

# Veholder – Virtual Artefact & Archive Project

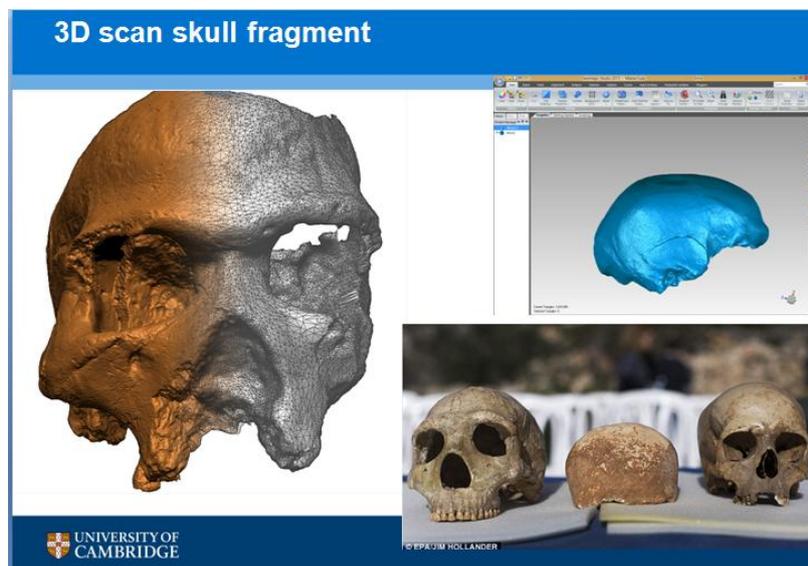
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## Background and Purpose

We wish to propose a collaboration between suitably matched museums and collections to develop what might be called a Virtual Environment for Holdings and Online Digital Educational Repositories – the Veholder project, for short. Anyone drawn to museums and archives and special collections, either seeking generalist or specialist knowledge, finds they quickly want to visit another collection, and even more to be able to bring together related or complementary objects from one collection alongside those of another.

The advances and emerging possibilities with Mixed Reality (MR) systems make possible such a combination of collections, by mixing physical objects in one locale with complementary virtual objects in a collaborating remote collection – or the combination of two or more virtual objects to be available to those remote from any of the collaborative collections. High resolution 3D scanning, coupled with suitable mixed reality displays and systems will enable both the specialist researcher, the developing student, and the interested general public to get the most out of otherwise hidden and necessarily carefully shielded collections.

As one example, the specialist Duckworth Collection<sup>1</sup>, which is part of the Leverhulme Centre for Human Evolutionary Studies<sup>2</sup> at the University of Cambridge, has specimens which are regularly compared to consider structural changes and functional developments over time and species, and this study would be mutually enhanced both by offering high resolution scans of its specimens to other such collections as well as having access to high resolution scans of their collection.



### Related Presentations (Video, Slides):

- Mixed Realities and Museums - Ronald Haynes at Augmented Reality IFITtalk@Manchester  
<https://www.youtube.com/watch?v=BdexNuJPAJs>  
<http://people.ds.cam.ac.uk/rsh27/Presentations/ManchesterFITworkshop-Mixed-Realities-and-Museums.pdf>
- UIS Lightning Talks 2015 - Mixed Realities and Museums - Uncanny Valley or Peak Experiences  
<http://thesecretnote.com/video/Museums-Mixed-Reality-Haynes-UIS-201512.mp4>  
<http://people.ds.cam.ac.uk/rsh27/Presentations/UIS-Staff-Seminar-20151215-Mixed-Realities-and-Museums-rsh27.pdf>

<sup>1</sup> See: <http://www.human-evol.cam.ac.uk/duckworth.html>

<sup>2</sup> See: <http://www.human-evol.cam.ac.uk/>

## Other Virtual Museum Projects

### **v-must - Virtual Museum Transnational Network<sup>3</sup>**

- aims to provide tools and support to develop Virtual Museums (VM) that are educational, enjoyable, long-lasting and easy to maintain
- has 18 partners, coming from 13 different Countries and several Associated Members
- VM example - [www.virtual-egyptian-museum.org](http://www.virtual-egyptian-museum.org)
  - Georges Ricard, Ph.D., Curator - there is a definite benefit to the virtual experience that cannot be duplicated in a real museum. Some of the notable virtual advantages we can envision include:

Lighting, Scale, Peripheral Vision, Non-Linear Visit, Presentation of Historical Context, Access and Conservation

### **British Museum - With Google**

[http://www.britishmuseum.org/with\\_google.aspx](http://www.britishmuseum.org/with_google.aspx)

The British Museum: A Museum for the World | British Museum blog

<http://blog.britishmuseum.org/2015/11/12/the-british-museum-a-museum-for-the-world/>

## Mixed reality (MR) – and the Virtuality Continuum

- merging real and virtual worlds to produce new environments and visualizations where physical and digital objects co-exist and interact
- encompasses both augmented reality, where digital information and virtual objects augment images of the real world, and augmented virtuality, where real objects augment artificial computer-generated images
- the Virtuality Continuum extends from the completely real through to the completely virtual environment with augmented reality and augmented virtuality ranging between. In this context mixed reality is defined as “..anywhere between the extremes of the virtuality continuum”.  
- Paul Milgram, Fumio Kishino, Taxonomy of Mixed Reality Visual Displays (1994)<sup>4</sup>

### **Why Mixed Reality in Museums (or elsewhere)?**

- Share
  - collections, content, details otherwise not easy (or possible)
- Compare
  - shape, size, pattern, context, history, etc.
- Create new options
  - metacollections, e.g. theme or subject-specific

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<sup>3</sup> See: <http://www.v-must.net/> and <http://www.v-must.net/virtual-museums>

<sup>4</sup> See: <http://www.v-must.net/virtual-museums/glossary/mixed-reality>