Boosting User Experience by Innovating at the Mobile Network Edge

An Introduction to the new ETSI Industry Specification Group (ISG)

for Mobile Edge Computing (MEC)



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Agenda

- Introduction to Mobile Edge Computing (MEC)
- Example of use cases and benefits of MEC applications
- Introduction to the MEC Initiative
- Call for active participation



Mobile-edge Computing An environment for Innovation and value creation



Can be leveraged by applications to create value

Offers application developers and content providers <u>cloud-computing</u> <u>capabilities</u> and an <u>IT service</u> <u>environment</u> at the <u>edge of the</u> <u>mobile network</u>

This environment is **<u>characterized by</u>**:

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



Business Benefits

A new value chain and an energized ecosystem, based on Innovation and business value

Flexibility and agility

New Market Segments

Mobile operators, application developers, content providers, OTT players, network equipment vendors, IT and middleware providers can benefit from greater cooperation

Operators can open their Radio Access Network (RAN) edge to authorized third-parties, allowing them to flexibly and rapidly deploy innovative applications and services

New innovative applications and services towards mobile subscribers, enterprises and vertical segments

Translates local context, agility, rapid response time and speed into value



Use cases: Network-Centric Applications





- Popular content/data stored at the Base Station
- Backhaul and Transport savings (up to 35%)
- Improved QoE (20% improvement for loading a Web page)
- Dynamic Content Optimization
- Based on real-time radio conditions or other factors
- Improved video quality and throughput



Use cases: Enterprise and Vertical Applications





- Get Mobile Device location in real time and in a passive way (no GPS)
- Understand how the crowd is distributed or locate specific users
- Relevant in Smart City (Macro cells), Retail (Micro cells), and advertising
- Analyze live Video streams at the base station
- Trigger events automatically (e.g. movement, abandoned bags, missing objects, crowd, etc.)
- Accelerate detection and protect network from verbose traffic
- Public safety, smart cities



Use case: Efficient Delivery of Local Content



- Overlay augmented reality content onto objects viewed on the device camera
- Provide local object tracking and local AR content caching
- Local content delivered locally
- Improved QoE and overall efficiency



MEC Initiative

A new value chain and an energized ecosystem, based on Innovation and business value

Expected deliverables

Create a standardized, open environment allowing efficient & seamless third-party application integration across multi-vendor platforms

Requirements; framework and reference architecture; interoperable and deployable APIs' specifications. First phase to be delivered within 18-24 months

Scope of the first phase

The first phase deployment scenarios and architectural blueprint are described in the MEC introductory technical whitepaper (see <u>MEC White Paper</u>)



Call for Active Participation

The various players in the value chain (ETSI members and non-members) are invited to actively participate in the ISG Contribute to the development of the specifications based on industry consensus

Share best practices and demonstrate Proofs of Concepts (PoCs), together with the benefits of the MEC use cases

1st ISG Meeting

2 – 4 December 2014 | Munich, Germany

Ensure the representation of the stakeholders in this newly emerging ecosystem

2



Thank you

Communication Contacts:





References





BACK-UP NOTES



MEC Scope of Work



MEC scope focuses on enabling third-party applications to be hosted in the mobile network edge



The Value of ETSI for MEC

ETSI is working on the integration of telecom standards with cloud and internet technologies

MEC initiative intends to unite Telco and IT-cloud , providing IT and cloud computing capabilities for RAN

ISG is open to ETSI members and non-members



