Routers and modems. Tmthetom. CC-BY-SA.4.0

Net Neutrality 2.0. "Device Neutrality" and Opportunities for Free Software

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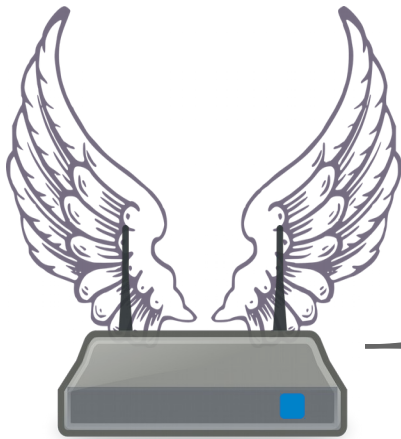Lucas Lasota · Deputy Legal Coordinator · fsfe.org/about/lasota

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Agenda

- Router Freedom and Net Neutrality

- Device neutrality and Open Internet

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Router Freedom and

Net Neutrality

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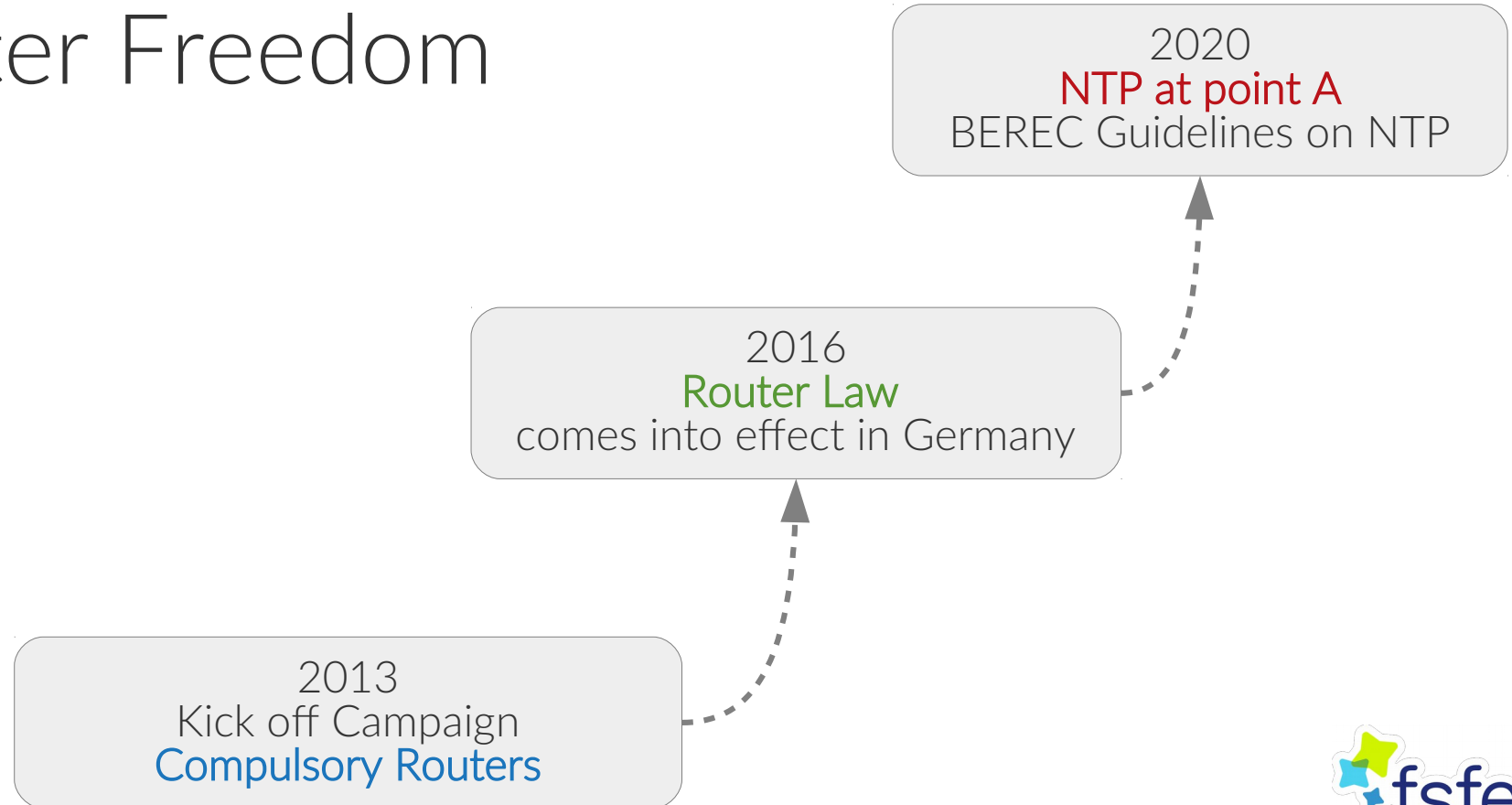There is no
Router Freedom
without
Free Software

Freedom of
choice

Privacy and
Data Protection

Free Competition
& Compatibility

Security

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FSFE and
Router Freedom

2020
NTP at point A
BEREC Guidelines on NTP

2016
Router Law
comes into effect in Germany

2013
Kick off Campaign
**Compulsory Routers**

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EU Net Neutrality Regulation (aka Open Internet Regulation)

Regulation (EU) 2015/2120

Art. 3(1): *End-users shall have the right to access and distribute information and content, use and provide applications and services, and use* **terminal equipment of their choice**, *irrespective of the end-user's or provider's location or the location, origin or destination of the information, content, application or service, via their internet access service.*

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Definition of the NTP: the current challenge for Router Freedom in the EU

Internet access service
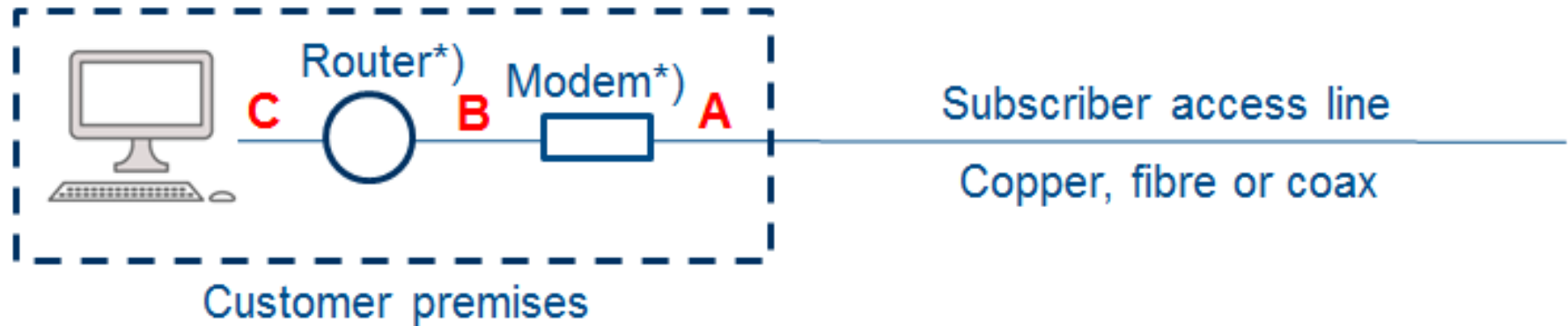
*) In case the NTP is at point A or C, router and modem may be integrated in one device.

Status of
Router Freedom
in Europe

Router Freedom Monitoring Map
http://u.osmfr.org/m/581123/

Net Neutrality vs Open Internet

• Both concepts are **policies** under which the principle of nondiscrimination in the management of Internet traffic.

• **Rationale**: internet gatekeepers, due to their termination bottleneck, could use their market power to distort competition between content and service providers on one side, and access to content and services by consumers on the other side, as well as to undermine human rights.

• **Net neutrality** is concerned with „last mile access". Focus on internet access policies of network operators (ISPs).

• While the web is open but more and more application used in devices are proprietary, therefore closed. **Open Internet** means that information can flow freely on the web, and content and service providers can compete for consumers' attention in a fair and transparent way.

HARDWARE LINKS BETWEEN END USER AND INTERNET

ARCEP, *The state of the Internet in France*, 2018.
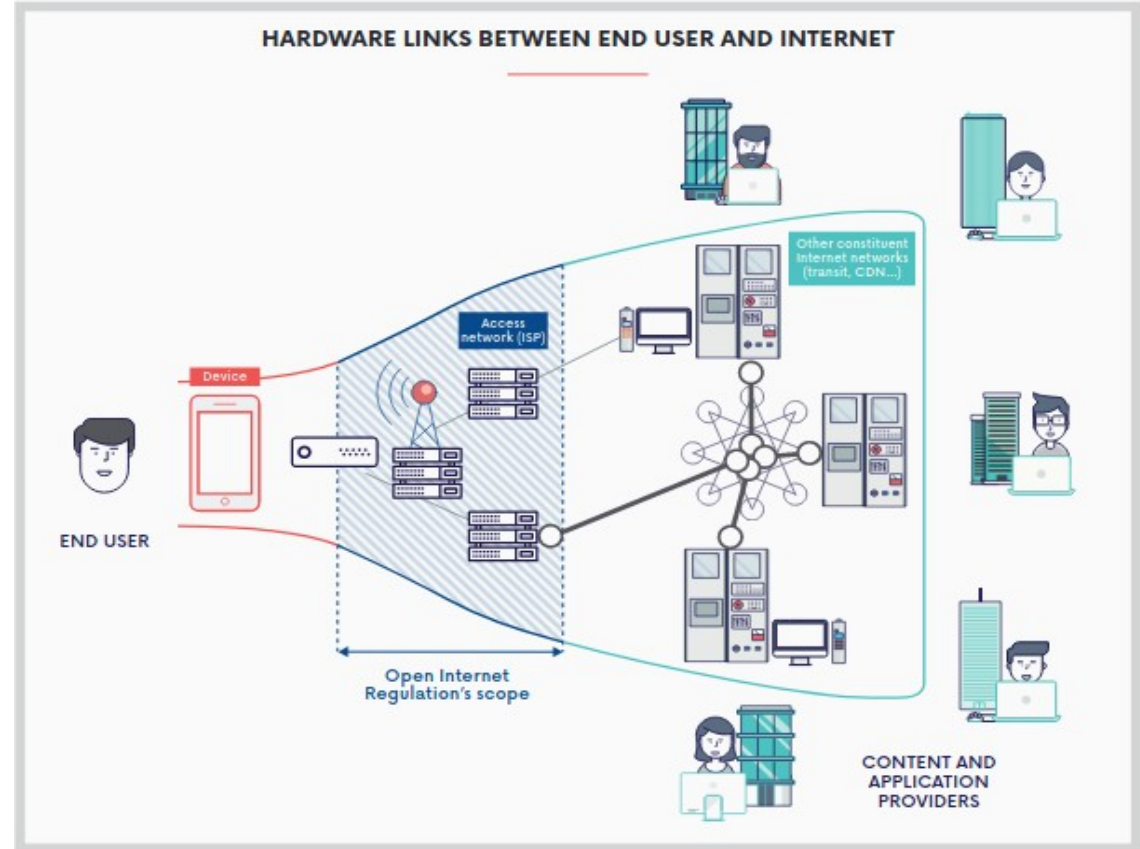
Open Internet and Device Neutrality

- **Device Neutrality** prevents discrimination of the services/apps by platforms or hardware companies. It ensures similar „neutrality" users should have of non discrimination of their communications based on network control by telcos.

- **Rationale**: the same of open internet. The end-user is the one who is at the termination point of the network. The network's intelligence is located at the extremities (and not in the intermediate steps).

- **Device** is understood as an equipment, either mobile or fixed, connected to the Internet. (BEREC, 2018)
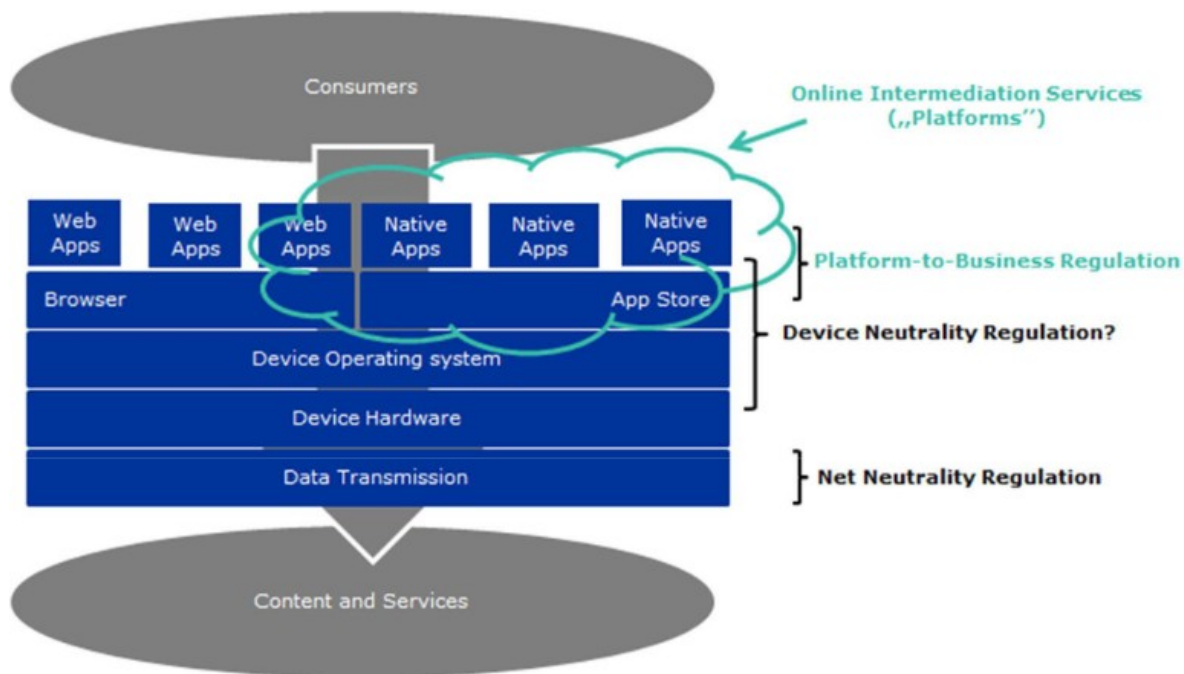
BEREC, Report on the impact of premium content on ECS markets and the effect of devices on the open use of the Internet, 2018.

Krämer, J. Device Neutrality: The missing link for fair and transparent online competition? CERRE, 2019

Device Neutrality: areas of application

A firm controlling the *hardware level* could

- privilege, restrict or prohibit access to certain networks (mobile, ad-hoc or infrastructure networks);
- prohibit or inhibit the installation of certain operating systems;
- reserve or privilege system resources (e.g., battery, memory, computing power, storage, dedicated interfaces) for specific apps;
- prohibit, inhibit or restrict software at higher layers from accessing hardware components (e.g., sensors, chips, camera, microphone);
- prohibit, inhibit or restrict compatibility with ancillary hardware components and devices.

A firm controlling the *app store* could

- deny, unduly delay or discriminate access to the app store based on (legal) app content, app functionality or identity of the app developer;
- bias, distort or restrict "findability" of certain apps based on (legal) app content, app functionality or identity of the app developer.
- require or prohibit apps to use ancillary services and functionalities (e.g., payment services, push notifications, reporting services)
- require apps to share data or deny access to data in a discriminatory way;
- prohibit or inhibit its installation on certain operating systems or devices.

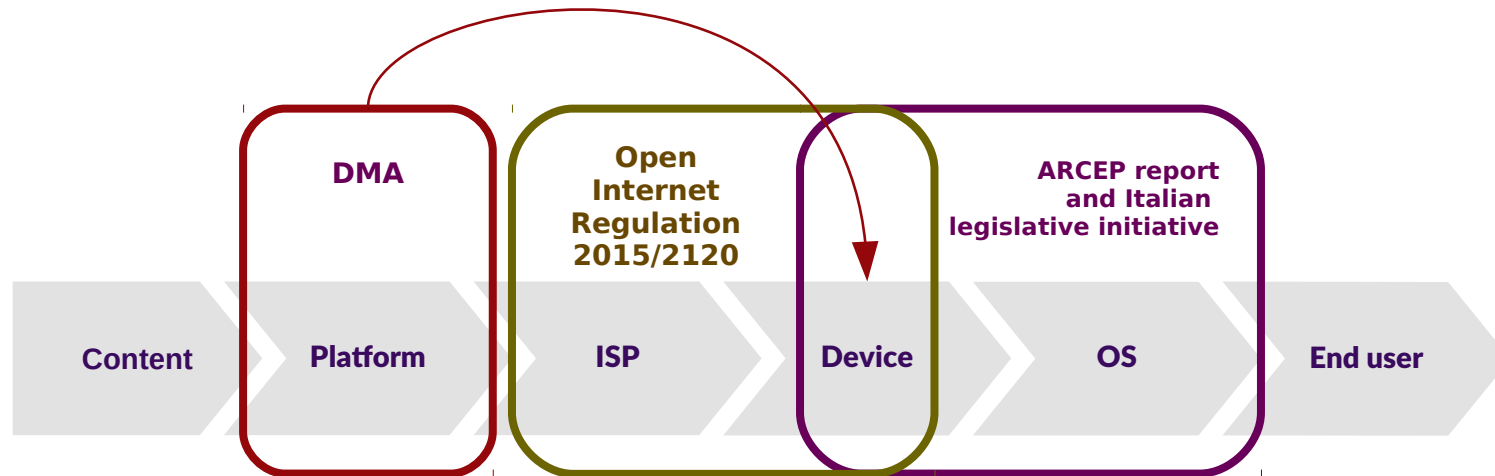## A firm controlling the *operating system level* could

- privilege, restrict or prohibit access to certain networks (mobile, ad-hoc or infrastructure networks);
- prohibit or inhibit the installation of the operating system on certain hardware;
- reserve or privilege system resources (e.g., battery, memory, computing power, (data) storage) for specific apps;
- privilege, prohibit, inhibit or restrict software at higher layers from accessing hardware components (e.g., sensors, chips, camera, microphone, screen);
- prohibit, inhibit or restrict compatibility with certain applications and devices;
- pre-install certain applications and restrict removal of some or all of these applications;
- integrate certain applications more tightly in the operating system and user work-flow (e.g., voice and zero-click activation, background performance, notifications).

A firm controlling the *browser* could

- privilege, restrict or prohibit access to selective content (e.g., block advertisements, set default starting page and default search engine);
- privilege, restrict or prohibit access to selective plug-ins / extensions;
- bias, distort or restrict "reachability" of certain websites or plug-ins based on (legal) content, functionality or identity of the website owner (e.g., discriminate with respect to the loading speed of certain websites, warning messages).
- privilege, restrict or prohibit websites' or plug-ins access to the browser's full functionality (e.g., JavaScript, service worker, stored data);
- prohibit or inhibit its installation on certain operating systems;
- reserve or privilege system resources (e.g., battery, memory, computing power, storage) to specific content;
- unduly delay or omit the adoption of web standards (e.g., in order to retain control over functionality reserved for native apps, especially if the firm controls the app store level as well).

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Device Neutrality: Regulatory initiatives in the EU

- **2015**: „Open Internet Regulation 2015/2120".
- **2015**: Device neutrality legislative proposal in Italy.
- **2018**: ARCEP proposal for an Device Neutrality regulation.
- **2020**: EC Digital Markets Act proposal.

Content	Platform	ISP	Device	OS	End user
	DMA	**Open Internet Regulation 2015/2120**		**ARCEP report and Italian legislative initiative**	

Device Neutrality and the EC DMA

• **Ex ante and sector-specific regulatory instrument**. The DMA covers eight different sectors, also known as Core Platforms Services(CPS), including OS, cloud, search engines, app stores, etc..

• Unlike telecom law, which charges NRAs, **enforcement is centralized** on the EC.

• **Complement to competition law**. Dominance is not a requirement. Gatekeepers are designated based on the combination of pre-established quantitative and qualitative criteria. No need competition law procedures.

• **Main goals**: to ensure fair, open and   contestable   digital environments as an engine of innovation.

DMA Article 6

In respect of each of its core platform services identified pursuant to Article 3(7), a gatekeeper shall:

(e) refrain from technically restricting the ability of end users to switch between and subscribe to different software applications and services to be accessed using the operating system of the gatekeeper, including as regards the choice of Internet access provider for end users;.

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Takeaways

- Free Software is fundamental for device neutrality and router freedom.

- In the „last mile" context, router freedom is regulated under net neutrality principles, but the regulatory framework over the NTP is the current challenge for end-users' rights.

- Device neutrality is an „open internet" issue and has been subject of several legislative attempts. The EC DMA is the most proeminent one.

- The EC DMA aims on vendor lock-in to protect contestability and fairness on the markets. One aspect of device neutrality (pre-installed software) has been tackled.

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Thank you!

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