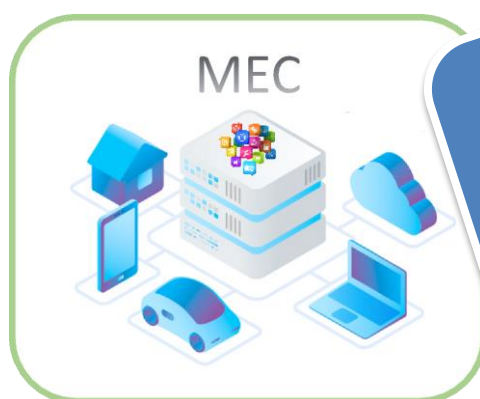# Droidcon MEC Hackathon 2020

ICT ITS Piemonte - Via Jacopo Durandi 10 - Turin (Italy), 25-26 November 2020
(In conjunction with Droidcon conference 2020)

Call for Edge Computing Developers for 5G and Android

Develop mobile applications for advanced services
in MEC-enabled 5G networks

NEWS: Hackathon RELOADED!!
Developers can now register also for a Droidcon MEC Hackathon **remote participation**!

Enter your team for this competition today!
You will be asked to develop Android Applications (at terminal side)
communicating with MEC Applications (at server side), using ETSI MEC technologies.

Submissions are OPEN!! Final deadline is 15/06/2020
Registration Notification to the teams: 30 June 2020

Further details here:

https://it.droidcon.com/2020/hackathon/

Organized by Intel, CISCO, Links Foundation, Synesthesia, TIM
Hosted by Synesthesia

Endorsed by **ETSI** and in collaboration with TORINO CITY LAB GSMA

Under the patronage of Città di Torino

Notes:

- *As space is limited, only a selected number of developers' teams will be admitted to the competition.*
- *At the end of the competition, prizes by the Organizing Committee will be awarded to the winning teams.*

Droidcon MEC Hackathon 2020 – The 5G challenge

- MEC (**Multi-access Edge Computing**) can serve many key 5G use cases. Most of them are related to application scenarios specifically targeted to vertical markets of the 5G era. The purpose of this Hackathon is to demonstrate the usage of MEC system as an enabler for different use cases and business objectives, helping all stakeholders to develop a diverse, open MEC ecosystem.
- Examples of MEC-enabled vertical segments applications include (but are not limited to) the following big categories of use cases (here called blueprints):
    - o automotive
    - o factories of the future
    - o drones
    - o consumer, media and entertainment
- Submissions for one of the blueprints are allowed. In addition, as a special prize, for this edition of the Hackathon, developers are encouraged to focus on the automotive domain, in synergy with the Smart Road project (https://www.torinocitylab.com/en/).
- Developers' teams at the Hackathon will be tasked to develop Android applications for services in MEC-enabled networks, running on **OpenNESS** platform[1] from Intel and using ETSI MEC technologies.[2]
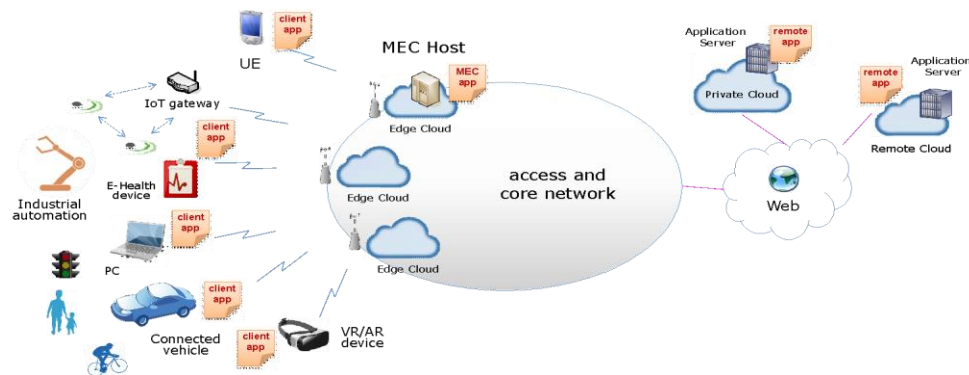
- Candidate developers' teams are free to choose a specific challenge/blueprint adhering to the above topics. To inspire ideas, the following use case example is provided (link here).
- Of course, candidates are encouraged to reuse their existing or past projects with their applications, and apply/adapt to the present challenge. In addition, teams will learn and exploit the ETSI MEC APIs running on the MEC Hosts at the competition (e.g. Location API, …).[3]

- On any of the above use case/blueprint or any problem that you are working on, please take up the challenge (**optional**) to see how the following can help you[4]:
    - Data Parallel C++ or DPC++ cross-architecture language from the oneAPI initiative to create custom accelerators on the FPGA for your kernel algorithm.
    - OpenVINO™ toolkit to accelerate deep learning inference tasks for computer vision applications. The OpenVINO toolkit includes various neural network topologies and enables deep learning inference acceleration.

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[1] OpenNESS: the easy button to deploy innovative services at the Edge. OpenNESS is an open source reference toolkit that makes it easy to move applications from the Cloud to the Network and On-Premise Edge. https://www.openness.org/

[2] Please refer also to the ETSI white paper "Developing software for MEC", available via this link.

[3] For more information on the ETSI MEC standard (including MEC architecture and MEC APIs), you can check the specification tab at this URL.

[4] You can use Intel® oneAPI toolkits and the Intel® Distribution of OpenVINO™ toolkit on the Intel® DevCloud to understand what they do and how they can help you.

Droidcon MEC Hackathon – Team submission guidelines

- **Team size**: 5 members (maximum)
- Submissions should be sent through the application form via the following link https://droidcon-mec-hackathon.eventbrite.it. They should include a description of the idea; the target MEC application; information on any intention to reuse / integrate code from past activities, or other projects / prototypes / products (highly recommended); and a short CV for each team member. Any supporting material (e.g. short video clips) related to the idea is welcome. IMPORTANT: Submissions should clearly state how the team intends to use ETSI MEC APIs (available at https://forge.etsi.org/). *NOTE: Whilst the use of MEC service APIs is not mandatory, teams are encouraged to utilize them.*
- **Submission** due date: **15th June 2020**
  Submissions will be evaluated by the Droidcon MEC Hackathon Organizing Committee based on various criteria, e.g. relevance to the Call for Developers, assessed relevance of the selected use case, usage of MEC APIs, composition of the team, level of maturity of the project.
- Selected teams will be notified by **30th June 2020**. Participants selected for the competition will be also admitted to join the Intel® Edge Builders program
- **Cost**: The submission is free of charge, as well as the Hackathon attendance for the selected teams
- **Venue**: Via Jacopo Durandi 10 - Turin (Italy). Hackathon: from Wed 25 Nov AM to Thu 26 Nov PM
- At the end of the competition there will be an **awards ceremony**, at the main Droidcon conference (on 16 April) with a number of **prizes**, courtesy of the Organizing Committee:
  - The venue host Synesthesia will provide the winners free passes for a future Droidcon conference (2020/ 2021). Synesthesia will also present a customized Hackathon Winners trophy to proudly display in their office.
  - Intel will offer Amazon echo devices to the first 3 teams. The developers from the winner team will be eligible to be part of *Intel Software Innovator* program (https://software.intel.com/en-us/intel-software-innovators) and their project will be eligible to be featured as an Intel Early Innovation Project. This means that the project will be eligible for stipend to produce/present a tutorial/paper on their project, hardware funds for their project, and other start up mentorship program.
  - Special prizes will be offered by the organizing committee in correspondence to particular achievements of the developers teams, for some of the following (**optional**) challenges: usage of OpenVINO toolkit, or DPC++ framework.
  - The winners will be offered the possibility to participate to the Smart Road project (a consortium of partners, from car makers, network operators, universities and the City of Turin), with the aim of proposing their developed solution as possible implementation for testing activities in the urban environment of Turin.
- All MEC Hackathon participants will have a great opportunity for networking with the Droidcon conference attendants who represent key stakeholders of the industry from all corners of the world.
- **NEWS**: **Hackathon RELOADED!!** in order to "hack" potential COVID-based travel restrictions, now Developers can optionally register also for a Droidcon MEC Hackathon **remote participation**!

> **For the registration, please follow this link**
>
> https://droidcon-mec-hackathon.eventbrite.it

For further information, you can contact us at info@droidcon.it

Good luck and we hope to see you at this Droidcon MEC Hackathon 2020!

The Droidcon MEC Hackathon 2020 Organizing Committee.

under the Patronage of

CITTA' DI TORINO