

OpenFlow
(MiniNet?)

Streaming $\begin{cases} \text{signal} & n_1 \\ \text{stream} & n_2 \end{cases}$

CDN

content delivery
networks

CM

MN
SDN
network
probing

WiFi

N2

AP

AP

CDN

PI

- BW

- Sec

- priv

- 5G URLLC

Network probing

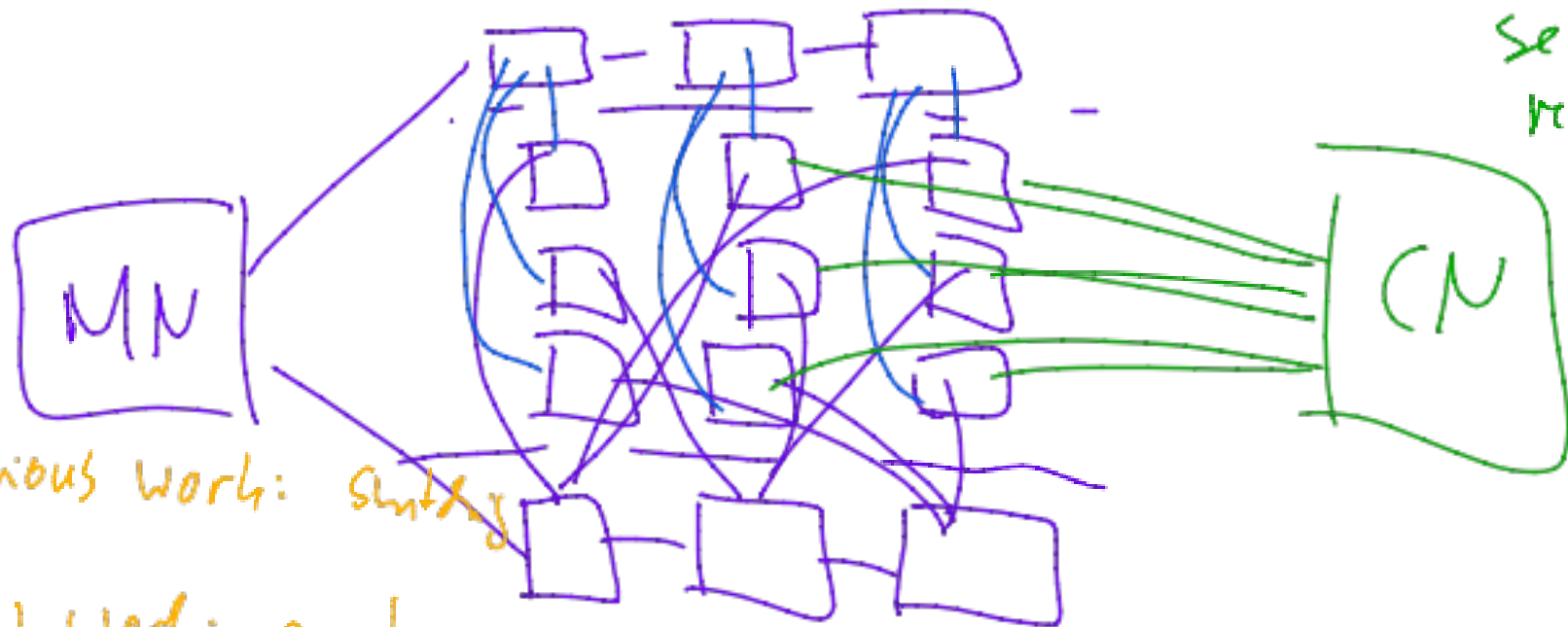
- (double) sending
split

✓ data

? eval. parameter

cost: ^{US} shortest way

sec, priv
reliability, latency
...



previous work: sending

new work: appl. spec. requirements/vouchers

Service parameters of sec?

BW #A / Delay #B

Subj
alarm

reliability

#C
reliability of packet
packet loss delay

Service #1

BW

streaming

Service #2

delay // VoIP
(video)

Arstands

transmission
delay

social
network
IoT
alarm (fire, ...)
fall

Health

Sec | priv
reliability

delay

packet loss

- Energy - light
- Comm - mobile
- I
- IoT

- 3.5 Billion people "unconnected"
- 6? IoT ← buzz

m IoT

e-SIM
billions of devices
US\$

m MoB Bandwidth
Loss

56 req.

process control
US\$

ultra
reliability URLLC
low latency

SCOTT key message
"elevator pitch"

largest security
project in EU

57 partners from
12 countries

80 M€ budget
35 M€ EU & national

8 partners from
Norway



IoT is the game changer and driver for digitalisation, and
SCOTT contributes through:

- Answer the **IoT** need for a new and **more advanced security paradigm** through **security classes**
- Create a **Convincing privacy assessment** through **privacy labelling**
- Establish a **clear link** between **security and safety**

SECURITY



PRIVACY

TRUSTABILITY



USABILITY



SAFETY



Automotive

Home

Rail

5G

Avionics

IoTSec.no = Publications = NEK Standard Norge

Open discussion:

- network knowledge
- network probing (time, traffic, - variability)

1 → tutor of the former network seg

micro segmentation
appl. spec. routing

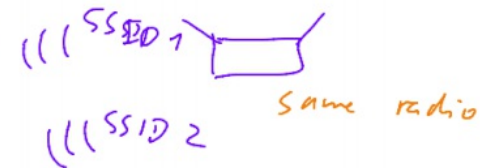
Methodology for use cases applied to WP8 "Managed Wireless"

Steps



- **Core use case: "Managed wireless"**
 - Analysis of protocols for monitoring wireless access (C.1)
 - Provide tools for identification of "bad" wireless (C.2)
 - Manage wireless remotely (C.3)
- **Extended use case: Service differentiator for future services**
 - Routing, e.g. micro-routing (E.1)
 - Network segmentation (E.2) and slicing (E.3)
- **Future services and application areas**
 - TelCo 5G network slicing (F.1)
 - IoT Gateway monitoring (F.2)
 - IoT Management (F.3)
- **leading to Demo and Impact**

network segmentation



same radio

network slicing
spatial, code, freq, time
SSID 1 slice

?

slice 2: spatial, code, freq, time
SSID 2



Paper TOC

Intro Review for 5G
SDN
(CDN) ← use case
Application specific requirements
Tab

Impl

→ Eval Tab A "net"

Ackn:
IoT Sec
SCGT+