Comments by the German government on the evaluation and revision of the EU regulatory framework for electronic communication networks and services

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I. Preliminary remarks

Digitisation is one of the main challenges of the future. Europe’s development into a gigabit society must take place quickly and successfully. The dynamic development of efficient telecommunications markets and infrastructures with full-coverage is therefore vital for the future digitisation, performance and international competitiveness of the German and European economy.

A central goal and key element of digital policy is highly efficient telecommunications markets which provide an optimum contribution towards growth, innovation, employment and diversity of expression and media, and which drive the digitisation process. A rapid deployment of efficient infrastructures, taking account of justified interests, requires diversity of competition and technology; local and regional network operators will also continue to play an important role. In particular, optimum use must be made of synergies and market potentials, with parallel and supplementary action to be taken whenever such measures fail.

Digitisation is taking place at a rapid rate. This pace is mainly being set by developments like automated and connected driving, Industrie 4.0, the Internet of Things, and the interconnection of the basic sectors of energy, transport, health, education and public administration (“smart networking”); these developments require high-performance fixed and mobile networks. Wherever possible, technological and commercial changes on the one hand and the establishment of an appropriate policy framework on the other should take place at the same time. There is therefore a need for lean and short decision-making paths.

The German government agrees with the European Commission that the successive adaptations of EU telecommunications rules in combination with EU competition rules have played a key role in making markets more competitive and resulted in a lasting improvement in the cost and price efficiency of the European telecommunications sector. It also shares the Commission’s view that effective competition remains a key factor for investment in telecommunications networks. However, the German government also believes that growth, investment and innovation aspects must in future enjoy even greater priority with a view to dynamic efficiency.

A competition-friendly framework for the digital economy must aim at open and functioning markets along the entire value chain. This means that the policy framework will have to be oriented even more towards growth and investment. The German government takes the view that key aspects for the further development of the legal framework include the legal and regulatory consideration of “over-the-top” (OTT) players – this involves developments in competition and relevant consumer aspects –, the establishment of an appropriate policy framework for the medium to long-term transition from copper to fibre optic technology, and the commitment to place Europe at the forefront of the development and dissemination of 5G technology. A stimulation of demand via a reduction in transaction costs is also relevant, as such costs frequently impede a rapid penetration of higher-grade networks and services.

All of this needs to be borne in mind in the revision of the European legal framework for electronic communications. At the same time, it is necessary to ensure that the institutional framework is optimised and the revised legal framework does not result in additional burdens on national budgets.
The German government believes that the following core issues are crucial for the future regulatory framework:

- The application of the three-criteria test to identify the need for regulation of specific markets can permit a rapid response to dynamic market developments. For this reason, it is not absolutely necessary to have a recommendation on relevant markets by the European Commission on the basis of European average considerations.

- In-depth review of the impact and of the effectiveness of regulatory measures, both via an ex-ante assessment and via an ex-post analysis. The findings of this analysis should feed into the further development of the legal framework.

- Maintaining of the asymmetric SMP regulation under telecommunications law. The appropriateness of more symmetrical regulatory approaches in terms of the attainment of the regulatory goals should be reviewed – giving consideration to the effects of the Directive on measures to reduce the cost of deploying high-speed electronic communications networks (2014/61/EU).

- In general, regulation must be oriented to the conditions on the regional and national telecommunications markets, take account of changing market conditions, and always be restricted to what is necessary.

- Formulation of clear requirements and a framework for ICT standardisation, rather than intervention in the business community’s “freedom of standardisation” by imposing specific direct substantive demands.

- Setting of investment incentives for the deployment of broadband:
  - Supplement to the three fundamental regulatory objectives: (1) “Promoting competition”, (2) “Developing the internal market” and (3) “Promoting consumer rights” in the form of regulatory objective (4) “Accelerating the deployment of high-performance public telecommunications networks”.
  - Full-coverage roll-out of high-performance networks remains a task for the private sector. Public funding and other engagement by the state (e.g. broadband roll-out by municipalities) should take place only where the roll-out will not be provided by the market in the foreseeable future.
  - Where the market does not deliver full-coverage roll-out of high-performance networks in areas which are difficult to cover, examination of the possibility to provide an investment incentive via dispensing with ex-ante regulation and instead using the instrument of sector-specific ex-post regulation by NRAs. This requires non-discriminatory third-party network access.
  - Stimulating demand via the reduction of transaction costs, particularly the reduction of information and coordination costs.
  - Possibility for adequate use of the instrument of state aid.
  - In principle maintaining of the principle of technology neutrality.

- Appropriate inclusion of OTT services which offer substitutes for traditional telecommunications services or compete directly with them, both in the context of the definition of services and in terms of the need for regulation. Here, a case-by-case approach is required.

- Minimum harmonisation of consumer rights for the telecommunications sector.

- Numbering administration continues at national and international level; explicit permission for extraterritorial use of national IMSI numbers in M2M.

II. Summary
● Maintaining of the current universal service concept, which safeguards the basic provision to prevent social exclusion; no extension of universal services to include broadband coverage, but maintaining the optional inclusion for Member States; examination of the simplification or abolition of obsolete universal services.

● Maintaining of the possibility for Member States to act to protect diversity (e.g. “opening clause” of Art. 31 of the Universal Service Directive for must-carry).

● Enabling of forward-looking and innovation-friendly frequency administration, taking into account the justified interests of all spectrum users with a view to future technological advances. Safeguarding of efficient spectrum usage which leaves sufficient national scope for flexible solutions and supports European and international coordination on the basis of the principle of subsidiarity and within existing institutions like RSC, RSPG, CEPT, ITU.

● In the field of frequency management, the interplay of national and EU-wide competences must be capable of rapid adaptation to current developments. In order to address the dynamic development of the sector, the German government proposes developing rapid procedures for updating the political goals of European spectrum policy through specific meetings of the Digital Single Market Strategic Group.

● Optimisation of the institutional framework by means of clear distribution of competences and responsibilities between European and national level; to this end, establishment of criteria for measures which are actually and clearly cross-border or have “effects on trade between Member States”.

III. Detailed comments

In the view of the German government, the goals of the European and the German national digital agenda can only be attained via a mix of measures which extends well beyond the regulatory framework in the traditional sense. Here, regulatory measures must be justified by aspects of market failure, other major public interests, or the need to uphold fundamental rights. This is true of the broadband roll-out and of the question of the best possible use of the potential of digitisation on the user/application side. Regulation within the narrower definition is basically sector-specific competition policy, and its scope should be regularly reviewed. This should also take place via a differentiation of regulation. Ex-ante regulation should be restricted to the necessary level and should continue to be an exception requiring justification.

The regulatory framework will continue to be a major foundation for dynamic market development. In terms of the allocation of scarce resources and in terms of access, appropriate intervention will continue to be needed. Here, the “three-criteria test” offers the basic decision-making aid as long as the actual market situation is taken into consideration in each case. However, the way in which regulatory intervention has an impact should also be examined in detail. The German government sees deficiencies here, since this has not been examined in the past, or only inadequately. On the one hand, a well-grounded ex-post analysis should be used to review whether the desired objectives have actually been attained by the specific means used. On the other, where adjustments in the regulatory framework take place, they should be preceded by an examination of whether these changes are actually capable of attaining the desired effects on the specific markets. The findings of these analyses should feed into the further development of the legal framework.

The German government takes the view that the three current fundamental regulatory objectives: “promoting competition”, “developing the internal market” and “promoting consumer rights” remain relevant and should be retained. A fourth objective, “accelerating the deployment of high-performance public telecommunications networks”, should be included in the catalogue in order to achieve or improve a targeted and tailored regulation of incentives for investment in broadband. This target can and should be considered in the context of the review of the regulatory instruments and mechanisms in which greater emphasis needs to be placed on investment promotion and the setting of further incentives for what is a primarily market-driven deployment of high-performance telecommunications infrastructures. Here, it is necessary to ensure that potential conflicts of objectives are resolved and that the competitive orientation of the regulation remains in place. Digitisation policy and the related regulatory framework should also be focused more on addressing the user side and involving the users. Even if digitisation is developing dynamically in many areas, it is necessary to note that issues like Industrie 4.0 and the interconnection of central basic sectors of the economies should also be supported by the state. In many cases, the rapid penetration of digital services is impeded not only by competition problems or gaps in infrastructure, but particularly by information and coordination costs. Better use of the potential of digitisation results in innovation and market growth and ultimately also in easier refinancing of cost-intensive infrastructure deployment.

1. Network access regulation

Access regulation has played a key role in the past in the development of competition at network and service level. However, in this context it is now also necessary to consider whether the regulatory framework needs to be updated in the light of the constant advance in the digitisation of the entire economy.

It will also be vital to keep using the strengths of competition and to ensure equal opportunities for the various market players with a view to the future deployment of high-performance broadband networks and the roll-out in rural areas. This confronts regulation with increasingly complex challenges in view of the large number of different business models, but also creates the opportunity to make full use of all the potential for a market-driven deployment of high-performance networks.

The German government therefore sees the need to make regulation more investment-friendly. It is expecting ambitious proposals that will limit regulation to the necessary level and, in particular, reduce and eliminate unnecessary red tape in procedures.
Market regulation

It is clear that, since the technological and structural conditions need to be considered in a very granular manner, detailed market knowledge is required for appropriate solutions. To this extent, a shifting of case-by-case decisions to European level – beyond the requirements which derive directly from a single European internal market – is not a suitable means of giving appropriate consideration to the national market situations. At national level, there is a growing debate about how to respond appropriately to an increasing (regional) heterogeneity of network deployment and the resulting competitive situation.

In the view of the German government, the three-criteria test continues to be an appropriate instrument to identify the need for regulation. According to this, sector-specific regulation might be appropriate for those markets which are characterised by substantial and ongoing structural or legal market access barriers, which do not tend towards effective competition in the longer term, and on which the application of general competition law alone is not sufficient to counteract the relevant market failure. The German government considers differentiated regulation tailored to the concrete market to be the best way of ensuring equal competition opportunities and of supporting efficient investment. This applies to both the product and service markets as well as the definition of geographic markets in need of regulation. Regulation based on telecommunications law should only remain in effect as long as there are no competitive markets. Therefore, the question must first be answered as to whether structural competition issues exist on the market concerned which general competition law is unable to resolve. Only if this is the case should sector-specific regulation be implemented. The three-criteria test offers a good starting point for this. Thanks to its flexibility and universal applicability, the three-criteria test can, if used correctly, quickly identify the need for regulation even in the case of dynamic market developments without a recommendation needing to be specifically altered. This means that it is not necessary or useful to retain the recommendation on relevant markets with the repeated need for revision by the European Commission. At the same time, the German government is well aware of an unequal application of the three-criteria test. For this reason, the Commission should therefore mainly focus on reviewing the correct use of the three-criteria test by the NRAs. Its consistently correct use would make a substantial contribution towards an investment-friendly climate for the construction of high-performance networks.

Taking this approach, it is important to restrict regulation to the absolutely necessary degree. For this reason, not only the number of regulated markets has been continually reduced in Germany in recent years, but also the degree of intervention. Regulation must not be a rigid concept but must respond to changing markets. Given appropriate market conditions, this increases the potential for a transition to an ex-post control of market abuse. However, there is a need for an in-depth debate on the basis of a careful analysis in order to weigh up the opportunities and risks of potential adjustments in regulatory policy.

The German government supports harmonisation attempts in as far as these are helpful and conducive to the European Single Market. Special characteristics of the Member States and regions must be adequately considered, all the more so because there are some significant variations in wage costs and infrastructure conditions – and hence also in the market situation – from one Member State to the next. In the case of dynamic and diversified markets, the efficient use of the principle of subsidiarity can help tailored measures and decisions to be taken in reasonable periods of time.

This continues to include the possibility of giving the NRAs at national level the right to decide whether to dispense with ex-ante regulatory measures on certain markets in favour of sector-specific ex-post regulatory measures. This flexibility seems to be necessary, especially as the developments on the various markets and in the various Member States are taking place at different speeds. It must be borne in mind that numerous telecommunication markets have fundamentally changed since the enactment of the current EU legal framework. They are characterised by a much higher intensity of competition as a result of previous regulation, advances in technology, and innovations. Overall, therefore, there is room to reduce the scope and complexity of telecommunications regulation whilst simultaneously boosting flexibility for national regulatory authorities in an increasingly dynamic environment, including and particularly at services level. This includes the regular review as to whether and to what extent it is possible to move from ex-ante regulation to sector-specific ex-post regulation. A sector-specific ex-post supervision to be undertaken by the NRAs generally ensures – due to reporting requirements to the NRAs (e.g. on fees) and to the short deadlines specified in telecommunications law – a more rapid intervention in the case of abuse of a dominant position than is
currently possible in the context of general supervision of competition. The German government believes that the question raised by the European Commission, as to whether the number of wholesale products should be reduced, does not arise if the need for and intensity of regulation is decided by the NRAs on the basis of a specific market analysis and the three-criteria test. It is always also necessary to weigh up whether the scope and design of access regulation risks undermining the non-incumbents’ efforts to invest in their own infrastructure in the long term. An assessment of this question is only possible in the light of the specific market situation in the Member States.

The main aim of access regulation is to permit and safeguard competition on the end-user markets. It is therefore necessary to clarify that, when market analysis investigates the need for and intensity of regulation of the wholesale markets, greater consideration also needs to be given to the functioning of competition on end-user markets.

To the extent that it is ensured that various investors have the possibility to invest in the same way in new networks, the German government wonders whether there is actually a need for (immediate) regulatory measures. If the three-criteria test identifies a need for regulation in areas which are inadequately supplied with high-performance networks, consideration should be given to whether the instrument of sector-specific ex-post regulation offers positive investment incentives in place of ex-ante regulation. As a consequence, however, it is necessary to deploy the three-criteria test again within specific deadlines to see whether a tightening of access regulation is required.

Symmetrical regulation, as provided for in Germany for example in Section 18 of the Telecommunications Act, can be useful in certain cases, particularly for operators of public telecommunications networks who control access to end-users. The German government is in principle open to a broadening of the scope of symmetrical regulation (e.g. for high-speed connections). However, consideration should also be given to the initial experience made with the effects of symmetrical regulation of access to passive infrastructures in the context of the Directive on measures to reduce the cost of deploying high-speed electronic communications networks (2014/61/EU).

The current revision timetable prescribed for the market analysis generally seems to be very tight, and it should be designed in a way that it can be extended flexibly. The periods and reviews envisaged at present can weaken the predictability of regulatory decisions and thus the necessary legal and investment certainty for long-term investments. The national regulatory authorities should therefore be given the possibility to provide for longer investigatory cycles within prescribed maximum periods, at least in the case of proven market stability. This could also significantly reduce the burden on bureaucratic and human resources both for the national regulatory authorities and for the market players.

For fundamental reasons, a critical view is taken of ideas about expanding regulation to oligopolies in which no significant market power is identifiable. Firstly, such an expansion of regulation would not fit in with the system. Regulation of markets is only justified in certain circumstances. Market regulation in the form of access and fee regulation, as is undertaken on certain telecommunications markets, mainly makes sense in the case of natural monopolies or in the transitional phase from a statutory monopoly to the establishment of effective competition. Beyond this, it would be necessary to demonstrate the existence of particularly long-lasting circumstances of market failure in order to show the need to regulate a market. The threshold to the determination of the need to regulate a market are correspondingly high.

### Standardisation

Regulation also needs to give consideration to new technologies. Here, it is welcome that the European Commission sees standardisation as a key element for the success of the digital single market and wants to generate stimulus here so that technological development and standardisation can keep pace and interoperability can become firmly established. However, we are sceptical as to whether this can be achieved through an integrated Priority ICT Standards Plan. It is more likely to be achieved by formulating clear and concise terms for the main (legislative and technical) requirements and framework (conditions) rather than stipulating special direct requirements for the contents of standards and hence intervening in the private sector’s “freedom of standardization”.
Further investment incentives for full-coverage broadband deployment

The German government considers the roll-out of full-coverage high-performance networks to be a task for the private sector. It does not share the European Commission’s view that inadequate investment by telecommunications firms in rural areas is primarily due to a lack of uniformity and predictability of regulation within the EU. Rather, the German government believes that inadequate investment in rural areas is the result of too little cumulative demand due to the low population density in these regions. This results in decisions to invest in regions with lower opportunity costs and better prospects for profits.

Nevertheless, private-sector investment remains the means of choice. Government support should supplement rather than replace market investment if the market will not roll-out the infrastructure in the foreseeable future.

Functioning competition, in particular in tandem with an effective funding policy subject to clear rules, will ensure full-coverage network deployment at a high-level that will also include supply for rural areas and facilities of public interest. The German government’s Digital Agenda for Germany aims to use an efficient mix of technologies to implement a full-coverage broadband infrastructure in Germany with a download speed of at least 50mbps by 2018.

A more flexible of the state aid framework should be considered with a view to enabling the instrument of state support to be used more effectively to cover rural areas. In particular, a critical view should be taken when state aid rules are stricter for wholesale products than those for the regulated market.

Besides financial support, the German government sees a need to create additional suitable framework conditions for companies. European initiatives should therefore supplement national actions in a sensible manner. In particular, more investment incentives for small and medium-sized private and public projects should be created at EU level, for instance through common quality standards for assessing investments in broadband projects or further training measures to strengthen the broadband-specific investment expertise of banks or measures to foster demand for high-speed networks (for instance through demonstration projects in public application areas like eHealth, eGovernment and eEducation). Price-regulation for wholesale products in the case of publicly assisted broadband roll-out should also take account of the aim “accelerating the deployment of high-performance public telecommunications networks” and be designed accordingly. As a rule, regulation in state-supported areas should not be stricter than it is the case with asymmetric SMP-regulation in non-supported areas.

A systematic and comprehensive use of the potential of digitisation in main fields of the economy and society will permit scope for growth and innovation to be tapped. Indirectly, this will also boost the willingness to pay for broadband internet access services, meaning that investment in less densely populated regions will be more worthwhile. Investment incentives can also be provided by the aforementioned shift from ex-ante regulation to sector-specific ex-post regulation. Ultimately, all measures should be reviewed which help to lower transaction costs and thus make the development of rural areas a more attractive proposition.

In all of these measures, technology neutrality is an important underlying principle and must be maintained. This ensures that the legal framework will continue to be designed in a manner which is open to advances in technology.

2. Spectrum management

Irrespective of the type and methodology of the legislation, regulatory measures should always aim at efficient and sustainable frequency planning which permits optimum use of the available spectrum whilst taking account of the justified interests of all spectrum users.

Spectrum management requires forward-looking planning which takes future developments into account. At the same time, consideration needs to be given to the growing needs of the communications services (e.g. due to 5G, Industrie 4.0, and connected and automated driving) as well as the interests of other frequency users (satellite services, navigation, military use, broadcasting, users of wireless manufacturing technology, etc.). Spectrum scarcity
means that, once again, the decisions have to be partly political, and not merely technical. The German government sees a need for an ongoing political steering of European spectrum policy by the Member States. For this purpose, it is suggested that the "Digital Single Market Strategic Group", which is staffed according to the responsibilities of the different departments, set up annual programmes in meetings dedicated exclusively to spectrum policy with such programmes containing political goals and projects to supersede the multi-year programmes and to monitor fulfilment of such programmes.

In this context, the German government points out that the interests of the authorities and organisations with security responsibilities and military interests must continue to be considered and that national competences should not be affected.

**Procedures and criteria for frequency awards**

In view of varying population densities, topographical features and market structures, the scope for action and the needs of the users diverge considerably between the Member States. Innovations and technological advances, as well as a rapidly changing communications market, will in future further increase the demands placed on spectrum administration. It is therefore necessary to establish a framework which permits the national authorities to respond quickly and flexibly to the specific needs of the users in the respective Member States and to undertake corresponding tailored frequency awards. At the same time, the developments in the field of connected and automated driving, for example, or 5G, will need cross-border coordination and cooperation.

Licence-free spectrum/general allocations are important instruments which support research and innovation. They permit simple and rapid access to spectrum that is generally harmonised across Europe, and thus particularly help SMEs to access the market. Individual allocations are primarily needed when specific quality and security requirements need to be met by the radiocommunication service. They already require a special justification pursuant to Art. 5 of the Authorisation Directive, whilst in principle frequencies are to be awarded for general use. This rule-exception relationship should be retained, although the question of who pays for the non-addressable costs of necessary frequency protection should be examined. The decision as to when general allocations or individual awards are used should continue to be taken on a case-by-case basis and on the basis of technical requirements or the attainment of objectives of general interest.

If there is to be successful, innovation-friendly and adaptable frequency administration, it is also necessary to strike a balance between increasing European harmonisation and flexibility for the Member States. Harmonisation should only take place where it generates genuine European added value.

The German government believes that the current legal framework for award procedures and criteria has generally proven its worth. However, some principles might be formulated more clearly and enforced better in order to ensure more uniform and efficient implementation. For example, regulatory principles to generally align the award of frequency use rights for communications services could be formulated for the following aspects:

- **Stipulation of the regulatory principle of efficient use of the spectrum.**

- **Ensuring that the procedures are appropriate and proportionate (e.g. regarding access criteria, guarantees, procedures, rights to be heard, etc.).**

- **Criteria for adequate compensation payments to existing users in the case of revocation or withdrawal of rights or for incentive payments for the voluntary withdrawal from a frequency band.**

The German government would welcome a further acceleration of the provision of harmonised frequencies for electronic communications. For example, there could be a binding common deadline, with narrowly defined exceptions, until when a harmonised frequency band for cross-border services must actually be made available. However, all-encompassing harmonisation of time schedules, including a common start date, would hold up first-movers like Germany in the 700 MHz band and is therefore viewed critically. In this context, the German government explicitly
advocates the stipulation of criteria for a coordinated release of the 700 MHz band, since this will facilitate the deployment of higher-performance networks as a vital precondition for Industrie 4.0 and connected mobility.

The Member States should thus be given a single framework which creates sufficient planning security for companies whilst also permitting flexible solutions to be tailored to the respective national situation. However, the German government does not believe that further-reaching harmonisation of the award and allocation procedures and other conditions (e.g. on the duration of the licence or on coverage) or even an ex-ante notification requirement would be suitable ways of making frequency awards more efficient in the Member States, and therefore takes a very critical view of them. The revenue from the award of spectrum rights should continue to be exclusively paid to the Member States.

**Cross-border cooperation**

Cross-border award procedures on a voluntary basis by means of cooperation between NRAs are already possible in the existing legal framework and are being used (e.g. UK-Ireland cooperation). Such cooperation – also on a multinational basis – should continue to be encouraged. The starting point for regional or pan-European concerted awards should, however, be the clearly formulated need for this in the form of evidence of specific projects from industry. Otherwise, there will be the risk that the allocated spectrum is not used optimally and in the worst case (as e.g. with the 2 GHz MSS frequencies) is left unused.

**Instruments for efficient and flexible frequency use**

Flexible frequency use will gain in importance particularly as a result of the introduction of 5G technology and the use of higher frequency bands. It seems likely that new sharing methods will facilitate the joint use of various radio services.

The necessary flexible allocation of frequency use rights is already anchored in the current legal framework (Art. 9b of the Framework Directive). In Germany, Section 62 of the Telecommunications Act provides that frequency bands for trading, lease or cooperative, joint use (frequency pooling) can be released. Possible problems can be resolved by a more efficient implementation of these projects.

It is, however, necessary to bear in mind that frequency trading can also result in inefficient frequency usage.

The German government shares the Commission’s view that, if the spectrum is to be used efficiently, it must be possible – taking into account the principle of non-discrimination – to allocate frequencies for a different use if these are not used for the original purpose. Once again, the framework should be as flexible as possible, permitting the Member States to respond to the specific situation in the country. Uniform criteria for withdrawal procedures/compensation payments could create greater legal certainty. Also, a “toolbox” could be provided (e.g. use it or lose it clauses, incentive models, ban on hoarding frequencies), giving the Member States various options for the refarming process. These instruments should fulfil the general principles of an objective, transparent, non-discriminatory and proportionate procedure and strengthen competition.

**Support for new technologies**

Alongside standardisation, the provision of adequately harmonised spectrum is an essential building block for the development of 5G technology. However, this requires not only European, but if possible global harmonisation. This should continue to be delivered by the established ITU structures.
3. Sector-specific regulation of communications services

Provisions of the Universal Service Directive refer, for example, to ensuring equal access for disabled end-users, emergency services, facilitation of change of provider, and the power for the NRAs to require the operators of telecommunications networks to transfer certain radio and television broadcasting channels in certain circumstances and where appropriate to stipulate an appropriate fee (“must-carry” obligation).

In this context, the goals of the 2009 revision of the regulatory framework for telecommunications can be deemed successful.

Given the high-level of market dynamism, it is not possible to predict at present whether and to what extent there will be a future need for regulation of communications services. This question must be examined by the NRAs on a case-by-case basis.

In the opinion of the German government, the regulation of network access continues to take priority over the regulation of end-user markets. With a view to the dynamic market development and potential trends towards a concentration of power, however, the possibility of future competition problems on end-user markets cannot be excluded. For this reason, the possibility of ex-ante intervention at end-user level should remain in place; regulation should only take place when the three-criteria test identifies a specific need for regulation on the specific markets.

Handling of over-the-top (OTT) players

The appearance of over-the-top players (OTTs), who offer substitutes for traditional telecommunications services or compete directly with them, but who are not, or not clearly, subject to sector-specific regulation, poses questions with relevance for regulation. These must be taken into consideration when further developing the legal framework in order to achieve harmonised, converging and coherent rules. This requires intensive and continuous monitoring of the related market and convergence processes and appropriate regulatory instruments in the Member States and at EU level in order to create a level playing field where necessary.

In this analysis, consideration must be given not only to the establishment of a level playing field but also to promotion of innovation, the deployment of infrastructure, IT security, and consumer and data protection.

The question of what electronic communication services can be substituted by OTTs must be answered on a case-by-case basis in view of specific market developments. There are certainly a number of OTT services which affect demand for traditional telecommunications services.

In the eyes of the German government, the question of whether all communications services (including substitutes) should be covered by a new common definition is an important one which should be discussed in detail at European level. There are no final answers to this question on the table yet.

In view of the dynamism of the markets and services, too narrow a definition should be avoided. The definition of the Telecoms Single Market Regulation [(EU) 2015/2120] for internet access services basically appears to be suited to initially describing and defining the field of “internet access services”. Further statutory stipulations on any regulation of OTT services and differentiation between them should be sufficiently open for the regulatory authorities to have sufficient scope in terms of the market definition to allocate the services in line with the “demand-side oriented relevant market concept”. This could ensure flexible adaptation to the market development.

Which provisions of the legal framework should apply to which services, and whether existing sector-specific or service-specific rules are still appropriate or general rules might be sufficient, must be examined specifically and critically in terms of each individual provision in order to attain a consistent outcome.

This includes both competition developments and consumer aspects as well as privacy and data protection aspects. The enforceability issue is of special relevance in this context with a view to consumer aspects as well as privacy and data protection law and this must also be taken into consideration when reviewing the e-Privacy Directive.

The question raised by the Commission as to whether the markets for call termination show characteristics which are likely to justify further ex-ante regulation until 2020 and beyond cannot be answered in advance or in general terms. Whether and to what extent regulation is required depends on the specific market conditions, e.g. the existence of substitute services (messenger services).

**Consumer rights**

Whilst the uniform application of consumer rights and company duties can in principle generate positive momentum, the German government rejects the full harmonisation of consumer rights in the field of telecommunications law. The Member States must be left a certain degree of flexibility for additional consumer protection measures. This applies most notably to existing national rules. Furthermore, measures should be taken to ensure that the consumer rights provisions are adequately integrated into the Member States’ contract law and that they are harmonised and reconciled with the legal framework for consumer rights that already exist at EU level.

**Numbering**

The administration and allocation of numbering resources should continue to take place at national and ITU level. The German government sees no additional benefit from a European numbering area, especially as the M2M industry primarily operates on a global basis. The challenges deriving from M2M are being discussed in international organisations like the ITU, and at European level in the context of CEPT ECC. Should harmonisation become necessary in future, this can be achieved in the established structures of the ITU and CEPT ECC. The German government is also in favour of explicit permission for the extraterritorial use of national IMSI numbers in the M2M context.

**Must-carry rules**

In view of numerous different transmission media (broadband cable, IP TV, satellites, frequencies, apps), the dissemination of digital content of public interest is not really at risk. A discussion of possible effects on diversity of opinion deriving from the design of user interfaces should, however, take place in an appropriate context. With a view to the efforts by certain Member States to migrate from analogue to digital radio, the German government calls for an interoperability requirement for receivers along the lines of the EBU’s smart radio initiative.

Measures at Member State level to protect diversity (e.g. “opening clause” of Art. 31 of the Universal Service Directive for must-carry) must also remain possible. There, the possibility to stipulate an appropriate fee for transmission obligations should be retained.

**4. Universal service**

The purpose of the universal service is to ensure social and economic participation of people e.g. in remote areas or with disabilities via appropriate access to telecommunications services at affordable prices. In Germany, the market has so far delivered these basic services on a voluntary basis. An appropriate price development was mainly attained via market liberalisation and the strengthening of competition.
On the basis of this experience and of the large shifts in user behaviour, the German government sees a possibility to adapt the Universal Service Directive. The Member States should retain a large degree of flexibility in terms of the definition of universal services and their financing; here, market distortion between Member States should be avoided as far as possible. There certainly should be no broadening of the universal service regime. In the case of broadband in particular, even just debating the extension of universal service obligations could cause market uncertainty and impede investment. The German government regards functioning competition, supplemented by a funding policy based on clear rules, as the right way to ensure full-coverage high-performance internet. This includes the connection of institutions pursuing public interests (e.g. schools, universities).

In an environment with open and competition-based markets, therefore, any universal service concept must be based on the principle of avoiding distortion of competition and limited to the level which is absolutely necessary. However, it must also be ensured that full-coverage of and access to high-performance bandwidths is achieved as quickly as possible.

Technology-neutral rules on basic coverage and coverage for people with disabilities will remain necessary in future, and must constantly be kept in line with advances in technology. However, the German government believes that the scope of universal services is basically worth reviewing in the light of the developments. The need to compile a printed list of subscribers and the scope of coverage with public coin-operated and card-operated telephones should be reviewed. In the view of the German government, a simplification or full national flexibility on the obligations is feasible. In general, the possibility for the Member States to choose the way universal services are financed pursuant to Art. 13 of the Universal Service Directive should be retained.

5. Institutional design and regulation

Efficient regulation requires the current institutional legal framework to be analysed with a view to optimisation. This analysis should not be limited to further centralisation measures or the reversal thereof. Instead, the economic logic and the efficiency of the fulfilment of government tasks by the existing concepts should be examined and focused on. The aim should be to revise the existing, very complex and time-consuming procedures and to increase their efficiency. Overall, it appears unnecessary, or no longer necessary, for the European Commission to review each individual measure by each of the 28 national regulatory authorities for all markets.

At present, for example, the Article 7/7a procedures create a lot of work for all sides. The German government considers unbundling of the currently lengthy and unclear group decision processes to be necessary, and these should be replaced with a system of clearly distributed tasks and responsibilities. Specifically, there is a need to decide which regulatory task can and should be better addressed centrally at EU level and which task can be better addressed at national level. The response to this question should involve the definition of clear criteria and thresholds, e.g. by stipulating in greater detail when a measure is actually and clearly cross-border or has "effects on trade between Member States". Full use should be made of the principle of subsidiarity.

The current institutional legal framework has proved its worth for the field of frequency administration. It encourages the involvement of industry in the coordination processes (bottom-up process). This ensures that the proven need for spectrum is met uniformly and efficiently wherever possible on a pan-European basis, and in line with the interests of the market. Finally, the Commission ensures uniform technical implementation within the EU in cooperation with the RSC and the RSPG. The RSPG has an important advisory function and provides a link to the expertise and experience of the frequency administrations; this should be maintained and strengthened.

The current system delivers the necessary economies of scale for innovation and market success and makes cross-border services possible. However, the coordination processes within CEPT create a challenge in terms of capacity for small and medium-sized enterprises. For this reason, certain Member States have launched initiatives to give better support for and coverage of the spectrum needs of SMEs. At Commission level, too, additional advisory and support services for SMEs could be put in place, for example to help companies with the cumbersome compatibility studies or test runs required in the CEPT, ETSI or ITU context, without processes being duplicated here.
However, in view of the special dynamism of developments, general strategic decisions in the field of spectrum policy should be taken at short notice by a high-level (i.e. DG level) group in order to permit rapid adjustment to current developments.

6. Security aspects

Furthermore, the German government generally asks the European Commission to ensure that forthcoming reforms of the applicable rules for telecommunications and internet services adequately consider IT security aspects in the interest of citizens, commerce and government and also to examine in this context to what extent measures against malware and criminal infrastructures as well as measures to support users in protecting their own systems are needed.