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Welcome to **STM32WB0 series** **workshop**

Introduction and agenda
Start at 9 am CET

Workshop team



Team Introduction

FAE



Sebastien Denoual - ST Rennes

SW Application Engineer Wireless microcontrollers

With 20 years of experience in wireless connectivity and multimedia applications in embedded systems, Sebastien is supporting customers who are developing software applications based on Bluetooth® Low Energy technology.



Dominique Follezour - ST Rennes

SW Application Engineer Wireless microcontrollers

With over 20 years of experience in wireless communication systems, including 2G/3G cellular, Bluetooth, and Wi-Fi, Dominique is supporting customers who are developing software applications based on Bluetooth® Low Energy technology



Laurent Louazon - ST Rennes

HW Application Engineer Wireless microcontrollers

With over 25 years of experience in wireless communication systems, including 2G/3G/4G, Bluetooth, and Wi-Fi, Laurent Louazon is supporting customers who are developing hardware applications based on 2.4Ghz technology

Team Introduction

Marketing



Yvon RANNOU – ST Munich

With more than 20 years of experience in embedded processing and communication systems including MCUs, MPUs, sub-GHz, and 2.4 GHz connectivity, Yvon is a valued member of ST's wireless marketing team. He focuses on business development in EMEA supporting all ST wireless technologies.



Purpose of the workshop

- Highlights **STM32 portfolio for Bluetooth® Low Energy** technology, introduce STM32WB0 family ideal for cost- and energy-sensitive wireless applications
- Learn **Bluetooth® Low Energy basics** and associated STM32WB0 BLE 5.4 features.
- Demonstrate ease of use, how to evaluate and prototype an application using **STM32 wireless ecosystem**



Agenda (9:00 – 12:00)

1

5 min

Session introduction & agenda

2

30 min

Introduction of STM32WB0 series

3

20 min

Basic Beacon application
BLE Beacon concept & build



4

30 min

P2P server application
BLE profile concept & build



5

15 min

10:30 Break

6

20 min

STM32WB0 extended feature
Play with PAwR



7

15 min

BLE add on
X-NUCLEO-WB05KN1 over Zephyr



8

20 min

Test and optimize RF perf
Prepare certification



9

15 min

Takeaways, Q&A

1 Basic beacon

2 Create BLE Profile

3 PAwR Advanced feature

4 BLE Add On

5 Test your RF design



Demo



Hardware Tools

3
20 min

“Click & Go” Beacon application
BLE Beacon concept & build



NUCLEO-WB05KZ



USB to USB C



ST BLE Toolbox App



4
30 min

P2P server application
BLE profile concept & build



NUCLEO-WB09KE



USB to USB C



ST BLE Toolbox App



5
15 min

STM32WB0 extended feature
Play with PAwR

8
20 min

Test and optimize RF perf
Prepare certification



Hardware Tools

7
30 min

BLE add on
X-NUCLEO-WB05KN1 over Zephyr



X-NUCLEO-WB05KN1

+



NUCLEO-U5A5ZJ-Q

**Network
Processor**

BLE stack

**CPU
Host**

Application
BLE Application



USB to Micro-B Cable



ST BLE Toolbox App





Workshop Package

- STM32CubeIDE 1.16.0 or later

<https://www.st.com/en/development-tools/stm32cubeide.html>

- STM32CubeWB0 1.0.0 or later

<https://www.st.com/en/embedded-software/stm32cubewb0.html>

- STM32CubeMonRF 2.15.0 or later

<https://www.st.com/en/development-tools/stm32cubemonrf.html>

- Zephyr setup for  BLE add on
X-NUCLEO-WB05KN1 over Zephyr

https://docs.zephyrproject.org/latest/develop/getting_started/index.html



Payoff of the workshop

- Have better understanding of Bluetooth® Low Energy for STM32 wireless
- Learn key basics **Bluetooth® Low Energy** concepts
- Know where and **how to evaluate with STM32WB0 series**
- Get answer(s) to any other question(s) talking directly with STM32 wireless experts

Remote flow and rules

Remote workshop Rules

- If not speaking **please make sure to be muted** (we'll mute all in beginning).
- **Use CHAT window** of the Teams meeting to ask questions or highlight a problem during all the chapters and hands-on exercises.
 - Please mention slide number in case the question is related to specific slide.
 - Questions will be answered by facilitators in written form inside the CHAT window directly in real time.
 - Specific questions will be read by the facilitator at the end of each chapter and answered in spoken way by all the facilitators.
- In case of more complex issues private CHAT session can be started.
- If needed to share screen or have dedicated audio exchange, we will enable it at hands-on session check points or during the break.

LET'S START!!!



Find out more at [STM32 Wireless Microcontrollers](#)

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