Richard M Heaton BA (Hons)

CECL
GLOBAL

Personal Details

Nationality   British

Year of Birth   1979

Profession   Visualisation Artist

Specialisation   3D Specialist

Summary:

Richard is the Visualisation Manager at CECL with over 16 years' experience on projects across a wide range of sectors including architecture, construction, master planning and engineering.

Richard has a unique ability to mentally deconstruct objects and scenes and then to rapidly recreate them in 3D applications, both virtual and physical.

Richard is also a Civil Aviation Authority (CAA) UAV pilot for drones up to 7kg

Key Projects and Achievements:

- **National Grid, Morecambe Bay**
  - Animations and Still CGI images
    - National Grid commissioned a series of animations detailing the proposed locations and methods of construction for a new cable tunnel under Morecambe Bay. The animations portrayed the minimal impact the project would have on wildlife and residents. National Grid presented the animations and stills at public consultations in order to inform the general public.
  - 3D Printing, Physical model
    - National Grid also commissioned two physical scaled models to be produced in addition to the animations. The models showed the two different design options for the Islet centrepiece that acts as an exhaust vent for the tunnel. The models featured a cutaway showing the design and depth of the shaft as well as high and low tide markers. These were also used at the public consultation and were greatly appreciated by the visitors to the exhibition.

- **Morgan Sindall Nuclear | Energy | Water, Health and Safety Best Practice Training Video**
  - The purpose of the project was to help visually communicate the safe practices that are used in the running of day-to-day temporary road works. The animations were included in a larger safety induction package that was presented to new and temporary employees, allowing them to gain a better understanding of safe working protocol before going on site.

- **National Grid, Hinkley Sea bank**
  - A series of still images were produced showing the process of laying high voltage cables underground. The images portrayed certain obstacles the client would face and how they planned to overcome them. A total of 27 images were produced and were used in the tender stage as well as to inform management.

- **Morgan Sindall Transport, Whitehart Lane 3D Printing**
  - The Morgan Sindall Transport division commissioned the production of two physical 3D printed models detailing alternate methods for constructing a new entrance, an underpass and support structures at the new station. Each model showed a different construction process, whereby parts of the model could be removed and replaced with the proposed design. The models were presented in a tender bid by the Morgan Sindall Transport division.

- **Cemex, Southam Quarry, Photogrammetry Drone Survey**
  - Cemex required a tunnel be constructed under a public highway connecting two quarrying sites. As part of the design of the tunnel, designers had to determine the amount of material that needed to be excavated from the portals. Typically, a traditional survey would be carried out, which can often be time consuming. Instead, we used a drone to collect aerial images of the site. This footage was then interpreted by photogrammetry software, whereby the images are stitched together based on GPS metadata within the images. The end result is an accurate virtual mesh that can be interrogated in order to ascertain precise excavation quantities.

- **UnPS, Lee Tunnel, Photogrammetry Survey**
  - The UnPS BIM team required a survey of as built information in order to compare it with their BIM model. Using a high-resolution 360° camera, footage of the as built information was captured on site. This footage was then processed using photogrammetry software. A total of 15 areas were surveyed, allowing for the creation of a virtual mesh that could then be imported and overlaid on the existing BIM model. This allowed UnPS to create reports and amend the design at a fraction of the cost compared to if they had conducted a traditional Lidar survey.

- **Terminal 5, London**
  - Project leader in control of a five-person team. Tasked with creating images and animation on a weekly turn around. Using BIM and traditional design, he was able to lead a team to create a full detail model of Terminal 5, using the model to visualise key design intentions for sign off and later to create animation for the interior designs.

- **Greenwich Peninsula Master Plan, London**
  - A long running project whereby he oversaw many design changes. Tasked with creating animations for all the proposed plots and cable cars.

- **Athletes Village 2012, London**
  - An intensive but rewarding project that ran from late 2008 to 2013. Richard was required to create many animations and still images of the Athletes Village.

- **Wembley Park Master Plan, London**
  - Project manager tasked with overseeing all aspects of animation and CGI still production on an important redevelopment project.

Education:

University of Sunderland – BA (Hons.) Model Making and Design

Employment Record:

Premier Signs – Creative Designer   2002-2005
- As the Creative Designer at Premier Signs, Richard had the responsibility to create new designs, as well as prototype a working model and produce documentation regarding the process of creation. This would then be sent to the Design Principle to get signed off for production.

Luminova UK Ltd. - Lead 3D Visualisation Artist   2005-2008
- Lead Artist at the London studio where he managed multiple projects, including animations for the Heathrow Terminal 5 Project. He managed a team of five people based in the UK studio as well as corresponding with his counterpart at the head office in Melbourne, Australia. Whilst working at Luminova, Richard led many high-profile projects.

Hatton Associates - Production Manager   2008-2011
- Richard had full responsibility of managing the visualisation team and having contact with clients. A very demanding role which saw him working on many high-profile projects. Notable projects include the Athletes Village for the London Olympic games and the Greenwich Peninsula and Wembley master plans.

RMHeaton - Owner   2011-2014
- Self-employed. Undertaking visualisations for a wide range of private Clients.

UnPS Ltd. (A Morgan Sindall Group Company) - Visualisation Manager   2014-2017
- Seeking a further challenge, Richard undertook the role of Visualisation Manager at Underground Professional Services, a civil engineering consultancy specialising in the construction of tunnels and underground space. He was responsible for seeking out new technologies and bringing new technological ideas to the company. Richard's main

responsibility was creating visual media to aid in tenders and work winning. Notable contributions to UnPS include initiating the use of drones for surveying purposes and 3D printing for physical model making.

Colin Eddie Consulting Limited (CECL) - Visualisation Manager   **2017-Present**
- Richard's current role is similar to the role he held at UnPS, but with the additional responsibility of sourcing visualisation work. He is responsible for a small visualisation team for whom he undertakes a mentoring and training role.

Computer Skills

I have knowledge of the following programs:

Autodesk Maya – Visualisation/Animation

Autodesk 3D Studio Max - Visualisation/Animation

Maxon Cinema 4D - Visualisation/Animation

Autodesk AutoCAD – Computer Aided Design

Sketch Up – Visualisation/Animation

Polytrans – 3D File Conversion Package

Deep Exploration - 3D File Conversion Package

Mental Ray/iRay – Rendering

Vray – Rendering

Unreal Engine – 3D Application Creation

Bunkspeed Pro – Real-time rendering

Adobe Photoshop – Art Work / Texturing / Compositing

Adobe Premier Pro - Compositing / Encoding

Adobe After Effects – Compositing

Adobe Illustrator – Art Work

Adobe Muse – Automated Website Creation

Adobe Edge – HTML Animation / Interactivity

Adobe Dreamweaver – Basic coding knowledge HTML CSS and PHP

Adobe Media Encoder – Encoding Video Footage

Objective-C – Basic coding knowledge WIP

Autodesk Revit – Basic knowledge

Autodesk Softimage - Basic knowledge

Blender - Basic knowledge

Microstation Connect - Basic knowledge

Solidworks - Basic knowledge

Microsoft Office –Word, Excel and PowerPoint

Other Skills

Model making

Clay/Wax sculpting

3D Printing

Ground School Qualified Drone Pilot up to 7kg

My main strengths of production/management work are as followed –

Maya is my main visualisation software, though I do have a general knowledge of 3DS Max.

Strong communication written, verbal and visual.

Managing my own time on multiple projects or that a team.

Working within budget and deadlines.

Strong spatial awareness.

Able to understand and communicate working drawings (CAD).

Researching and compiling information on current and emerging markets.

Modelling in polygons or NURBS to a very high level of detail.

Illustration/Texturing; for still images and 3D geometry.

Lighting/Materials; understand the theory of light and how it effects a scene. Strong knowledge of materials for architectural and interiors for design.

Creating realistic scenes within a 3D digital environment.

Rendering, I have managed render servers for previous employers, as well as creating my own render server.

I am also in the process of learning objective-C in my spare time. As I am interested in building apps and how they can display working geometry/drawings/ideas in a dialog that can inform the user interactively.