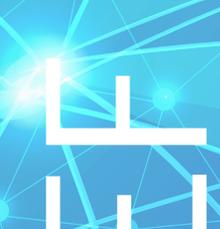




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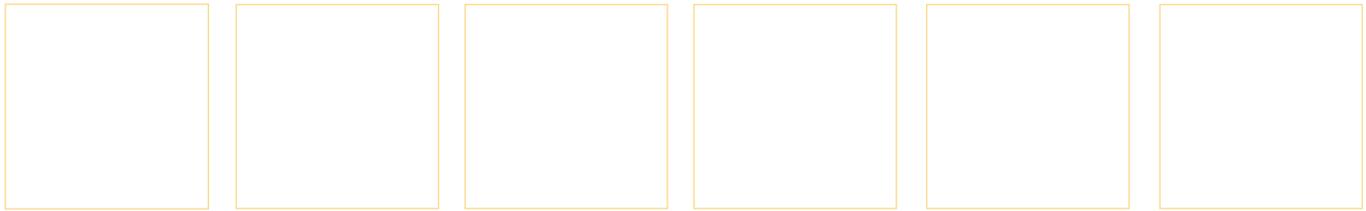
## *Quo Vadis Regulation?*

*Annual Conference, 30 June 2017,  
the Florence School of Regulation,  
Communications and Media Area (FSR  
C&M)*

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On 30 June 2017, the Florence School of Regulation, Communications and Media Area (FSR C&M) held its eighth Annual Conference. The Conference was divided into three panels, during which participants had the opportunity to discuss the following challenges, which are currently being raised by regulatory, market and technology developments in the electronic communications and media sector: (i) the Digital Single Market objective and the risk posed by the exploitation of big data, (ii) the goal of deploying adequate future-proof infrastructure, which requires investment, from both the private and the public sectors, and (iii) other challenges that are raised by the European Electronic Communications Code.

The event gathered different stakeholders together, and these included representatives from National Regulatory Authorities (NRAs), international organizations, academia, and industry, as well as law and consulting firms. This policy brief summarizes the main points raised during the discussion and seeks to stimulate further debate.



## The Big Data Challenge

Big data is one of the hottest topics in the regulatory debate in the electronic communications and media sectors. For market players, big data is triggering new business strategies. However, it is also creating new legal challenges, ones that are often complex and with no apparent feasible solution.

The discussion first touched upon the issue of *profiling*, i.e., the practice of collecting and processing data so as to create a profile for a given user, which can be used for advertising purposes, for forecasting, for offering tailored products/services, etc. There is an agreement that we, as users but also as citizens, are constantly monitored and that our data are collected with the final aim of identifying our behaviors and consequently acting in a tailored way. The danger behind that practice is that it may shape our choices and threaten pluralism of choice, opinion, knowledge, product, service, etc. As an example, one might think of the so-called 'confirmation bias' and how it risks becoming stronger if algorithms based on profiling provide only a certain stream of information. This could also go further, by creating clusters of opinions which are difficult to penetrate and which can manipulate opinions and information, leaving the space to fake news. However, participants have agreed that profiling may also bring with it added values, one example being healthcare: in this case, monitoring and profiling allow for an immediate and tailored medical response.

Multi sided-markets, advertising and the role played by data-sets owned by companies were key in the section of the debate that concerned the impact of data on competition law. To understand well the challenges brought by big data, it is worth starting an analysis from the big data value chain, namely: collection, storage and analytics. As regards collection, it has been highlighted that this can be done directly from the users, or indirectly by buying data from brokers (although this is still not so widespread in Europe). Storage, in turn, implies the need for large data centers. However, cloud computing could make the relative fixed costs more variable. Finally, as far as data analytics are concerned, this is where applications and algorithms become relevant and in this regard it is worth recalling the 4Vs: volume, variety, velocity and value. However, it is important to remember that data are not the only element in the framework, as skills (labor) and capital are also fundamental.

After having looked at the big data value chain, participants remarked that it is necessary to consider its evolution, which can be linked to three main triggers: the technological progress, the preferences of customers and the data protection regulations. With regard to data protection rules, the need emerged to clarify their scope of application: while some regulations affect all data (e.g., IP, competition law, consumer protection law, sector specific rules, etc.), others apply to personal data only (e.g., the GDPR, specific data protection rules in telecommunications, etc.).

Next, the discussion focused on the role of data in the determination of market power. In particular, participants discussed the crucial role played by substitutability and portability. According to Prof. de Stree, to take due account of big data, an analytical framework might be based on three principles and two questions.<sup>1</sup> The three principles are: i) data is an input, but it is not unique; ii) the data ecosystem exhibits many network effects; and iii) each big data application and/or algorithm is different. The two questions, on the other hand, relate to the value of the data and their availability. As for the latter, the debate focused on the cost of the direct and indirect collection of data and on its impact on antitrust assessments.

Participants have agreed that there is already a lively debate taking place on whether traditional competition procedures require profound changes (e.g., merger control) in order to encompass the role and power that are played out by big data. Reference was made to merger cases (*Google/DoubleClick*, *Facebook/WhatsApp*, *Microsoft/LinkedIn*) in which the European Commission concluded that a large amount of users' data would have continued to be available after the transaction, and to abuse cases (a 2014 case in the energy sector in France, and a 2015 case concerning the lottery in Belgium)<sup>2</sup>, where national competition authorities concluded that the datasets were not replicable, and thus could not be used to launch other services.

1. Bourreau, M., de Stree, A. and I. Graef (2017), *Big Data and Competition Policy: Market Power, Personalised Pricing and Advertising*, CERRE Project Report, available at: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2920301](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2920301)
2. Autorité de la concurrence, Décision 14-MC-02 du 9 septembre 2014 relative à une demande de mesures conservatoires présentées par la société Direct Energie dans les secteurs du gaz et de l'électricité and Belgian Competition Authority, Beslissing BMA-2015-p/K-27- AUD of 22 September 2015, Zaken nr. MEDE-P/K13/0012 en CONC-P/K-13/0013, *Stanleybet Belgium NV/Stanley International Betting Ltd en Sagevas S.A/ World Football Association S.P.R.L./Samenwerkende Nevenmaatschappij Belgische PMU S.C.R.L. t. National Loterij NV*.



As for the value of data, a number of issues were put onto the table, such as: the relationship between the quality of algorithms/applications and both data quality and data variety, the depreciation value of data, and the impact of Artificial Intelligence (A.I.) on the algorithmic developments. It was also highlighted that the more scarce data is, the higher the risk of market power.

Next, participants focused on data and video, the role of advertising, and the potential barrier to entry to the market that is created by the ownership of data. A reference was made to the study conducted by the Dutch Authority for consumers and markets (ACM), which revealed that, for now, data ownership does not seem to be an issue, as the most important way to attract users is to provide a large content offer or specific content.

The last, but not the least important, issue that was addressed during the panel on data and their protection concerned the role played by the different relevant national authorities. The common view is that competition law and consumer protection law can complement one another, but they cannot substitute for each other. This is reflected in the need for co-operation and collaboration between the different national regulatory authorities. This effort is key in order to have both the relevant instruments to understand the single cases and effective consumers/users' protection.

## Investments, Infrastructure and Technological Developments

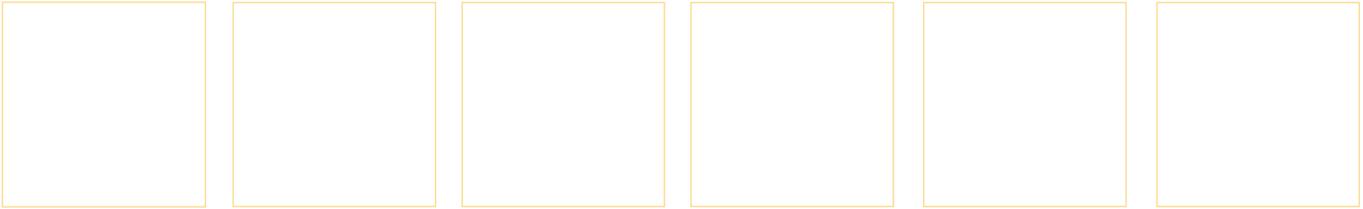
The second panel started with the mention of the Common EU broadband targets for 2025, which aim to fuel values within society by boosting the economy and innovation. As the Internet of Things evolves, the majority of our objects, it was recalled, will be connected wirelessly, and this amplifies connectivity needs. Furthermore, setting ambitious targets is justified by the fact that regulatory frameworks cannot be changed frequently, and thus a ten years' perspective appears to be adequate. On the other hand, participants noted that the new targets call for substantial investment, creating challenges for the European Union. Currently, there is a significant investment gap, which the EU is trying to address through various initiatives, like Wi-Fi for the EU. However, a lot still remains to be done.

In this scenario, the right balance between public and private investments becomes a key issue. It was explained that one of the factors that has a strong impact on such a balance is technological neutrality, a widely accepted principle that the European Commission has, until now, used to guide developments in the sector, but which, in the Connectivity Package, nevertheless appears to have been abandoned, or at least to have been strongly weakened. It was noted that regulations that are not technologically neutral are less of an issue when, because of the characteristics of the industry, the risk of error is low. However, in the broadband market, where technological evolution is rapid, especially in the context of mobile broadband, with its relatively short technological cycle, the risk of regulatory error appears to be significant. Picking a winning solution, or aiming at connectivity targets that demand cannot sustain, risks diverting or delaying private investment and thus creating a need for greater public intervention. It was highlighted that, considering that the Package seems to favour fixed network solutions, such risk may be amplified with regard to wireless technologies, and thus may negatively affect the development of 5G, which, however, is expected to contribute to the achievement of the connectivity targets.

Moreover, it was emphasized that the Commission's strategy may fail to take into due account the diversities of technologies that are already available at the national level, and could thus contribute, in the end, to accentuating the differences among the Member States, to the detriment of the Digital Single Market objective and, in the final analysis, to the achievement of EU-wide connectivity targets.

Finally, it was noted that, in order to invest, players need legal certainty and the assurance that the regulatory scenario will not change during the time that is needed for any given cycle of the investment.

Speakers have also debated the current challenges concerning the interconnection and net neutrality rules. The premise is that data traffic is increasing impressively, and the majority of this traffic is carried by content distribution networks (CDNs). To manage traffic, business actors generally revert to informal agreements, and therefore disputes between Content and Application Providers (CAP) and Internet Service Providers (ISP), mainly concerning traffic delivery and the need for enhanced capacity, are usually solved without regulatory



intervention. Furthermore, it was mentioned that there is a clear difference between traditional voice traffic and voice-over-IP traffic, which, in turn, implies different needs in relation to access regulation. The approach for voice-over-IP is necessarily different, as it is based on peer-to-peer and transit regimes. Moreover, market power appears to be different in the two scenarios, therefore altering the premises for regulatory intervention. To complete the picture, participants noted that, in the case of voice-over-IP, there are few ways to overturn traditional bottlenecks due to the fact that one can peer, or rather buy, transit.

It was added that the standard in use for traffic exchange, which is imposed by the net neutrality rules, is the 'best effort' one, and that there are no alternatives, although there may be a demand for differentiated products. It was also argued that the benefits of the introduction of QoS alternatives will be balanced by the loss of the built-in controls on local access operators' ability to exercise market power.

Another element raised in the discussion was the evolution of the network architecture, which goes in two directions: software-defined networking and network function virtualisation. With virtualisation, new networks can be adapted, 'sliced' and 'decentrally' controlled by different users. In other words, a network can have multiple 'tenants' or VNOs, which means, also, that there can be different QoS regimes. These developments, however, seem inimical to the net neutrality rules that have recently been enacted in the EU, which rely on a single, if variable, QoS – best efforts. The main question debated by participants was whether, in a context where networks develop the technology to project their network service delivery (including QoS) beyond the scope of their local network, the current network neutrality provisions are still sufficient or practicable.

The final consideration with regard to technological developments concerned the convenience of advocating for regulatory holidays that are aimed at the deployment of new networks. Some considered this to be a concrete option, due to the European Commission's strong commitment to pushing investment in this direction. It was suggested that other policy instruments might be the use of FRAND, and of some degree of flexibility for co-investors, although this solution may, in practice, be difficult to implement.

Another topic which participants debated extensively is the relevance of 5G and the challenges it raises. It was recalled that 5G is of tremendous importance because of its potential to change all of the industries where the EU has international strength. In addition, the 5G deployment creates vertical needs, which are not limited to one single industrial level, but, for the same reason, they are not necessarily homogeneous. For example, network slicing could fit indoor coverage well, but, on the contrary, may not work for connected cars. It was therefore argued that a one-stop-shop regulatory solution may not be able to address these different needs. On the other hand, it was noted that sectorial regulation is quite a success story in the EU. In the relevant sector, we have spectrum rules, telecoms rules and vertical rules to be combined, and the initiative in support of 5G development has to take into due account, and fit well, into this rather complex scenario, which, currently, raises various challenges. One of the major problems with spectrum rules is that the focus on fairness in spectrum assignment may create trade-offs in terms of lower prices, higher data allowances, better coverage and innovation. Telecoms rules, it was said, raise two main challenges: how to stimulate a sufficient level of investments, and how to ensure enough flexibility to allow for different business models. By way of example, prohibiting zero-rating and price differentiation may limit the providers' ability to offer differentiated levels of protection and treatment (i.e., the quality of service).

The final topic debated in relation to 5G was whether it finds adequate space and consideration in the new Code. Perceptions were diverse. On the one hand, some suggested that, if not more, at least the Code avoids the problem of over-regulation, and considered that, if needed, the European Commission might intervene with additional tailored measures. On the other hand, some stated that the new regulatory framework should contribute more to triggering demand and supply, in order to create the right incentives for the European industry.



## The European Electronic Communications Code: Current Issues and Future Challenges

The last part of the discussion revolved around the analysis of the main regulatory and institutional challenges that are associated with the recent initiatives undertaken by the Commission in the framework of the connectivity package. Its centerpiece, the proposal for a Directive establishing the European Electronic Communications Code (hereinafter the 'EECC'), was adopted on 14th September, 2016.<sup>3</sup> The EECC is directed to bringing EU-wide common rules and objectives governing the telecoms industry to date.<sup>4</sup> Participants remarked that its main goal is to stimulate competition, which, in turn, can spur innovation, strengthen the internal market, and ensure better protection of consumer rights. It was acknowledged that this can only be achieved by taking into due account the technological and commercial changes accompanying the creation of the Digital Single Market (more internet use, less traditional telephony), while promoting the growth of very high capacity (hereinafter 'VHC') connectivity and supporting network deployment by all operators.

Participants pointed out that one of the major updates of the regulatory framework deals with the provisions governing asymmetric access regulation. National Regulatory Authorities (hereinafter "NRAs") are asked to amend market analysis procedures so as to intervene only when it is necessary to address retail market failures and to ensure more positive end-user outcomes. In particular, when identifying the markets that should be subject to *ex ante* regulation, NRAs will have to draw upon formalized best practices and take into consideration commercial access agreements and any other form of obligation already imposed, in a way which appears to be much more holistic than in the past. There was a consensus that the codification of the three criteria-test (Article 65 of

the EECC), which has so far only been mentioned in a non-binding legislative instrument,<sup>5</sup> would ensure more robust and predictable results. Finally, it was highlighted that the recent consultation which was launched to update the Significant Market Power (hereinafter "SMP") Guidelines,<sup>6</sup> which serve as a fundamental basis for the assessment of SMP in retail telecommunications markets, will help the NRAs to improve the regime through the alignment of asymmetric regulation with the broader connectivity targets fixed in the new Code.

Participants also stressed the importance of those new provisions, which are expected to enhance consumer protection (for example, NRAs would have to ensure that end-users have free of charge access to at least one comparison tool). The general purpose of fixing the minimum standards is to allow a transparent assessment of price, tariffs, and the quality of service performance of the different publicly available electronic communications services across the EU (Articles 96(2) of the EECC). This part of the framework is complemented by switching rules that are directed at coping with the rapidly increasing number of bundles, so as to avoid lock-in effects through specific sector provisions, such as the maximum duration of contracts. On this point, there was consensus that a delicate balance will have to be struck between removing barriers to switching and supporting investment in VHC networks.

Moreover, participants highlighted the fact that greater integration and harmonization in regulatory decision-making will be achieved through the introduction of appropriate institutional changes. The proposal for a repeal and replacement of the current BEREC regulation<sup>7</sup> aims to meet this goal through a large set of reforms. It was noted that this is particularly true with reference to access

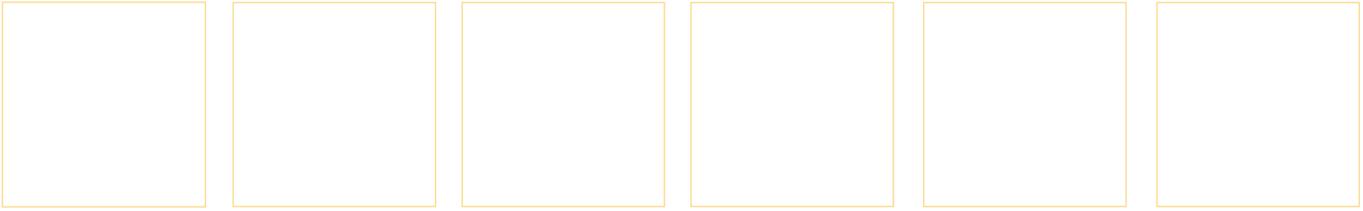
3. Proposal for Directive of the European Parliament and the Council establishing the European Electronic Communications Code (Recast) COM(2016) 590 final/2, available at: [http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=comnat:COM\\_2016\\_0590\\_FIN](http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=comnat:COM_2016_0590_FIN). Notably, this body of provisions should apply to providers of both networks and services.

4. The proposal consists of a horizontal recasting of the four existing Directives (the Framework Directive, the Authorisation Directive, the Access Directive and the Universal Service Directive), bringing them all under a single Directive.

5. Commission Recommendation 2014/710/EU of 9 October 2014 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services.

6. Commission guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services, last updated in 2002.

7. Proposal for a Regulation of the European Parliament and of the Council establishing the Body of European Regulators of Electronic Communications (BEREC) - COM(2016)591, available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016PC0591&from=EN>.



regulation. In this respect, it was observed that BEREC's oversight functions may be enhanced so as to ensure that common policy objectives are achieved. An important point raised during the discussion dealt with the new procedural rules that are to be followed in order to appoint the Executive Director of the BEREC Management Board, as a list of candidates suitable for this role will have to be established by the European Commission (Article 22 of the Proposal). Participants stressed that one of the main risks associated with the change will be the increase in the Commission's institutional influence via a reformed BEREC structure. Participants concluded that significant amendments to the major provisions of the Code are possible in the near future, given the current intense debate on this point in the European Parliament.

Finally, the discussion focused on the new tasks relating to radio spectrum. It was noted that a mandatory peer-review process will be established. In particular, BEREC will have to issue non-binding opinions in reference to NRAs' draft measures assigning rights of use to the radio spectrum. It was noted that although the main objective of the model is to establish a more appropriate and efficient governance structure, BEREC has opposed the new regime that has been proposed by the Commission, for both technical and procedural reasons. It remains to be seen how potential alternatives can be implemented in practice.

Participants thus highlighted that the modernization of the current EU telecoms rules, which were last updated in 2009, tries to address the investment challenge that is associated with the realization of the ambitious connectivity targets. With the introduction of forward-looking and simplified regulation, all companies should be encouraged to invest in new top-quality infrastructures, everywhere in the EU, both locally and across national borders. Moreover, it was noted that the implementation timetable foresees the implementation of the Code into the national legal orders by EU Member States by the end of 2019, and that the initiative was adopted simultaneously with the Commission's 5G Communication<sup>8</sup>. In this respect, participants stressed the important role that should be played by the EECC

in supporting the deployment and take-up of next generation networks, such as 5G, notably, as regards the assignment of radio spectrum and of favorable framework conditions, amongst other areas.

Overall, the diversity of views ensured a lively debate during the conference. While participants agreed on various issues, the discussion revealed the need for further research on those issues that have not yet been sufficiently explored.

8. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: 5G for Europe, An Action Plan, available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1478790753783&uri=CELEX:52016DC0588>.

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