



moh-jee 文字



Clara

MFA Advanced Product Design



Leon

MFA Interaction Design



Pius

MFA Interaction Design



Bene

MFA Advanced Product Design

Dear jury, we are a group of students from Umeå Institute of Design in Sweden. For this project, we wanted to design something for our younger selves, rooted in play, imagination, and curiosity. We hope it sparks joy and a sense of wonder, and the feeling of becoming part of a story, for both us and for other children who want to bring their imagination to life.

Our goal

How might we bring children's
imagination to life?

Early technology adoption is rising rapidly, around **40% of toddlers have a tablet** by the age two, and by age four, ownership climbs to **58%.**



[1] <https://www.commonsensemedia.org/press-releases/digital-childhood-starts-at-age-two-landmark-study-shows-evolution-of-young-childrens-media-use>

Ideation

Guided by how technology can support children's imagination, we explored generative AI as a storytelling companion. Among four concept directions, interactive story building proved the most engaging.



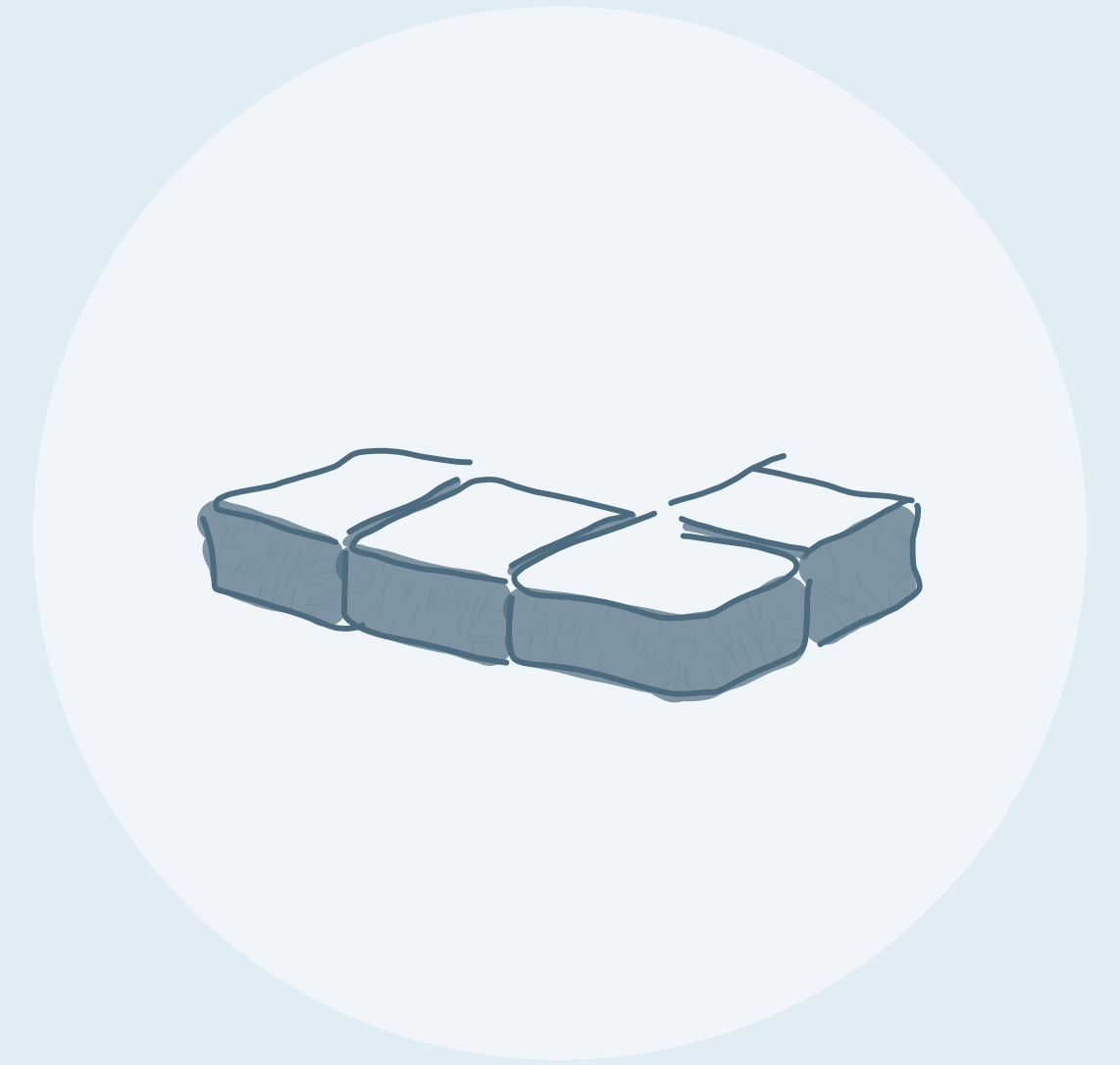
Story generation with sketches



Outdoor input capture device



Cube storyteller



Multi-Input story snake

Iterative Prototyping

The form evolved through iterative prototyping, balancing ergonomics, playfulness, and clarity of interaction. Each refinement responded to how the object was held, connected, and explored in real use.



Exploring by playing

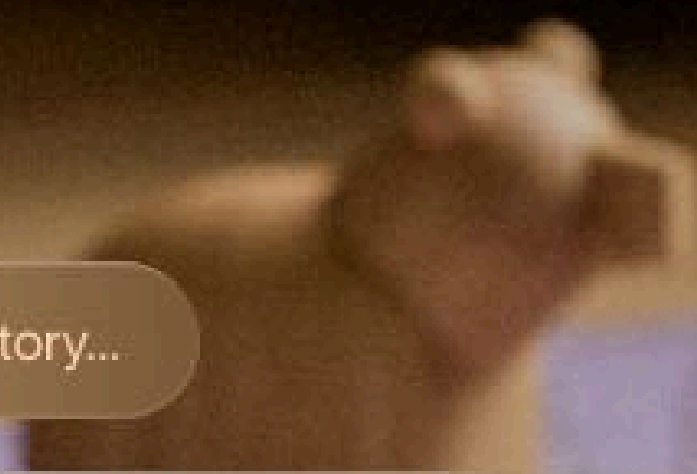
We tested with Roby, a 5-year-old, and his mother to see how children might interact with the toy and what stories they would create. Solo play proved challenging at this age, emphasizing the need for collaborative or guided play.

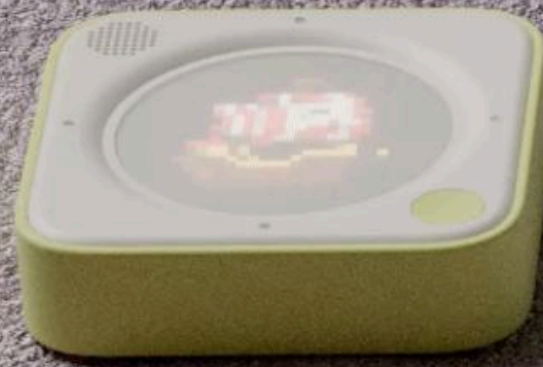




Playing story...

Once upon a time, Leo the tiger and his alien friend Zip set off in a UFO across a sea that stretched further than any eye could see...

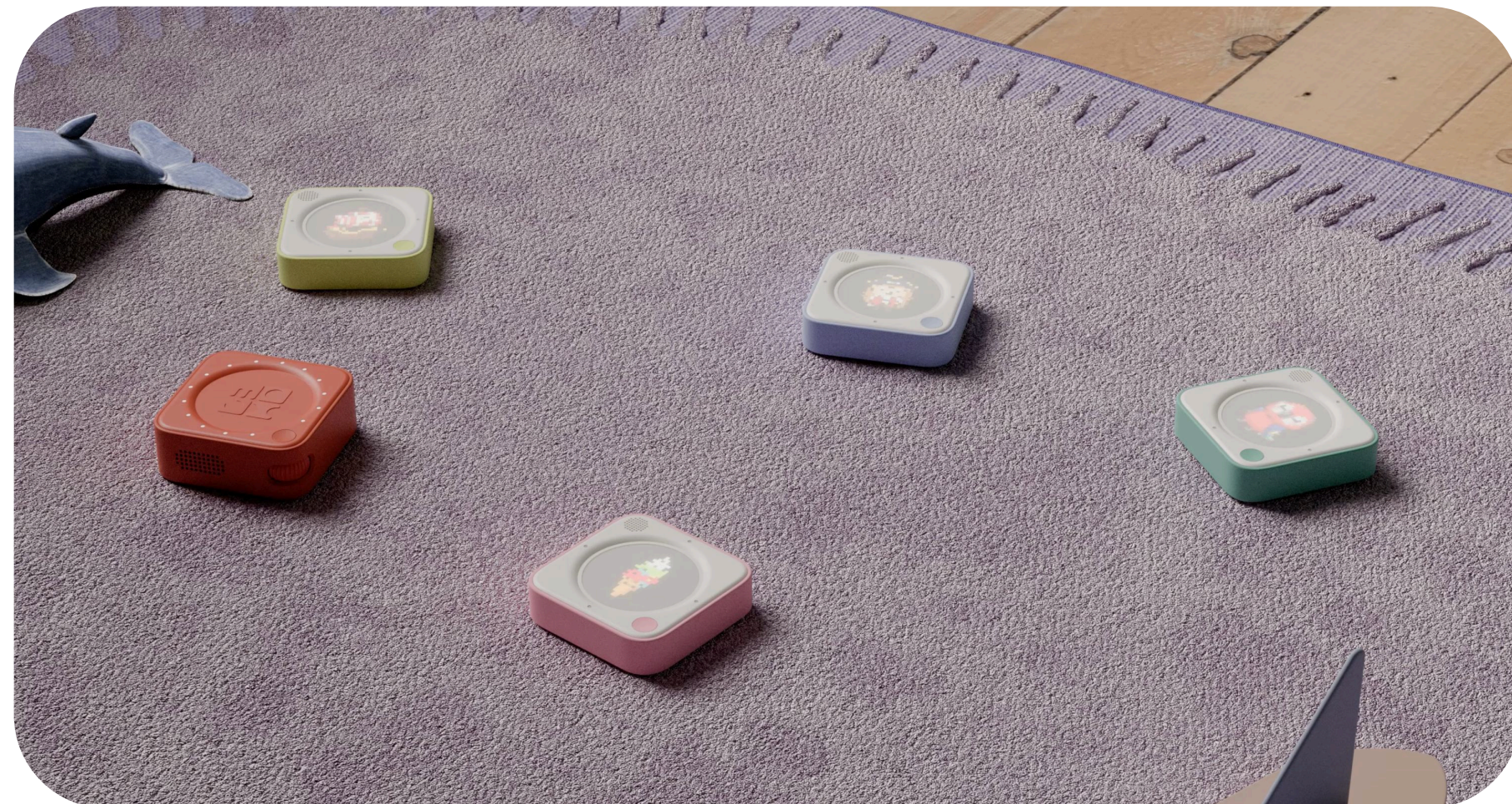




Story generation

Combining the first 4 inputs

Once the four inputs are set, the tiles can be magnetically combined to generate the first part of the story.



The setup

Four interactive modules allow users to actively shape and guide the story, enabling dynamic and responsive storytelling. The base functions as the main speaker, providing consistent audio output as the narrative unfolds.

Interaction
Modules

Main Speaker

Charging Base



Input Button

Long press for voice input

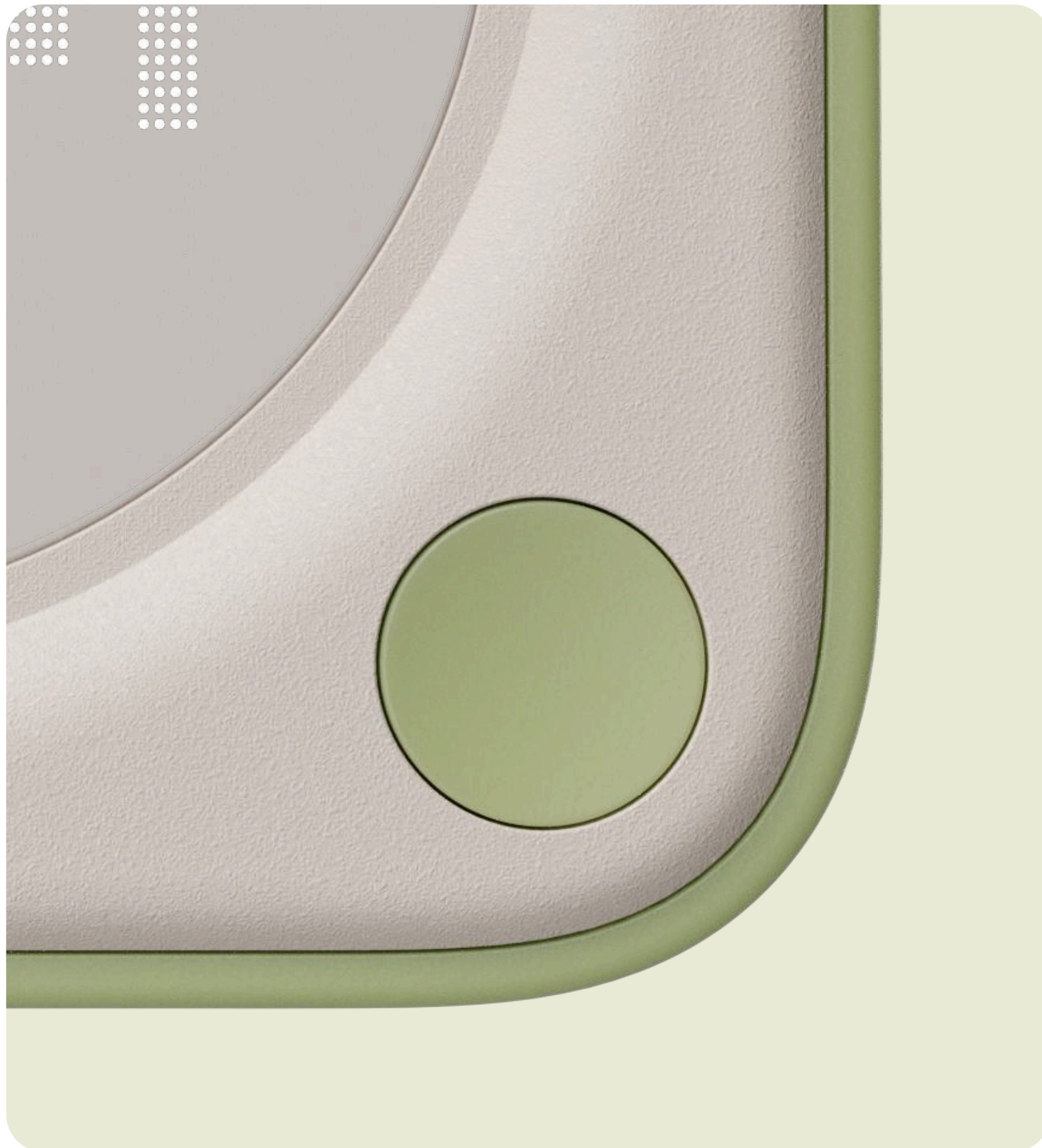
Users can add ideas in two ways. Long-press a tile to record a voice input and speak whatever comes to mind.



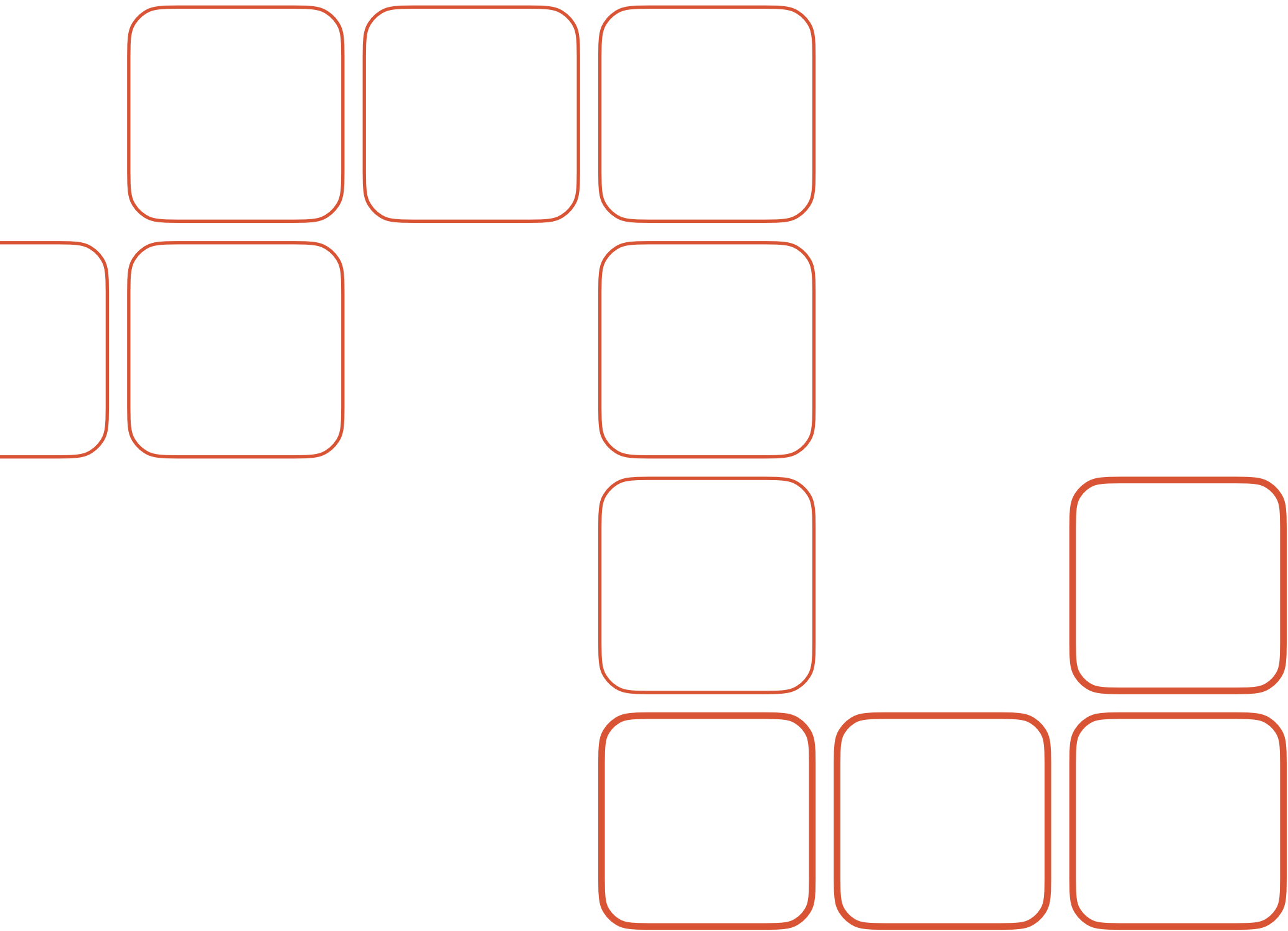
Input Button

Single press to toggle library of old inputs

Short-press a tile to cycle through recently used characters, places, and objects, making it easy to revisit beloved elements and build on earlier stories.



Setting story length

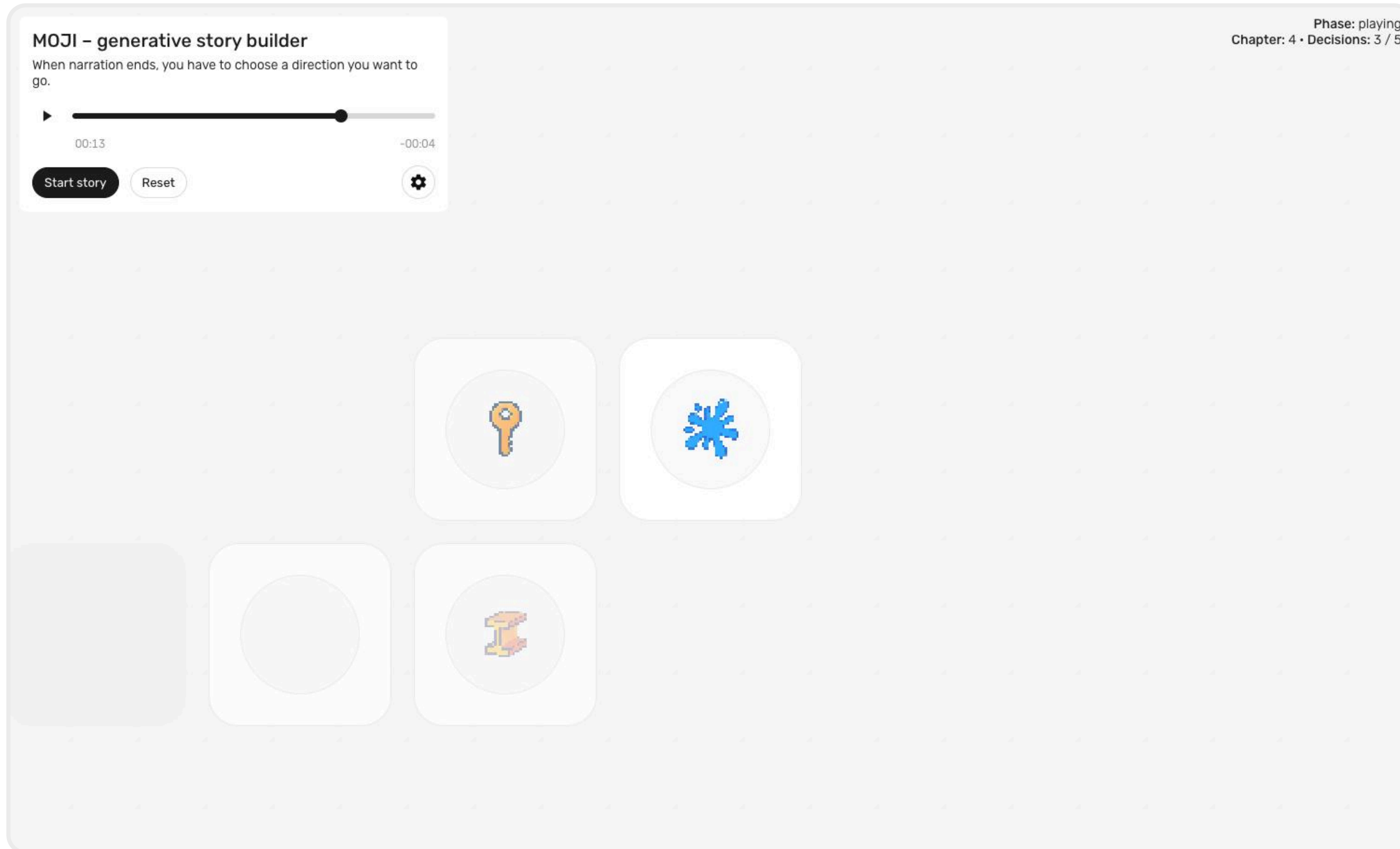


After setting all inputs, the base allows users to set the story's length using a rotary dial. Each tile represents a chapter, and the number of LEDs on the base indicates the total chapters in the story.



Technical prototype

Understanding the story building experience



As a proof of concept, we developed a technical prototype using ChatGPT 5.2 to generate stories and ElevenLabs to produce sound and natural narration.

Test the prototype on <https://moji-prototype.vercel.app/>

Building the story

Generating a chapter requires an input

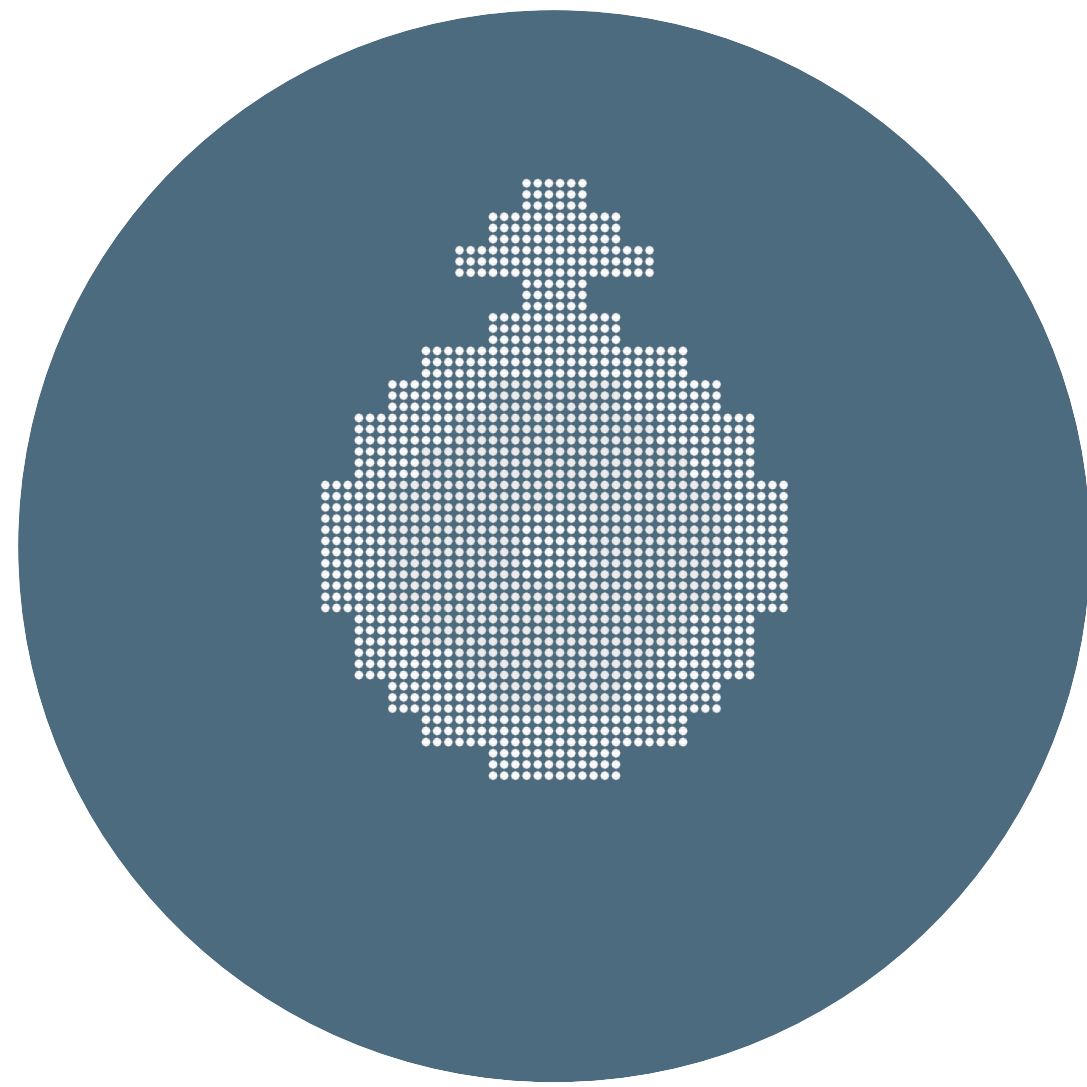


After a chapter ends, the story can be continued in three different ways.

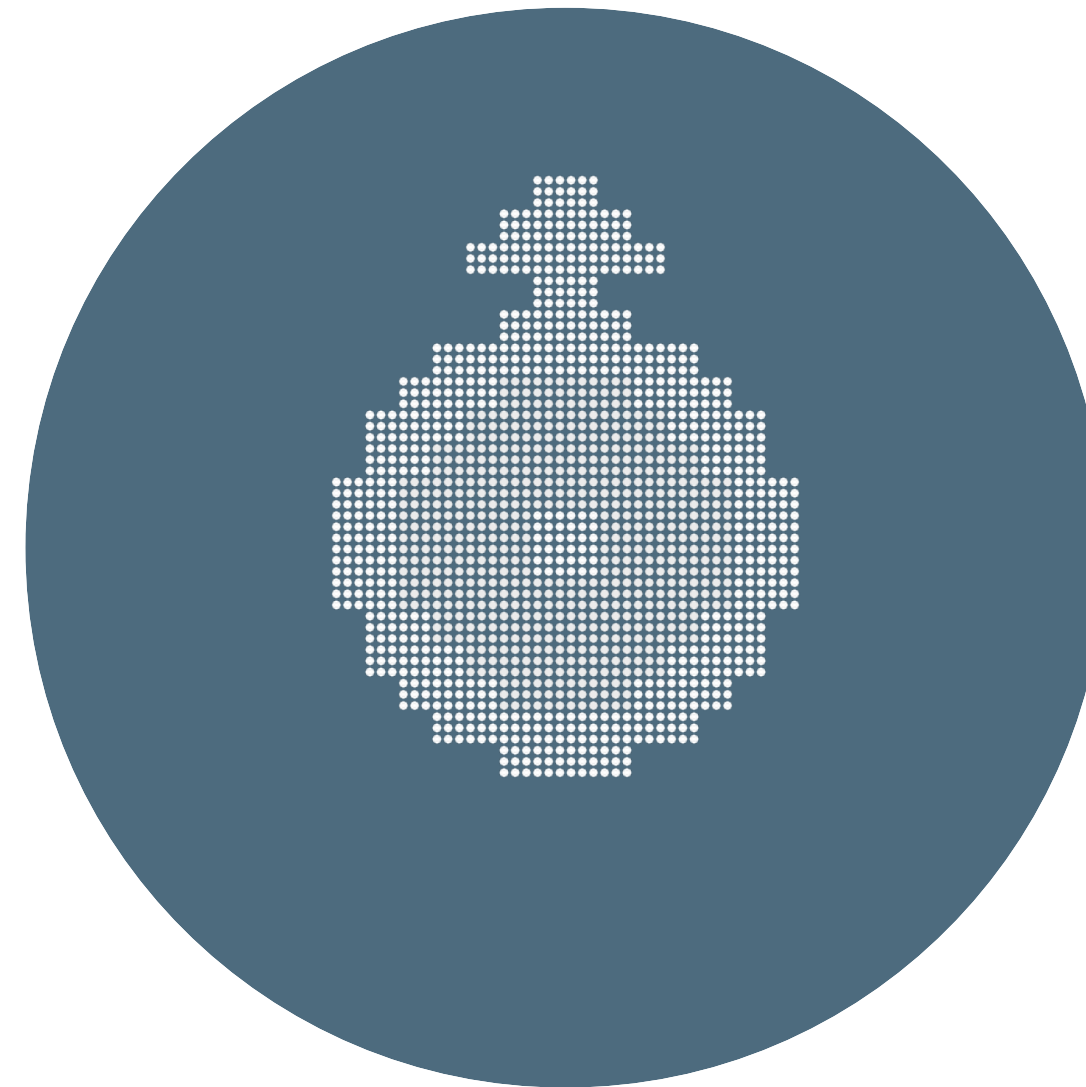


Types of actions

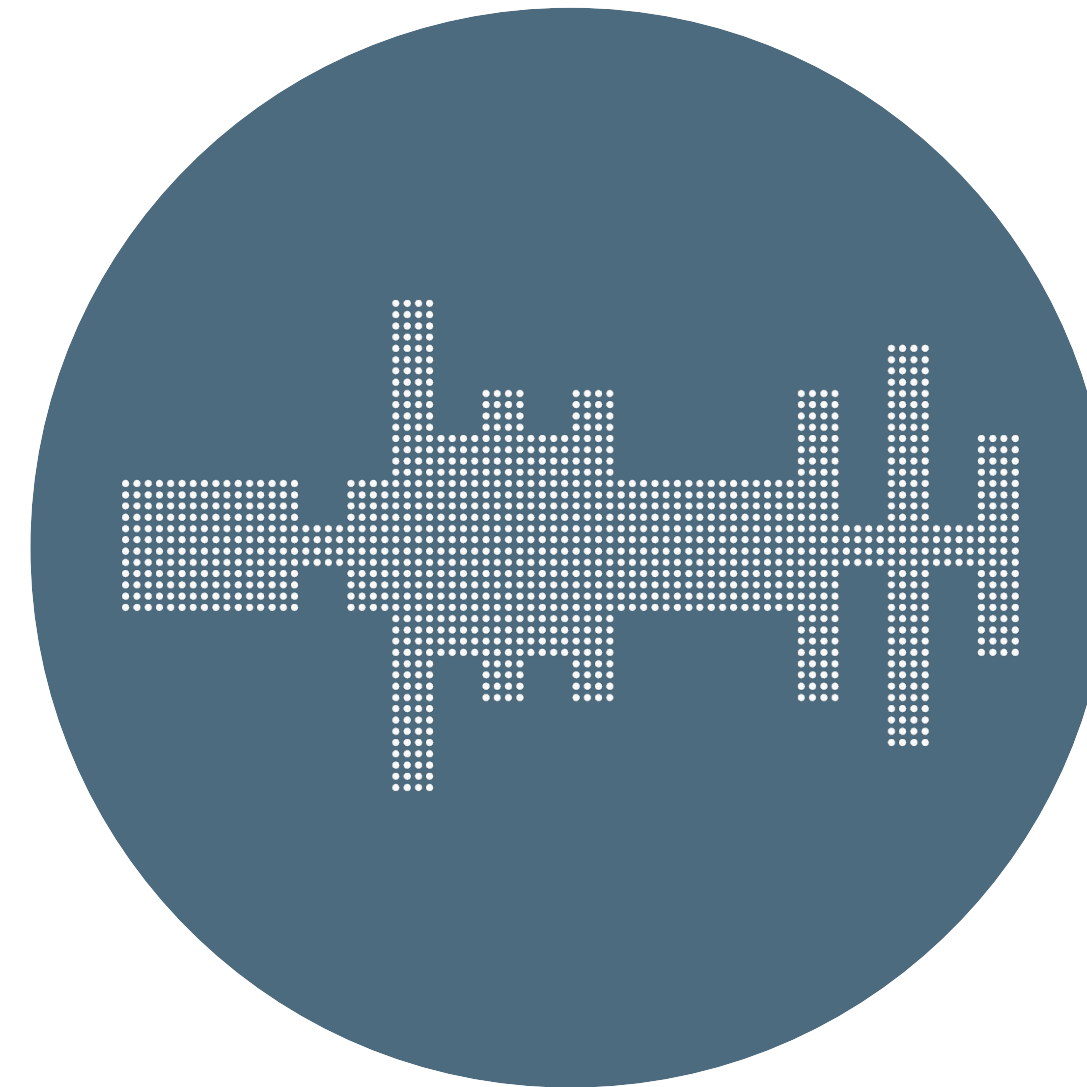
An ambient teaser hints at what's next, a riddle poses a challenge, or an open-mic input shapes the narrative freely.



Ambient Tease



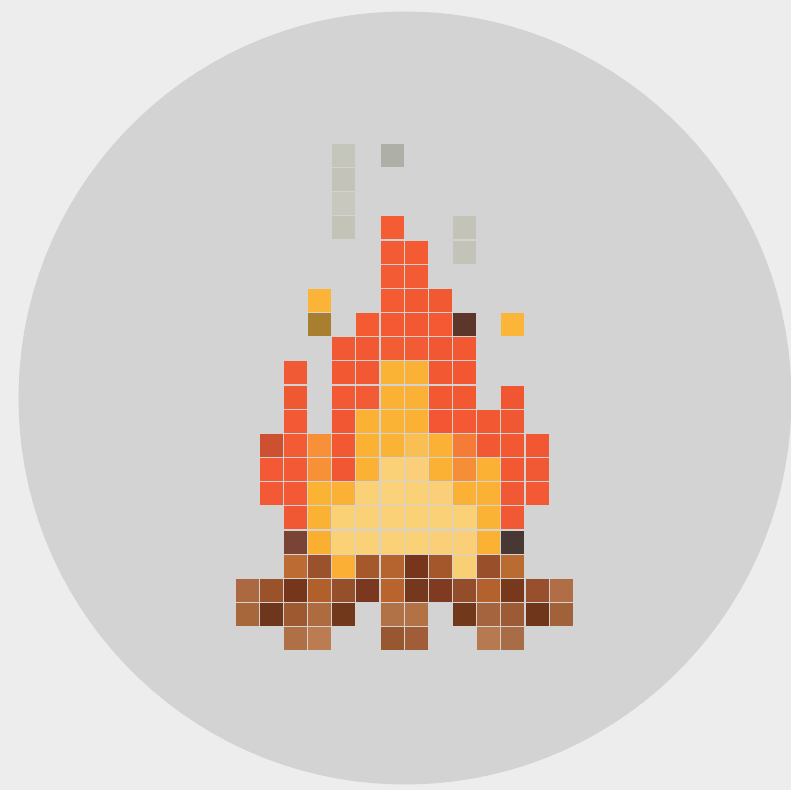
Riddle



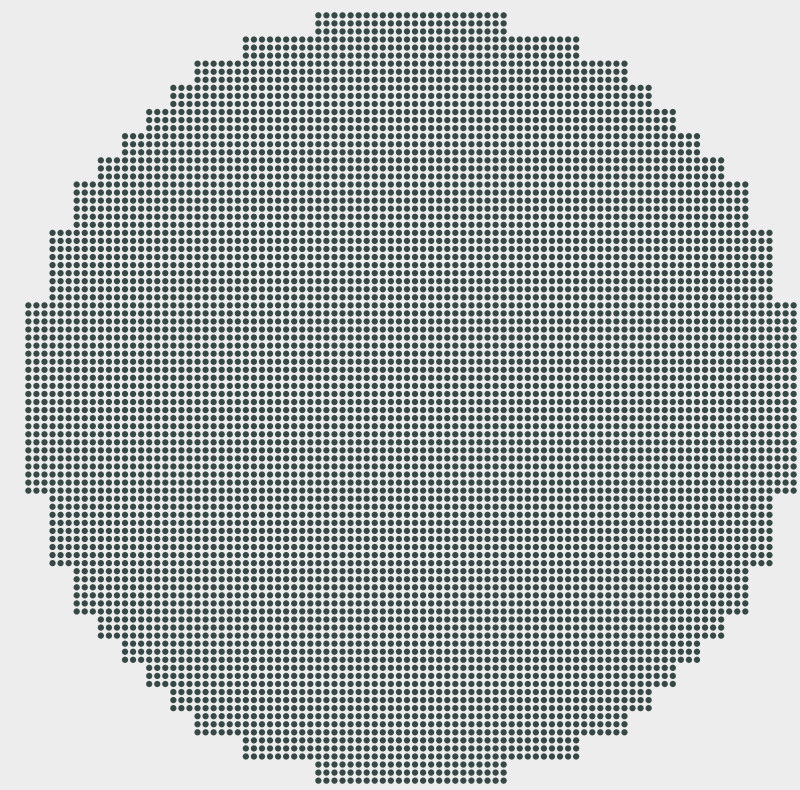
Open Voice Input

Designing a screen that doesn't feel like one

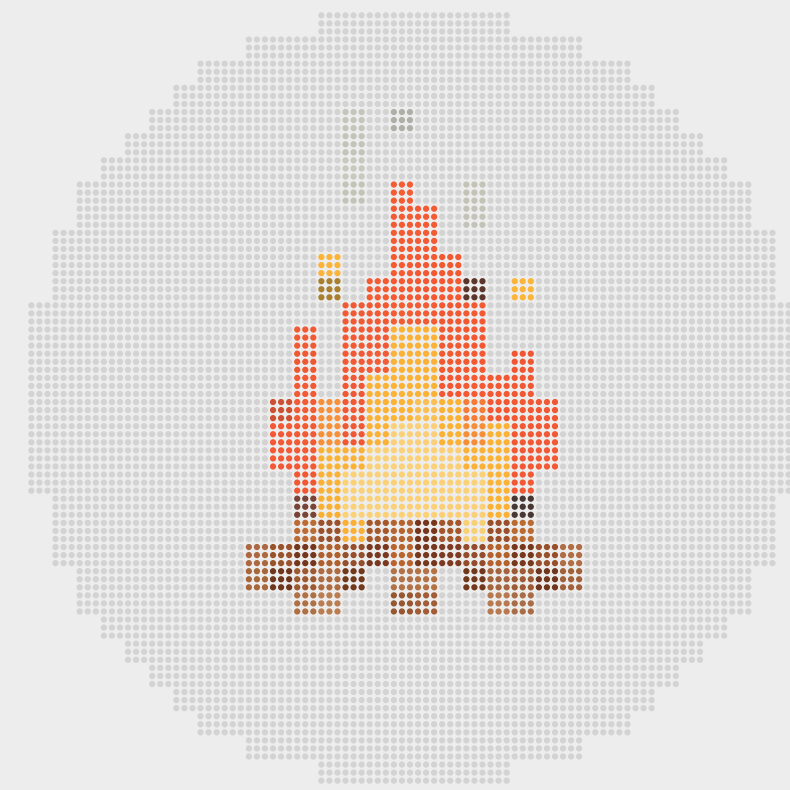
Instead of a typical screen interface, we explored a more subtle, embedded display that blends into the object and supports storytelling through simple, atmospheric visuals.



32px graphic



96px LED grid



final graphic



Adaptive Modes

We decided to embrace unexpected interactions: creating a loop lets the story continue automatically and stacking a tile pauses the narrative.

Loop

Passive listening to generated story

Snake

Active listening and creating





Stackability



Stackability



Mode Toggle

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Ambient Creation



Narrated Story

