



T  $\Xi$  T H Y S

Overview

Version 2.1

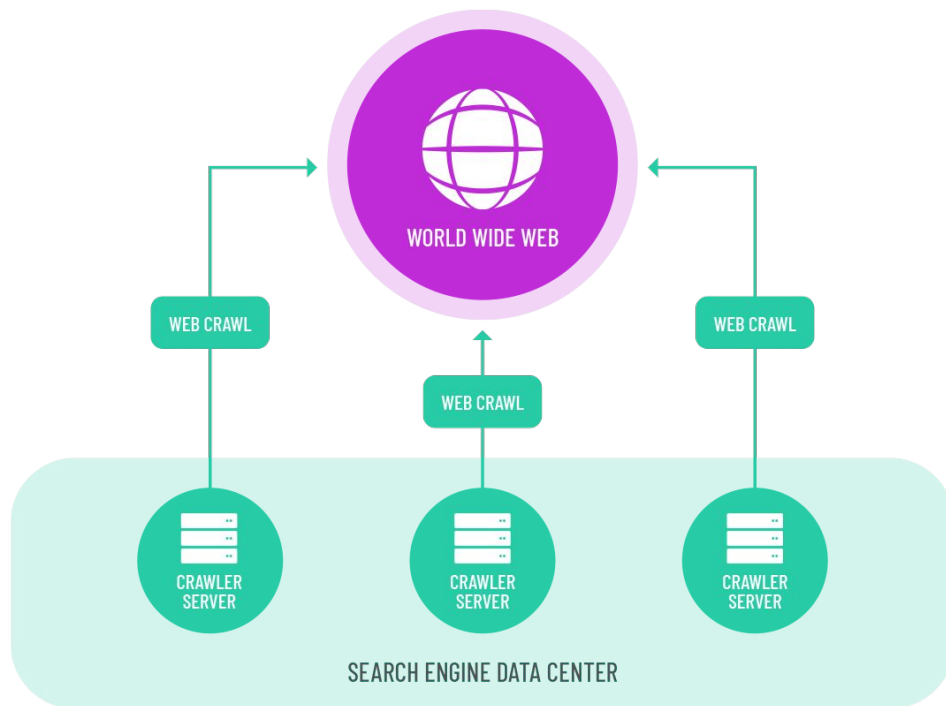
*“The Semantic Web will bring structure to the meaningful content of Web pages, creating an environment where software agents roaming from page to page can readily carry out sophisticated tasks for users.”*

Tim Berners-Lee 2001

Problem

# Centralized Web Crawling

# Centralized Web Crawling

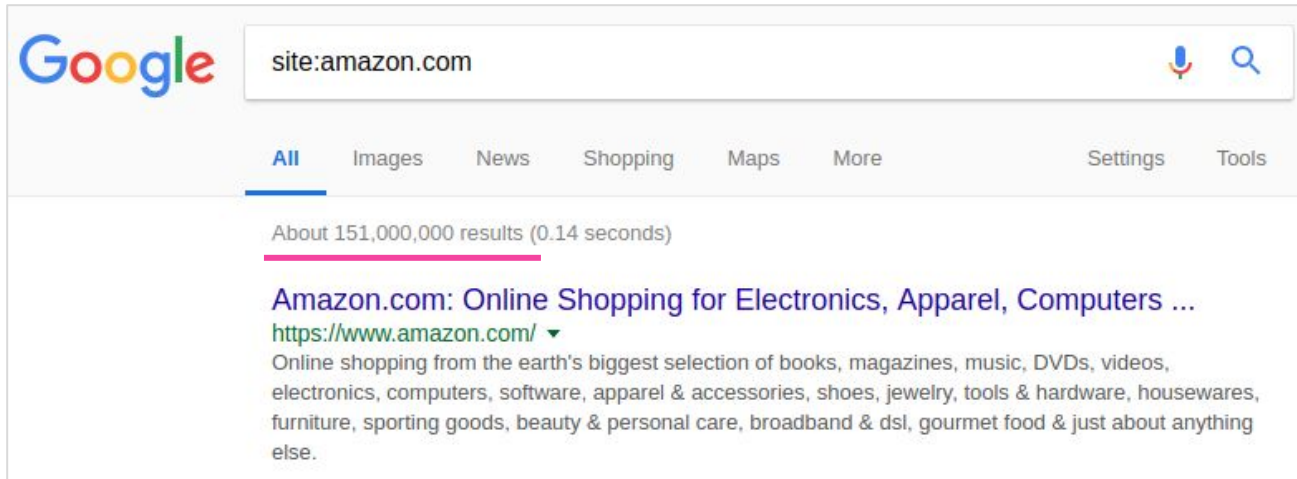




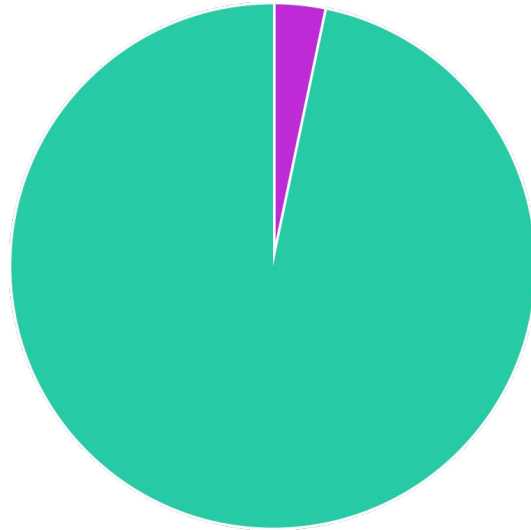
Issue One

# Scale

# 562 million products on Amazon.com vs. 151 million indexed



# What if a network could collect information from the entire web?



Surface vs. Deep Web

4%

Indexed Web

96%

Unindexed Web

# Tethys Network

- Leverage under-utilized computing power and bandwidth on consumer devices
- Low up-front setup cost
- Unlimited crawling throughput
- Unblockable by websites
- Globally and geographically disperse





Issue Two

# Semantics

# Google's results

**Amazon.com: Ultimate Ears BOOM 2 Cherry Bomb Wireless Mobile ...**

<https://www.amazon.com/Ultimate-Ears-Bluetooth-Waterproof.../dp/B014M8ZO92> ▼

★★★★★ Rating: 4.3 - 2,117 reviews

Khanka EVA Hard Case Travel Carrying Storage Bag for Ultimate Ears UE BOOM 2 Wireless....  
LTGEM Case for Ultimate Ears UE BOOM 2 / UE BOOM 1 Wireless Bluetooth Portable.... For  
Ultimate Ears UE Boom 2 Waterproof Portable Bluetooth Speaker Portable Travel Hard....

**Mortgage Rates for Purchase | Current Rates from Chase Mortgage**

<https://www.chase.com/mortgage/mortgage-rates> ▼

Fixed rate loans. Rate, APR\*\*, Points, # of Months, Rate, Amount. 30 Year Fixed Rate, 4.375%, 4.482%, 1.250, 359, 4.375%, \$1,073.46. 1, 4.375%, \$1,075.85. 15 Year Fixed Rate, 3.875%, 4.042%, 1.125, 179, 3.875%, \$1,576.89. 1, 3.875%, \$1,578.22. Estimated Payments\* ...

\* Google Search <https://www.google.com/search?q=ultimate+ear+boom+2>

\* Google Search <https://www.google.com/search?q=fixed+rate+mortgage>

# What if an AI can understand semantic information like a human?

Electronics > Portable Audio & Video > Accessories

**IMAGES**

**PRODUCT NAME**

**RATINGS AND REVIEWS**

**PRICE**

**SHIPPING INFORMATION**

Roll over image to zoom in

Ultimate Ears  
**Ultimate Ears BOOM 2 Phantom**  
Wireless Mobile Bluetooth Speaker  
(Waterproof)

★★★★★ 2,565 customer reviews  
| 630 answered questions

Amazon's Choice for "ue boom 2"

Price: **\$103.45 & FREE Shipping**

**In Stock.**  
Want it Tuesday, April 17? Order within 12 h...  
and choose **One-Day Shipping** at checkout. Details  
Ships from and sold by Amazon.com. Gift-wrap available.

Style: **Core Lineup**

Core Lineup UE BOOM 2 + Echo Dot (Black)  
UE BOOM 2 + Echo Dot (White) Limited Edition

Share

**Buy new:** \$103.45

Qty: 1

**Add a Protection Plan:**  
☐ 4-Year Protection for \$10.02  
☐ 3-Year Protection for \$5.90

to Cart

Turn on 1-Click ordering for this browser

Deliver to losangeles 90001

**Buy used:** \$83.99

# Tethys Network

- Recognize and extract semantic information
- Leverage human intelligence globally to train machine learning models
- A marketplace for sharing and profiting from trained machine learning models

The background of the slide is a dark, textured surface with a subtle, abstract pattern of light-colored lines and dots, resembling a network or a constellation of stars. The lines are thin and connect various points, creating a sense of interconnectedness. The dots are small and scattered throughout the background, adding to the overall complexity of the design.

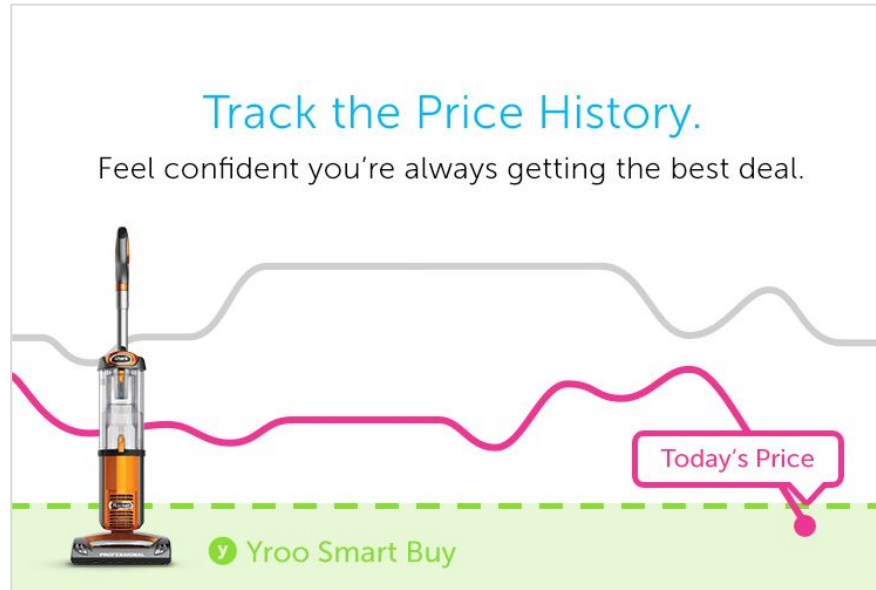
Issue Three

# The Web Has No Memory

# Google's result was a 5 days old snapshot

This is Google's cache of <https://www.amazon.com/Ultimate-Ears-Bluetooth-Waterproof-Shockproof/dp/B014M8ZO92>. It is a snapshot of the page as it appeared on 19 Mar 2018 09:46:21 GMT. The current page could have changed in the meantime. [Learn more](#)

# What if a system can bring long-term memory to the Web?



# Tethys Network

- Special purpose blockchain to record any state transition on the Web
- Support point-in-time query
- Unlimited scalability to handle web-scale data
- Transparent and tamper-proof with blockchain



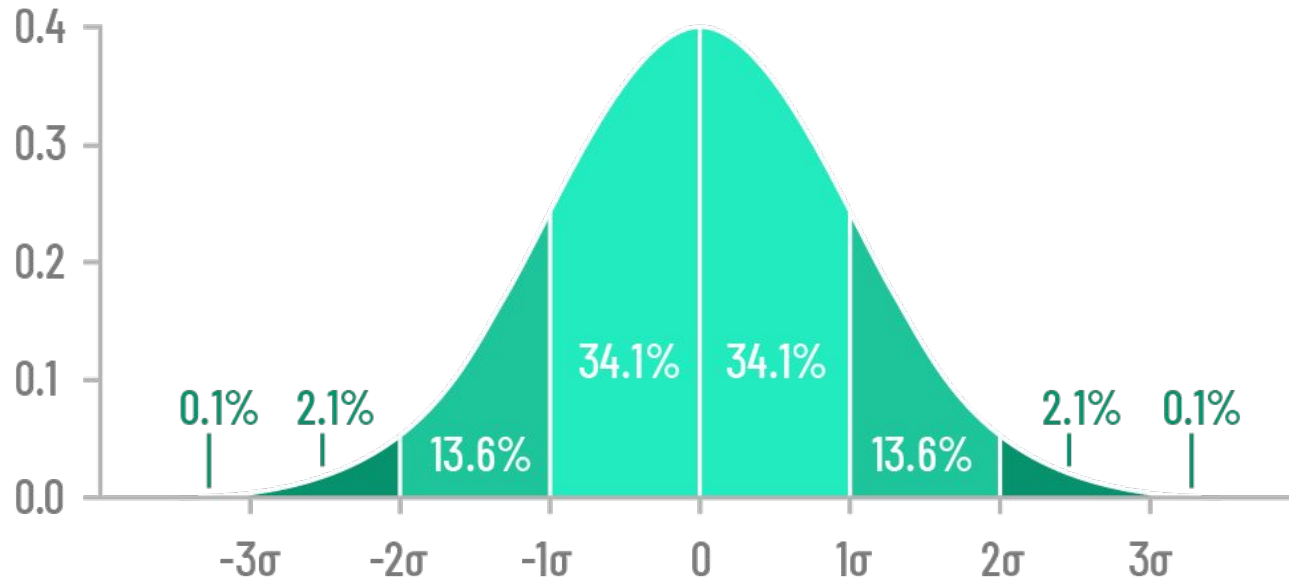
The background of the slide is a dark, textured surface with a subtle, abstract pattern of light-colored lines and dots, resembling a network or a molecular structure. The lines are thin and connect various points, creating a complex, web-like appearance. The dots are small and scattered throughout the background, adding to the overall texture.

Issue Four

# Information Verification


Search Engines are the middlemen and gatekeepers for information, even though they are unable to verify the accuracy of such information they provide.

What if a system can verify information it collects and establish statistical truth?



# Tethys Network

- Verify accuracy of the collected data statistically
- Leverage consumer devices to obtain optimal accuracy
- Geo-targeted multi-point data collection

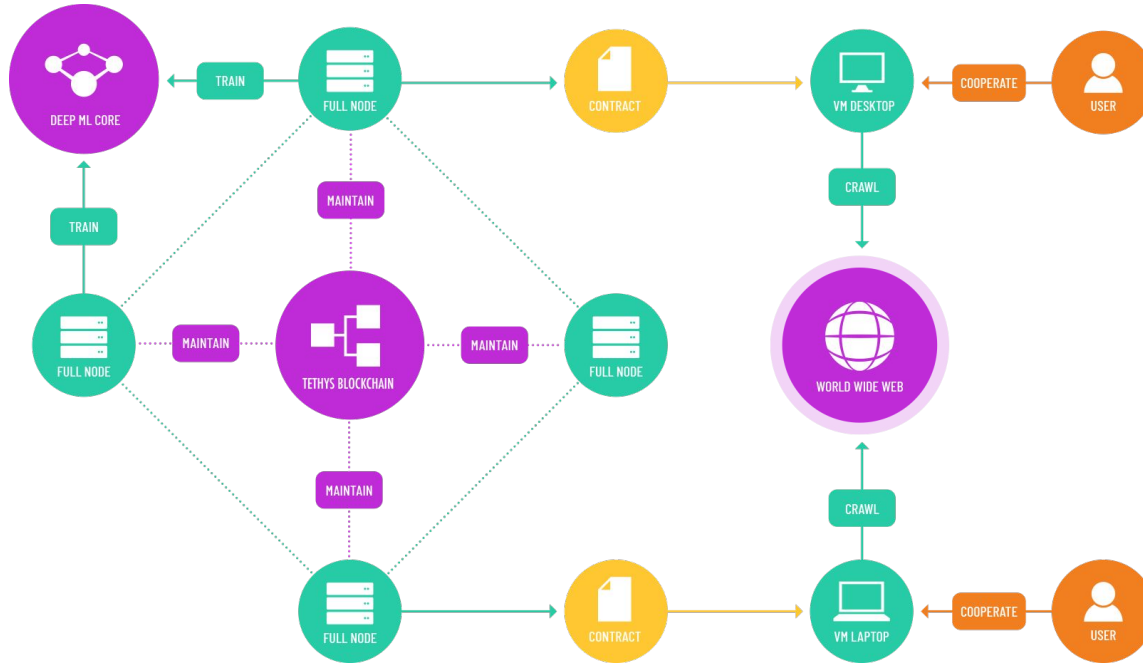
The background of the slide is a dark, textured surface with a subtle, abstract network pattern. This pattern consists of numerous small, light-colored dots connected by thin, faint lines, creating a sense of interconnectedness and data flow. The overall aesthetic is modern and technological.

Solution

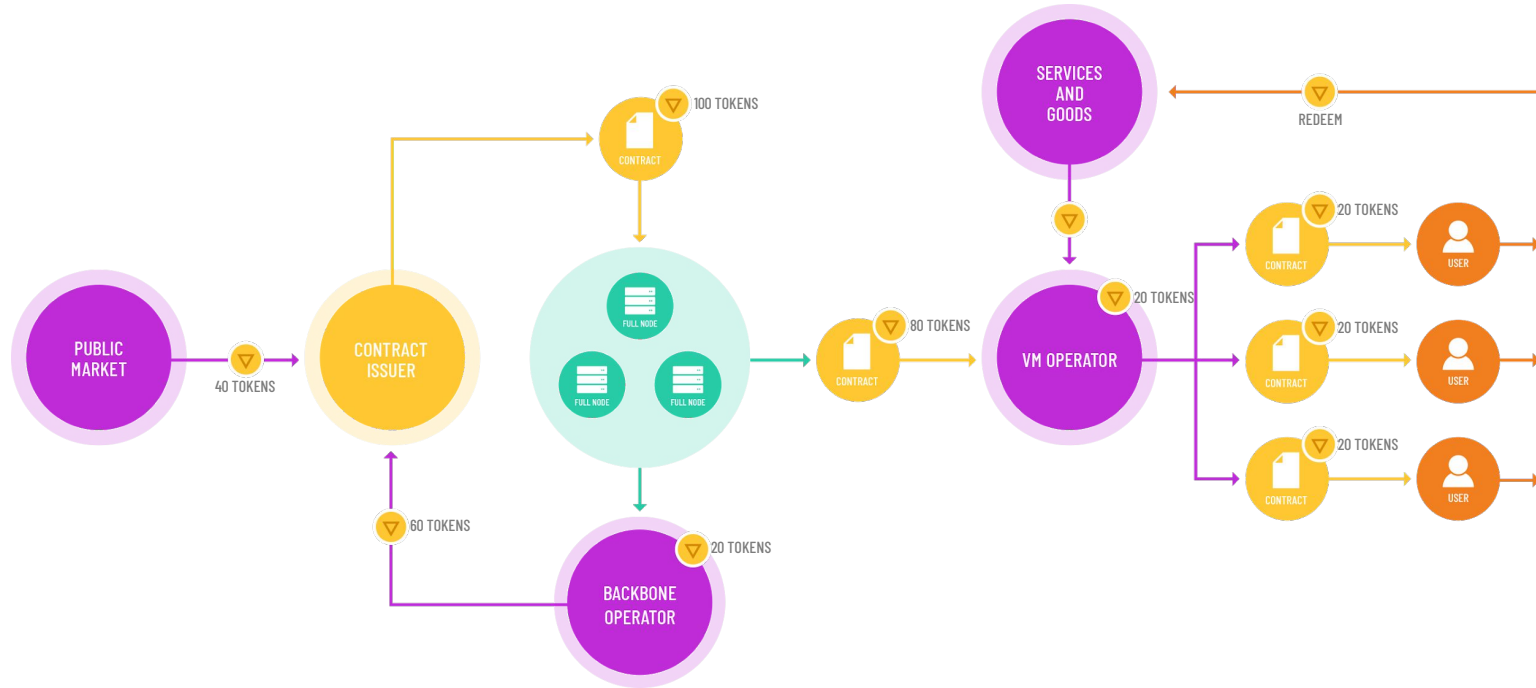
# Tethys Network

# Decentralized Semantic Information Collection Network

# Tethys Network Overview



# Tethys EcoSystem Overview





# Why Tethys?

## Current Web Crawling Solution

- ✗ Limited throughput
- ✗ Zero consumer participation and incentivisation
- ✗ Shallow textual extraction
- ✗ Without memory
- ✗ No information verification

## Tethys Network

- ✓ Unlimited throughput
- ✓ Consumer incentivisation
- ✓ Semantic navigation and extraction
- ✓ Temporal database built on blockchain technology
- ✓ Decentralized statistical verification