IIC/BEREC Telecommunications and Media Forum 2021

Introduction

The IIC and BEREC (The Body of European Regulators for Electronic Communications) held their first joint forum event in 2019, agreeing thereafter to hold it biennially. The event focuses on the primary regulatory issues affecting Europe, with contributors from regulatory bodies, operators, content providers, international bodies and research organisations. Key topics for 2021 were the Covid-19 recovery programme, the new digital legislation proposed by the European Commission (the Digital Markets Act and Digital Services Act), infrastructure, security and climate change. The event took place online on the 26th and 27th May 2021.

The Digital Decade – recovery and resilience

Human values and digital sovereignty

A keynote speaker from DG Connect noted that a feature of the Covid-19 pandemic how Europe had been especially hard-hit. In the process, many long-term issues came to the fore. The continent was too dependent on non-European technologies, supply chains were too fragile and digital convergence was not sufficient. The European Commission's 'digital decade' aimed to adopt a European approach to digital development, consistent with human values and 'digital sovereignty', backed by historic scale funding of 750 billion Euros. The policy programme, ('compass') is based on the four cardinal points of education and skills, infrastructure, business, and government, transformation. A framework of multi-country projects will be supported by a 'traffic light' system of annual reporting to ensure projects are on track – 'red' will trigger a corrective process between the commission and member state. Recovery plans so far submitted by member states included extensive digital measures, mostly meeting and sometimes exceeding the commitment of 20 per cent of endowments.

The programme will address supply chain dependencies, including semiconductors, cloud and data, acknowledging digital as an engine for prosperity. The aim is for a stronger Europe but not a protectionist one – projects can include countries from outside the EU, but with a link between principles and ownership. A representative from the World Bank noted the relevance of the programme to countries outside Europe, and emphasised the importance of co-operation around the world. Digital represented the foundational infrastructure for many sectors in the future, and essential to societal resilience. Diversity was important to avoid the risk of dominant players turning

the digital economy into the 'platform economy'. Data is key to improving peoples' lives in a range of areas, and 'data connectivity' is as much a priority as digital connectivity.

Operators viewed the plans as ambition and convincing, while noting that a digital policy programme is not the right place for a specific regulatory programme. It was critical to promote investments in demand stimulation as well as infrastructure. The recovery fund was an opportunity to 'crowd in' private investment, but reforms needed to be locked in, including removing process barriers,

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guidelines for network sharing and license procedures. Public money should be invested where the market failed, and not crowd out private investment. It was also noted that the climate around spectrum auctions had changed, with incentives for rapid investments, not just revenue. Hold-ups in network development were currently being caused by chip shortages, security issues affecting equipment supply and rights of way, where local government remains the greatest barrier. The issue of the contribution of 'over-the-top' providers was largely in the past. Service providers are frequently working with network providers to improve availability. The proportion of traffic represented by video-on-demand is expected to decline in the future. The important issue is connectivity across all technologies, if Europe is to keep pace with Asia and the US. Overall, operators welcomed the focus away from regulation and towards investment.

Digital Markets Act and Digital Services Act
Addressing the practices of 'large gatekeepers'

A panellist from BEREC, the Body of European Regulators for Electronic Communications, described how the DMA was an asymmetric instrument targeted at particular practices and behaviours by large gatekeepers. It was not an attempt to regulate the internet. It is designed to give end-users ownership of their data by restricting the gathering and combination of data without permission, and providing choice in the un-installation, as well as the installation of software. There are benefits to platforms too, guaranteeing openness, ensuring interaction across different platforms and enabling innovation. This is necessary because platforms operate at international scale, but information gathered at the national level was important to support enforcement from Brussels. The acts takes account of national specificities, but in a European context and with European practices.

Another representative from BEREC described how the DSA, in contrast to the trading focus of the DMA, addresses on the 'information space', especially social media and search engines. Their scale and model makes

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them different from conventional media, and requires a new style of regulation without preventing them from operating at scale. The current self-regulatory approach has low confidence, and the regulation provides for governance and legally enforceable rules which are properly suited to platforms based on user-generated content, especially in 'duty of care' and transparency obligations. It applies European values and freedoms on behalf of European citizens.

A panellist from Facebook agreed on the concept of the DSA, and much of what was in it. He questioned which companies were in the scope of the DMA, and how you could get out of scope, as

well as which services were included. The act breaks the link between market power and conduct, getting to the heart of product design. Unlike telecoms companies, platforms have different business models, but the regulation is generic.

Manipulative practices

*The risks from manipulative behaviours practiced by tech companies were described in a presentation from **Professor Helen Nissenbaum** of Cornell Tech. Defined as 'imposing a hidden or covert influence on another person's decision-making', manipulative practices in digital involve the exploitation of general and individual vulnerabilities, which technology is adept at discovering. It was, said the presenter, easy for companies to get consent to data practices, and consumers forget that technology is impacting their view of the world. This creates the danger of a loss of autonomy, created by asymmetric conditions of knowledge. It is not possible for people to be sufficiently informed to give 'informed consent', and GDPR is insufficient for the regulatory task. Possible regulatory responses could involve widening the definition of harm.*

A full report can be found at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3306006

A representative from Amazon was concerned that the DMA entailed 18 immediate obligations across 8 services – nearly 100 ways of application– and worried that the redress was focused on speed rather than fairness. He pointed to the role of the Amazon marketplace in enabling small retailers to compete with larger competitors, and the risk to investment in innovation arising from any reduction in competitive pressure. He also addressed the issue of trader verification, explaining that in 2020 only 6 per cent of accounts passed Amazon's own process. He agreed that the regulation was too general, applying the same rule to software uploads, for example, as to toothbrushes. The product safety elements are too blunt to be dealt with by the acts, and should be left to other legislation. There was also a question of why the act would apply only to a large platform like Amazon, when consumers should be protected wherever they shopped. He made the additional point that pushing consumer transactions outside of the Amazon system would increase the risk of fraud.

By contrast, a panellist from Sky felt that the DMA and DSA were not novel, and were based on principles established in European law. Such rules had enabled Sky to thrive, he said, and he questioned why companies creating such major societal impacts had gone unregulated for so long. His suggestions for improvement included clarity on the limitations of national bodies in the regulation of large platforms, and the potential for applying traceability rules to all online traders, not just online marketplaces.

A representative from Telefonica believed that the DMA would curtail the expansion of large platforms, and provide more opportunity for innovation from other players. He expressed concern at the asymmetry in the DSA on the issue of liability for illegal content. The level of liability cannot be the same for a large provider as, for example, a cloud provider, he felt. But it cannot be just about size, noting that micro enterprises are often very active in the dissemination of illegal content. It was also important to take measures to ensure that content taken down didn't simply reappear elsewhere.

In a discussion over whether the DMA and DSA could be integrated pieces of legislation, the concerted view was that the industry was used to interaction between regulations, and regulatory bodies have different scopes and points of view, which should be maintained.

Green growth, sustainability and climate change
Supporting the transition

A representative from ARCEP described how the organisation was building on the transition envisaged by the Paris Agreement, with progressive awareness and measures such as the provision of environmental information. The national authority was actively encouraging green investment, and accepted green issues as another chapter in its responsibilities. Part of this had involved creating a new platform and events bringing together parties to share knowledge and devise better tools. The organisation was also co-ordinating with other regulators to optimise data collection and availability, and taking a prospective role outside of its mandate to update regulatory tools. Another panellist discussed ongoing research designed to help the infrastructure itself to become more climate-neutral, a topic complicated by the 'rebound effect' – the impact in manufacturing if equipment is changed.

A broadcast regulator from Ireland described a sector-wide initiative to foster best practice and improve debate, with a roadmap to ensure transparent reporting and governance. It was recognised that television and radio are significant sources of trust in the country, and the media has an important role in supporting the public sphere. The initiative includes cinema and film companies, recognising the financial challenges facing the sector. The role of the regulator is to maintain standards in credible and trusted information, but also to ensure that the media is free to challenge and interrogate alternative narratives. Regulators are in a good position to provide an open space for industry discussions outside of normal competitive issues.

A representative from BT described how, as well as more energy-efficient networks, the company was helping customers to make better choices themselves through behavioural economics. There were challenges involved in the retirement of legacy infrastructure, where it may be difficult to move some customers. Across Europe he argued that policymakers should help reward companies performing well in the green space versus those that are not. For example, net neutrality is good for innovation, but not for distribution. An alternative version of net neutrality could take account of efficiency and sustainability. There was also an argument for better consumer information, such as 'kite-marking', to help customers to consider service and sustainability rather than just price. Regulators needed to accept that future networks will involve complex environmental trade-offs, such as the use of batteries, in order to ensure resilience. They should be aware of adding cost.

A panellist from AT&T described how many of the changes the company was making to address climate issues, including the deployment of new equipment, were resulting in more efficient services for customers. National governments, however, needed to set mandates for regulators that allowed for more effective action, such as promoting fair rules for global trade.

Operators were keen that any new measures should not punish early adopters – for example setting a simple target of 50 per cent reductions in carbon when many companies have already done so. Consistent standards were also required, along with a fair set of measures that could be made available to consumers to enable comparisons. Third parties could have a useful role to play in converting technical measures for consumers, such as in broadband speed trials. Some argued that companies failing to engage should be 'named and shamed'.

Infrastructure and connectivity

Open access networks – challenge and opportunity

The session began with a presenter from Rakuten explaining how the company had developed an Open RAN model with the aim of lowering cost, and disaggregating and controlling each part of the technology stack. The result enabled greater automation, productivity and efficiency, with benefits for the industry and the consumer. The model allows networks to be improved through software upgrades, rather than the hardware replacement of the past. It has been shown to be scalable, and to deliver on performance as well as cost.

Regulators

He went on to describe how regulators in Asia-Pacific have been supportive and keen to understand use cases and the benefits of a 'cloud-native' technology. Concerns revolved around stability and reliability but the network had proved its resiliency. The discussion has moved on to enablement, creating a system that encourages roll-out. Most regulators want to promote competition and innovation. The speaker noted that in Japan, spectrum is allocated based on speed, modernisation and sharing, and has resulted in excellent infrastructure. The use of unlicensed spectrum will have an important role when Open RAN is built to scale.

Innovation

Cloud architecture will, the presenter believed, drive major transformation. Nokia had shown how innovation could take place in disaggregation, based on an ecosystem of willing partners. Existing partners have an important role to play, but innovation through proprietary hardware is 'in the past'.

Security and resilience

Here the network would depend on 'zero trust' network architecture, (where each element of the ecosystem needs verification), starting with the supply chain. The system requires 100 per cent visibility, not just of the units, but where the parts inside the units come from. Black boxes need to be removed. We need to understand the supply chain fully, create the right architecture and use identity management to ensure that no malicious hardware is deployed inside the network.

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A panellist from DG Connect described how security was being strengthened through the cybersecurity toolbox, with measures in place for the exchange of information and encouraging as much convergence as possible. The EU was well aware of the benefits of software-based networks, but the maturity of the technology needed to be assessed in light of the deployment targets – there was no waiting for technologies to become available – and the cost / benefit dimension.

A representative from Ofcom expressed concern over the limited number of vendors after the removal of 'high risk' vendors. The UK was embarked on a strategy to create more diversity, supporting both new and existing suppliers, and encouraging open, interoperable solutions. As part

of the strategy the new SONIC laboratory[1] would test the readiness of new products, starting with Open RAN. Ofcom would share results with partners.

A Microsoft representative said that the updated Network Information and Security proposal (NIS 2) was sensible. Cyber-attacks are across borders and, while the national interests are understood, greater harmonisation is necessary. 5G will make security more complex and more diverse. The cybersecurity certification scheme needs to take account of Open RAN and private networks. A panellist from Nokia noted that most software interfaces can interoperate, and the evolution of the networks would open up the ecosystem to new players. There needs to be a path to the adoption of Open RAN which, he said, would overtake traditional RAN in the coming years. A representative from Telenor said that security regulation needed to be predictable and consistent, noting that in Sweden security regulation is stricter for mobile than for fixed line, driving consumers to less secure networks because of price. Networks being built now will last for a decade, and security proposals should be agreed and then allowed to remain for some time. He welcomed Open RAN but observed that vendor diversity would be critical, and that the technology doesn't yet fully exist.

Another panellist noted that, while there were 'believers and non-believers' in Open RAN, the issue was about having secure, resilient networks rather than a single technology. Open RAN is not more secure per se, and poses new security challenges given the range of products from different sources. Software updates themselves pose security risks, as does the integration. An operator suggested that security authorities needed to be involved in the discussion about Open RAN.

International co-operation on security was improving, recognising that the threat is different in different countries. Authorities were co-operating with tech firms, for example with Google over mobile phones, and with Microsoft's digital crimes unit.

Pace and scale of regulation

A panellist from DG Connect recognised that regulation itself wasn't popular, but was necessary to clarify conditions, create predictability and promote harmonisation. It is effected at the EU level, and should not have disruptive impacts for member states. It was important to work at the foundational layer then look sector-by-sector. An operator pointed out the need for regulators to understand the commercial realities, with trade-offs on security set against the speed of roll-out. Speed of change was recognised by one regulator as an issue for operators, noting how there had been successive changes in the supply field. There needed to be greater consistency between regulators. It was pointed out that harmonisation can often stimulate innovation, a thought seldom recognised.

Keynote conversation

FCC Acting Chairwoman Jessica Rosenworcel discussed a range of topics with Michel Van Bellinghen, Chairman of BEREC. Here is a summary of what she had to say:

Security and 5G

On the certification of 5G, the policies were traditionally based on preventing spectral interference, but the FCC is now looking at this more broadly, for example in the context of network security Traditional equipment authorisation could be used to incentivise more secure consumer-based products suitable for the 'Internet of Things'. The FCC is helping to remove insecure equipment from

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[1] SmartRAN Open Network Interoperability Centre

networks, but there is also a need to promote innovation. We are enthusiastically exploring Open RAN, and looking to more vendor diversity, but without allowing the cheerleading to get ahead of where the technology is.

The days where regulators could focus singularly on, for example, telecoms, are over. The FCC has to act with every other actor, public and private sector. A recent executive order from the President of the United States directs every arm of government to look hard at the security of existing IT systems, and instructs the government to work more closely with the private sector. The task of making everything in the world cyber-secure is too big and the consequences too great. We're all going to have to work together.

The digital divide

The last year has proved that broadband is a 'need to have' for everyone, and yet in the US there are many households not subscribing to broadband. We are supporting deployment, but there are two specific programmes. The first is the Emergency Broadband benefit designed to target households that have experienced job loss or rely on Federal Aid Programmes. It will provide a broadband connection to their household and support of between $50-$75 a month. The second helps children without reliable internet access at home, some 17 million young people in the United States. They fall into what I call 'the homework gap'. They have reliable internet access at school but they don't have it for their nightly schoolwork. The programme makes sure all schools and libraries get support to purchase devices and set up students up at home with Wi-Fi hot spots, or routers and modems. These affordability programmes are just as important to ending the digital divide as the traditional programmes to extend the reach of infrastructure.

Our other big initiative is broadband mapping. I have stood up a broadband task force to develop with pinpoint accuracy where service is and is not and at what speeds. My hope is that if we have a data set that is comprehensive, we will make smarter decisions about what to fund where and think about futureproof infrastructure. We will also have to understand what speeds are available where. The existing standard in the United States for broadband is 25Mbs down and 3Mbs up and I think that is too slow. If we want to futureproof our networks, we will have to figure out how we support higher standards in conjunction with the mapping work.

New technologies

As well as fibre we are taking action to improve the viability of low earth orbiting satellite systems that might be able to reach our rural communities with substantial speeds. We are clearing our airwaves for unlicensed spectrum particularly in the 6 GHz band, where we have 1200 MHz of spectrum newly cleared. We are holding new auctions for mid-band spectrum for 5G and encouraging our carriers to work with the millimetre wave spectrum they purchased in earlier auctions. We have to embrace every single technology that is out there – no single technology is going to be capable of reaching everyone everywhere.