

# Tellfari: A Social Protocol for Location-Based Communication (Draft)

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“Everything you can imagine is real.”  
Pablo Picasso

In 1969 our planet spoke some of its most powerful words yet. It sent two men as far as they could go without dying, and they spoke to the place by planting a flag which colors represent purity and innocence, hardiness and valor, and vigilance, perseverance, and justice. They told the place: we can and will go further aided by our values.

These men came back, and while they have kept quiet in their old days, the flag keeps talking. Such is the power of location-based communication.

## Intuition for Location-Based Communication Impact

Consider  $i$  as being the impact of a particular message  $m$ . For the sake of simplicity, let's consider the impact of such a message to be the number of people it reaches. Now let's calculate the impact of an email sent to a co-worker, indeed a simple exercise as  $i = 1$ . Post the same message to a social media account and the impact increases to  $i = n * R(n)$ , where  $n$  is your number of friends and  $R(n)$  is the reach factor of your message (how many of your friends read it). Again, pretty easy to see here that  $R(n) \leq 1$  and that  $n$  is the maximum impact your message could have.

Now consider a billboard installed on a highway on your way to work. The billboard says “Diamonds are Forever”. Since 300,000 drivers drive thru that highway in any given day to into of a city of a million residents, and 1% if the drivers a likely to notice the sign, you need to either become a spammer and email 3000 people every day, or come up with 90,000 friends to have the impact this billboard has in a month.

Yet, this calculation is painfully simplistic and brute. A better intuition for impact is: ***what medium could reach its target audience with the least waste possible.***

The minimization of waste could very well increase the effectiveness of any campaign, preserve human attention to make society more focused, aid the environment and persuade its audience better. For an email message sent to a friend, waste is nearly zero. In case of a message posted in a social<sup>1</sup> network, we could go in circles debating how wasteful they are, but the answer is likely the better part of  $n * R(n)$ , since those messages are not particularly relevant.

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<sup>1</sup> Social Protocols <https://www.w3.org/Talks/980922-MIT6805/SocialProtocols.html>

The billboard is a different beast: such a structure is not only wasting metal, paper and electricity. It's also wasting the attention of anyone not getting married in the next six months. For the sake of entertainment, consider  $w$  as being a figure very close to 900,000 seconds of attention per day (assuming three seconds of attention per person). This yields a loss of 10.41 days of attention per day to our hypothetical city. This means that, by displaying such a message in a highly viewed billboard we are burying the lives of 10 adults and a child, every day, for every misplaced billboard. Now that's waste!

Granted, time would have passed anyway, and it's not like you were going to do anything else while driving, but what is the cost of distraction, of loss peace, of misdirection. Such a waste is more than mere inconvenience since it applies to millions.

Assume the city has 1000 off such billboards. Now the cost of this type of communication increases to the complete loss of focus of 10,000 adults and 1000 children every day. Yes, misdirected billboards advertisement (or out-of-home advertisements as they are called) can cost us the equivalent of losing 1% of the city's productive force (plus closing the biggest primary school of the city). Now, let me sweeten the deal just a bit for you: you have to drive back home and side the other side of all those billboards.

## Introducing Tellfari

Imagine all those billboards were connected to a massive search engine that instantly customized every message so as to reduce waste while maximizing impact. Something along the lines of:

$$\sum_{n=1}^i = I$$

$$\sum_{n=1}^w = W$$

$$T = I - W$$

or

$$T = \max\left(\sum_{n=1}^i - \sum_{n=1}^w\right)$$

which of course is reached when

$$T_{(\max)} = \max\left(\sum_{n=1}^i\right) - \min\left(\sum_{n=1}^w\right)$$

or

$$T = i * n$$

## Building Tellfari

Start with a hypothetical network of billboards and public smart panels that showcase the most relevant messages for passersby at any given time. Add a series of contextual messages that simultaneously hide irrelevant messages while displaying highly relevant ones. A proposed design for such a system is presented in the whitepaper Bitfari: A Peer-to-peer decentralized advertising network. But Bitfari is not a pure one to one communication system, but a mass

media optimization solution, and since search engines are not perfect, a flawless system of this kind is impossible to build with today's technology.

Built on Bitfari, Tellfari is a pure communication system that maximizes impact and minimizes waste by delivering a highly targeted group of emails to its users.

Consider a list ***D*** or your *disclosure matrix*, where you disclose your focus at the time. Things like ***I want to buy milk, see movie trailers, save money on shoes***, etc.

Now, you could head to Google and try these searches, but you want to buy milk locally, see movie trailers in a big billboard and buy shoes from your local store.

Let's introduce to the mix a variable ***P*** or the price of your attention. Additionally, let's consider a list of offers, content, applications and ads called the ***local market or LM*** for short. Actors in the local market connect to a system where they type these offers, content, provide application metadata and compose ads to match with potential customers.

Finally consider two relevance scores: ***M*** for a **matching score** and ***C*** for the **cost of reading** the message. We define **relevant messages** as meeting a threshold of  $M - C > P$ . Now we are ready to build.

Tellfari is a system that gathers, in the form of direct emails, all the ***relevant messages of a local market and delivers them timely, using a personal device or a network of connected screens such as Bitfari.***

## **Is This Just Real-time Search?**

No, but it can be envisioned as **reverse real-time search**. Or a system in which the market searches for the best prospect. Matching with his or her economic interests while valuing his or her attention.

## **Enter Bitcoin**

Users price their attention with a Bitcoin amount which needs to be met by messages sent by merchants.

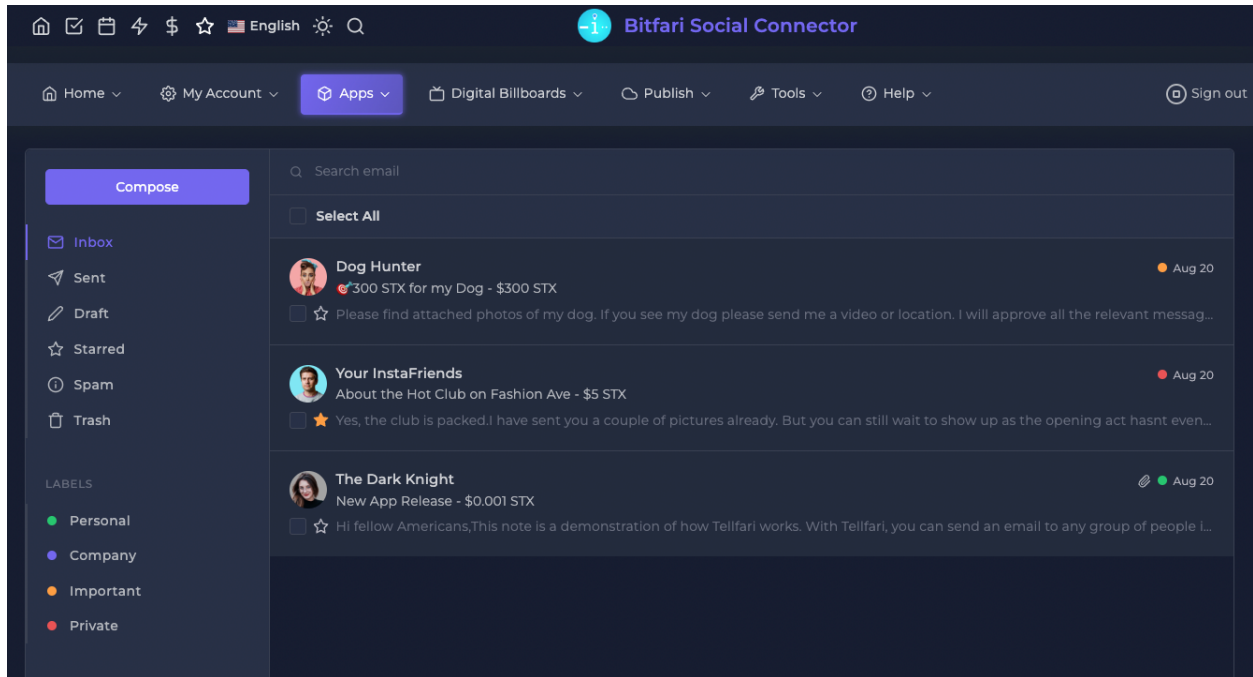
## **Pure and Perfect Location-Based Communication**

Imagine you went to the moon (and we all are since we are purchasing crypto like maniacs). What would the moon tell you? If you were using Tellfari, your economic interests will match with those of advertisers and that little flag would offer you a ride back home to purity, valor, and justice. Just before you had your Big Mac at the moon.

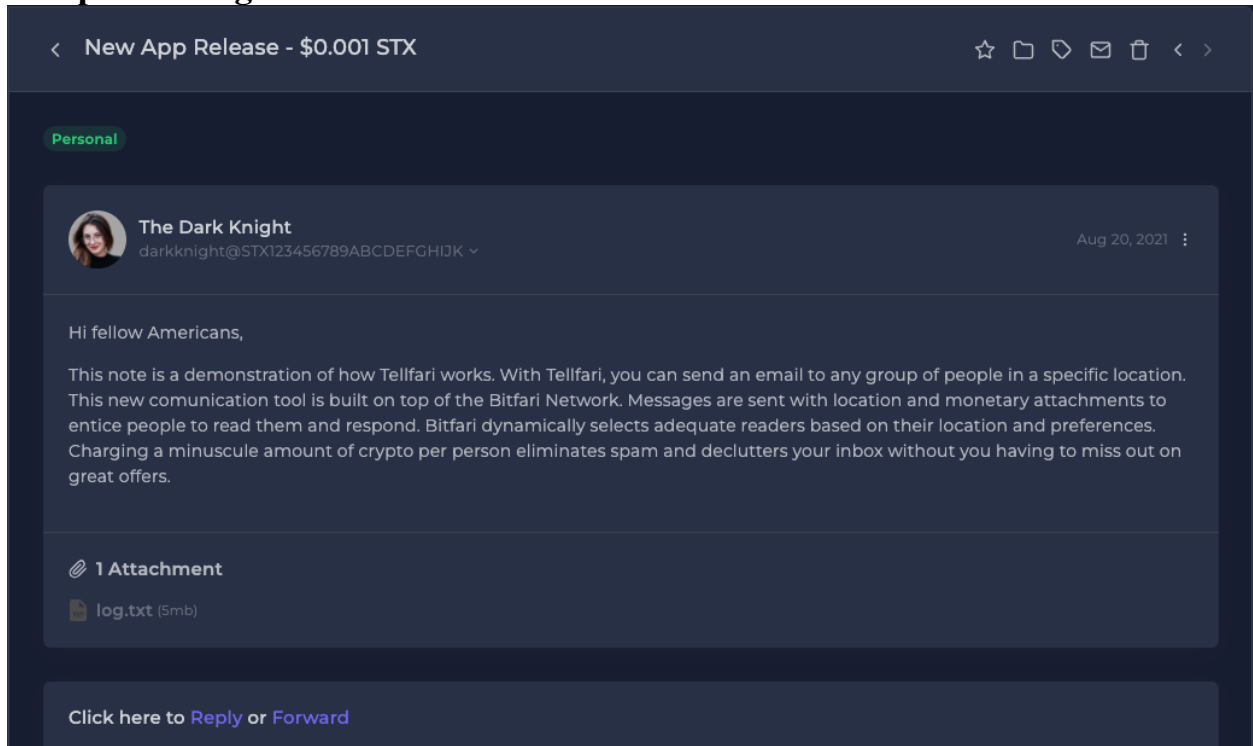
## **Tellfari and Bitfari**

Tellfari is the communication protocol used in Bitfari. It's also an email app that replaces direct mail and traditional location-based communication devices such as posters, flyers and stickers.

# Implementation




# Sample Message



# Sample Flyer

< 📧 300 STX for my Dog - \$300 STX ☆ 📁 🗑️ ✉️ 🗑️ < >

**Important**

 **Dog Hunter**  
doghunter@STX123456789ABCDEFGHIJK ▾ Aug 20, 2021 ⋮

Please find attached photos of my dog. If you see my dog please send me a video or location. I will approve all the relevant messages and distribute 300 STX to the contributors. And thank God for Bitfari! We dont have to use paper and plaster the city anymore to get our voice heard!

[Click here to Reply or Forward](#)