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Workshop DECT NR+

nr+

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Agenda for the session:

13:30-14:00	Introduction (Roel) • Why run a workshop • Short history of DECT-2020 • The way ahead
14:00-14:45	Presentations on the current standard • What is the standard (Kristian – Nordic Semi) • IoT use case perspective (Jussi - Wirepas)
14:45-15:00	Break
15:00-16:00	Workshops ‘exploring applications and use cases’ • One workshop team for each ‘petal of the flower’
16:00-17:00	Panel discussion on workshop findings

History of DECT-2020 / NR+

From the ETSI archives:

- First mention of DECT-2020 in 2017
- Responding to ITU WP5D's work on IMT-2020
- Two of the cornerstones of IMT-2020, URLLC and mMTC, were mentioned and use cases for these identified
- DSPG and RTX involved early on
- Wirepas became involved in 2018
- Past few years standardization has focused on IoT and included Mesh topologies (but other topologies are still supported)
- From the start the standard aimed to embrace all the application areas of (classic) DECT as well

DECT-2020 roadmap ideas for discussion

2020	2021	2022 and onwards

Service profiles

- ULE profile
- Telephony / intercom profile
- Media streaming profile
- Metering profile
- Industrial control profile release 1
- Location / inventory tracking profile

Certification

- RED Release 1 essentail requirements

Harmonized std for essential 3.2 reqs.

- RED Release 2 essentail requirements covering multi antenna support

T specif Relea

Radio system standards

- End2End security
- Multi-cell operation Star mobility
- …

Network layer release 1

Convergence Release 1

DLC Release 1

- Legacy co-existence
- Single channel operation
- Modulation and coding schemes
- HARQ support
- Measurements
- SISO
- Security architecture
- Mesh support
- …

MAC Release 1

PHY layer release 1

Radio performance release 1

RX
- Sensitivity, adjacent channel selectivity, out of band blocking and spurious response

TX
- Maximum TX power,Power control dynamic range and accuracy Adjacent channel leakage ratio, modulation accurcy

Polite spectrum access requirements

Network layer release 2

Convergence Release 2

DLC Release 2

MAC release 2

PHY release 2

Radio performance release 2

- 3GPP-Inter
- Location
- Additional
- Higher mo
- >1Gbps
- …

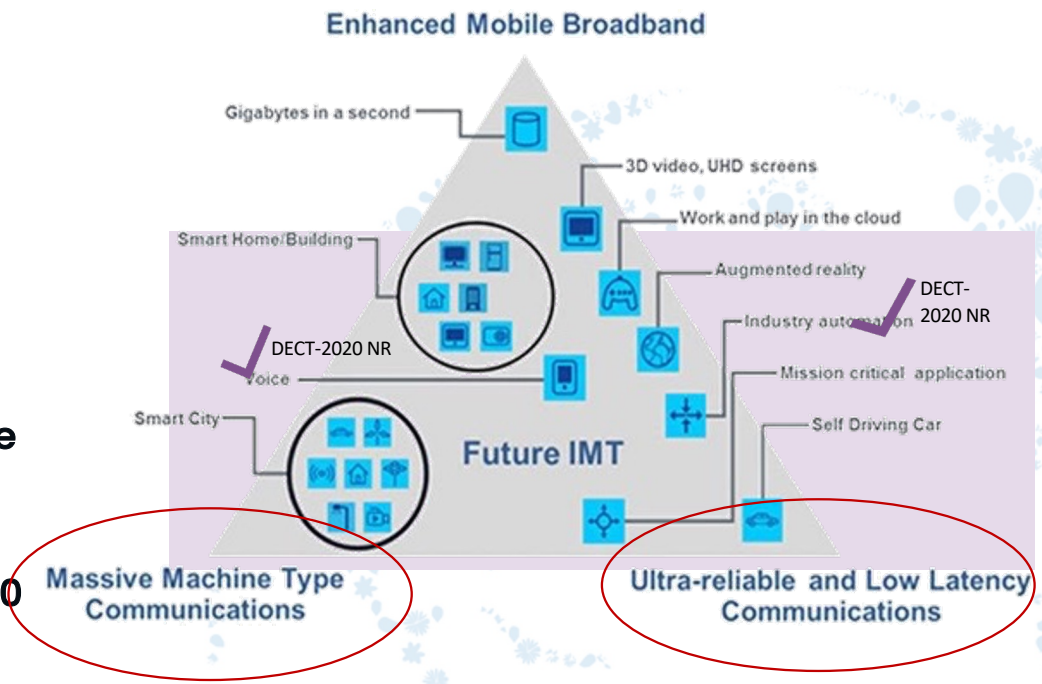
- MIMO ope
- Multi Chan
- Enhanced MAC for MIMO
- Measurements
- …

PHY and lower MAC release 3

Radio performance release 3

DECT-2020 NR design objectives

- DECT-2020 NR design objective has been to create a wireless communication technology which can be deployed by anyone, be operated by anybody, and used anywhere. Its operation must be simple, autonomous and able to co-exist with other local networks in the same area sharing the spectrum. Technology is easy to introduce into new frequency bands.
- It should be **application agnostic** enabling rapid adoption of different use cases and fostering digitalization. It should focus on **ultra-reliable low latency communication** and **massive scale machine communication** networks **exploiting mesh** communication.
- **ITU-R adopted DECT-2020 NR as part of the IMT-2020 family, also known as 5G. ITU-R technology recommendation M.2510-1**



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DECT NR+

Purposes with the workshop:

- Obtain information about the (current state of the) standard
- Engage conference delegates to explore opportunities with the new standard
- Start some creative thinking about features and applications that have not been possible to address with classic DECT
- Obtain an understanding of what is and what is not possible with the standard

- *Filling the DECT band with new use cases and applications is the best way of protecting it. This is important for all companies active with DECT, whether classic or new!*

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Workshop teams

Workshop teams

Telephony/Smart Home – room London:

- Christian Schepke
- Scott Walsh
- Siji Li
- Marcin Grzegorczyk
- Jakub Ignaczak
- Sylvia Zipp
- Ruth Hudson
- Avi Barel

Pro-Audio – room Frankfurt:

- Johan van der Stoel
- Wilco Blootens
- Niels Steen Hansen
- Erling Skjoldborg
- Andreas Wilzeck
- Jens Pilz
- Andreas Mueller
- Frank Martiny
- Jens Christian Lindof
- William Berrie

Workshop teams

Enterprise – room Solar:

- Paul Rowe
- Julien Bertheuil
- Andy Macqueen
- Karin van Dam
- Helge Grote
- Stephan Fuchs
- Torsten Wolf
- Sabine Hegner
- Ben de Kraker
- Roel Ottink

Workshop teams

Industrial IoT – room Saturn

- Jussi Numminen
- Kristian Saether
- Adrie van Meijeren
- Antonio Muchaxo
- Thomas Rupp
- Andreas Zipp
- Rudi Stahl
- Arend van der Weijden

Panel discussion

Panel members:

- Jussi Numminen
- Kristian Saether
- Christian Schepke
- Adrie van Meijeren
- William Berrie
- Enterprise (TBD)

- The heads of the workshop teams should bring up discussion topics, questions etc. from the workshops

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