Q&A for Tech Talk Topic: Future-proofing for Connected Home over IP

Q: Will the presentation slides be available to download?
A: All of the previous Tech Talk presentations and videos are available at https://www.silabs.com/support/training

Q: Will Z-Wave be included as part of CHIP?
A: The Z-Wave Alliance has not announced any plans to participate in the Connected Home over IP project.

Q: Is there a timeline for when a draft spec for CHIP might be available?
A: The stated goal for the Working Group is to release a draft specification in late 2020.

Q: Is Dotdot going to disappear?
A: Dotdot will be one of the components contributing to the application layer definition for Connect Home over IP, but Dotdot as it is today will not likely continue.

Q: Does CHIP sit on top of Zigbee clusters or accommodates the clusters in some way?
A: The Project will leverage existing market-proven technologies, including the Dotdot data models, but it is not planned to sit atop Zigbee clusters.

Q: When will CHIP dev boards be available with added memory (flash and RAM) to support all PHY interfaces concurrently?
A: To be prepared for CHIP, we recommend starting today with our MG12 or MG21 development kits, using OpenThread. These parts should be able to support CHIP with a firmware update. See https://www.silabs.com/wireless/thread

Q: Apart from Series 2 which has substantial amount of RAM and flash , do you have any recommendations for memory constrained devices for CHIP specs.
A: The memory requirements for CHIP are still unknown, so our best advice for future-proofing a design today is to use the MG12 or MG21 which provide you with the maximum of 1MB of flash.

Q: What is recommended for farm monitoring applications, BLE or ZigBee or CHIP?
A: This is difficult to answer without more detail. You might find this whitepaper helpful: https://www.silabs.com/whitepapers/selecting-the-appropriate-wireless-mesh-network-technology.
Or you are welcome to contact your local Silicon Labs representative or visit www.silabs.com/support for discuss your use case further.

Q: How does Connected Home over IP differ from IEEE 1905.1?
A: IEEE 1905.1 runs on the top of PLC and it is mostly used for increasing the performance of home networks by leveraging the existing power line. Connected Home over IP focuses on IP connected IoT devices including sensors, lights, door locks, etc., many of which will be wireless. At this time, IEEE 1905.1 is not part of the Connected Home over IP project.

Q: Will it also use the Weave data model apart from the Dotdot data model ?
A: The Project will leverage work from a variety of existing systems, including Google's Weave and Zigbee's Dotdot.

Q: Does the “Connected Home Over IP” use Zigbee? Based on the diagram I saw in the slides, looks like for IEEE 802.15.4, it will use OpenThread instead of Zigbee.
A: Currently Zigbee Pro is not part of the Connected Home Over IP project. We are recommending starting with either Zigbee or OpenThread because both of these two protocols are built on top of 802.15.4 and your products could be over-the-air upgraded in the future to support Connected Home Over IP project which will be using OpenThread.

Q: Where can I find the upcoming Tech Talks?
A: The upcoming Tech Talk events and a registration page is here: https://www.silabs.com/about-us/events/tech-talks

Q: When you refer to Bluetooth LE as part of CHIP, does this include AoA/ToF etc. or 5.1 and 5.2 features?
A: It is still too early to comment on what BLE features will be available on Connected Home Over IP. The Connected Home over IP Working Group within the Zigbee Alliance is the best resource to find answers to this question.

Q: Will the MG21 be able to transmit at +20dBm using the internal DC/DC? With Series 1, when using the internal DC/DC, transmit is limited to +13dBm.
A: The MG21 supports Tx power up to +20dBm, but it does not have an internal DC/DC.

Q: Does the MG21 or MG22 support proprietary sub-GHz communication protocols?
A: No, those devices are 2.4GHz only, however the MG12 can support sub-GHz (or dual-band).

Q: If something is installed in a home, and working, what use cases would you want to send an update to change a device from Thread->CHIP or Zigbee->CHIP
A: The intent of the Connected Home over IP project is to create a protocol that is compatible across the multiple ecosystems. A customer may want to upgrade if they see the value in controlling their devices from different ecosystems they may already have in the home.

Q: Do you have any options for me to upgrade from EFR32MG1Pxx?
A: For CHIP future-proofing we'd recommend to use EFR32MG12 (larger memory). If you are using 48 pin package, there is a pin-compatible version.

Q: What is the difference between Dotdot and CHIP, looks like both are trying to solve the same challenge.
A: Project Connected Home over IP is reusing components from the Zigbee Alliance and other technologies, so in a sense you can look at this project being an evolution of the Dotdot application layer.

Q: Does Home IP here mean each device at home has its IP address to communicate to each other?
A: That is correct, each device is IPv6 addressable.

Q: Bluetooth LE has both network security and application security key assignment. Does Zigbee have a similar structure on its specs ? Sometimes with Zigbee lighting, one manufacturer's gateway does not always work with another's Zigbee light bulb.
A: Zigbee 3.0 has a Network Key and also a link Key, which is a key established between the Trust Center and the End Device. So you do have the ability to encrypt the payload within devices in the same network. You highlight one of the drivers behind Connected Home over IP - to unify the application layer between vendors.

Q: Will there be any talks about Simplicity Studio and possibly hands-on seminars?
A: Yes, we highly recommend you sign up for the BG22 virtual workshop here: https://www.silabs.com/about-us/events/virtual-bluetooth-workshop
This is a free webinar that is hands on, you get a free BG22 development board, and the labs will be done in Simplicity Studio.

Q: What practical areas could this be used in within a industry model?
A: The initial target for Project Connected Home over IP is the smart home, but it's reasonable to expect the same model could be extended to industrial applications, much like other protocols have done so in the past.

Q: Will CHIP support other protocols like BLE and Wi-Fi?
A: Yes. Refer to slide 7 in the presentation where it shows multiple Physical layers which are initially planned to be supported, including both Wi-Fi and IPv6 over BLE.

Q: You only mentioned BLE. Is Classic moving away entirely?
A: We do not think Bluetooth classic is going away in the near term, but a lot of new Bluetooth features are implemented on top of Bluetooth LE.

Q: Are Z-wave and Zigbee going to compete or work together in a unified network?
A: Z-Wave and Zigbee are the two dominant standards in today's smart home. While they overlap in many areas, we see them as complementary because they use different frequency bands and the end customer will choose a smart home product based on which ecosystem they already use.