

CLEEN2022 workshop

International Workshop on
**Cloud Technologies and Energy Efficiency
in Mobile Communication Networks
(CLEEN 2022)**

How cloudy and green will mobile network and services be?
In conjunction with PIMRC 2022, 12 September 2022, Virtual Conference

September 12th, 2022

Dario Sabella
(Intel, Next Generation and Standards)

CLEEN workshops: the series

Cloud Technologies and Energy Efficiency in Mobile Communication Networks (CLEEN)

How cloudy and green will mobile network and services be?

Purpose: study **novel concepts for 5G** to allow for flexibly centralised radio access networks using cloud-processing based on open IT platforms, in coordination with NFV and MEC.

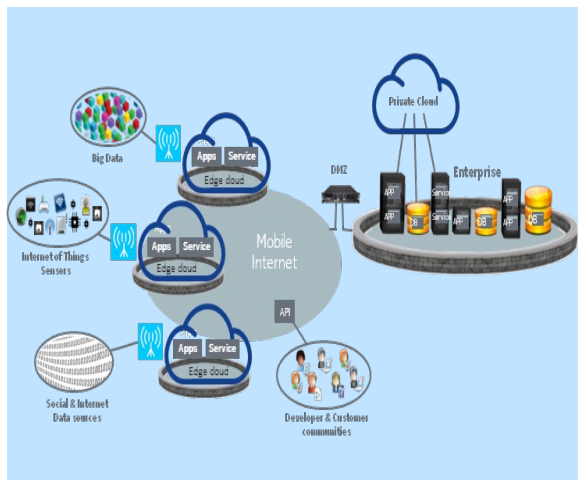
The aim is to allow:

- guaranteed **high QoS/QoE** for mobile access to cloud-processing resources and services
- future network evolution focused on **energy efficiency** and **cost-effectiveness**.

This requires new concepts for the design, operation, and optimization of radio access networks, backhaul networks, operation and management algorithms, and architectural elements, tightly integrating mobile networks and cloud-processing.

CLEEN2022 workshop is about...

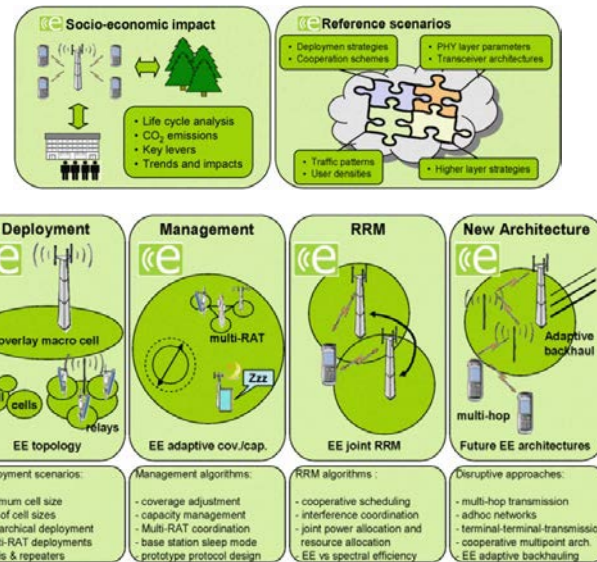
Edge Cloud



Cloud-computing at the network edge.

- Proximity
- Ultra-low latency
- High bandwidth
- Real-time access to access network and context information
- Location awareness

Energy Efficiency



Past editions

- 1st international Workshop on Cloud Technologies and Energy Efficiency in Mobile Communication Networks (CLEEN 2013), at IEEE VTC fall 2013.
 - www.ict-ijoin.eu/cleen2013
- 2nd international Workshop on Cloud Technologies and Energy Efficiency in Mobile Communication Networks (CLEEN 2014), at WCNC2014.
 - www.ict-ijoin.eu/cleen2014
- 3rd international Workshop on Cloud Technologies and Energy Efficiency in Mobile Communication Networks (CLEEN 2015), at EUCnC2015.
 - www.ict-ijoin.eu/cleen2015
- 4th international Workshop on Cloud Technologies and Energy Efficiency in Mobile Communication Networks (CLEEN 2016), at CrownCom 2016.
 - <http://www.flex5gware.eu/cleen2016>
- 5th international Workshop on Cloud Technologies and Energy Efficiency in Mobile Communication Networks (CLEEN 2017), as a regular IEEE conference technically co-sponsored by IEEE ComSoc.
 - <http://www.flex5gware.eu/cleen2017>
- 6th international Workshop on Cloud Technologies and Energy Efficiency in Mobile Communication Networks(CLEEN 2018), at VTC2018-spring
 - <https://5g-ppp.eu/cleen2018/>
- 7th international Workshop on Cloud Technologies and Energy Efficiency in Mobile Communication Networks(CLEEN 2019), at WCNC2019
 - <https://5g-ppp.eu/cleen2019/>
- 8th international Workshop on Cloud Technologies and Energy Efficiency in Mobile Communication Networks(CLEEN 2020), at ICC2020
 - <https://5g-ppp.eu/event/5g-ppp-cleen-2020/>

CLEEN2022 edition

Special topic for this 2022 edition
(co-located with IEEE PIMRC2022 Conference)

Final panel on *“Challenges and Opportunities of Edge Cloud and Energy Efficiency Technologies”*

Panelists:

- **Erol Gelenbe**, FIEEE FACM FIFIP, Institute of Theoretical and Applied Informatics, Polish Academy of Sciences & CNRS Lab. I3S, Univ Cote d’Azur
- **Emilio Calvanese**, Smart Devices, Telecommunications & Security Strategy Program Director International Research Programs, CEA-Leti
- **Tuomas Niemela**, Chief Architect, Edge Cloud Platforms, Nokia
- **Zdenek Becvar**, Associate Professor at Czech Technical University in Prague
- **Paolo Di Lorenzo**, Univ. La Sapienza, ETSI RIS vice-chair

CLEEN2022 workshop

programme

<https://hexa-x.eu/cleen2022-workshop/>



experience
what's inside™

Workshop programme - updated

9:00	CET Welcome and presentation by the workshop chair, Dario Sabella (Intel)
9:05	Paper talk #1: "XR-Specific C-DRX Enhancement for UE Power Saving in 5G NR" (paper ID 1570824029), Sourav Dutta, Dibbendu Roy, Goutam Das
9:25	Industry Talk – Tuomas Niemela, Chief Architect, Edge Cloud Platforms, Nokia: "MEC and RIC integration: as industrial perspective and evolutionary view".
9:50	Paper talk #2: "Enabling Application Relocation in ETSI MEC: A Container-Migration Approach" (paper ID 1570824791), Francesco Barbarulo, Carlo Puliafito, Antonio Viridis, Enzo Mingozi
10:10	Keynote #1 – Erol Gelenbe, FIEEE FACM FIFIP, Institute of Theoretical and Applied Informatics, Polish Academy of Sciences & CNRS Lab. I3S, Univ Cote d'Azur: "Optimizing the Environmental Impact of Networks, the Cloud and Edge"
10:30	Coffee Break

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11:00	CET	Keynote #2 – Paolo di Lorenzo (Univ. La Sapienza, ETSI RIS vice-chair): “Energy-efficient Edge Computing empowered by Reconfigurable Intelligent Surfaces”
11:20		Paper talk #3: “Robotic Aerial 6G Small Cells With Grasping End Effectors for mmWave Relay Backhauling” (paper ID 1570820756), Jongyul Lee, Vasilis Friderikos
11:40		Panel Discussion, moderated by Dario Sabella (Intel): “Challenges and Opportunities of Edge Cloud and Energy Efficiency Technologies”. Panelists: Erol Gelenbe, Emilio Calvanese, Tuomas Niemela, Zdenek Becvar, Paolo Di Lorenzo
12:00		Wrap-Up & Closing by the Workshop Chair

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