

2022 年英特尔杯大学生电子设计竞赛嵌入式系统专题邀请赛

参赛队作品简介

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作品题目 (中英文对照)	“时间旅者”——博物馆穿越主题元宇宙平台 “Time Traveler” – A Museum Metaverse Platform With the Theme of Time and Space Travel		
作品简介 (中英文对照, 中文限 500 字以内)	<p>2021 年 10 月, Facebook 改名为 Meta, 标志着扎克伯格对建立元宇宙公司的信念与决心, 拉开了全世界元宇宙的序幕, 同时 2021 年也被称为“元宇宙元年”。</p> <p>本参赛作品以博物馆穿越为主题, 完成了“云-边缘-终端”平台架构的建立, 采取 B2B2C 的运营策略, 为希望接入元宇宙的博物馆、游客提供服务。</p> <p>对于博物馆用户, 可以通过在展馆中部署边缘主机 GNS-V40 接入元宇宙。经过调查发现很多已有的 AR/VR 项目中的场景、物品不具备复用性, 而我们开发的博物馆管理程序可以实现虚拟物体的编辑、存储, 满足馆内展品信息变动的情况。服务程序可以根据终端发送的摄像头视频流进行定位, 将接入的用户全部映射到同一空间中。</p> <p>对于游客用户, 我们打通了线上与线下的隔阂。线下到访的游客可以使用 HoloLens 2, 而线上远程连入的用户还可以选择 PC、VR 头显的方式, 通过直接、间接连接边缘设备, 获取用户、物体的实时信息, 与好友、物品进行交互, 从而实现与身处不同地区的亲朋好友一起观博, 共同开始一段关于时间的知识文化之旅。</p>		

<p>作品 简介 (中 英文 对照 , 中 文限 500 字以 内)</p>	<p>In October 2021, Facebook was renamed meta, marking Zuckerberg's belief and determination in the establishment of metauniverse company, which opened the prelude to the world's metauniverse. At the same time, 2021 is also known as the "first year of metauniverse".</p> <p>With the theme of Museum crossing, this entry completed the establishment of the "cloud edge terminal" platform architecture, and adopted the B2B2C operation strategy to provide services for museums and tourists who want to access the meta universe.</p> <p>For Museum users, they can access metauniverse by deploying the edge host gns-v40 in the exhibition hall. After investigation, it is found that many scenes and objects in existing ar/vr projects are not reusable, and the museum management program we developed can realize the editing and storage of virtual objects to meet the changes of exhibit information in the museum. The service program can locate according to the camera video stream sent by the terminal, and map all the accessed users to the same space.</p> <p>For tourist users, we have opened the gap between online and offline. Tourists visiting offline can use hololens 2, while users who are remotely connected online can also choose the way of PC and VR head display. By directly or indirectly connecting edge devices, they can obtain real-time information of users and objects, interact with friends and items, so as to watch blogs with relatives and friends in different regions and start a knowledge and culture journey about time together.</p>
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