

# Public debriefing 35<sup>th</sup> BEREC Plenary Meeting

Johannes Gungl, BEREC Chair 2018

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Body of European Regulators  
for Electronic Communications

**BEREC**

The logo for BEREC (Body of European Regulators for Electronic Communications) features the word "BEREC" in a bold, sans-serif font. The letters "B", "E", "R", and "E" are dark blue, while the "C" is a dark red. A thin, dark blue curved line starts under the "R" and sweeps under the "C", ending under the "C".

# BEREC FACILITATES A FAST AND SMOOTH DEPLOYMENT OF 5G IN EUROPE



## PREPARE the 5G landscape

5G is based on small cells, meaning more base stations are needed for it to work properly. To help minimise the cost and boost the speed of 5G deployment, BEREC will gather best practices in infrastructure sharing across Europe. It will publish a **Report on Infrastructure Sharing** and adopt a **Common Position**.



## SOW the seeds of 5G in Europe

For 5G deployment, spectrum needs to be assigned. Member States may have different spectrum available and use different ways to assign it. To help each country to pick the most suitable procedure for its market, BEREC will publish a **Report on Spectrum Authorisation and Award Procedures**.



## HELP the crop of 5G grow

Citizens and companies should benefit from reliable 5G services. Coverage obligations can help to ensure the wide availability of 5G, especially in challenge areas like rural regions, indoors or along transportation networks. A **Best Practices Report on Coverage Obligations** by BEREC will help Europe to foster a fertile 5G deployment.



## MONITOR the development of 5G

There are clear benefits to achieving a common understanding of how to monitor mobile coverage. A BEREC **Common Position on Monitoring Mobile Coverage** will facilitate a mutual understanding and foster a consistent approach on how this information can be made available and understandable throughout Europe.



## HARVEST the bountiful 5G crop

With its work, BEREC will help to prepare a fertile landscape for 5G deployment. The next step is for citizens and operators to harvest the 5G crop, maximising the potential that 5G has to offer. Completely new business models, high speed internet everywhere and smart homes are just the beginning.



# **Common Position on monitoring mobile coverage**

## CP 1: Technical specifications for monitoring mobile coverage in Europe

- Criteria for information about mobile coverage:
  - Strength of the signal received
  - Minimum probability of successful service reception
- applying an appropriate threshold to the available mobile signal power



## CP2: The use of signal predictions for mobile coverage estimation

- *“NRAs should base their coverage estimation on coverage calculations/predictions whenever it is not economically or technically possible to carry out field measurements of the whole country. “*
- An NRA may elect to:
  - generate coverage prediction and publish information themselves
  - obtain the results of predictions from the operators and publish information themselves
  - use a third party to generate the coverage predictions and publish information



### CP3: Ensuring the accuracy of coverage information provided to the public

- *“NRA should verify the reliability of mobile coverage information using, where appropriate, field measurements, noting that for technical and resourcing reasons it may not be possible to make widespread measurements.”*



### CP4: Availability and presentation of mobile coverage information

- *“NRAs should strive to provide easy-to-access accurate mobile coverage information to the widest possible range of consumers.”*
- useful for end-users to be able to compare coverage and services provided by their operators
- Goal: maximise access, especially via website, apps, open data



## Monitoring mobile coverage – Public Consultation

- **Objective:** get stakeholders' view especially on CP1 and common thresholds
- **Questions**
  - Should BEREC define common thresholds?
  - What thresholds would you consider appropriate?
  - What would be the rationale for such thresholds?
- **Public consultation:** 4 weeks (starting today)
- <https://consultations.berec.europa.eu/en/berec>



# Infrastructure Sharing



Created by Pedro Santos  
from Noun Project

- Current regulations and legal framework
  - Public information on sharing opportunities
  - Notification of sharing agreements to NRAs
  - Obligations to share
  - Dispute resolution
  - Public guidance on sharing



Created by Dorot  
from Noun Project

- Current sharing arrangements
  - Types of sharing (passive, active, roaming, others)
  - Assessment of sharing agreements (remedies and concerns)



Created by April Stevens  
from Noun Project

- Benefits of infrastructure sharing arrangements
  - Competition where two networks cannot be deployed
  - Cost reduction (CAPEX and OPEX)
  - Introduction of a new player
  - Acceleration on network deployment
  - Decrease in retail prices



Created by Namur One  
from Namur Project

- Challenges of and barriers to infrastructure sharing arrangements
  - Insufficient space on existing masts
  - Landlord pricing
  - Electromagnetic field emissions
  - Coordination effort between sharing partners and extended period for planning and decision-making
  - Technical issues (when different equipment suppliers)
  - Decreased level of competition between sharing partners
  - Technology evolutions more difficult
  - Competition issues (also between partners)



Created by Namur One  
from Namur Project

- Future evolution of sharing arrangements and 5G
  - More sharing for 5G deployment (denser network, fibre backhaul)
  - New sharing partners (e.g. municipalities, verticals)
  - Sharing is already possible in most countries
  - Need to ensure that sharing agreements do not impede 5G deployment

# **Layer 2 wholesale access products excluding Ethernet-based leased lines on Market 4**

## Layer 2 wholesale access products excluding Ethernet-based leased lines on Market 4 (1)

- L2 WAPs are currently imposed in
  - 15 countries on Market 3a
  - 15 countries on Market 3b
  - 6 countries on Market 4
  
- Main motivation to impose L2 WAP on Market 4 was to enable ANOs
  - To offer high-quality retail communication services to businesses and/or
  - To replicate such services of the SMP operator
  
- Compared to (Ethernet) leased lines, a L2 WAP has the advantage to be less costly and it still has a sufficiently high quality level to be used for high-end business services

## Layer 2 wholesale access products excluding Ethernet-based leased lines on Market 4 (2)

- The following 11 common characteristics were identified:
  - 1) Technology
  - 2) Availability
  - 3) Bandwidth: 3a) Type 3b) Speed
  - 4) Quality of Service: 4a) Type 4b) Level
  - 5) Service Level Agreement: 5a) Availability 5b) Performance parameters  
5c) Performance targets
  - 6) Service Level Guarantee
  - 7) Redundancy
  - 8) CPE/modem
  - 9) Traffic Prioritisation
  - 10) Customer Identification
  - 11) Security
- L2 WAPs on Markets 3a and 3b (BoR (15) 133)
  - Also have the common characteristics 1, 2, partly 8, 9, 10, and 11
  - But not 3 and 4 which are rather similar to Ethernet-based leased lines

# Post-mergers and acquisitions market developments report

- 3 Mergers are analysed
  - Hutchison/Orange merger in Austria (2013),
  - Hutchison/Telefónica (brands: 3 and O2) merger in Ireland (2014)
  - Telefónica/KPN (brands: O2 and E-Plus) merger in Germany (2014)
- Analysis of price effects
  - Price baskets for low, medium and high usage are calculated based on detailed tariff data and country-specific usage data
  - Price developments in the three countries are compared to price developments in other EU countries without merger or entry
    - Differences-in-differences approach
- Some evidence on quality effects is analysed for Austria and Germany

- The transaction was authorised by the EC in December 2012 subject to commitments:
  - Facilitate MNO market entry (divesting spectrum to a potential new MNO, national roaming, sites)
  - Upfront agreement with one MVNO and a reference offer for up to 16 MVNOs with wholesale access of to up to 30% of Hutchison's network
- Results
  - Significant relative price increases in 2014 and 2015
  - Only in 2016 the effect became considerably smaller and statistically insignificant, likely caused by competitive pressure from MVNOs, which gained significant market shares in this period.
  - MVNO remedy appears to have taken more than three years to become effective.

- The transaction was authorised by the EC in May 2014 subject to commitments:
  - Capacity-based wholesale access to two MVNOs before the acquisition (up to 15%) and spectrum divestment to one of them
  - Amendment of the network sharing agreement which had been agreed between Meteor and O2 to protect competition from Meteor
- Results
  - Merger led to statistically significant relative price increases in the short to medium run
  - the magnitude and persistence of these effects vary across usage baskets
  - The effect of MVNO remedies was small

## The German Case – Telefonica/KPM (e-plus)

- The transaction was authorised by the EC in July 2014 subject to commitments:
  - Sell up to 30% of the merged entity's network capacity to 1 to 3 MVNOs
  - Divest spectrum and assets to a new MNO => Finally no new MNO
  - Extend existing wholesale agreements to MVNOs/SP
- Results
  - Evidence of price increasing effects in the short to medium run
  - But results should be interpreted with caution
    - Not very robust to changes in the specification
    - No data included for MVNOs (~20% market share) and Sub-brands

- In all three cases, there is some evidence that the studied mergers led to price increases in the short to medium run (even up to three years after the merger in the Austrian case).
- Effects of mergers on QoS is more difficult to assess, however evidence gathered in the report points to negative effects in the short and medium run.
- A careful approach should be taken with 4-to-3 mergers:
  - Structural remedies (such as promoting new MNO market entry) were not effective in the analysed cases
  - MVNO remedies may take considerable time to become effective or might not be sufficiently effective (or at least not in all parts of the market)

# International Activities

## Cooperation with TRAI & Joint Statement on NN



Body of European Regulators  
for Electronic Communications  
**BEREC**

MEMORANDUM OF UNDERSTANDING BETWEEN TELECOM REGULATORY AUTHORITY OF INDIA AND  
BODY OF EUROPEAN REGULATORS FOR ELECTRONIC COMMUNICATIONS



*"BEREC fully supports the approach of the Western Balkan states to the EU. It means creating growth opportunities and improvement of quality of life for the citizens of the region"*



Discussion on how to cooperate in order to develop the necessary cooperation in the region as well as to efficiently contribute to fostering the consistent preparation for and alignment to the EU Digital Single Market in the Western Balkans

# Other outcomes

- BEREC Report on Termination Rates at the European level
- BEREC Annual Reports 2017

# What's next?

- **Next Plenary: 3-5 October 2018 in Portoroz**
- **Next Public Debriefing: 10 October 2018**
  
- **BEREC Stakeholder Forum: 17 October 2018**

- **Contact for Press and Media**

- [press\(at\)berec.europa.eu](mailto:press@berec.europa.eu)

- **Social networks**

- Official Twitter account



- Official LinkedIn corporate page

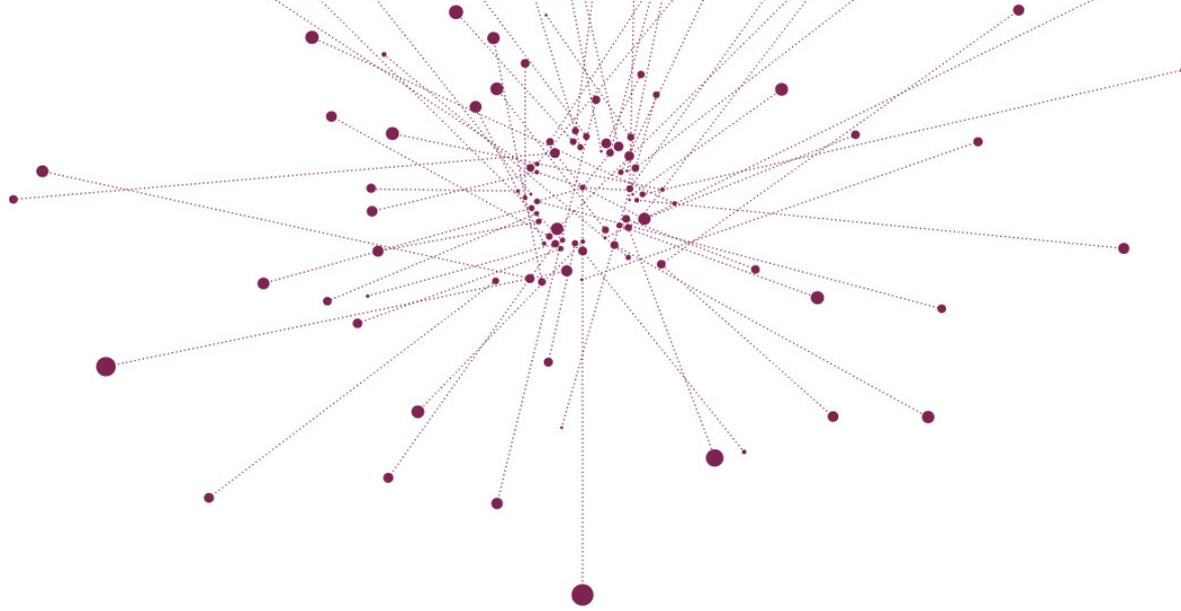


- Official YouTube account



- **Information Sharing Portal**

- <https://isportal.berec.europa.eu/>



Thank you!

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