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Basic information		
INI - Own-initiative procedure	2016/2305(INI)	Procedure completed
Internet connectivity for growth, competitiveness and cohesion: European gigabit society and 5G		
Subject 3.30.06 Information and communication technologies, digital technologies 3.30.25 International information networks and society, internet		

Key players			
European Parliament	Committee responsible	Rapporteur	Appointed
	 ITRE Industry, Research and Energy	 BONI Michał	28/10/2016
		Shadow rapporteur	
		 WERNER Martina	
		 FOX Ashley	
		 VAN NIEUWENHUIZEN Cora	
		 REIMON Michel	
		 BORRELLI David	
		 KAPPEL Barbara	
	Committee for opinion	Rapporteur for opinion	Appointed
	 IMCO Internal Market and Consumer Protection	 LÓPEZ-ISTÚRIZ WHITE Antonio	11/10/2016
	 TRAN Transport and Tourism	 ŻŁOTOWSKI Kosma	16/11/2016
 REGI Regional Development	 LEWER Andrew	09/11/2016	
 CULT Culture and Education	 COSTA Silvia	08/11/2016	

Key events

24/11/2016	Committee referral announced in Parliament		
25/04/2017	Vote in committee		
05/05/2017	Committee report tabled for plenary	A8-0184/2017	Summary
31/05/2017	Debate in Parliament		
01/06/2017	Results of vote in Parliament		
01/06/2017	Decision by Parliament	T8-0234/2017	Summary
01/06/2017	End of procedure in Parliament		

Technical information

Procedure reference	2016/2305(INI)
Procedure type	INI - Own-initiative procedure
Procedure subtype	Strategic initiative
Legal basis	Rules of Procedure EP 54
Other legal basis	Rules of Procedure EP 159
Stage reached in procedure	Procedure completed
Committee dossier	ITRE/8/08471

Documentation gateway

Document attached to the procedure		COM(2016)0587	14/09/2016	EC	Summary
Document attached to the procedure		COM(2016)0588	14/09/2016	EC	Summary
Document attached to the procedure		SWD(2016)0306	14/09/2016	EC	
Document attached to the procedure		SWD(2016)0300	14/09/2016	EC	
Committee draft report		PE597.728	06/02/2017	EP	
Committee opinion	CULT	PE595.493	01/03/2017	EP	
Amendments tabled in committee		PE601.016	02/03/2017	EP	
Committee opinion	IMCO	PE597.470	23/03/2017	EP	
Committee opinion	REGI	PE597.520	23/03/2017	EP	
Committee opinion	TRAN	PE599.496	12/04/2017	EP	
Committee report tabled for plenary, single reading		A8-0184/2017	05/05/2017	EP	Summary
Text adopted by Parliament, single reading		T8-0234/2017	01/06/2017	EP	Summary
Commission response to text adopted in plenary		SP(2017)536	06/10/2017	EC	

Internet connectivity for growth, competitiveness and cohesion: European gigabit society and 5G

PURPOSE: to present an action plan for the rapid and coordinated deployment of 5G networks in Europe.

BACKGROUND: the [Digital Agenda for Europe](#) and the [Commission communication](#) "Connectivity for a Competitive Digital Single Market - Towards a European Gigabit Society" stress the importance of having very high capacity networks such as 5G to enable Europe to compete in

the global market.

According to the Commission, revenues generated by 5G worldwide are expected to be equivalent to EUR 225 billion by 2025. Another source indicates that the benefits of introducing 5G in four major industrial sectors could reach EUR 114 billion per year.

A lack of coordination between the different national approaches to the deployment of 5G networks would create a significant risk of fragmentation in terms of frequency availability, continuity of services across borders (for connected vehicles, for example) and the implementation of standards.

For this reason, the Commission proposes an action plan as a means of promoting appropriate coordination.

CONTENT: in addition to the new regulatory framework envisaged by the Commission and the proposed measures in the European electronic communications code, this communication presents an action plan for the rapid and coordinated deployment of 5G networks in Europe, by means of a partnership between the Commission, the Member States and the sector.

The proposed plan aims to create momentum for investment in 5G networks and to create new innovative ecosystems, thereby enhancing European competitiveness and delivering tangible benefits to society.

The Commission intends to base the plan around the following essential elements:

- setting in place a common timetable for the launch of the first 5G networks by the end of 2018, followed by the launch of fully commercial 5G services in Europe by the end of 2020: Member States will be encouraged to set in place by the end of 2017, national roadmaps on the deployment of 5G in the context of national broadband programmes;
- designate, by the end of 2016, a provisional list of frequency bands for the launch of 5G services;
- agree, by the end of 2017, on all the frequency bands (below and above 6 GHz) to be harmonised for the initial deployment of commercial 5G networks in Europe;
- promote early deployment in large urban areas and along major transport routes;
- continue the deployment, starting in 2018, of a selection of 5G tests with a clear European dimension;
- encourage Member States to consider using the future 5G infrastructure to improve the performance of communications services used for public safety and security;
- facilitate, in cooperation with the sector and the EIB group, the establishment of a venture capital financing mechanism for 5G;
- support innovative European start-ups aimed at developing 5G technologies and related new applications in different industrial sectors;
- ensure the availability of the initial global 5G standards by the end of 2019 and bring together key players to work towards the promotion of global standards.

The European Parliament and the Council are invited to approve the action plan for 5G.

Internet connectivity for growth, competitiveness and cohesion: European gigabit society and 5G

PURPOSE: to pave the way for better internet connectivity to prepare for the digital future.

BACKGROUND: in 2010, the [Digital Agenda for Europe](#) defined objectives for connectivity by 2020: universal availability at 30 Mbps, to ensure territorial cohesion, and subscriptions at 100 Mbps by at least 50% of European households, to anticipate future competitiveness needs.

In 2015, fixed networks offering at least 30 Mbps were available to 71% of homes across the EU. Subscriptions at 100 Mbps+ are growing sharply, from a low base: 11% of all homes had such subscriptions by mid-2015. However, there are still substantial differences between Member States, and between urban and rural areas, in both coverage and take-up.

While basic broadband is available to every European, the Commission noted that this is no longer good enough for the ongoing digital transformation.

In its [resolution](#) of 19 January 2016, the European Parliament underlined the role of private investment in Internet connectivity networks for digital progress and the role of a stable regulatory framework in enabling all players to invest in all areas, including rural and remote ones.

CONTENT: this communication confirms the importance of Internet connectivity for the Digital Single Market and the need for Europe to deploy now the networks for its digital future.

To this end, it sets out a vision for a European Gigabit society. This vision is operationalised through three strategic objectives for 2025. To help make this vision a reality, this communication proposes a series of initiatives designed to establish the right conditions for the necessary investments to take place, primarily to be achieved by the market.

Strategic objectives for 2025: while the 2010 connectivity objectives remain valid up to 2020, the Commission sets out three complementary strategic objectives to meet the digital challenge:

- high-speed gigabit connectivity (allowing users to send and receive a gigabit of data per second) for places driving socio-economic developments such as in schools, universities, research centres, transport platforms, public services such as hospitals and public administrations, as well as businesses that rely on digital technologies;
- access for all European households to Internet connectivity offering at least 100 Mbps;
- 5G coverage for all urban areas and all major terrestrial transport paths. An intermediate objective for 2020 is for 5G connectivity to be available as a fully-fledged commercial service in at least one major city in each Member State, building on commercial introduction in 2018.

Adapting the policy and legal framework for investment: according to estimates, an overall investment of around EUR 500 billion over the coming decade is required to reach the vision and objectives for 2025.

The proposed initiatives consist of a major reform of the regulatory framework for electronic communications, in the form of the accompanying legislative proposal for a European Electronic Communications Code (the Code) and Body of European Regulators for Electronic

The European Electronic Communications Code presented by the Commission proposes the following:

- incentives for deployment and take-up of very high-capacity networks in competitive markets: the aim is to enable adequate returns on new investments relative to risks, giving Europe-wide predictability to the international investment community, while leaving adequate scope for adaptation to localised network conditions;
- spectrum rules for mobile connectivity and 5G: the proposed Code establishes: (i) key principles for spectrum assignment in the Union, new Union-level instruments to establish assignment deadlines and licence periods (minimum 25 years), and a peer review among national regulators to ensure consistent assignment practices; (ii) consistent approach to coverage obligations, to small-cell deployment and to network sharing, thereby stimulating 5G deployment and rural connectivity; (iii) facilitates spectrum sharing in 5G networks, and promotes end-user access to Wi-Fi-based connectivity;
- improved consumer protection: the proposed Code: (i) modernises end-user switching rights, including for bundles; (ii) ensures that vulnerable end-users have a right to an affordable connectivity contract; (iii) secures a fair internal market through maximum harmonisation of the main sector-specific end-user rules.

In addition to legislative and regulatory measures, the Commission also proposes the following:

- [an action plan for high performance 5G connectivity in Europe](#): according to a recent study, the successful deployment of 5G could bring about EUR 113 billion per annum in benefits in four industries (automotive, healthcare, transport and utilities), with benefits widely spread over business, consumers and wider society. In addition, 5G deployment could support the creation of more than two million jobs in the EU;
- further policy and financial measures, at Union, national and local levels, including a "Wi-Fi for Europe" initiative to promote widespread availability of Wi-Fi connections for citizens across the EU.

The Commission calls on Member States to review progress of their National Broadband Plans and update them by the end of 2017 with a time horizon of 2025. In cooperation with the Committee of the Regions, it will set up by the end of 2016 a participatory broadband platform to ensure a high level of engagement.

Internet connectivity for growth, competitiveness and cohesion: European gigabit society and 5G

The Committee on Industry, Research and Energy adopted an own-initiative report by Michał BONI (EPP, PL) on internet connectivity for growth, competitiveness and cohesion: European gigabit society and 5G.

Recognising that 5G will be a key building block of the gigabit society, Members welcomed the [Commissions action plan](#) aimed at making the EU a world leader in the deployment of standardised 5G networks from 2020 to 2025.

5G vision: Members stressed the importance of adequate coordination among the Member States, so as to prevent the same kinds of delays in the rollout of 5G that were experienced with 4G. They emphasised the importance of an ambitious timeline for spectrum allocation within the Union if Europe is to be in the lead regarding the development of 5G technology.

Certain conditions need to be fulfilled in order to enable the development of 5G infrastructure:

- private investments should be supported by an infrastructure-oriented policy and regulatory environment tailored to predictability and certainty and aimed at promoting competition to the benefit of the end users;
- all sectors - academia, research institutions, the private sector and the public sector on research and development should be involved in the process;
- the deployment of fibre backhaul infrastructure, competition for driving investment and high-quality end user experiences should be prioritised;
- a maximum number of EU citizens should be able to benefit from gigabit society connectivity, including those living in remote areas;
- a coherent European spectrum strategy, including coordinated national roadmaps and timetables, is needed in order to ensure a smooth transition period towards 5G in all Member States;
- spectrum allocation should be harmonised in order to ensure the consistency of decisions and concerted EU-wide efforts should be made to manage the accessibility of 700 MHz and frequencies ranging from 1GHz to 100 GHz in the long term;
- all sector players should benefit from a predictable level playing field that drives competition and should enjoy the flexibility to design their own networks.

Enabling gigabit society benefits: the report underlined that 5G and 5G applications will reinvent business models by providing very high speed connectivity, which will unlock innovation in all sectors, not least transport, energy, finance and health. The deployment of 5G technologies in Europe is expected to have benefits amounting to EUR 141.8 billion annually by 2025.

Members stressed the following:

- any decision made in the rollout of 5G technologies should always remain oriented towards the ultimate purpose of offering end users affordable, trustworthy and high-quality services;
- fair competition and a level playing field for market participants are key necessities for the deployment of the gigabit society by market participants; the principle of same services, same risk, same rules should apply in this respect;
- a competitive legislative framework and initiatives are required, which encourage investments in infrastructure, particularly in order to tackle the digital divide between urban and rural areas.

Policy approach: Members believed that the best path towards the gigabit society lies in a future-proof, pro-competitive and technology-neutral approach supported by a broad range of investment models such as public-private or co-investments.

All decisions related to spectrum allocation and 5G deployment, must be formulated based on future needs and how the market is expected to develop over the next 10-15 years; a successful 5G deployment can only be achieved through far-sighted European legislation and policy coordination.

The Commission should:

- ensure, long-term financing for the 5G Action Plan and the network modernisation at the appropriate level within the horizon of the next Multiannual Financial Framework 2020-2027;
- take the lead in promoting intersectoral, cross-lingual 5G and cross-border interoperability and supporting privacy-friendly, reliable, secure services;
- consider setting a concrete and appealing target as a framework for private sector experimentation with 5G technologies and products;
- detail its action plans to facilitate the participation of SMEs and start-ups in experimentation with 5G technologies and to ensure them access to the 5G Participatory Broadband Platform.

For their part, Member States should:

- implement the 5G Action Plan fully through coherent, inclusive and timely action in regions and cities;
- implement rapidly the provisions in Directive (EU) 2016/1148 of the European Parliament and of the Council of 6 July 2016 concerning measures for a high common level of security of network and information systems across the Union.

The report calls for:

- stepping up efforts on standardisation with a view to ensuring that Europe plays a leading role in setting technology standards allowing for the deployment of 5G networks and services;
- adopting effective measures to fight piracy and a comprehensive approach to improve the enforcement of intellectual property rights to ensure easy routes to legal content for consumers;
- encouraging the development of integrated solutions and tests followed by cross-industry trials of large-scale pilots in response to demand for services in the gigabit society;
- adopting clear, common EU rules in order to preserve affordability and consumer choice.

Members supported EU-level initiatives to ensure greater spectrum coordination between Member States and long-term licence durations. They also called on the EU to coordinate efforts within the International Telecommunication Union (ITU) with a view to ensuring coherent EU policy.

Internet connectivity for growth, competitiveness and cohesion: European gigabit society and 5G

The European Parliament adopted by 516 to 65, with 42 abstentions, a resolution on internet connectivity for growth, competitiveness and cohesion: European gigabit society and 5G.

Recognising that 5G will be a key building block of the gigabit society, Parliament welcomed the [Commissions action plan](#) aimed at making the EU a world leader in the deployment of standardised 5G networks from 2020 to 2025.

It also welcomed the gigabit society medium-term objectives of attaining network speeds of at least 100 Mbps for all European consumers, upgradable to 1 Gbps and increasing in the long term to 100 Gbps for the main socio-economic drivers, such as public services providers, digitally intensive businesses, major transport hubs, financial institutions, hospitals, education and research.

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- investments should be made in education with a view to improving digital skills and to tackle the digital divide of rural and remote

areas.

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