

# Multistakeholder Process; Internet of Things (IoT) Security Upgradability and Patching

**Incentives and Barriers:** How do we foster greater adoption of good patching and updating practices?

~Status Update~

January 31, 2017

# Working Groups Logistics and Composition

- Wide-range of experts representing different perspectives
- 39 members representing industry, academia, and advocacy groups
- 1- Hour Weekly meeting to share perspectives and commentaries

## Our observations and current suggestions

- There is no consensus in IoT Security Upgradability and Patching
- We attempt to build a taxonomy to describe the scope and outline various incentives and barriers

# Taxonomy Overview

Stakeholders	Category	Next slide for details
Produce IoT	Software	Environmental (Barriers/Incentive) Interactive (Barriers/Incentive) Scale (Barriers/Incentive)
	Hardware	Environmental (Barriers/Incentive) Interactive (Barriers/Incentive) Scale (Barriers/Incentive)
Regulate IoT	'Macro' environment	Environmental (Barriers/Incentive) Interactive (Barriers/Incentive) Scale (Barriers/Incentive)
Use IoT	Human user	Environmental (Barriers/Incentive) Interactive (Barriers/Incentive) Scale (Barriers/Incentive)
	Machine user	Environmental (Barriers/Incentive) Interactive (Barriers/Incentive) Scale (Barriers/Incentive)

# Producer > Software > Barriers

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## Environmental

Ability to patch the entire landscape

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Media of delivery, via Internet?

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Ability to track outstanding consumer devices (similar use of MDM)

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## Interactive

Consumer disable connectivity of device.

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Consumer 'jail-break' device compromising security integrity (Firmware?)

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Consumer perception of control and privacy

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## Scale

Need to track all code-lines, different technology divert code-lines.

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number you can support (~4 trillion devices)

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Support of legacy technology protocol

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# Some Future Directions

- Narrow and define our scope
  - Recognize consumer-grade IoT may quickly intercept with industry-control IoT
- Build a list of reference of prior work on best practices
- Build consensus on what is a barrier vs. incentive
  - Consider building a one-to-one match between barrier and incentive
- Define success-criteria and end-goal of the working group
- Define who is the audience of our deliverable