



HOW THE ILLUSTRATORS AND DEVELOPERS BEHIND
MINUTE OF ISLANDS
SHOWCASE THEIR MAGIC

Studio Fizbin lands its lofty artistic goals and a multiplatform launch with optimized asset streaming and enhanced 2D effects.



→ **THE CHALLENGE**

Creating a sharp, highly stylized package that replicates the flat visuals of a comic book – with zero compromises

→ **THE PLATFORMS**

PC, PlayStation 4, Xbox One,
Nintendo Switch

→ **PROJECT STAFF**

10

→ **COMPANY**

Ludwigsburg and Berlin, Germany

STUDIO FIZBIN: A UNITY CASE STUDY

How does an art-driven team create remarkable 3D effects in a gripping and emotional 2D puzzle game? To achieve an authentic comic book style that looks illustrated rather than computer-generated, [Studio Fizbin](#) gave artists the lead and asked developers to find the tools and techniques to make their vision happen.



SOMETIMES IT TAKES A BAG OF TRICKS

The Fizbin artists wanted the graphic elements of *Minute of Islands* to look authentically hand-drawn, so they illustrated the entirety of every level – each a mountainous, crannied, full-featured island – as a single, massive image and cut it into 4K graphics. From parsing these files and rapidly prototyping them to optimizing asset streaming and launching on multiple platforms, the developers used a variety of powerful Unity features to reinforce their unique and innovative skills.

THE RESULTS

- Improved content with rapid prototyping from contributors at all skill levels
- Ensured reliable game performance by consistently profiling memory
- Created four game versions from one code base
- Optimized live content delivery using the Addressable Asset System
- Achieved a perspectival look with 2D objects using a Unity-enabled signed distance function (SDF) generator



MAKING PEOPLE THINK, FEEL, AND CARE

Sebastian Hollstein, Alexander Pieper, and Mareike Otstrand, students and gamers at the Film Academy Baden-Württemberg, started Studio Fizbin in 2011. They made their first 2D adventure collaboration, *Inner World*, with Unity, and the title is still a popular download on Steam.

With each title, Fizbin's goal is to create an experiential game with heart – according to *Minute of Islands* game director Anjin Anhut, "Fizbin has always wanted to tell relatable, empathy-driven stories that entertain and also make people think, feel, and share."

A Fizbin game jam in 2018 sparked the *Minute of Islands* project. Fizbin's art director wanted the game to look like a comic book, in the tradition of works by European comic masters such as Hergé or Moebius. The group got excited about creating a game with a unique art direction, where lines and colors were wholly drawn and composed by illustrators in a style that suited them.



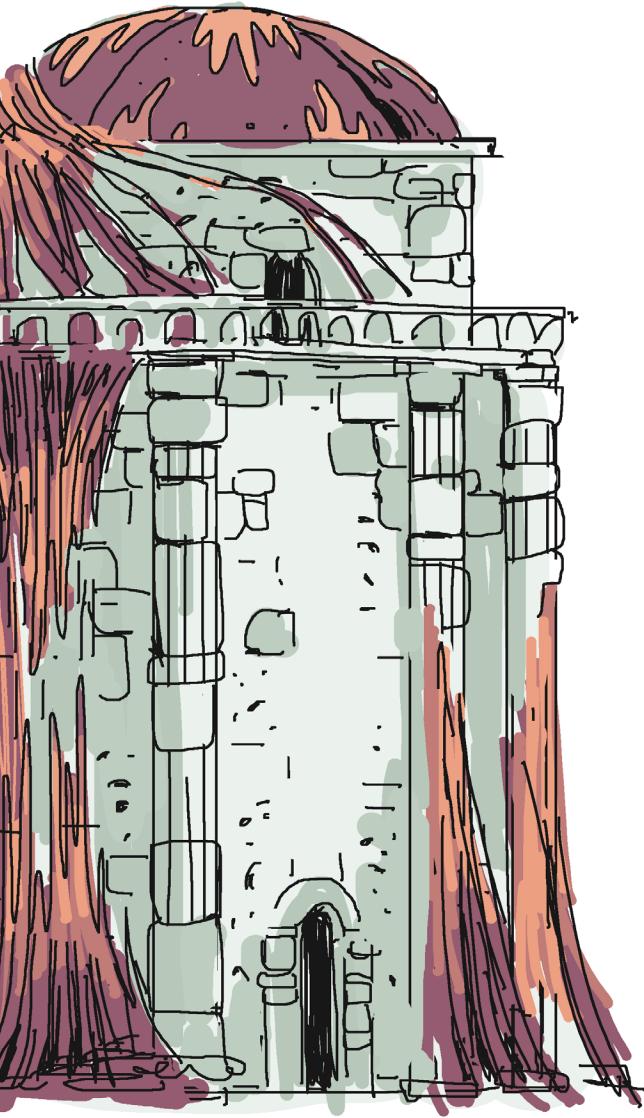
Watch the official trailer for Studio Fizbin's *Minute of Islands*.



BUILDING A BEAUTIFUL, UNFLINCHING GAME

First written as a screenplay, *Minute of Islands* follows a young mechanic named Mo on a quest to save her world from ecological collapse. Making *Inner World*, Fizbin built levels as rooms where players solved puzzles to move to new areas. Mo's world, however, is an archipelago where each level is a huge standalone island. She solves puzzles to make progress within one massive drawing.

These huge, detailed illustrations, one for each island, were too large to produce in one Photoshop file. To enable efficient asset streaming, Fizbin divided each drawing into grids of texture objects – between 60 and 100 per island. Although it was a very labor-intensive process, the result was worth it. In a five-star review, *Adventure Gamers* called *Minute of Islands* “a beautiful, unflinching game [with a] breathtaking visual style, moving story and intensely affecting presentation.”



DEVELOPING FOR MULTIPLATFORM REACH

Fizbin's three founders first learned Unity in school, where it was the standard teaching tool for animation. As they added to the studio's talent, they were able to draw from a substantial pool of Unity developers and they found that this skill set paired well with other specialties. Anhut adds, "We are definitely a Unity shop, but we contract with artists and developers who use different tools like Maya and Spine. Unity works with third-party apps very easily."

As experienced Unity developers, Fizbin knew they could use one code base and quickly create multiple game versions for PC, Xbox, and PlayStation.

When they started the *Minute of Islands* project, Nintendo had just released the Switch. Before they decided to deploy to Switch, Fizbin hadn't anticipated the console's need for an flexible asset management system, which meant they had to retrofit their considerable asset libraries for Unity's Addressable Asset System, well into production, which took quite a bit of effort. Oberbeck advises, "If you're going to target Switch or if you're even thinking of mobile devices, set your content up for [Unity Addressable Asset System](#) at the very start."

"WITHOUT UNITY, WE PROBABLY WOULDN'T HAVE DONE MULTIPLATFORM AT ALL. WE'D HAVE TO WRITE OUR OWN ENGINES, WHICH WOULD HAVE BEEN MUCH MORE DIFFICULT."

— Julian Oberbeck, Tech Artist, Studio Fizbin

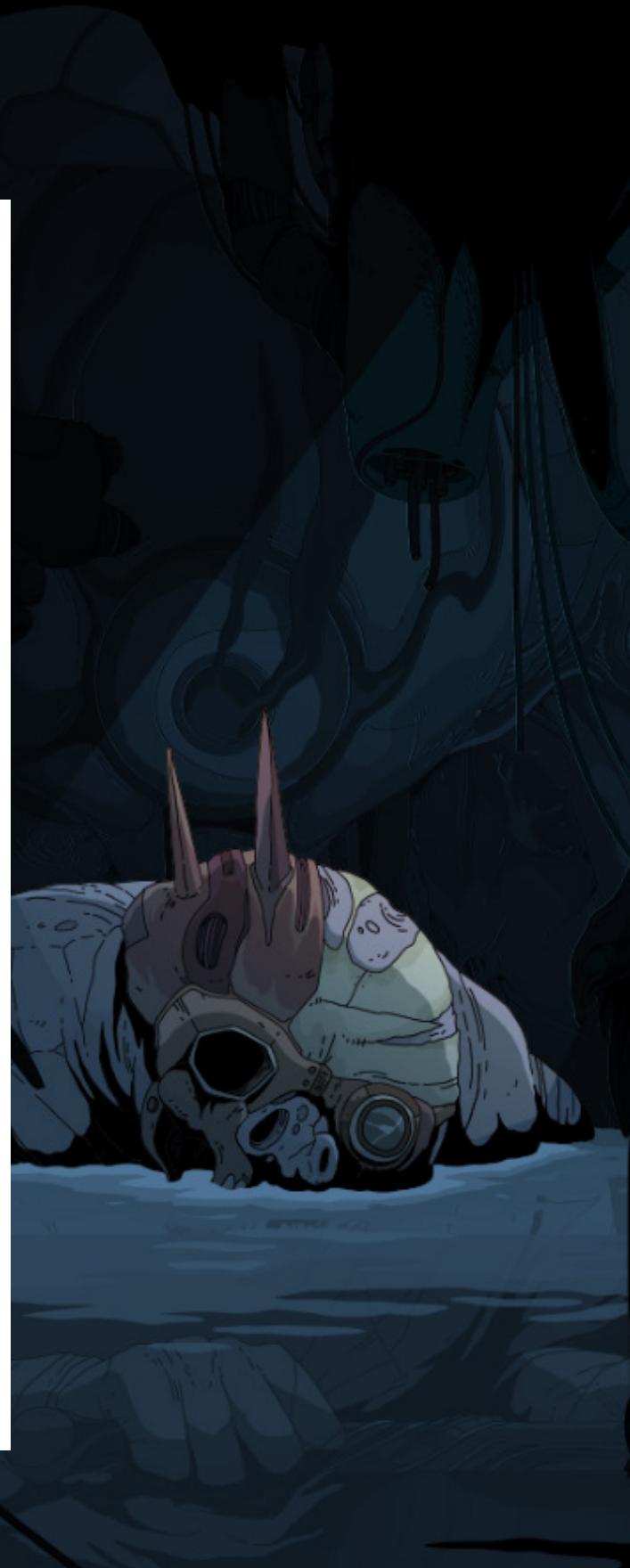
MAKING TIME FOR UNIQUE ART

Artists meticulously drew each *Minute of Islands* level in its entirety, rather than composing it from a catalog of reusable assets. By not recycling trees, boulders, or textures in different locations, each setting is one-of-a-kind – just as they'd be in a comic book. To further enhance the look, the team used fixed line weights, no gradients or anti-aliasing, and very little transparency. This also eased retouching and editing, particularly at edges.

After creating the art in Clip Studio Paint Pro (CSPP), they used a script-based export workflow in Photoshop, then assembled the collection of files in Unity. “We exported as much data as possible and let Unity create assets from the art,” says Oberbeck. “We ended up working with ridiculously huge files – an entire island could fit on thirteen 4K displays. That’s a lot of pixels.”

Oberbeck acknowledges that the technique favored the art team’s productivity while putting a lot of stress on their tech stack, but their focus on unique art creation made the choice very clear for them.

To make sure files were perfectly located, pixel-by-pixel, as they went back and forth between Unity and Photoshop, the team extracted coordinates from Photoshop layers and created XML scripts with the highly detailed layer names and coordinates. Not having to manually align graphics saved Fizbin considerable time. “We just used a refresh button in the [Unity Inspector](#) window to redraw layers exactly where they belonged.”





THINKING LIKE MAGICIANS

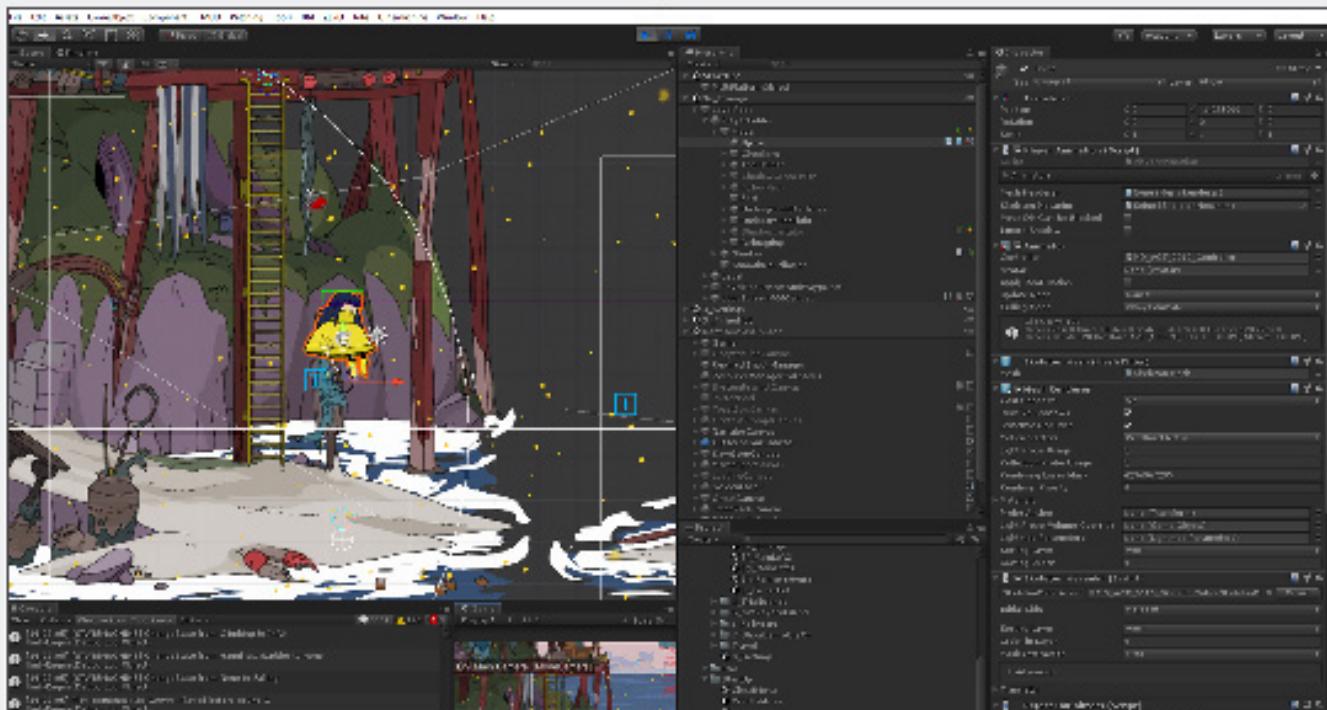
Computing power is a huge part of generating great 3D visuals, while the burden of generating great 2D visuals falls largely on artists. Creating the illusion of depth isn't as hard with math, graphs, and curves, while drawing similar 2D effects takes enormous artistic skill. And to bring this artistry to life in a video game, it's the tech artist who finds a way to show a missing dimension.

Animating waves lapping against a shore with seafoam is relatively easy in 3D because there's a fair amount of data in the image, and shaders have a depth buffer. To achieve the effect in 2D without adding too much work for the artists, Oberbeck built a compute shader that applied the signed distance function (SDF) to calculate the distance from a position to the nearest part of a shape. This enabled identifying shore areas and applying an "outer glow" type effect to sprites that would serve as the seafoam images.

"Many times I used concepts from 3D to create a component with the Sprite Renderer, and it just worked," he says. "And working on the 2D game revealed some interesting insights. In 2D, I realized that you don't have to shade everything just because there's light. And I can't overstate the power of parallax effects to cheat on creating a 3D look. You just have to consistently think outside the box."

Or, as Anhut puts it, "For awesome 2D, think like a magician!"





PLUSSING IT WITH THE MEMORY PROFILER

Inspired by Walt Disney's approach to driving creativity and optimizing content, Fizbin instituted periodic month-long "plussing it" sessions. Everyone, from interns to senior managers, pushed aside deadlines and budgets to focus on developing any ideas that would simply make a scene, effect, or gameplay better. According to Anhut, "This was production without preproduction, crazy brainstorming and experimentation – the team loved it."

Of course, as with any brainstorming session, a lot of the whiteboard ends up erased. For this part of the process, [Unity Memory Profiler](#) was invaluable. It let them easily inspect the memory constraints of any code, and greenlight snippets and projects that were also likely to be practical. Because the tool was easy to use, the whole team was able to get involved.

STAYING TRUE TO AN ORIGINAL VISION

The art and story in *Minute of Islands* are nuanced, with details that only get noticed after multiple encounters. As players get deeper into the game, they are sometimes surprised at how this bright comic book look reveals some hard, dark truths – which was precisely Fizbin's goal. Oberbeck says, “Juxtaposing the light and colorful with heavy emotional themes creates a very strong contrast. I'd say that contrast is in the DNA of both the studio and the game.”

After a successful launch on four platforms in June 2021, the entire team was proud of the way they used so many varied technical techniques, yet kept a consistent look. Studio Fizbin stayed true to their original vision of a purely comic book style. And with Unity, they successfully told a story that makes people feel, think, and care.



