Beyond the Application

Cellular Privacy Regulation

Chris Dudley

cdudley@scu.edu
SEE, digital communications
Many years as a network engineer
Santa Clara University Law student
Research assistant providing technical expertise in privacy audits and reviews
THE PROBLEM
Senator Franken became alarmed about CarrierIQ (Thanks to all the hacking!)

requested info from the carriers on their use of this technology.

petitioned the FCC for new rules to stop.

FCC, following rulemaking process, issued Notice and opened up for comments.
FCC’s Interesting Questions

What privacy and security obligations should apply to customer information that service providers cause to be collected by and stored on mobile communications devices?

How does the obligation of carriers to ‘take reasonable measures to discover and protect against attempts to gain unauthorized access to CPNI’ apply in this context?

What should be the obligations when service providers use a third party to collect, store, host, or analyze such data?

Many more good ones!
What IS CPNI anyway?

Information

Relating to the “quantity, technical configuration, type, destination, location, and amount of use of a telecommunications service.”

Made available to the carrier by the customer solely by virtue of the carrier-customer relationship so billing information.

Can not be used to market to a Telco’s own customers.

22 USC § 47 (h)(1)

Verizon California, Inc. v. F.C.C., 555 F.3d 270 (D.C. Cir. 2009)
CPNI must be disclosed to the customer upon request.

Location data is currently not available to the consumer from any telco.

Knowing what they know would be interesting, wouldn’t it?
AGAINST REGULATION?
Carriers’ Comments

The industry does just fine regulating itself. This is the purview of the Federal Trade Commission and will cause conflicts. The FCC does not have the authority to regulate handsets. The information the industry collects is necessary to insure good service.
After people objected, CarrierIQ was “killed” Industry is bringing it back under new names T-Mobile calls the app “System Administrator” Some carriers are now openly selling user data Verizon markets user data online Suggests advertisers “re-correlate”.

How is this even pretending there is self-regulation?
FTC is deeply involved in improving mobile privacy, particularly with applications.

FTC has no authority over carriers and their relationships with their customers.

FTC has issued a statement in support of further CPNI regulation.
Anyone remember the arguments for the Carterfone Decision?

Similar “quality” argument here.

Becomes an argument for including data collected in CPNI:

Information “necessary for the operation of the network.”
New technologies cross boundaries
Embedded devices increasingly include cellular
Blurry line between intrusive data collection and advanced location functionality
Enhanced approach required to not limit to “handsets” but to “devices”
Customer knowledge and ability to control key
Workable Solution?
Two Approaches to Regulation

Give consumers more control
Consumers often are pretty clueless
Many don’t care about that control

Hold carriers more accountable
Consumer choice could be left behind
Poses enforceability issues
What Should Regulation Look Like?

- Carriers must be held accountable (under CPNI order) for everything the consumer cannot control.
- Opt-in schemes with opt-out available any time
- How much data is really necessary if they can’t sell it?
- Carriers need incentive to grant users who want control.
- Carriers become responsible for any data breach on any unlocked phone
Location should be included in CPNI.

Far less ambiguity for law enforcement requests for location tracking data.

Would require Pen/trap (judicial) order.

Still easier to get than 4th Amendment probable cause search warrant.
Politics are in a pro-privacy upswing now. Many Senators are making a stand. White House created a privacy initiative. Even the GAO has signaled the need for greater privacy controls. "Defense" and "law enforcement" arguments are irrelevant here.
Conclusions-Predictions

- There will probably be new regulation soon.
- The Telcos will sue, challenging the statutory basis for the regulation.
  - Telcos will try to keep it tied up in court.
  - They will not win (out on a limb here).
- Enforcement will become a huge mess.
- Consumers will still benefit from regulation.
March 15 2006 Notice issued.

Similar comment period. (30 day comment, 30 day reply)

99 docs logged - only 37 here. Why?

Sunshine Act meeting July 6, 2006

Rule posted June 8, 2007
Complete List of Questions

1. How have [data privacy] practices evolved since we collected information on this issue in the 2007 Further Notice?
2. Are consumers given meaningful notice and choice with respect to service providers’ collection of usage-related information on their devices?
3. Do current practices serve the needs of service providers and consumers, and in what ways?
4. Do current practices raise concerns with respect to consumer privacy and data security?
5. Are the risks created by these practices similar to or different from those that historically have been addressed under the Commission’s CPNI rules?
6. Have these practices created actual data-security vulnerabilities?
7. Should privacy and data security be greater considerations in the design of software for mobile devices, and, if so, should the Commission take any steps to encourage such privacy by design?
8. What role can disclosure of service providers’ practices to wireless consumers play?
9. What extent should consumers bear responsibility for the privacy and security of data in their custody or control?
10. Whether the device is sold by the service provider;
11. Whether the device is locked to the service provider’s network so that it would not work with a different service provider;
12. The degree of control that the service provider exercises over the design, integration, installation, or use of the software that collects information;
13. The service provider’s role in selecting, integrating, and updating the device’s operating system, preinstalled software, and security capabilities;
14. The manner in which the collected information is used;
15. Whether the information pertains to voice service, data service, or both;
16. The role of third parties in collecting and storing data.
17. Any other factors relevant?
18. What are these other factors, and what is their relevance?
References

- Statute authorizing CPNI Regulation: 47 U.S.C. § 222
- Regulation: 47 C.F.R. § 64.2001 et. seq.
- CPNI Rulemaking Information: 96-115
- CPNI Compliance Certification: 06-36
- Register of official publications: [https://www.federalregister.gov/](https://www.federalregister.gov/)
- FCC's code for CPNI Rulemaking Information: 96-115
- FCC's code for CPNI Compliance Certification: 06-36
- FCC's code for CPNI Rulemaking Information: 96-115
- Mosaic theory, see United States v. Maynard, 615 F.3d 544, 557 (D.C. Cir. 2010)
- Verizon's marketing information on user data: [http://business.verizonwireless.com/content/b2b/en/precision/overview.html](http://business.verizonwireless.com/content/b2b/en/precision/overview.html)
- Privacy and Data Management on Mobile Devices | Pew Research Center's Internet & American Life Project: [http://pewinternet.org/Reports/2012/Mobile-Privacy.aspx](http://pewinternet.org/Reports/2012/Mobile-Privacy.aspx)
- Note link sent via SMS on Aug. 30, 2012 to T-Mobile customers: [https://support.t-mobile.com/docs/DOC-2929?noredirect=1](https://support.t-mobile.com/docs/DOC-2929?noredirect=1)
FCC has statutory authority to regulate telephone privacy since 1934.

CPNI=Customer Proprietary Network Information

Mobile privacy has been included since 2007

FCC considered Handsets but so far excluded them from CPNI order so far.
Arguing for Consumer Protection

The EFF (naturally)
Electronic Privacy Information Center (Initiated 2007 CPNI order covering mobile)
Center for Democracy and Technology
Center for Digital Democracy
Future of Privacy Forum
MA AG & Dept. of Telecommunications
Catholic Bishops (with other clergy)
Hispanic Technology & Telecommunications Partnership (HTTP)
Private citizen

Only 35 total comments
Most discuss need for regulation rather than the form it should take.
Who Owns Malware?

Obviously the hacker does.

Just a bit hard to regulate hackers

Assignment of responsibility could be used as incentive

Incentive to accountable carriers to provide better security

Incentive for carriers to grant users control
Also Against Regulation

The usual advertising subjects:
- Direct Marketing Association
- Interactive Advertising Bureau
- Farm Industry Communications Committee
- Consumer Banker Association

Nothing much new to offer