

Louis Schnellbach

Engine Programmer
(with bits of network & other things!)

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Projects & Works

Professional



Assassin's Creed Odyssey

UBISOFT

September 2016 - September 2018 (24 months)

As Engine/Generalist Programmer on Assassin's Creed Odyssey, I've been working on:

Low-level things

- Making some systems to support multithreading
- Ensuring performances were good for critical systems
- Fixing engine & memory issues
- etc...

Some new features/systems

- Making more Props destructibles
- Improving the Fire System
- etc...



Ghost Recon Wildlands

UBISOFT

October 2014 - March 2016 (18 months)

I mostly worked on the engine-side of our internal network library, but also had to do some more high level tasks.

Engine-side network (C++):

- Debug/Refactoring/Optimization of network codebase

Gameplay-side network (C++/Script):

- Mostly worked on custom library wrapper between Engine and Gameplay
- Did some support for Gameplay Programmer

Tools and other (C++/C#):

- Optimize our internal 'code generation' tool
- Fix/Improve network flow issue in Editor
- Bandwidth tool analysis



Just Dance 2015

UBISOFT

April 2014 - September 2014 (6 months)

I was in charge of Tournament feature, both online and gameplay side, and I had to:

Online (C++/Python)

- Implement interactions between game and servers (such as scoring, anti-cheat, ...)
- Design server side real-time score computing system, and optimize it

Gameplay (C++)

- Develop the gameplay side of the whole feature
- Adapt it for each target platform (Wii/WiiU, PS3/PS4, Xbox360/XboxOne)



Swiftly Touch

July 2013 - September 2013 (3 months)

Dreamtronic company made a custom touch table where I had to help develop debug and optimise games.

Using Unity3D (C#), I had to:

- Debug & Optimize already existing games (about a dozen)
- Use Third-Party API to integrate Microsoft Kinect to Unity
- Create a Server / Client architecture using .NET sockets for a PC / Android Tablets game
- Integrate NFC Reader for PC
- Work on new games for their "Touch Table"

Personal



Ilargia

Entity-Component Game Engine

Ilargia is a game engine project where I experiment multiple things such as:

- Data oriented design
- Runtime external library loading
- Cross-platform target (Unix, Windows, Emscripten)
- Script hot-reload
- Graphical User Interfaces
- And so on...



Haize

C++ Scripting Language

Haize is a C++ Script language project, with a syntax similar to the C, with a easy to-use binding between native code and script.

Lexical, Syntactic and Semantic parser are written from scratch.



Muon

Generic C++ Framework

Muon is a C++ framework designed to be used as a layer between the Standard Library and some missing feature I'm using in other projects

Student

le cnam
enjmin

Event[0] 

October 2013 - March 2014 (6 months)

Set in a retro-futuristic universe, the player is stuck in an abandoned shuttle lost in space with the ship's AI as his only companion.

I have worked mostly on:

Artificial Intelligence

- AI word recognition algorithm
- Optimizing AI word database loading
- Spellcheck for user input sentences

Interface

- InGame HUD
- Terminal screen glitches

le cnam
enjmin

Wander 

February 2013 - December 2013 (11 months)

Wander is a first-person platform game where the main character is blind, and only some sounds can reveal the environment.

As the main programmer for the longest part of the project, I had to:

- Create the "sound" visual effect
- Implement the trust-relation between the player and the creature
- Make in-editor tools for our Game Designer
- Code every in-game cinematic

le cnam
enjmin

Mira 

May 2013 - June 2013 (1 months)

MIRA is a God Game experience, where you can combine elements to terraform a playground;

This project was designed to be played inside a cylinder, where the screen is displayed with 4 projectors around the player.

As it was **based on a custom engine I made**, i mostly had to:

- Optimize the terrain generation & terraforming
- Integrates a sound engine (FMOD)
- Create gameplay interfaces
- Load data from Lua

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Facteur 

June 2013 - September 2013 (4 months)

You play a mysterious postman who has the ability to modify the mail he delivers. Initially supposed to be a first year project, and then cancelled, we decided to realize it during our free time.

What i did on it was:

- In-game cut-scene
- Player & NPC Interactions
- Global performance optimization

Skills & Knowledge

Language

C++

C

C#

Lua

Python

GLSL / Cg / HLSL

Engine, SDK

Unity3D

OpenGL

Software & Other

Git

Vim

Perforce

UML

Languages

- **French**: Native
- **English**: Fluent / Full professional proficiency
- **Basque**: Basic knowledge

Education

- **2012-2014**: [ENJMIN \(École Nationale du Jeu et Médias Interactifs Numériques\)](#) (France)
Master's Degree in Computer Science and Game Programming
- **2011-2012**: [Université de Pau et des Pays de l'Adour](#) (France)
Bachelor's Degree in Computer Science
- **2009-2011**: [IUT de Bayonne et du Pays Basque](#) (France)
Two-year university degree in Computer Science