Dotdot Unifies IoT Device Networks

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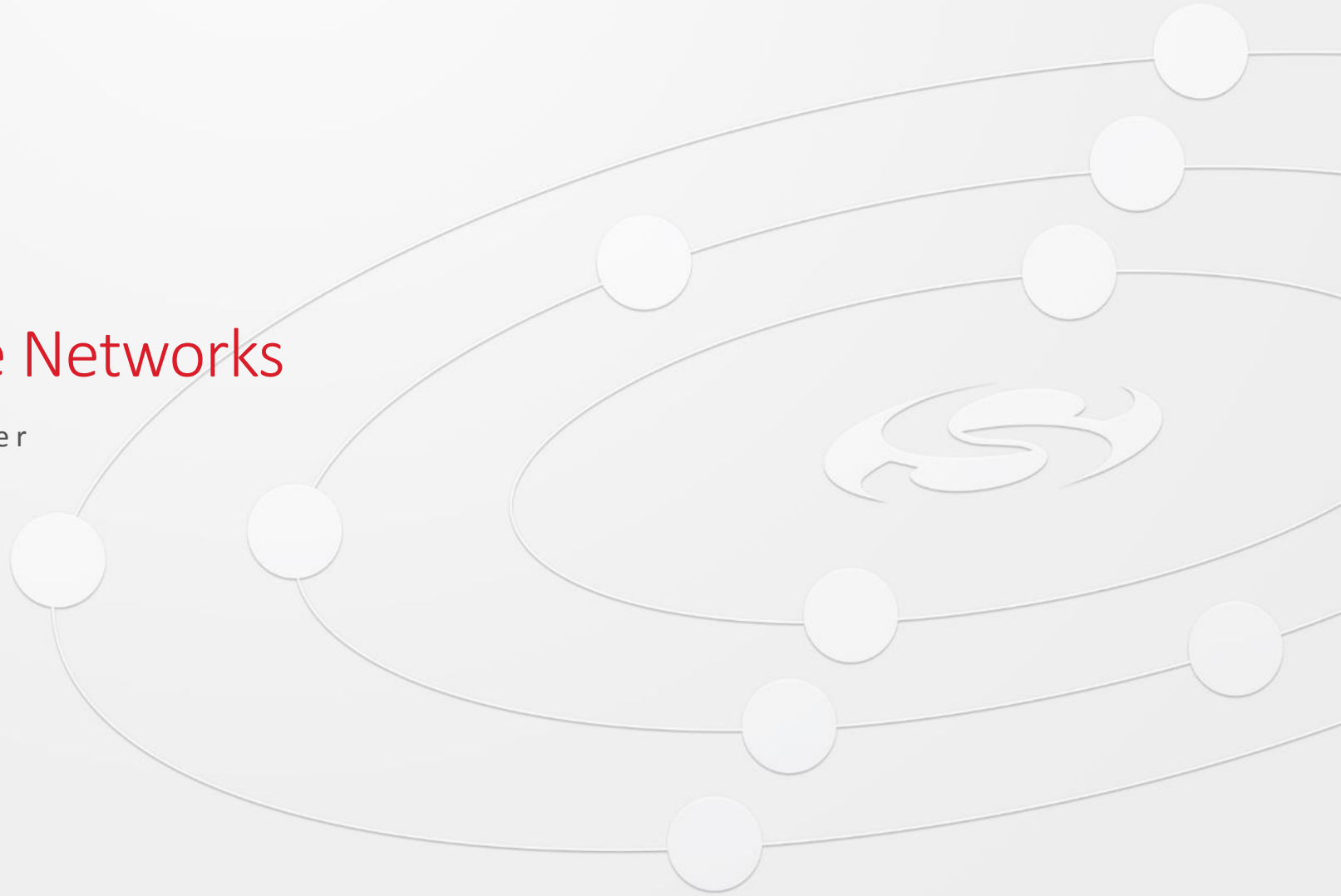


The IoT is happening!

Billions of devices from smart homes to smart cities and everything in between

Diverse applications driving varied connectivity needs

Bluetooth® zigbee WiFi® WIREPAS 5G sigfox

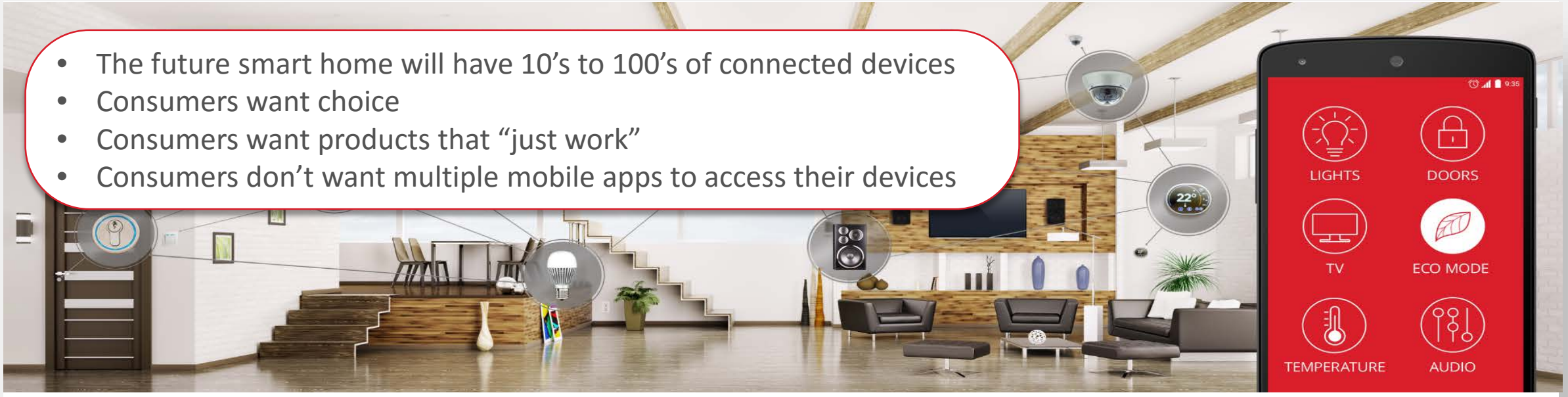
Z-WAVE® THREAD NB-IoT Lte™ Proprietary LoRa™

The Walled Gardens of IoT Networks

"The Internet of Things will weave a seamless tapestry of connected devices into your life. Except that it won't… if things keep going the way they are."

- Michael Dorazio, Concannon Business Consulting

The Connected Home



- The future smart home will have 10's to 100's of connected devices
- Consumers want choice
- Consumers want products that "just work"
- Consumers don't want multiple mobile apps to access their devices

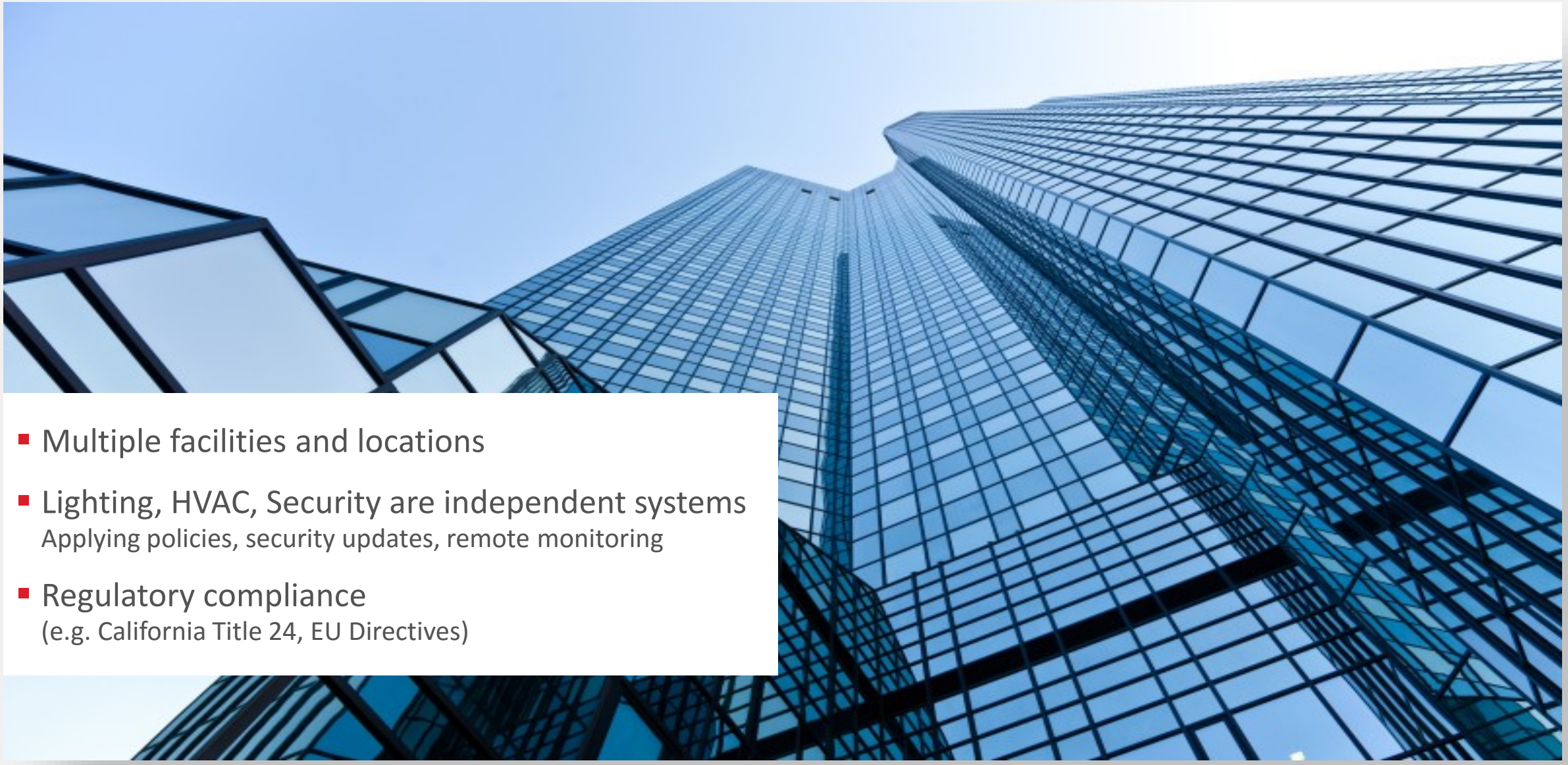
Works with Apple HomeKit

works with the Google Assistant

WORKS WITH amazon alexa

Works with SmartThings™

The Connected Building

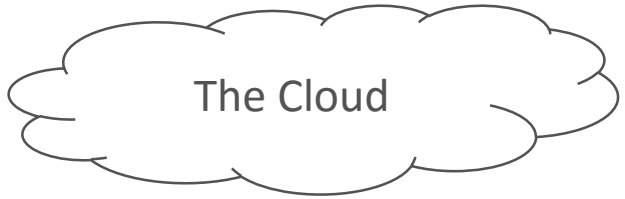


- Multiple facilities and locations
- Lighting, HVAC, Security are independent systems
  Applying policies, security updates, remote monitoring
- Regulatory compliance
  (e.g. California Title 24, EU Directives)

IoT devices need a common language

Multi-vendor, multi-protocol device interoperability is essential to unlock the full potential of the IoT

Where Should the Convergence Happen?



Application

Transport

Network

Data Link

Physical

The cloud is too high…

1) Latency
2) Reliability – devices need to keep working without the cloud
3) Complexity – maintaining a patchwork of API translations

Table 3-52. Attributes of the Level Control Server Cluster

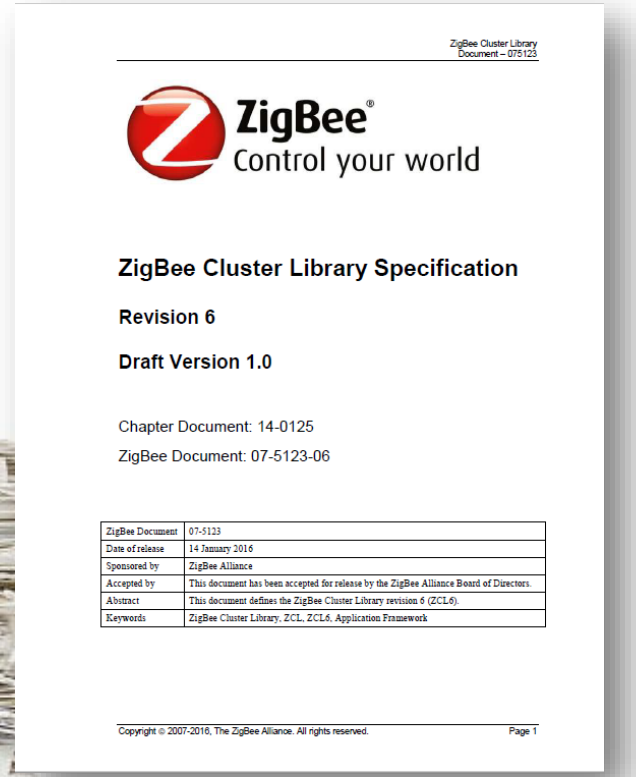
Identifier	Name	Type	Range	Access	Default	M/O
0x0000	*CurrentLevel*	uint8	0x00 – 0xfe	Read Only Reportable Scene	-	M
0x0001	*RemainingTime*	uint16	0x0000 – 0xffff	Read Only	0x0000	O
0x0010	*OnOffTransitionTime*	uint16	0x0000 – 0xffff	Read Write	0x0000	O
0x0011	*OnLevel*	uint8	0x01 – 0xff	Read Write	0xff	O
0x0012	*OnTransitionTime*	uint16	0x0000 – 0xfffe	Read Write	--	O
0x0013	*OffTransitionTime*	uint16	0x0000 – 0xfffe	Read Write	--	O
0x0014	*DefaultMoveRate*	uint16	0x00 – 0xFE	Read Write	--	O

Not possible since dictated by wireless protocols

Bluetooth · zigbee · Wi Fi · WIREPAS · 5G · Z-WAVE · THREAD · NB-IoT · Lte · Proprietary

Example: Zigbee Cluster Library (ZCL)

- 15 years of development and learning
- 400+ global and diverse companies
- 1,000 page specification
  - 100+ clusters
    - Functional building blocks (e.g. level control)
  - 100+ device types
    - Flow meter, occupancy sensor, thermostat, …
- 2,400+ certified products
- Over 300 Million products deployed



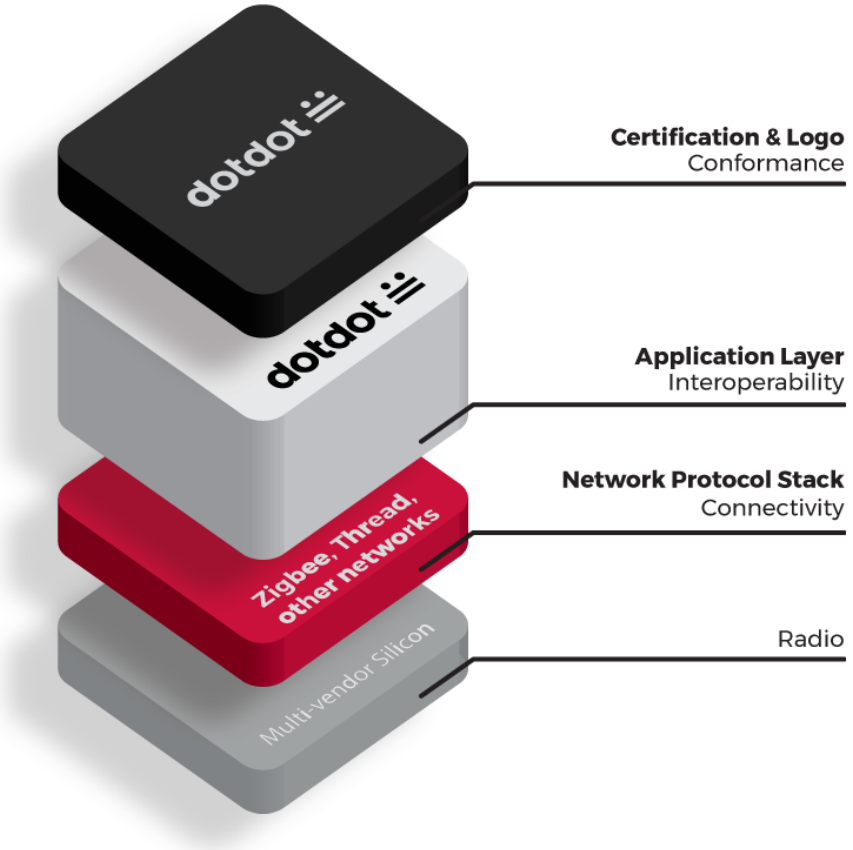
amazon · comcast xfinity · Deutsche Telekom · QIVICON · IKEA · Landis+Gyr · OSRAM · PHILIPS hue · SAMSUNG

Sounds great! …but isn’t the ZCL only supported on Zigbee?

dotdot by zigbee alliance

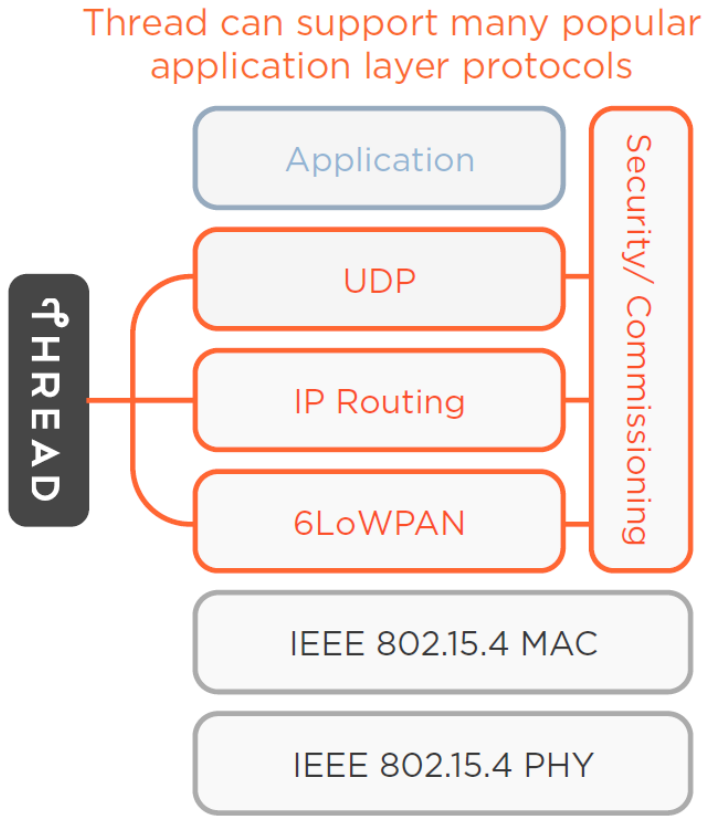
- "The universal language of the Internet of Things"
- A standard application layer for IoT devices to communicate with each other over any network
- Adaptation of the Zigbee Cluster Library to other networking protocols

- Open standard; collaboration with other standards bodies
- Certification program to ensure interoperability
- Consumer-friendly brand
- 1st implementation of dotdot is over Thread (IPv6 mesh)

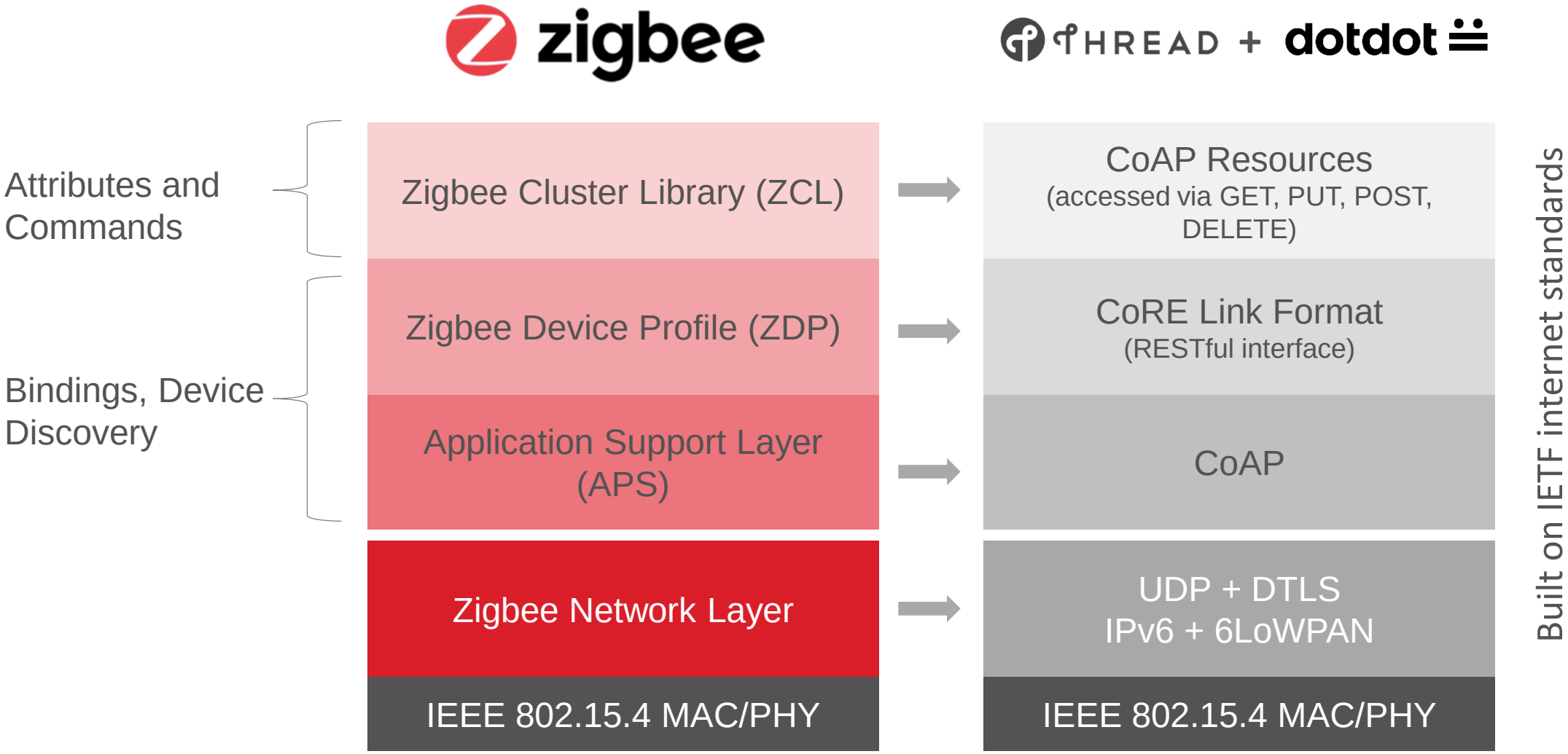


Thread Overview

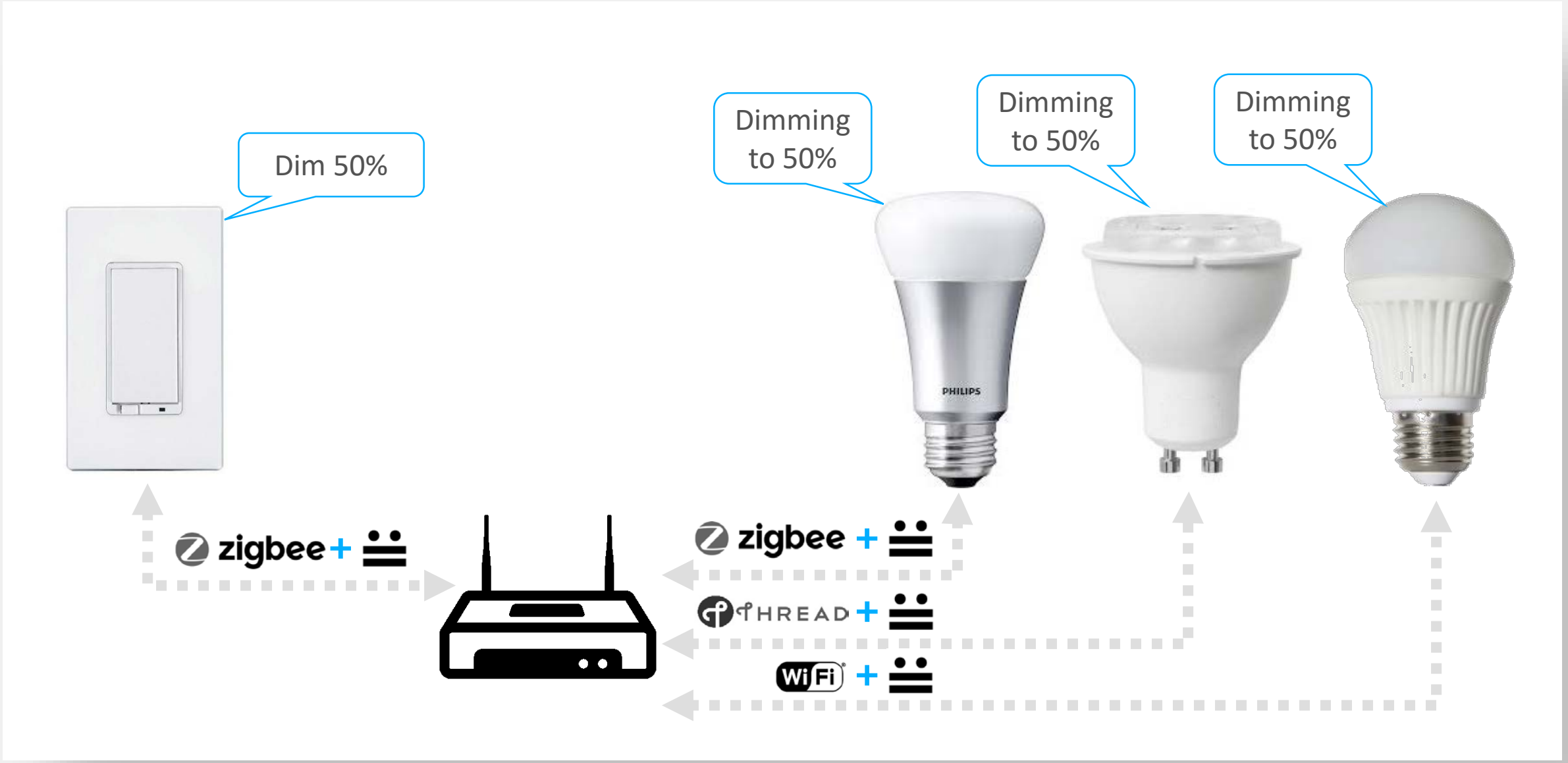
- IPv6-based, low-power, secure mesh networking protocol
- Built for the IoT – smart home, commercial buildings
- Intended for control and automation (250 kbps)
- Scalable to 250+ nodes per subnet
- Runs on existing 802.15.4 wireless SoCs



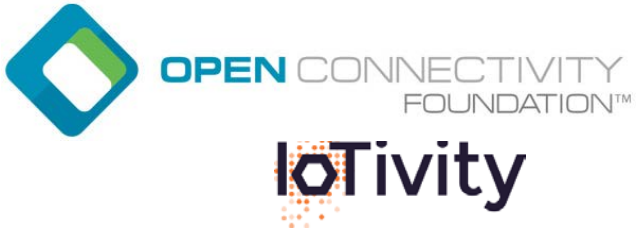
Mapping Zigbee to Thread + dotdot



End-to-End Example



Alternatives



- Other similar, new initiatives exist in the space
- Each have pros/cons and are ultimately trying to solve the same problem
- Dotdot leverages existing specifications enabling manufacturers to focus on core product development instead of defining a new language

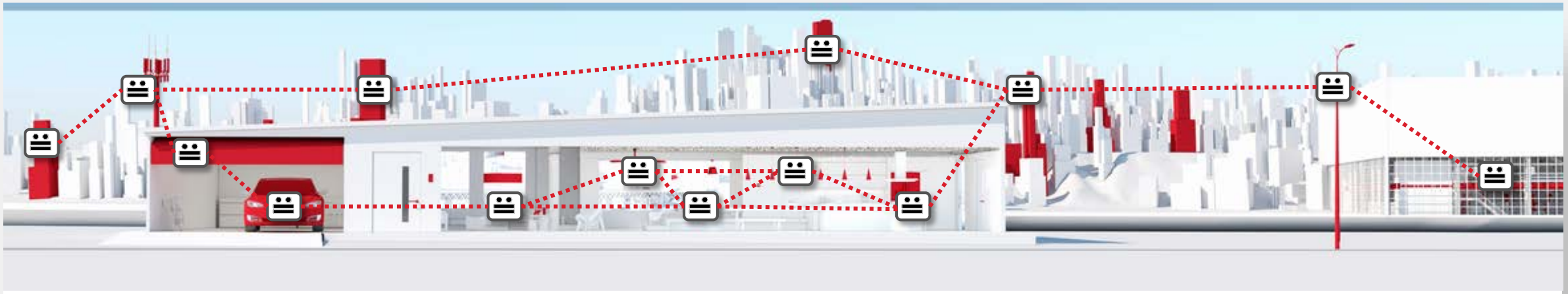
Current Status of dotdot

- Announced at CES 2017
- Specification in development with global test events scheduled
- 1st implementation: Thread + dotdot demonstrated at CES 2018
- Launch planned for Summer 2018
- To learn more…
  - Visit www.speakdotdot.com
  - Watch Thread + dotdot webinar
  - Get involved! Join Zigbee or Thread Group

dotdot Announced
Jan 2017

dotdot over Thread Spec Available and CES Demos
Jan 2018

dotdot over Thread Launch and Certifications
Summer 2018



dotdot

The universal language of the Internet of Things

SILICON LABS

A leader in silicon, software and tools for a smarter, more connected world.

Extensive multiprotocol wireless portfolio

Bluetooth® zigbee WiFi® THREAD Proprietary

Stop by our booth 4A-128 to check out the latest advances in IoT connectivity!

FOUNDED IN 1996

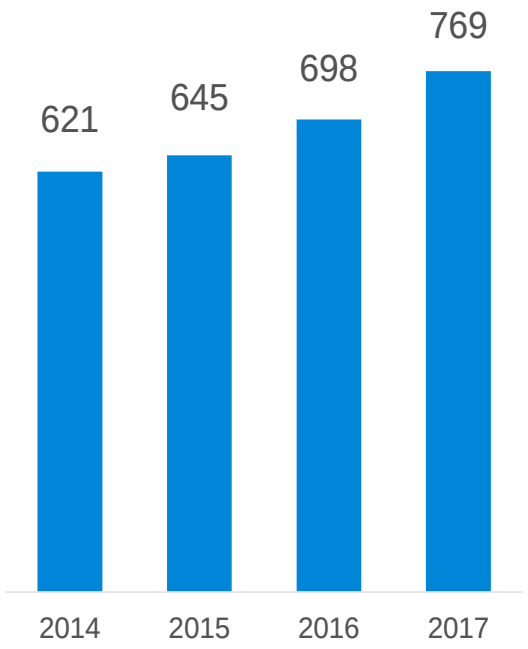
Nasdaq

LISTED SLAB

~35,000 CUSTOMERS

>1600 PATENTS

REVENUE ($M)



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Thank you.

Slides available for download:
www.silabs.com/EW2018