MAEL VIGNAUX, SENIOR GAMEPLAY PROGRAMMER

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EXPERIENCES

2019 – 2024
GAME DIRECTOR, GAMEPLAY/AI PROGRAMMER ELSEWARE EXPERIENCE - DINARD

Direction of the Elseware Experience studio created for the project BROKEN PIECES.
I handled game programming, sound design, music, actors' direction, recruitments, technical art and managed the port to Xbox and PlayStation. Responsible for 95% of the code base, the Game released in 2022. It won the unfold award for sound design excellence, and received great public review.

Currently working on the second title preproduction, a third person action adventure on UE5, as responsible of all things game design and AI including :
- Creation of a new scripting system to autotomize level designers.
- Goal Oriented Action Planning AI system for a robust and easy-to-scale fighting system.

2018 –
GAMEPLAY PROGRAMMER, TECHNICAL EXPERT, GAME DESIGNER EUROPEAN JOINT RESEARCH CENTER - ISPRA

Development of a virtual exhibition using latest VR paradigms and improvements such as eye and hands tracking as well as gesture recognition. The virtual exhibition showcase multiple area in which the European Union policies act for the conservation of pollinators. In charge of Gameplay code, Overall Optimization, Animation handling, Artificial intelligence, Sound design and VFX.

2014 – 2018
SOFTWARE DEVELOPER, SOUND DESIGNER FREELANCE

- Development of interactive systems highlighting Architectural visits in Virtual Reality. Creation of innovative systems for user interactions at the beginning of the virtual reality emergence.
- Featuring latest progress in 3D audio using STEAM audio systems.
- Team leader and designer of a virtual agent tools whose goal was to identify cognitive disorders caused by cranial trauma.

2014 – 2018
SOUND DESIGN TEACHER, PARIS UNIVERISTY - ITESCIA

Creation of a course as part of the training Master of Programming at Paris Cergy University. Class topic is focused on the integration of an audio engine (FMOD) and the usage of it in both "Unity 3d" and "Unreal Engine 4".

AUGUST – NOVEMBER 2013
GAME DESIGNER – TEAM LEADER, SOUND DESIGNER

Management of a development team and lead game design for the creation of a real-time online virtual casino prototype on Unity 3D. Prototype sold at the end of development.

APRIL – AUGUST 2013

INTERNSHIP, ASTROPHYSICS LABORATORY OF MARSEILLE

Internship for the creation of a control algorithm (Matlab and Labview) for the wavefront analyzer of the European Extremely Large Telescope. Publication of results at the AO4ELT of Florence.

EDUCATION

DECEMBER 2017

PHD DEGREE, ARIANE SPACE – AIX MARSEILLE UNIVERSITY

Candidate for PhD majoring in physics, optics and signal processing. The thesis was financed and co-directed by Ariane space and the Aix-Marseille university. The objectives were to create diverse algorithm to help thin film deposition engineers create more stable and reliable process. The thesis led to 2 publications and the release of a thin-film simulation and prediction software.

SEPTEMBER 2014

MASTER DEGREE, AIX-MARSEILLE UNIVERISTY

Master degree specialized in physics, optics and laser instrumentation.

OTHER

2007 –

MODDER,

Participation and release of diverse game modification as sound designer, musician and programming help, with for instance "**Logistique**" or "**Dniepr**" who had a total download count of almost a million copy.

2007 –

SOUND DESIGNER,

Sound design and integration on different animated shorts, as with for instance "salesman pete" which won the 3rd place during the "**Imagina award**" of 2011 and vimeo staff pick.

SKILLS

- C++ , C#, Matlab
- Unreal Engine / Unity
- Playstation and Xbox DevKits
- Physics and Optics

- Actor direction / Script editing.
- Reaper / Cubase / Ableton Live
- FMOD, Steam audio, audio engines and integration in general

PUBLICATIONS

- M. Vignaux et al "Semi-automated method for the determination of the all-optical monitoring strategy of complex thin-film filters," Opt. Express 27, 12373-12390 (2019)
- M. Vignaux et al "Trinary mappings: a new tool for the determination of potential spectral paths for optical monitoring of optical interference filters," Appl. Opt. 57, 7012-7020 (2018)
- M. Vignaux et al "In situ optical monitoring of Fabry-Perot multilayer structures: analysis of current techniques and optimized procedures," Opt. Express 25, 18040-18055 (2017)
- Alexandre Joerg, Mael Vignaux, and Julien Lumeau, "Versatile digital micromirror device-based method for the recording of multilevel optical diffractive elements in photosensitive chalcogenide layers (AMTIR-1)," Opt. Lett. 41, 3415-3418 (2016)
- Kacem El Hadi, Mael Vignaux 1, Thierry Fusco " Development of a Pyramid Wave-front Sensor, " AO4ELT 3