



Norwegian  
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# **Net neutrality in Europe** *– Regulation and guidelines*

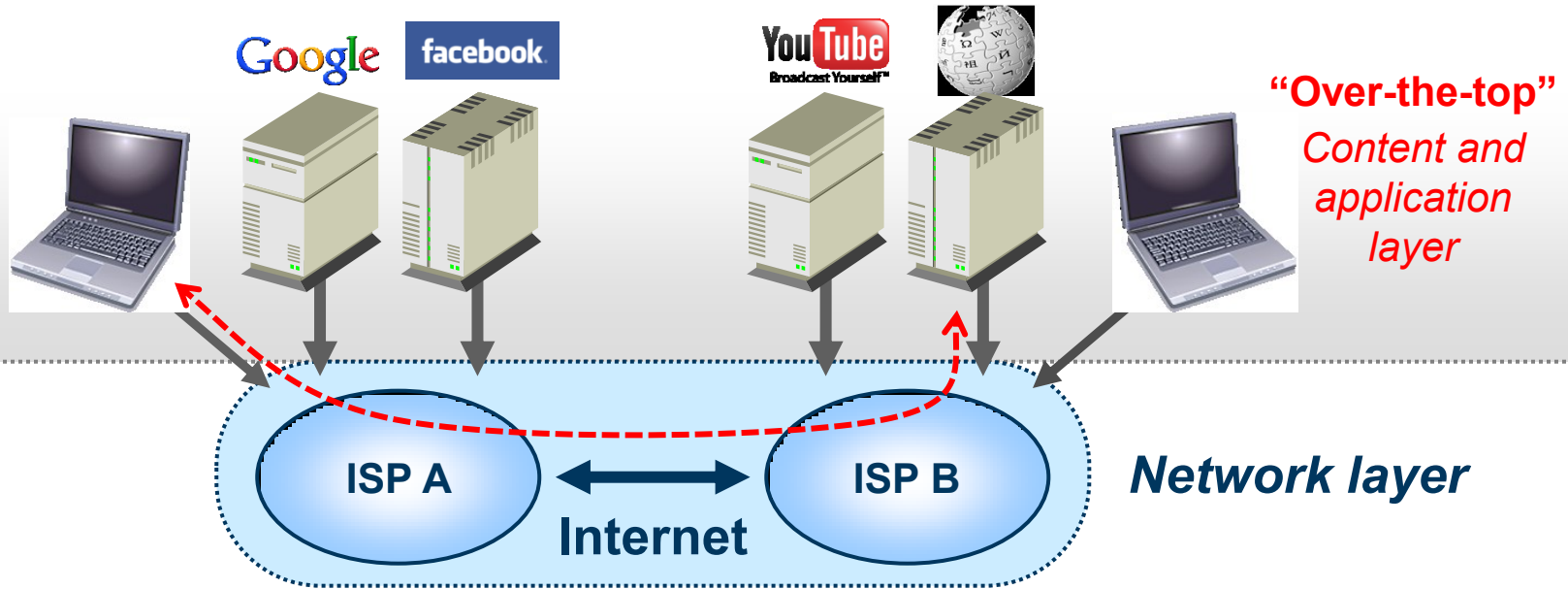
**Frode Sorensen (@ipfrode)**  
**Norwegian Communications Authority (Nkom)**

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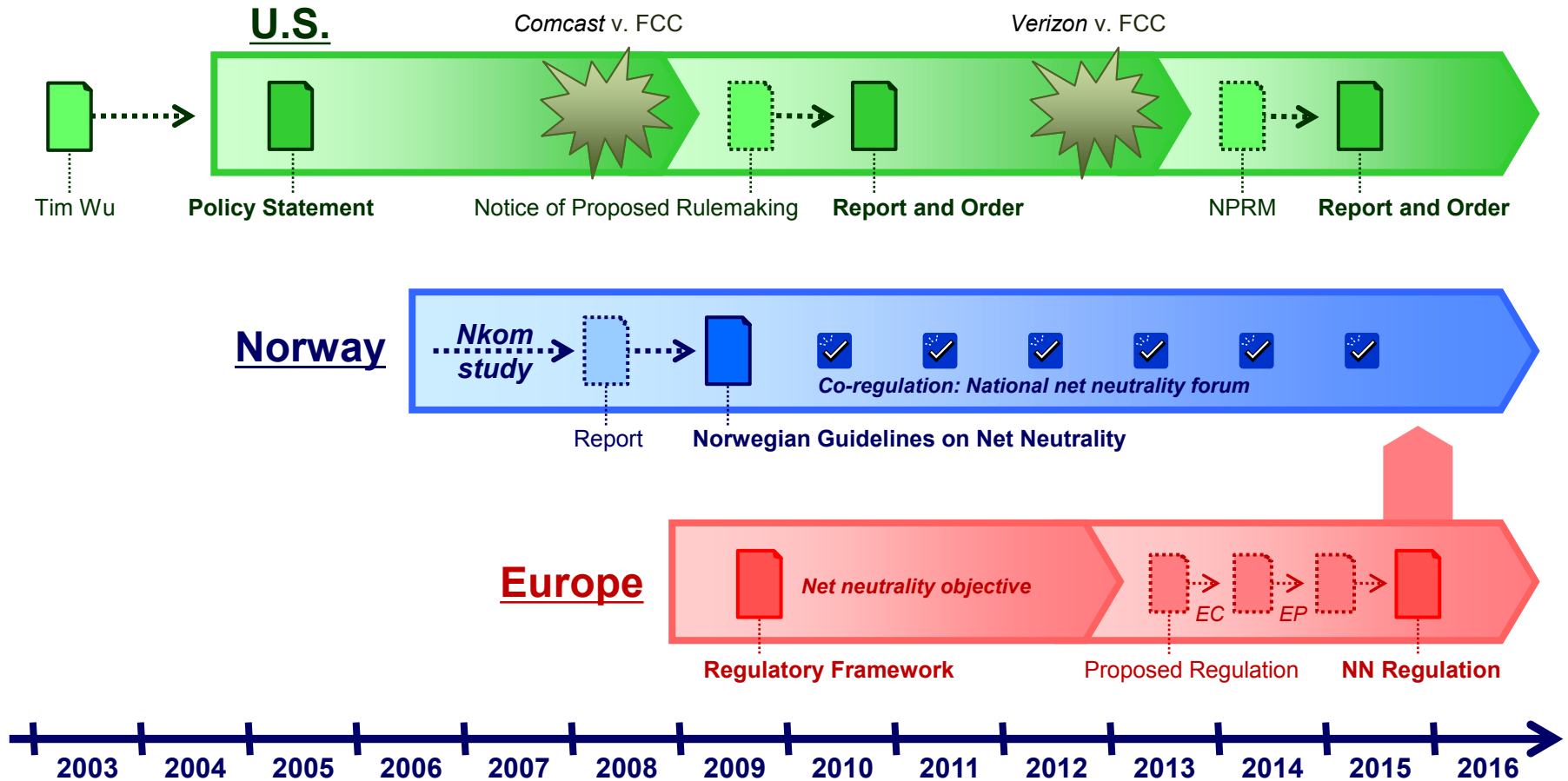
# Understanding Net Neutrality



**Content/applications are *decoupled* from the network layer**

**Net neutrality belongs to the network layer of the Internet**

# Net neutrality timeline



# The aim of the European NN rules

- **Safeguard equal and non-discriminatory treatment of traffic**
- **Protect end-users** (– who are end-users?)
- Guarantee the continued functioning of the internet ecosystem **as an engine of innovation**
- **Existing regulatory framework** aims to promote the ability of end-users to access and distribute information or run applications and services of their choice.
- **A significant number of end-users are affected** by traffic management practices which block or slow down specific applications or services
- **Require common rules** at the Union level to ensure the openness of the internet and to avoid fragmentation of the internal market

# Commercial practices / zero-rating

- **Neither prohibited per se, nor accepted per se**
- **Some practices will clearly infringe**
  - *e.g. all applications blocked except the zero-rated application(s) when the data cap is reached*
- **Others practices less clear – to be assessed based on criteria set out in the Guidelines**
  - *circumvention of general aims of Regulation*
  - *market position of ISPs and CAPs involved*
  - *any effects on end-user rights of consumers/businesses*
  - *any effects on end-user rights of CAPs*
  - *scale of practice and availability of alternative offers*

# Traffic management of IAS

## 1. “treat all traffic equally”

## 2. reasonable traffic management

*...based on **objectively different technical QoS requirements of specific categories of traffic**. Such measures **shall not monitor specific content**...*

## 3. **shall not block, slow down etc. – with three exceptions**

(a) compliance with other laws, (b) preservation of integrity and security, and (c) congestion management measures.

- *In contrast to **network-internal blocking** put in place by the ISP, **terminal equipment-based** restrictions put in place by the end-user are not targeted by the Regulation.*
- *NRAs should consider that in cases when **application-agnostic** congestion management **is not sufficient**, congestion can be dealt with according to Article 3(3)(c).*

# Specialised services

## Examples that may be considered specialised services:

- VoLTE (high-quality voice calling on mobile networks)
- Linear broadcasting IPTV services with quality requirements
- Real-time remote health services

## Specialised services must meet requirements of:

- *Necessity* – are specialised services necessary to meet requirements for a specific level of quality?
- *Capacity* – is network capacity sufficient that quality of internet access services is not degraded?
- *No substitution* – are specialised services usable or offered as a replacement for IAS?



# Transparency requirements

**ISPs shall ensure that contracts specify at least the following:**

- (a) Impact of traffic management measures
- (b) Impact of volume limitation, speed etc.
- (c) Impact of any specialised services on IAS
- (d) download and upload speed of IAS
  - fixed networks:
    - minimum, normally available, maximum and advertised speed
  - mobile networks:
    - estimated maximum and advertised speed

**ISPs shall also publish the information**

# Supervision and enforcement

## NRAs shall closely monitor and ensure compliance with Art 3 & 4

- **Information-gathering**
  - Transparent information from ISPs, published/contractual
  - ISPs shall make information available at request of NRAs
- **Technical measurements**
  - BEREC NN QoS Regulatory Assessment workstream
- **Assessment of practices in the market**
  - BEREC fostering exchange of experiences by NRAs
- **Annual net neutrality report**
  - Published by 30 June for the period 1 May – 30 April
- **Enforcement**
  - NRAs may e.g. impose requirements on ISPs

# Discussion

- Distinguish Regulation from Guidelines
- End-user rights and end-user control
  - *“Equal” treatment of traffic*
  - *Run applications of their choice*
  - *Protect the freedom of expression*
- Innovation on the edge and in the core
  - *CAPs are protected as end-users*
  - *Compatible with Internet technology evolution*
  - *Compatible with 5G development and deployment*
- Where will zero-rating lead?

# Summary

- Objective: Protect the value of the Internet
- European NN at the beginning of a new era
- Where did we come from?
- Where are we now?
- Where are we heading?
- Global outlook