

CEPS EVENT REPORT



Thinking ahead for Europe

Wireless Broadband and Broadcasting: New Business Models and Challenges for Spectrum Policy

Seminar organised by the CEPS Digital Forum, 12 May 2016

Rapporteur: Romain Bosc

Although traditional linear TV over broadcast networks still dominates audiovisual (AV) consumption today, this is changing with fixed and wireless broadband playing a growing role in delivering and distributing video content. New business models are emerging, e.g. for LTE broadcasting, both as a substitute for, and a complement to, traditional broadcast networks. However, there is great uncertainty about the prospects and impact of these developments.

This seminar held at CEPS on May 12th 2016, and chaired by Colin Blackman, focused on the mid- to long-term impacts arising from convergence of wireless broadband and broadcasting in Europe and internationally, the implications of the emergence of new business models for delivery of AV services, and the challenges for spectrum policy. See the annex to this report for a complete programme of the event.

Background

The Commission presented, in February 2016, a proposal to coordinate the use of the 700 MHz band for mobile services, in order to accommodate the growing demand for wireless broadband by operators, improve internet access for all Europeans and incentivize the emergence of innovations such as connected cars, remote health care, or the 'Internet of Things'. Therefore, the intention is to reallocate spectrum and make more bandwidth available for mobile services in the 700 MHz band (694-790 MHz) that is now used for TV broadcasting, e.g. digital terrestrial television (DTT). The long-term usage of the sub 700 MHz band (470-694 MHz) is mainly foreseen to be dedicated to downstream audiovisual content distribution.

With the constant decline of average revenue per user (ARPU), and the enhanced competition in content creation and distribution from Internet companies (i.e. OTT services), mobile broadband and broadcast industries are facing numerous challenges. Both industries are developing broadcast solutions to cope with future mass mobile multimedia services. While broadcasters need improved infrastructure to provide mobile services to indoor users, and Mobile Network Operators (MNOs) need more spectrum to



The CEPS Digital Forum is a multi-stakeholder platform aimed at raising the level of debate about the policy challenges that arise from the European Commission's Agenda for Europe. It brings together academics, telecommunications operators, broadcasters, equipment manufacturers, content providers,

application producers, internet players, national regulators and European institutions to enable a constructive discussion on how to achieve a successful transition to a balanced and inclusive information society and exploring more broadly the implications of an hyperconnected society. For more information, please click [here](#).

The rapporteur, Romain Bosc, is Research Assistant in the Regulatory Policy Unit at CEPS.

deliver content on mobile devices, the development of the future 5G system brings new opportunities for developing a single converged network.

Perspectives on the new multi-device audiovisual world

With streaming videos now accounting for more than half of broadband traffic, video has become the major service for which consumers are willing to pay, as pointed out by Gerard Pogorel (Telecom ParisTech). Professor Pogorel presented different scenarios of UHF-sharing delivery networks, some key market trends and challenges that are likely to redefine the media and telecom landscapes in the near future. He showed that traditional MNOs and broadcasting industries were subject to a series of strategic moves with some actors taking advantage of complementary functions (AT&T Direct TV, BT, China Broadcasting Network (CBN) licensed as telecom operator, Telecom Italia-Vivendi, and so on). This consolidation and cross-ownership of electronic media platforms, built on the convergence of broadcast and broadband media, entails important implications for regulatory policies such as spectrum management and question the adequacy of today's regulatory frameworks, for instance the AVMS or net neutrality rules. Seemingly, convergence raises concerns from broadcasters about being subject to the same rules as network operators, while telcos are campaigning for a less-intrusive regulatory framework.

In integrating unicast with broadcast and caching, 5G offers new potential, and better connectivity and network scalability that could help support the emergence of converged platforms. Branimir Stantchev (European Commission) outlined the vision of the European Commission upon co-existing and converging models. Mr Stantchev then echoed the recommendations that the Commission is pushing forward such as the need to develop new measures for video consumption, the need for the broadcasting community to provide relevant guidance to 5G R&D, advocating mobile and broadcast communities to cooperate and produce viable innovative services, or calling for investigating the feasibility and cost of a co-channel based on a Single-Frequency Network (SFN). He highlighted a study that is currently being finalised on the socioeconomic aspects of 5G and some oriented actions to be taken in a white paper on the implication of developing 5G for the media and entertainment industries.

The following presentation gave the audience an overview from the telecoms and broadcasting perspectives. Rosario Baratta, (Telecom Italia) presented Telecom Italia's strategic network investments and coverage targets as well as some strengths and weaknesses of the Italian market. Although Italy is still lagging behind in terms of fast connectivity, it enjoys high competition in mobile broadband that has driven prices down to some of the lowest in Europe. While Italy is characterized by the highest mobile broadband traffic consumption per user in the EU (1.17 Gbit/month), the existence of cable as a naturally convergent platform is a missing dimension. With competition having shifted from price to quality, Mr Baratta questioned the adequacy of network neutrality rules, arguing that quality was becoming a key factor in the convergence process. There are three different models for the convergence between broadcasting and communications: i) a deal between a telco and a media operator through distribution platforms; ii) a telco effectively becomes a TV/media operator through internal content production; or iii) acquisition/merger between a telco and a TV/media operator.

Today, 95% of TV viewing hours are delivered over broadcast networks, as recalled Darko Ratkaj (European Broadcasting Union), who gave his perspective on the new multi-device audiovisual world from the broadcasting standpoint. In his view, better quality of user experience drives user engagement. Therefore, technical performance, content choice, convenience, and costs are the main determinants for demand. Mr Ratkaj also stressed the importance of public service media providers as a major source of funding of original European content. The EU cultural, creative and media industries is a key economic sector representing 25% of the global audiovisual (AV) market, generating 6.8% of GDP (€860 billion in 2014) and supporting 6.5% of Europe's employment (about 14 million jobs, mostly highly skilled). Hence, Mr Ratkaj called for protection of the European AV media ecosystem's rich and diverse dimensions that are rooted in local territories, economies, and cultures. In his view, the loss of UHF spectrum from terrestrial broadcasting would be detrimental for both consumers and the European AV industry, mainly because it would result in insufficient network capacity and coverage, higher costs for both content providers and consumers, the lack of predictable quality (only best effort) and free-to-air reception, insufficient safeguards for public service media, and the absence of models to sustain original content production. In his opinion, mobile broadband does not constitute a viable alternative to terrestrial TV, but rather should be seen as a complement for improved bidirectional communications and enhanced interactivity, meaning greater on-demand and personalised service, as well as improved multi-device capacity.

Implications of wireless broadband and broadcasting for spectrum policy

A second panel, moderated by Erik Bohlin (Chalmers University), gave room for more reflections on these potential developments from a variety of stakeholders with a particular focus on the implications for spectrum policy.

Based on the observation that in Germany there were just nine channels with a daily market share above 2% while more than 20 channels on digital terrestrial television (DTT) are seamlessly transmitted, Karl-Heinz Laudan (Deutsche Telekom) suggested we rethink current models, proposing to favour a few relevant channels instead of 24/7 transmission of niche programs. He also urged regulators to make the 700 MHz band available for mobile use no later than 2020, referring to Germany and France which went ahead and auctioned the band in 2015, while Finland and Sweden will do so by 2016 and 2017. He also urged the EU to achieve cross-border coordination by June 2017 and to publish national plans by December 2017 at the latest. He supported the Commission's proposal and called for maintaining the core of the 700 MHz band for mobile broadband alongside the 800 MHz band to give the EU a powerful opportunity to deliver on the Digital Agenda objective of universal high-speed broadband access (i.e. 30 Mbit/s for all EU citizens by 2020).

Wladimir Bocquet (GSMA) formulated complementary recommendations and rejected a "one size-fits-all" response to the fast-changing mobile and media markets, in particular considering the disparities in terrestrial broadcast and IPTV across Europe. Instead, Europe should harmonise best practice for the selection of spectrum bands and award methods. Hence, he advocated that the objectives of spectrum awards should be to raise long-term economic value for the economy, society and consumers; that the assignment procedure should be objective, transparent and non-discriminatory in its treatment of

existing and new mobile operators; and that future awards should ensure that spectrum is effectively assigned and efficiently used. He added that licence rights and obligations should be clear and promote competition as well as downstream market efficiency; and finally that industry and stakeholders should be consulted throughout the process to ensure there are no distortions or flaws in the allocation of spectrum.

Philip Kelley (Nokia) looked at the definition of broadcast services, and noted that it was not really about technology but rather the direct reception of diverse transmissions by the general public. In his view, enhanced cooperation between broadcast and mobile broadband could achieve complementary distribution of linear audio-visual content to mobile devices. Further, mobile devices may become the TV receiver for large screens. Therefore, a win-win situation with more efficient use of spectrum requires a more flexible allocation of bandwidth to linear and non-linear content using the 470-694 MHz band. He anticipated that holders of broadcast licences and wireless broadband licences would enter into agreements to optimise content delivery, before concluding that regulation was key in defining criteria that will give more clarity and certainty to further innovative business models to flourish.

Guillaume Lebrun (Qualcomm) agreed on the crucial role that regulators have in making the two camps work together, helping protect content creation and quality, while enabling its distribution through the most efficient technology. MNOs have dense networks, capable of providing on-demand services, payment systems, interactive functionalities and a series of new services that terrestrial broadcast networks cannot provide. Additionally, broadcast content providers produce high quality content, and have access to large spectrum for free because they invest a lot in content creation. Mr Lebrun saw tremendous opportunity to combine these specificities to create a breakthrough for Europe in the global media landscape. Otherwise, maintaining the status quo and rejecting flexibility, or hampering the development of Supplemental Downlink (SDL) would ultimately benefit third parties such as Internet companies. Converging services of digital terrestrial television and mobile broadcasting would help unleash the next generation of innovation based on enhanced personalisation. Audience measurement would also evolve since the interaction between viewers and technology will become more dynamic, meaning that a passive audience will be less relevant. Rather, viewers would be enabled to interact with the content, to choose and purchase directly their products. Further, we could also imagine a programme where viewers would interact with the show live, or generate their own content to disseminate to others. Mr Lebrun saw that there was an opportunity to revitalize investment through integration of broadcasting into MNO business models. Finally, the proposed regulation was seen as providing unique momentum that should be seized to benefit all European players.

With Europe leading spectrum release for mobile broadband, as highlighted by Lodovico Benvenuti (Mediaset), he nevertheless called for more restraint when it came to predictions about the end of TV and linear consumption. Linear TV consumption is still a major market and the first window for consumers and therefore a key driver for consumption trends, benefiting other platforms. Mr Benvenuti rejected the assumption that Europe was lagging behind on online distribution. Conversely, he claimed that Europe's services were doing well both in online public service broadcasting (PSB) and on the commercial side as well as in Pay TV and free-to-air. Even though platforms like

YouTube and Facebook have radically changed the traditional media landscape and have disrupted traditional markets, he argued that the most successful content was still produced by traditional content producers. He invited his colleagues from the telecom industry to be more cautious, conceiving online consumption rather as a coexisting complement. Mr Benvenuti also acknowledged that IP distribution was clearly the future in the long run, and that Internet companies will keep on growing, making them key complements and strategic partners. However, he expressed concerns about UHF band reallocation. In his opinion, the way forward is co-existence and not convergence, at least not until broadband has sufficiently developed, and considering the huge costs of migration. In any case, future platforms will have to provide universal services, free point of access and the same level of coverage as traditional broadcasting today.

Further discussion with the audience explored future relations between broadcasters, telcos and Internet companies as well as how the revision of the AVMS Directive could support the transition and the emergence of new platforms. Mobile video will generate three-quarters of mobile data traffic, but it is not clear what the share between linear and non-linear consumption will be. Although participants had different views on the future of the network infrastructures landscape, they generally agreed that Europe should have a harmonized long-term strategy for the UHF band based on real usage scenarios and customer demand. It was importantly noted that the challenge of network delivery capacity should be addressed in respect of preserving the public interest and public services.

In concluding, participants agreed that more collaboration between creative sectors and the telecom industry was needed, with the support of the European Commission as a platform for dialogue. Even more important was the need for alignment between spectrum policies and audiovisual policies in order to create new opportunities in the media sector and for driving adoption of new technologies through a virtuous circle between content creation, cultural diversity and technology.

Annex
Programme of the CEPS Digital Forum Seminar

**Wireless Broadband and Broadcasting:
New Business Models and Challenges for Spectrum Policy**

Date: Thursday, 12 May, 2016

Chair: Colin Blackman, Director, CEPS Digital Forum

Agenda

09:30-10:00 Registration and Coffee

10:00-11.15 **Perspectives on the new multi-device audiovisual world**
Moderator: Colin Blackman, Director of the CEPS Digital Forum

Gerard Pogorel, Telecom ParisTech

Introduction: Markets, convergence and actor strategies, new perspectives and challenges

Branimir Stantchev, European Commission

The vision of the EC

Rosario Baratta, Telecom Italia

Telco-broadcaster convergence: the telco perspective

Darko Ratkaj, EBU

Telco-broadcaster convergence: the broadcaster perspective

11:15-11:30 Coffee break

11:30-13:00 **Panel Discussion: Implications for spectrum policy**
Moderator: Erik Bohlin, Chalmers University

Wladimir Bocquet, GSMA

Philip Kelley, Nokia

Lodovico Benvenuti, Mediaset

Guillaume Lebrun, Qualcomm

Karl-Heinz Laudan, Deutsche Telekom

13:00-13:15 **Conclusions and future work**
Branimir Stantchev and Gerard Pogorel