

Portfolio

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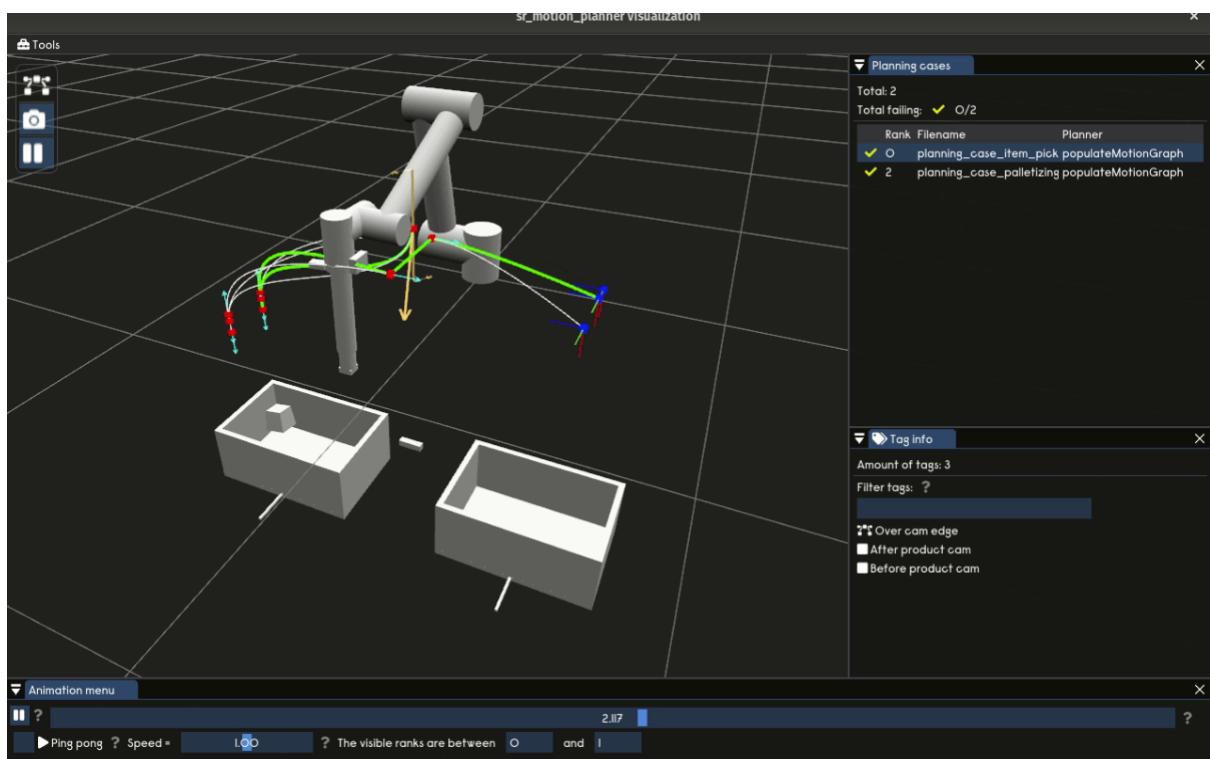
Software Tool Development

Smart Robotics Motion Library and Editor

Company: Smart Robotics

Technologies & Frameworks: C++, Python, Rust, OpenGL, Dear ImGui

A custom-made robotics motion library that is used by the applications teams at Smart Robotics to plan robot motions. This includes algorithmic motion and collision checking libraries as well as a visual editor



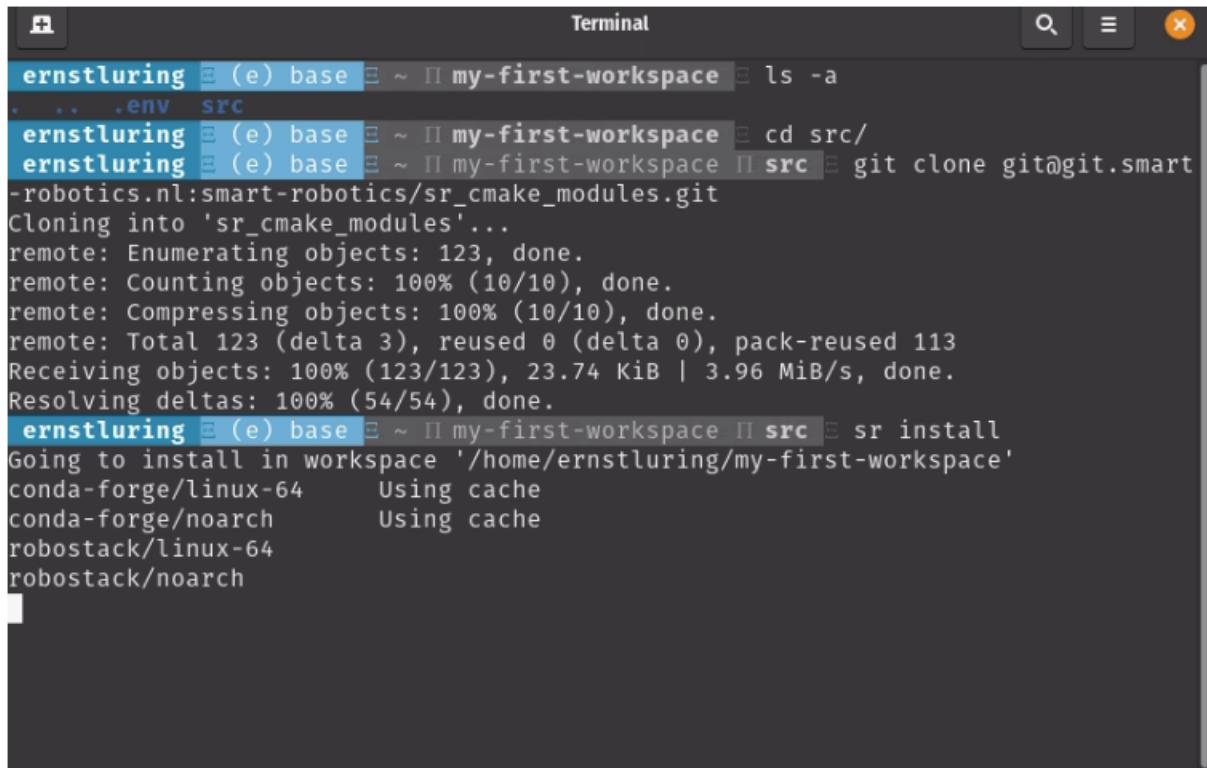
See motion editor video: [robot-motion-planner-editor1.gif](#)

Smart Robotics Installation Tools

Company: Smart Robotics

Technologies & Frameworks: Python, Conda, Quetz, FastAPI

A custom package manager (like npm or yarn) to increase the efficiency of installing, packaging, and building software libraries at Smart Robotics.



The screenshot shows a terminal window titled "Terminal". The command history is as follows:

```
ernstluring [~] (e) base ~ my-first-workspace ls -a
. . . env src
ernstluring [~] (e) base ~ my-first-workspace cd src/
ernstluring [~] (e) base ~ my-first-workspace src git clone git@git.smart-robotics.nl:smart-robotics/sr_cmake_modules.git
Cloning into 'sr_cmake_modules'...
remote: Enumerating objects: 123, done.
remote: Counting objects: 100% (10/10), done.
remote: Compressing objects: 100% (10/10), done.
remote: Total 123 (delta 3), reused 0 (delta 0), pack-reused 113
Receiving objects: 100% (123/123), 23.74 KiB | 3.96 MiB/s, done.
Resolving deltas: 100% (54/54), done.
ernstluring [~] (e) base ~ my-first-workspace src sr install
Going to install in workspace '/home/ernstluring/my-first-workspace'
conda-forge/linux-64      Using cache
conda-forge/noarch        Using cache
robostack/linux-64
robostack/noarch
```

See the tool running here: [!\[\]\(23d9fc146e83b5c3013cfa32c784f8d5_img.jpg\) install-and-build.gif](#)

Logging in with Smart Robotics Microsoft account: [Quetz-login-azuread.mp4](#)

Realtime 3D PBR Robot Renderer

Company: Smart Robotics

Technologies & Frameworks: C++, Qt6, QML, OpenGL

This was an experimental project, at Smart Robotics, to create a real-time robot renderer with PBR (Physically based rendering) techniques.



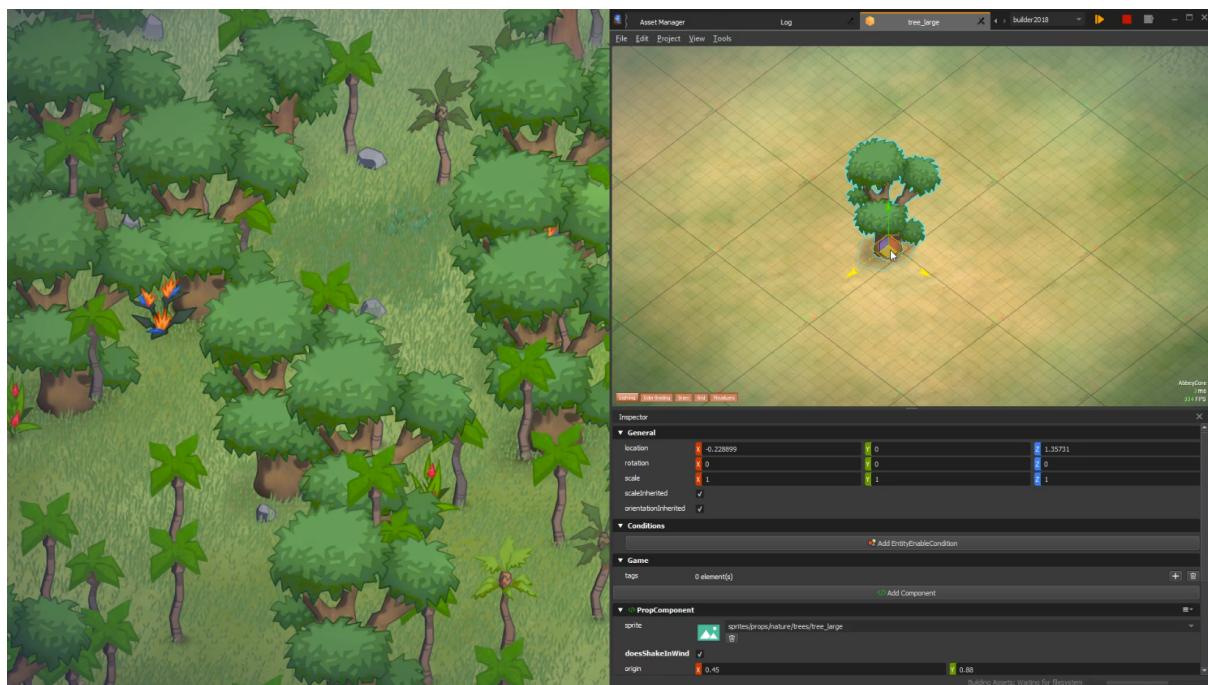
AbbeyCore Game Engine

Company: AbbeyGames

Technologies & Frameworks: C++, OpenGL, Lua, Python

AbbeyCore is the custom-developed cross-platform 2.5D game engine that runs the Godhood and Renowned Explorers games. The engine is built around the principle of hot reloading where every asset in the game (including game code) is hot-reloadable within a second. This greatly increases the number of iterations a developer can make which in turn results in a better workflow for the developer and eventually a better product.

The engine also features a complete suite of toolsets called AbbeyCore Studio, which enables artists, designers, and developers to create content with ease.



See the game engine and hot-reloading of game assets in action here:

- ❖ [abbeycore-reload-entity.mp4](#)
- ❖ [abbeycore-reload-script.mp4](#)
- ❖ [abbeycore-reload-texture.mp4](#)

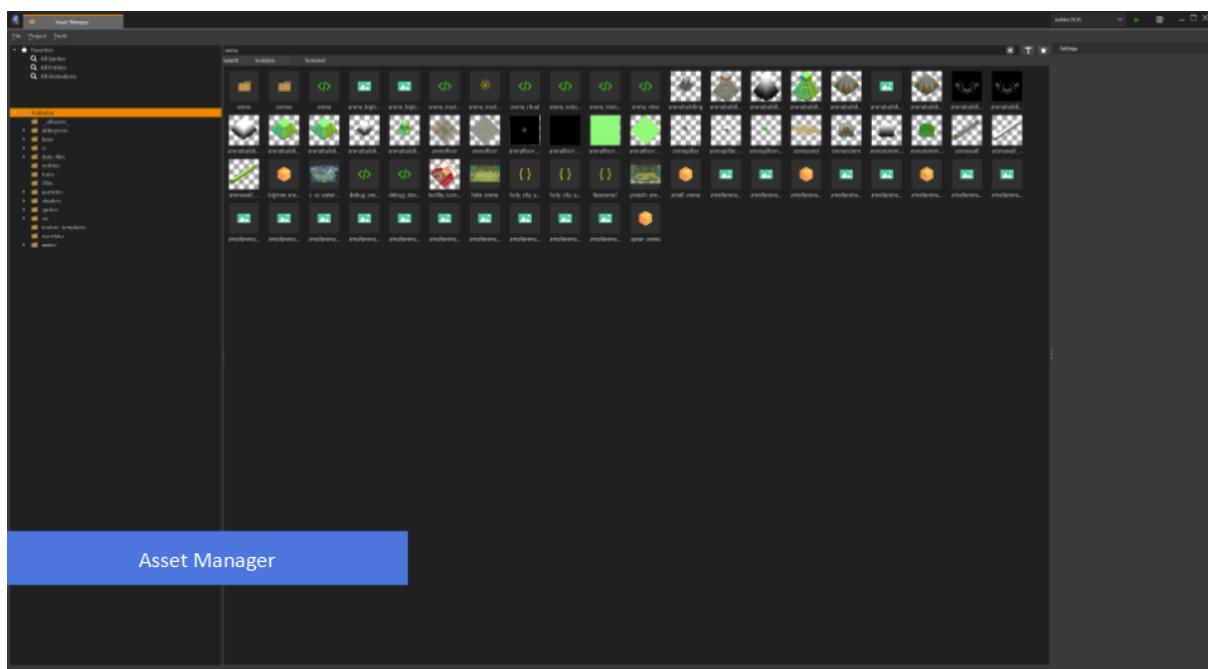
AbbeyCore Studio

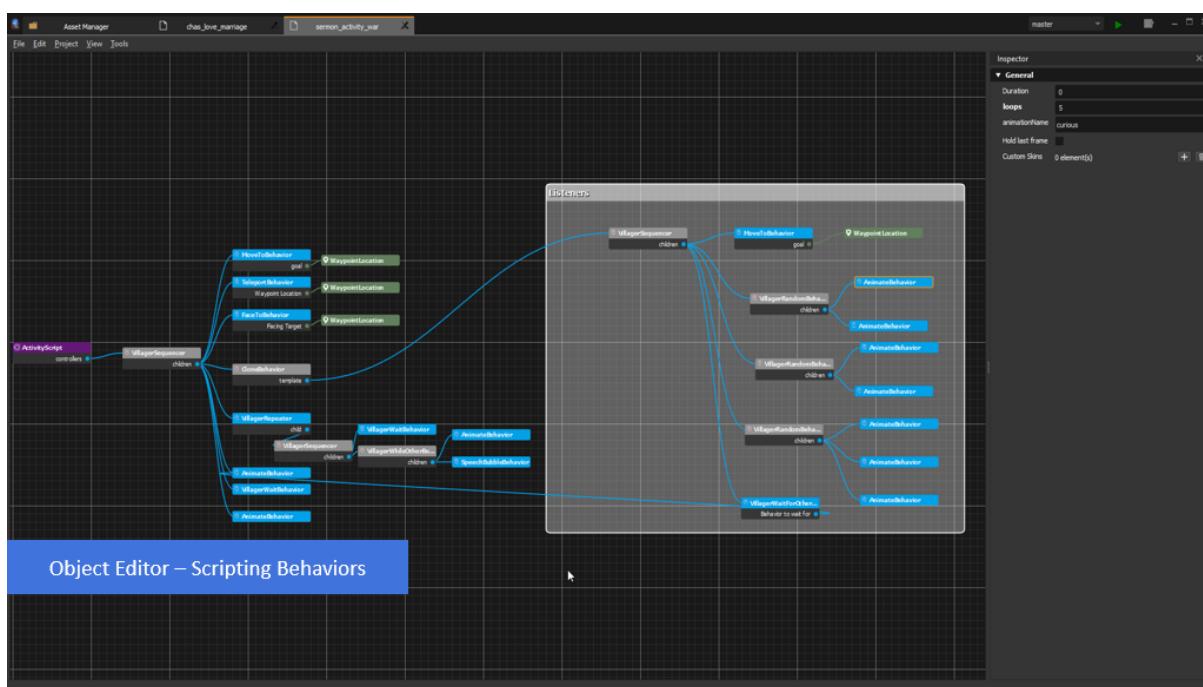
Company: Abbey Games

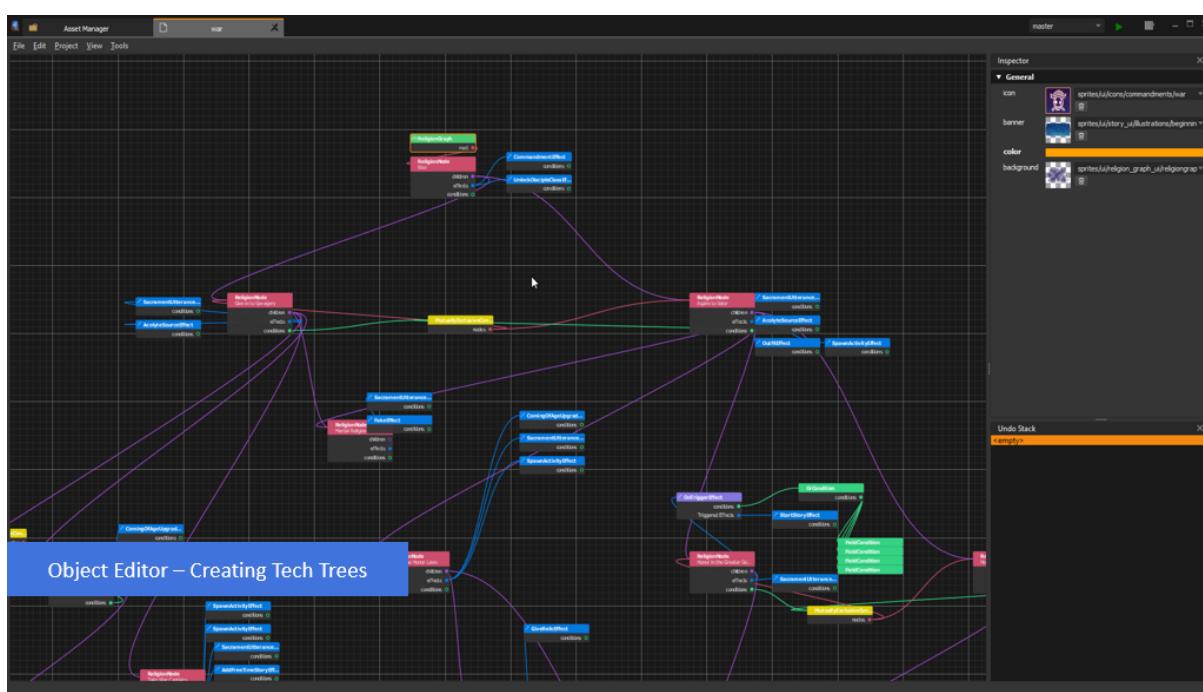
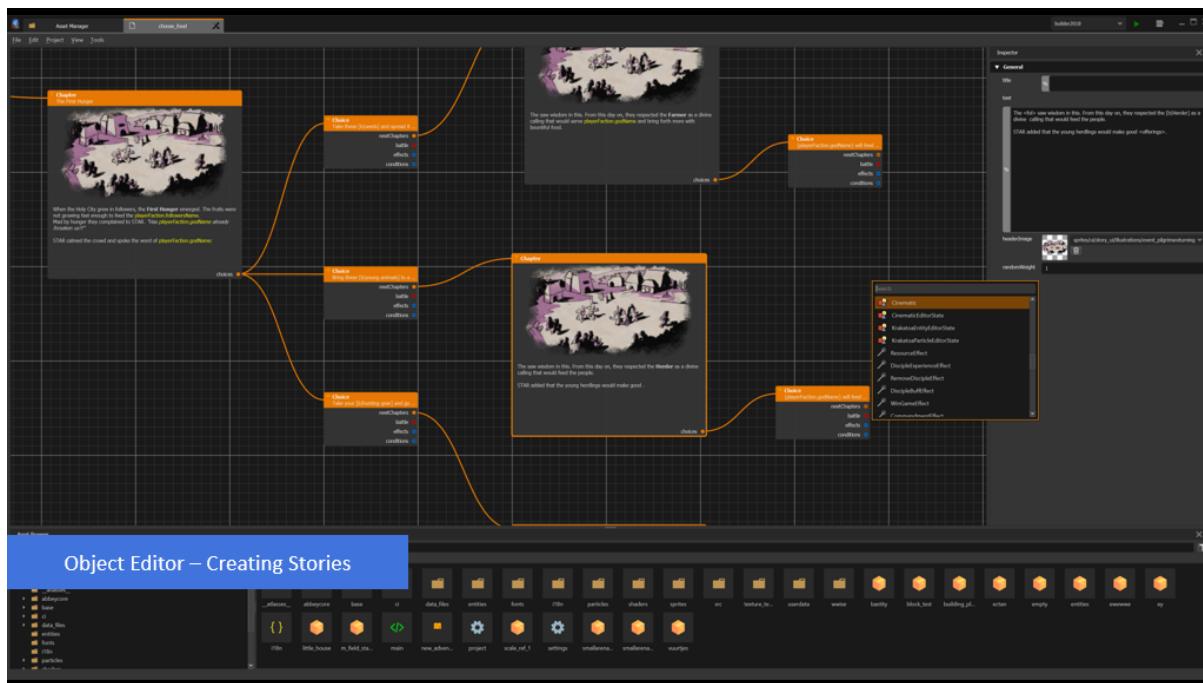
Technologies & Frameworks: C++, Qt, Lua, Typescript, React, NodeJS, Electron, OpenGL

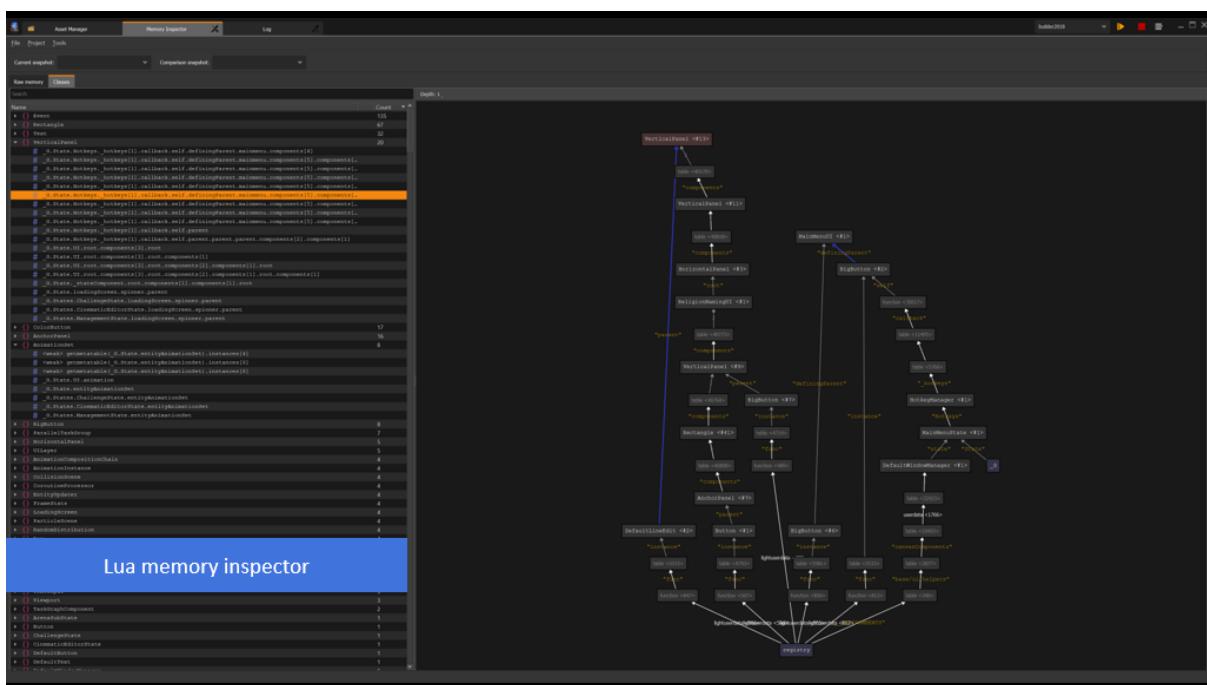
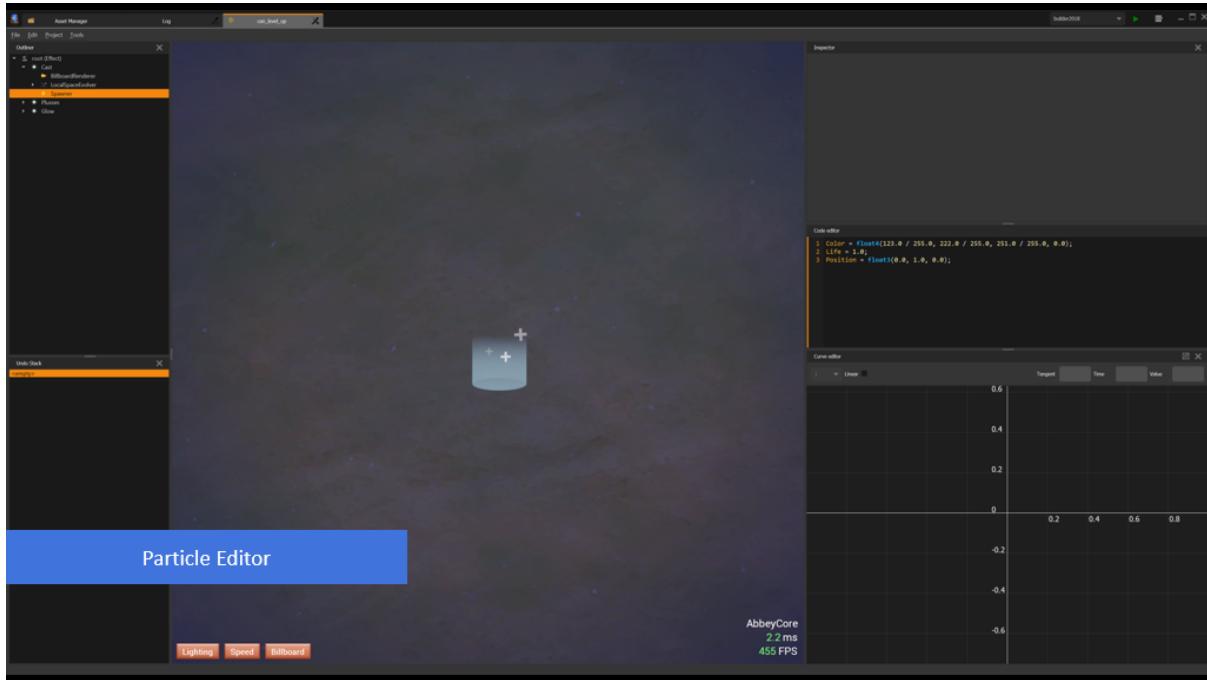
The suite of toolsets that enables the artists, designers, and developers of AbbeyGames to create game content with ease. This includes an *asset manager*, *entity editor*, *visual scripting editor*, *particle editor*, *Lua memory inspector*, *custom Lua code completion*, *custom Lua debugger*, and a *custom bug reporter*.

These toolsets were developed with extensive user testing and UX research, to fully align them to the mental model of the user and create the most effective workflow.









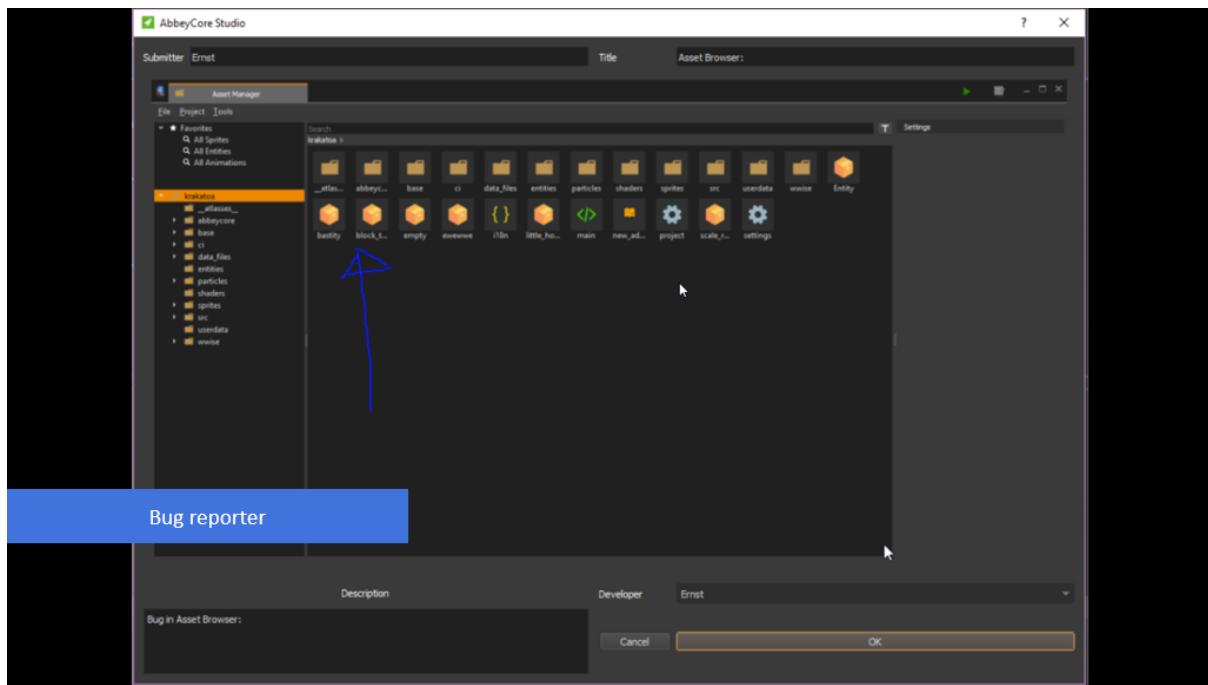
```
local result = ContentManager:getTable("//..path")
-- Create an event that is fired when the file is reloaded
local fileChangedEvent = datafiles._pathEvent[path] or Event()
datafiles._pathEvent[path] = fileChangedEvent
if datafiles._path2Function[path] == nil then
    datafiles._path2Function[path] = function()
        datafiles._buildDefinitionMappings(result, path, fileChangedEvent)
    end
end
-- Merge the file tables into the directory table
local allFileTables = datafiles._directoryOfFileTables[path]
for _,fileTable in ipairs(allFileTables) do
    table.merge(result, fileTable, {override = true})
end
if reloadCallback ~= nil then
    reloadCallback()
end
datafiles._pathEvent[path]:notify(path)
end
ContentManager.onReload("//..path..".data", datafiles._path2Function[path])
end
end
and
datafiles._build _enumerate
return result _fileExists
end
write
```

Function FileSystem:delete(path)
Returns true if the file was deleted; false otherwise.

```
local allFileTables = {}
-- If it's a single file
if filesystem:fileExists("//..directoryPath..".data) then
    -- Delete original file
    if FileSystem:fileExists("//..directoryPath..".data) then
        table.insert(allFileTables, loadFile(directoryPath))
    end
-- Merge versions from other packages
for _,package in ipairs(PackageManager:getPackages()) do
    if package.data == nil and filesystem:fileExists("//..package.data..".directoryPath..".data") then
        table.insert(allFileTables, loadFile("//..package.data..".directoryPath))
    end
end
-- If it's a directory, merge the contents of all datafiles in it into one table
for _,dataPath in ipairs(dataPaths) do
    local paths = FileSystem:enumerate(dataPath.."..directoryPath", true)
    -- Flatten to enumerated files
end
```

The screenshot shows the Unity Editor interface with a custom "Custom Lua debugger" window overlaid. The window displays the following information:

- CALL STACK**: Shows the call stack for the "render" function, with "PAUSED ON BREAKPOINT" indicated for the "componentLua" frame.
- BREAKPOINTS**: Shows a list of breakpoints, with one entry for "componentLua" highlighted.
- Custom Lua debugger**: A code editor window containing the "city" script from the "city" component. The code includes comments explaining UI anchoring and rendering logic.
- OUTPUT**: Shows the output of the "Debug.Log" statements in the script, including resource names and their paths.

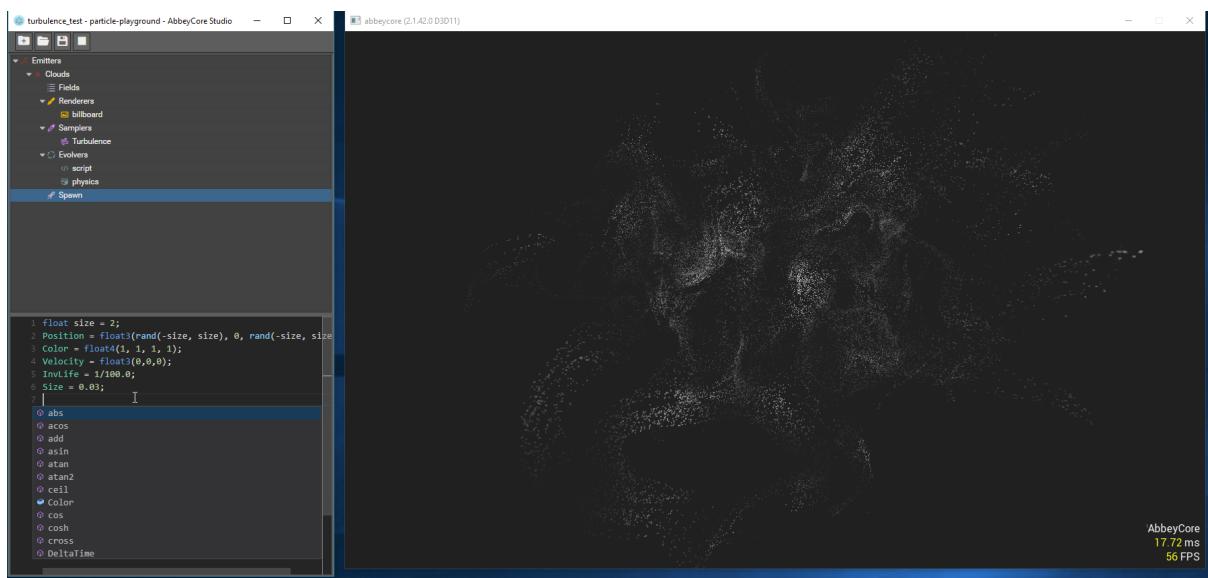


AbbeyCore Studio Standalone Particle Tool

Company: Abbey Games

Technologies & Frameworks: Typescript, React, Redux, NodeJS, Electron

A standalone particle tool created for fast particle system creation and editing. This tool is created with React, Typescript, and Electron.



Web & App Development

Qastor3

Company: QPS B.V.

Technologies & Frameworks: C++, Qt, QML, C#, .Net

Qastor is a precise navigation, piloting, and docking software application (for Windows & iOS) capable of receiving real-time meteorological information and chart updates. It has been developed, designed, and tested in extensive cooperation with world-class pilots.



Qastor3 preview: [qastor3.mp4](#)

Janna Visser Consultancy Website

Company: Janna Visser Consultancy

Technologies & Frameworks: WordPress, Php, Html, CSS, Javascript

<https://jannavisser.com/>

Godhood Website

Company: AbbeyGames

Technologies & Frameworks: Html, CSS, React, Gatsby

<https://godhoodgame.com/>

AbbeyTime

Company: Abbey Games

Technologies & Frameworks: C#, ASP.Net Core, Razor Pages

Custom time-management web application for Abbey Games.

The screenshot shows the homepage of the AbbeyTime web application. At the top, there is a header with the logo 'AbbeyTime' and a small profile picture. On the right side of the header are links for 'Goto user' and a gear icon. The main title 'Abbey time tracking' is centered above a subtitle '— by TimeBob, 2019'. Below the title is a small illustration of a monk at a desk. The page is divided into three main sections, each featuring a circular profile picture of a person:

- What is Abbey Time?** This section features a man covering his eyes with his hands. The text explains that Abbey Time helps track time spent on projects and manages work distribution among projects.
- How do I start using AbbeyTime?** This section features a man eating a salad. It provides instructions on how to set up an account via Slack.
- How does it work?** This section features a man holding a trophy. It discusses the export of data in the correct format.

The screenshot shows the 'Admin' section of the AbbeyTime application. It features a grid of four cards:

- Users**: Represented by a user icon. A blue 'Manage' button is at the bottom.
- Projects**: Represented by a stack of three cubes icon. A blue 'Manage' button is at the bottom.
- Wbs**: Represented by a lightbulb icon. A blue 'Manage' button is at the bottom.
- Export**: Represented by an export icon (two overlapping arrows). A blue 'Manage' button is at the bottom.

The screenshot shows the 'Projects' list view in the Admin section. The table has the following data:

#	Name	Active	Action
2	Godhood	✓	<button>Edit</button>
1	Project X	✓	<button>Edit</button>
3	Renowned Explorers	✓	<button>Edit</button>

Abbey Games Forums and Accounts

Company: Abbey Games

Technologies & Frameworks: PHP, C#, ASP.Net Core

After being online for 2 years Abbey Games decided to take down its forum. During these 2 years, the forum worked really well and offered a place for fans to talk about the games.

Together with the forums, an accounts system was created to facilitate the possibility to have game data in multiple places online. Players could register on this system and connect with one account to all Abbey Games game services.

Below is a web archive link, through this link the forums can still be viewed and give you an idea of how it worked.

<https://web.archive.org/web/2021012011550/https://community.abbeygames.com/>

Fig And Forest Website

Company: Fig and Forest

Technologies & Frameworks: Html, CSS, Javascript

<https://www.ejldigital.com/portfolio/fig-and-forest/>

MakeMyMVP Website

Company: Caesar Experts

Technologies & Frameworks: Html, CSS, Javascript, GSAP

<https://www.ejldigital.com/portfolio/makemymvp>

Rick Bouter Website

Company: Rick Bouter

Technologies & Frameworks: WordPress, PHP

This project entailed creating a new WordPress website and transferring data from an old website to the new one. Also included was an integration with Twitter and LinkedIn to automatically share blog posts on determined times on these social media platforms.

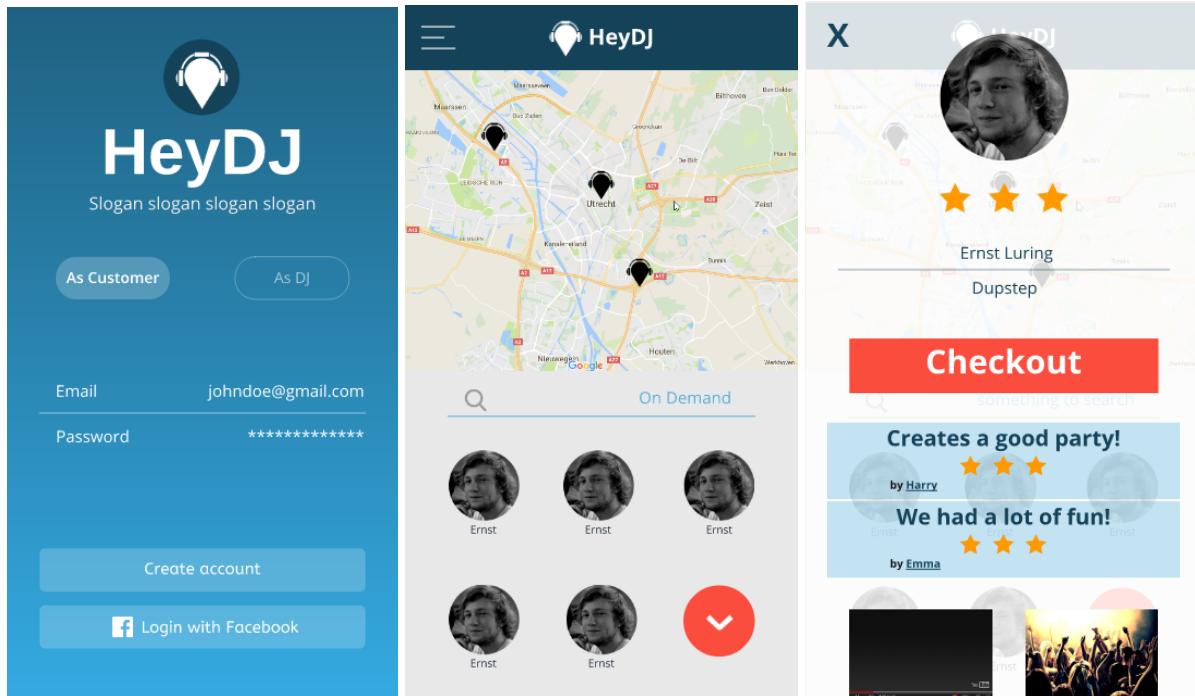
<https://rickbouter.com/>

HeyDJ MVP Mobile App

Company: Caesar Experts

Technologies & Frameworks: Angular, Typescript, Ionic, NodeJS, Firebase

The idea of this mobile app was to have a place to connect DJs with people that trying to find a DJ for a party. This mobile app was created and designed as an MVP to validate the idea, and to discover if there would be any interest in the application. Below are some of the mockup designs created for this project.



Game Development

Tracks of Thought

Company: Tidbits Play

Technologies & Frameworks: C#, Unity

Tracks of Thought is a (self) exploration RPG shaped by your own personality. Confront your fellow passengers in card-based conversations to discover more about yourself and your mysterious destination!



See the game here: [Tracks of Thought on Steam](#)

Godhood

Company: AbbeyGames

Technologies & Frameworks: AbbeyCore, C++, Lua

Create your own religion in Godhood: the roster-management auto-battling god game! Choose and guide your disciples. Command their virtues and vices. Inspire them to construct great temples, ready for rituals to be held in your honor. Convert worshippers, defeat your rivals, and become the most powerful god of all!



See the game here: [Godhood on Steam](#)

Renowned Explorers: International Society

Company: AbbeyGames

Technologies & Frameworks: AbbeyCore, C++, Lua

In this strategic rogue-like, you become a famous expedition leader in the 19th century. You form your own crew with the skills and personality to discover legendary treasures while exploring randomized locations and stories on every new adventure.



See the game here: [Renowned Explorers: International Society on Steam](#)

UMCG Exergame

Company: UMCG Groningen

Technologies & Frameworks: Unity, C#, Microsoft Kinect

An exercise game focused on balance exercise and fall prevention for elderly people in collaboration with UMCG Groningen. A Kinect registers the movement of the balance exercises and converts these in-game to ice skating motions. The data of the player's movement collected by the Kinect can be forwarded to a physician or physiotherapist who can inspect this data.



See the game in use here: [YouTube](#) Exergaming | To strengthen the elderly

Blasterfest

Technologies & Frameworks: Unity, C#

Blasterfest is a local-multiplayer game where you face off against up to three of your friends with your blaster and jetpack to win the title of the deadliest bounty hunter.



The gameplay trailer: [YouTube](#) Blasterfest - Trailer

Mariachi Mayhem

Technologies & Frameworks: Unity, C#

Mariachi Mayhem is a fun party game created in 48 hours during the Global Game Jam 2016 with the theme "ritual". The goal of the game is to get as many skeletons as possible on the altar in the middle of the screen. To win you can bash your opponents away, steal the skeleton and stay in the lead.



The game at the Global Game Jam website: [Mariachi Mayhem | Global Game Jam](#)

Dungeon Drivers

Technologies & Frameworks: Unity, C#

Dungeon drivers is a turn-based strategy game with cards and cars. Including different playable characters, a card burning mechanic, and a deck-building mechanic that works in combination with customizing your vehicle.



The gameplay trailer: [YouTube](#) Dungeon Drivers Gameplay Trailer

AR Experience Museum Blokhuispoort

Technologies & Frameworks: Unity, C#, Vuforia Augmented Reality SDK

A mobile AR experience for the Blockhuispoort museum in Leeuwarden used to tell the most interesting historical stories of the old prison in a fun and interactive way.

