

The Digital Land: The Web We Want – Draft 3

Jordhy Ledesma | jordhy@bitfari.org | www.jordhy.com

Summary: The Digital Land is a network for the curation of spatially relevant Internet content and delivery of a geospatial Web. This paper explains why the geo-web has failed so far and how blockchain technology can help it flourish.

SECTION 1 – The Web We Want

1. A Web of Relevance, Audited by Society, Curated by Owners, Protected by AI

The web can't scale beyond centralized operators because of three key factors. First, decentralized storage and processing must take place. Second, decentralized identity must be maintained. And, finally, decentralized moderation and monetization should be enforced. Using blockchain technology the digital land brings a decentralized geospatial web to life.

2. Pillars of the Digital Land

The digital land is a planet within a planet. A digital veil projected right on top of Earth's geography to provide humans with the most valuable resources of our age: information and connection. As the first concentric planet, the DL sets a canvas of innovation by choosing an adequate technological stack. The ecosystem chooses Bitcoin as a reserve and treasury currency, Stacks 2.0 as a decentralized identity layer and Bitfari for decentralized moderation and monetization.

3. Additional Tools and Data

Using Open Street Map (a crowdsourced Wikipedia for maps with 600K contributors), the DL can quickly bring places to the blockchain with adequate degrees of detail and precision. Using this data, we can create imaginary projection layers in the sky, building sides, streets and roads, indoor spaces and area maps.

4. The Digital Land Elements

E1. Basic Elements

Lines, nodes, geofences, polygons, derivatives, collisions, screen operators, oracles and auditors and users are the key elements of the system. The first four elements are the same used in Open Street Map, so we will not describe them here. The last four relate to Bitfari, joining forces to curate content in order to show relevant contextual information to those using the system. We now move on to explore geo-derivatives and collisions.

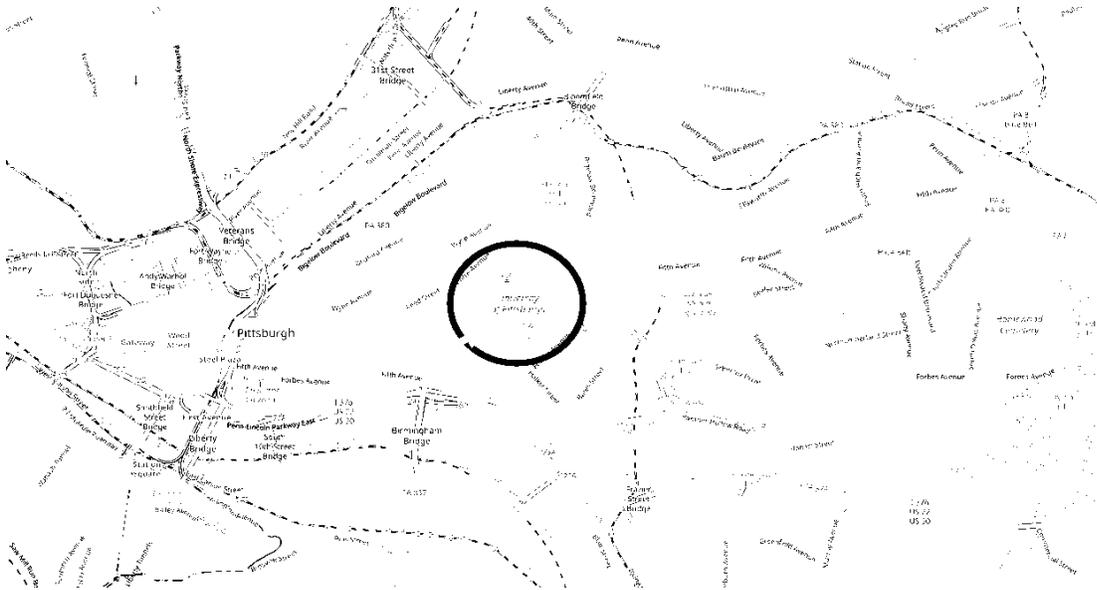


Figure 1- DL Elements

E2. Geo-Derivatives

The system can distribute information and target users at the planet/moon, continental, national, state, provincial, regional, city, municipal, district, neighborhood, place, street, building, polygonal and point levels, hence virtual billboards are layered and provide rich geo-context at multiple levels. This aides in showing users the most relevant information according their interests and decentralizes ownership, moderation and auditing of location-based communication.

A geo-derivative, or location derivative is a catch-all for attention mining (distributing ads, apps and content to users) in a specified location. Take the example of the derivative Manhattan Prime:

$M = M' + M''$, where M is the total attention mined at Manhattan, M' is the attention mined but not specifically located at M and M'' is the attention mined and specifically located (place level, etc.).

OpenStreetMap

Search

Relation: Manhattan
(8398124)
Version #27
Added name:en
Edited 3 days ago by archivist -
Changeset #120178217

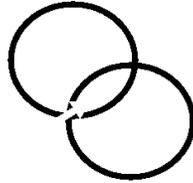
Tags

admin_level	7
alt_name:ru	Манхэттан
alt_name:vi	Mã Nhật Tân
boundary	administrative
name	Manhattan
name:en	Manhattan
name:ru	Манхэттен
name:vi	Manhattan
name:zh-Hans	曼哈顿
name:zh-Hant	曼哈頓
place	suburb
population	1694251

E3. Collisions

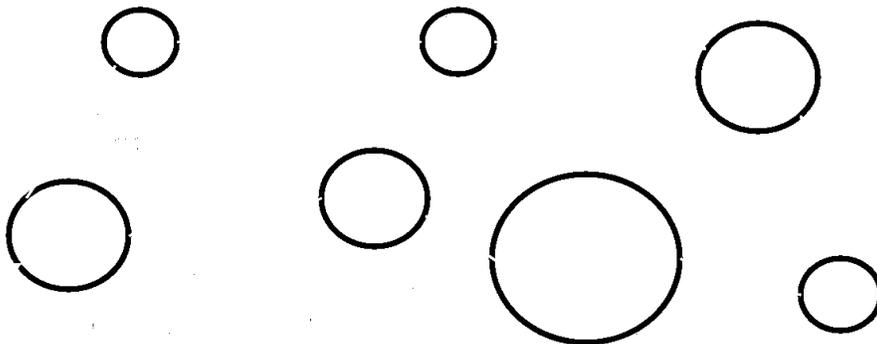
Collisions occur when two or more virtual billboards target the same people or areas. When this happens, income is distributed among the operators involved in the collision. Collisions fight land ownership centralization and provide many natural auditors to the system.

Split across
Collision members



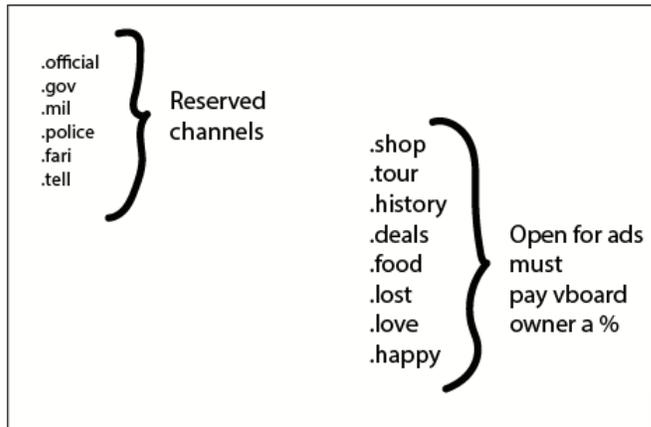
E4. Emergence

As these layers grow in content and types of information, we can establish similarities across areas in terms of movement, commercial activity and online engagement. Such emergent information can be used to create the first real-time geospatial advertising network. In our previous paper, we referred to this network as the collection of “Bitfari Virtual Screens”. For those unfamiliar with Bitfari, it is a network of physical and virtual screens connected to serve contextual ads, apps and content. It can also be envisioned as the UI of a global public supercomputer.

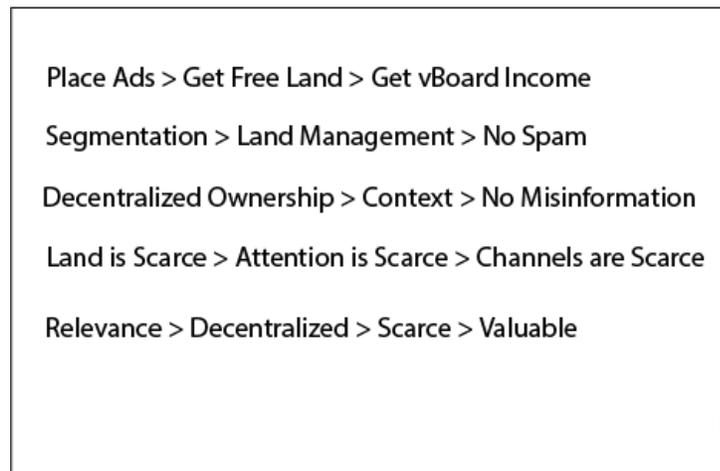


Coverage, decentralization,
robust moderation,
contextualization, lower cost

5. The Web Has Domain Extensions, DL has Channels



Channels concentrate ads, apps and content of similar nature. They are created to focus the attention of passersby when they are out and moving with purpose. This is particularly useful for AR-ads, since users can block political ads, etc. and focus their attention in whatever interests them at the time. Digital Landlords own and operate all the public channels. Reserved channels are kept for whitelisted applications.



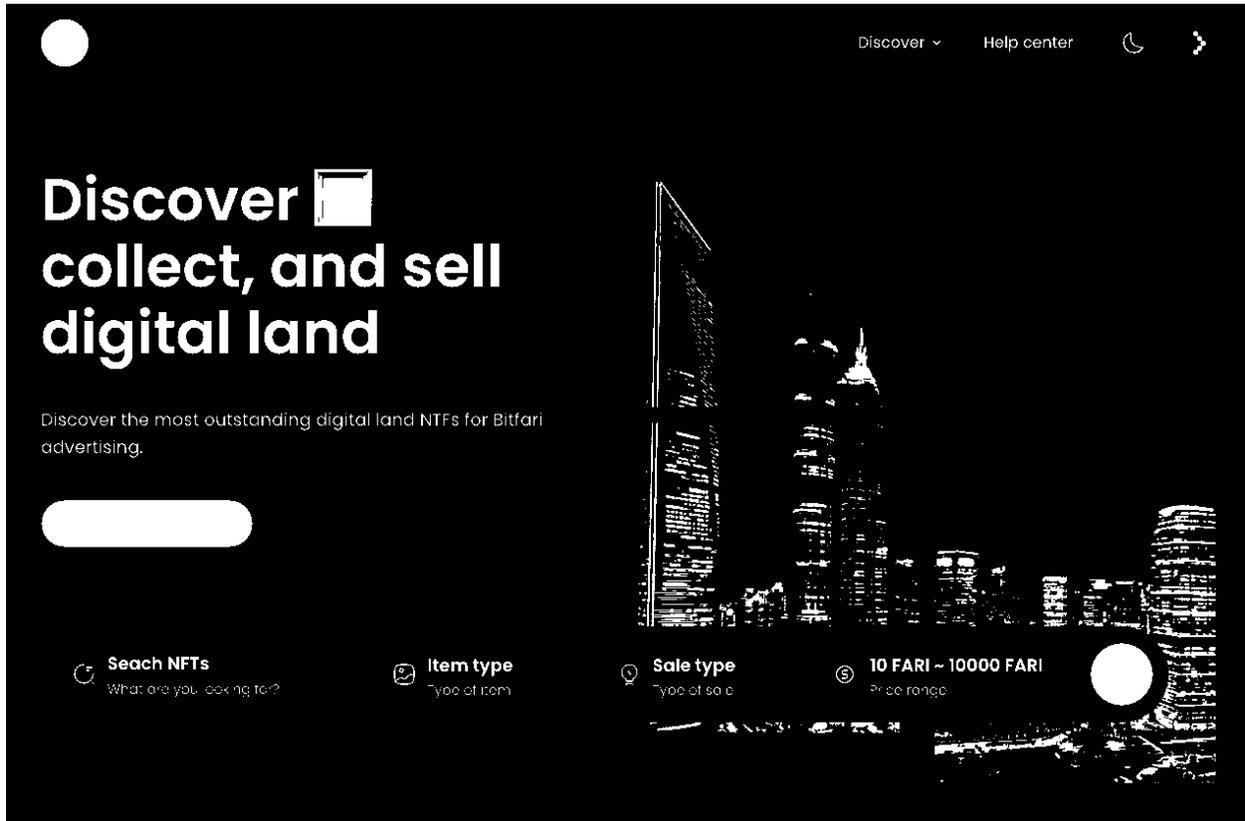
6. Ownership and Scarcity Model

Good land is scarce, creates context for passersby (tourism, entertainment, work, etc.) and filters information naturally. Five land development cycles are pointed above to showcase how the DL system reduces spam and misinformation while providing value for both operators and users. In the end, digital land becomes valuable due to scarcity, quality of information provided and the many benefits for owners.

7. Karma System and Leaderboards

Both karma systems and leaderboards are planned to drive more ads to the best managed boards, where ads are approved faster and users are the happiest. At scale this creates a globally reviewed system of ad distribution that naturally can suggest or even auto-rotate ads in the best places possible for a particular

type of message. A final component of the system are, of course, digital land marketplaces to allow people to buy, trade and develop virtual land in which we will include leaderboards, prizes for competition winners (both trading and land development competitions) among other incentives. Digital Land will also be tradable in other marketplaces! See below a picture of the first version of the marketplace.



SECTION 2 – A Manifesto

8. Rationale for the Digital Land

The web is very hard to use on mobile devices. Apps have to be tailor made, navigation is cumbersome, mobile websites feel cramped and creators can't monetize well because ads frankly don't work quite as well on smartphones. Smart watches and glasses remain gimmicks in terms of web browsing since very poor content is produced for them. Information overload is felt the most on mobile devices, since creators don't have the tools to filter, prioritize, adapt or curate their content for mobile experiences. This paper introduces a network to fix these issues: the digital land.

In *Bitfari: A Peer-to-peer network for Decentralized Advertising*, we introduce a network for delivery of ads and apps using real and virtual screens. In this paper we describe in detail the operation of Bitfari's virtual screens, a collection we also call the digital land.

The evocative term “digital land” alludes to an information veil laid on top of whichever place one happens to be in. This digital veil has multiple layers, and each layer contains the single most important piece of information for a given context. A summary of the most important information at any given place for a predetermined set of contexts (directions, menus, social, apps, ads, kids, tourism, etc.).

9. A Brief History of the Place

The Hyperlocal Graveyard is paved with good intentions. Applications such as Gowalla, Foursquare, YikYak, Highlight, Color, and many more to list, either shutdown or pivoted far away from their original hyperlocal domination ambitions. It turns out that creating a hyperlocal social network is a very hard task. Albeit, a task that can be more readily accomplished using simplified using smart contracts and blockchain technology.

These hyperlocal applications suffered a lot of problems. Just to name a few:

- Low engagement
- Weak USP¹
- Lack of Privacy
- Harassment^{2 3}
- Anti-features⁴

10. A Brief History of the Movement

Let’s talk about the mobile web for a bit. Small screens, low processing power, limited batteries, unfocused users, it’s a nightmare on broad daylight. Developers ran away and moved to apps, focusing users’ attention, compromising on standards and choosing native experiences. They ran away from the Web to create a better Net.

People don’t browse, they just take pictures. They stopped reading and now resort to posting emojis. Information consumption became non-existent as information retrieval got too complex. Apps had to conform to the odious choice of displaying streams of irrelevancy. The movement of information became a stream of nonsense. Browsing for relevance became swiping for whatever, we traded Gina Bianchini⁵ for Mark Zuckerberg. Then Hillman Curtis died⁶. Then Steve Jobs killed Flash. Then Uber created a geofence around your house. All hell broke loose. And now Tik Tok is the dominant mobile app.

In just a decade, we went from a list of apps centered on relevance to a stream of whatever⁷. The world is running away from relevance because it can’t provide it. It’s running away from privacy because it can’t ensure it. It’s drowning us in whatever because it thinks we’ll consume whatever.

¹ Foursquare Engagement Problem <https://streetfightmag.com/2012/04/18/addressing-foursquares-engagement-problem/>

² What was YikYak? <https://www.failory.com/cemetery/yik-yak>

³ The YikYak Problem <https://fsutorch.com/2022/04/06/the-yikyak-problem/>

⁴ Anti-features <https://scobleizer.blog/2009/09/23/antifeatures-big-mistake-that-location-app-developers-make/>

⁵ Gina Bianchini, Wikipedia https://en.wikipedia.org/wiki/Gina_Bianchini

⁶ Hillman Curtis, a Pioneer in Web Design, Dies at 51 <https://www.nytimes.com/2012/04/21/technology/hillman-curtis-a-pioneer-in-web-design-dies-at-51.html>

⁷ Top 2012 focused on content quality and relevance <https://techcrunch.com/2012/12/23/the-20-best-ios-and-android-apps-of-2012/>

11. War on the Digital Land

This nonsense is over! Governments and banks tried to pull the same trick on us: they railroaded us from hard money to whatever bucks. But Bitcoin proved we won't stand still. And then hard money was again.

And here we are, fighting again for our rights. We, as people of the digital land and also the physical world have a right to privacy and a longing for relevance. Fools we are not fools, consumers we are not. We are people, and not just any people; we are the ones who created the content you now sell and built the business you now profit from. We have gone unpaid for more than a decade. And rather, we are billed with ads every fifteen seconds. Bitcoin, a revolution for hard money, is now followed by Bitfari, are revolution for relevance.

The digital land is for the people, developed by us, moderated by us, audited by us and served by us as we have agreed upon. Our digital autonomous organization has made it so the profits of showing ads go to users in payment for their attention, to auditors in payment for their moderation efforts and to screen operators and digital land owners for their development efforts.

No more free attention, no more nonsense. No more manipulation. We have fought and won the battle for our money. Now, we are going to fight for our minds. This is the emancipation of the digital citizen, and here are our demands which will become our rights as we build the digital land.

12. The Rights of Digital Citizens

We present this new platform, in order to create a free layer of communication that includes those left behind while procuring essential rights for those still captive in the online silos of our time. We list these rights not only so the intent and goals of our platform are clear but also to underscore the stakeholder mindset shift we will procure.

12.1 Rights of Digital Citizens

- Digital citizens have a right to privacy
- Digital citizens must be paid for their attention
- Digital citizens must own the digital land
- Digital citizens have a right to digital assembly
- Digital citizens have a right to relevance
- Digital citizens will not be manipulated by advertisers
- Digital citizens have the right to free digital speech and dialogue
- Digital citizens will not be censored

12.2 Ownership in the Digital Land

- In the Digital Land, Digital citizens will own the Social Network
- In the Digital Land, Digital citizens will own the Search Engine
- In the Digital Land, Digital citizens will own the Attention Economy
- In the Digital Land, Digital citizens are the owners, not the product
- In the Digital Land, Digital citizens choose the algorithm and not the other way around.