Public debriefing
37th BERECE
Plenary Meeting
Regulierungsdialog
17 Dezember 2018
5G topics

• BEREC Report on practices on spectrum authorization, award procedures and coverage obligations with a view to considering their suitability to 5G

• Common position on mobile network infrastructure sharing

• Common position on information to consumers on mobile coverage
Authorisation regimes

• Auctions
• Beauty contents
• First come first serve
• Hybrid form
What are the design objectives of award procedures

- Competition
- Efficency
- Coverage
- Innovation
- Other objectives
Competition factors considered in award procedures

• Competition concerns were mentioned by most respondents to be considered when designing award procedures.

• Concerns relate to extremely asymmetric spectrum holdings, foreclosure strategies, tacit collusion,...

• Measures to safeguard competition
  – Spectrum Caps
  – Reserved spectrum for certain bidders or group of bidders (e.g. new entrants), happens only in a few cases
  – Wholesale access obligations: half of respondents do not consider any wholesale access obligations
  – Band-bundling to facilitate market entry (access to an appropriate set of bands)
Factors to consider in designing the award

**Licence durations**

<table>
<thead>
<tr>
<th>License duration years</th>
<th>Number of competent authorities (Number of award procedures)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2023</td>
<td>3</td>
</tr>
<tr>
<td>2024</td>
<td>5</td>
</tr>
<tr>
<td>2025</td>
<td>39</td>
</tr>
<tr>
<td>2026</td>
<td>1</td>
</tr>
<tr>
<td>2027</td>
<td>5</td>
</tr>
<tr>
<td>2028</td>
<td>3</td>
</tr>
<tr>
<td>2029</td>
<td>1</td>
</tr>
<tr>
<td>2030</td>
<td>2</td>
</tr>
<tr>
<td>2031</td>
<td>1</td>
</tr>
<tr>
<td>2032</td>
<td>21</td>
</tr>
<tr>
<td>Indefinite</td>
<td>0</td>
</tr>
</tbody>
</table>

**Coverage Obligations**

<table>
<thead>
<tr>
<th>Type of obligation</th>
<th>Number of competent authorities</th>
</tr>
</thead>
<tbody>
<tr>
<td>General coverage obligation</td>
<td>25</td>
</tr>
<tr>
<td>Remote areas coverage obligation</td>
<td>15</td>
</tr>
<tr>
<td>Indoor coverage obligation</td>
<td>5</td>
</tr>
<tr>
<td>Road coverage obligations</td>
<td>5</td>
</tr>
<tr>
<td>Train coverage obligations</td>
<td>5</td>
</tr>
<tr>
<td>Other coverage obligations</td>
<td>5</td>
</tr>
</tbody>
</table>
Awards and coverage obligations for 5G

Spectrum Authorisation for 5G

- Mix of bands used:
  - 700 MHz (coverage)
  - 3.4-3.8 GHz (capacity and FWA)
  - 26 GHz (high capacity and very low latency)
- Different bands will require different authorisation regimes
- Innovative ways of authorising spectrum may be necessary

Coverage obligations and targets for 5G

- Focus on road and railway seem to increase
- Remote area obligations
- Specific locations obligations
- Area coverage
- Enhanced mobile broadband
- Specific quality of service requirements

Too early for concrete conclusions!
5G topics

- BEREC Report on practices on spectrum authorization, award procedures and coverage obligations with a view to considering their suitability to 5G

- **Common position on mobile network infrastructure sharing**

- **Common position on information to consumers on mobile coverage**
For the purposes of promoting common understanding between NRAs on sharing, BEREC is of the common position that NRAs should use the following definitions:

**CP1: typology of infrastructure sharing types**

<table>
<thead>
<tr>
<th>Passive sharing</th>
<th>Active sharing</th>
<th>Other sharing types</th>
</tr>
</thead>
<tbody>
<tr>
<td>co-location, site</td>
<td>RAN sharing, MORAN, MOCN, frequency (or spectrum)</td>
<td>core network sharing</td>
</tr>
<tr>
<td>sharing, mast</td>
<td>sharing, national/local roaming</td>
<td>backhaul sharing</td>
</tr>
<tr>
<td>sharing</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Mobile infrastructure sharing

**CP2: main objectives to be pursued when considering network sharing agreement**

*When NRAs are to assess sharing agreements (i.e. spectrum awards, third party request, dispute settlement), BEREC is of the common position that NRAs should aim at achieving/maintaining at least the following regulatory objectives*

<table>
<thead>
<tr>
<th>Effective competition</th>
<th>Better connectivity</th>
<th>Efficient use of spectrum</th>
</tr>
</thead>
</table>
| • Infrastructure-based competition | • Service improvements  
• Allow the development of IoT, M2M, network slicing,…  
• Reduction of cost of deployment for passive infrastructure |                                              |

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CP3: parameters to consider when assessing network sharing agreements

BEREC is of the common position that, inter alia, the following parameters are to be considered when assessing network sharing agreements in order to achieve/maintain the objectives

<table>
<thead>
<tr>
<th>Competitive market forces evolution</th>
<th>Feasible level of competition</th>
<th>Type of sharing</th>
<th>Shared information</th>
<th>Reversibility and contractual implementation</th>
</tr>
</thead>
</table>

Mobile infrastructure sharing
5G topics

• BEREC Report on practices on spectrum authorization, award procedures and coverage obligations with a view to considering their suitability to 5G

• Common position on mobile network infrastructure sharing

• Common position on information to consumers on mobile coverage
  – Thanks for the contributions to the consultations!
Opinion for the evaluation of the application of Regulation (EU) 2015/2120 and the BEREC Net Neutrality Guidelines
Objectives and general conclusions of the evaluation

• **Scope**
  – the Regulation (EU) 2015/2120 and the BEREC Net Neutrality Guidelines

• **Approach**
  – collect input from stakeholders at an early stage on the application of the Guidelines (March/April 2018)
  – collect input from NRAs on experiences with the application of the Guidelines

• **General conclusions**
  – the NN rules work well and fulfil the aim of protecting end-users’ rights and internet innovation
  – no review of the Regulation desired by BEREC
  – nevertheless, Guidelines could be clarified in certain instances in order to strive for consistency in the application of the Regulation
  – the Regulation seems to leave considerable room for implementation of 5G technologies
Specific conclusions regarding 5G / NN Guidelines

• **New technologies (e.g. 5G)**
  – the Regulation seems to leave considerable room for implementation of 5G technologies (e.g. network slicing, 5G QoS class identifier (5QI) and Mobile Edge Computing)
  – to date, BEREC has no knowledge of any concrete example given by stakeholders where the implementation of 5G technology would be impeded by the Regulation

• **BEREC will consider further clarifications on**
  – commercial practices: e.g. a step-by-step methodology for zero-rating, or by addressing new variants of zero-rating
  – traffic management: e.g. on differentiating QoS for IAS, data compression, blocking of content, legitimate security issues, the duration of traffic management measures
  – specialized services: e.g. on the definition of SpS, the relationship between SpS and IAS, the impact of SpS on the general quality of IAS
  – transparency: e.g. on the scope of transparency requirements, mobile IAS speed, hybrid IAS, the process of certification
Specific conclusions on Internet value chain / next steps

• Internet value chain
  – BEREC notes that the open access to, and provision of, services and applications that the Regulation seeks to maintain could potentially be affected in practice by developments further up or along the internet value chain to which the Regulation does not apply.
  – BEREC therefore concludes that this subject should be kept under scrutiny at European level for further consideration in ongoing and future regulatory developments.

• Next steps starting 2019
  – BEREC has concluded that no substantial changes are needed, but further clarifications could be provided the Guidelines
  – BEREC will next year start the activity “Update to the Guidelines”
  – BEREC will involve stakeholders via a written consultation of the updated draft Guidelines in October 2019
Terminating Contracts and Switching Provider for public consultation
Terminating Contracts & Switching Provider - Goals

- **Strategic Priority 5** - Exploring new ways to boost consumer empowerment

- This work is essential to safeguard competition through increasing consumer choice

- The goal of the Report is to better inform both consumers and NRAs on how they might maintain and enhance consumer awareness of their ability to exercise choice

- The analysis is carried out for different types of ECS services including fixed and mobile voice services, fixed and mobile broadband services, OTT services, broadcast,…
### Terminating Contracts & Switching Provider - Findings

#### Processes to facilitate switching and provide safeguards to consumers
- Information provision, validation and authorisation
- Consumers required to contact the RP to initiate the process
- Less rules in place for the other services
- Generally, bundles follow the rules defined by the NB ECS in their component
- The length of the overall porting / switching process
- Fixed and Mobile NB-ICS less than 1 working day

#### Legislative and Regulatory Framework
- Switching and the validation process
- Contract matters and termination
- Charges & fees
- Customer retention practices;
- Technical issues
- Compensation initiatives

#### Obstacles to switching provider
- Fixed NB-ICS: contractual obstacles
- Mobile NB-ICS: actions taken by the TP to hinder/burden the switching decision by the consumer
- Fixed IAS: offer/technology availability
- Mobile IAS
  - Contractual obstacles
- Pay TV
  - Contractual obstacles
- Defined bundles
  - Contractual obstacles, actions by the TP, lack of consumer information
- Undefined bundles
  - The availability of offers and technologies
BEREC

Work Programme 2019
Overview

• Outline process for developing WP 2019

• Summary of WP 2019 public consultation

• Key updates to WP 2019 post-public consultation

• BEREC vision

• Next steps
Outline process for developing WP 2019

1. Call for inputs
   - EECC & BEREC Reg.
   - Regular BEREC work
   - Carry-over from 2018

2. Outline WP 2019
   - Survey of NRA priorities
   - Incoming Chair views
   - Assess resources

3. Internal work on PRDs
   - Draft WP 2019 adopted for public consultation
   - Public consultation & Stakeholder Forum

4. Final WP 2019 adopted and published
   - P2
   - P3
   - P4
Summary of WP 2019 public consultation

• 18 responses – generally supportive

• Stakeholders very keen to engage further with BEREC across:
  – Public consultations
  – Early calls for input
  – Technical workshops

• Additional workstreams proposed by stakeholders – BEREC will consider such proposals when work on WP 2020 is initiated

• BoR (18) 241: BEREC report on the outcome of the public consultation also published
Key updates to WP 2019 post-public consultation

• Early input from stakeholders on BEREC Guidelines

• Feasibility study on provision of consistent information on pan-European 5G coverage and capability
  – Extra deliverable which will also input to Report on the impact of 5G on regulation and the role of regulation in enabling the 5G ecosystem

• Broader scope of Guidelines on intra-EU communications
  – Project includes stakeholder workshop in January 2019 to discuss with operators and other interested parties the provisions on intra-EU communications
Harmonising Implementation

- UPDATE TO GUIDELINES ON NET NEUTRALITY
- GUIDELINES RELATED TO SYMMETRIC ACCESS
- GUIDELINES RELATED TO INTRA-EU CALLS AND SMS
- 12 BEREC GUIDELINES
- GUIDELINES RELATED TO CO-INVESTMENT
Looking Forward

1. Dynamics of Investment in Connectivity in VHCN Study
2. Impact of 5G on Regulation Report
3. Towards a Vision for Europe’s Telecom Consumers Workshop
4. Data Economy Report
Collaborating with Stakeholders

• Supporting stakeholders in the EU including the Commission, RSPG, other EU institutions and bodies
• Dialogue with international colleagues, especially in the Western Balkans
Next steps

• Publish WP 2019

• Draft outline of WP 2020 to be adopted by 31 January 2019 (as per new BEREC Regulation) – includes:
  – Workstreams in WP 2019 to be finally delivered in 2020
  – Multiannual workstreams
  – BEREC Strategy beyond 2020

• Call for inputs to WP 2020 – indicatively April 2019
Other outcomes
New EWG Structure

End User

Fixed Network Evolution

Market and Economic Analysis

Wireless Network Evolution

Open Internet

Planning and Future Trends

Regulatory Framework

Remedies

Roaming

Statistics and Indicators
BEREC Chair and Vice Chairs 2019

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• BEREC Chair 2018

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• BEREC Chair 2019

Dan Sjöblom, PTS
• BEREC Chair 2020

Tanja Muha, AKOS
• BEREC Vice-Chair 2019

Constantinos Masselos, EETT
• BEREC Vice-Chair 2019

Marcin Cichy, UKE
• BEREC Vice-Chair 2019
Overview Public Consultations

- **BEREC Common Position on Infrastructure sharing**
  - Open until 18 January 2019, 17:00 CET

- **BEREC Report on access to physical infrastructure in market analyses**

- **BEREC Report on termination of contracts and switching of provider**
  - Open until 23 January 2019, 17:00 CET

- **BEREC Report on a set of indicators to measure the Internet of Things (IoT)**

Participate on: [consultations.berec.europa.eu](consultations.berec.europa.eu)
Summary of all documents published

- BEREC Report on geographical market definition
- BEREC Report on technical and economic replicability assessment in the context of symmetric access
- BEREC Report on contractual simplification
- BEREC Report on the outcome of the public consultation on the draft BEREC Report on contractual simplification
- BEREC Common Position on information for consumers on mobile coverage
- BEREC Report on the outcome of the public consultation on the draft BEREC Common Position on monitoring mobile coverage
- BEREC Report on Regulatory Accounting in practice 2018
- BEREC Report on Termination Rates at the European level
- BEREC Report on transparency and comparability of international roaming tariffs
- BEREC Opinion for the evaluation of the application of Regulation (EU) 2015/2120 and the BEREC Net Neutrality Guidelines
- BEREC Report on practices on spectrum authorization and award procedures and on coverage obligations with a view to considering their suitability to 5G
- BEREC Work Programme 2019
- BEREC Report on the outcome of the public consultation on the draft BEREC Work Programme 2019
- Summary of the 6th BEREC Stakeholder Forum meeting
- Decision of the Board of Regulators on the Co-Chairs of the BEREC Expert Working Groups 2019-2020
BEREC 2018

A year of accomplishment
Proactively tackling the 5G challenges

Harmonisation: promoting the single market

Enhanced engagement with stakeholders
What’s next?
Outlook

• Workshop on Intra-EU Communications: **29 January 2019**
  – Information on BEREC Website
  – Including a link for registration and an e-mail address to provide input in advance of the Workshop

• Next Plenary: **7-8 March 2019 in Budapest**
• Next Public Debriefing: **13 March 2019**

• Save the date: Joint BEREC-IIC-Event, **25 and 26 June 2019 in Riga**

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• **Information Sharing Portal**
Thank you!

Body of European Regulators for Electronic Communications

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