

**FireChat**

## **Introduction:**

FireChat is a “peer-to-peer mesh networking” based mobile application developed by Open Garden that allows users to send messages using Bluetooth or Wi-Fi; it works without any Internet Connection or mobile phone coverage.

FireChat provides a new type of communication called “firechats”. These live and anonymous discussion groups can hold as many as 10,000 people simultaneously.

## **Gain in Popularity:**

The app first gained popularity in Iran and Iraq following government restrictions on Internet use. In June, more than 40,000 Iraqis downloaded this application. It was also used by students in Taiwan during the ‘Sunflower movement’

## **Hong Kong Protest:**

Recently, the app has reached a massive popularity in Hong Kong.

According to Reuters [\[1\]](#), the posts and links related to “Hong Kong protests” are being removed from search engines, social networks and other websites.

The pro-democracy protesters reported that their contents posted in popular Chinese micro blog ‘Weibo’, Search engine ‘Baidu’ and messages on WeChat are being censored. The Chinese authorities also banned Instagram.

To bypass the censorship, the protestors have begun using the FireChat application to communicate with other protesters.

The app gained more than 200,000 new users within few hours.

Wired noted [\[2\]](#) that there were 2 million chat sessions initiated within two days. The app is seeing about 20,000 concurrent users in Hong Kong.

The application became the most downloaded app from Hong Kong iOS Apple Store.

According to Android application store, the app has now been downloaded more than 10,00,000 times.

## **Using:**

To begin, a user needs to sign up by providing his full name, username and email ID. The app doesn't verify the email address, it only checks whether the email and username already been registered or not.

By enabling WiFi and Bluetooth, users can communicate with nearby users.

It also allows doing communication over the Internet.

## **Privacy and Security risks:**

The app is not designed with security and privacy in mind. University of Toronto's Citizen Lab has published [\[3\]](#) detailed analyze on this application.

The application does not encrypt messages. In June 2014 speaking to Wired, Open Garden acknowledged that this application "was not meant for secure or private communications"

It is a public chat. So, users can't share any classified messages.

The app also doesn't have any method to verify the users. You will never know who is in the chat room.

A deep analysis of how this tool works at packet level is available at this blog:

[http://breizh-entropy.org/~nameless/random/posts/firechat\\_and\\_nearby\\_communication/](http://breizh-entropy.org/~nameless/random/posts/firechat_and_nearby_communication/)

## **Potential use in India:**

Because India is a Democracy and would not try to contain the free speech of its citizens this application does not have much usage among the law-abiding citizens of India. But this tool could be used by anti-social groups to spread hate messages [4] and specify targets for violent mobs.

Simply banning of sms's and internet based messengers will not help against these sorts of tools as they work using close range Wi-Fi and Bluetooth. The theory by the government that most people in such mobs do not carry smart phone (Because they mostly are from the lower income bracket) is not valid anymore as Smartphone's are becoming cheaper due to online portals selling phones at discounted prices (flipkart, snapdeal etc). Also the government should be ready to handle an influx of new close range technologies like NFC and Transfer Jet and should figure out methods on how to block them if the need arises.

Since this tool needs the user to "sign up" in their website, if the government manages to block those connections then the tool will become useless. But there could be many more clones of this tool that do not need any internet connection to work (thus making it truly p2p).

## References:

- [1] <http://in.reuters.com/article/2014/09/29/hong-kong-china-internet-idINKCN0HO1MJ20140929>
- [2] <http://www.wired.com/2014/10/firechat-hong-kong-usage/>
- [3] <https://citizenlab.org/2014/07/iraq-information-controls-update-analyzing-internet-filtering-mobile-apps/>
- [4] <http://blogs.wsj.com/indiarealtime/2012/08/17/indian-bans-mass-sms-to-counter-panic/>