DECT EVOLUTION TO DECT NR+

MAY 24

SIJI LI

RENESAS ELECTRONICS CORPORATION

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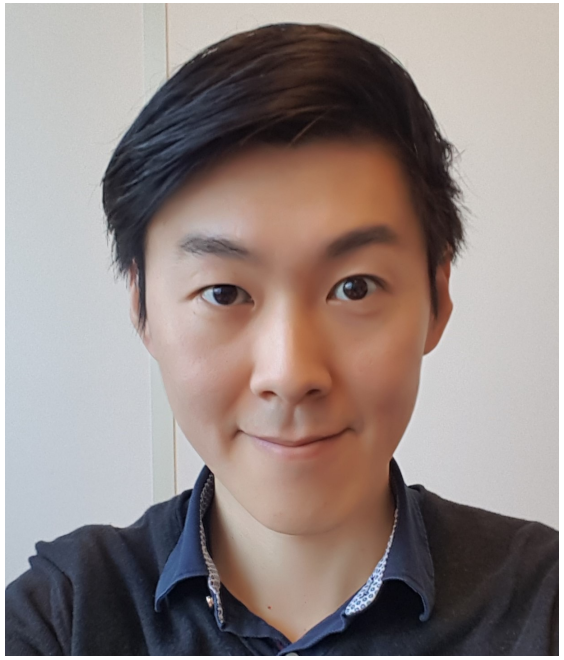
INTRODUCTION

- Siji Li
- Product marketing manager BU A&V since Jan 2020
- In charge of DECT modules, general purpose codecs
- Located at Den Bosch, The Netherlands



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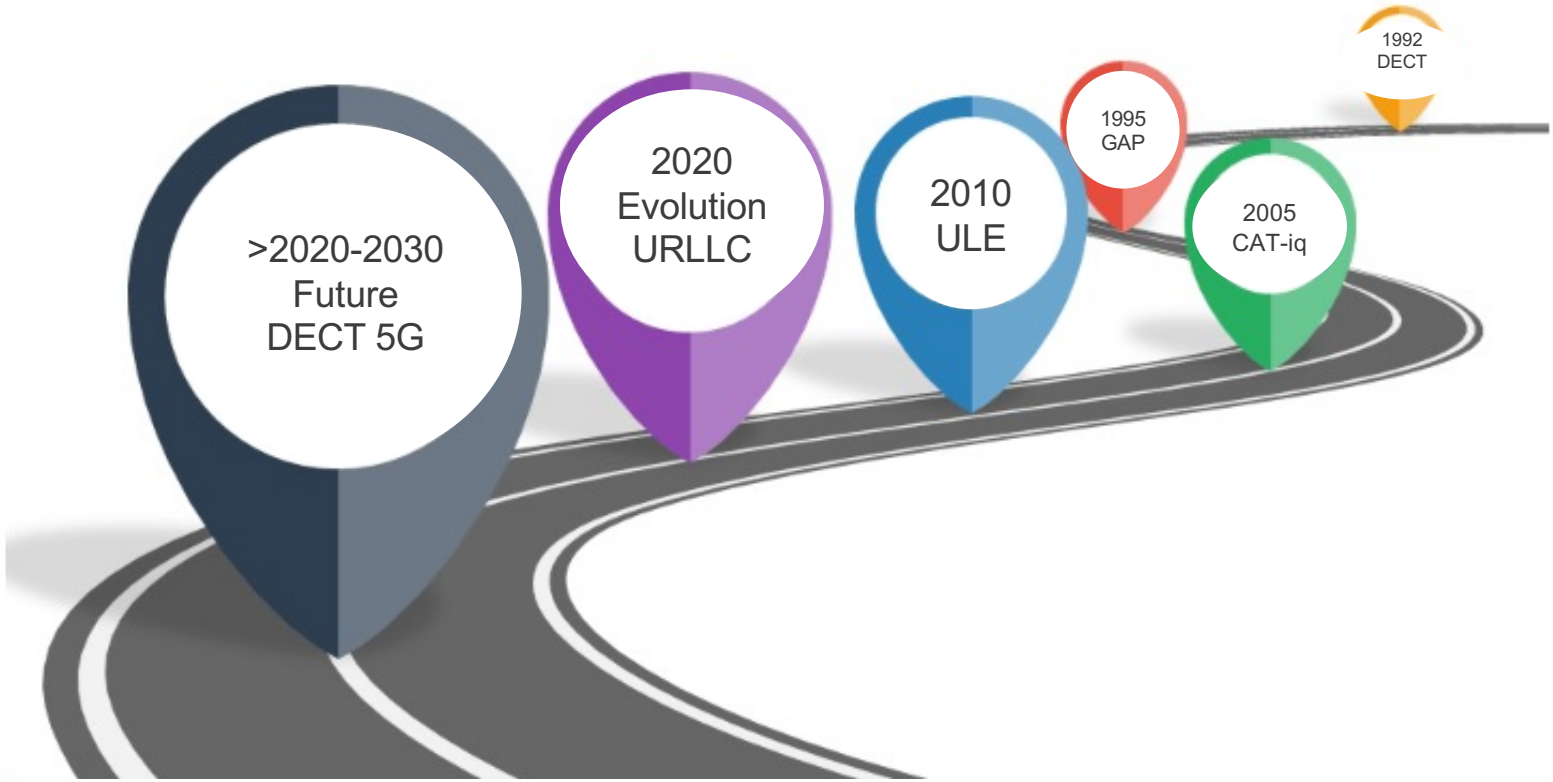
DECT EVOLUTION
STEADY PACE OF INNOVATIONS



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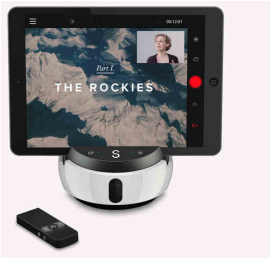
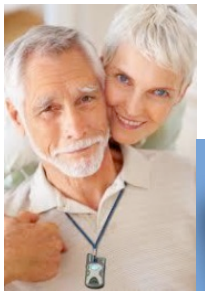
DECT APPLICATION EVOLUTION

CORDLESS PHONES & ENTERPRISE TOWARDS A LARGE VARIETY OF APPLICATIONS





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SOLUTIONS TO MAKE MARKETS MEET

Telephony

Telephony is the largest market for DECT technology today, focusing on HDvoice handsets and Gateway integration. The CAT-iq certification guarantees the interoperability and highest quality of service.

Enterprise

This non-residential enterprise market is growing fast, driven by the change to Unified Communications and increased use of headsets & accessories. The DECT standard is the best wireless standard for high density networks, QoS and mission critical solutions in the enterprise environment.

Smart Home

Identified with low power consumption, low latency, long range, moderate data rate and value-added complementary voice capabilities, ULE is the best-of-class technology for in-home networking.
It addresses Ultra-Low Energy application requirements by introducing optimized and ETSI standardized communication methods.

Pro-audio

For the audio market the DECT solutions provide real-time communication with full-duplex audio and exceptional speech clarity. DECT is an optimized wireless technology to solve communication challenges in the pro audio industries and operates in a license and interference free band.

Industrial IoT

Industrial automation is a very challenging application field for a wireless protocol. There is often specific needs like human machine interfaces and real-time machine control, which are mission critical and just have to get through on time. DECT is perfect for Integrated systems, Low latency control and Voice Data Integration.

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DIALOG/RENESAS DECT MODULE PORTFOLIO

DECT New Generation
TS 102 527

Cat-iq HD voice
Broadband Network
Multiline

ULE
HANFUN

SC1444x

SC14CVMDECT
SC14WAMDECT

Embedded DECT
Protocol stack
Fully tested module
Type approved

DECT Evolution
Low latency, LC3
EN 300 175-1

URLLC
Density*3
LC3 Codec

DA14495

DA14AVDDECT

Embedded ‘495/7218
Protocol stack
Fully tested module
Type approved

Applications

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DECT TECHNOLOGY ROADMAP

DECT 5G/ DECT NR+

- Approved by ETSI and IMT2020 October 2021
- New radio standard 1.9GHz using OFDM modulation radio
- The new DECT ETSI standard is now ITU-R approved as a new 5G technology standard
    - New standard is not a migration but additional in the spectrum offering higher spectrum efficiency for future
    - Next step is harmonization simulations with current DECT standards and get CEPT approval

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DECT 5G/2020 NR+ INVESTIGATION

BENEFITS AND TARGET

- High density
- Non-Cellular 5G standard
  - Decentralized device based local private mesh network
- Fulfill massive machine type communication and ultra-reliable low latency
- Low transmission power
- Interference free
- Long distance – up to 2km
- Cost effective

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CONCLUSION

- Renesas always follows the latest DECT technology evolution and will come with best performance leading products
- We believe in the high potential DECT will bring, with its high reliability connection with large range and fixed low latency
- DECT evolution to DECT NR+ will create many more new possibilities on varieties of use cases

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Q&A

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