The original version of this paper was presented by Rob Munday at the 7th International Symposium on Display Holography, 10-14 July 2006, held at the OpTIC Technicum, St Asaph in North Wales, UK. The symposium was also attended by Chris Levine and Jeffrey Robb. The paper was written by Rob Munday with help from his assistant Jeffrey Robb and fact checked by both Chris Levine and Jeffrey Robb prior to its submission to the symposium and subsequent publication. It represents a true and accurate account of the joint and equal creative collaboration conducted by Rob Munday and Chris Levine to shoot and create the first ever officially commissioned 3D-holographic portrait of Her Majesty the Queen. The portrait was commissioned by the Jersey Heritage Trust to commemorate the Island of Jersey's 800-year allegiance to the English crown.

Equanimity - A stereographic portrait of Queen Elizabeth II

By Rob Munday and Chris Levine, 2004

Background to the project

The wheels were set in motion in 1998 when Gordon Young, an artist working with the Jersey Heritage Trust, visited an exhibition in London called HyperVisual. The exhibition, which had been toured around the world by graphic designer Chris Levine in association with the British Arts Council, displayed holograms by the holographer and holographic portrait artist Rob Munday. In particular, the exhibition featured Rob Munday's unique holographic portraits of singer/song writer Seal and the Oasis band members Noel and Liam Gallagher, which Munday had independently shot and created in 1994 and 1997 respectively. At this same time, The Jersey Heritage Trust - The States of Jersey were looking to commission a portrait of Her Majesty the Queen to commemorate the Island of Jersey's 800-year allegiance to the English crown. After a recommendation by Gordon Young, the Jersey Heritage Trust took the brave decision to commission a unique and contemporary holographic portrait, the first ever officially commissioned 3D/holographic portrait of Her Majesty Queen Elizabeth II, or indeed, any member of the British Royal Family.

In 2001, and believing Chris Levine to have created Munday's holographic portraits, The Jersey Heritage Trust contacted Chris Levine and subsequently commissioned him for this very special portrait. In 2003, Chris Levine, in turn, commissioned Rob Munday to shoot and create the portrait, requesting that the project be conducted as a joint creative collaboration. Given the unusual circumstances of the commissioning of the portrait, and despite recognising that the portrait would be very largely if not entirely devised, shot and created by himself, working as both an artist and a holographer, with Chris Levine acting as a project manager, Munday agreed, but only on the condition that he would receive at least an equal creative credit as a co-author of the work and that the portrait would be credited whenever shown as 'by Rob Munday and Chris Levine', or 'by Chris Levine and Rob Munday' with equal emphasis. Additionally, Rob Munday would also be credited for all technical aspects of the project. This was agreed by Chris Levine and, sometime later, ratified by a legally binding agreement, drawn up and signed by all three parties, Rob Munday/Spatial Imaging, Chris Levine/ARM, and The Jersey Heritage Trust, in 2005.

As with all projects of this magnitude several other participants played an important role. Of note was Jeffrey Robb, an employee of Rob Munday's company Spatial Imaging and who acted as Rob Munday's assistant, liaising between Chris Levine and Rob Munday, coordinating the project, and offering advice and assistance throughout, and photographer Nina Duncan who was employed to assist with lighting and to record the event for posterity, taking several of the photographs shown in this paper.

The initial planning

Initial discussions between Rob Munday and Chris Levine, in July/August 2003, revolved around the use of Rob Munday's' unique and state-of-the-art ruby pulsed-laser hologram portrait studio to create a 'true' laser hologram portrait in the style of his portraits of Seal and Oasis band members Noel and Liam Gallagher. Rob Munday was recognised worldwide for his pulsed laser portraits, which he had been creating since he built the first dedicated pulsed laser portrait studio in the UK at the Royal College of Art in 1985. Chris Levine suggested using this medium for the portrait, but Munday refused, preferring to save this for himself and a possible future portrait. Instead, Rob Munday proposed creating a large-format holographic stereogram which would be made from a sequence of photographic images shot by himself at Buckingham Palace. Various options with respect to the production of the final 'commissioned' holographic stereogram were considered, however a decision was made to subcontract Dr. John Perry of Holographics North, USA, to print the final holographic copy. This decision was influenced by a highly successful collaboration between Dr. John Perry and Jeffrey Robb of Spatial Imaging in 2003 which involved the production of a large format holographic installation in Tokyo, Japan. It was also influenced by the fact that Dr. Perry operated the only company in the world capable of making large format holographic stereograms.

A holographic stereogram portrait is made from a sequence of views taken of the sitter from different positions or angles using a specially designed moving camera. The technique is related to conventional 3D photography except that many more photographs are taken to give the illusion of parallax or 'look-around'. A benefit of holographic stereography is the fact that the resultant

photographic sequence can be archived and used later to produce many other types of stereographic images, such as lenticular images or 3D images for TV.

To create the image sequences Rob Munday took the decision to design and build a new and unique digital camera recording system completely from scratch. Rob Munday and Jeffrey Robb also proposed utilising the latest computerised three-dimensional head scanning technology from Wicks and Wilson, a UK company, to create a computer model of the Queen's head from which other types of three-dimensional images could be made at a later stage.

Several meetings followed between Rob Munday and Chris Levine in August, September, and October 2003, to decide upon both the aesthetic and the technical requirements of the work. One such proposal, made by Rob Munday, was to illuminate the holographic stereogram with a vertical array of LED's. Munday had developed this kind of lighting for a previous project. This type of illumination creates a sharp, single colour (non-rainbow) image whilst extending the otherwise narrow vertical viewing aperture of a rainbow hologram.

The technical bit – Munday designs and builds his 'Video Images with Parallax' system

Only six weeks prior to the first sitting Rob Munday embarked upon designing and building the digital camera system that he would use to shoot the sequence of images required for the portrait. Munday also embarked on writing custom software to control all aspects of the system and the imaging process. The V.I.P (Video Images with Parallax) system was, for its time, the most sophisticated 3D camera system in the world for the recording of parallax image sequences and 3D portraits.

The system utilised the Pantera SA 2030 full colour digital camera, which, at the time of the project was the highest-resolution, full-colour digital camera available and was made by Canadian company Dalsa Corporation. The camera was capable of outputting 10-bit greyscale images at a resolution of 1200 * 1600 pixels with RGB Bayer filtering at a blistering 30 frames per second. A high-speed PCI frame grabber card was used to save these images in real time directly to computer memory in a high specification computer workstation.

With respect to camera translation, Rob Munday initially made the decision to employ a traditional shift lens/shift camera technique to avoid keystone distortion. It became apparent however that there were also some disadvantages to this method of shooting parallax image sequences and so he latterly redesigned and reprogrammed the system at his own expense to rotate the camera instead.

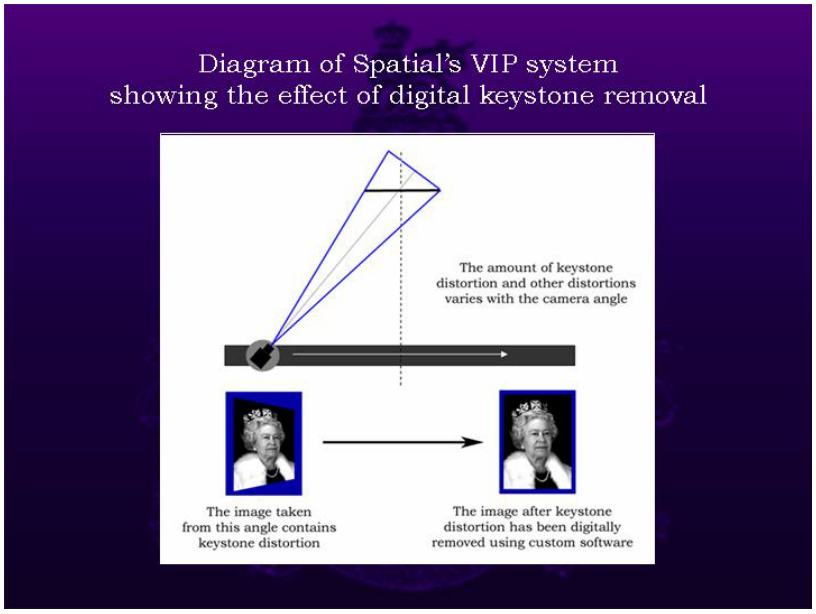
Rotating the camera to point towards the subject generally introduces undesirable image distortions, which a shift lens or shift camera system avoids, however Rob Munday recognised that by developing and employing new custom written post processing software it was possible to reverse the distortions after the digital images had been recorded (N.B he was later told that he may have been the first person in the world to write and employ such software to undistort digital parallax image sequences). After a lot of consideration Munday concluded that this method provided the ultimate compromise between photographic image quality, angle of view and final holographic stereogram quality. The three main advantages of rotating the camera to point towards the subject were that:

1. A superior quality, faster lens could be used rather than a much lower quality wide angle shift lens.

2. There was no reduction in the brightness of the images as the camera moved to the ends of the rail which would normally be caused by light passing through the side of a wide-angle shift lens.

3. The angle through which images could be recorded and hence the final holographic stereogram viewing angle was not limited by the travel limit of the shift lens. In other words, a much larger viewing angle could be created.

Those three technical and aesthetic advantages, along with his choice of lens and camera would finally enable Rob Munday to create the portrait that he had artistically envisioned.



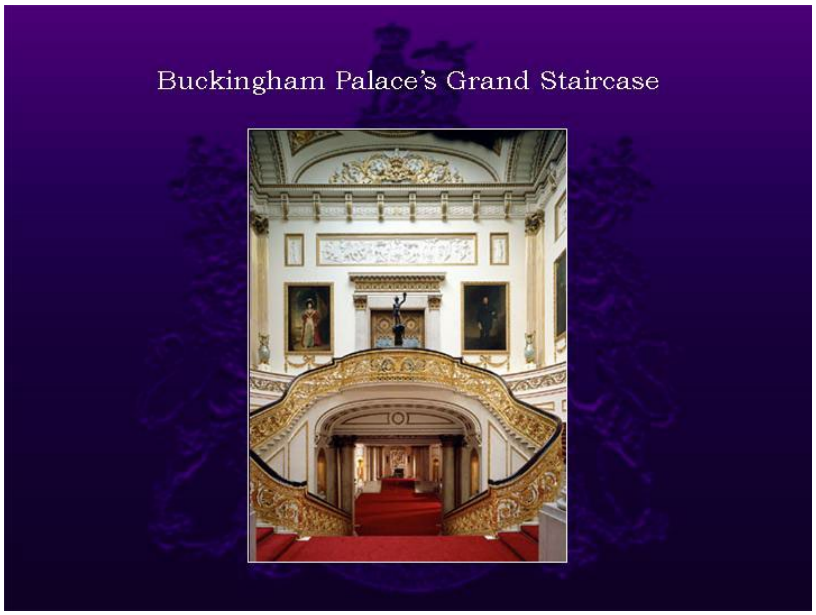
Munday utilised a state-of-the-art linear motor rotational stage which rotated the camera smoothly, at high speed and with extreme accuracy. The rotational stage/camera assembly was itself mounted on a 2.5m long linear motor rail. This also enabled the camera to be translated in a smooth and accurate manner at high speed. The two stages were electronically 'locked' together in a non-linear manner such that the camera continuously pointed at a position in space as it moved along the rail. The linear motor rail, the longest commercially available of its kind in the world, was manufactured, together with the rotary stage, by Anorad Europe in Holland. The entire motion control assembly was then mounted onto a rigid but portable subframe that enabled Rob Munday to transport his system to Buckingham Palace.

The total investment made by Rob Munday/Spatial Imaging in developing his VIP system was approximately £50,000 ($95,000).

Munday builds his studio at Buckingham Palace

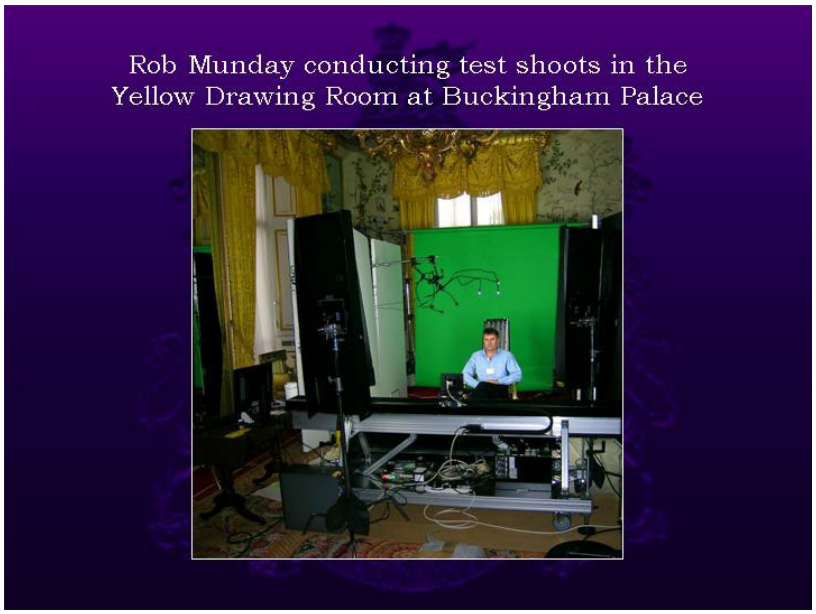
The sitting was to be held in the Yellow Drawing Room at Buckingham Palace and Rob Munday was allowed three days prior to the sitting to build his studio, test his camera equipment and conduct test shoots. The Yellow Drawing Room was the Queen's preferred environment for portrait sittings. It is a corner room with windows on two sides and has more natural light than most of the rooms in the Palace (although this natural light was not used). As such it's the room most often used by artists for more traditional painted and photographic portraits.

Rob Munday's first task in assembling his temporary studio at the Palace was to manoeuvre his VIP camera system into the room. He did not anticipate any problems in achieving this however after arriving at the Palace he realised that the rail was far too long to be taken up to the first floor using either the lift or the nearby spiral staircase. Fortunately, the Queen's senior porter came to the rescue and suggested that it could be carried from the main entrance, through the Grand Hall and up the curving marble stairs of the Grand Staircase. Six of the Palace porters then proceeded to man-handle the system up one of the most famous staircases in the world, past priceless antiques, and grand master paintings. It was with relief that the VIP system arrived at the top unscathed.



Rob Munday then spent his allotted three days building his studio within the Yellow Drawing Room, testing his camera equipment, and conducting test shots. Chris Levine played no part in this process. Nina Duncan arranged the lighting according to the specification that Munday had provided prior to the set-up, which was to surround the Queen with as much light as possible to compensate for the relative insensitivity of the video camera that he had chosen, whist, of course, obeying the usual rules of portrait lighting.

As part of the design of his studio, Munday hung a green screen backdrop to accommodate an idea by Chris Levine to later add a picture of the Island of Jersey or the Jersey Crest to the background of the portrait. This was later removed by Munday who favoured a much simpler, more elegant, and less 'commercial' portrait in the style of his other portraits.



At no time in the past or since has such an assemblage of high-tech equipment been allowed inside the Palace.

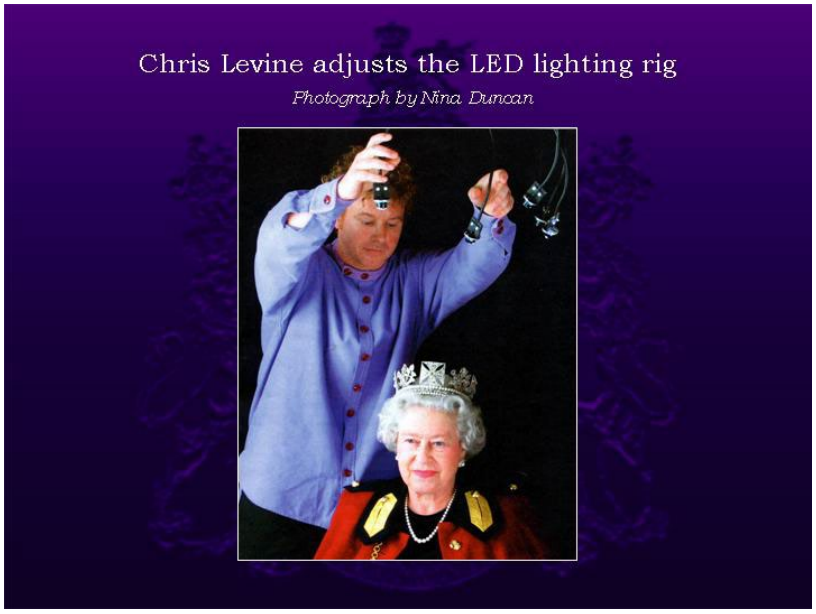
The First Sitting, 14th November 2003

Prior to the first sitting in November 2003 a meeting had been held between Chris Levine and Miss Angela Kelly, the Queen's personal assistant, to select the clothing to be worn by the Queen. Chris Levine chose a dark blue velvet dress, a selection of black and red capes, a single string of white pearls and, with a recommendation from the Palace, the George IV State Diadem.

The George IV State Diadem is depicted on British postage stamps and coins and was made in 1820 for George IV's Coronation. It incorporates 1,333 large diamonds and 169 pearls and was also worn by both Queen Victoria and Queen Elizabeth at their respective coronations.

At the first sitting Rob Munday and Chris Levine were granted only one hour of the Queen's time to shoot the portrait and create the required parallax image sequences. At precisely 3.00 p.m. on the 14th November 2003 the Queen entered the room with her PA and dresser Miss Angela Kelly and Munday and Levine introduced themselves to her. The Queen then enquired as to which cape she should wear whilst her PA prepared the crown. This was apparently the first time that the crown had been removed from the safety of the Royal vault for many years. The Queen swiftly placed the crown on her head arranging it herself in the mirror much as somebody would arrange their hat!

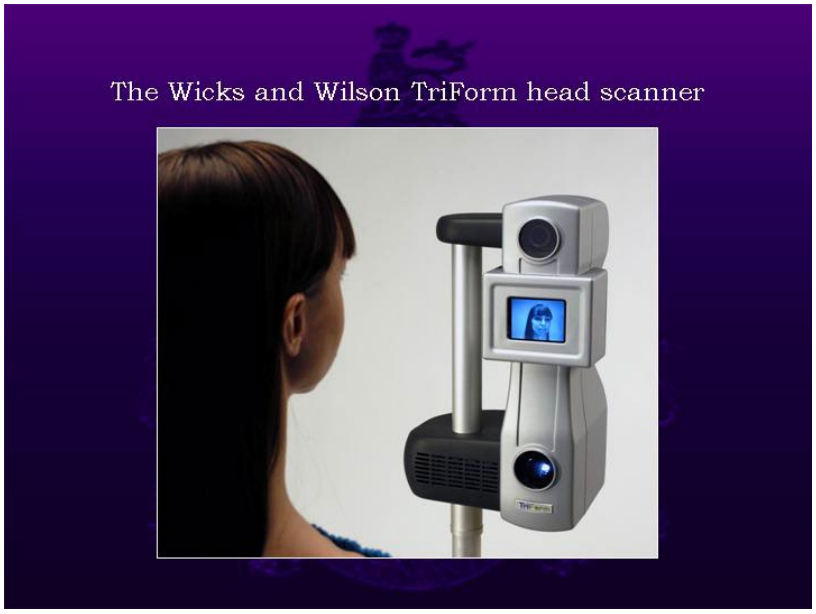
Munday had chosen to shoot a head on portrait and had spent three days prior to the shoot very precisely positioning his camera system and a chair for the Queen to sit on that both faced his camera and was also at the correct height and distance. This ensured that the Queen's face and body would be in an optimal position to achieve the compositional, three-dimensional, and aesthetic visual result that he had chosen for the portrait. Chris Levine then directed the Queen to sit in the chair and, whilst she settled herself, he lit the Crown using a specially made LED lighting unit, designed to highlight the diamonds.



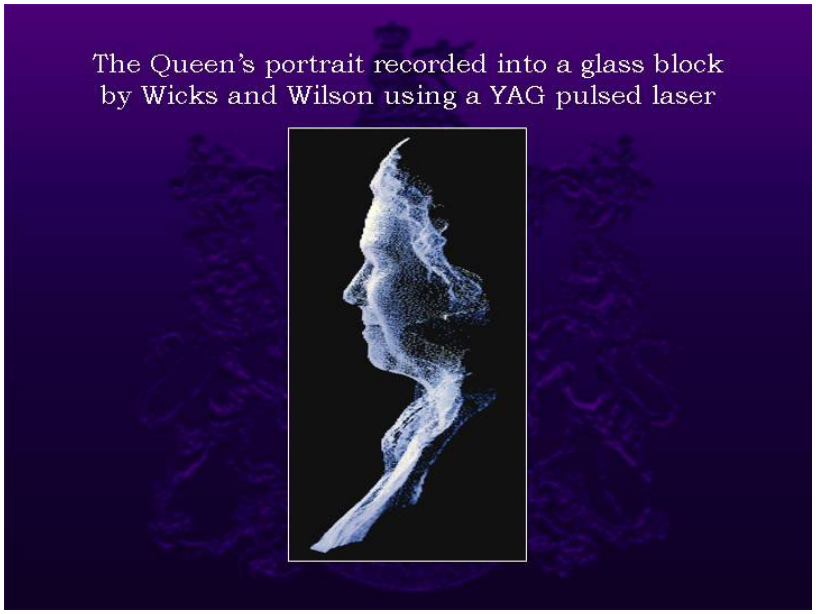
After several dry runs the shoot began in earnest. Rob Munday operated his camera via the computer keyboard, deciding upon and setting all the creative variables, such as camera aperture, exposure time, the distance that the camera moved, the angle through which the camera rotated, the recording speed, the number of frames taken for each pass, the focus, and the composition of the shot, all of which ultimately defined the visual appearance and aesthetic of the final portrait.

Rob Munday's assistant, Jeffrey Robb, was tasked with checking that the camera remained in focus, and Chris Levine, following Rob Munday's advice, directed the Queen to look into the distance and remain motionless for the duration of the pass. Both Rob Munday and Chris Levine commenced the recording process on various shots, analogous to pressing the shutter button on the camera, by pressing the space bar of the computer keyboard. The Queen, well used to posing for photographs and paintings, adopted her naturally regal pose without any need for intervention or artistic direction and remained still for the eight seconds it took to record each 205-frame sequence. Given this length of time, it was not possible to time the shot with the Queen's breathing.

Nerves and the concentration required meant that the first fifteen minutes of the shoot was a rather hushed affair. It was Rob Munday's assistant Jeffey Robb that finally broke the ice by asking the Queen if she remembered unveiling a commemorative hologram at the University of Surrey which Rob Munday had created some eight years earlier. She replied saying that she did, and remembered that she had been presented with a copy of the hologram. Rob Munday then asked the Queen what had become of his hologram and was pleasantly surprised to be told by the her that it was in the Palace Library. Assistant Nina Duncan also light-heartedly mentioned that the process was a bit like having your passport photo taken to which she jovially replied that she didn't need one! The conversation broke the ice and created a more relaxed atmosphere after which the Queen chatted freely.



At the end of the main shoot, the Queen's head was also scanned into a computer as a three-dimensional model. This unique head scanning system, designed and built by British company Wicks and Wilson of Hampshire, was operated by Stuart Winsborough. The system had been designed by Wicks and Wilson to produce glass bock 'crystal' three dimensional portraits however the resultant 'point cloud' 3D data set can be converted to any 3D model format and hence used for all manner of other three-dimensional imaging techniques.



Although visibly tired, the Queen stayed fifteen minutes longer than was originally planned which, according to the Queen's PA, Miss Angela Kelly, was a sign that she had found the shoot enjoyable. During the 75-minute sitting Rob Munday and Chris Levine shot 18 image sequences, each comprising of 205 images. Both black and white and colour sequences were recorded of the Queen

wearing a selection of black and red capes and at the end of the shoot Rob Munday demonstrated his VIP system to the Queen showing her the images that had been recorded. Rob Munday also showed her a true holographic portrait work that he had created some years before of his 18-month-old daughter Camille, which the Queen found fascinating (*in doing so he had hoped to encourage the Queen to commission him for a similar portrait of her then new-born granddaughter, Lady Louise Windsor*).

After the Queen had left the room, both the shoot and the images were appraised.

Firstly, and despite the tens of hours of testing the new and world-leading Pantera camera prior to the shoot, it was found that, whilst the image sequences were very good and have in fact been subsequently used, the black and white image sequences in particular displayed a less than perfect noise level. This was unfortunately caused by an unexpected and very rare camera fault. It was also recognised that, due to several factors, about which we were asked not to comment, the Queen had seemed very tired during the sitting. Whilst Chris Levine seemed content with the results, Rob Munday felt strongly that neither the camera fault, nor the circumstances surrounding the Queen's apparent tiredness, had been conducive to obtaining the best possible portraits, and so, whilst walking back to Victoria Underground station at the end of the day, Munday proposed strongly that they seek a second sitting. Chris Levine duly contacted the Palace and a very rare second sitting was granted for March 24th, 2004.

During the intervening weeks between the sittings Rob Munday took the decision to upgrade his camera and redesign parts of his VIP system to further improve the aesthetic and technical quality of the digital images for the second shoot and hence the final portrait. Chris Levine and Jeffrey Robb also visited Dr. Perry at his studios in Vermont to discuss the project and the printing of the final holographic stereogram. Upon returning from the USA, it was confirmed and agreed that a very large format holographic stereogram, approximately 1 x 1.5 meters in size, similar to those famously produced by Dr. Perry for artist Harriet Casdin-Silver, would be subcontracted by Spatial Imaging. Chris Levine proposed the name 'Equanimity' for the portrait, which means 'the quality of being calm and even tempered', and also proposed that the holographic stereogram would be lit with blue light

to enhance the sense of ‘equanimity’. This latter input by Chris Levine however, later resulted in the Queen describing her portrait as looking like ‘an old lady lost in the woods’, and so the lighting subsequently reverted to being white. Several emails followed between Dr. Perry and Rob Munday to discuss the implications of using this form of lighting and how it may affect the production of the holographic stereogram and Rob Munday designed a prototype lighting system for the portrait.

The first ever hologram of Queen Elizabeth II and first portrait miniature by Rob Munday

In February 2004, between the two sittings, Rob Munday created the first ever holographic portrait of any kind of Her Majesty the Queen and the world’s first holographic portrait miniature at his creative holography studio in Richmond-Upon-Thames, London, using one of the eighteen image sequences shot during the first sitting. A photoresist master holographic stereogram was made using Munday’s unique 3D digital holographic stereogram technique and Lightgate digital holographic stereogram mastering system that he had invented in 1997 and for which he won a coveted International Hologram Manufacturers Association 'Excellence in Holography' award for Best New Technique in the year 2000. This, in turn, was used to produce a nickel metal master holographic stereogram and copy. The portrait, the first ever holographic stereogram portrait miniature, was shown to the Queen by Rob Munday prior to the second sitting in 2004 *(N.B. It was shown for only the second time by Rob Munday at his solo exhibition at The Little Back Gallery, London in 2017).*

The Second Sitting, 24th March 2004

The second sitting was conducted on the 24th March 2004. The experience gained from the first shoot together with a thorough examination of the initial images meant that several improvements were made, both artistically and technically.

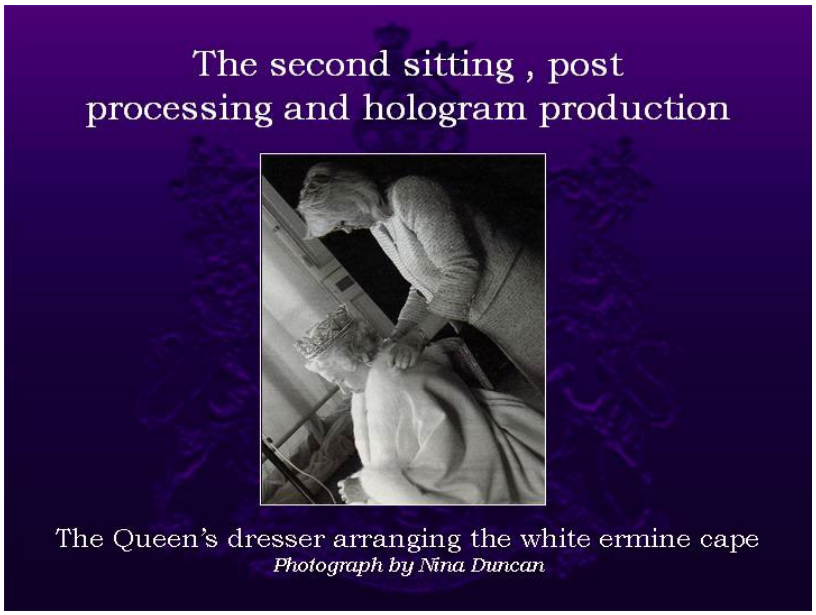
From the very beginning of the project, Rob Munday had decided to record a simple and elegant, but starkly realistic portrait of the Monarch, as never before seen, and in the style of his other holographic portraits and artworks. For the second sitting, Rob Munday had only two days to set up his camera and studio, which he did with the help of his assistants Jeffrey Robb and Nina Duncan. Chris Levine did not attend these set up days. Once again, Munday arranged his camera system so as

to achieve his predetermined ideas of how he wished the portrait to look, again determining all the visual parameters of the shoot.

Nina Duncan adjusted the lighting to give a more flattering illumination and to also provide a higher intensity illumination for the digital camera and a black backdrop was agreed.

On the morning of the shoot, the Queen's PA and Dresser, Miss Angela Kelly, came up and quietly whispered in Munday's ear, 'The Duke of Edinburgh is incredibly interested in what you are doing and wants to pop in to see your work'. A little while later, The Duke of Edinburgh arrived alone and introduced himself. After shaking hands, Munday took him over to his studio set-up, at which point the duke began earnestly asking Munday questions about his camera system, the type of portrait he planned to create and the three-dimensional imaging process in general. This was not a formal visit, and he did not need to come at all, but at 81 he showed an extraordinary level of curiosity and interest.

The Queen again arrived promptly at 3.00 pm. Chris Levine commenced the proceedings by showing the Queen some printouts of the images shot at the first sitting and Rob Munday presented the holographic stereogram portrait that he had created at his studio in Richmond from the first sitting images.



Again, the shoot began in earnest, with the parties performing the same functions as at the first sitting.

The ambience and atmosphere of the second sitting was completely different to that of the first sitting and jovial from the very beginning. All parties were far more relaxed, and the Queen was clearly far less tired than at the first sitting. Munday and Levine had effectively conducted a dry run in November 2003, a benefit few other artists have ever been allowed, Munday had ensured that his camera system and studio were on song and even better designed than before.

There remained however just one last issue that caused Munday concern. As with the first sitting, Chris Levine had chosen dark tops for the Queen to wear, which, when set against a black background disappeared (N.B a red top was worn but with a monochromatic camera became dark grey) . Neither did it frame the Queen's face well or provide for any three-dimensional interest in the portrait. After some sequences had been taken, and unhappy with this choice, Munday strongly proposed that a white, more 'hologenic' cape should be worn. Upon hearing Rob Munday's request, Miss Angela Kelly, the Queen's PA and dresser, offered to fetch some white capes, and promptly disappeared to the Queen's apartment and to do so. Upon returning she showed a selection which included the now famous white ermine stole. As soon as both Rob Munday and Chris Levine saw it they immediately agreed with each other that it would be perfect for the shot, and it has ultimately proven to be a major feature of the work.

The Queen once again adopted her naturally regal pose without any intervention or artistic direction whilst, following Munday's advice to fix her gaze on a small light unit provided by Chris Levine and placed at the back of the room. This common technique prevented the Queen from inadvertently looking at and following the camera with her eyes, a technique employed by Munday for all his portraits, and which prevents the sitter from looking cross-eyed in the final portrait. The improvements made, together with the much more relaxed and jovial atmosphere, enabled Munday and Levine to record a further 20 enhanced 205 frame sequences.

After a total of two and a half hours of the Queens time, during both sittings, approximately 8,200 images were recorded for posterity (including test parallax image sequences).

Munday's post processing

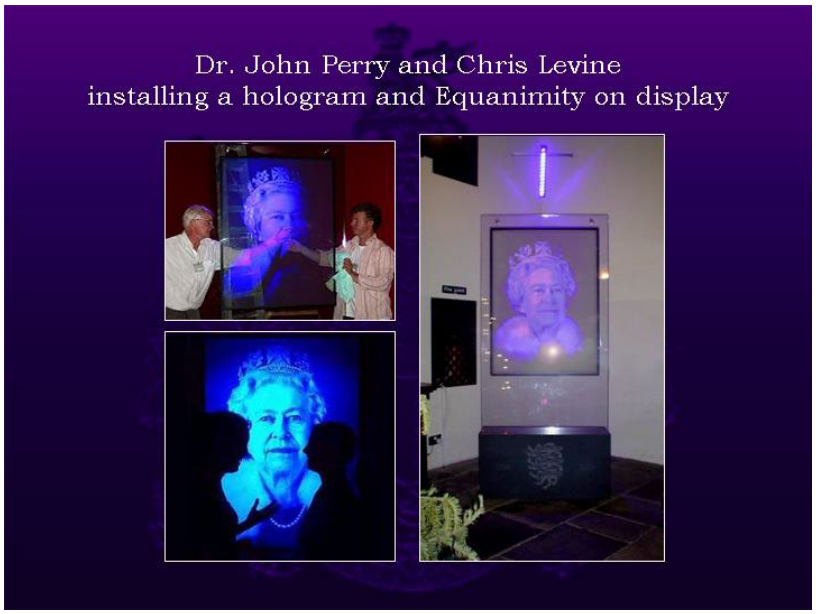
Three weeks after the second sitting, Rob Munday chose a particular sequence for the final three-dimensional commissioned work and Chris Levine agreed to his choice. Rob Munday then post processed his chosen image sequence using custom software that he had written to reverse the image distortions naturally inherent in parallax image sequences. This ensured correct scale and dimensionality of the portrait and an improved final aesthetic result. It was later discovered that this was very likely to have been the first time that such a process had been employed to both aesthetically and technically enhance a holographic stereogram image and portrait. Rob Munday also adjusted the contrast and brightness of the images, applied a sharpening filter, re-sized and cropped the images to his desired aspect ratio, and also, using his own custom written software, conducted an incremental crop of the entire parallax image sequence so as to select the part of the Queens face that would lie on the 'plane' of the holographic stereogram and thus be in the sharpest focus. For this Munday chose the Queen's eyes.

Following Dr. Perry's recommendations, Munday also registered the images with respect to each other such that Dr. Perry could achieve the correct degree of projection in the final holographic stereogram.

Lastly, two undesirable reflections in the Queen's eyes were also removed by computer artist Richard Bainbridge.

Holographic stereogram production

The processed image sequence was then sent to Dr. Perry via an FTP web site. Dr Perry further adjusted the images to pre-compensate for the chromatic distortions inherent in shooting a blue holographic stereogram with a red Helium Neon laser. He then transferred the images to 35 mm film, shooting from a 1200 * 1600 pixel LCD monitor. The film was processed and placed into his proprietary stereogram printer to produce the master holographic stereogram. Finally, four 'rainbow' film holographic stereogram copies were created, two proofs and two final works, each 3 x 4 ft in size.



Dr. Perry then flew to London to assist with the installation of one of the two holographic stereograms at the Queen's Gallery at Buckingham Palace. The mounting and presentation of the holographic stereogram, which was designed by Chris Levine, was kept intentionally simple. The holographic stereogram was sandwiched between two thick sheets of glass which were held upright using a solid block of granite onto which the three leopards of Jersey were engraved. A light source comprising of a linear array of LED's, proposed and designed by Rob Munday, was used to illuminate the holographic stereogram.

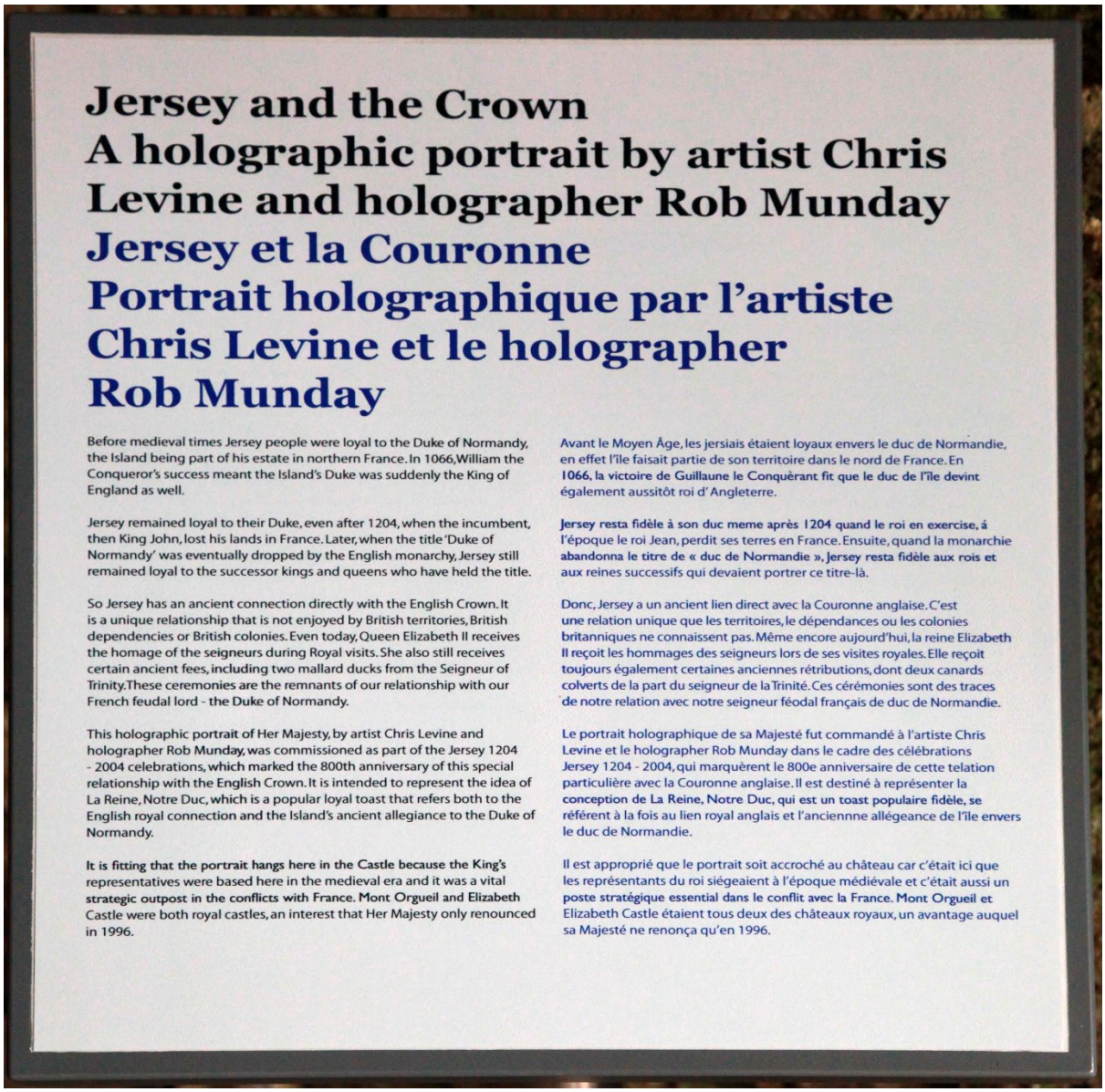
A second holographic stereogram was unveiled by The Prince of Wales in June 2004 which subsequently toured the UK.

Soon after however, the holographic stereograms made by Dr. John Perry were found to contain undesirable optical distortions which caused the Queen's face to look bloated. Also, the fact that the portrait had been lit with blue light, caused the Queen to comment that she 'looked like an old lady lost in the woods'. This version of the portrait was clearly unacceptable.

Final commissioned work and other works

In 2005, Rob Munday gave permission for Jeffrey Robb, who headed up the lenticular imaging division of Rob Munday's creative holography studio Spatial Imaging in Richmond-Upon-Thames, London, to use one of the image sequences of the Queen to produce a large format lenticular stereogram version of the portrait instead. It was deemed by both Munday and Robb that this may provide for a much better and more aesthetically pleasing three-dimensional portrait than the former holographic stereogram, and this did indeed prove to be the case.

The Jersey Heritage Trust – The States of Jersey agreed and accepted a lenticular print in preference to the holographic stereogram previously made, as their final commissioned work and for their permanent display at the Mont Orgueil Castle in St. Helier, Jersey.



Jersey and the Crown
A holographic portrait by artist Chris Levine and holographer Rob Munday
Jersey et la Couronne
Portrait holographique par l'artiste Chris Levine et le holographer Rob Munday

Before medieval times Jersey people were loyal to the Duke of Normandy, the Island being part of his estate in northern France. In 1066, William the Conqueror's success meant the Island's Duke was suddenly the King of England as well.

Jersey remained loyal to their Duke, even after 1204, when the incumbent, then King John, lost his lands in France. Later, when the title 'Duke of Normandy' was eventually dropped by the English monarchy, Jersey still remained loyal to the successor kings and queens who have held the title.

So Jersey has an ancient connection directly with the English Crown. It is a unique relationship that is not enjoyed by British territories, British dependencies or British colonies. Even today, Queen Elizabeth II receives the homage of the seigneurs during Royal visits. She also still receives certain ancient fees, including two mallard ducks from the Seigneur of Trinity. These ceremonies are the remnants of our relationship with our French feudal lord - the Duke of Normandy.

This holographic portrait of Her Majesty, by artist Chris Levine and holographer Rob Munday, was commissioned as part of the Jersey 1204 - 2004 celebrations, which marked the 800th anniversary of this special relationship with the English Crown. It is intended to represent the idea of La Reine, Notre Duc, which is a popular loyal toast that refers both to the English royal connection and the Island's ancient allegiance to the Duke of Normandy.

It is fitting that the portrait hangs here in the Castle because the King's representatives were based here in the medieval era and it was a vital strategic outpost in the conflicts with France. Mont Orgueil and Elizabeth Castle were both royal castles, an interest that Her Majesty only renounced in 1996.

Avant le Moyen Âge, les jersiais étaient loyaux envers le duc de Normandie, en effet l'île faisait partie de son territoire dans le nord de France. En 1066, la victoire de Guillaune le Conquèrant fit que le duc de l'île devint également aussitôt roi d' Angleterre.

Jersey resta fidèle à son duc meme après 1204 quand le roi en exercise, á l'époque le roi Jean, perdit ses terres en France. Ensuite, quand la monarchie abandonna le titre de « duc de Normandie », Jersey resta fidèle aux rois et aux reines successifs qui devaient portrer ce titre-là.

Donc, Jersey a un ancient lien direct avec la Couronne anglaise. C'est une relation unique que les territoires, le dépendances ou les colonies britanniques ne connaissent pas. Même encore aujourd'hui, la reine Elizabeth II reçoit les hommages des seigneurs lors de ses visites royales. Elle reçoit toujours également certaines anciennes rétributions, dont deux canards colverts de la part du seigneur de la Trinité. Ces cérémonies sont des traces de notre relation avec notre seigneur féodal français de duc de Normandie.

Le portrait holographique de sa Majesté fut commandé à l'artiste Chris Levine et le holographer Rob Munday dans le cadre des célébrations Jersey 1204 - 2004, qui marquèrent le 800e anniversaire de cette telation particulière avec la Couronne anglaise. Il est destiné à représenter la conception de La Reine, Notre Duc, qui est un toast populaire fidèle, se réfèrent à la fois au lien royal anglais et l'anciennne allégeance de l'île envers le duc de Normandie.

Il est approprié que le portrait soit accroché au château car c'était ici que les représentants du roi siégeaient à l'époque médiévale et c'était aussi un poste stratégique essential dans le conflit avec la France. Mont Orgueil et Elizabeth Castle étaient tous deux des châteaux royaux, un avantage auquel sa Majesté ne renonça qu'en 1996.

From 2004 to 2006, several commercial works were produced. Munday's company Spatial Imaging was also responsible for creating a range of lenticular images from 8*10 inches to 6 * 4 ft in size.

These were used to commemorate the Queen's 80th birthday and were shown at various venues by both Rob Munday and Chris Levine. A lenticular image also featured on limited edition commemorative gold and silver medals made by the Royal Mint.

Also in 2005, The Jersey Heritage Trust, the sole rights holders, requested that Rob Munday create a second holographic stereogram portrait miniature for presentation to entities such as The Royal Mail, The Bank of England and Benham etc. To create the miniature Rob Munday selected one of the twenty image sequences shot at the second sitting and again utilised his unique 3D digital holographic stereogram technique and Lightgate digital holographic stereogram mastering system to create the miniature. This second portrait miniature was the first to utilises the 'achromatic' technique providing for a black and white digital holographic stereogram, again, uniquely developed by Rob Munday.

Jonathan Carter, Director, of the Jersey Heritage Trust, and one of the driving forces behind the commission stated 'As Jersey has a long and fascinating relationship with The Crown, we wanted to commission a Royal Portrait that not only reflects this history but is also a contemporary iconic image of distinction. By presenting our heritage in this contemporary form, the portrait will symbolise and celebrate Jersey, its people and the future'.

Footnote: Rob Munday and Chris Levine have independently, as well as together, created and shown various versions of the portrait as artworks, both in 3D and 2D form, and the portrait has been used for several commercial projects. In 2012, Rob Munday produced and showed the first ever large format digital reflection hologram portrait entitled Diamond Queen and was also commissioned independently by The Jersey Post-The States of Jersey to design and create the world's first stamp to contain a 3D holographic portrait of a head of state to celebrate the Queen's diamond Jubilee. The portrait was also used for the world's first £100 banknote and adorned the cover of TIME Magazine. A copy of the portrait was gifted by the people of Jersey to the National Portrait Gallery in London. In 2013, Munday also unveiled the world's first 24 carat gold holographic portrait miniature at the prestigious Royal Miniature Society's Annual Exhibition.