**Matthew Ball: The Metaverse**

Everyone has heard of the Metaverse. It doesn’t matter the company… odds are they’re talking about it.

SEC filings using the term “Metaverse” have seriously spiked since 2020.

The estimates are extraordinary. Banks estimate trillions of dollars will pour into the sector.

Behind that growth is extraordinary investment. There’s more to the sector than hype.

We’re used to hype preceding products hitting the market (i.e. 3dTV)

But the metaverse has investments from apple, Microsoft, google and other megacaps.

In the first five months of 2022 big tech has spent $120 billion on the metaverse, up from $57B in all of 2021.

It’s not just corporate expectations. World governments are involved too. EU has made the metaverse a top two economic concern. Dubai’s crown prince has started a metaverse jobs program. The FTC seeks to block Meta’s influence of owning the entire metaverse.

Behind all of this is a shared belief that the metaverse isn’t a game… it’s the next generation of the internet.

This is something g bigger than a 20-minute presentation. So instead we’ll discuss what it is, what it isn’t, and why now.

The metaverse is simply a synchronous, real-time, 3D internet. The internet is a global, persistent web of information and communication. But it’s predominantly 2d. It’s not spatial.

It’s also not real-time. You are requesting coded pages with 30-to-60 second updates.

It’s also not shared. You receive messages and email privately… and the greater network doesn’t retain it. It’s in a server, not a shared global experience.

The Metaverse elevates the internet. We will see new protocols, hardware… and major new companies.

Here’s what the metaverse is not…

The metaverse is not immersive virtual technology. It is a common means of access, but this is not the metaverse.

It’s not Roblox, Minecraft or any other game. These are 3D networks of shared experiences… but they’re apps. They are not the network itself.

The metaverse is not Web3/4/Crypto. These are part of the tools involved. But they’re not the metaverse itself.

It is not a replacement to the internet. It will not eradicate mobile models.

It is not a comprehensive vision of the future. It describes some new technologies that are being built.

The Metaverse is not here yet. There are tech problems that must first be resolved, like power, efficiency, payment rails and networking. Also social problems stand in the way, such as data rights, toxic behavior, and the role of algorithms.

The transition won’t be sudden. For example, we are in the mobile era today. But the first cell emerged in the 70’s. 2G emerged around the early 90’s. There were “dumb” phones… and now the advent of new devices ushered in an undeniable *era*.

But when does “the mobile era” begin? That’s not an answerable question. But there were key moments that promoted a substantial shift.

Real-time 3d simulation transcended “Games.” We have deterministic simulations. We have collision and now particle simulation. And we have tools that let people build these spaces with little experience. John Hopkins have used an extended VR device to perform a spinal surgery. These devices are now used to simulate living cities, e.g. by Tesla. The U.S. army has adopted $22b of Microsoft AR devices.

Atlanta had produced a full-scale simulation of its downtown and simulated traffic within. This has made the city more efficient when it comes time to invest.

We are making the real world legible to software. The greatest platform is not apple or android, it’s the world itself.

Consumer devices can now perform full scale 3d simulations. PS5 simulates full-scale cities. Microsoft flight simulator has 2 and a half individually rendered trees, you house, your car – these are all available to fly to and updated in real time. It’s a live experience replicating the world almost exactly on standard issue devices.

Virtual goods are taking off. In 2021 45 b poured into NFTs. 50.1B into global art market. Fortnite skins sell out many fashion houses globally.

Adoption has been exponential. And generationally, it’s making a difference.

Roblox users are largely 9-year-olds. But these kids know 3d systems and those trends will continue.

We’re on the cusp of new extended reality hardware. Haptic wearables, hyper real live mocap from mobile phones, holography and more are all in development. And they are increasing recall, communication and understanding.

Every category is displaced through reinvention…

There are five categories of corporate fortune. Some giants die (AOL). Some languish and are surpassed (Yahoo). Some adapt and grow (Facebook). Some are displaced in their core market but grow overall (IBM). And new giants emerge (Google, Unity Software). Finding which company is which will be key for investors in the Metaverse transition.