and therefore provide an image for the recipient. The content is triggered by different easy-to-use gestures:**

Swiping: A soundscape represents image composition and a pictorial mood. Doubletap: Image regions are linked to spoken keyword descriptions. Two fingers moving downwards: Each image contains a more detailed visual description including information about the artist.

We linked the app to the built-in screen-reader (named VoiceOver) since the community is used to deal with those options on their smart devices. In addition to that, the app comes with three display sizes and an invert-option for better legibility as well as a tutorial.

**The Story**

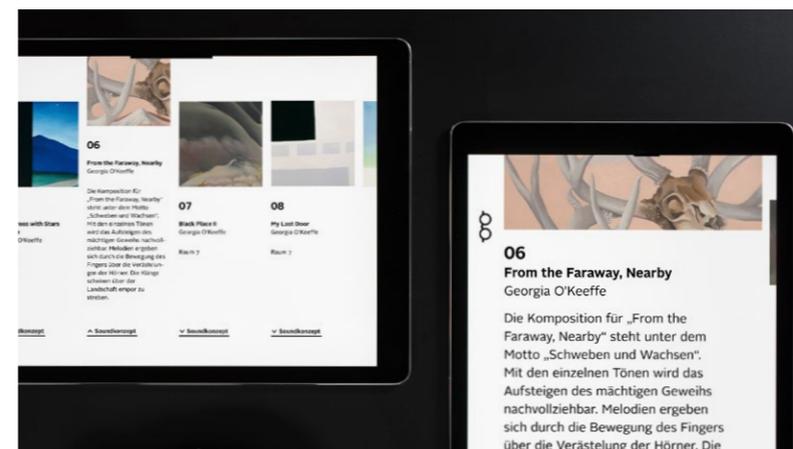
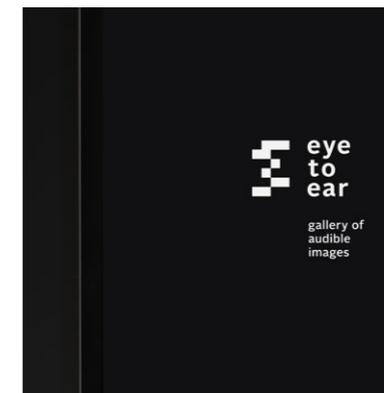
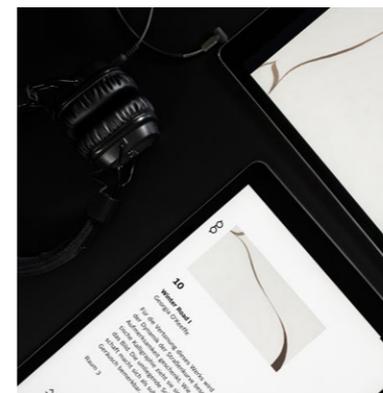
We teamed up with multimedia guide developer "NOUS Wissensmanagement GmbH" to professionalize the concept technically. The first showcase of the app took place in the context of an actual exhibition, in particular the retrospective about the artist Georgia O'Keeffe at "Bank Austria Kunstforum Wien" running from Dezember 2016 to March 2017. The whole design process was accompanied by members of the "Austrian Association of the Blind and Visually Impaired" through valuation.



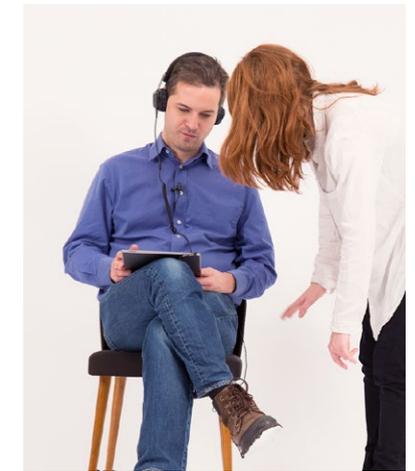
schematic layout of a sound image and "Eye to Ear" in use: artwork by Georgia O'Keeffe, "Jimson Weed/White Flower No. 1", 1932, Copyright Crystal Bridges Museum of American Art



diverse features: tutorial, zoom-function and invert-option



ltr., ttb.: soundimage and its explanation, logo, menu in display size 1 (landscape) and 3 (portrait)



blind person testing "Eye to Ear"

**What was the effect?**

As the actual usage by visually impaired people has shown, the interactive and digital approach gives people a new autonomy in independent and self-determined art experience. Due to the mixed method of sound, verbal description and interactivity blind persons envision images very accurate to the actual artworks. Visually impaired persons are encouraged in taking part in a discourse about art. As our tests have shown, due to the playful character of the app, sighted persons enjoy this alternative art experience too, in particular children.

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