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)

Presented by Dr. Rolf Schuster, Vodafone
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 cloud-computing capabilities and an IT service environment at the edge of the mobile network

This environment is characterized by:
- 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

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

Flexibility and agility

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 Market Segments

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

**Active Device Location Tracking**
- 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

**Intelligent Video Analytics**
- 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 MEC White Paper)
Call for Active Participation

The various players in the value chain (ETSI members and non-members) are invited to actively participate in the ISG.

1. Contribute to the development of the specifications based on industry consensus.

2. 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.
Thank you

Communication Contacts:

Huawei Technologies
Yun Chao Hu
yunchao.hu@huawei.com

IBM
Brian Naughton
naughton@uk.ibm.com

Intel
Caroline Chan
caroline.chan@intel.com

Nokia Networks
Nurit Sprecher
Nurit.sprecher@nsn.com

NTT Docomo
Sadayuki Abeta
abeta@nttdocomo.com

Vodafone
Adrian Neal
adrian.Neal@vodafone.com
References

BACK-UP NOTES
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