Improving Usability and Context Awareness over Fifth Generation Wireless Networks

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Intel in Finland Today

2 R&D sites:

Espoo

- ~ 90 engineers
- Majority in SSG / OTC

Tampere

- ~ 205 engineers
- Majority in MCG and PEG

Intel in Finland

- Intel has had a presence in Finland since 1980 focusing on customer relations
- Strengthening its R&D capabilities, Intel has opened two R&D centers in 2011:

Espoo / Westend

Areas of Expertise:

- Core Enabling
- Graphics and Media
- Web Technologies
- System Software
- Software Solutions

Tampere / Hermia

Areas of Expertise:

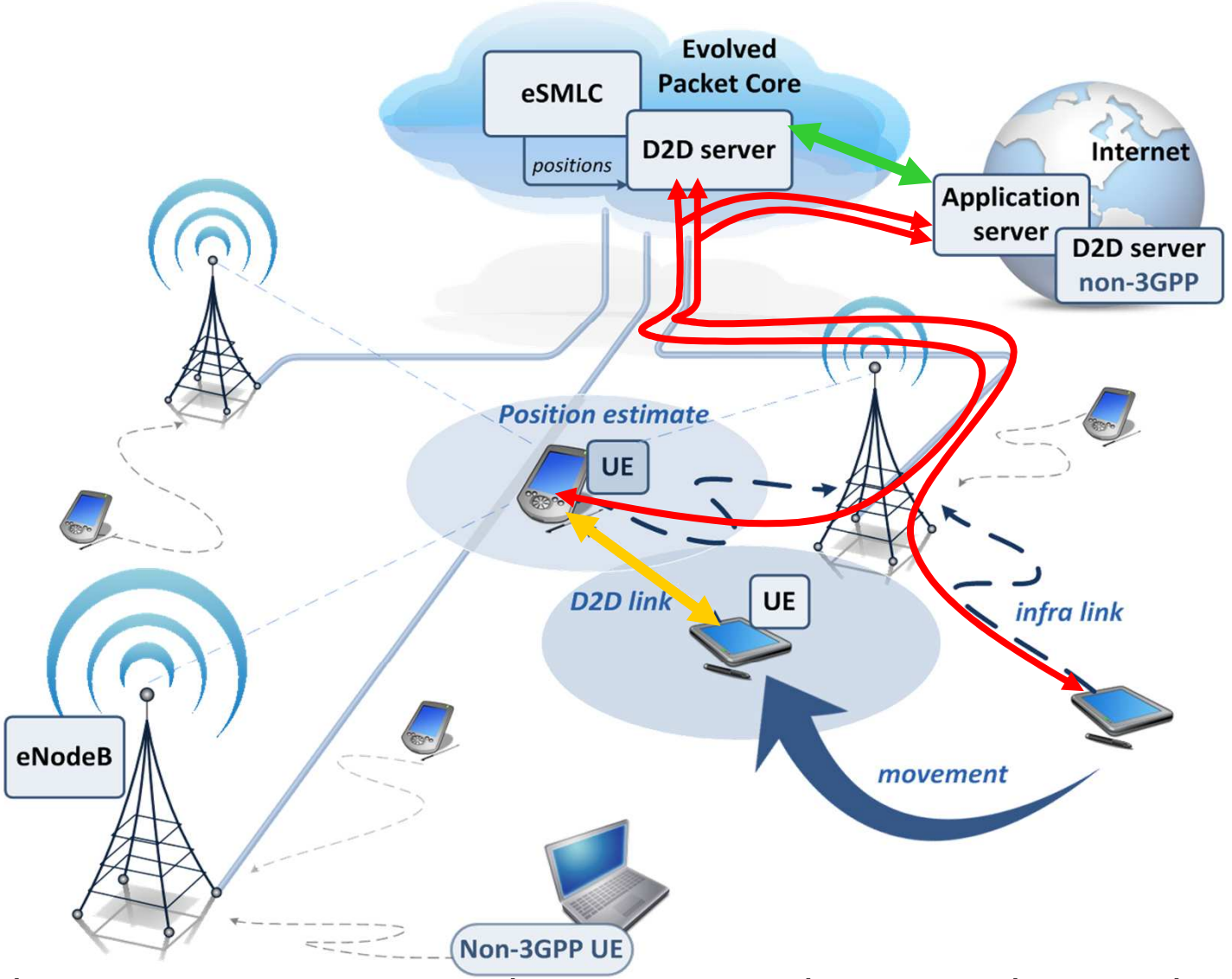
- Software Developing (Camera, Security, Firmware, System Engineering, Validation, Test OS)
- Hardware & Mechanical Engineering
- Product Integration
- World-class Imaging Algorithm development
- Platform Architecture

The cellular problem

- Mobile traffic doubles annually
- Lot of differentiation on network experience
- Diversity of service requirements increasing from variation in devices, apps, usages, etc.

Future needs

- Uniform network experience
- Establish context aware services.
- Fulfill needs for Quality of Experience



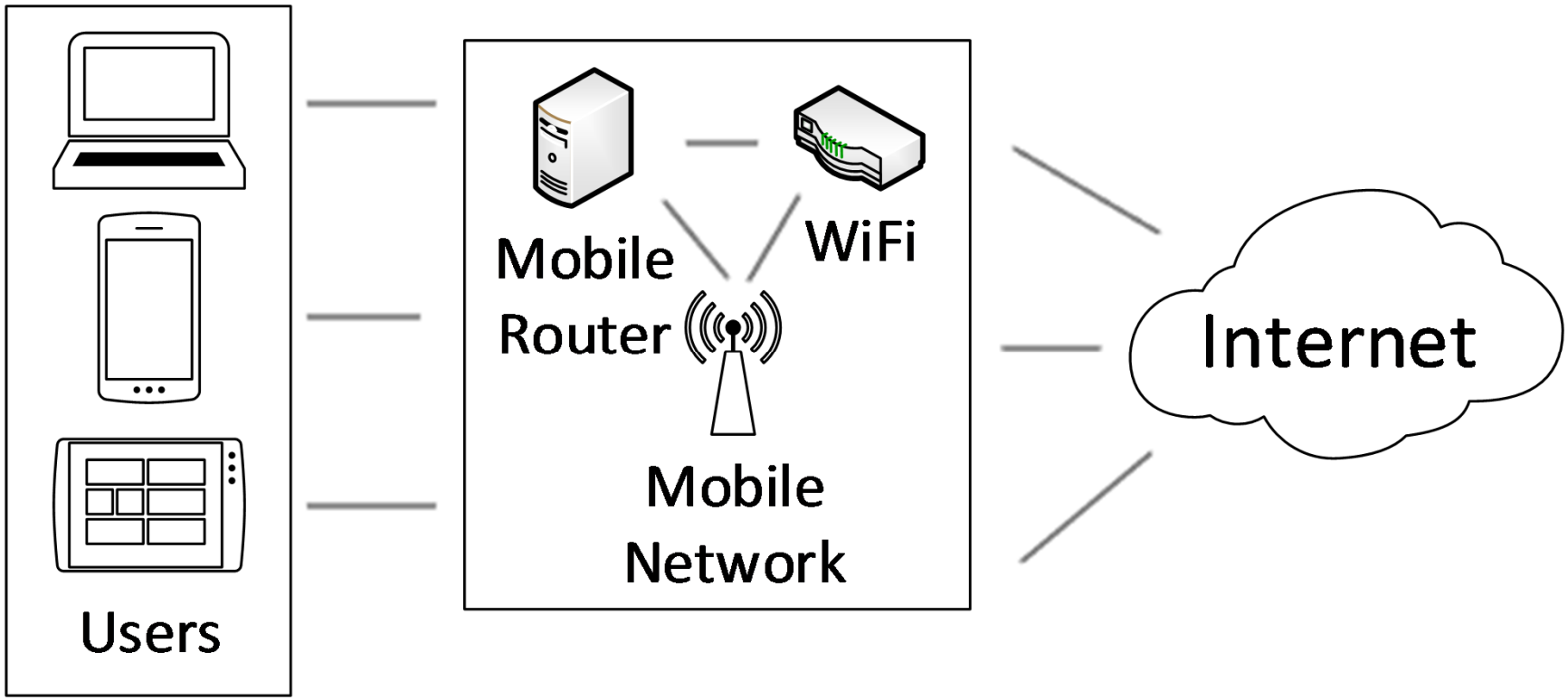
S. Andreev, A. Pyattaev, K. Johnsson, O. Galinina, and Y.Koucheryavy, IEEE Communications Magazine, April, 2014.

Example Use Cases for Device-to-Device communication

- Voice service
- Multimedia content sharing
- Group multicast
- Gaming
- Context-aware applications
- Safety and privacy applications

Proposed architecture for adding context-awareness

The novelty is on Mobile router inteligency.



Summary

- Lot of uses cases for context aware network experience
- Quality of Experience
- The best result will be done in co-operation

Especial thanks

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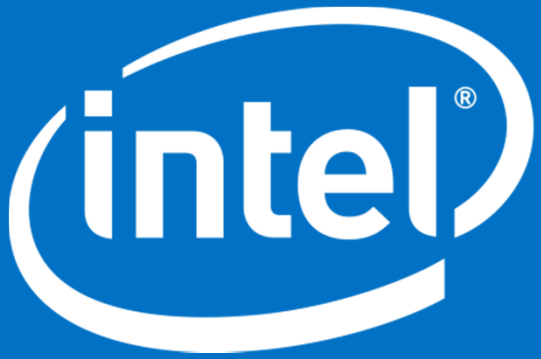

Mobile and Communications Group