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# THE TECHNOLOGY, MEDIA AND TELECOMMUNICATIONS REVIEW

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EDITOR  
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## Chapter 17

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# LUXEMBOURG

*Linda Funck*<sup>1</sup>

### I INTRODUCTION

The Luxembourg TMT sector has evolved from being predominantly a provider of voice services into a diverse, competitive and interconnected industry using terrestrial, satellite and wireless transmission systems. Today Luxembourg has first-class infrastructure and telecommunication networks and is among the top locations for electronic communication services and infrastructure.<sup>2</sup>

Traditionally the sector was limited to very few players. Telecommunication and postal services were operated over several decades as a public monopoly of the state-owned *Entreprise des Postes et Télécommunications (EPT)*.<sup>3</sup> The radio and television sector was controlled and developed from its early years by a privately owned company. Indeed, the first radio broadcasting in Luxembourg was initiated by the founders of the current broadcaster *CLT-UFA*. The privately held operator ensured a leading role in the national and international development of the radio and television sector and *RTL Group* today ranks as the top television and radio broadcaster in Europe. Luxembourg has also been a pioneer in non-terrestrial communication technology. *SES-Astra*, a Luxembourg-based company created in 1985, was Europe's first private satellite operator and today *SES* has global standing.

The presence of important market players in the TMT and TMT-related sectors in Luxembourg and the related know-how and experience has led the Luxembourg government to make efforts to maintain, create and further develop its electronic telecommunication technologies with the aim of being among the best places in Europe and abroad to do business within the sector and becoming a hub for e-services in Europe.

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1 Linda Funck is a partner at Elvinger, Hoss & Prussen.

2 IDC.

3 New commercial name 'Post Luxembourg'.

Luxembourg combines many features that are beneficial to the development of an ICT<sup>4</sup> sector, including the diversity and multilingual skills of the population and workforce, a geographical location in the centre of Europe and an important financial industry in need of high performance communication technologies. In addition, Luxembourg has gradually developed a state of the art digital infrastructure, international telecommunication connections (offering fast and reliable connectivity to other European cities at very low latency rates), efficient national communication networks, performant data centres, a comprehensive legal framework, cutting-edge research, safety and security, all of which contribute to Luxembourg's increasing attractiveness to technology organisations and electronic communication services, but also to financial institutions, companies active in biotechnology and medicine and other businesses. Luxembourg has become one of the top locations for ICT infrastructure (data centres, high speed connectivity and internet traffic) and it offers specialised expertise to keep data safe. The presence of regulated ICT 'support' professionals of the financial sector, who are subject to the same confidentiality obligation as banks, provides considerable comfort and security to clients in the financial sector in areas such as the outsourcing of IT functions.

The quality of the communication infrastructure has led numerous actors in the gaming sector (online video games) and gambling sector to set up their headquarters in Luxembourg or even install their technological centre for the European area in Luxembourg.<sup>5</sup> Luxembourg as a new European online gambling hotspot is attractive for low latency internet providers who expand their ICT location to Luxembourg. Global brands in the media and internet world such as Amazon, eBay, iTunes, PayPal, Vodafone Procurement, RTL Group, tigo and Skype all have European headquarters or major operations in Luxembourg.<sup>6</sup> The establishment of Level 3 in Luxembourg (one of the most important operators of telecommunication services at the level of the backbone internet) confirms Luxembourg as a centre of excellence in the internet sector. Luxembourg is also attractive to a number of e-payment institutions and can be considered as Europe's e-payment hub with brands like Digicash, Amazon Payments, PayCash, Microsoft or Rakuten all based in Luxembourg. Luxembourg has a good reputation for service availability, security and data protection and responsive authorities.<sup>7</sup>

On 7 July 2014, the government announced the establishment of three new companies active in the ICT sector, Chatwork, SK Broadband Connect and MTX Connect confirm the attractiveness of Luxembourg for ICT businesses.

In July 2014, professional associations have formalised their combined interests in the ICT industry by giving 'ICT Luxembourg' a legal existence headed by a board of directors composed by representatives of the main professional associations. Their aim

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4 Information and communication technologies.

5 Onlive Inc., having implemented a cloud gaming platform and chosen Luxembourg to locate all its servers for the European distribution of its services, Big Fish Games, Agapiet, Bigpoint, Kabam- Europe, Nexon Europe S.à.r.l., Innova.

6 In 'Luxembourg an e-Hub for Europe'.

7 Luxembourg For Finance : [www.luxembourgforfinance.com](http://www.luxembourgforfinance.com).

is to promote the ICT sector on a national and international level and to develop and diversify the ICT branch of activity and services.

The government encourages the establishment of new businesses (notably through ‘Luxembourg for Business – proud to promote ICT’<sup>8</sup>) and is keen to further develop the TMT sector in line with the major industry trends. Efforts are also made in ICT research with a focus on security, reliability and trustworthiness of ICT systems and services.<sup>9</sup> In a context of increasing influence of digital technologies on every aspect of our lives and throughout all business areas and with the recent development in cloud computing and e-archiving, digital security is a key element of the success of the digital economy. Important improvements are made to the legislation in order to adapt the national legal framework to overcome the barriers related to the use of the new technologies.<sup>10</sup> Eurocloud Europe, a European non-profit organisation, established its headquarters in Luxembourg at the beginning of 2013, which emphasises the willingness to position Luxembourg as the European hub for cloud computing services. To establish Luxembourg as a ‘big data hub’, specialised in the protection and processing of data, is a major objective for the new government.<sup>11</sup>

Luxembourg is very present at European-level discussions and negotiations and stout in its defence of its position in the global process of harmonisation and liberalisation, while supporting the direction of European regulation. At a national level, research and development in the ICT sector is conducted by a number of government-promoted institutions.<sup>12</sup> In developing its communication networks in the context of the investment realities and opportunities in the telecoms and media sector, the challenge is to direct investment in a way that ensures that the right type of network is built and that public investment works in cooperation with the private sector so as to promote a more competitive telecoms environment. The government has been very active in negotiating and defending the interests of Luxembourg in the adoption process of the European Telecoms Package. Similarly the government is actively taking part in the discussions regarding the forthcoming data protection reform.<sup>13</sup>

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8 New video available on [www.investinluxembourg.lu/ict/clip-luxembourg-your-gateway-europe](http://www.investinluxembourg.lu/ict/clip-luxembourg-your-gateway-europe).

9 Interdisciplinary Center for Security, Reliability and Trust (SnT), Computer Science and Communication (CSC).

10 Such as the amendment of article 567 of the Commercial Code (See Section VII (i) Key legislation).

11 *Letzebuurger Journal*, 17/06/2014.

12 For instance, CRP Henri Tudor (CRP) and the University of Luxembourg, which has a computer science and communications research unit. Centre Gabriel Lippmann (which is expected to merge with the CRP) is active in applied scientific research and technological development.

13 The European data protection reform proposed by the European Commission in January 2012 for the purpose of satisfying the modernisation of the data protection frameworks will entail amendments to the existing data protection laws. Luxembourg does currently

The development of the information society is one of the key priorities of the government. In addition to the aforementioned policies, it has created an action plan called 'e-Luxembourg' with the ultimate goal that Luxembourg administrations, corporations, education personnel and individuals may efficiently use and have access to electronic communication means and to help improve their quality of life. At present many filings, registrations, requests to public administrations such as tax, social security and energy sector can be made online. The government has adopted a GED system (electronic document management), banning the use of paper. The aim is to streamline the internal government structures so as to become more cost efficient. In 2013 Luxembourg has introduced the electronic identity cards that are now available. Luxembourg's Prime Minister Xavier Bettel, in his speech in regard to the state of the nation, stated that he is confident that the Luxembourgish IT sector will continue to offer Luxembourg new perspectives and new markets.

The Council of Government recently (3 and 4 June 2014) announced the launch of a new strategy 'Digital Luxembourg'. The objective of this strategy is to strengthen and consolidate the position of the country in the ICT sector. The Digital Luxembourg platform aims to assemble private players and public institutions federating the inter-sectorial and cross-sectorial interaction. The Ministry of Media and Communication will head and determine the political strategies. All current ICT initiatives have to be valorised and regrouped into a global strategy to increase their visibility and strength.

The government has again expressed its full awareness that the continuance of the success and the competitiveness of Luxembourg's financial sector will, among other things, depend on the availability of cutting-edge services based on FinTech.<sup>14</sup>

Convergence has been achieved by creating rules and regulations, regulatory authorities and consulting entities at national, European and international level, which embrace the diversity, interconnectivity and interrelatedness of the various industries and players. The increasing convergence between telecommunications, information technology and media has led to the adoption of the regulatory framework which was introduced into Luxembourg law by two laws of 27th February 2011 (the Paquet Telecom). The Paquet Telecom is designed to provide for one set of rules for all electronic communication services and networks. The continuing development in the ICT sector constantly calls for adjustment of the current legislation and regulations at national and European level (see *infra* 'Main sources of law').

As a result of convergence, it is extremely important that interconnectivity and free access to all operators and service providers within the TMT sector is ensured in an equal manner. The use of one infrastructure for different types of services is of particular importance and it is crucial that the operators and owners of the infrastructure or networks make these available to the other participants in the TMT sector. This is particularly true in Luxembourg because of the small size of the market. Efforts are constantly made to

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not envisage to legislate on network neutrality at national level unless this would be recommended at EU-level.

14 Financial sector related technology.

ensure competitiveness among the players in the TMT sector.<sup>15</sup> Ensuring Luxembourg's international connectivity is at the top of the agenda for the coming years with the aim of ensuring the lowest latency rates with major capitals, the lowest prices and the presence of the most important carriers.

Importantly, the government supports the principle of network neutrality (i.e., keeping a free architecture, open and non-discriminatory, guaranteeing access without unjustified conditions on electronic communication networks). Competition among incumbent operators and alternative operators remains an important element for the e-industry players.

## **II REGULATION**

TMT services cover an extremely wide scope of technology and services, with different laws and regulations applicable that charge various regulatory authorities with supervising different services and related technology. The competent ministry in Luxembourg for the telecommunications and media industry is currently the Ministry for Communication and Media.

### **i Telecommunication, radio frequency, energy, railway service and postal service**

The Law of 1997 created the Luxembourg Institute of Telecommunications (ILT), whose duty it is to supervise and regulate the telecommunications sector. In 2000, the tasks of the ILT were widened to encompass the Luxembourg energy sector and postal services and, as a consequence of the Law of 1997, it was renamed 'Luxembourg Institute of Regulation' (ILR).<sup>16</sup> The scope of the ILR's tasks was modified on several occasions and for the last time by the Laws of 27 February 2011 and 26 July 2011. The ILR is an independent regulator and not funded out of the public state funds paid for by tax payers, but is financed by the operators of the sector supervised and regulated by the ILR.

Its competences in the different sectors are set by the Electronic Communication Law and the Spectrum Law. The recent amendment of the Spectrum Law has introduced clarifications on the allocation of competences between the Minister for Communication and the ILR. The ILR is entitled to set rules in accordance with European Directives and national law. Additionally, it controls the efficient use of infrastructure for the benefit of the consumer. It is entitled to determine the fees and conditions at which communication networks are operated and services rendered so as to allow the formation of a competitive market. It has the authority to also draw up reports and proposals, which it must submit to its board and the government. It gives advice, and prepares statistics and regulations.

The ILR is competent to receive notifications and grant authorisations or licences in relation to the provision or operation of electronic communication network services and is assisting the competent minister in the allocation of licences for radio spectrum. It is also in charge of establishing the plan of frequencies, updating public registers required by law for the various TMT sectors.

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15 cf Activity report 2013 p.9-16 ILR.

16 [www.ilr.lu](http://www.ilr.lu).

The ILR has the power to issue administrative sanctions against operators that breach laws or regulations. It may also act as a dispute settler between competing operators. The ILR in addition acts as mediator between customers and operators.<sup>17</sup>

The ILR is not empowered to monitor and regulate abuse of dominance. It is, however, responsible for ensuring that dominant players do not exclude other competitors from the sector. It may take measures and issue rules to reinsure a competitive market if in its opinion proper competition is no longer warranted.

## **ii Media**

The Media Law (as defined hereafter) has been amended by the law of 27th August 2013. The governmental commissions existing under the former law (i.e., Communication Media Service (CMS), Independent Radio Broadcasting Commission (CIR) and the National Programming Council (CNP)) have been replaced by one single authority the Luxembourg Independent Audio-visual Authority (LIAA). Its main responsibilities are to:

- a* ensure the service providers' compliance with the law;
- b* grant or withdraw broadcast permits;
- c* ensure access to audiovisual programmes for persons with a visual or hearing disability;
- d* stimulate on-demand audio-visual media service providers to promote and distribute European works;
- e* encourage audio-visual media service providers to establish codes of conduct concerning the broadcasting of inappropriate content; and
- f* impose sanctions on non-compliant service providers such as fines, withdrawal of permits, warnings and suspension of transmission.

The National Commission for Data Protection (CNPDP), created by the law of 2 August 2002 on the protection of individuals with regard to the processing of personal data, is the authority in charge of the supervision of the electronic communication market, as far as data protection issues are concerned.

The CNPDP controls the processing of personal data in Luxembourg and ensures compliance with the data protection regulations, in particular those relating to the confidentiality and security of processing operations. In addition, it has advisory competence towards the government. Although the CNPDP is a public institution, it enjoys independence in order to carry out its mission.

The CNPDP has investigative competence that allows it direct access to data of processing operations. As an investigation body, the CNPDP is allowed to issue administrative sanctions.

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<sup>17</sup> ILR Regulation 11/151/ILR of 4 April 2011. See annual report 2013 on [www.ilr.public.lu/publications/rapports-annuels/2013.pdf](http://www.ilr.public.lu/publications/rapports-annuels/2013.pdf).



**iii Main sources of law**

The TMT sector is extremely broad and diversified. Due to the specifics of the various industries on the one hand and the interrelatedness on the other hand, it appears that laws and regulations apply to more than one specific service within the TMT sector, resulting thus in a large number of applicable legislation and regulations.

The main laws are:

- a* Law of 27 July 1991 as amended by Law of 17 December 2010 and the Law of 8 April 2011 on electronic media (the Media Law) as amended for the last time by a law of 27 August 2013;
- b* Law of 11 April 2010 on freedom of expression in electronic media, amending Law 8 June 2004 (as amended) on the freedom of expression in the media sector;
- c* Law of 27 February 2011 on electronic communication services and networks (the Electronic Communication Law), abrogating Law of 30 May 2005 on electronic communication services and networks (the Former Electronic Communication Law);
- d* Law of 30 May 2005 as amended by Law of 27 February 2011 on organisation and management of radio spectrum (the Spectrum Law);
- e* Law of 30 May 2005 regarding the organisation of the ILR as amended by the Law of 26 July 2010;
- f* Law of 30 May 2005 on the specific provisions regarding the protection of individuals as to the processing of personal data in the electronic communication sector and amending Articles 88-2 and 88-4 of the Criminal Instruction Code as amended by the law of 27 July 2007 and the law of 24 July 2010 and by the Law of 28 July 2011 (the Electronic Data Protection Law);<sup>18</sup>
- g* Law of 14 August 2000 on electronic commerce as amended (the Electronic Commerce Law);
- h* Law of 18 April 2001 on copyrights as amended (the Copyright Law);
- i* Law of 2 August 2002 as amended (for the last time by a law of 28 July 2011) regarding the protection of individuals as to the processing of personal data (the Data Protection Law);<sup>19</sup>
- j* Luxembourg Constitution;
- k* Law of 11 August 1982 on privacy (the Privacy Law);
- l* Articles L.222-12 to L.222-23 of the Consumer Code regarding distance contracts on financial services, abrogating the Law of 18 December 2006 on distance selling of financial services;
- m* Articles L.222-2 to L.222-11 of the Consumer Code;
- n* Bill of law No. 6543 on electronic archiving expected to be adopted by the end of 2013 has been delayed and shall be adopted by end of 2014;

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18 A bill of law has been adopted by the government council.

19 The European Data Protection reform proposed by the European Commission in January 2012 for the purpose of satisfying the modernisation of the data protection frameworks will entail amendments to the existing data protection laws.

- o* General laws are applicable for all aspects not specifically regulated by specific laws or regulations, in particular the provisions of the Luxembourg Criminal Code (e.g., in relation to pornography, discrimination, racism, violence, theft and piracy) and the commercial code with the amended article 567 (See Section VII, *infra*);
- p* Law of 2 April 2014, amending *inter alia* Consumer Code, Electronic Data Protection Law and Electronic Commerce Law; and
- q* Law of 18 July 2014 on cybercrime<sup>20</sup> (the Cybercrime Law).

In addition, a large number of Grand-Ducal regulations and other regulations (particularly from the ILR) have been adopted in relation to the implementation of the various laws.

#### **iv Ownership restrictions**

Luxembourg rules and regulations do not, in principle, impose ownership restrictions within the TMT sector, except for certain specific sectors. Regarding telecommunications services, the previous authorisation regime has been replaced by a less stringent notification regime.

There are no ownership restrictions for being granted a concession to operate Luxembourg satellite systems or broadcast a Luxembourg programme via satellite or cable except that for the latter a broadcasting licence may only be granted to a legal entity incorporated under Luxembourg law.

Because spectrum is considered a rare resource, its management and use is reserved to the Luxembourg state. Licences to use spectrum may, however, be granted to third parties subject to the conditions of national legislation, related regulations or international or European agreements and treaties.

There is no specific national regulation on cross-ownership of media companies. However, general laws on competition still apply.

#### **v Mergers and acquisitions**

There is no specific Luxembourg authority regulating mergers or acquisitions in the TMT sector. The ILR's competences are to guarantee competitiveness on the Luxembourg TMT market and thus it will monitor acquisitions and mergers in the sector so as to evaluate their position on the market *ex post*.

The Law of 23 October 2011<sup>21</sup> on competition, which prohibits restrictive agreements and abuses of dominant position, provides for an independent authority, which is the Council for Competition Matters (CCM) to be in charge of the investigation of cases, consultative missions and sectorial inquiries (or by types of agreement). The former Investigation Division for Competition Affairs has been abolished. The CCM is also the decision-making body and exercises various powers for the execution of its mission (i.e., the finding and sanctioning of legal violations, drafting of opinions, market studies, information of companies and execution of missions allotted to the national

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20 See Section VII.iii, *infra*.

21 Amends and replaces the Law of 17 May 2004.

CCM). Decisions by the ILR in relation to the regulation of competition must be taken in agreement with the CCM. None of the relevant authorities has *ex ante* powers nor may they prevent mergers or acquisitions.

### III INTERNET AND IP-BASED SERVICES

#### i Internet and internet protocol regulation

Internet services were regulated, prior to the Electronic Communication Law, by the law of 21 March 1997 relating to telecommunication services and the operation of telecommunications networks (the Law of 1997).

Even though the Law of 1997 did not provide for specific internet or internet protocol regulations but covered telecommunications services and networks more generally, in the absence of the express exclusion of internet services and in light of the definition of 'telecommunication services and networks',<sup>22</sup> internet services were considered to be governed by this law.

The Former Electronic Communication Law introduced certain changes and widened the scope of existing regulation to a larger range of communication technologies and introduced the definitions of 'electronic communication network' and 'electronic communication services' as opposed to 'telecommunication services'. The new terminology reflected the increased scope of the services and networks that are regulated. Express reference to internet services is made.

Neither the Law of 1997 nor the current Electronic Communication Law provide for any specific rules applicable to internet services or IP-based services as opposed to traditional telephony services, except that due to the specific nature of the telephony services, certain additional rules apply to the provision of telecommunication services that are offered to the public. The Electronic Communication Law provides for certain specific obligations applying to publicly available telephony services and public telephone networks.<sup>23</sup> These specific regulations are due to ensure a universal service to the resident population and apply only to traditional telephony.

As previously noted, the ILR is the competent regulator in charge of the supervision of the services rendered both in relation to internet services and traditional telephony services. With the adoption of the Former Electronic Communication Law, the operation or provision of electronic communication services or networks is no longer subject to licence but only to notification to the ILR.<sup>24</sup> No distinction is made between traditional telephony and internet or IP-based services.

The Electronic Communication Law provides for a global legal framework applicable to all electronic telecommunication services and networks, with certain

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22 The abrogated Law of 1997 provided for a definition of 'telecommunication services' and 'telecommunication networks', with 'telecommunication' having been defined as 'each transmission, issue or reception of signals, images, sounds or data of any nature, by wire, radio, by optical or by electromagnetic means'.

23 Articles 11 and 12 of the Electronic Communication Law.

24 Article 5.

specifics depending on the type of service or network, ensuring however that the whole sector is consistently governed by the same legislative and regulatory national framework.

## **ii Universal broadband service**

The development of communication infrastructure in Luxembourg is among the top priorities of the governmental programmes in the field of the information and communication technology. The government has been developing the broadband infrastructure services for approximately 10 years.

Since the end of 2011, Luxembourg has a 100 per cent standard (fixed) broadband coverage (DSL up to 25 Mbps) available to all Luxembourg households.<sup>25</sup> NGA<sup>26</sup> reached close to 94 per cent (+6 per cent) of the households in 2014. 4G broadband availability in Luxembourg reached around 80 per cent in urban and 58 per cent in rural areas. In terms of fixed broadband subscriptions the market share is as follows: 80 per cent DSL (VDSL included, DOCSIS 10 per cent, FTTH/B 8 per cent),<sup>27</sup> Luxembourg residents are very connected (93 per cent weekly basis / 82 per cent daily basis).

In terms of fast broadband and ultra-fast broadband the deployment is less advanced in terms of coverage and take-up. The government is, however, committed in the NGA deployment and pursues its ambitious strategy initiated in April 2010 aiming to be the first fully fibred country in Europe. The installation of the optical fibre is in constant progress since 1997 and Luxconnect<sup>28</sup> is joining the efforts to cover the whole territory with optical fibre. FTTP, using fibre optic cable is further progressing and was usable by close to a 31.8 per cent of all Luxembourg households (compared with around 26 per cent in 2011).<sup>29</sup> While working on the deployment of optical fibre throughout the country, efforts are also being made on the existing networks so as to increase the broadband speed.

As of January 2014, around 73 per cent have broadband subscriptions for less than 30Mbps, around 25 per cent between 30 and below 100Mbps and 2 per cent above 100Mbps.<sup>30</sup>

In Luxembourg a notable market trend towards bundled offers (broadband mobile or fixed telephony and TV) continues. As of today Luxembourg benefits from an extremely developed FTTH architecture.

The ultimate aim of the government is to provide households and businesses with access to ultra-high-speed broadband by 2015 (100Mbps) and reach a capacity with downstream speeds ranging to 1GB/s and upstream speeds of 500Mbps in 2020.<sup>31</sup> The EPT (through Post Telecom) have launched offers for ultra-high speed internet access

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25 Luxembourg 2011 Telecommunication Market and Regulatory Developments.

26 Next Generation Access (VDSL, DOCSIS 3 cable and FTTP).

27 Source : Digital Agenda for Europe Scoreboard 2014.

28 Luxconnect has been created at the initiative of the government.

29 Luxembourg and ICT: A snapshot.

30 Cf footnote 29.

31 End 2011, depending on the operator, capacity with downstream speeds ranged to +20 Mbps and upstream speeds of 50Mbps.

under the name of 'Lux Fibre'. Other alternative operators<sup>32</sup> have also launched their offers.

### iii Content regulation and protection

Pursuant to the Electronic Data Protection Law and the Data Protection Law, ISPs and operators of electronic communication services and networks are compelled to ensure the confidentiality of the communications exchanged by way of electronic communication means. The general rule is that other than the user, no person is allowed to listen, intercept or store communications and data relating to the traffic and location without the agreement of the user.

This prohibition does not apply to (1) communications relating to emergency calls, (2) commercial transactions to the extent that they constitute proof of the transactions, (3) authorities investigating and acting in relation to a *flagrante delicto* or within the scope of criminal offences in order to ensure national and public security, and (4) cookies. In relation to data resulting from commercial transactions and cookies, the user or parties to the transaction must be informed that their data may be processed, the conditions (in particular the duration) and aim of the storage, and the possibility of the user opposing such data processing. Moreover in relation to the cookies, a specific consent to the storage (opt-in) is required as a result of the recent change of law. Article 29 working group clarified in its recommendation 2/2013 that this consent has to be free and unequivocal. So there has to be no doubt that the user gave his consent. Furthermore, there has to be a real choice and no risk of deception or negative consequences if the user chooses not to give his consent.<sup>33</sup> Discussions on exemption to the opt-in principle are taking place at a European level. For the purpose of criminal law enforcement, specific conditions must be met to be able to have recourse to intercepted communications data. In addition, for the purpose of research, monitoring and pursuit of criminal offences and with the sole aim to provide relevant information to the judicial authorities, each ISP or operator must store traffic information and locational data for a period of six months. The law of 24 July 2010 amended the scope of criminal offences by limiting the possibility of only consulting the data in relation to criminal offences resulting in penal sanctions of more than one year's imprisonment. A Grand-Ducal Regulation determines the category of traffic data that may be useful for the research, observation and prosecution of criminal offences, as well as the manner pursuant to which such information is made available to the authorities.<sup>34</sup>

Intellectual property theft and piracy are regulated by:

- a* the Copyright Law;
- b* the Luxembourg Criminal Code;<sup>35</sup>
- c* the Privacy Law; and
- d* the Electronic Data Protection Law and the Data Protection Law.

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32 *Inter alia* Tango, Cegecom, Join Wireless, Orange.

33 CNPD, Rapport annuel 2013, page 62.

34 Grand-Ducal Regulation of 24 July 2010.

35 Articles 309, 460, 488, 505, 509-1 and following of the Luxembourg Criminal Code.

There is at present no public authority in Luxembourg that exercises a global supervisory or monitoring power on the content and traffic data of network operators, ISPs and users as this would violate the essential privacy principles.

Similarly, and for the same reasons, network operators may not control the content, application and services accessed by their network users.

The practice of deep packet inspection is prohibited in Luxembourg as it infringes confidentiality rules and constitutes an invasion of privacy, in complete violation of the aforementioned legislation. The same analysis would apply to filtering of data processed by means of electronic communication means.

However, network operators are obliged, in order to comply with the secrecy or confidentiality requirements, and avoid invasion of privacy, piracy or intellectual property theft, to take appropriate technical and organisation measures and have systems and procedures (firewalls, encryption, secured and restricted access, etc) in place that render the network and the data processing via their network secure.

#### **iv National security**

The Electronic Communication Law, the Electronic Communication Data Protection Law and the Data Protection Law provide for specific applicable measures to ensure national interests.

In certain circumstances, where national security (including public health and public order) is endangered, the government may requisition the entire electronic communication network established in Luxembourg, as well as the connected equipment, or prohibit the provision of some or all electronic communication services.

The government may also, in order to maintain access to the emergency services, dictate special conditions for the use of electronic communication services and networks. Although storage of personal data is generally prohibited, the Electronic Communication Law provides an exception in relation to storage of traffic data relating to emergency calls or inspection of false alerts or attacks or abusive calls.

## **IV SPECTRUM POLICY**

### **i Development**

The increasing development of wireless communication, media and information technology also affects spectrum policy in Luxembourg.

The need for radio spectrum has increased significantly over the past few years and Luxembourg actively participates in the elaboration of a pan-European spectrum policy and favours a more flexible and efficient use of spectrum.

Luxembourg has, in its contribution paper to the European Commission of 15 April 2010 (the 'April 2010 Contribution'), indicated that it is in favour of a more flexible use of spectrum, emphasising, however, that it is crucial that the more flexible use will not negatively impair the current quality of services or entail harmful interferences. Luxembourg has expressed its concern that a more flexible use would need to take into consideration the characteristics of more specific and sensitive technology, which would be more prone to harmful interference than others.

During the negotiations that led to the adoption of the European Regulatory Framework, Luxembourg explained that one of its top priorities was to maintain national competence in relation to the management of the spectrum and a full subsidiarity in this area.

**ii Flexible spectrum use**

As a result of the Law of 27 February 2011 amending the Spectrum Law, allocated licences are no longer personal.<sup>36</sup> On that account it is currently possible to sell, transfer or sublease allocated spectrum, thus enhancing the flexibility of spectrum use. The Spectrum Law also provides for the possibility of spectrum sharing.

The mobile use of spectrum dedicated to fixed use is possible as a matter of applicable law and regulations and is in line with the principle of technological neutrality.

**iii Broadband and next-generation mobile spectrum use**

Luxembourg aimed towards the objective of broadband for all by 2013. As described in Section III, *supra*, the government is actively developing the terrestrial broadband infrastructure. In order to achieve this aim, a mixture of technologies must be put in place to take into account both topographic and demographic facts (in particular rural versus urban); so in addition to the terrestrial infrastructure, wireless terrestrial systems and satellites will be used. According to the 11th edition of the 'eGovernment benchmark' of the European Commission, fixed high speed internet is accessible for 100 per cent of the population of Luxembourg, compared to 97 per cent for the rest of the European Union. For the 'new generation' high speed internet (30Mbps), 94 per cent of the population is covered compared to only 62 per cent for the other EU Member States.

In Luxembourg, the increasing need for spectrum for use by the offer of increasing broadband services is partly solved by opening additional frequencies or release of spectrum for the use of broadband and next generation mobile services.

Luxembourg completed the switch-off of analogue television broadcasting on 31 August 2006, replaced by DTTV. The released spectrum (referred to generally as 'the first digital dividend') is used for next-generation mobile services.

The ILR has adopted a new frequency plan which came into force in May 2014. Frequency bands 900MHz and 1800MHz have been made available for various mobile communication technologies. Frequency bands 800MHz and 2.6GHz have also been opened. In that respect in October 2011 Luxembourg concluded an agreement with its neighbouring countries regarding reducing the risks of interference due to overlapping coverage in the frequency band 790-862 MHz. This agreement became effective on 1 January 2014.<sup>37</sup>

In 2012, the ILR launched a public consultation regarding two licences in the 900MHz frequency and two in the 1,800MHz frequency which expired in 2012. The licences within the 900MHz have been renewed to the existing operators and one new

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36 Article 2 of the Law of 27 February 2011 amending Law of 30 May 2005 on organisation of the management of electronic waves.

37 Annual report 2013 p.36 ILR.

operator and the use thereof has been expanded to different technologies. These licences allowed the introduction of 4G technology in Luxembourg specifically (LTE). In addition the three operators have been allocated additional spectrum in the 1,800MHz band allowing flexibility for the introduction of innovative new technologies. Certain operators<sup>38</sup> have spread out an operational 4G network covering a large number of the Luxembourg population and offer 4G services. According to the ILR, 64 per cent of the population was covered by the 4G network (as of December 2012).<sup>39</sup> In 2014, already 80 per cent of the population in Luxembourg has access to this network.

Following the public consultation in July 2012, regarding the allocation of licences in the 800MHz and 2.6GHz frequencies, licences were allocated in relation to those frequencies to three operators by the Communication and Media Minister. Another consultation has been launched in March 2013 on part of the spectrum in the frequency bands 800MHz and 2.6GHz which were not yet allocated after the July 2012 consultation (i.e., 2.680-2.690MHz (FDD mode) and 2.570-2.620MHz (TDD mode). Such spectrum has been allocated to the recently established operator Join Wireless. In May 2014, the ILR launched a public consultation on the frequency band 2.1GHz. A request for additional spectrum was made by Post Luxembourg (former EPT), Tango, Orange and a new operator MTX Connect.

#### **iv Auction of spectrum and user fees**

Given the small size of the market and the limited number of operators, the experience of the authorities shows that allocations of spectrum through auctions or ‘beauty contests’ does not produce satisfactory results. Hence, although theoretically possible as a matter of law, auctions are not currently practised.

The Spectrum Law provides for various procedures for the allocation of spectrum licences such as competitive selection, comparative selection or by a public bidding procedure for the best offeror. The competent minister will determine on the applicable procedure on a case-by-case basis after a having made a public consultation and publish this decision in the Luxembourg Official Gazette and in the EU Official Journal at least one month prior to the launch of the procedure.<sup>40</sup>

The fees payable to the Luxembourg state (as owner of the national spectrum) for the allocated spectrum are determined by Grand-Ducal Regulation.<sup>41</sup> These fees comprise administrative management taxes as well as user rights fees. The law of 27 February 2011 amending the Spectrum Law has modified the allocation and recovery of the fees payable in relation to spectrum licences in favour of the ILR. Public services and authorities are not subject to the payment duty to the extent that spectrum is used for the provision of services within the scope of national defence, public security or emergency services.

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38 Orange / Tango / EPT (now Post Telecom), Join Wireless, Cegecom.

39 Luxembourg and ICT: a snap shot (June 2013).

40 Article 6 of the Spectrum Law.

41 Grand-ducal regulation of 21 February 2013.



## V MEDIA<sup>42</sup>

The Media Law has been amended several times and for the last time on 27 August 2013. The law aims to cover all types audio visual and sonorous media. High importance is attributed to content regulation, protection for children, non discriminatory content and the form and the content of commercial advertising.

### i Digital switchover

Luxembourg took the decision not to develop a switchover plan with specific target dates for terrestrial broadcasting because the government favoured a market-driven approach.

Luxembourg's penetration rate of cable as a means of receiving television programmes is among the highest in Europe: some 95 per cent of households subscribe to cable networks. The average household catches around 46 channels. EPT launched an IPTV service (in particular 'VOD') entitled 'La Télé des P&T' in March 2008. Initially offered in nine locations, the service now covers a large part of the country. The basic offer includes more than 110 channels in 2014.

Netflix and Google Play Films recently announced that their VOD services will be available in Luxembourg by the end of 2014. Six providers<sup>43</sup> will then offer VOD services.<sup>44</sup> The complete switch-off of the analogue channels in the cable network although contemplated to be achieved by end 2011 is not yet fully completed but only the principal channels remain available through analogue broadcasting. A growing number of households are able to receive television through ADSL and to choose between two competing offers to receive a complete range of TV programmes.

The switchover to DTTV was completed in Luxembourg in 2006, when CLT-UFA moved the main channels used for terrestrial broadcasting to the terrestrial digital spectrum. Luxembourg holds sufficient spectrum for programme distributors other than CLT-UFA, as well as for new applications such as mobile television or HDTV.

The evolution of digital terrestrial radio transmission in Europe is being followed by the government and the ILR. In Luxembourg, the Broadcasting Centre Europe has set up different DRM short and middle-wave transmitters allowing international coverage. CLT-UFA now broadcasts its German-speaking RTL programme digitally.

About 50,000 households watch TV via satellite, with SES being the principal operator.

### ii Internet-delivered video content

It is difficult to measure the importance of internet video distribution in Luxembourg given the absence of surveys or statistics on this phenomenon. The only indicator is the fact that, as in most other western countries, people watch less traditional TV, which seems to indicate that internet video is becoming more popular, particularly with the

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42 Information in this section has been largely drawn from the government's annual report 2011 and 2012.

43 I-tunes, Netflix, Numéricable, Tango S.A., Google Play Films.

44 Annual governmental report 2012.

younger public. Given the general availability of cable and satellite TV, the impact so far has been minimal. Also, based on the high connection rates of Luxembourg residents to the internet, it should be expected that this move will not pose dramatic problems for consumers.

### **iii Globalisation and foreign investment**

Luxembourg has made important steps towards providing the type of infrastructure demanded by ICT companies and has a longstanding official policy of welcoming pan-European companies in addition to creating the appropriate framework for the development of local businesses.

With regard to foreign investments, given the small size of the market, global media companies have so far shown little interest in acquiring interests in local media players or in building up a presence in Luxembourg. As Luxembourg is a market economy, however, foreign investments are not restricted and neither is foreign control over Luxembourg companies. The size of the Luxembourg stake in SES is linked to the state concession pursuant to which SES operates orbital slots allocated to Luxembourg. Any direct impact on local programming or national culture is very limited if not non-existent.

## **VI SECURITY**

### **i Privacy and consumer protection**

Privacy and consumer protection in the electronic communication domain is guaranteed by various laws. The adoption of the Consumer Code by the law of 8 April 2011 has to be noted. The Media Law set guidelines and restrictions in relation to commercial advertisements. Specific provisions for the protections of children are provided for.

Information about consumers must be treated confidentially and may not be rendered accessible to third parties and the processing of consumer data is allowed only if it falls within the criteria defined by the relevant laws. Processing of data is subject to the principle of legitimacy of processing. Each data processor located or using physical means located in Luxembourg to process data is subject to a notification or prior authorisation procedure addressed to the CNPD depending on the nature of the data processed and the purpose for doing so.

Sharing of consumers' personal data is strictly prohibited by law, unless the consumers give their express consent. Where locational data is being stored and processed by an operator, a user must be informed thereof and must be able to oppose any such action (the process of which must be clearly set out and communicated to the user).

Luxembourg law prohibits the addressing of advertisements or other unrequested communication to persons by electronic means without their consent. If the supplier of a product received the persons' e-mail addresses during a previous sale, it can use those e-mail addresses to promote analogous products and services unless the concerned persons request such actions to be stopped.<sup>45</sup>

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45 Article 11 of the modified law of 30 May 2005 on data protection.

**ii Protection for children**

There is no specific legislation or regulation that ensures the protection of children online.

Luxembourg has ratified in 2011 the United Nation Convention in relation with the children rights and the Convention of the Council of Europe concerning the children protection against exploitation and sexual abuses and is involved in their implementation.

Moreover, the government is issuing a number of recommendations and is supporting various projects to render children and their parents aware of the risk related to the use of the internet. The Project 'Bee Secure' has been drawn up in the context of the EU Safer Internet Programme, which gives directions for the use of the internet to children, parents and educational staff.

Generally, the policy is to familiarise children with new technology rather than filtering or blocking access to various types of information (which might, however, be an alternative); the intention is to teach children how to use the internet safely and to always be aware of the risks related to such use.

Children's rights are protected by provisions of the Luxembourg Criminal Code (LCC). Further to the adoption of the law of 21 February 2013 amending Articles 372 and 377 of the LLC, the LLC provides for enhanced sanctions in relation to sexual child abuse matters. The 'LISA Stopline' is a project that provides a structure to report illegal information transmitted over the internet anonymously. The E-commerce Law requires information service providers to withdraw or render inaccessible any illegal content they become aware of. Media Law includes specific children protection provisions.

The Luxembourg University is an active member of the project 'EU Kids Online'.

The CNP was in relation to the adoption of the bill of Law No. 6478 lobbying to introduce an appropriate visual warning obligation.

**iii Cybersecurity**

The digital economy is a tributary to a secured infrastructure. Cybersecurity is therefore one of the priorities of the Luxembourg government.

Individuals and companies are encouraged to take appropriate technical measures to defend themselves against cyber attacks.

Similarly, as for children, the government has created 'CASES Luxembourg', which is a project accessible by all internet users whose purpose is to make the public aware of potential cyber attacks that are inherent to internet use and advises on how to identify potential cyber attacks. In this context it is worth mentioning the certification authority 'Luxtrust', which manages electronic certificates with the highest level of security.

Network operators and ISPs are required by applicable law to comply with stringent security measures.

As a response to the increasing number of cyber attacks the Luxembourg Criminal Code has been amended so as to include offences of the electronic communication sector.

The government pursues efforts to prevent and fight against cybercrime and has created in July 2011 two new structures: the Luxembourgish Cybersecurity Board (CB), whose mission is to work on a strategic plan against attacks via the internet, and the Governmental 'Computer Emergency Response Team' (CERT), which is the competent

body to deal with incidents of cyber crime in the public information systems. The CERT also cooperates with the Haut Commissariat à la Protection Nationale (HCPN) and the Centre de Technologies de l'Information de l'Etat. Both HCPN and CERT have adopted a cybersecurity plan, which has been submitted to the counsel of government. In 2011 the CB had identified five priorities (on national and international scale) on which Luxembourg shall pursue its efforts.<sup>46</sup> The CB has asked a new working group to review the national strategy regarding cybersecurity in order to determine whether any amendments are necessary. Furthermore, the Luxembourg government has signed a letter of intent with Belgium and the Netherlands to cooperate in the prevention and fight against cybercrime. Luxembourg regularly hosts conferences on cybersecurity that are mainly dedicated to experts in security matters.

The CB acts as a central point of information and contact for users to report cybersecurity incidents, which allows the CB to supply businesses with this information to put them in a position to take appropriate action to deal with the risk to security.

The CB met at the beginning of 2014 and acknowledged the progress of the inventory of data bases managed by the Luxembourg public authorities and issued a recommendation as to the use of mobile communication equipment within the public sector.

After having delayed the implementation of the European Council Convention on Cybersecurity (CCC) and the directive relating to attacks on cyber-criminality,<sup>47</sup> a law relating to cybercrime was adopted on 18 July 2014. Such law adapts the national substantive and procedural criminal law to the specific needs of fighting against cybercrime. The new law introduces certain new criminal offences into the Criminal Code, including in particular the misuse of identity, 'phishing' and illegal interception of computer data supplementing the legal instrument of computer-related crimes, which includes the illegal access, hacking and deletion of computer data. The law also amends the Criminal Procedure Code in order to achieve the requirements of the CCC regarding the prompt preservation of stored computer data and traffic data.

The Luxembourg government, through specialised and fully dedicated organisms, constantly works to develop cybersecurity measures.

#### **iv Emergency response networks**

Traditionally Luxembourg first responders and other emergency responders (such as police, customs and civil protection) benefit from a dedicated network. This network was still analogue (RIFO). With the adoption of the law of 20 May 2014 for the financing of a national integrated radio communication network for Luxembourg RIFO will be replaced by RENITA. RENITA is based on the digital technology Terrestrial Trunked Radio (TETRA) and in the case of a congestion of mobile networks, the RENITA network is less exposed to the inherent risks.

On an international scale the Luxembourg government has actively cooperated on strengthening emergency telecommunication and rapid response in the event of disasters.

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46 Ministère d'Etat – Stratégie nationale en matière de cyber sécurité.

47 EU Directive 2013/40 on attacks against information systems (2 September 2013).

It has developed a nomadic satellite based telecommunication system – ‘emergency.lu’ aimed at assisting humanitarian agencies to respond to communities affected by natural disasters, conflicts or protracted crises.<sup>48</sup> As of 2012 this platform was available as a public global service.

At an EU level, harmonisation of the digital frequency relating to these services has been achieved, permitting interoperability.

## **VII YEAR IN REVIEW**

### **i Key legislation**

The law of 9 July 2013, which amends Article 567 of the commercial code, ensuring the ownership of data stored by a third party (i.e., cloud computing service provider) in case of insolvency proceedings of a data controller in favour of the data subject shows Luxembourg’s aim to create a secure environment for cloud computing services. Luxembourg is the first country to have adopted a law addressing this specific legal concern in relation to cloud-computing services.

The adoption of the Law on Cybercrime also aims to strengthen the existing legal framework to fight against cybercrime.

The adoption of the law on emergency networks enhances national security.

The introduction of the e-archiving in the legislative framework, which is scheduled to be approved by end of December 2014, is further evidence of the importance that Luxembourg allocates to e-services. E-archiving will help to limit filing costs, facilitate the access to filed documents and make the sharing of the information the documents contain possible. Therefore, the sustainable conformity of the copies to the originals has to be guaranteed. Furthermore, the archived documents have to be protected from any form of manipulation that could affect the conformity of the documents.

Considering the increasing importance of transnational transactions carried out by electronic means, Luxembourg is also favourable to the implementation of a uniform framework on electronic identification and electronic authentication, which should help to increase the security and trust in online transactions and electronic commerce proposed to be achieved at EU level through the adoption of the EU Regulation proposal filed in June 2012 (COD 2012/0146) and the adoption of regulation of the European Parliament and of the Council laying down measures concerning the European single market for electronic communications and to achieve a Connected Continent, and amending Directives 2002/20/EC, 2002/21/EC, 2002/22/EC, and Regulations (EC) No. 1211/2009 and (EU) No. 531/2012.

The adoption of the EU Roaming Regulation has lowered the price caps for data downloads making it much cheaper to use maps, watch videos, check e-mails and update social networks while travelling across the EU. This will enhance competition among operators and create attractive offers for consumers. This is of particular importance to Luxembourg residents given the small size of the Luxembourg territory. Luxembourg is cooperating with other European countries on the data protection reform.

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48 ITU News release.

Key policies still include the April 2010 government paper on a national strategy for high-speed networks, which defines the priorities and means of the government in enhancing high-speed internet for households and businesses in Luxembourg. The announcement of the government's new 'Digital Letzebuerg' strategy evidences the government's intention to pursue its efforts to continue the development of the ICT sector with the aim of elevating Luxembourg as a high-tech centre of excellence.

Government policy aims at further promoting the ITC sector and related infrastructure as one of the pillars of the Luxembourg economy. The government is continuing to invest heavily into the security of the networks and infrastructures as one of the main pillars of the development of the electronic communication systems. The creation of various structures at national level evidences that the government's priority is to prevent and combat cybercrime and other attacks on the electronic communication services and infrastructure. The creation of the Cybersecurity Board and the CERT and the adoption of a national strategy in cybercrime matters show the government's absolute determination to fight against and prevent cyber-criminality.

In the field of spectrum policy, the main developments of the past year are the availability of the 900 and 1,800MHz frequencies (and the 800MHz and 2.6GHz) to mobile telecommunication services, which opened the path to the 4G development technologies. Decisions as to the allocation of the 2.1GHz spectrum is imminent. Many other decisions and policies taken in this field have been in line with European policy. During the ITU World Radio Conference to take place in 2015 important decisions as to opening of additional spectrum for mobile telecommunications services and the approval of the conditions for the utilisation of the frequency 700MHz by mobile services will be on the agenda. However, the opening of additional frequency will need to be discussed among other things on the Luxembourg level as to its technical implementation and Luxembourg's need for additional spectrum.

The continuing development in the online video games sector in Luxembourg and the establishment of internationally known companies encourages LU-CIX to develop its services. LU-CIX had organised the Luxembourg gaming exhibition in November 2012. The government has renewed its prior intention to establish efficient technical infrastructures and a business-friendly legal environment to assure these companies good development in Luxembourg. This forum had a positive impact and has propelled Luxembourg as hotspot for the set-up of ICT-related companies, like gaming businesses that are now moving into Luxembourg.

The government through its competent organ has continued its ICT promotion efforts and visited various countries or states in 2013/2014. Luxembourg has also been present at various conferences organised in Luxembourg and throughout the world.

Luxembourg also hosted the ICT Spring conference in June 2014, where the government representative expressed his intention to further develop Luxembourg as a centre for 'Big Data' and for the electronic payment services. He has also referred to cybersecurity as an element of trust that is essential for the citizens and the entire economy.

In the satellite sector, SES has continued to expand its fleet of satellites offering a global connectivity covering 99 per cent of the world's population. It is also investing in new infrastructure onsite. A new entity 'Luxspace' has been granted a concession

to launch microsatellites. The first launch was in October 2011 and the second was launched in January 2012.

Luxembourg hosted the 'International Satellite Conference 2014' regrouping 16 countries. Representatives of the UIT, ESA and Luxembourg University were present.

## ii Key mergers and takeover activity

Sony has chosen Luxembourg as its European platform for its digital library in Europe.

Skype was taken over by Microsoft in 2011 (Microsoft's largest acquisition). Following the acquisition it has been decided that Skype should remain in Luxembourg.

No major takeover activity has taken place over the past six months but the actors of the ICT sector have taken the opportunity to develop and their activities and services in the respective areas of predilection in the light of the new technologies (cloud, e-archiving, roaming etc).

## VIII CONCLUSIONS AND OUTLOOK

The digital economy form is one of the important pillars of Luxembourg and is a top priority of the Luxembourg government. Luxembourg is considered to be located in the middle of the so-called 'Golden Ring'.<sup>49</sup> Continuing efforts are made to favour the development of new communication and information technologies. The development of the international connectivity and the security in the current context remains among the key priorities. The adoption of the 'Digital Letzebuerg' strategy shows the government's commitment to and awareness of the importance of the ICT sector and ICT-related services.

Luxembourg has become one of the European leaders in terms of broadband penetration. Luxembourg has attracted and currently attracts a number of new companies active in the ICT sector. The fast-growing development of the ICT services increases the need for additional spectrum. The RSP<sup>50</sup> is thus aiming to identify at least 1,500MHz of available spectrum for the mobile services by 2015.

The fast development of cloud computing services and e-archiving will continue in the near future to be a driving force in the development of the data protection legislation and internet security sector. The ultimate aim is to install a feeling of trust in the online environment, which is essential to the development of this sector of the economy.

Luxembourg is keen to take advantage of the growing demand for high-performance infrastructure bandwidth capacity and connectivity needs of the e-economy. Its geographical location close to the major European cities is a clear advantage.

Luxembourg will continue to develop high-standard data centres services and facilities. It has opened the first green centre worldwide, showing its commitment to research and development of new infrastructures and technologies. Many Luxembourg data centres offer Tier IV design and most of the others are classified as Tier III.

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49 Luxembourg and ICT: a Snapshot.

50 The Radio Spectrum Policy programme Decision EU 243/2012/UE.

Luxembourg is actively working on cybersecurity matters and participated in the discussions negotiations on the data protection reform.

Besides the importance of developing the networks and guaranteeing security, the Luxembourg government and its partners are aware that the long-lasting and efficient development of the digital economy requires e-skills and is thus active in promoting the ICT business to the students. Awareness of the training opportunities and carriers in the ICT sector is one of the areas of development of the digital economy in Luxembourg (the E-skills project).



## Appendix 1

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# ABOUT THE AUTHORS

### **LINDA FUNCK**

*Elvinger, Hoss & Prussen*

Linda Funck is a partner with Elvinger, Hoss & Prussen, which she joined in 2000 when she became a member of the Luxembourg Bar.

Her principal fields of activity are mergers and acquisitions, banking, financial and securities laws, corporate restructuring and IT law. In the field of TMT, Linda Funck regularly advises local and international companies on all IT aspects and is a regular adviser to clients seeking to establish or develop their TMT activities in Luxembourg.

She holds a master's degree in law from the Université Paul Verlaine in Metz. She is fluent in English, French, German and Luxembourgish.

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