

9:58



AA

ali-alkhatib.com



Ali Alkhatib

01 MAY 2020

We Need to Talk About Digital Contact Tracing

Over the past few weeks, Apple & Google have floated the idea of developing and distributing a digital contact-tracing app that will inform people when they've been exposed to someone who's contracted COVID-19, and communicate to people that they've been exposed to *you* if you later test positive yourself (edit: since writing this, Apple has released a beta of iOS 13 that includes the SDK necessary to begin using this system). Writing this in late April and early May, it feels like we're desperate for information and weary from not knowing who's caught COVID-19, who's still vulnerable, who gets it worse or why, or even how to treat it. We're desperate for any information we can get our hands on. This

proposal by Apple and Google promises to give



9:58

AA

ali-alkhatib.cc

Ali Alkhatib

01 MAY 2020

We Need to About Digital Contact Trac

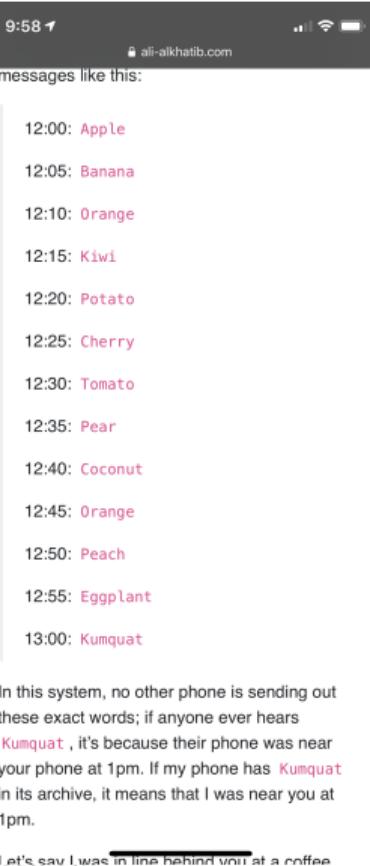
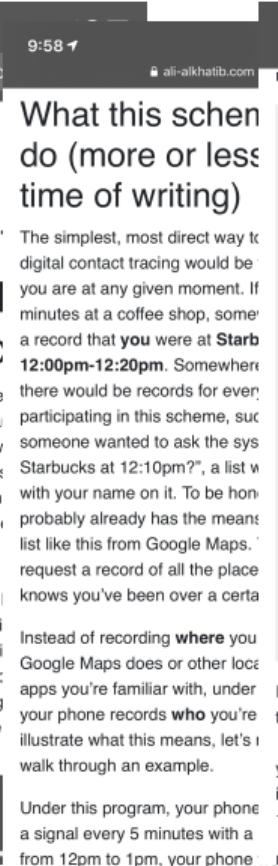
Over the past few weeks, Apple floated the idea of developing a digital contact-tracing app that would let you know if you've been exposed to someone who has contracted COVID-19, and come into close proximity with them. If you later test positive yourself (edit: this, Apple has released a beta version of the app that includes the SDK necessary to build it), your phone would send out signals to other phones nearby that have also been exposed. Writing this in late April, it feels like we're desperate for information about who's been exposed to COVID-19, who's still vulnerable, who's been treated, why, or even how to treat it. We can't get any information we can get our hands on from the government or the media, so we're relying on Apple and Google to provide us with the information we need.

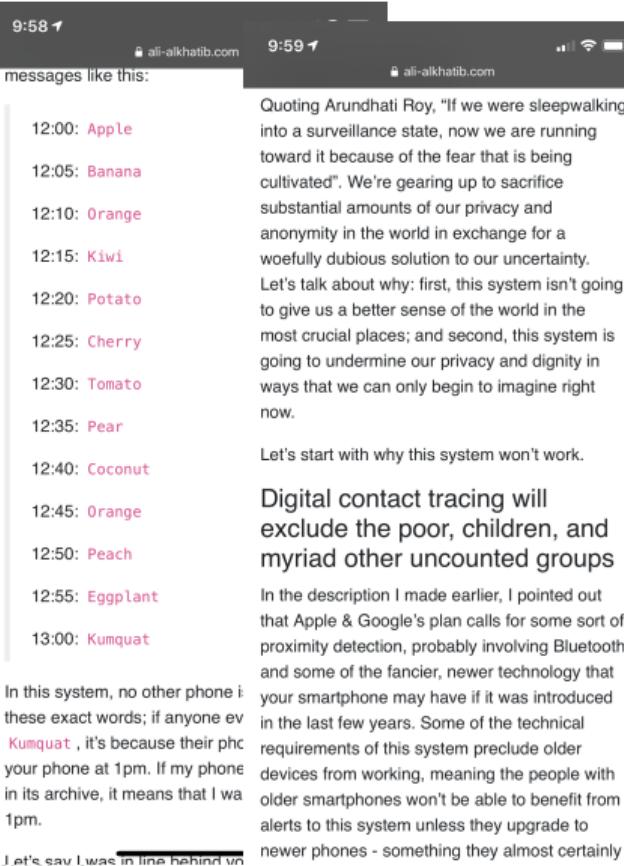
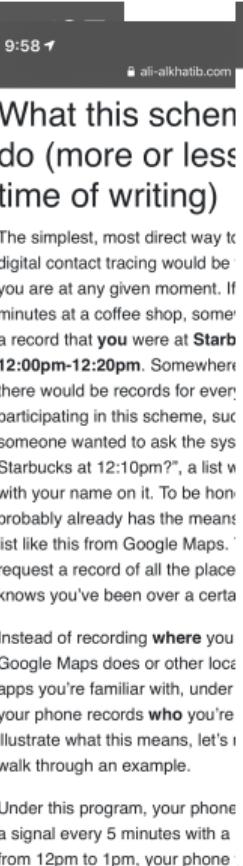
What this scheme will do (more or less, at the time of writing)

The simplest, most direct way to implement digital contact tracing would be to track where you are at any given moment. If you spend 20 minutes at a coffee shop, somewhere there'll be a record that **you** were at **Starbucks** from **12:00pm-12:20pm**. Somewhere, theoretically, there would be records for everyone participating in this scheme, such that if someone wanted to ask the system "who was at Starbucks at 12:10pm?", a list would come back with your name on it. To be honest, Google probably already has the means to produce a list like this from Google Maps. You can even request a record of all the places Google Maps knows you've been over a certain timeline.

Instead of recording **where** you are the way Google Maps does or other location-tracking apps you're familiar with, under this scheme your phone records **who** you're near. To illustrate what this means, let's make up and walk through an example.

Under this program, your phone would send out a signal every 5 minutes with a unique word. So from 12pm to 1pm, your phone would send out messages like this:





9:58 ↗

9:58 ↗

Ali Alkhateib @_alialkhateib · May 1
I wrote a post - "We Need to Talk About Digital Contact Tracing".

We Need to Talk About Digital Contact Tracing
🔗 ali-alkhateib.com

7

43

132

**Abeba Birhane** @Abebab · May 4

"The decisions we make now are going to follow us around for generations. It's important that we move quickly, but it's as important that we don't run headfirst into a surveillance state that offers nothing but oppression & more uncertainty."

@_alialkhateib ali-alkhateib.com/blog/digital-c...

I saw this kind of thinking applied to social problems all the time. Social problems are sticky and enlarged and don't seem to reduce very well. But if you can perform a kind of process space archeology and convert the social problem into a technical one, then you can actually reduce it. That's what happened with the computer virus that converts the problem into something more manageable, or even trivial. It's brilliant.

It's also worrisome. It's worrisome because it doesn't solve either the real social problems, or the new technical ones, and it's dangerous because it obscures the real problems that we need to address - the ones we all recognize and otherwise feel entitled to engage with as fellow humans.

There are technical problems that need to be solved in this pandemic, but this isn't one of them. There are no major issues of uncertainty that digital contact tracing addresses, and we know exactly where it fits in. If it problems, we can avoid it now before it gets off the ground, before we get locked into a false sense of security that everyone is covered and protected. We can do this by being clear about what the system does, and what it doesn't do, and what it can't do.

The real challenges are the social problems of trust, of privacy, of consent, of responsibility, and of rights.

We need constraints in our life. Systematic contact tracing into a digital system won't give us what it offers, and won't give us this. If we need some constraints, here are a few:

- We need more personal protective equipment for everyone. If we want people working in warehouses, nursing homes, and meat processing facilities, we need to give them the means to avoid getting infected.
- We need more tests. We need so many tests for so many people that the cost becomes zero and the results...

...are free.

In this system, these exact words are key:

Kumquat, it's time to turn your phone at 1pm. If my phone is in its archive, it means that I was at 1pm.

Let's say I was in line behind you messages like this:

a signal every 5 minutes with a

from 12pm to 1pm, your phone

message like this:

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

...

WHAT DO WE MEASURE

**WHAT DO WE MEASURE
AND WHAT DOES IT MEAN WE OVERLOOK**