



The Internet of Things That Break

IoT and Future Network Architecture

Andrew Sullivan

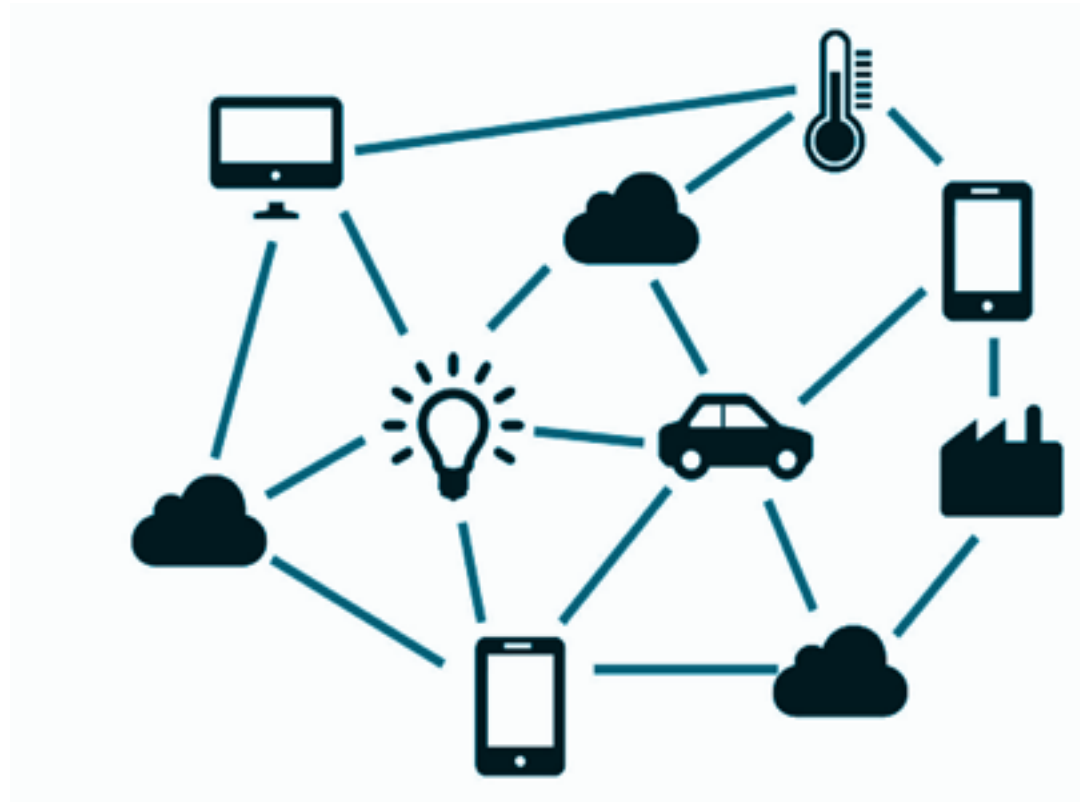
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The Internet of What?

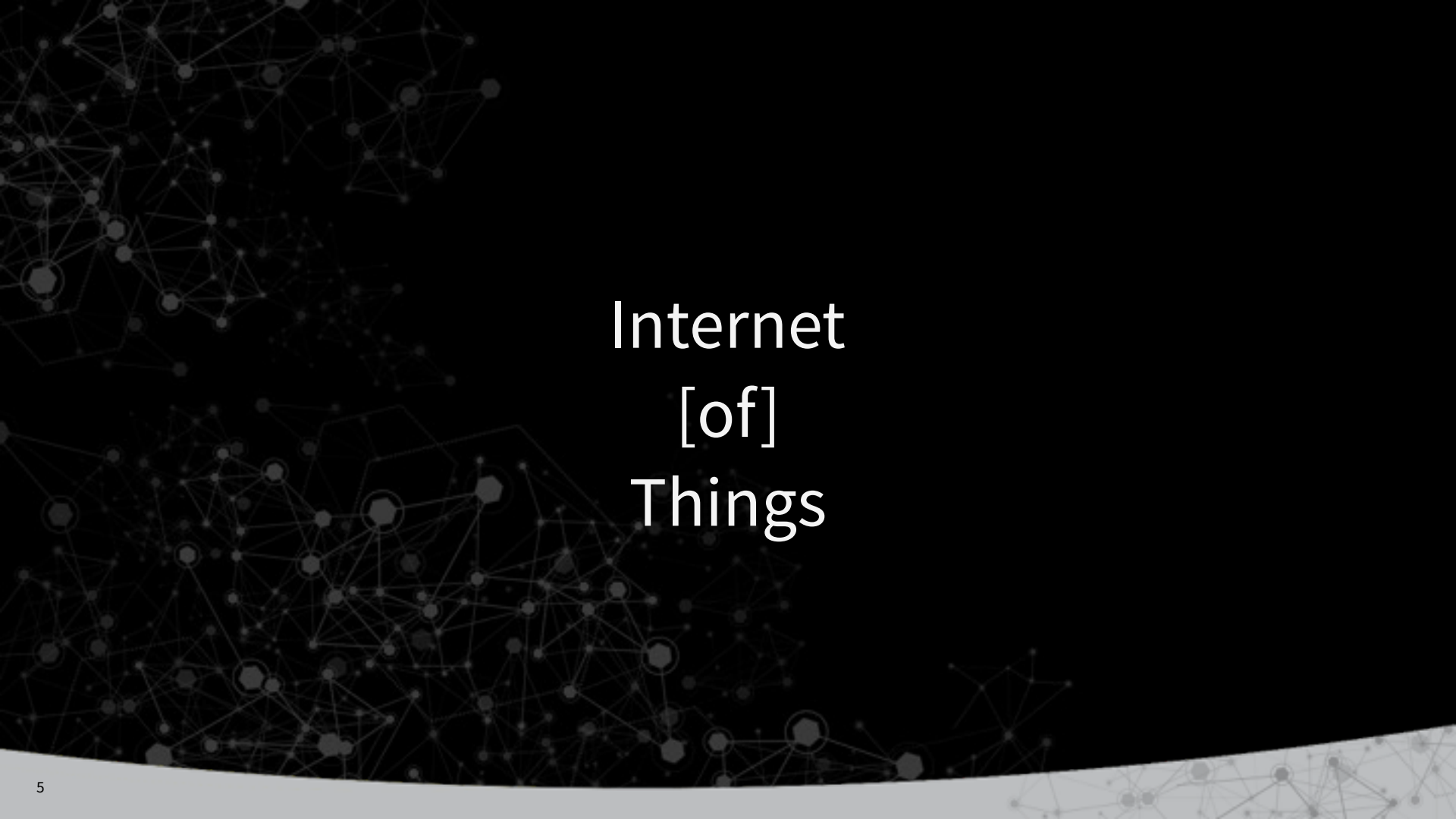




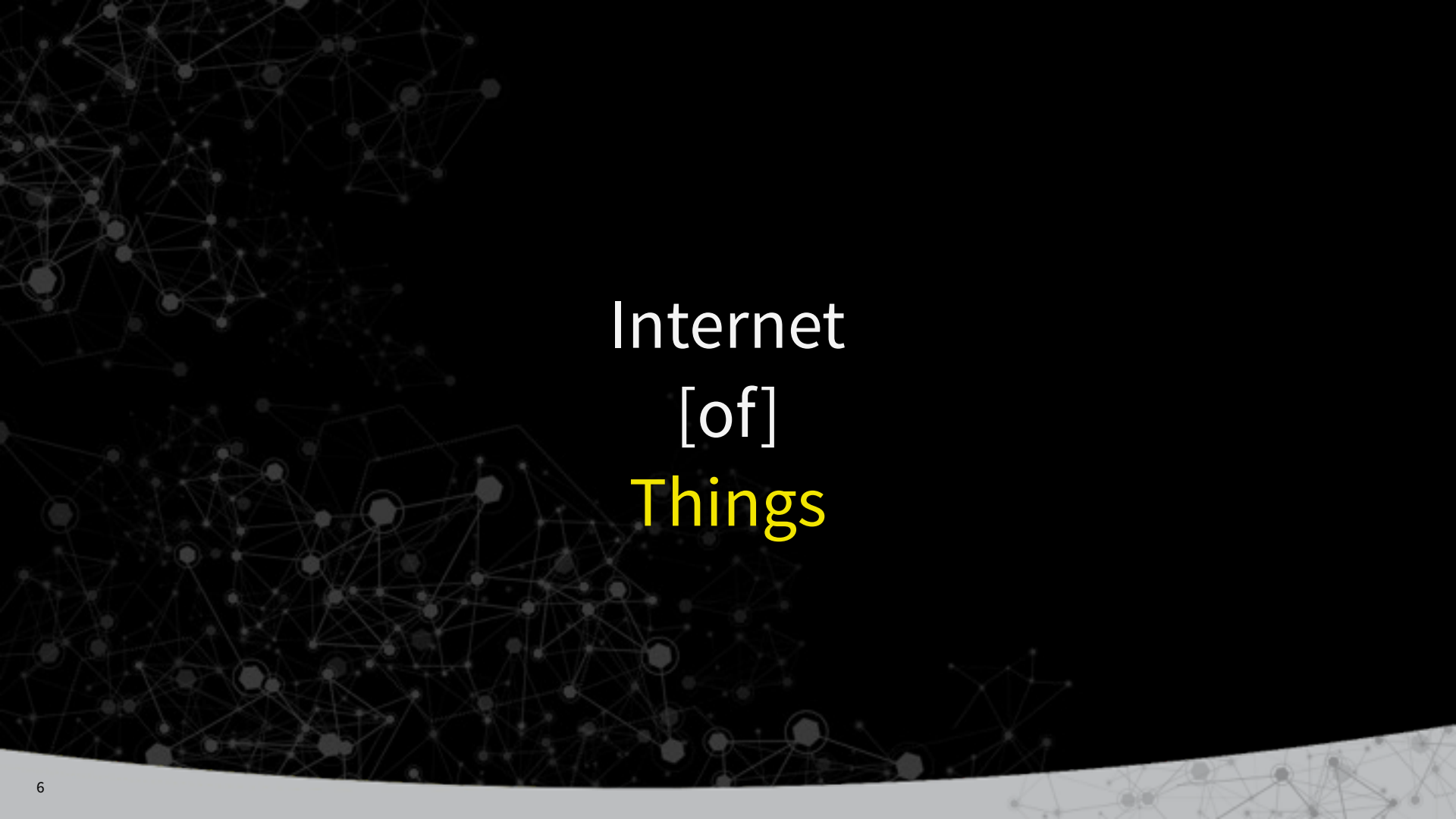
Values for architecture

Propriety: fits with nature or well-established rules or practices

Economy: proper management of materials and the site, *but also* suiting the building to its function

An abstract graphic representing a network or data structure. It consists of numerous small, light-gray circular nodes connected by thin, light-gray lines. The nodes are distributed across the slide, with a higher density in the top-left and bottom-left corners, and a sparser distribution towards the right. The overall shape of the network is irregular and organic, resembling a complex web or a molecular structure. The background is a solid dark gray, and the text is centered in the middle-right portion of the slide.

Internet [of] Things

The background of the slide is a dark, textured surface with a complex network of thin, light-gray lines and small dots, resembling a digital or molecular structure. The lines and dots are more densely packed on the left side and become sparser towards the right. The text is centered on the right side of the slide.

Internet [of] Things

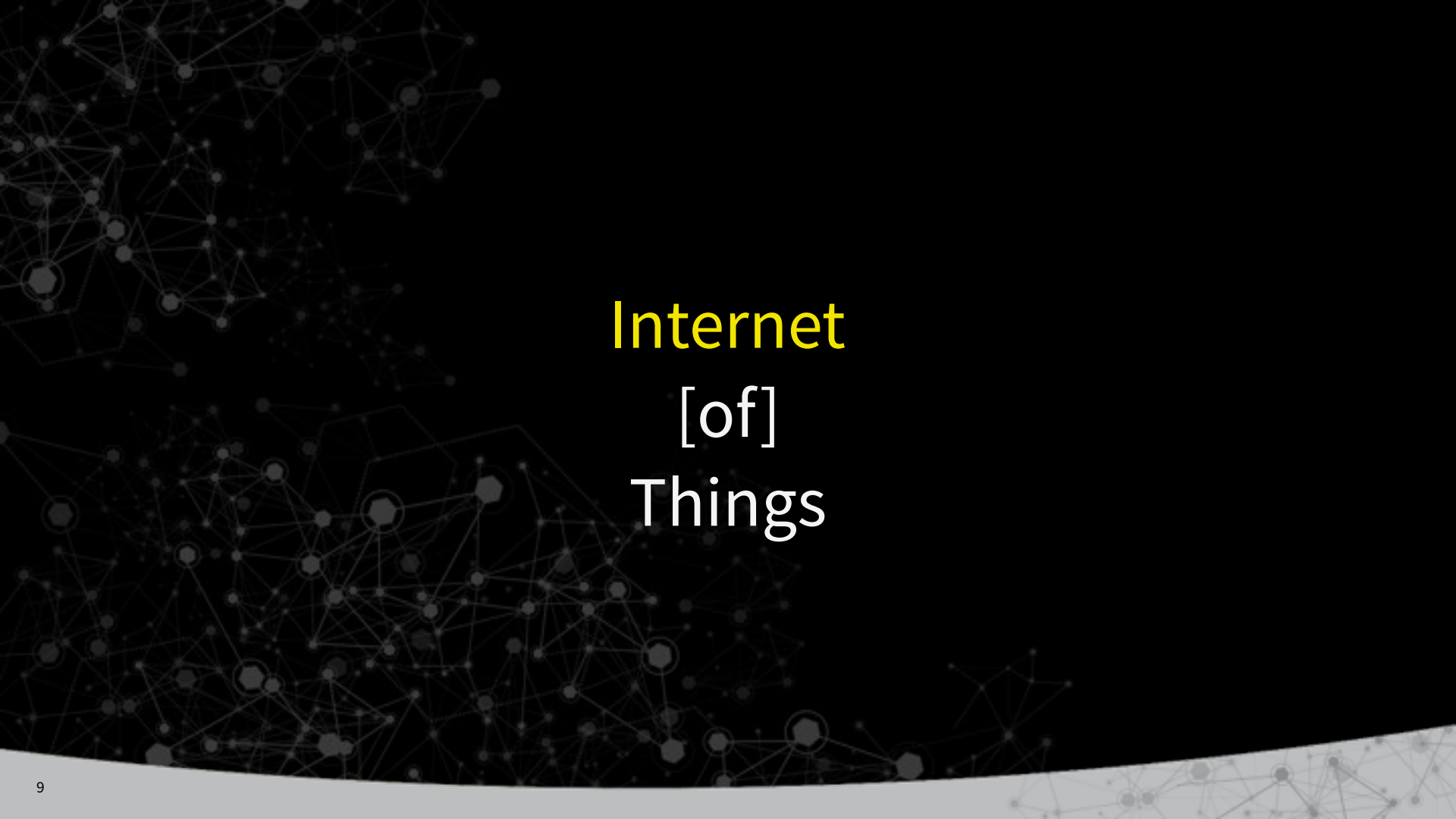
Things are just two

Actuators: change state in the world (cause action)

Sensors: detect state in the world (state-detectors)

Combine these and connect them to the Internet, and you have IoT.




The background of the slide is a dark, almost black, space filled with a complex, abstract network of thin, light gray lines. These lines connect numerous small, circular nodes of varying sizes. Some nodes are highlighted with a slightly darker gray or white outline, creating a sense of depth and focus within the network. The overall effect is reminiscent of a digital or biological network, such as a neural network or a data communication system. The network is denser on the left side and fades out towards the right.

Internet [of] Things

Bad incentives

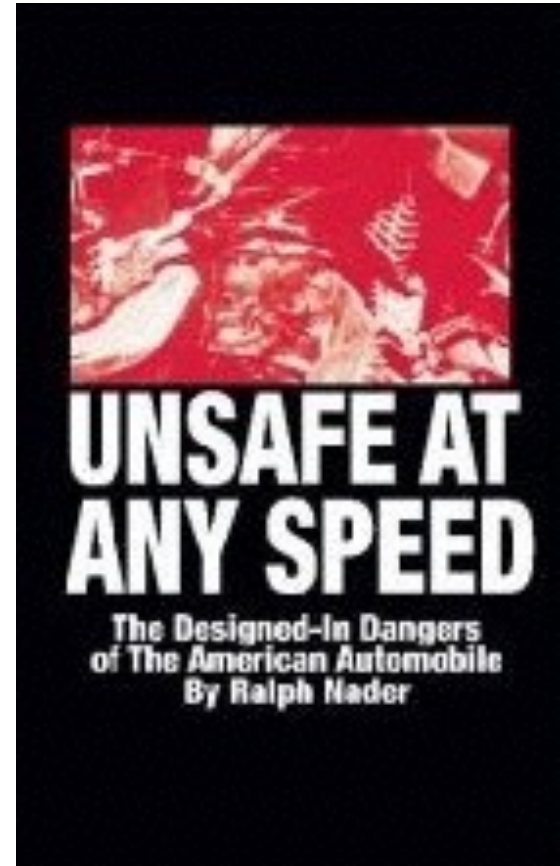
1. Incentives for security are backwards
Usability is harder
2. Pressure to ship == ship soon, secure later
3. More devices than people

The background of the slide is a dark, textured surface featuring a complex network of light gray lines and nodes. These nodes are represented by small circles of varying sizes, some of which are highlighted with a white glow. The network pattern is most dense on the left side and fades towards the right. A smooth, light gray curved line runs along the bottom edge of the slide, separating the dark background from the footer area.

Machine to machine
is not
human to service

The roots of the unsafe vehicle problem are so entrenched that the situation can be improved only by the forging of new instruments of citizen action.

—Ralph Nader in the Preface



Two principles to start

P1: Innovation will always build atop already-deployed systems

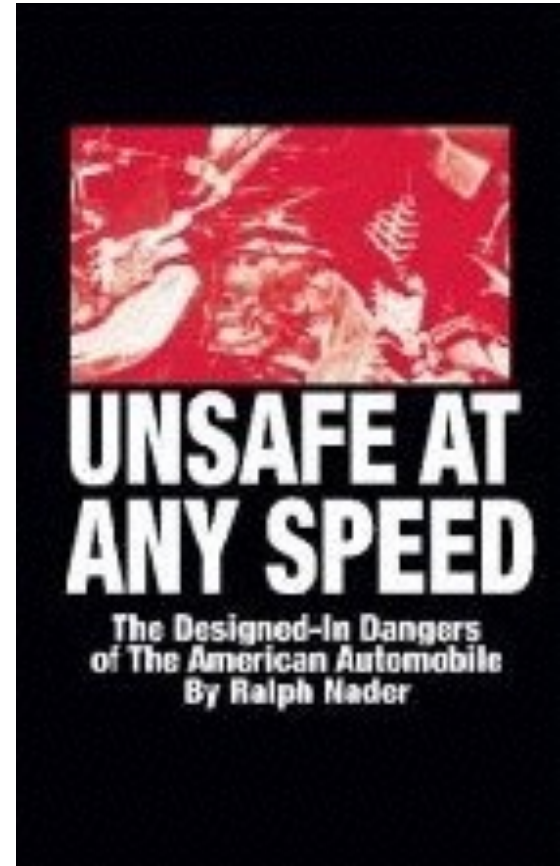
P2: The success of the web makes things deploy web-like (which means servers and some centralization)





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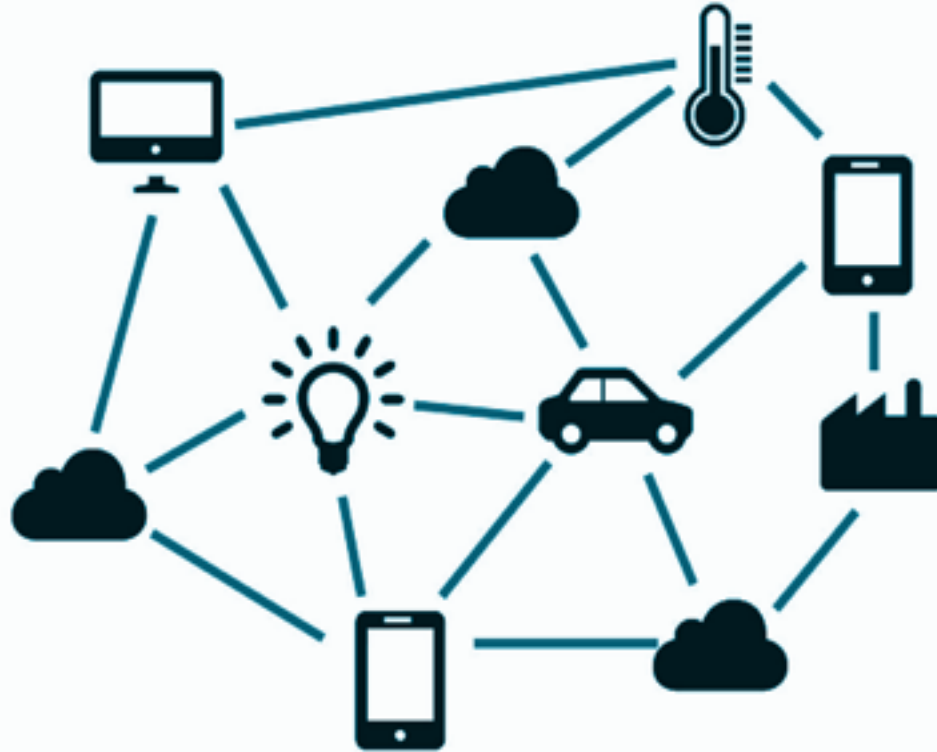
Two alternatives

A1: Large scale government regulation of ISP operations is inevitable, and just the cost of success.

A2: The parts of the Internet industry whose practices impinge most strongly directly on consumers will find a co-operative regime, without the need of direct regulation.



More connections == more critical







THANK YOU!



DynSM

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