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Learn to Build Your Own Museum in the Metaverse

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1.Introduction

The *Museums in the Metaverse* (MiM) platform has been developed by the University of Glasgow and Edify with funding from Innovate UK. The purpose of the platform is enable users to build and publish their own virtual museums without the need to code or have other specialist technical knowledge. This tutorial will lead attendees through the process of doing just that. We will showcase the capabilities of the platform, then guide users through asset identification, upload, and placement, then through experience curation and publication. The output of the tutorial will be draft virtual museum experiences that attendees can publicly publish at a later date, if they so choose.

2. MiM Concepts

The following ontology and action concepts will be introduced and their role within the MiM platform explained.

2.1. Ontology

Within the MiM platform creators begin by selecting an *environment* which will serve as the venue within which they will arrange their exhibition. Next they select the *objects* and *assets* that they wish to showcase within it.

Objects are 3D computer models which will typically digital facsimiles of items in a museum's collection, but since users can also add their own models they could be models of any kind or origin of real-world object. Objects that have been shared for use on the Museums in the Metaverse project (MiM Objects) are hosted in the *MiM Repository*. [File formats are: GLB, GLTF.]

Assets are media, such as PDFs, JPEGs, websites, sound recordings [MP3, MOD, WAV] and video files [WMV, MP4, ASF] which can be presented within the environment alongside objects.

A particular combination of an environment, objects, and assets, constitutes a *scene*. Scenes can be concatenated to produce diverse and complex *experiences*.

Experiences can be published for public consumption.

2.2. Actions

Creators within the platform can curate their own MiM *Experiences* in a few steps and without any specialist coding or 3D knowledge. The technical literacy required for this is equivalent to that required by Microsoft PowerPoint.

The first step is to *create* a new experience. This establishes a new save within the MiM platform with a title, description, and tags.

The second step is to *discover* existing objects and assets within the MiM Repository, or on Sketchfab. The creator can also upload their own at this point, and choose whether other creators can use them or not.

The third step is to *collect* the objects and assets that will be used within this particular experience. This brings the encrypted files to the local device and makes them available to the creator to use.

Once an environment has been selected, the creator can then *place* the objects and asset to create a scene.

Using annotation tools, images, PDFs, movies, and sound tools within the scenes, allows creators to build narratives around the positioned objects.

Finally, creators can *publish* the experience so that others can visit their curation from anywhere in the world, across a range of devices.

3. MiM Tutorial

This MiM Tutorial will guide attendees through the creation of their own MiM Experience. This will involve selecting environments, then discovering, collecting, and placing objects to create a scene. Devices (laptops, headsets) will be provided.

After a brief introduction, and contingent on attendee numbers, we expect to divide the attendees into between two and four groups who will each be led by a MiM expert in the production of their group's experience.

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There will be hundreds of MiM objects available to use in this tutorial via the MiM Repository but attendees will be encouraged to bring an asset of their own if they wish to include it.

The tutorial will be structured as follows:

Part 1 - **Building a Museum in the Metaverse** (50 minutes)

Part 1 will be a presentation/demonstration by the MiM R&D team, to develop understanding about:

- the added value of 'XR superpowers' for creating Cultural Heritage experiences (eg. facilitating access to stored objects, interaction, shared digital experiences, remote co-curation);
- access, outreach and intellectual property challenges that the MiM platform can address (eg. audience accessibility, geographical challenges, and sharing/ownership of digital assets and curations);
- potential curators of/audiences for MiM experiences (with close reference to MiM's audience research and published impact report);
- possibilities of the platform for storytelling, interpretation and learning (by demonstrating the curation of a MiM exemplar from conception to publication).

Based on above, participants will be encouraged to identify a theme/topic for a 'Museum in the Metaverse' experience that they would find engaging, or a collection that they would like to curate and share.

Part 2 – **Building <u>Your</u> Museum in the Metaverse** (60 minutes)

Following a 10 minute break, Part 2 of the tutorial is designed to allow participants to refine and curate their own 'Museums in the Metaverse' experience in groups with fellow delegates, supported by the MiM team. This will involve:

- Topic identification
- Object sourcing and selection
- Sourcing/creating interpretation assets
- Environment selection
- Curating objects and assets within environment
- Save and upload

4. Outcomes

We expect four main outcomes from the Tutorial session.

First, the attendees will gain awareness of the capabilities of the MiM platform for their study, practice or organization.

Second, the attendees will learn about some of the distinctive considerations that arise around virtual museum curation.

Third, the experiences produced can, if appropriate, be made available on the MiM platform.

Fourth, the groups will be asked to provide platform feedback. This will influence the ongoing development of the MiM platform.

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