



**ACADEMIC
PARTNER**

Presentation:

The Deployment of Gaming Technology in the Construction and Educational Sector: Opportunities and Barriers

Presenters:

Gerard Nicholson, B.Sc. (Hons) Arch Tech. M.Sc. BIM, ACIAT

*Lecturer CAD, Virtual Modelling and BIM at GMIT
gerard.nicholson@gmit.ie*



We have been using Unreal Engine for about 16 months.

Everything you see was built in the west of Ireland.

We do the all the small things right.

Content for today

- Epic Games – Unreal Engine
- Example projects I have worked on
- Barriers
- Opportunities
- Game Deployment Example

Only a small sample!



The program offers the following support:

- Free training materials
- Virtual visits
- Advice on mega grants
- Curriculum oversight
- Early notice of internships

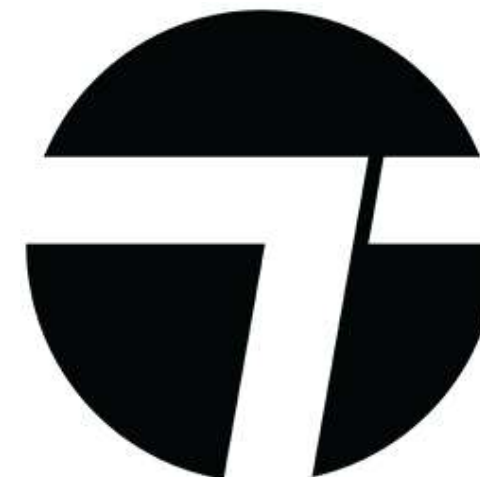
Free training – link with industry

Free Cloud based GPU computing



GMIT is the first educational institute in the Republic of Ireland to become an Epic Games Academic Partner.

Render Engines



Why Unreal Engine?



- You will be able to import **Twinmotion** project files in the **UE4** Editor the same way you can import.
- Create immersive virtual worlds and interactive experiences.
- Open real-time platform for creators, can be used in **construction, Training & Simulation**, Broadcast & live events, Film & TV, Game Dev and Automotive.
- The **Blueprint** Visual Scripting system in **UE4** is a complete gameplay scripting system based on the concept of using a node-based interface to create gameplay elements from within **Unreal** Editor.

Projects



Deployment of Game

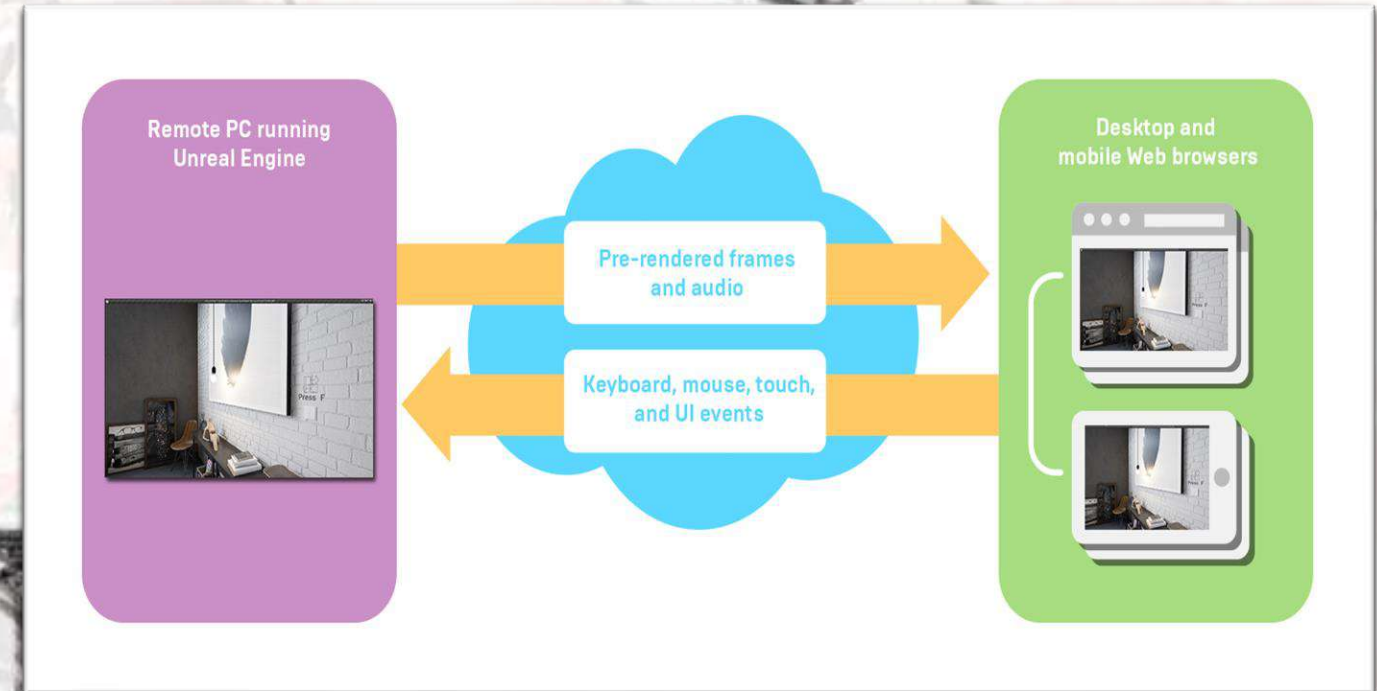


Define

To get the game installed, setting up and running.

Methods

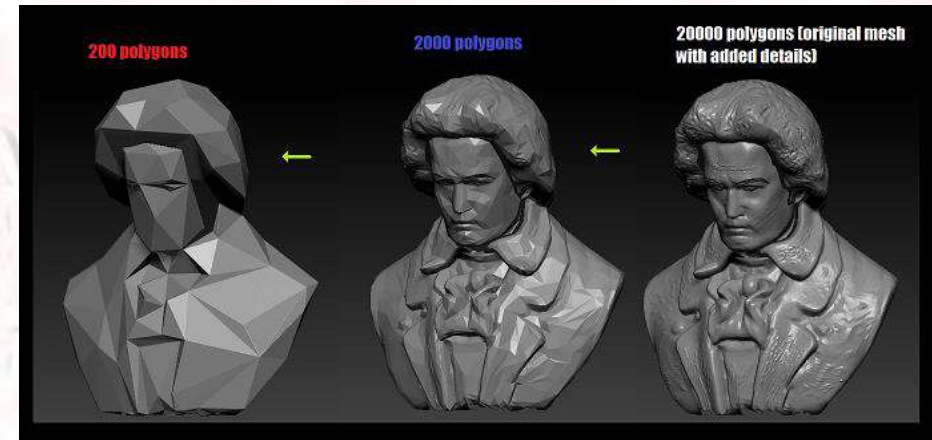
- PC - Windows, Mac, linux
- Tablet/ Phone – Apple, Android
- Cloud – Pixel Stream



Deployment of Game – Barriers



- Skillset and knowledge compared to AEC (C++, database REST API, development of 3D Geometry for games etc.)
- GPU and CPU (during development and deployment)
- 4K, 120 FPS – PS5 Example
- Polygon count (under 90k and 2 million)
- Importing Geometry (Project and game ready Geometry)
- Cost



Deployment of Game – Opportunities



- Communicate with the next generation in an entirely different way
- We can communicate our design intent to our public in new ways
- Hardware and technology wont be an issue in the future, this will allow us to have more detail



Game Deployment Example



If you have a basic PC and good broadband (15mb) – use the Pixel Stream link from Eagle 3D Streaming – google chrome – old version

- Pixel Stream Link - <https://rebrand.ly/ffu83il>

If you don't know what a graphics card is, don't download from one drive! You need a dedicated graphics card – 500mb – Download and unzip

- OneDrive Link - https://galwaymayoinstitute-my.sharepoint.com/:u:/g/personal/gerard_nicholson_gmit_ie/ERwPmi45iyFDsK76kBzyxocB2Tgm2ug1FMdFgdGSZqGUdQ?e=GKgdh



Thanks



Funding



Industry Collaborators



Presentation:

The Deployment of Gaming Technology in the Construction Sector: Opportunities and Barriers

Presenters:

Gerard Nicholson, B.Sc. (Hons) Arch Tech. M.Sc. BIM, ACIAT

Lecturer CAD, Virtual Modelling and BIM at GMIT
gerard.nicholson@gmit.ie

Contact us by -

