MOBILE WORLD CONGRESS

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EU divided over spectrum allotment

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European member states are divided over the apportionment of radio spectrum for critical public safety – seen as vital to maintain free flows of data in the hyper-connected world – especially in the wake of recent terrorist attacks.

Cell tower. Thuringia, 2011. [Acid Pix/Flickr]

The issue has seen the UK split from other key member states – EurActiv has discovered – as representatives from the telecommunications sector descend this week (2-5 March) on Barcelona for the Mobile World Congress.

Spectrum is amongst key issues under debate in the Catalan capital this year, since the World Radio-communication Conference (WRC) – conducted by the International Telecommunications Unions (ITU), a Geneva-based UN agency – will review and revise global spectrum rules in November this year.

Such rules are needed to prevent interference between broadcast and telecommunications users in different countries.

The EU executive has asked stakeholders to give their views on the options proposed in a report on the issue presented by former Commissioner Pascal Lamy in September 2014.

700 MHz band

The Lamy Report sets out a strategy to resolve broadcasters and mobile operators rival claims for the Ultra High Frequency (UHF) spectrum, which is a finite resource. It is mostly used for broadcasting, mobile broadband and wireless microphones.

While the two industries have agreed that the 700 MHz band, currently used by TV broadcasters, should be given over to wireless broadband, they cannot agree how and when.

The location of the 700 MHz band gives it excellent propagation characteristics, according to America's Federal Communications Commission (FCC). This allows the 700 MHz signals to penetrate buildings and walls easily, and to cover larger geographic areas with relatively less infrastructure.

Provisions are also being considered by several EU member states to set aside part of the 700 MHz for a range of public security and utility services: a priority that has hardened in the wake of the attacks on Parisian satirical magazine Charlie Hebdo.

France, Germany, Italy, the Netherlands and Sweden all favour keeping some promotion of spectrum for such exclusive purposes, but the UK is taking a different tack, sources in Barcelona told EurActiv.

Since the UK has never maintained broadband for exclusive public purposes it instead intends to auction its 700 MHz bandwidth, with a view to allowing public critical infrastructures to share the bandwidth with the private sector.

The UK's move is likely to affect a European Commission consultation on

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how to allocate the prised band, set to run until 12 April 2015.

It may not affect the Commission's desire to define a common position in the area of spectrum management, but is likely to be keenly watched around the world since the UK alone has signalled it wants to allow critical infrastructures to share bandwidth with others.

Bharat Bhatia, an ITU executive dealing with spectrum, told a seminar on the issue in Barcelona yesterday (1 March) that the need for public safeguards within spectrum was climbing up the agenda as evidence of fundamentalists' use of social media as a recruitment tool escalates.

Spectrum for the hyper-connected world

"All the usual public services such as police fire and ambulance are feeling under even more pressure now, especially with the increased threat from ISIS: public safety users need to talk to each other without constraints," Thomas Lynch, the associate director of the critical communications group with consultancy IHS, told the seminar, hosted by Chinese telecoms giant Huawei.

Many in the telecoms sector in the UK are sceptical that the move will work. Nick James, the CEO of UK Broadband, an action group, said that the amount of video required by critical public safety networks was extensive.

"Lots of other applications, such as airports monitoring air traffic, the use of drones, or new smart city applications. To provide critical services you need a lot of spectrum […] I am worried that we will not get it," said James.

Allotting spectrum is becoming more important as hyper-connectivity gathers pace. Innovations in wearable connected products – which collect data on the wellbeing of the wearer; new earpieces and watches to rival the functionality of telephone handsets are all set to be unveiled in Barcelona this week.

Commis- sioners call for EU unity on roaming, spectrum

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European Commissioners responsible for digital affairs are jointly appealing to member states to stop resisting efforts to end surcharges for mobile roaming and spectrum harmonisation.

Vice-President Andrus Ansip [Flickr/Algimantas Balezentis/BDF]

"It does concern me that we may end up with a lack of provisions for spectrum and not enough ambition on roaming and net neutrality," Vice-President for the Digital Single Market Andrus Ansip yesterday (2 March) told delegates at Barcelona's Mobile World Congress (see background).

Ansip's comments will be reflected in a speech today by Günther Oettinger, the Commissioner for Digital Economy and Society, in a speech laying out the EU's vision for 5G telecommunications development.

The Estonian politician said a poor result on roaming and spectrum "would not reflect the significance, ambition and urgency that

EU heads of state gave to the single European telecoms market in October 2013".

The European Parliament voted last year to end roaming fees within the EU by the end of 2015, but the legislation still needs approval by member states in the EU Council.

Member states are squabbling, because their relative charging rates vary greatly.

For example, eastern European countries with cheaper charges for local calls fear operators will increase prices for such domestic calls unless these operators see a corresponding reduction in the tariffs they pay other operators when their customers travel abroad.

The timing is sensitive, because member states are finalising their positions before commencing trilogues with the European Parliament next week.

On spectrum, Ansip said "the more that this natural resource is divided, the less efficient it is, that is the situation we have today".

Coordination of European spectrum is vital for the future Telecom Single Market, Ansip said, and also for the development of 5G mobile communications.

Ansip is set to resent a landmark European Digital Single Market strategy in May.

"We cannot make much progress in building the Digital Single Market without progress on telecoms, and making sure that high-quality connectivity becomes more widely available in all corners of Europe," Ansip told delegates.

Meanwhile, Ansip's concerns are set to be reflected in a speech by Günther Oettinger setting out the EU's vision for 5G technology, set to dominate the hyper-connected world.

"There can be no successful 5G deployment in Europe without enhanced coordination of spectrum assignments between Member States," Oettinger will warn.

"We must build together a European approach in the international spectrum debates with other global actors," he will tell a keynote session on 'The Path to 5G' in Barcelona.

The speeches by two commissioners represent part of a show of force by the EU executive at the Barcelona showcase technology conference, expected to see 90,000 visitors this year, and is the first time that the Commission has exhibited formally at the site.

Commission talks up 5G as member states wilt on telecoms

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The European Commission is seeking a leadership role in developing new generation telecom networks using 5G technology. But its efforts were thwarted as EU national ministers met in Brussels Tuesday (3 March) to dilute telecoms reforms vital to the idea.

Guenther Oettinger [European Parliament/Flickr]

Delegates to the Mobile World Congress (MWC) in Barcelona were presented yesterday with grand European plans for developing 5G networks.

"The digital economy is simply becoming the economy. And the future network infrastructure, 5G, will become the infrastructure," said Günther Oettinger, the EU Commissioner for digital economy and society, who was launching the EU's '5G vision' in Barcelona.

"With the Internet of Things, we see a new era of connectivity where billions of devices exchange data and instill intelligence in our everyday life. From watches to shoes. From fridges to heating. From hospitals to factories," Oettinger told delegates.

"With 5G, telecom operators should be able to provide specialised network services to a series of new industry partners: from the automotive, to rail, health or energy sectors," the German Commissioner subsequently told journalists during a press conference.

Oettinger was joined at the conference by representatives from nine global tech firms signed up to the 5G Public Private Partnership. These included chief technology officers from Alcatel-Lucent, Docomo, Ericsson, Huawei, Nokia and Samsung.

"The omnipresence of the Internet through connected devices will make it possible to remote control everything," Stéphane Richard, the CEO of Orange told a keynote seminar at MWC on the subject.

"50 billion objects will be connected by 2020. We are at the dawn of a new era and 5G is at the heart of that," Richards added.

"5G will become a powerful tech platform enabling new applications, business models and industries," said Ken Hu, the rotating CEO of Huawei, the China-headquartered tech giant which is also signed up to the PPP. Huawei announced last November that it planned to invest €442 million in research into 5G.

"The doors to the future digital world have opened up. We are at the beginning of the beginning," said Hu.

Standardisation without conflagration

Oettinger stressed that the PPP aims to lay an open foundation for the creation of standardisation with full industry and geographical cooperation.

"I am optimistic that with your leadership, we will avoid a 'war' on standards, contrasting clearly with the situation at the start of the previous generations of communications systems,"

the German Commissioner said addressing business leaders, referring to the onset of 3G and 4G networks.

The move sees a growing tie-up between the EU and Asia, following an agreement reached last year to team up with South Korea on 5G.

Oettinger signalled his intention to sign similar agreements with Japan, China – possibly as early as this year – and the US.

ChinaEU, a Brussels-based, business-led association promoting ICT cooperation between Europe and China, called upon the two sides to start a strategic collaboration on 5G as soon as possible.

The group is looking to a forthcoming China-EU Summit, scheduled to be held this June in Brussels, as an opportunity for the two regions to launch an official partnership on 5G.

"A cooperation between Europe and China on 5G will open the door to both the Chinese and the European industry to the biggest and richest markets in the world respectively and create the conditions to invest more in European and Chinese digital economies," said Luigi Gambardella, ChinaEU's president.

"We see great interest from both sides to enhance cooperation in Internet, telecom and (the) high tech segments," he added.

Brussels calling – with roaming charges

However, news from Brussels suggesting that EU member states are diluting single telecommunications market proposals provided a sour backdrop for the announcement.

The new regulatory framework, along with 5G, provides a cornerstone of the Commission's single digital market proposal, currently being finalised.

Oettinger echoed appeals made on Monday (2 March) in Barcelona by Vice-President Andrus Ansip that coordination of European spectrum is vital for the future Telecom Single Market and also for the development of 5G mobile communications.

Member states are today (4 March) set to adopt a position the Telecoms Single Market proposal, drafts of which suggest substantial diluting of proposals for net neutrality, a ban on surcharging for the use of mobile phones throughout the EU, and provisions for harmonising the approach of member states to spectrum.

Oettinger said problems connected to spectrum allotment "relates to finance ministers having dollar signs in their eyes", alluding to member states' jealousy in guarding the right to auction off spectrum for eye-watering sums. Finding new spectrum and coordinating it effectively is seen as critical to the development of 5G.

The Commissioner said that responsibility for spectrum should fall under the auspices of ministers of digital affairs, rather than within treasury departments.

Guy Verhofstadt, the president of the Alliance of Liberals & Democrats for Europe in the European Parliament, described the development as "a scandal".

"An end to roaming charges and the delivery of a genuine single market for telecoms was a campaign priority for all parties, many of whom are today responsible for blocking this measure," he said.

US election could trigger battle over Internet governance

published 05/03/2015

Officials attempting to reach a deal over the reform of Internet governance have told EurActiv that delays and the "weaponisation" of the issue in the current US political climate are threatening to ignite an international dispute.

A September deadline is "almost certainly going to be missed", an official told EurActiv at the Mobile World Congress in Barcelona, Spain.

The issue is likely to become enmeshed in gridlock in Washington, as the Obama Administration campaigns for the 2016 election.

The Internet Corporation for Assigned Names and Numbers (ICANN), a United States-based organisation, is attempting to transfer control over internet address registration from the US government's Department of Commerce to a group of stakeholders. ICANN members include representatives from major web companies and domain name registries, governments and international organisations.

Fadi Chehadé, the organisation's president and CEO, recently said that it could be ready to become independent from the US government in a matter of months. The US contract with ICANN expires in September this year.

But "agreement on how a new stakeholder group should operate will not have been reached by then, almost definitely," according to one source with close knowledge of the process who spoke to EurActiv on condition of anonymity.

Agreement rests on the Department of Commerce agreeing to the terms of ICANN's reform proposal. But complicated discussions over how ultimate control of internet address registration would operate under the so-called multi-stakeholder model are still ongoing.

Ghost of Dubai haunts internet debate

The issue is contentious because such control could theoretically blackball a country from the web. American policymakers fear the process could be 'captured' by a cabal of unsympathetic countries.

"The delay threatens to bring the ghost of Dubai back to life," the source added, referring to an abortive attempt to put ICANN under the control of the International Telecommunications Union (ITU), a UN body, during an overhaul of

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that organisation's rules which took place in 2012.

The effort to update the ITU rules giving the organisation ICANN's powers collapsed in December 2012 after six EU member states joined the United States and Canada in refusing to agree a text at the World Conference on International Telecommunications (WCIT) in Dubai.

The US was concerned that references to the internet in the treaty might be used to legitimise censorship and – more controversially – enable commercial negotiations between telecoms networks and so-called 'over-the-top providers', especially large internet technology providers, such as Google and Microsoft.

"Some of those countries which supported the US back then will change their minds and start pushing for the process to be put into the hands of the UN if the process starts to drag on into 2016," one source told EurActiv.

"The problem is that some countries suspect that the US is just playing everyone along, and has no intention of really relinquishing control, and if the issue drags into next year they will claim they have been proved right," another said.

Europe's position will be crucial in the coming months, the sources said, since European support for the US at WCIT was patchy, but decisive, and that position could change if the predicted delay occurs.

ICANN officials will start touring European capitals over the next two months to canvass opinion on the latest drafts of reform proposals.

"The issue is set to ignite in September in a storm of ill-will and bad timing," said one source, adding: "Obama has lost control of the Congress to the Republicans, and in the wake of the [Edward] Snowden allegations the issue of control over the internet is becoming politically weaponised in Washington."

The campaign for the election which will take place in November 2016 will be fully under way by early next year.

The issue of governance was touched on by Federal Communications Commission (FCC) chairman Tom Wheeler yesterday (3 March) at the Mobile World Congress in relation to net neutrality.

Wheeler was discussing his agency's use of decades-old regulatory tools in putting together its new net neutrality. The FCC voted to approve net neutrality proposals last week in a split 3-2 decision, with Democrats outvoting Republican members of the commission.

The proposal called for a stricter set of rules that will treat broadband providers, including mobile operators, more like utilities.

"The basic question is if the Internet is the most powerful and pervasive platform in the history of the planet, can it exist without a referee? We need a referee to say 'wait a minute, does that make sense?' Do we have a set of rules that says that is just and reasonable?" Wheeler asked of delegates in Barcelona.

It is a question American politicians will certainly return to later this year.

Next wave of innovation waits on 5G connectivity

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Disruptive innovations were thin on the ground at the Barcelona Mobile World Congress. But an air of expectation is gathering around 5G technology, which promises to deliver the kind of pervasive connectivity required for the 'Internet of Things'.

Underwater Television at Mobile World Congress, Barcelona (HZO, with permission)

Korean giant Samsung launched its Galaxy S6 Edge phone at the start of the week, emphasising innovation as its dominant theme.

The phone incorporates ultra-smart camera technology and is rounded at the edges. That lets users identify – through a colour bar – who might be calling during a meeting, even when the phone is face down on a table.

It is a slick feature but more of an addition than a disruption.

Watches and phones, the next big thing?

The next day saw the launch of Chinese-headquartered Huawei's Android

smartwatch, a growing market. Such watches perform varying functions connected to the phone, with additional health analytics.

Interest around watches prefigures the launch by Apple of its own watch scheduled for the beginning of next month.

Apple products often garner wider market interest and its watch is expected to create a greater buzz around smartwatches. Analysts predict that 350 million will be worn worldwide by 2018.

It is hard to imagine the smartwatch displacing the smartphone as the key mobile technology however, and by 2018 another landmark will be reached when – if statements laid down in Barcelona prove correct – standards for 5G technology should be near completion.

The launch of the Commission's 5G vision document could come to be seen as more significant for innovation in the longer run.

The result of 18 months of discussion within the European Commission's 5G Public-Private Partnership (see background), the chief aim is to trigger a global debate to define the scope of 5G, its main technological constituents, and lay down a firm timetable for putting it in place. The process is expected to conclude by the end of 2015.

All eyes will now be on the consortium 3GPP, the body which will develop those standards. Its members and those appointed to its various sub-committees will play a significant role in formulating the standards.

Standards and spectrum will determine 5G

Exploiting 5G to the full will only be possible with sufficient bandwidth, allowing phones and objects to be connected at all times.

5G access networks will require hundreds of megahertz up to several gigahertz of radio frequency to be provided at very high system capacity. Carrier frequencies above 6 GHz will need to be used.

"Maintaining a stable and predictable regulatory and spectrum management environment is critical for long term investments," according to the Commission's vision. This is one area of concern, since attempts to reach consensus between EU member states on spectrum is proving complicated.

Achieving tangible results on spectrum coordination will be critical. Massive amounts of additional frequency will be required as a vehicle not only for connecting people through their phones, but things to people and things to things.

The Internet of Things is truly around the corner, and 5G has the capacity to deliver it, the Commission believes. But in innovation terms, it still remains opaque as new services will follow the standard and network roll out.

The hyper-connected world is around the corner

Innovation is likely to take on an exponential dimension in the 5G environment as the connectivity of objects will open up hitherto unimagined possibilities.

As with all disruptive technological changes, there will be winners and losers.

Europe is betting big on 5G and experimenting with new industry partners from home and abroad.

"5G will represent a new wave of innovation. We need to ensure that technological revolution and business model evolution go hand-in-hand," President of 2012 Laboratories (R&D) with Huawei, Li Yingtao, said at the launch. "We are joining forces with our European partners to help the EU take the lead on the road towards 5G."

HZO is a Utah-based company that offers a waterproofing service for electronics and chips. A 40-inch television set sat submerged in a bubbling aquarium on its stand in Barcelona. A mesmerising spectacle and useful service, it was emblematic of innovative design encasing existing technology, as was much else on display in Barcelona.

Television underwater is one thing, but the next big leap will be internet everywhere.

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