Exploring New Frontiers: Metaverse Queen Mary **Dr Michaela MacDonald Senior Lecturer** The School for Electronic Engineering and Computer Science THAN JUST A **Queen Mary University of London**

Metaverse – The Concept

- Metaverse as a collective digital space that merges aspects of both physical and virtual worlds and enables users to interact in immersive, interconnected environments
- Early versions of the Metaverse massively multiplayer online games (MMOs) like Second Life and World of Warcraft – evolved around realtime interaction and user-generated content
- Current iterations include proto-Metaverses such as Roblox or Fortnite
- Future visions of the Metaverse aim to go beyond gaming, encompassing everything from social interaction and entertainment to commerce, education, and remote work

Metaverse: Key Characteristics

- **Scaling** ability to increase the size of the Metaverse
- Persistence unlocking technical limitations to improve the immersiveness of the Metaverse
- Interoperability the merging of different virtual worlds and systems
- **Decentralisation / centralisation** distributing or concentrating control over data, content, online identity
- **Economy** allowing for trading across the Metaverse
- **Identity** evolving current online identities for avatars for a stronger connection to the user
- Digital and physical spanning across many aspects of life
- Multiple contributors content from all sorts of stakeholders from individuals to commercial organisations

Existing Issues

- IP protection (copyright, TMs)
- IP registration (TMs)
- IP enforcement
- Use of third-party IP and user-generated content
- Unfair competition
- Competition law
- Licensing mechanisms

New Issues

- Interoperability
- Decentralised regulation and new forms of governance
- Convergence of digital and physical
- Multiple contributors
- Computational creativity and Algenerated content

The Way Ahead = Human-Centric Metaverse

We need to ensure that we build a Metaverse(s) that prioritizes user rights and experiences.

Thank you

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