

Back to the Future: The use and re-use of objects through 3D Printing

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A 3D scan of Van Gogh to create the perfect replica



Paintings are not 2D, but 3D;
How *high* is the pixel?



The special 3D technique, by means of which these reproductions are produced, goes by the name of **Reliefography**

Creates a three-dimensional scan of the painting and a professional, high-resolution print

Faithful reproduction of the front of the painting, as well as of the back and comes in a frame

3D replica of a Van Gogh painting. The final result is approved by the curator of the museum

Bulgarian 3D Model Marketplace partners with Regional Museum

threeding
3D PRINTING MARKETPLACE

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 Deal of the day



Lincoln 3D Scans hosts objects from the Collection Museum and Usher Gallery in Lincoln, UK

LINCOLN 3D SCANS

THE COLLECTION, LINCOLN & OLIVER LARIC



ARIADNE

Artist: Unknown after Praxiteles
Period: 2nd Century
Material: stone, marble



BAILGATE MILESTONE

Artist: Unknown
Period: Romano-British
Material: Stone



BARDNEY ABBEY TABLE LEG

Artist: Unknown
Period: Medieval
Material: Stone



BEETHOVEN

Artist: Loewental, Artur
Period: 19th Century
Material: Bronze



BIRD FIGURINE



BORDEAUX ALTAR



CABINET



CAST OF GAIUS

“[Lincoln 3D Scans] aims at making the collection available to an audience outside of its geographic proximity and to treat the objects as starting points for new works. All models can be downloaded and used without copyright restrictions”

Get started in 3D printing and modeling

With free apps, 3D models
and tutorials

SHARE IT

Sharing is central to the Next Industrial Revolution, so we built it directly into the MakerBot Digitizer experience. Send your 3D design files to friends, family, and colleagues, or easily upload them to Thingiverse.com, the largest community for sharing 3D designs.

Copyright Implications

- **Scan** – replica / copy
- **3D Model** – with assistance from apps available on online platforms, model (*artefact*) can be modified
 - “material alteration” “embellishment”
- *Antiquesportfolio.com v. Rodney* [2001] E.C.D.R. 5
- *Eisenman v. Qimron* [2001] E.C.D.R. 73

Antiquesportfolio.com v Rodney Fitch & Co [2001]

- Can copyright subsist in photographs of three-dimensional antiques?
- Judge Neuberger: **angle at which the picture was taken; lighting and positioning of an object**
- Great deal of skill, labour and effort on the part of the photographer
- **Photographs of three-dimensional objects may be copyrightable**

Bridgeman Art Library v. Corel

- Bridgeman Art Library – a British Company – **licenses** high quality photographic **replicas of artwork**, many of which are in the public domain
- Brought a case against Canadian corporation – Corel
- 7 CD Roms containing hundreds of digital reproductions of well-known paintings
- Bridgeman claimed that 120 of those images infringed copyright

Ruling and Relevance

- **Exact photographic copies of public domain images could not be protected by copyright because the copies lack originality (*Interlego v Tyco*)**
- However, providing tools to work with the sculptures, artifacts, raises different questions – i.e. modify the work

Eisenman v. Qimron

[2001] E.C.D.R. 73



- Dead Sea Scrolls case - from all the books of the Bible but one (the book of Esther)
- Over 800 ancient scrolls were discovered in caves near the Dead Sea between 1947 and 1956
- Kept in a Museum in Jerusalem. But for security reasons, **photographs of the scrolls were were also held in several places including the Huntington Library, California**

Qimron as author?



- Qimron studied and deciphered the text, which itself was a physical recreation of a large number of parchment fragments
 - (121 lines; Qimron reconstructed 11 lines for a total of 132 lines)
- Hershel Shanks, editor of the *Biblical Archaeological Review* published a book, edited by Robert Eisenman and James Robinson
- As an appendix to his publisher's Introduction, he included the **deciphered text**, without Qimron's (or anyone else's) authorisation, and without attributing it to Qimron

A copyright work?

- Supreme Court was called upon to decide on whether the **reconstruction of one of the ancient texts** by an Israeli academic--Professor Elisha Qimron-- was a protected “copyright work”
- The defendants (Eisenman et al) challenged the copyrightability of Qimron's reconstruction
- He reconstructed a pre-existing work (albeit of ancient provenance) but did not constitute a “work” in the copyright sense

- “Over 2,000 years after it was written and half a century after it was discovered, one of the Dead Sea Scrolls finally has a ‘legal’ author, in a judicial declaration...”
- Work involved amounted only to “sweat of the brow” or whether it was genuinely creative “authorial” work
- *Infopaq, Football Dataco cases*: **“own intellectual creation”**; **personal touch**; **by expressing his “free and creative choices”**

Questions from a 3D printing point of view

- Scanning a three-dimensional object (antique; artefact) – can it be copyrightable? (*Antiquesportfolio*)
- Skill, labour, effort / modification (material alteration, embellishment) – creates a new copyright work?
- Tools provided on online platforms to modify the work – adding a new purpose to the original work

- Gartner Cycle 2013
- Wider access to information / objects?
- Monopoly for certain organisations?
- Online platforms providing tools for purposes of modification – how will we perceive these platforms?