

## World's First 3D Browser and Unsharded Spatial Fabric for the Spatial Internet

## From Walled Gardens to the Open Web

The browser changed how we experience the World Wide Web

#### In the 1980s

#### Walled Garden Platforms











- Controlled Download & Installation
- Not Open or Extensible
- No Interoperability
- Controlled App Stores
- Controlled View of Revenue and Data

## Now

#### Open Web Browsers



- Open Access to Websites
- Open Standards
- Fully Interoperable
- Extensible Developer Tools and Marketplaces
- Frictionless, On Demand Content



## Imminent Transition to the Spatial Internet

From websites to real-time immersive applications





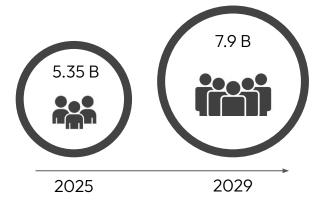






## The Spatial Internet is a Multi-Trillion Dollar Opportunity

Projected internet users worldwide<sup>1</sup>



Average time spent online daily<sup>1</sup>



1.11 billion websites operating online<sup>1</sup>



350 million domains created

## "\$5 trillion in value by 2030"

- McKinsey on the metaverse<sup>2</sup>



I "Internet Usage Statistics in 2024." Forbes, Forbes Magazine, 1 Mar. 2024, www.forbes.com/home-improvement/internet/internet-statistics/

# Partial list of companies that will *never* build their spatial internet infrastructure within a walled garden XR world



## We're Repeating Internet History

Moving from 2D websites to 3D metaverse content for the spatial internet

#### Walled Garden Platforms











1990s

#### Open Web Browsers











#### Walled Garden Platforms & App Stores











Today

#### Open 3D Metaverse Browsers











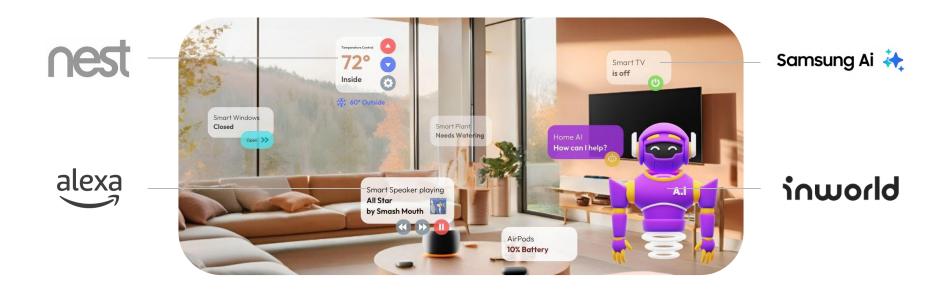


A metaverse browser doesn't just present web content in 3D.

So then, what makes the metaverse different than the World Wide Web?



# The future of the 3D internet will be comprised of millions of real-time 3rd party services





## Three Tenets of the Spatial Internet

Revolutionizing application delivery, interaction, and existence in a shared 3D space

1 Streamed on demand

Everything delivered in real-time, no downloads or installs

2 Spatially aware

3D content placed in a shared immersive environment

3 Unbounded by application boxes

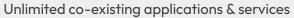
Apps coexist and interact in an open, limitless space

These three tenets transform the World Wide Web into the metaverse



## **Augmented Reality**













## Virtual Reality



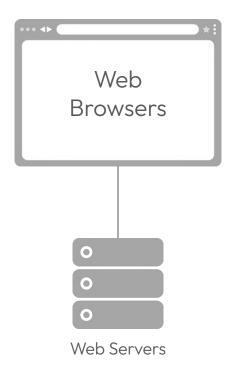




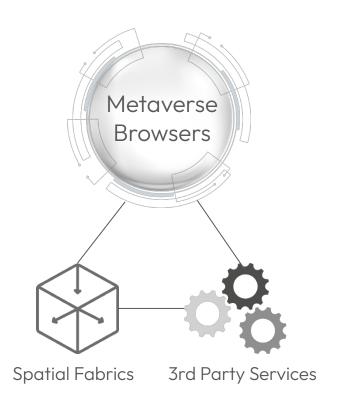




### World Wide Web



### Metaverse

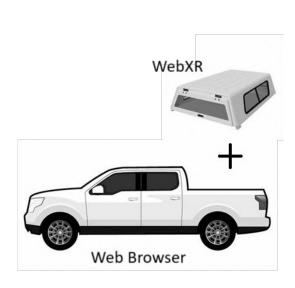




# Partial list of companies that will *absolutely* build their spatial internet infrastructure on open standards and protocols



# You can convert a pickup truck into a camper, but it will *never* be able to fly to the moon





Metaverse browser

## Why we need a new 3D browser architecture

- The primary application of the spatial internet is to merge many real-time 3rd party services into a single, shared, mixed reality experience
- The existing DOM-centric web architecture was designed for isolated 2D content segregated into rectangular containers
- Some metaverse functionality can be replicated, but only by utilizing add-on browser features such as iFrames and canvases
- Services are seamlessly instantiated based on proximity rather than by manually launching tabs or preinstalled apps
- Ideally, the metaverse would be shardless and scale to the entire world's population



## Properties of the new 3D browser architecture

- A common map replaces the DOM
- MVMF realtime service models replace documented REST APIs
- App protocols allow service objects to communicate
- Additional metaverse open file formats encode spatial data

#### Similarities with the web

- Based on open standards
- Accessible across devices
- Streams on demand
- Open to all developers, creators, and providers using the standard



## What is a Spatial Fabric?

A spatial fabric provides a map that arranges objects and services, and manage shared resources within its part of the metaverse





A metaverse browser can merge several spatial fabrics into one continuous scene.





### Meet RP1, the World's First Metaverse 3D Browser

Designed to support the three tenets of the spatial internet



## RP1's Spatial Fabric

RP1 is the only product in the world that has an unsharded map that can connect everyone globally in real-time, offering immersive experiences on any device



Scalable to the world's population, fully unsharded



Extensible tools, and services



Unlimited contiguous map for unlimited persistent content





1:1 digital twin of our solar system plus an imaginary universe to explore



## RP1's Unrivaled Audio Experience

Fully unsharded, infinitely scalable surround sound audio for all, made possible with RP1's Statabase technology

## Server-mixed audio for better performance

- 192 kbps mono upload, 384 kbps stereo download — regardless of avatar count!
- Mixes ~6,000 audio streams per GPU, with cross-GPU support for spatial audio blending
- Not peer-to-peer



Unlimited audio mixing options to suit any environment setting

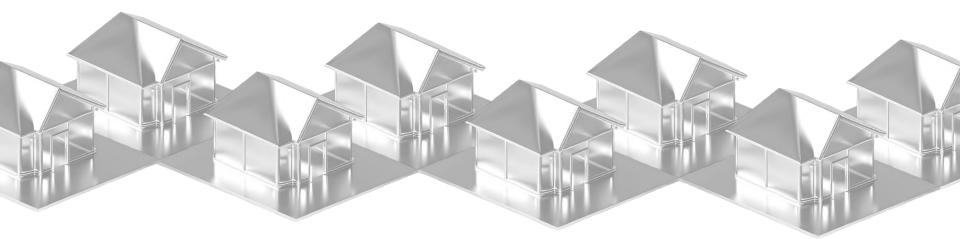
- Distance Boost
- Distance Dropoff
- Focus Angle
- Focus Dropoff
- Let/Right Gain
- Clarity



## RP1's Unlimited Virtual Land & Unbounded Creativity

Websites aren't scarce, virtual land shouldn't be either

Land is equivalent to getting a website domain. Buy, build, and maintain land just like a website.





### RP1's Spatial Fabric Includes a 1:1 Digital Twin of Earth

Ownership of property on Earth = Ownership on RP1's digital twin of Earth

#### **Augmented Reality**

Full control of any augmented applications or services running on your property in real life

#### Virtual Digital Twin

Full control of any virtual applications or services running on your property in an official digital twin





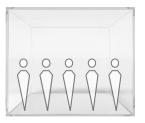
### The Metaverse Should Not Be Limited to Shards with Only 25 Users

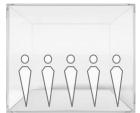
Meta, Apple, Roblox, Fortnite, etc.

Single application box

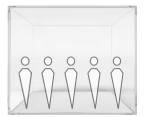
Limited to 25-100 users (depending on avatar fidelity)

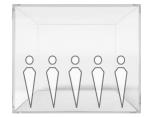
Pre-installed • Closed ecosystem • App stores

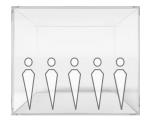














## With RP1's Statabase Technology, We Connect the World's Population in Real-time

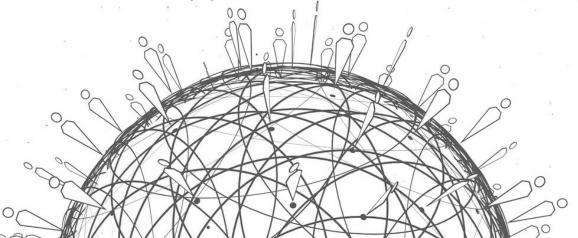
The most advanced real-time distributed data network in the world by 2030

No application boxes

Unlimited Unsharded Users • Full Spatial Audio • 6DOF •

On-demand

World's population in VR & AR avatars





## RP1's Statabase Technology

Revolutionary software that powers large-scale, real-time, on demand spatial apps

For every 1 RP1 server with

Statabase Technology



Seamlessly stay connected and manage avatars, audio, maps, and more in real-time

#### Seamless Integration

The database's new best friend — effortlessly handles the real-time data while SQL handles the historical data

#### **Unmatched Scalability**

Maximizes crowd capacity, cuts cost, fills servers 200-500x more, and reduces energy bills — an eco-friendly win

#### Breakthrough Efficiency

Effortlessly unlock instant data power and dive into colossal immersive adventures

They need 200-500 servers

## Costs per person for every user compared to other tech



#### RP1

- Initial hardware expense < \$3/user (unsharded)
- Monthly operating costs < \$0.25/user</li>
  (40 hours of use per week)



#### Other Systems

- Initial hardware expense ~ \$1,000/user
  (25 users per shard)
- Monthly operating costs ~ \$40/user
  (40 hours of use per week)



## The World's Most Portable Networking API Layer

Metaversal Model Foundation (MVMF) is an open standard for seamless communication of networked real-time services

#### **Key Features**

- Unified API for all shared services
- Simplified connections
- Standardized Models
- Service provider maintains client-side library

#### Challenges Solved

- Reduces redundant API integration efforts
- Simplifies real-time service connections
- Abstracts proprietary communication protocols

#### **RP1 Integration**

- Powers communication between services, apps, and spatial fabrics
- Manages multiple real-time services for dynamic objects in a shared 3D space

Impact: Trillions of hours saved across industries



## RP1 Makes the Metaverse Possible Today

Our technologies scale globally in a unified ecosystem, combining open web standards with proprietary software

#### Statabase

High-performance companion to traditional databases

- Scalable
- Real-time applications
- 200-500x Increased server productivity



#### **MVMF**

New real-time API solving for real-time services

- Stateless
- Real-time services
- User-friendly, even with unknown APIs



#### Scale

Unlimited land and high user capacity for limitless experiences

- Sound & spatial audio
- Avatars
- Land / Space

Visit rpl.com/learn for more



## Lead the Charge In The Next Internet Frontier

Claim a front row to provide services, tools, and assets for any Metaverse Browser

#### **Extensible Tools**

Forge the builder's toolkit for true immersion: zero code to full code, for visionaries and devs

(Ex: Unity, Wordpress)

#### **Moderator Services**

Design moderator tools to enforce rules, monitor interactions, and manage content

(Ex: GamerSafer, Blockchain Verification)

#### **Payment Processors**

Revolutionize virtual commerce to buy, swap, and spend immersively (Ex: Stripe, Paypal)





#### **Identity Modules**

Develop solutions to manage identities across experiences with open standards and seamless sync

(Ex: Modulate, GGWP)

#### Avatar Systems

Shape the future of self-expression and interaction in the spatial internet

(Ex: ReadyPlayerMe, Genies)



## RP1 Browser Open Demo

Key Features at Launch · Early 2025



Always-on URL access (no downloads or installs)



1:1 Scale digital twin of Earth & solar system



Scalable to the world's population<sup>1</sup>



Instant high capacity meeting rooms



Spatial audio, full fidelity avatars, 6DOF



Friends system for messaging & meetups



## Enter RP1

rpl.com

Copyright 2024, Metaversal Corporation