

Talking to Amazon Alexa using nRF Connect SDK

Nordic Tech Webinar

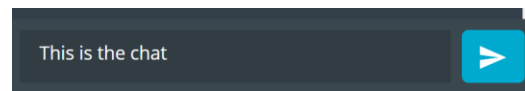
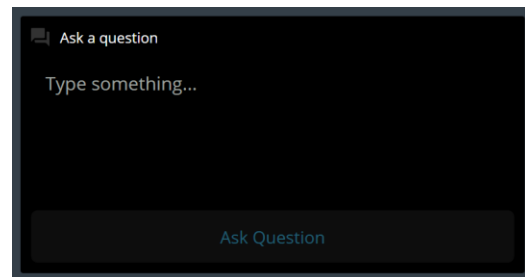
Audun Korneliussen / Senior R&D Engineer

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Practicalities

- Duration: about 60 minutes
- Questions are encouraged!
 - Please type questions in the top of the right sidebar
 - All questions are anonymous
 - Try to keep them relevant to the topic
 - We will answer towards the end
- The chat is not anonymous, and do not use for questions
- Go to DevZone if you have more questions
- A recording of the webinar will be available together with the presentation at webinars.nordicsemi.com



Agenda

- What is Alexa Gadgets?
- How gadgets interact with Alexa
- Which features are supported?
- How to set up the Alexa Gadgets sample in the nRF Connect SDK
- How to build on the sample and add more features
- Questions and answers

What is Alexa Gadgets

- Toolkit for connecting a Bluetooth Low Energy device to an Alexa device.
- The connected Bluetooth LE device, the “Gadget”, automatically gets notified of various Alexa events, such as real-time speech data, reminders, current time, and more.
- This information can be used to create products such as toys, wall clocks, and fun gadgets



How gadgets interact with Alexa

- Alexa Gadgets Toolkit docs describes the required steps to connect a Gadget:
 - Advertising format
 - Alexa Gadgets GATT Service
 - Pairing method (LE Secure Connections)
 - Handshake with Alexa
- Describes the format of data sent over the established connection

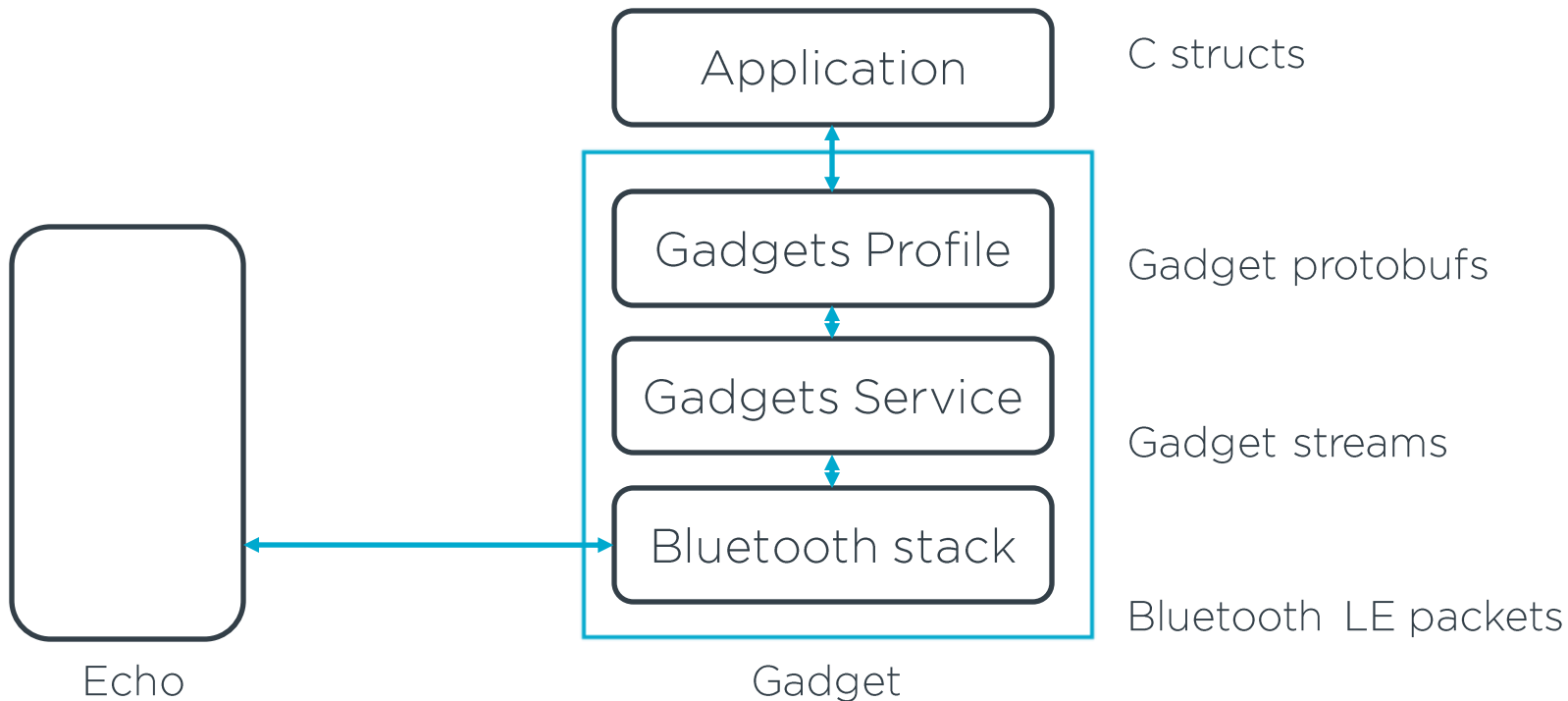
How gadgets interact with Alexa, cont'd

- Alexa terminology for data exchange:
 - Directives: commands/requests sent from Alexa (Echo device) to Gadget
 - Events: reply sent from Gadget, typically in response to a Directive
- Directives and Events are described in Protocol Buffer (protobuf) format.
- Protobuf is a method of serialization of structured data.
- To use the nRF Connect SDK Alexa Gadget sample one has to download a protobuf tool, but nRF Connect handles the rest.

How gadgets interact with Alexa, cont'd

- Data flow illustrated on Alexa Gadgets developer pages:
<https://developer.amazon.com/en-US/docs/alexa/alexa-gadgets-toolkit/understand-alexa-gadgets-toolkit.html>

How gadgets interact with Alexa, cont'd



Which features are supported

- Speechmark data
- Notifications
- Timers, alarms, and reminders
- Wake word detection
- Current time
- Tempo data of songs from Amazon Music
- Custom Interface

- OTA not yet supported

How to set up the sample in NCS

- Demo!

How to build on the sample and add features

- Demo!

Q&A

Program for Embedded World 2021

Date	Topic
March 1, 10-11 CET	The Magic Vikings from the North
March 1, 14-15 CET	Introduction to radio technology
March 2, 10-11 CET	The nRF9160 SiP and its location tracking options and possibilities
March 2, 14-15 CET	Embedded ML - Demo Decadence!
March 3, 10-11 CET	Talking to Amazon Alexa using nRF Connect SDK - EMEA/APAC
March 3, 14-15 CET	Talking to Amazon Alexa using nRF Connect SDK - EMEA/Americas
March 4, 10-11 CET	Power profiling applications in real life
March 4, 14-15 CET	Understand the nRF Connect SDK

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