

5G TNF

5G Test Network Finland

5gtnf.fi

VISION

5G Test Network Finland enables Finland to provide the best and most appealing 5G test network environment and ecosystem in the world for research and business development.

MISSION

5G Test Network Finland coordinates the integration of 5thGear testbed projects and facilitates the cooperative creation of an open innovation platform for 5G technology and service development.

In addition to the 5thGear testbeds, active cooperation with other parallel research and industry projects and test infrastructures is practiced.

5GTNF Overview

5G Radio Network

5G Core Network

Business and Regulation

Internet of Things

Network Functions Virtualization

Network Management

New Spectrum and Sharing Methods

Quality of Service/Experience

Software Defined Networking



EU

5G PPP / H2020, CELTIC+

ASIA

NSFC-FINNISH ACADEMY,
SINO-FINLAND ALLIANCE

USA

WIFIUS PROGRAM

5G TN

5G Test Network is a scalable environment enabling future business model piloting and service development in realistic real-life use cases. It also provides an opportunity for testing and development of key technology components forming the future 5G systems.

CORE++

Cognitive Radio Trial Environment provides a unique live network environment for trialling of new spectrum sharing concepts for future mobile broadband systems.

FUHF

The Future of UHF Frequency Band studies the changing media environment, long-term media consumption formats and their impact on business models for different actors in mobile communications and broadcasting ecosystems.

TAKE-5

The 5th Evolution Take of Wireless Communication Networks creates a multidisciplinary and open research platform for investigation and experimental evaluation of innovative ideas in networking, services and new business models for 5G.

5G TNF Partners

- **Telecom vendors:**

- Anite, Bittium, Coriant, Digita Networks, Eltel Networks, Ericsson, EXFO, Huawei, Intel, Nokia, MediaTek, Pulse Finland, Sony Europe, Schneider Finland

- **SMEs:**

- Efore, Fairspectrum, Haltian, Indalgo, Magister Solutions, PehuTec, RF-Tuote, Rugged Tooling, Sarokal Test Systems

- **Network operators:**

- Elisa, TeliaSonera

- **Universities and research institutes:**

- Aalto University, Centria, University of Helsinki, Oulu University of Applied Sciences, Tampere University of Technology, Turku University of Applied Sciences, University of Oulu, University of Turku, VTT, Åbo Akademi University

- **Other:**

- City of Oulu, FICORA, Finnish Defence Forces, YLE

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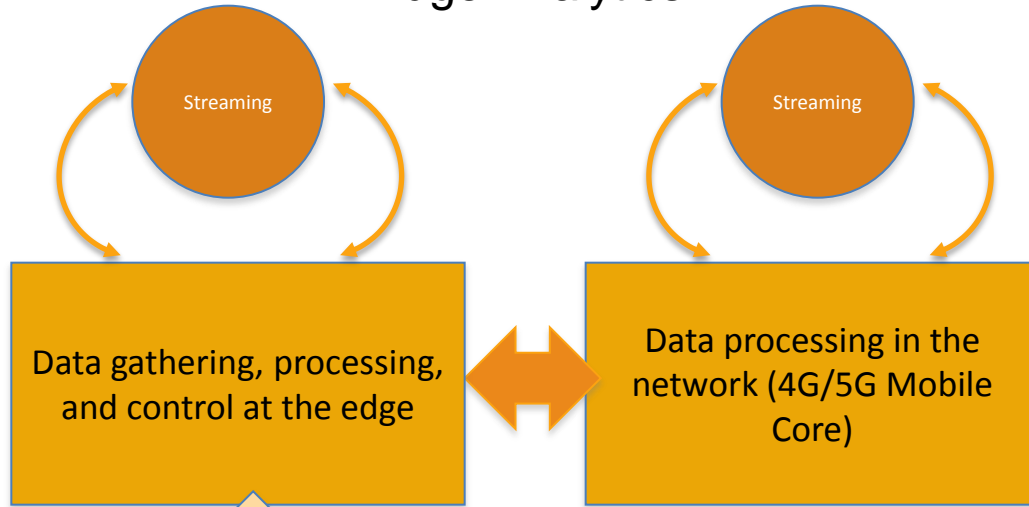
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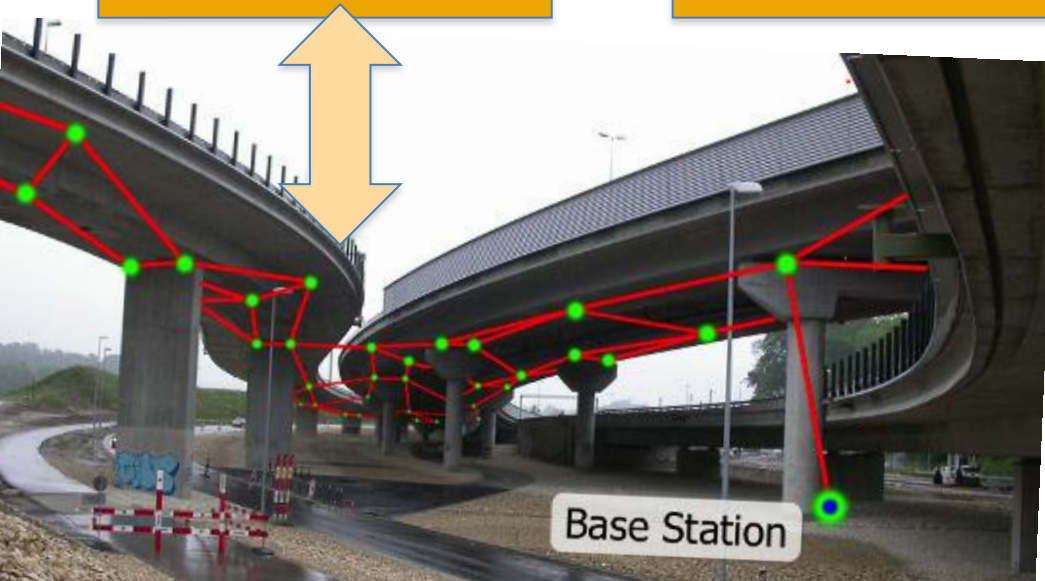
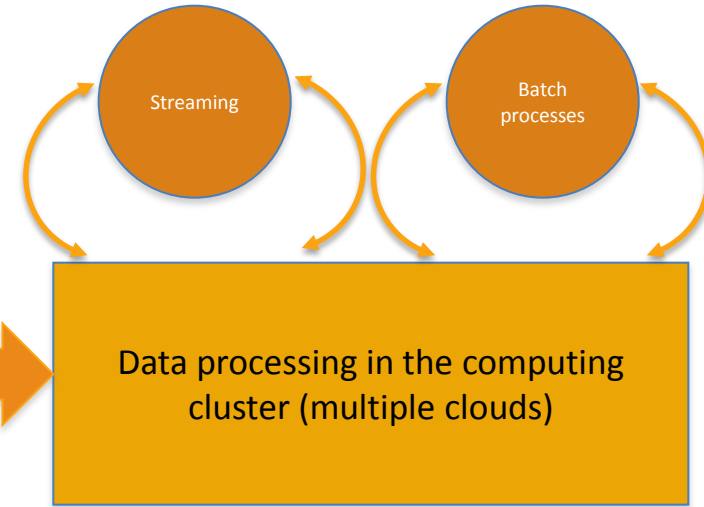
Research at University of Helsinki Department of Computer Science



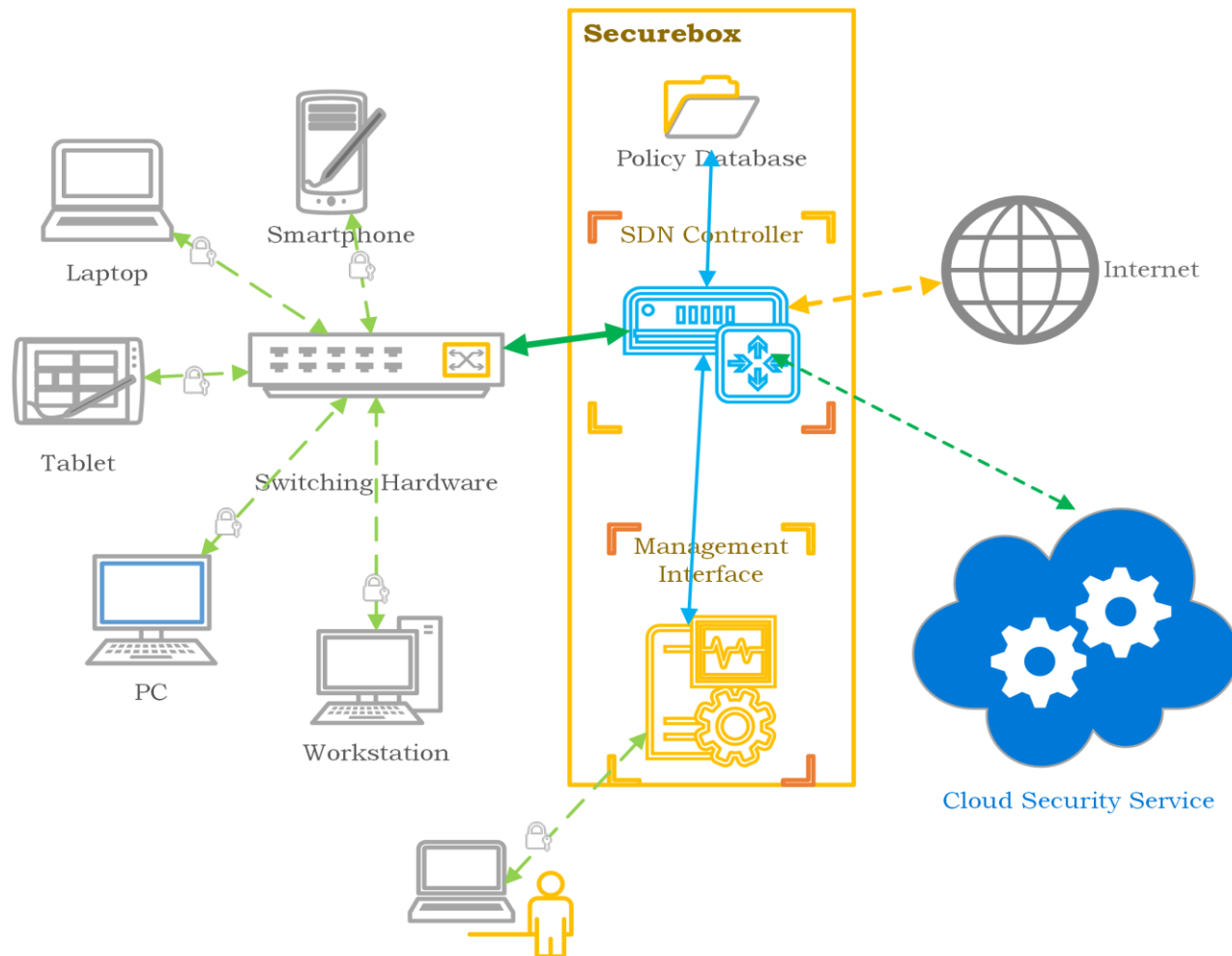
Edge Analytics



Big Data Frameworks



Securebox Edge Architecture



Securebox is a novel cloud-driven, low cost Security-as-a-Service solution that applies Software-Defined Networking (SDN) to improve network monitoring, security and management for smart IoT environment.

Contacts: Aaron Yi Ding and prof. Sasu Tarkoma



SoftOffload

- SoftOffload is an open-source software defined platform for achieving intelligent mobile data offloading.
- It collects various traffic context from both end-users and network operators, and performs optimal mobile offloading to increase user-side throughput and reduce network congestion.
- Code and demo:
 - www.cs.helsinki.fi/group/eit-sdn/softoffload.html

