

# REAL TALK ABOUT A REAL METAVERSE

---

Raph Koster

CEO

 **PLAYABLE WORLDS**

# LET'S GET OUR DREAMS STRAIGHT

---

- It's wonderful to see so many chasing the **potential** that the metaverse offers.
- Those of us who've been doing it for a while wish for more discussion of **pitfalls**.
- Let me tell you some of what has already been tried.
  - Maybe it will save you some effort chasing down blind alleys.

# WE'VE HAD ONLINE WORLDS FOR 44 YEARS

---

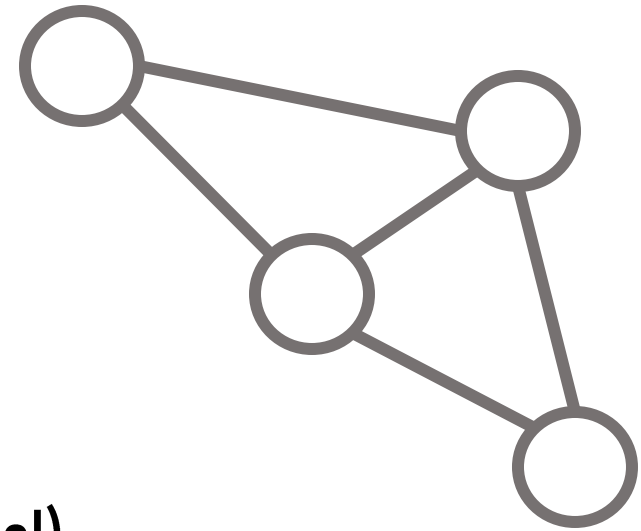
- The first text-based virtual worlds: 1978.
- The first graphical ones: 1985.
- We've had higher concurrency than Fortnite since at least 1992.
- **Peak complexity** was 1992-2003.
  - Graphical and physics fidelity has increased.
  - Feature depth has not. In fact, it's decreased markedly.



# MULTIVERSES HAVE BEEN BUILT SEVERAL TIMES

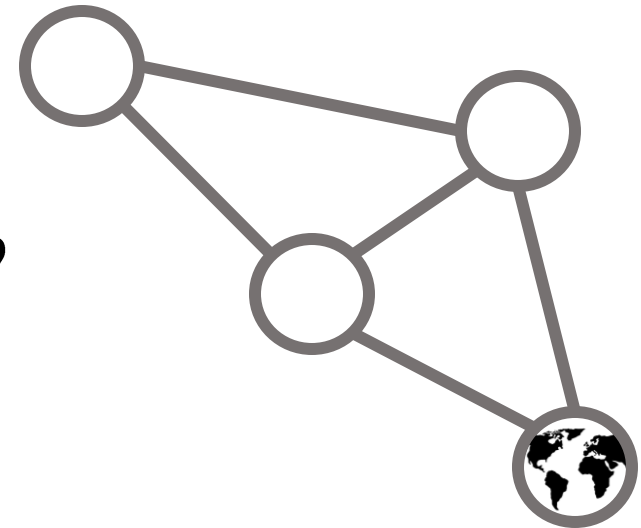
---

- A multiverse:
  - Multiple online worlds with different content...
  - Built atop compatible platforms...
  - Allowing players to move between them with one client.
- The first functional multiverse tech: **1992** (InterMUD protocol).
  - Decentralized worlds!
  - Run by volunteers!
  - On open-source software!



# REAL WORLD CONNECTIONS MAKE A TRUE METAVERSE

- Have a virtual version of a real-world storefront?
  - The first time I built a virtual mall for real stores was **1994**.
- True virtual concerts with real-time audience interaction?
  - Suzanne Vega did her live concert on Second Life in **2006**.
- Carry avatar identity across disparate websites?
  - There were web browser plugins for this by **2007** or so.
- Connect a world to classroom software?
  - This was widespread by **2009**.



# THE KEY ISSUES ARE SOCIAL, NOT TECHNICAL

---

- Here are some things we know from painful experience:
  - Players do not want to **govern** themselves. It's a lot of work.
  - Open platforms mostly result in a bunch of crappy **clone** worlds.
  - Real world earning power for players always **collapses** to less than local minimum wages.
  - Persistent tradeable items always **crash** your economy.
  - Players mostly don't want **item portability**.
  - 3d **sucks** for a huge range of interactions.

# EXAMPLE OF SOCIAL PROBLEMS

---

- There is no data portability without standards.
  - Standards are a **social** coordination problem.
  - Standard bodies are centralized control all over again.
- Metaverse assets need to be compatible across a wide range of standards:
  - 3d format (there are **over 100** in common use).
  - Dynamic remote asset streaming (unsupported).
  - Object template data format (**no two games** share a format).
  - Common behavior API (non-existent).
- The two major game engines don't even agree on **which way is up**. (Literally).

# SO WHAT DOES IT TAKE?

---

- We **do** have a model for decentralized creativity!
  - It supports commerce! And creation! And standards!
- Unfortunately, we've spent the last **20 years** undermining it technologically.
  - Client-side Javascript was probably the first big mistake.
  - CSS, definitely.
- We also have been running away from it as fast as possible for business reasons.
  - We have Facebook, not OpenID.
  - Google, not RSS.
- But the **Web** does give us a roadmap!

# CLIENT AGNOSTICISM

---

- To support a true Metaverse, any device should be able to be a client.
  - Which implies an open network protocol.
  - And not being wedded to one engine.
    - Or did we want a single point of failure/monopoly control again?
- It should not care how it is rendered (aka **“the Goggles Fallacy.”**)
  - Rendering should bend to user need.
    - A Maps view may be more useful for some applications than 1st person is.
- An old rule of virtual world development: “anything that can **go flat** will.”
  - Put another way – Twitter is not better in 3d. So your metaverse still needs to support feed-style displays.

# MAPS AS DATA

---

- A true Metaverse might have the player interact with fictional worlds, or real ones.
  - **At the same time.**
  - There isn't any difference between Azeroth and Maps, to a metaverse.
- This means the practice of defining worlds as sculptural 3d art must cease.
  - This unlocks simulation as well.
  - Over the long term, we will want to dance across worlds of data, not just maps.

# ASSET STREAMING

---

- Current engines bake all the art into the client.
  - Can you imagine **patching your browser** every time Amazon adds a book to the store???
  - It's a slow, sometimes multi-hour process.
- Everything needs to come down on the fly.
  - And only be what that device needs or can handle.
- And really, it needs to come down from arbitrary locations, just like images on the web.
- Without this, there is **no** true user-created content.

# OPEN SOURCE SERVERS

---

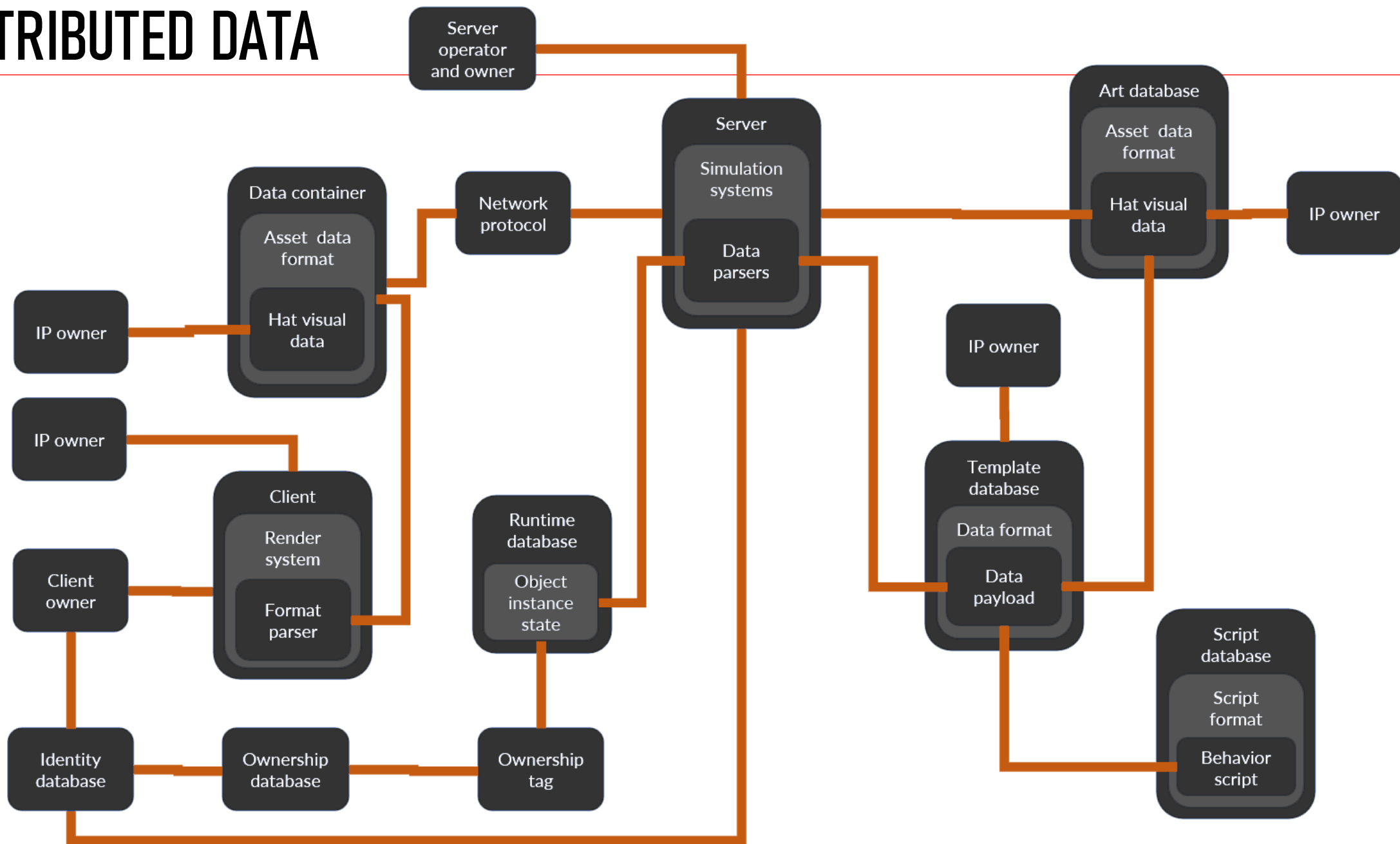
- As long as one company operates and hosts the server worlds, they have enormous power.
- **Wordpress** is a better model for the future than current Roblox.
- And yet we want them to interconnect, which means a “hyperworld” linking protocol.
  - We may as well use URLs, that’s what they are for.

# PLUG-IN MODEL

---

- Shared asset formats don't mean common **functionality**.
- Disparate server codebases **will not be compatible** unless there are commonly agreed standards.
  - Past experience shows they fork pretty quickly, in order to add new capability.
- One solve: a plug-in model, where plug-ins can encompass softcode scripts and assets.
  - Standardized code API for softcode would be necessary.
  - This would be a huge standards battle in its own right.
  - This also implies dynamic object type definition.
    - Did you know JSON was originally specced in **2001** to help solve this? (It took 12 years to become a standard).

# DISTRIBUTED DATA



# AND THEN THE SOCIAL PROBLEMS

---

- The standards bodies are centralized control all over again, aren't they?
- Metaverses provide perfect **surveillance**. Who should have that power?
- What **rights** do metaverse users have vis-à-vis operators?
  - Avatar rights document dates to **2000**.
- What about all of copyright and trademark law?
- What does this mean for the nation-state?
  - First conference on this question was **2004**.

# WELCOME TO THE METAVERSE

It's hard, but rewarding.