

The World in our Hands



Medal designed for the 2016 London Design
Biennale

Researcher's Name: Drummond Masterton

Research Programme: Digital Creativity

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Project Details

- The winning entry to the open competition to design and manufacture a series of medals for the inaugural London Design Biennale, 2016.
- Submitted: Jan 4th 2016 to a panel of judges including, Sir John Sorrell (President of the Biennale), Dr Christopher Turner (Director of the Biennale) and Ben Evans (Executive Director of the Biennale and Director of London Design week)
- Awarded: February 2016.
- Completed for London Design Biennale - Utopia by Design, Somerset House, London, Sep 2016.
- Technical Partners: Renishaw



300-Word Supporting Statement

The winning entry to the open competition to design and manufacture a series of medals for the inaugural London Design Biennale, 2016. The theme of the inaugural London Design Biennale was Utopia by Design, which celebrates the 500th anniversary of the publication of Sir Thomas More's classic, Utopia (1516).

The proposal for the medal was focused on expanding my research work in 3D Printed Metals working in partnership with Renishaw, UK. Previous research work had focused on 3D printed Titanium and Near Net forming techniques.

The research questions tested in the project were:

What affect does different alignment of parts within additive manufacturing systems have on the continuity, accuracy and quality of surface finish?

Can 3D Geometries be successfully printed without the need for support structures on face angles above 45 degrees?

The medal was extremely groundbreaking both for the artist and the manufacturing partner, Renishaw. It was the first time that the artist

had created a fully finished multiple design using 3D printed stainless steel. It was the first time that Renishaw had been able to achieve an almost completely enclosed hollow object without the use of any support structures. This relationship was mutually developed as the artist and technician both shared files and production solutions within propriety software designed for Additive Manufacturing.

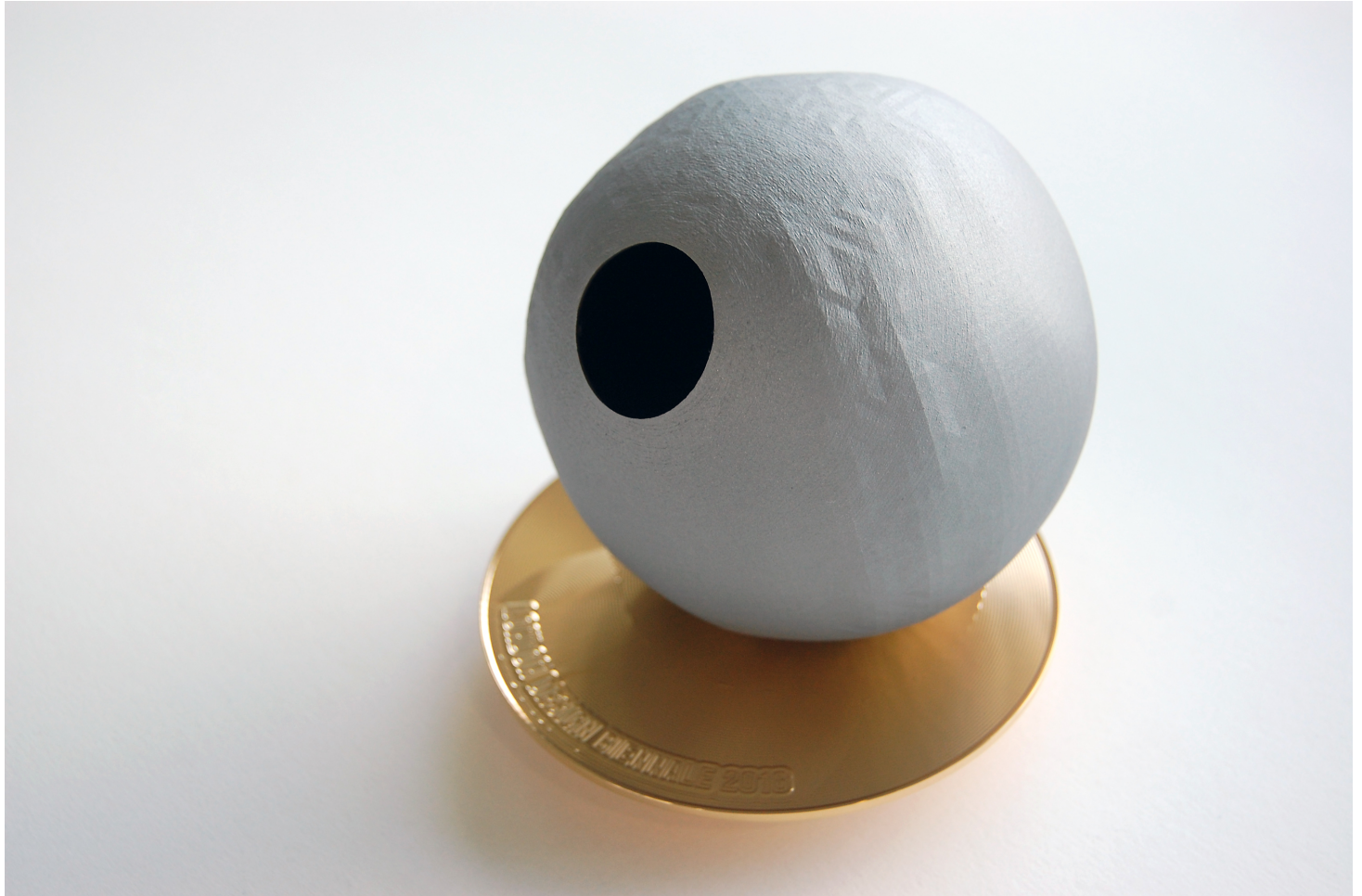
The medal material, Marine grade Stainless Steel was used for its conceptual relationship to Thomas More's debasing of precious metals in his book Utopia. This new AM powder had just been released and the research enabled complex geometries and thin wall section parts to be tested and provide case study references for Renishaw.

The research phase of 3D digital model making, prototyping and building in stainless steel using Renishaw's SLM 250 Additive manufacturing system took 6months to refine to a level that matched the artists requirements.

Research Output



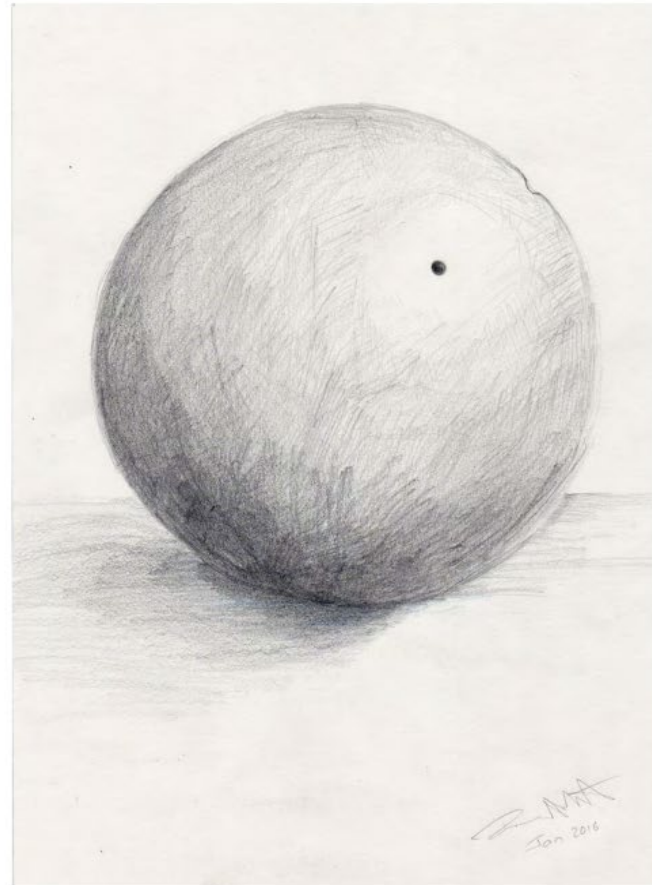
Medal on base



Research Output

Original design proposal for medal

Drummond H. Masterton, *'The world in our hands'*
London Design Biennale, 2016.



The Medals will take the form of a 3D printed sphere to be held in open palms, containing an internal terrain that can only be viewed through a pinhole in their shell. A second pinhole transforms the sphere into a camera obscura, projecting an image of the outside world onto the internal terrain.



Example detail of the internal 3D printed, gold plated terrain.

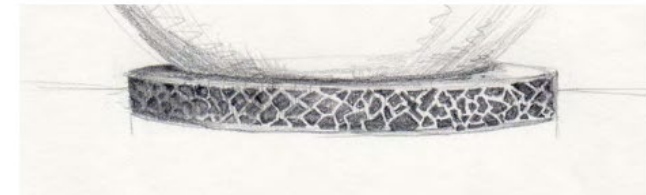


Illustration of the 3D printed Gold Lattice base.

Dissemination

[London Design Biennale: Utopia by Design September 2016](https://www.londondesignbiennale.com/london-design-biennale-medal-winners-2016)



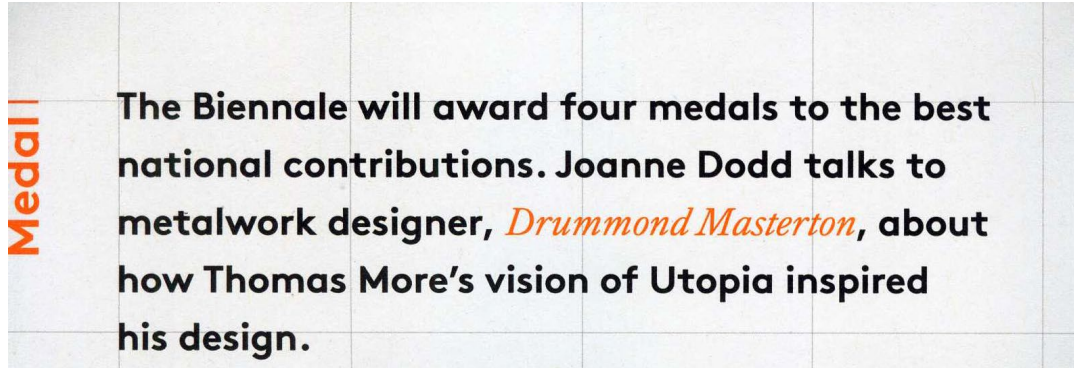
<https://www.londondesignbiennale.com/london-design-biennale-medal-winners-2016>

The inaugural London Design Biennale awarded four Medals to its participating countries and territories, which included the London Design Biennale Medal, the Utopia Medal, the Jaguar Innovation Medal and the Public Medal. In addition, the Jury chose to commend Mexico, Chile and Japan for their entries. The Medals were designed by Drummond Masterton, Head of Sustainable Product Design at Falmouth University, and created using advanced digital printing and milling technologies.

2016 MEDAL WINNERS

Contextual Evidence

Excerpts from [2016 Biennale catalogue pp. 104-105](#)

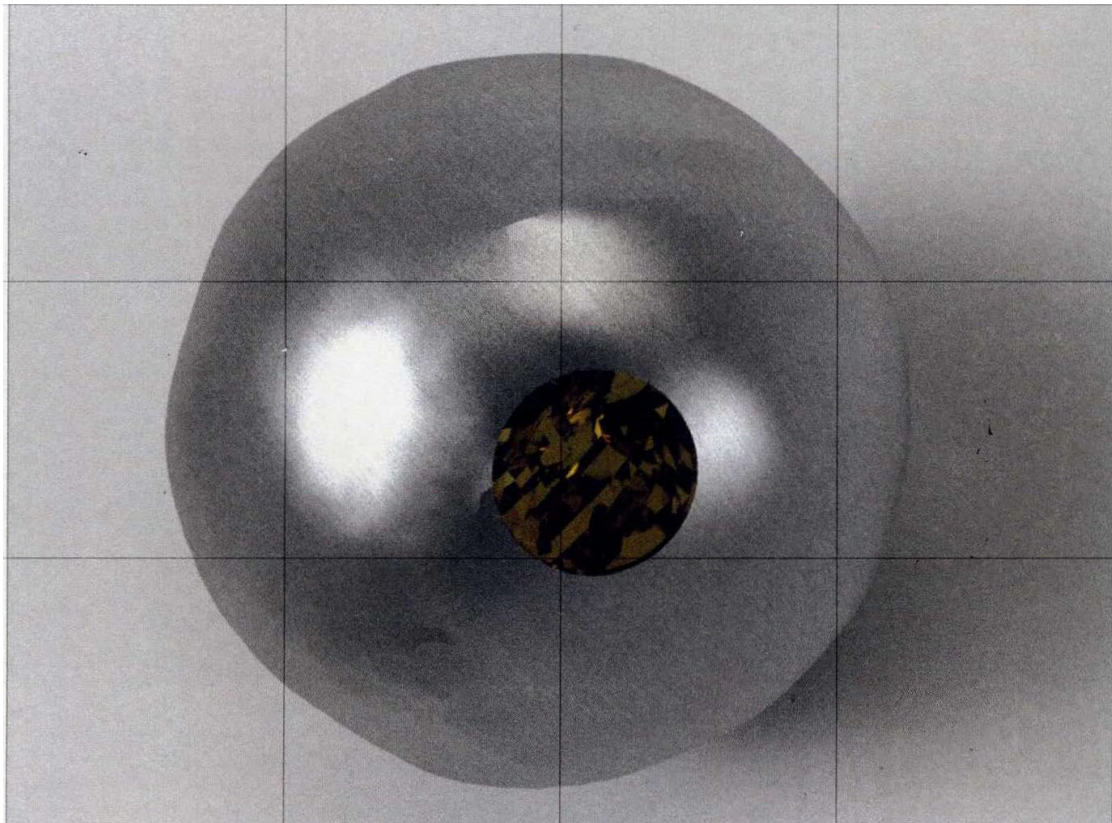


All the medals are designed by Drummond Masterton, Head of Sustainable Product Design at Falmouth University, and created using advanced digital printing and milling technologies. The World In Our Hands, as the edition is

titled, takes the form of a 3D printed steel sphere, with a gold plated terrain that can be viewed through a small opening in the shell. In More's Utopia, gold and silver are held in low regard, used for chamber pots and prisoner's shackles; iron is instead prized for its useful properties. To reflect this functional philosophy, Drummond has chosen to use stainless steel for these trophies. The thin layer of gold coating that highlights the ridges of the globe's internal landscape, and glows through the perforation in its exterior, was selected only for its ability to reflect up to 99% of the light that falls on it.

Viewers are encouraged to manipulate the medal in their hands so as to see different views of the secret scenography visible through the small opening, which functions like the aperture of a pinhole camera. It is this fleeting suggestion of an alternative world that is most fascinating about the design. Through a peephole in the globe you see a gilded, craggy landscape that serves as an apt metaphor for utopia: a tantalising and perfect, but inaccessible world that exists only in the mind - and humanity is shaped by these dreams of better.

Contextual Evidence



Excerpt from [2016 Biennale catalogue pp. 104-105](#)



