

EVAN HOROWITZ | QUICK STUDY

Apple vs. the FBI: A guide



KEITH BEDFORD/GLOBE STAFF

Peter Brockmann participated in a rally Tuesday against a court order that requires Apple to unlock the iPhone of one of the San Bernardino, Calif., shooters.

By Evan Horowitz | GLOBE STAFF FEBRUARY 25, 2016

The FBI needs help getting information from a terrorist's locked iPhone, so it obtained a court order requiring Apple to create some custom software.

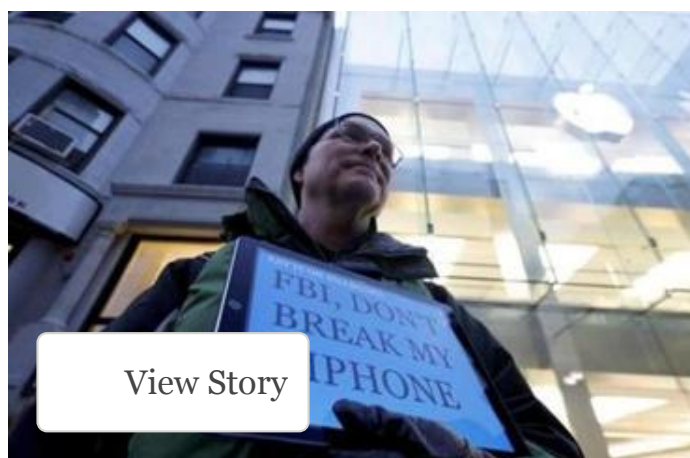
Apple is refusing to comply, raising a Frankensteinian concern that such phone-cracking technology is simply "too dangerous to create," and once created, impossible to stop.

The result has been a weeklong, high-stakes public relations showdown between the nation's top domestic law enforcement agency and the world's most profitable company.

Here are six things you need to understand, if you want to get a handle on the swirl of claims and counterclaims.

The FBI can't access the phone without Apple's help

At the root of this fight is an iPhone which belonged to Syed Farook, one of the terrorists who killed 14 people in San Bernardino last December. The FBI has the phone but can't see inside because the data is encrypted.



Apple said to be developing an iPhone even it can't hack

If Apple succeeds — and experts say it almost surely will — it will create a significant technical challenge for law enforcement.

FBI director comments on Apple encryption issue

Over the years, Apple has added increasingly secure forms encryption to its iPhones, ensuring that prying eyes can't easily read your personal information.

And there are no exceptions for law enforcement. The FBI can't peer through this encryption, and Apple can't either.

What the FBI can do, however, is try to guess Farook's passwords. It's a primitive strategy, but it can work. On many iPhones, the passcodes are simply 4-digit numbers, and since there aren't that many 4-digit combinations, you can actually try them all in a relatively short time.

Except — and here's the technological crux — Apple's software is designed to prevent this game of guessing. Enter a few incorrect passcodes and the iPhone goes into temporary lock-down. Make enough mistakes and all the data gets automatically deleted.

That's why the FBI needs help. They want Apple to shut off these protections with a custom software update, so that FBI agents can guess their way into the phone.

Technologically, this is probably doable, but so far Apple is refusing to play along.

The courts could force Apple's hand

There's nothing unique or unprecedented about requiring a company like Apple to actively assist the FBI with its law enforcement activities.

One of the key precedents for this legal fight is the 1977 Supreme Court case *United States v. New York Telephone Co.*, which found that telephone companies could be compelled to help the government install tracing devices.

The real question in this case is whether requiring Apple to create custom software is a step too far. Does it constitute an “undue burden” on the company, or perhaps even violate Apple’s free speech rights, as some legal scholars have suggested?

If Apple helps to crack this phone, there will be others

Apple worries that helping to break into this one terrorist’s iPhone could set the stage for lots of other court-ordered hacking. Already, there are a number of cases around the country with similar iPhone-cracking requests.

And it’s not just about legal precedents. What if the court-ordered software gets into the wild? Malicious hackers and foreign governments could use it to try and guess the passwords on iPhones all over the world, for whatever nefarious or oppressive purposes they like.

And even if the software never gets loose, it could still be a boon to authoritarian governments. China, for instance, already has a legal framework for demanding encrypted information, which it might use more regularly if it saw the US doing something similar.

Then again, the case could be a victory for the rule of law.

One hopeful sign in this tense fight is that it’s happening out in the open, not in secret courts or classified NSA program but in federal courts and with traditional law enforcement tools like warrants.

A successful resolution to this case — for or against Apple — could show the judicial system’s readiness to oversee complex issues of electronic privacy and security with the same deliberative approach already well-established for wiretapping and other forms of state surveillance.

Apple may outflank the courts with new technology

Apple really could help the FBI in this case, which is why the FBI's request for assistance makes sense. But Apple might evade future legal wrangling if it made itself powerless, locking up the iPhone so tightly that there is really nothing the company could do to help loosen it.

Already, Apple has taken a step down this path, with a new internal architecture that makes password-guessing more difficult. Recent reports suggest that it is planning a further turn of this screw, making it impossible to turn off the anti-guessing protections.

One problem with this strategy is that it's likely generate serious political blowback. Were the FBI and other state agencies suddenly locked out of every phone at every crime scene, they'd have new reason to argue for a more far-reaching remedy like a true backdoor — a secret, skeleton key fitted to let governments hack into all encrypted devices.

Phone companies are already required to make their facilities wiretap-friendly. Technology companies could well face a similar demand. From a privacy perspective, this scenario is far worse than anything the FBI is requesting today.

The end is not near

PR battles happen fast, but legal wrangling takes time. Apple has said it will be “challenging the FBI's demands,” and if it pushes its appeal up the legal ladder to the Supreme Court, years may pass before the courts definitely decide whether the company must help the FBI break into iPhones.

Congress could end the standoff with a statute clarifying the rights and responsibilities of technology companies in the face of demands from law enforcement. But with political polarization being what it is, a clean legislative solution seems unlikely.

In the meantime, encryption technology will continue to advance, the NSA will pursue its less-public efforts to collect sensitive information, and more and more of users' private information will be stored in the cloud and on electronic devices.

So by the time the courts resolve this fight between Apple and the FBI, the world may have already moved on. And the deep conflicts between surveillance, privacy, and encryption may be tangled in entirely new kinds of knots.

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