Nick Wood
Com Laude
Reality Check for IP in the Metaverse

PTMG

21 March 2023
Agenda

The move from Web 2.0 – Web 3.0 & how we experience the metaverse

The hype vs the reality

Why some business leaders are excited

Reality check: metaverses, NFTs, blockchain domains

Some legal issues for pharma

Digital first health provision

A possible strategy when you have to be involved
Where we are today

Four Internets exist today

1. *Silicon Valley Open Internet* – Utopian, bottom up, innovative, decentralised

2. *DC Commercial Internet* – Ad-driven monetisation of web by corporate monopolies

3. *Brussels Bourgeois Internet* – Regulation to protect privacy & human rights & to curb influence of tech giants

4. *Beijing Paternal Internet* – State licensed commerce with surveillance & censorship in order to enhance social stability

How will Web 3.0 & Metaverse impact upon this model?
Consider the journey from Web 1.0 – Web 3.0

Web 1.0 – the Information Economy, early 90s: Read

Web 2.0 – The Platform Economy, late 90’s: Read, Write

Web 3.0 – The Token Economy, arriving now: read, write & experience

Success of leading brands built on collation, analysis and management of customer data and exploitation of this data in e-commerce, social media

Brands thrive in Web 2.0 which is (mostly) predictable and stable

- Protections for IP and avenues for enforcement proven in law & practice

Web 3.0 evangelists promise to bring to us an internet which is a digital facsimile of the real world; Soon the virtual will feel physical

- Protections for IP and avenues for enforcement not there
Consider how early users of Web 3.0 show up: 1st avatars

*Meta*

A new way to be you on Facebook

Create a personalized avatar with unique facial features, hair, outfits and more.

Get started
Then they transact, network or share an experience...
### Interest
- 540,000 registrants own 2.17 million .eth domains at August 22 – more registrations than .ES or .JP ccTLDs (.eth)
- More than 27 million unique players attended a Travis Scott performance in Fortnite April 22
- Google searches for “metaverse” up 7,200% in 2021

### Transactions
- Metaverse-focused companies raised $10.4 billion across 600 deals in 2021 (Deloitte)
- Microsoft bidding $69 bn for Activision Blizzard
- Fortnite with 20 million users generated $14 billion in in-game transactions between 2018 and July 2022
- $250m daily trading volume of NFTs at peak in Jan 2022

### Worth
- Metaverse economy worth $5 trillion by 2030 with 1bn users (Mckinsey)
- Global VR market worth $2trillion by 2030 (Citi)
- $2.1 m – highest priced plot of land in Decentraland in 2021
- Revenue from live entertainment businesses that can become part of the Metaverse concept – films, live music and sports – will exceed $200 billion in 2024 (PWC)
One theory behind the hype:
“As we move closer to a screen, the degree of personalization and advertising revenue increases—along with the time we spend with devices, and their second-order social consequences”

Source: Mckinsey Value Creation in the Metaverse June 2022
95% of 3,600 business leaders “expect Web 3.0 to have a positive impact on their industry within 5 to 10 years, and 61% expect it to moderately change the way their industry operates”

Activities taking us closer to the metaverse

- Socialising
- Gaming
- Fitness
- Commerce
- Remote learning

Drive for business efficiencies

- Sell virtual or physical goods (with fewer returns)
- Expand global footprint cost-effectively, in environmentally friendly way
- Recruit new staff

1.6 bn children moved to online learning during the pandemic (UN)

Source: Mckinsey Value Creation in the Metaverse June 2022
The Hype vs the Reality

Average number of daily visitors in December 2022:
- Decentraland: 7,000
- Sandbox: 39,000

Number of unique blockchain wallets making a transaction in any 24-hour period in December 2022:
- Decentraland: highest 675
- Sandbox: highest 4,503

Half a million users of NFT platforms
50,000 regular metaverse users

Source: Metcat, Decentraland Foundation
Metaverse of their imagination not yet possible

Many roadblocks before universal acceptance

<table>
<thead>
<tr>
<th>The economy</th>
<th>Networks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computing power</td>
<td>Inter-operability</td>
</tr>
<tr>
<td>Shortage &amp; diversity of developers</td>
<td>Costs too high - digital divide</td>
</tr>
<tr>
<td>Volatility of crypto currencies</td>
<td>Sustainability</td>
</tr>
<tr>
<td>Protection of data</td>
<td>Framework for law &amp; order</td>
</tr>
<tr>
<td>Absence of ethical behaviour &amp; proliferation of harassment</td>
<td>Need for moderation</td>
</tr>
<tr>
<td>Harmonised technical standards</td>
<td>Few trusted payment systems</td>
</tr>
<tr>
<td>Discovery &amp; access tools</td>
<td>User health &amp; safety</td>
</tr>
</tbody>
</table>
## Reality – More than one type of metaverse

<table>
<thead>
<tr>
<th>True Metaverses / NFT Worlds</th>
<th>Managed Metaverses or Cloud Games</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examples: Decentraland, The Sandbox, Somnium</td>
<td>Examples: Roblox, Fortnite, Second Life</td>
</tr>
<tr>
<td>Community owned and designed. No-one is in charge or owns the metaverse: a Decentralized Autonomous Organisation decides policy based on discussion between the owners of space. There is no CEO or Board – though there are marketing committees. It cannot be bought or sold</td>
<td>Owned and operated by a corporation, with a Board and executives, an HQ in the physical world, sometimes a listing on a stock exchange. Could be acquired or merged.</td>
</tr>
<tr>
<td>Decentralized: built upon blockchains</td>
<td>Built upon proprietary technologies</td>
</tr>
<tr>
<td>Uses its own crypto currency which can be converted and taken out of the game or traded</td>
<td>Uses its own in-game currency which cannot be spent out of the game</td>
</tr>
<tr>
<td>No law enforcement. No published anti-abuse or formal Take Down processes</td>
<td>Responsive to law enforcement. Formal Take Down and Complaints processes</td>
</tr>
<tr>
<td>Players are pseudo-anonymous, so some feel above the rule of law and the control of governments</td>
<td>Operator knows who you are, which credit card opened the account, so enforcement is possible</td>
</tr>
<tr>
<td>No validation or verification process before you buy space with crypto. Privacy by design</td>
<td>Operator undertakes KYC. They know who is on their platform</td>
</tr>
</tbody>
</table>
Reality – NFTs misunderstood & over-hyped

NFT is a record on a blockchain that stores creation and ownership details of a digital file. The NFT is not the digital file – naïve buyers often think they own copyright in the associated virtual art/music/photography.

Issues include:
• Hidden fees incl. high gas fees
• A seller can restrict your ability to resell unless you pay a royalty
• Poor customer support/guidance e.g. ERC-20, ERC-721, and ERC-1155 token standards
• Anonymous sellers known to buy their own work to inflate prices
• Most NFT platform have been hacked
• Poor platforms, difficult UI and uneven payment processes

“The NFT market collapse can only be partially attributed to the overall crypto bear market or lack of knowledge and understanding of web3. The real problem preventing new consumers from entering the market is the industry’s failure to innovate beyond using an NFT as a profile picture on social media” Guardian Newspaper
93% decline in NFT sales in 2022 (but total sales over $55bn)
1. Are trade mark registrations for real world goods appropriate for Web 3.0? Do brand owners need to file new applications and if so, in which classes? Is the Nice Classification adequate for Web 3.0?

2. Will virtual infringement in Web 3.0 damage brand reputation or distinctiveness or goodwill?

3. Does use in Web 3.0 meet the varying requirements of trade mark offices for demonstrating use?

4. How can a brand owner enforce real world trade mark registrations in the Web 3.0 virtual world? Does use in Web 3.0 constitute use in all or some jurisdictions? Where do you go for redress?

5. A brand may have a longer life on Web 3.0 than in the real world. What are the issues around abandonment?
Reality check - more questions for IP owners

6. Where do you send a Take Down Notice when there is copyright infringement in a metaverse?

7. In licensing agreements, how should virtual goods/services be differentiated from real world goods or services?

8. Can the design of a virtual product infringe physical world design rights?

9. Can personality rights be infringed in metaverse, for example if an avatar is a lookalike of a celebrity?

10. Few metaverse builders/platforms publish T&Cs. Who do you complain to if there is a data breach? Do you have a cause of action if a metaverse platform fails? How do you settle a dispute with another user of a metaverse platform?
## Reality – Blockchain domains underregulated, over-sold

<table>
<thead>
<tr>
<th>Web 2.0 DNS Domains</th>
<th>Web 3.0 Blockchain domains</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example: .com, .net, .uk, .de</td>
<td>Example: .eth, .hns, .crypto</td>
</tr>
<tr>
<td>Regulated through contract by ICANN (gTLDs) or a sovereign government (ccTLDs)</td>
<td>No controlling agency, jurisdiction unclear – some providers in Russia and Ukraine; few have T&amp;Cs</td>
</tr>
<tr>
<td>Interoperable with harmonized technical standards ultimately managed by ICANN</td>
<td>No uniform technical architecture</td>
</tr>
<tr>
<td>Registrants, registrars and registrants clearly under rule of law with many legal precedents</td>
<td>Some registrants regard themselves as above the rule of law. No accredited registries or registrars</td>
</tr>
<tr>
<td>ICANN requires compliance by registries and registrars to certain operating standards</td>
<td>No uniform operating standards</td>
</tr>
<tr>
<td>Identification of registrants possible (though harder since GDPR)</td>
<td>Registrants are pseudo-anonymous using an identity they select</td>
</tr>
<tr>
<td>Administrative dispute procedures enshrined in contract with registry</td>
<td>No dispute procedures because no central registry</td>
</tr>
<tr>
<td>KYC assisted because their Admin, Technical &amp; Billing contacts &amp; domains are generally on servers</td>
<td>No contacts and no servers so no KYC</td>
</tr>
<tr>
<td>Annual renewal or the registry cancels</td>
<td>Permanently owned</td>
</tr>
<tr>
<td>Nearly 400 million registered</td>
<td>Over 7 million, perhaps 8 million registered</td>
</tr>
<tr>
<td>Active aftermarket</td>
<td>Aftermarket emerging</td>
</tr>
<tr>
<td>Works seamlessly across browsers</td>
<td>Plug in required or use of a specialist browser like Brave</td>
</tr>
</tbody>
</table>
Reality – blockchain domains hard to manage for pharma

Blockchain domains important because they identify wallets that hold vital cryptocurrency, tokens, keys

- 0x78743110A1B17c86cH43g09853c0vb2836c205 hard to remember
- comlaude.eth easy to remember, making transfer of crypto simple
Consider the process for a registration under .hns:

- Fill a hot or cold wallet in our name or your name with HNS currency
- Search for your name on the marketplace.
- If the name is available, place a bid
- The bid is listed in the Bid History
- If 3rd party submits higher bid, you bid again or
- Buy more HNS, put in your wallet and bid again
- Auction process lasts for 720 blocks (1 block c. 10 mins)
- Anticipate sniping
- Once the auction ends, 14 day reveal period begins
- Highest bidder is awarded the name but pays the second highest bid
- Mint the domain, paying gas fees, with FX fixed for 4 minutes
Reality – Web3 speculation same as Web2 speculation

unstoppable domains

Domains

bristolmyerssquibb.crypt
For sale by owner
AB9BCF owns wallet 0xAB9BCf75628b3af33e8F53F5452CD11F5b9d7135
Real benefits of Digital First Health Provision?

Telepresence – being together virtually
- Virtual clinics with focus on physiotherapy and counselling e.g. Aversion Therapy
- Empowered patient communities all over world sitting together, active role in managing conditions
- Virtual environment for training pharma & healthcare workers
- Platforms for collaboration for healthcare professionals, researchers
- Patients do not have to travel – metaverse offers a positive extension of online pharmacies
- Helps combat shortage of doctors, consultants: virtual treatment that feels F2F

Digital Twins – virtual model or simulation using real world data
- Test how a patient recovers from surgery on a digital twin
- Dummy run of operational procedure
- Model patient behaviours based on clinical data using digital twins

Blockchain Technology
- Pharma companies better secure valuable data on drug discovery and development
- Patients in charge of their own data, kept on blockchain
## A realistic approach to the metaverse for pharma IP?

<table>
<thead>
<tr>
<th>Develop a strategy</th>
<th>Protect &amp; Monitor</th>
<th>Test &amp; Learn</th>
<th>Support a drive to scale</th>
</tr>
</thead>
</table>
| ✓ Identify movers in your organisation  
✓ Define your Web 3 goals  
✓ Define the role of IP  
✓ Identify a budget  
✓ Monitor competitors, early movers | ✓ Secure blockchain domains  
✓ Test management of wallets & crypto  
✓ Help develop use cases (e.g. Smart Contracts)  
✓ Update trademark strategy  
✓ Monitor incl. blockchain domains, NFT platforms | ✓ Support launch of initial activities  
✓ Monitor impacts, harms, risks, successes  
✓ Learn including what your partners & patients want & think  
✓ Co-operate with other pharma companies | ✓ Embed IP protections at centre of any Web 3. activity  
✓ Playbook for enforcement  
✓ Training & awareness of risks of Web 3.0 to your IP portfolio  
✓ Sustainable budgets |
Final thoughts

Arguably innovation is slowing
• Research productivity declining; timescales drawing out; costs rising across all industries

Web 3.0 and metaverse technologies true example of disruptive innovation
• Bottom up, like utopian Silicon Valley Open Internet
• Very fast moving

Like Large Language Model (LLM) chatbots such as ChatGPT, metaverse arrived without a framework for protection of rights

The metaverse of the imagination will become something more predictable
• Second Life not a success; Roblox 60 million Active Daily Users

Need to act together to develop Best Practice and to lobby for improvements
Nick.wood@comlaude.com