3-D specialist helps build holograph to remember holocaust

Solent Productions' broadcast and media professional, Craig Lees, has been working on a ground-breaking museum and archive project for the National Holocaust Centre (NHC) to capture vital testament from British Survivors of the Holocaust.

Recognised within the industry for his in-depth knowledge of Stereoscopic 3D live action, Craig was brought in to work on the Heritage Lottery-funded project by Bright White Ltd, a specialist creative design consultancy with a pedigree in designing and building pieces for museums. According to the consultancy's mission statement, they aim to 'engage the next generation with the riches of the past, to help them live and learn' and Craig is very much aware that the 'riches' in this instance are the powerful and compelling testimonies of survivors.

"A key part, if not the most important part of a visit to our Centre is to listen and talk to a survivor," says NHC Chief Executive, Phil Lyons, "and it is a major challenge for the centre to ensure that future generations of visitors can still benefit from this experience and enjoy an 'interactive' experience with survivors by preserving their voice for generations to come. With this project, that will never change."

In order to capture these personal and individual stories, Craig has designed and built a system incorporating cutting-edge technology to film ten survivors. He will oversee the use of ultra-high definition stereoscopic film which allows the camera to capture facial features in fine detail using a special scanning technique to create 3-D images. The technology means that one day future generations could see James Frank relating his experiences of Westerbork and Theresienstadt in the form of a 3-D hologram.

"I can't express how it has made me feel whilst listening to the survivors' stories", Craig concludes. "It puts everything in perspective as to what's important and what is not. I am super proud to be working on this project."

FOR FURTHER INFORMATION CONTACT THE MEDIA OFFICE ON 023 8201 3079 or press.office@solent.ac.uk

Solent Productions is Southampton Solent University's media production centre and is staffed by broadcast media professionals working with the latest technology.

Craig's work into stereoscopic 3D live action, (S3D), began with a research & evaluation project back in late 2011/early 2012. He was using mirrors and camera systems to create stereoscopic images three months before the film Avatar was released. Over time Craig has developed systems using newer technology and smaller cameras to create a mobile production rig that weights around 15kg and can be built and aligned within an hour.

What is stereoscopic 3D (S3D)?

Used in films such as *The Hobbit, The Great Gatsby, Avatar, Pirates of the Caribbean 4 and Tron Legacy,* S3D uses stereoscopic camera technology to create the illusion of three dimensions which we use every day in our human binocular vision. To capture live-action stereoscopic images you need two identical cameras that can be synchronised at the cameras' shutter level. The cameras are separated on the horizontal plane to create a second image that is slightly offset from the other. This is called stereopsis. For those that remember *Wayne's World* it replicates the 'Camera One, Camera Two' scene!

The image shift difference between the two cameras, also known as parallax, is then monitored and measured to make sure it is not too big or too small.

For the holocaust project a half-silvered beam-splitter, also known as a mirror rig, was used. This gets its name from effectively splitting a light-beam. This enables the cameras to get so close to each other that images can be perfectly superimposed, one on top of the other. This is also how the camera is aligned to ensure the geometry of the images is correct.

Images are then projected or screened on a 3-D TV with 3-D glasses to complete the effect.