

How Bitfari Prevents Ad Fraud

All the ways people can try to game bitfari and how the platform makes fraud impossible.

PREVENTING SMART SCREEN / PROJECTION FRAUD

1. A business sets up a smart screen that is not visible, turn off most of the time or stopped working.
 - a. Before the first payment is made, the screen should be audited by a critical mass of users with an installed bitfari smartphone app. At least three users will physically audit the screen, document they're findings on the blockchain and ascertain its state. After three random audits at three random times, the screen can be considered audited.
2. The reported size of the screen is different than that which is installed.
 - a. Auditors will check the screen size, as parts of the image projected will not show if the screen is of a different size as that contracted.
3. The screen is installed and then decommissioned
 - a. Random audits will find this and report the screen. After the screen is decommissioned in the blockchain funds held in escrow for this purpose will be released to the Bitfari treasury and the account will be placed on hold.
4. The smart screen is installed in the right place but facing inwards.
 - a. An auditor will likely find this to be the case and alert the owner. If the screen is not fixed a failed audit will occur.
5. The screen is installed below eye level, damaged, dirty, covered or unplugged
 - a. The auditors will fail the screen.
6. Multiple screens are installed on the computer but they are not linked
 - a. Auditors can inform the owner the screens are not linked, otherwise they will be paid as one.
7. The mining program is corrupted, or the machine became virus infected
 - a. Owners are responsible for installing AV software in their computers. The bitfari blockchain is resilient to these types of attacks. However, owners should monitor their accounts weekly to ensure funds are being received normally as Bitfari cannot issue refunds in this type of scenario.
8. A business owner disconnects the screen as soon as the auditor leaves

- a. The frequency of auditing is automatically adjusted depending on the location and foot traffic of the business. Since screens are audited by passerby customers that open the bitfari smartphone app or any other wallets connected to the service, the screen will be flagged, disconnected and paused. The owner is not paid the period in between audits.
 - b. But the owner claims the screen was always visible
 - i. The level of service of the network agreed upon is contingent on having more than 50% of audited users report that they can see the screen.
9. A business owner displays a negative, offensive, cruel, inappropriate or controversial ad in a space that was previously occupied by a bitfari screen.
 - a. While this store owner by potentially face legal action brought upon by government agencies, this does not constitute a violation of our terms. Business owners are free to display what they wish on their storefronts.
10. Now bankrupted, after being sued by an angry customer the business owner from point 9 lashes out, hires a designer, a developer and a forger. He then commissions the creation of a screen saver resembling a bitfari ad, one that includes offensive ads, in other to harm the network.
 - a. This constitutes a violation of our agreement. However, the bitfari blockchain is immutable, ads are immutable, and everything is stored in perpetuity. Meaning the business owner will be easily proven to be lying.
11. The same business owner now says his developers were connected to the bitfari test net instead of its main net.
 - a. The same point above applies.
12. A storefront owner really gets creative and, after having brunch with his friend front point nine, gets to work quite diligently. He buys a mac pro workstation, adds 1 TB of ram, virtualizes 100 instances of Microsoft Windows, connects 1 screen, and installs 100 different bitfari ad showers (one on each virtual machine, he then installs a script that shifts randomly across virtual machines).
 - a. While we generally block multiple connections from the same IP with regards to connecting the blockchain for ad serving, it is clear that this business will serve multiple audits. Auditors will also see photos of the same screen impersonating different locations.
13. The same owner reflects, repents and now has 10 virtual machines and 10 separate screens in his storefront at the airport.
 - a. Since the foot traffic might grant the business owner the amount of ad business required to sustain 10 screens and they are all independent now this might be ok if the business owner has different IPs for each VM. While this is ok, it is not

optimal and the screens should be linked for maximum earnings.

14. Amazon EC2 instances are deployed with the bitfari ad showing software. They have not screen whatsoever connected to them.
 - a. This will fail multiple tests; however, audits will be failed every time so no payment will be issued in this case.
15. Multiple ad-showing software is installed in a smart TV inside a bodega.
 - a. This might be ok in some weird instances. For example, the business owner is not getting any ad for night time showings. In this case it might be ok so setup a script that shuts down, Bitfari's software by dusk and restarts it at dawn. However, if the screen fails audits because of performance issues, crashes, etc, the storeowner will not get credit.
16. A clever storeowner from Nepal installs 10 screens in his store but deploys them with a location falsifier software that tricks the system into reporting that his screens are in Times Square.
 - a. This man will fail his audits 10 times and will not get credit. The screens in Time Square are showing different ads than the ones expected.
17. A group of teenagers has installed screens in the basement of his father's office in a high traffic downtown mall and several others in his home.
 - a. If the screens are not move upstairs the auditors will not see them - fail
 - b. His screens at home will not even qualify to be counted as storefront screens due to the foot traffic reported by oracles. That being said, he can benefit by using his private bitfari screen to keep track of offers and current events. He can even setup a private dashboard.
18. A screen is installed in the 90th floor of a skyscraper that sits atop a very busy Manhattan street.
 - a. The screen will fail the audits, and the operator will get no payment.
19. One hundred screens are installed consecutively in all the storefronts of a busy Queens street. Could this confuse the network?
 - a. This will not confuse the network and will probably be a common scenario in several streets of America. Ads will be showed at random in other to not saturate customers. However, after attending a conference, a technician suggests consolidating and linking the screens, they try it, pass the audits and now they can show amazing ads that span dozens of screens and split the earnings.

PREVENTING AUDITOR FRAUD

20. An auditor marks a screen to be ok even though it isn't.

- a. The number of auditors assigned is directly proportional to the foot traffic, hence multiple auditors will likely visit the location in question. If it's a low foot traffic location the storefront will earn less than the amount in reserves for the screen.

If the storefront is in a high traffic area, when a trail of auditors report the screen as broken, the screen gets decommissioned, stops earning and the auditor that wrongly claimed the screen was ok will not receive credits.

21. An auditor always marks screens as being ok even without looking at them.

- a. The app notifies auditors that they will not be paid if more people vote against their reported choice for the screen. After losing his credits multiple times, the auditor begins paying attention.

22. A scary-looking man in a ghost town installs a screen. Only he and his daughter live in said town. He instructs his daughter to audit the screen as ok even though it is turned off.

- a. In order to pass the audit, the daughter should turn on the screen to see the projected images and choose a matching one in her smartphone. However, since the foot traffic will be low both in the oracle reporting as well as in the app reports, the screen will be decommissioned soon, and its unlikely to receive any payouts. The key question here is: what kind of marketer places and ad on a ghost town?
- b. Bitfari private is the solution for these settings, users can get public service announcement, configure dashboards and apps and have nice-looking smart TVs that show relevant information.

23. What if there are not enough auditors in my area?

- a. Every user with the bitfari app installed in your area is an auditor. If nobody has the app installed, store owners will not get paid. App and screen installations are the proxies by which marketers choose spots to place ads. Other parameter many advertisers can choose are screen size and placement. For this, they can see the photos taken by previous auditors.

MARKETER FRAUD

24. A wild marketer places an ad with an image of a dead animal just to make a point
 - a. Only approved images are shown in the ads placed thru the public blockchain.
 - b. Images used for public ads are generally stock images licensed by the foundation or provided by artist thru donations. These images have been approved by the 51% consensus of the community.

25. A kid makes a bomb threat in a public ad placed on bitfari.
 - a. The ad composing software will flag this message and won't allow this to be posted. Since the kid is persistent, he studies how to connect to the blockchain via command line and post an ad. However, after the ad is posted in this fashion, pre-auditors will flag his message as incendiary since it doesn't come from a government source. The kid will lose the amount of his payment allocated to auditing, get a refund, and possibly have his account suspended.

26. A man posts a Nazi message in a foreign language just to trick the network .
 - a. Ad composing flags the ad as foreign and won't allow posting. Pre-auditors will delete it.
 - b. A trail of pre-auditors can ban the user's account for hate speech citing the translation.

27. The ad contains copyrighted material
 - a. A database of copyrighted material is kept in the ad composer and is flagged accordingly.

28. A marketer uses a catch phrase from another company in his ad
 - a. An auditor can flag the ad.
 - b. The composer might catch this if the company is big.
 - c. The competitor in question can sue the business owner placing the ad and eventually get compensation from the marketer.

29. A prankster tries to upload a nonsensical ad
 - a. The pre-auditors will block it and he will lose money

30. Someone tries to post an ad that contains code
 - a. Is banned because pre-auditors don't understand code
31. Someone tries to post an ad containing only a solid color
 - a. The ad will be banned because it makes the screen look broken
32. Someone posts only a weird sign that no one understands
 - a. Flagged ads are stored in the blockchain, they will be used as reference for future audits
 - b. The ad runs until someone reports it as offensive. Then it gets decommissioned.

33. Someone posts a copyrighted poem on the platform.
 - a. Anyone can open the app, audit the ad and flag it

34. My ad got posted but now people say it's offensive
 - a. When the ad initially ran, the majority of auditors liked it, then something happened in society, perhaps a tragic event, and people are sensible to the copy. Consider rewriting the ad.

35. But I really want to place images on my ads
 - a. Just pay for a pre-audit and your wish will be granted!

PREVENTING SMARTPHONE APP FRAUD

36. A man installs bitfari in 5 smartphones hoping to get as much coin as possible
 - a. We don't do airdrops. Payments are made only for network contributions.

37. People walk a high traffic area with multiple smartphones each in other to distort our metrics
 - a. Our foot traffic metrics come from public data sources, they don't depend on app usage or number of installs.

38. GPS location is somehow altered to gain discount codes to use online?
 - a. Bitfari's discount codes can only be used in person

39. A woman gives her smartphone to her boyfriend just so he can have some fun with her bitfari
 - a. Modern smartphones use biometric scanners for activation. However, if the smartphone in question doesn't the boyfriend will probably get to see ads intended for his girlfriend but is unlikely to get any freebies since we only offer ads and discounts. In a sense, this could lead to sales in the case he decides to shop for her.