technology today

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Corvid-19 – Smartphone Contact Tracing an MIT, Apple and Google Collaboration

To get the US economy going we need to keep the Corvid-19 Pandemic under control and prevent a second wave. That said, to get people back into restaurants, malls and other places of business we need to find a way of quickly identifying people with the virus and identifying the people they have exposed. To accomplish person to person contact tracking so it is completely anonymous, MIT is collaborating with Apple and Google to build an Application Programming Interface (API) that approved programmers will use to build apps that can perform anonymous contact tracing automatically. See photo.

MIT PACT's (Private Automated Contact Tracing) mission is to "develop technology that enhances the public health community's ability to slow the COVID-19 pandemic by augmenting the reach and efficacy of existing contact tracing strategies. We use personal digital communication devices that automate parts of the exposure detection function with privacy preserving design".

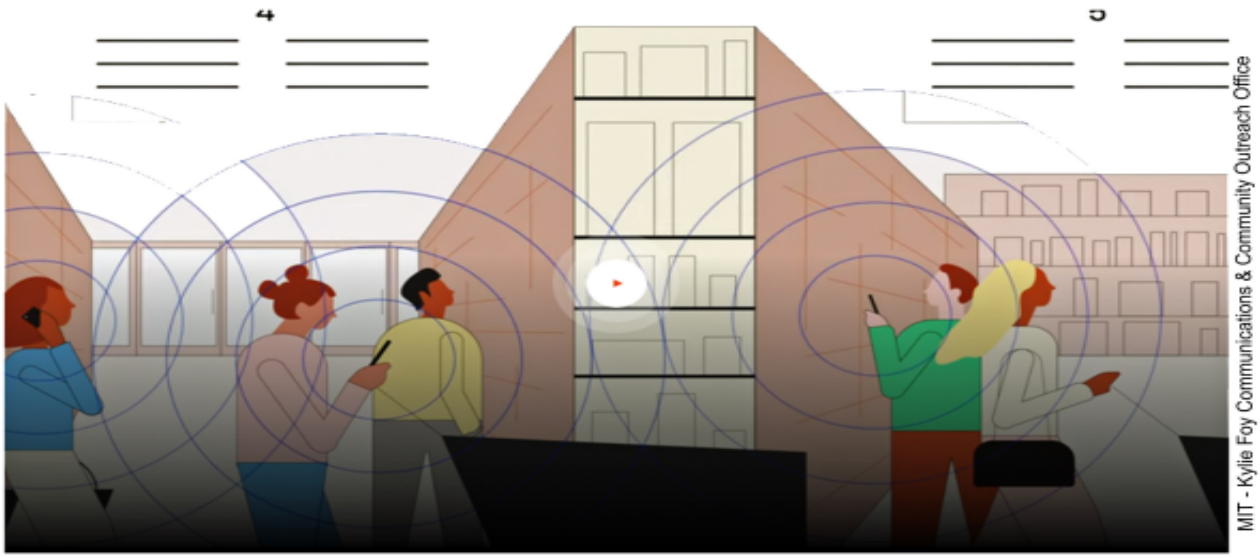
The current contact tracing method relies on hired infection tracer workers. They ask an infected person who has tested positive, by phone or in person, to remember where they went and who they saw over the last couple of weeks. With the information they gather from this conversation, they then try to find the other people that might have been infected.

Since just about everyone now walks around with a smartphone, MIT's targeting strategy uses a smartphone's Bluetooth signal, that are technically called chirps, to identify and anonymously collect smartphone proximity data by catching every close smartphone's chirp. These Bluetooth chirps are collected and stored in an anonymous cloud database. The stored information doesn't include names or even physical locations. For the data tracing to take place the person who caught the covid-19 virus would allow a medical professional to use a QR code reader on their smartphone which would then inform the cloud database that this Chirp ID came from an infected person's smartphone. The Chirp data in this cloud database only includes the Bluetooth chirp IDs. All smartphones constantly broadcast chirps so they can be connected to the Bluetooth devices that are in range. Once the smartphone from the sick individual is identified every smartphone with the app would inform their owner that they crossed paths with the identified smartphone. Specifically they were within X number of feet for a Y length of time with the infected person.

The goal would be that you would seek testing if your phone indicated that you might have been infected. What you do with the information, however, remains in your hands since your smartphone's chirp ID is completely anonymous. This MIT PACT video shows you how the system would work. https://www.youtube.comwatch?time_continue=4&v=yuXzAh4slNw&feature=emb_logo

Taking it a Step Further

1. Would you download and use a Corvid-19 contact tracing app? Why?
2. Do you feel that people who do download the app will automatically go and get free testing if they receive a proximity alert?
3. What percentage of the US population do you feel will need to download and use a contact tracing app for it to work?



An MIT team has developed an automated, smartphone-assisted approach to effective contact tracing while preserving privacy.