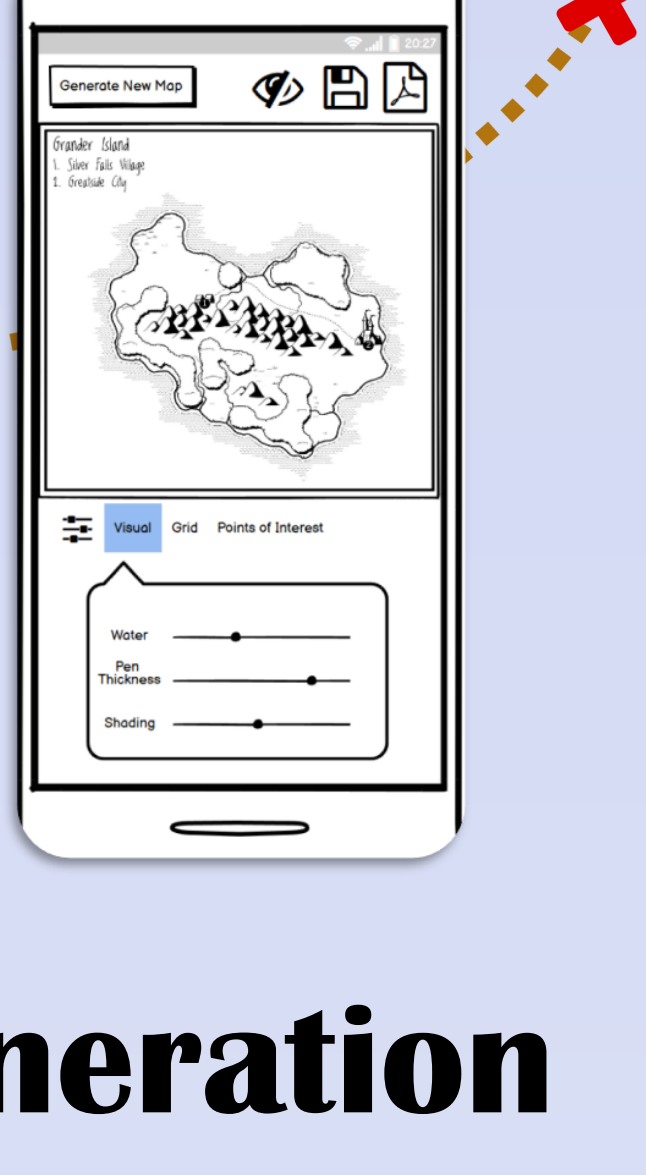


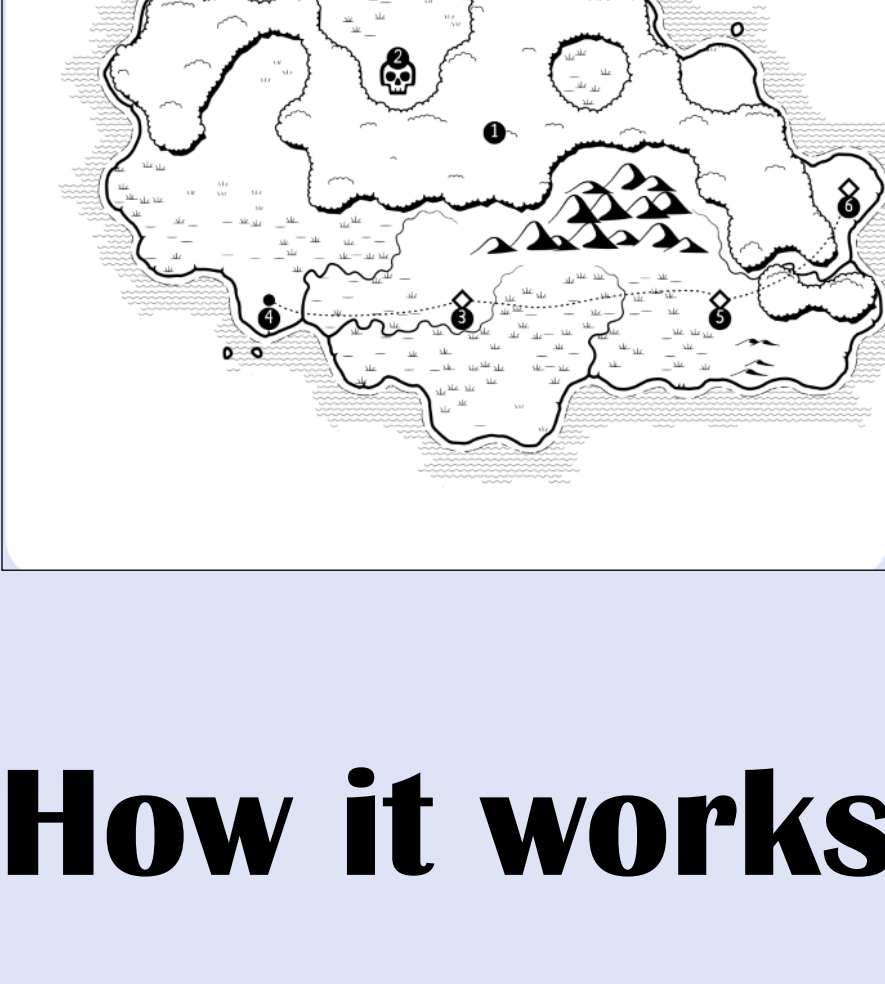
Creative Cartography

UX Accessibility Design & Evaluation

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Fantasy Map Generation



On the popular indie developer platform itch.io, you can find the free map generation program called *Perilous Shores*, developed by Watabou.

This powerful, simple program randomly generates fantastical maps like the one shown here.

Free tools and generators like Watabou's keep creative gaming communities alive, but it's difficult to find free *accessible* resources.

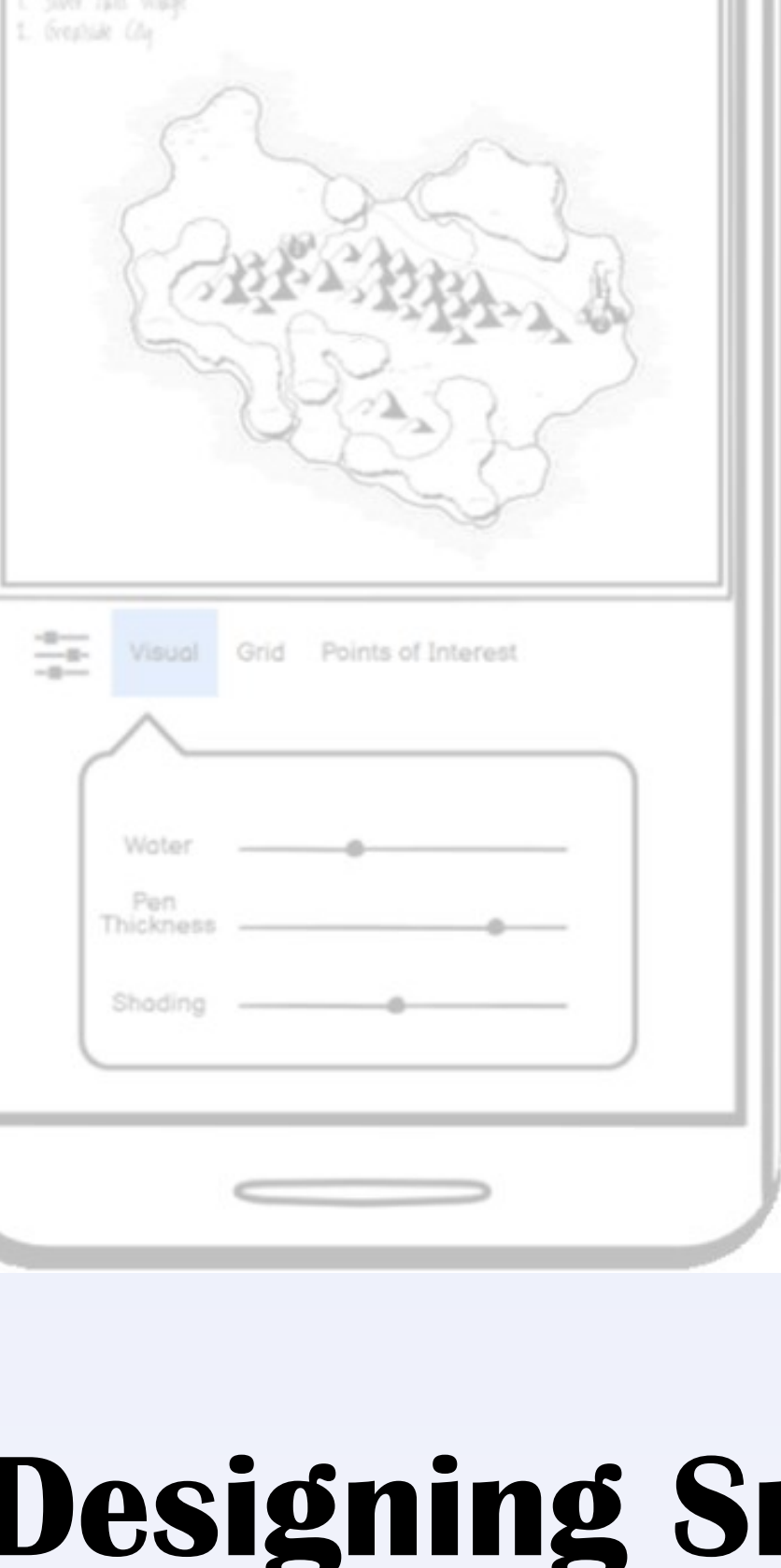
That is why we designed an accessible mobile app interface for this free map generator.

How it works

An accessible mobile app still needs to abide by UX design principles, which is why we spent extra time researching and testing the number, type, and placement of all the icons and settings of our mobile interface.

Our Main Menu.

The goal of the app is to generate maps with one click. The buttons located here drive the primary functions of the app. Without leaving the top register, users can generate maps, save them, and share them.



Performs the primary function of this app: **one-step map generation.**
Alt Text: "Button: Generate new map"

Activates voice-to-text mode.
Alt Text: "Button: Engage Accessibility mode for the visually impaired"

Saves the current map.
Alt Text: "Button: Save current map"

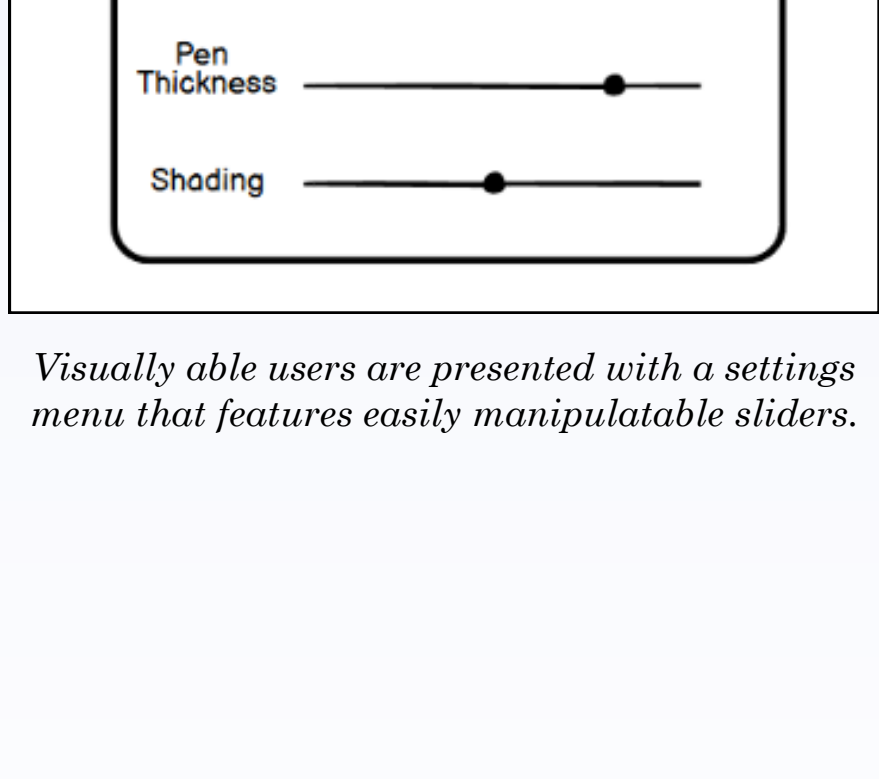
Exports the current map as a PDF, with options to share it.
Alt Text: "Button: Export map as a PDF File"

Designing Smart Settings

We designed the settings menu to facilitate easy operation for visually impaired users without sacrificing interaction for visually able users.

Because screen readers read left to right, a signpost exists in the form of the slider icon.

This icon's alt text is read first, followed by the titles of different settings groups. We chose to break up settings into groups, preventing a screen-reader from listing every settings option each time.



Visually able users are presented with a settings menu that features easily manipulatable sliders.

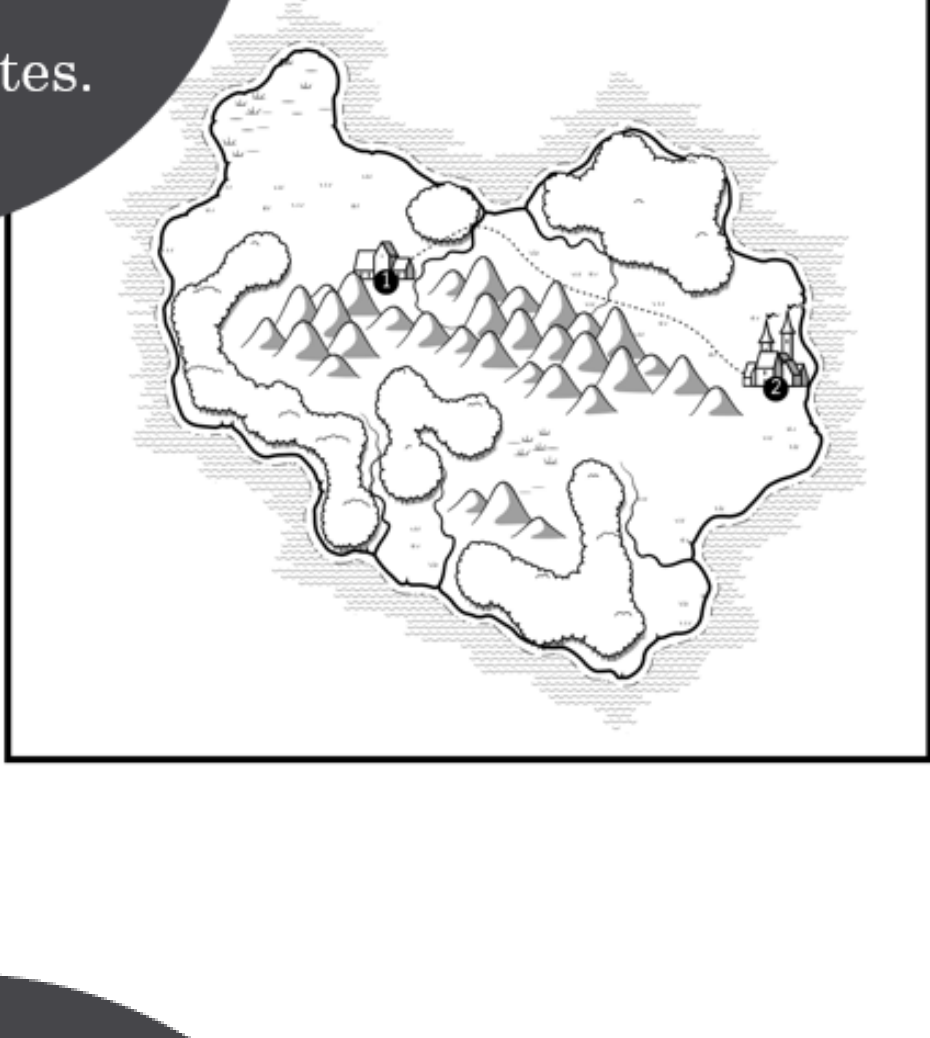
Designing with accessibility in mind

We developed an app that focuses on accessibility options for the visually impaired.

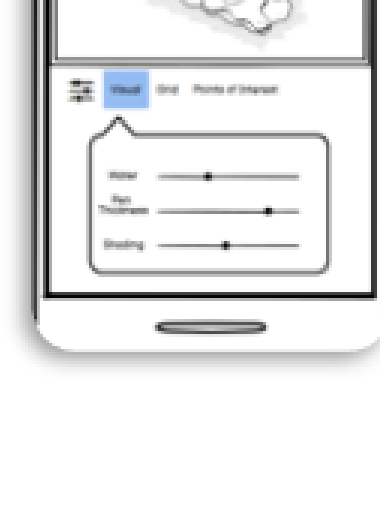
How can the visually impaired use a map-generation app?



Our app generates accurate, descriptive Alt Text for every map the user creates.



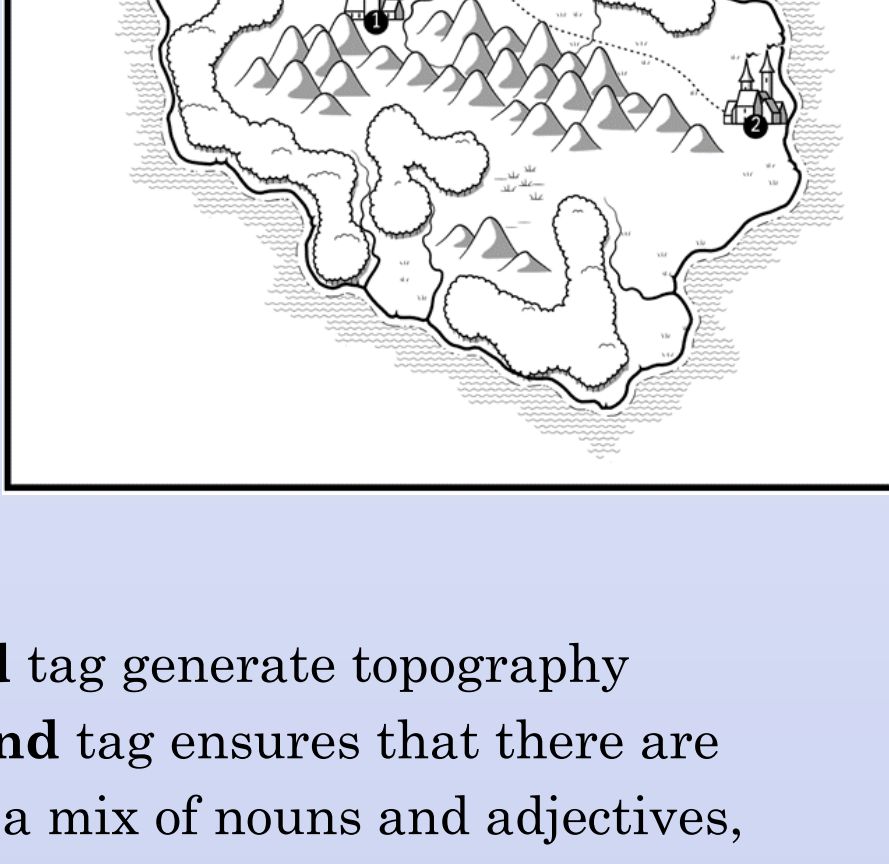
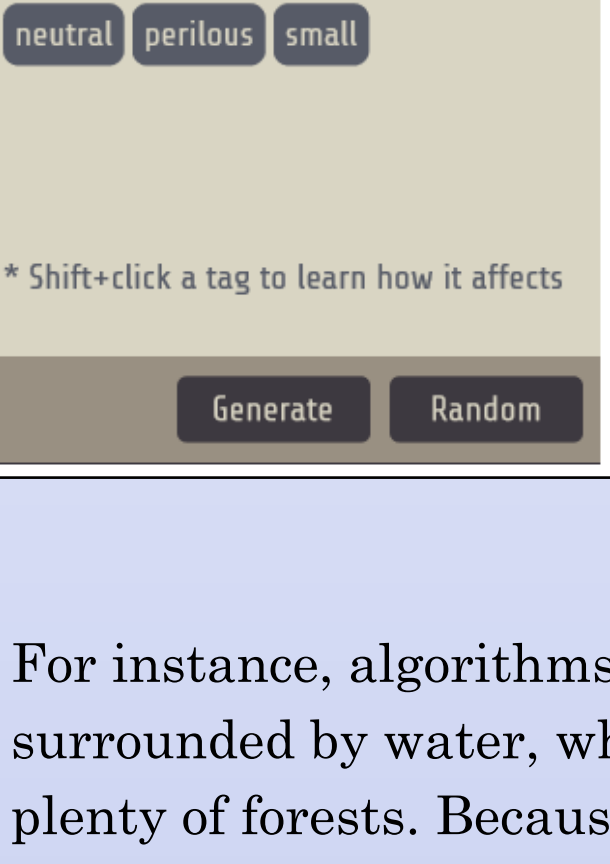
and The app features a button for accessibility mode, which enables dyslexia-friendly fonts.



Accessible Mapping

Watabou's program uses algorithms to randomly generate the map. These algorithms are given a tag, so that users can customize the generation process.

For example, the tags below correspond to the map on the right.



For instance, algorithms with the **island** tag generate topography surrounded by water, while the **woodland** tag ensures that there are plenty of forests. Because these tags are a mix of nouns and adjectives, they can be strung together to form coherent descriptions of the map.

We designed our mobile app to insert these descriptions into the Alt Text of each generated map, allowing visually impaired users to get accurate descriptions of the map.

A screen reader would read the map displayed above as:

"A map of Grander Island, a region with a couple points of interest: Silver Falls Village and Greatside City. The region's topography can be described as a large island with wetlands and woodlands. Its inhabitants are civilized and lawful."

With a simple interface and robust accessibility options, our app makes fantasy map generation available to creators from all walks of life.