

## Internet of Things Workshop Tweets

The FTC's Division of Privacy and Identity Protection hosted a one-day [workshop on the Internet of Things](#) in Washington, D.C. FTC staff live-tweeted the event from the Commission's @FTC account.

The following is a transcript of those tweets in reverse chronological order for ease of reading. All Tweets, without handles redacted, remain publicly available on the FTC's Twitter account for as long as Twitter allows.

### Promotional Tweets

Watching our Internet of Things webcast tomorrow? Here's our to submit your questions to panelists: [go.usa.gov/WmCW](http://go.usa.gov/WmCW) #FTCIoT #IoT

Here's how to submit your questions to panelists online during FTC's Internet of Things workshop: [go.usa.gov/WmCW](http://go.usa.gov/WmCW) #FTCIoT #IoT

████████████████████ Good morning. We will use #FTCIoT today for tweeting our #IoT workshop.

██████████ Great! Hope you enjoy! #FTCIoT

██ Good morning. We will use #FTCIoT today for tweeting our workshop.

██████████ Hope you enjoy today! Please note, we will use #FTCIoT in our workshop tweets today.

Good morning! If you're planning to watch our Internet of Things workshop, starts at 8:30am ET. Webcast: [go.usa.gov/WmxV](http://go.usa.gov/WmxV) #FTCIoT #IoT

Happening today: FTC workshop on the Internet of Things. Watch live: <http://go.usa.gov/WmxV> #InternetofThings #IoT #Privacy Tweets Qs using: #FTCIoT

Our workshop on the Internet of Things starts in 5 minutes. Agenda: <http://go.usa.gov/WEpC> Webcast: <http://go.usa.gov/WmxV> #FTCIoT

If you're watching our webcast today, you can submit questions to panelists. More info: <http://go.usa.gov/WmCW> Tweet ?s w/ #FTCIoT

### Chairwoman Edith Ramirez's Opening Remarks

FTC Chairwoman Edith Ramirez welcomes everyone to Internet of Things: #Privacy & #Security in a Connected World. #FTCIoT

Ramirez: Smart devices will track our health, remotely monitor aging fam members, reduce utility bills, & tell us we're out of milk. #FTCIoT

Ramirez notes main #privacy challenges from IoT: Ubiquitous data collection, unexpected uses of data, & security. #FTCIoT

██████████ Hi - have you refreshed your browser? #FTCIoT

Ramirez: With big data comes big responsibility. #FTCIoT

Any device connected to the Internet is potentially vulnerable to hijack. – Ramirez. #FTCIoT

In #IoT, data security can affect the safety of cars, medical devices & homes. - Ramirez #FTCIoT

Ramirez: Companies that don't pay attention to their security may find that the FTC will. #FTCIoT

### **What is the Internet of Things Presentation**

Dr. Keith Marzullo, National Science Foundation, will now present: What is the “Internet of Things”? #FTCIoT

The first connected device was a coffee pot, says Marzullo. #FTCIoT

How do we put the cyber world and the physical world together? - Marzullo #FTCIoT

NSF helping to fund autonomous driving cars, says Mazullo. #FTCIoT

Marzullo: Smart sensors can collect real-time data from water & soil to monitor environmental conditions. #FTCIoT

NSF's Keith Marzullo discusses the Internet of Things. #FTCIoT [pic.twitter.com/VJqmjKKVbq](http://pic.twitter.com/VJqmjKKVbq)

Advances in control, verification, & #bigdata are leading to commercial opportunities in #IoT, says Marzullo. #FTCIoT

### **Contextual Privacy Presentation**

Next up: Dr. Carolyn Nguyen from Microsoft will discuss Contextual #Privacy. #FTCIoT

Need to create viable & sustainable ecosystem centered on the individual, says Nguyen. - #FTCIoT

Nguyen: Let's think about how to enable the data flow of #IoT, not stop it. #FTCIoT [pic.twitter.com/1uEShn7Nnt](http://pic.twitter.com/1uEShn7Nnt)

██████████ Yes, archive and transcript at [ftc.gov/videos](https://ftc.gov/videos) later this week! :) #FTCIoT

Nguyen: Evolution of data-driven ecosystem: sharing of data in #IoT world; increasingly data will be passively generated/collected. #FTCIoT

Nguyen: Type of data, type of entity, device context, collection method, data usage, trust, & value exchange 7 key variables of #IoT. #FTCIoT

What matters to consumers is context, says Nguyen. #FTCIoT

### Panel 1 Tweets

Panel 1 is now starting: The Smart Home. Moderators: FTC's Mark Eichorn & Ruth Yodaiken. #FTCIoT

Panelists (L to R):Eric Lightner, Michael Beyerle, Jeff Hagins, Lee Tien, and Craig Heffner. #FTCIoT

Reminder - you can submit questions to workshop panelists using #FTCIoT.

Your fridge is a 72" computer that just happens to keep your food cold. - GE's Michael Beyerle #FTCIoT

██████████ It will be a part of the webcast archive at [ftc.gov/videos](https://ftc.gov/videos). Usually posted within a couple of days.

SmartThings puts an life-changing Smart Home experience in the palm of every consumer's hand, says Jeff Hagins. #FTCIoT

Our first panel is discussing smart devices in our homes during #FTCIoT workshop. [pic.twitter.com/FADTlnFZnb](https://pic.twitter.com/FADTlnFZnb)

We are redefining what a smart home means - connected devices in the home provide for integrated services, says Hagins. #FTCIoT

RT @KatyOnTheHill: Hagins of SmartThings: "things & our data have to be secure; we need to own the data; sharing has to be contextual & explicit" #FTCIoT

The modern consumer doesn't know that much about what can be done with their data, says EFF's Lee Tien #FTCIoT

Craig Heffner, Tactical Network Solutions, says there's no financial incentive to make devices secure. #FTCIoT

We need to push vendors to adopt better security. - Heffner #FTCIoT

Said Jeff Hugins RT @AnthroPunk "Just because the device has the capability to connect doesn't mean that it should." #FTCIoT

MT [REDACTED] Just b/c we can plug&play something #IoT doesn't mean consumers understand tech security/privacy concerns #FTCIoT// Hefner

Panelists discussing what kind of inferences can be derived from smart devices in your home. - #FTCIoT

Following our #FTCIoTtweets today? You can also watch the workshop live: [go.usa.gov/WmxV](http://go.usa.gov/WmxV)

RT [REDACTED] My @twitter feed is blowing up with live updates from #FTCIoT. Looks like all of #dctech is there!

Moderator: Do businesses share the data from their consumers with third parties? #FTCIoT

Level of security on #IoT devices based on perception of the device - lightbulb versus door lock - lock more secure, says Hugins. #FTCIoT

Q from audience - Is there any device that should not be connected? Any device that is not security risk? #FTCIoT

Break! We will be back at 11:00am with keynote speaker Vint Cerf. #FTCIoT

[REDACTED] Yes. We're just coming back from a break now. #FTCIoT

### **Vint Cerf's Presentation**

One of the "fathers of the internet," Vint Cerf is up now. #FTCIoT

Watch our Internet of Things webcast here: [go.usa.gov/WmxV](http://go.usa.gov/WmxV) #FTCIoT

Vint Cerf speaking at #FTCIoT workshop. [pic.twitter.com/jNrQ3rRnLq](http://pic.twitter.com/jNrQ3rRnLq)

[REDACTED] It's a full-day workshop. Please see all our previous tweets. [go.usa.gov/WmxV](http://go.usa.gov/WmxV)

Cerf: Increasing numbers of networked appliances from consumer goods to sensor systems to fitness to autos, etc. #FTCIoT

Google Glass, an experiment, is essentially no different than strapping your [smart phone] to your head. - Cerf #FTCIoT

[REDACTED] Awesome.

Cerf is discussing the data he collects about the energy use in his home. #FTCIoT

Smart cities are another extension of the smart home, says Cerf. Monitoring & reporting status of city services like traffic flow. #FTClOT

Cerf: Enormous potential for data accumulated & shared. Think early epidemic detection in health mgmt & wellness improvement. #FTClOT

Challenges/opportunities of #IoT: mass device configuration; access control; privacy & safety; feedback; software errors. - Cerf #FTClOT

Cerf: Go ask your ISP when they'll be on IPv6. ISPs have been slow to switch b/c consumers haven't asked. #FTClOT

Questions for Vint Cerf? Tweet them ASAP. #FTClOT

RT @KatyonthHill: Vint Cerf: "It will be increasingly difficult for us to achieve #privacy. Privacy may be an anomaly" #FTClOT

We're off for lunch. Catch up with the #FTClOTworkshop again at 1:00pm ET. Agenda: [go.usa.gov/WEpC](http://go.usa.gov/WEpC)

#### **Commissioner Ohlhausen's Remarks**

RT @MOhlhausenFTC: Watch FTC's Internet of Things workshop live: [go.usa.gov/WmxV](http://go.usa.gov/WmxV) Follow @FTC for tweets. I speak after lunch! #FTClOT

We're back! Commissioner @MOhlhausenFTC will now give remarks at our Internet of Things workshop. [go.usa.gov/WmxV](http://go.usa.gov/WmxV) #FTClOT

#IoT capabilities offer great benefits to consumers, but we must be sensitive to data security & consumer privacy issues. - @MOhlhausenFTC #FTClOT

FTC can help ensure promise of innovations, like #IoT, is realized by using unique set of policy & enforcement tools. - @MOhlhausenFTC #FTClOT

Photo of @MOhlhausenFTC discussing data security, #privacy & #bigdata relevant to development of IoT. #FTClOT [pic.twitter.com/TgJfU03IF](https://pic.twitter.com/TgJfU03IF)

Noting FTC's TrendNet case, @MOhlhausenFTC says biz offering new tech need to safeguard user #privacy to avoid giving tech bad name. #FTClOT

Copy of Commissioner @MOhlhausenFTC's remarks at #FTClOT workshop: [go.usa.gov/Wymd](http://go.usa.gov/Wymd) #privacy #bigdata #IoT

And here's a copy of Chairwoman Edith Ramirez's remarks from the workshop this morning:  
[go.usa.gov/WymR#IoT](https://www.ftc.gov/WymR#IoT) #privacy #FTCIoT

## Panel 2 Tweets

We're on to Panel 2: Connected Health & Fitness. Moderators: FTC's Cora Han & Kristen Anderson.

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Data coming off sensors incredibly high quality - can tell a lot about who you are from health & fitness devices, says Scott Peppet. #FTCIoT

██████████ U may have been trying to watch during break. We're streaming now. Try refreshing ur browser. [go.usa.gov/WmxV](https://www.ftc.gov/WmxV) #FTCIoT

What is the appropriate use of sharing health data in this connected world? - Stan Crosley #FTCIoT

A lot of consumer facing health apps are not covered by HIPAA, says Lorenzo Hall. #FTCIoT

██████████ Will keep that in mind. Thanks.

Jay Radcliffe talking about hacking his own insulin pumps due to software and design failures. It's scary. #FTCIoT

Iyer: Could we actually convert not only lapse in data, but also info inferred from data? For instance, look for patterns & trends. #FTCIoT

Moderator: How have you seen the health marketplace evolve in terms of their impacts on consumers? #FTCIoT

Moderator: When consumers choose to share their data over social media & other means, how does that affect privacy overall? #FTCIoT

The companies producing these devices may not even know what the privacy implications are, says Radcliffe. #FTCIoT

Consumers just want a copy of their data, says Scott Peppet. #FTCIoT

Audience Q: What affect would explicit consent have on health content? #FTCIoT

Explicit consent for everything would be catastrophic. - Crosley #FTCIoT

Peppet: What can FTC do? I would look really hard at the privacy policies of some of these devices. #FTCloT

### Panel 3 Tweets

Now discussing Connected Cars. Panel 3 is moderated by FTC's Karen Jagielski & Lerone Banks. Watch: [go.usa.gov/WmxV](https://go.usa.gov/WmxV) #FTCloT

Panelists L to R: Tadayoshi Kohno, Christopher Wolf, John Nielson, & Wayne Powell. Agenda: [go.usa.gov/WEpC](https://go.usa.gov/WEpC) #FTCloT

Moderator: What are some of the technologies that exist in vehicles today? How many computers, etc? #FTCloT

██████████ Hey, Alex. Transcript and webcast archives will also be posted here: [ftc.gov/videos](https://ftc.gov/videos). Usually within 24 hours. #FTCloT

Connections within a car are incredibly valuable from a safety perspective, says Kohno. #FTCloT

Other than safety, the moderator asks what other benefits are there for consumers with connected cars? #FTCloT

RT ██████████: .@yoshi\_kohno and @PrivacyWolf speaking about connected cars at #FTCloT [flic.kr/p/hFBanu](https://flic.kr/p/hFBanu)

Research shows 28% of drivers would share anonymized data from their connected cars, says Wolf. #FTCloT

██████████ Submitted to the moderators. #FTCloT

Moderator: Can you provide notice and choice to consumers? What about multiple car owners over time? How is data handled? #FTCloT

RT ██████████: AAA's John Nielsen: consumers should have some say over how their connected car data is used. #FTCloT

Audience Q: What's the number one security issue industry needs to address? #FTCloT

### Panel 4 Tweets

Our final panel of the day: #Privacy & Security in a Connected World. Moderators: FTC's Maneesha Mithal & Ben Davidson. #FTCloT

Panelists L to R: Ryan Calo, Dan Caprio, Michelle Chibba, T. Drew Hickerson, David Jacobs and Marc Rogers. #FTCloT

Moderator offers scenario of home owner who wants numerous smart devices in her home. At what stages should she consider security? #FTCIoT

Security has to be baked in at the very beginning, says Rogers. #FTCIoT

Moderator: Discuss the costs and benefits of IoT connected devices in the home. #FTCIoT

RT [REDACTED]: .@rcalo, David Jacobs talking about connected privacy and security at #FTCIoT [flic.kr/p/hFFskj](https://flic.kr/p/hFFskj)

[REDACTED] Thanks for taking photos today! #FTCIoT

Use your security policy or privacy stance as a competitive advantage. Get out there as leader of the pack, says Chibba. #FTCIoT

We need to innovate privacy "notice." - Calo #FTCIoT

On sharing data, default should be off, says Chibba. Enable consumers to opt-in. #FTCIoT

Moderator: What are examples that do a good job with privacy and security? #FTCIoT

Moderator: If you were the FTC, what would you do next? Rogers: Tread lightly. Jacobs: Enforcement. Hickerson: Continue to educate. #FTCIoT

We're wrapping up our Internet of Things workshop. Bureau of Consumer Protection Director Jessica Rich will provide closing remarks.#FTCIoT

Jessica Rich provides a brief overview of what was covered at the workshop. #FTCIoT [pic.twitter.com/1dQG8s4Fd2](https://pic.twitter.com/1dQG8s4Fd2)

This is the beginning of our conversation with consumers and industry on the implications of #IoT. - Rich #FTCIoT

Rich: Next step is a report to capture what we learned today, including recommendations about best practices moving forward. #FTCIoT

Rich: We're keeping our comments open until Jan. 10. Please email [iot@ftc.gov](mailto:iot@ftc.gov). #FTCIoT

Thanks everyone on Twitter who joined us for our workshop! Transcript & archive will be available at [ftc.gov/videos](https://ftc.gov/videos) soon. #FTCIoT