

## The Digital Design Studio Glasgow School of Arts



We have used our Vicon system along with the close integration into our Autodesk pipeline to capture the motions of our performers and visualise the characters at a speed which has helped us to help our client to meet their own tight deadlines. ~ [The Digital Design Studio](#)

# The Digital Design Studio

## Glasgow School of Arts



Recreating Amy



Recreating Amy - Rendered



Hull Immersive Visualisation Environment

The Digital Design Studio (DDS) is a postgraduate, research and commercial centre of Glasgow School of Art. Its intense learning and research environment exploits the interface between science, technology and the arts to explore imaginative and novel uses of advanced 3D digital visualisation and interaction technologies. The DDS has completed a large portfolio of projects with business and industry in Scotland, the UK and Europe, centred on our expertise in real-time 3D visualisation, 3D sound, modelling, motion capture and animation. In particular, the DDS has built a reputation for world leading work in 3D visualisation for heritage, as well as for our work in a number of flagship projects. The DDS works on a wide range of motion and 3D data capture and visualisation projects for commercial and industrial clients. The DDS sound dubbing studios are regularly used for network television and film productions, as well as within the DDS' own visualisation projects.

At DDS we have used Vicon systems for motion capture within a number of our commercial projects. This began when we first purchased our system in 2009 when we set out to equip our new customised offices at Pacific Quay in Glasgow with the best equipment available at that time. The Bonita camera setup was originally short listed, and subsequently purchased, for its head tracking capabilities which also allowed 3D content to be viewed through our projection system on to what was one of the largest Active Stereo projection screens in Scotland at the time being 12m wide by 8m tall. Due to the systems ease of use when recalibrating the cameras, we find that we are easily able to reconfigure our capture area for a variety of projects

and client requirements ranging from large battle scenes to intimate character driven interactions. We have produced motion capture data for a wide and varied range of projects such as the digital content at the new Battle of Bannockburn centre in Scotland. We also used our system recently to assist in the creation of the recent Warhammer 40k: Dawn of War 3 trailer and capturing sports movements like football, golf and training scenarios. We have also used the system in projects for large manufacturing organisations to help them assess safe working spaces in restricted areas as part of their work on Human Factors Analysis.

Our most recent use of the Vicon system has been in a project for The University of Hull. The Hull University staff within the HIVE (Hull Immersive Visualisation Environment) facility had become aware of the 10 Character Stations we had created for the Battle of Bannockburn Visitor Centre. They were impressed by the quality of our work and commissioned us to create two sets of interactive characters to be used to support two important events occurring in Hull in 2016/17 which they are involved in promoting. The first of these was The Amy Johnson Festival marking the 75th Anniversary of the death of Amy Johnson, the first woman to fly solo from England to Australia. The second and larger project is in preparation for Hull becoming the UK's City of Culture 2017, and this project is to create a virtual, William Wilberforce, the Hull born emancipator of slaves who was a leading politician and one of the main activists responsible for the eventual abolition of slavery in Britain in the early 19th Century.

In both of the projects undertaken we have used our Vicon system along with the close integration into our Autodesk pipeline to capture the motions of our performers and visualise the characters at a speed which has helped us to help our client to meet their own tight deadlines. Pre-rendered sequences continue to be delivered for these projects and are to be installed on large screens around Hull to engage with the public visiting the City and tell the story of the exciting life of both Amy Johnson and William Wilberforce in an informative and engaging way.

By using our Vicon system we have been able to offer our clients robust motion capture data with a minimal level of clean-up required. By using the benefits available by using Vicon Blade and Autodesk MotionBuilder integration effectively, we are able to work closely with our clients and this provides us with the opportunity to visualise their data in a virtual environment at the time of capture. Once this phase is completed further discussion regarding interpretation is generally undertaken to allow the best possible real-time character portrayal. We are scheduled to be producing more interesting character work for additional clients in the near future and we are looking forward to working on these exciting projects and continuing to get the best possible use from our Vicon system.

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