

CMS Network Sharing Study 2016

Sharing gathers pace

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Foreword

CMS is delighted to be presenting the second edition of its study on the sharing of communication networks in the EU and around the world. The first edition was highly influential and received a great deal of interest; the second edition goes into the topic in even greater detail and covers several more countries. Consequently, this second edition of the study is further-reaching and allows the drawing of more detailed and important conclusions about the structures and mechanisms for the sharing of telecoms networks.

This is of particular significance as the fifth generation of communications technology begins to be rolled out with all its potential for the internet of things.

Viable commercial and legal structures are essential as is clear regulatory guidance; this study and its thought leadership content represent a very important and valuable means of providing both objectives.



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Introduction

In 2014, we published a survey studying the main characteristics of network sharing deals concluded during the calendar year 2013.¹ We came to a number of interesting and sometimes surprising conclusions. The report was well received and we have been asked to prepare a second edition, which now covers the calendar years 2014 and 2015. The European Commission has asked us to consider an additional issue which they found of particular interest – whether there was geographic differentiation of sharing within countries. We have also gone into further detail on some other topics including spectrum sharing with electronic communications providers.

In the intervening period we have observed a number of regulatory decisions, both in relation to mobile spectrum availability and mergers of mobile operators. These decisions have had repercussions for the sharing of networks, voluntarily, and in some instances, compulsorily. We have also seen an increased appetite from investors from the financial sector for whom shared networks represent an attractive investment target.

For these reasons, and because a number of new deals have been identified and a significant number of the previous deals have been extended in scope or geography, this second edition of the network sharing study is a more substantial document than its predecessor. We have also included input from countries outside the EU where it seemed of particular interest.

What much of this is showing is that the drivers for network sharing are not those which were originally envisaged. In particular, the newest technologies are the subject of network sharing, because of the significantly higher costs of rolling out 4G and 5G networks as compared to 2G and 3G – these effects are driven by the propagation characteristics of the frequencies involved. Also, margins in the mobile sector are increasingly tight as roaming is regulated and more sites become increasingly difficult and expensive to identify. All of this has led to some degree of consolidation among mobile operators and therefore inevitably to a greater degree of commonality as to the networks being used.

Equipment manufacturers are seeing the opportunity and have created technology and equipment which is increasingly sophisticated in terms of shared access; this again makes network sharing more economically attractive, as well as practically effective.

Taking all these factors into consideration, we do not expect that this edition of the study will be the last.

We hope that you find this second study helpful in reviewing and analysing this innovative section of a market which is undergoing rapid change.

¹ The study also comments on deals that were completed very close to 2013. These are included in this report within 2013 data.

Mobile cellular and mobile broadband penetration



1 Austria 46.954 152.3% 64.7%	2 Belgium 43.565 113.7% 45.7%	3 Bulgaria 7.039 136.2% 50.8%	4 Croatia 12.317 105.1% 65.8%
5 Cyprus 24.772 129.5% 41.7%	6 Czech Republic 17.893 132.9% 52.2%	7 France 39.502 98.5% 48.7%	8 Germany 43.650 123.2% 45.1%
9 Greece 19.940 117.3% 36.3%	10 Hungary 12.698 118.7% 26.4%	11 Italy 32.284 155.0% 66.3%	12 The Netherlands 47.280 116.2% 64.3%
13 Poland 13.193 157.3% 79.3%	14 Portugal 20.149 113.8% 37.2%	15 Romania 9.131 114.9% 40.7%	16 Slovakia 16.861 117.8% 50.1%
17 Slovenia 21.940 112.9% 42.1%	18 Spain 27.629 109.1% 73.4%	19 UK 41.957 122.0% 77.6%	🇺🇸 Per capita GDP in USD (2014) 📶 Mobile cellular penetration (June 2014) 📶 Mobile broadband penetration – all active users (January 2014) 🇪🇺 EU countries reviewed

Source: European Commission and ITU

Overview of network sharing deals in 2014 and 2015

Deal structures

The network sharing deals identified in 2014 and 2015 in the study have been both new deals in new countries, and also extensions of existing arrangements in those countries where such deals have been in place since 2013 or before (see pages 8 and 9). This tends to indicate that market participants have correctly identified both the economic drivers making the transactions desirable, and the legal and commercial structures needed to give effect to them. These structures have been durable and capable of extension; that has been shown in a number of the cases in which we have been involved, or which we have looked at.

We are not aware that any of the network shares identified in any of the three years hit significant commercial or regulatory problems. Taken together, these developments indicate that network sharing is here to stay and that it is possible to build significant businesses on the basis of shared networks structures.

Auctions

Capital raising by governments through spectrum auctions has been a significant, sometimes controversial, feature of the wireless markets. Economic theory indicates that this should be an effective means of ensuring optimal resource allocation and use. However, this has not always been the case in practice and we believe that national finance ministries may have intervened more than is ideal. It is clear that spectrum sharing arrangements are capable of having an effect on the structure and intensity of competitive bidding in auctions. We consider this is potentially an important consideration for the future of network sharing arrangements.

Capital intensity

While mergers have been receiving more scrutiny, the capital intensity required of investment in new networks is also increasing. It is becoming clear that 5G will need very significant capital investments, even compared to 4G which in turn requires a greater capital investment than 3G. It seems that these factors will come together to produce something of a perfect storm in which

mergers are challenging, capital is scarce, and regulators are vigilant. In this climate commercial arrangements such as network shares may be a useful middle path allowing operators to cooperate, and economise on capital expenditure while retaining a significant degree of commercial independence which will satisfy both the regulator and their shareholders.

Trouble with mergers

At the same time as these network shares have been negotiated and extended, we have also seen a significant volume of actual or proposed mergers of mobile network operators. These have not encountered a warm and positive reception. In Austria, Germany and Ireland, the competition regulators have intervened with various measures intended to preserve competition, and the indications at the time of writing are that similar measures will be imposed by the European Commission in relation to a merger in the UK. A recent merger, admittedly between fixed networks, was prohibited in Denmark and again at the time of writing, the indications are that a proposed combination in France will also be the object of intense scrutiny.

Accordingly, our finding is that mergers of mobile operators encounter an increasingly high degree of regulatory and competition scrutiny and intervention. We have therefore modified our network deal characteristics “graphic” this year (see page 11) to indicate something of an upturn in difficulty at the merger end of the scale, where mergers are now significantly more difficult to pilot through the regulatory/competition approval processes than spectrum shares or (even more so) the various network share options. Network sharing may therefore be significantly easier to deliver than mergers, although it is always possible regulators may see fit to intervene in sharing deals as well.

Bright future

Consequently, if for different reasons to those which applied in 2014, it seems to us that the future remains very positive for both existing and future network sharing deals.

New countries join the trend

Four new countries joined the club of network sharers: Germany, Hungary, Bulgaria and China. In Germany, as part of the merger clearance process re E-Plus, the buyer had to agree to mandatory sharing of certain network elements – this was the basis for the Telefonica/ E-Plus – Drillisch deal.

This trend was also reflected with variations in the merger control approval decisions in Ireland and Austria.

Hungary has also become a new network sharing jurisdiction with a progressive scheme in 2015 between T-Mobile and Telenor (numbers 1 and 2 on the market).

Also in 2015, M-Tel (part of Telekom Austria Group, the market leader GSM operator in Bulgaria) and Max Telecom entered into a contract for national roaming.

A large deal was struck in China in October 2015, when three operators established a joint venture, China Tower and agreed to transfer all their towers to the newly formed JV.

Sharing of networks continued to be popular with five deals announced in 2014 and seven in 2015.

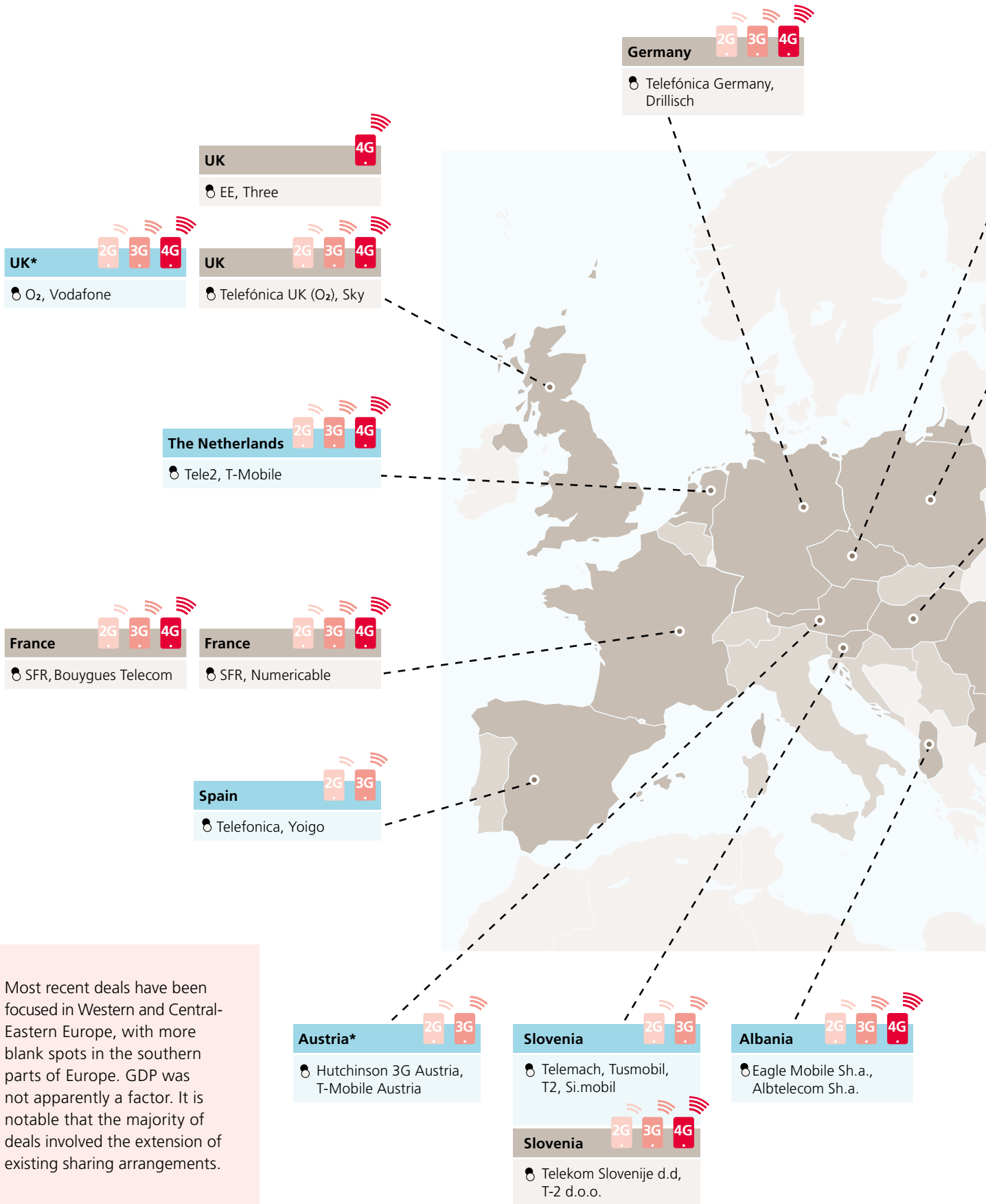
Deals announced in 2013 progress

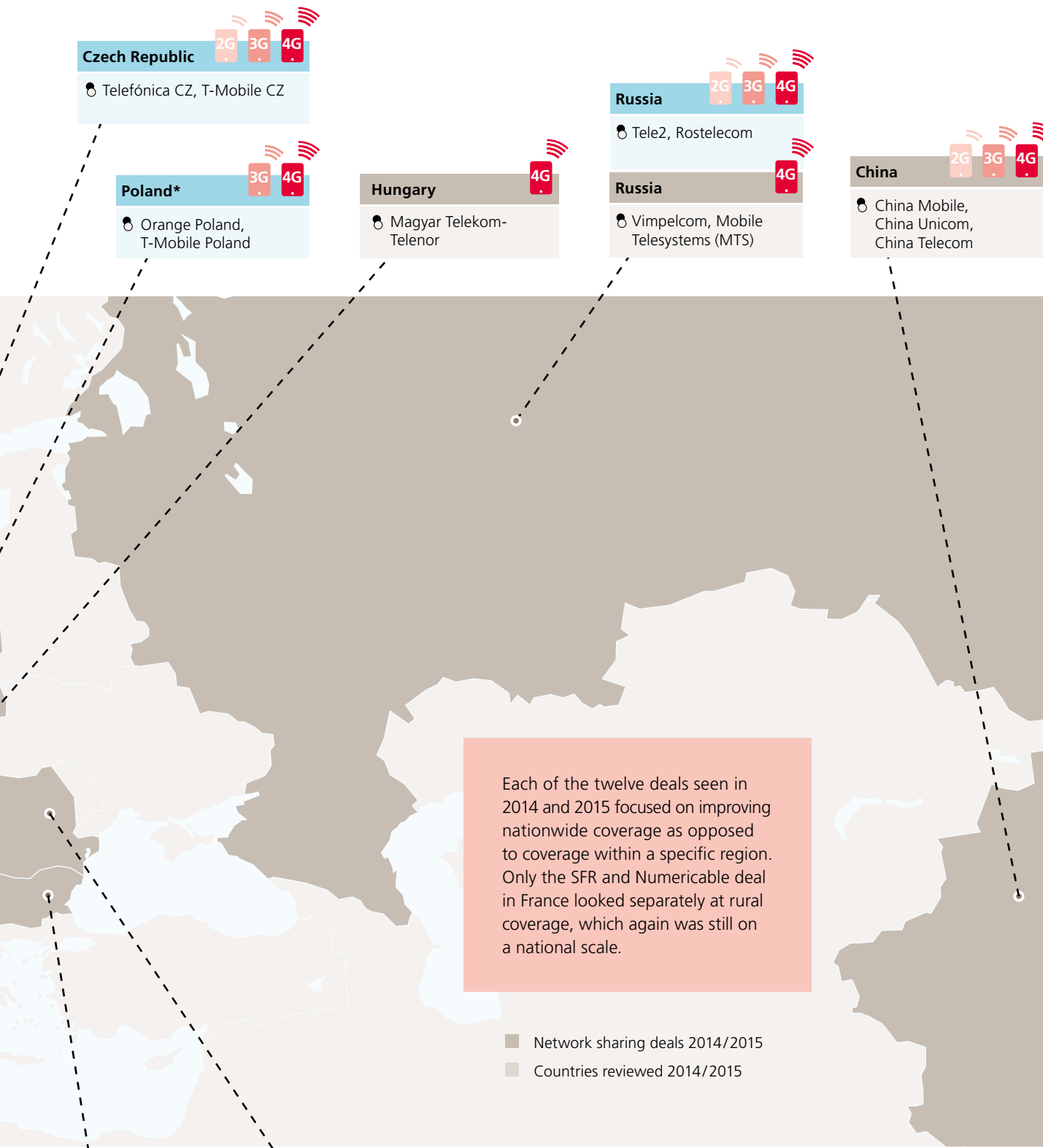
In contrast to the relatively small number of new jurisdictions, 2014 and 2015 were the years of scope-extension for existing deals. This is, in our view, a clear confirmation that the parties to these deals have had positive experiences and were prepared to extend the scope of their sharing – most typically to include 4G networks, or, even further beyond, to accommodate national roaming (e.g. Romania, France).

In the UK, Netherlands and France new deals were concluded among “experienced sharers” and “novices” also – the aim in all cases being to progress with 4G deployment quicker.



Network sharing deals completed 2013–2015





Each of the twelve deals seen in 2014 and 2015 focused on improving nationwide coverage as opposed to coverage within a specific region. Only the SFR and Numericable deal in France looked separately at rural coverage, which again was still on a national scale.

- Network sharing deals 2014/2015
- Countries reviewed 2014/2015

Bulgaria 3G 4G
 Mtel and Max Telecom

Romania 2G 3G
 Orange Romania, Vodafone Romania

Romania 2G 3G
 Vodafone Romania S.A., RCS&RDS S.A.

Romania 4G
 Orange Romania S.A. and Telekom Mobile Romania Communications S.A.

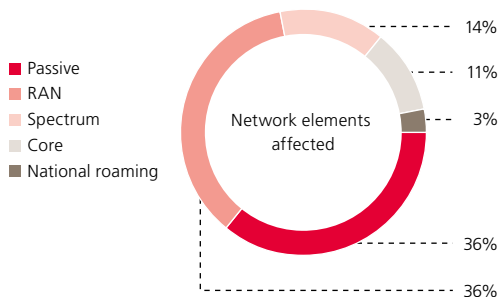
- 2013
- 2014/15
- 2G Network Type GSM
- 3G Network Type UMTS
- 4G Network Type LTE

Passive-only deals excluded
 *deals entered into prior to 2013 and still effective

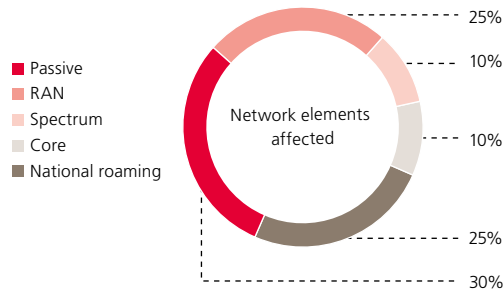
Characteristics of the deals

The charts below show the elements of the network shared in the deals completed.

2013

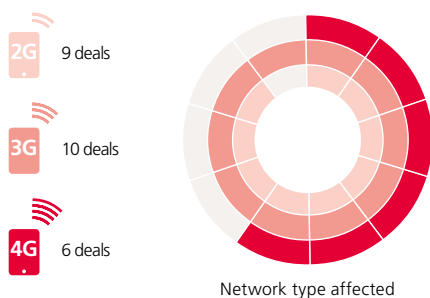


2014–2015

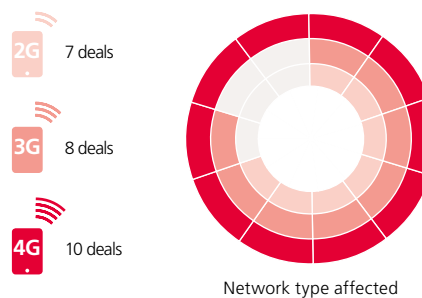


In our study we also looked at which generation network (2G–4G) the network sharing deal affects.

2013



2014–2015



In our study, we have taken the approach that:

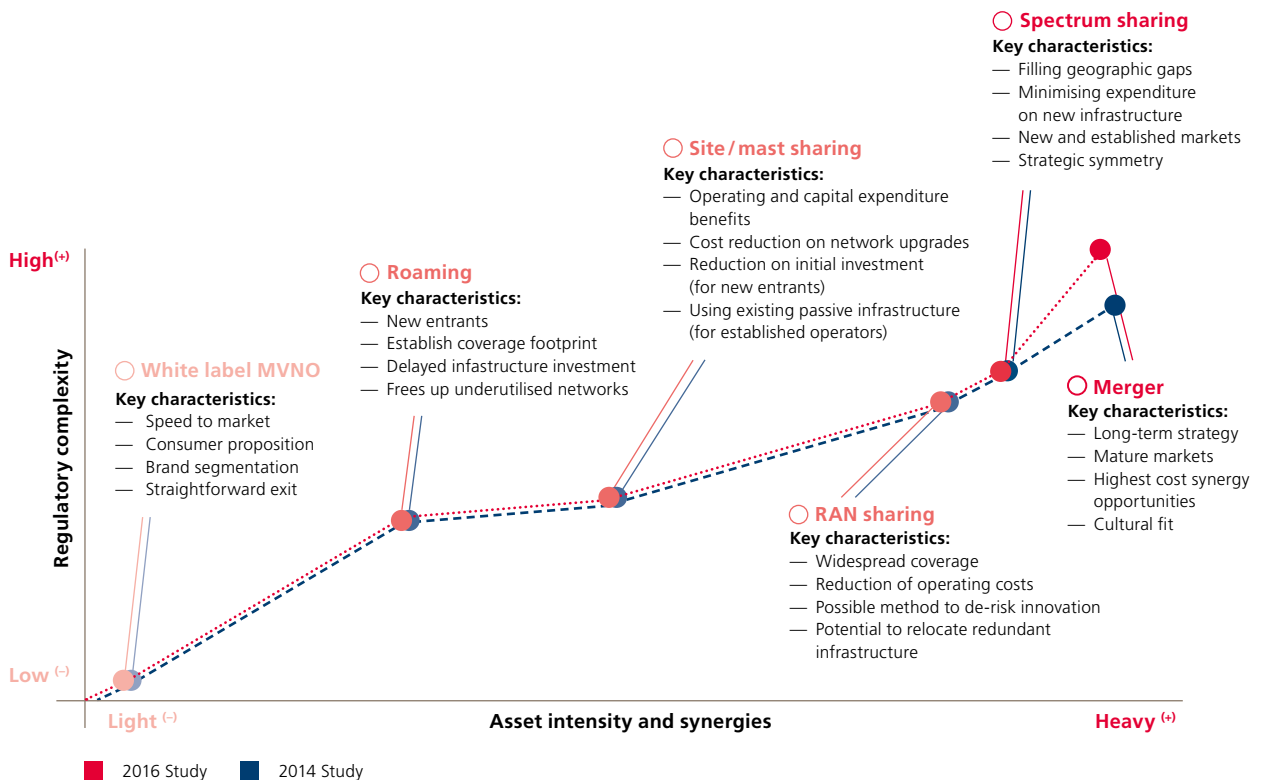
Sharing of:	Means:
Passive elements	Sharing of those parts of the access network that serve the active, also called “radio access” network elements (which make use of radio interface). In line with our previous study, we have not included deals in our analysis that cover only passive elements. These include sharing of masts, towers, sites, cabinet, or even power or air conditioning. As we see from European regulatory approaches, there is a considerable difference between passive and active sharing from a regulatory viewpoint. While a number of new regulatory issues arise and are addressed by regulators in different ways across Europe regarding active and spectrum sharing, no such changes are expected in relation to passive-only deals.
Active, or radio access network (RAN) elements	Sharing of antenna and devices that connect to such antennae, including base stations, NodeB and eNodeB units etc. (the exact name of the devices are technology specific, and are of little practical importance in this study).
Spectrum	Radio spectrum used to access only terminal equipment.
Core network elements	Sharing of different elements outside the access network of a mobile operator, including core elements of 4G networks such as MME (Mobility Management Entity), SGW (Serving Gateway), or transmission rings or backhaul facilities, or logical elements (e.g. billing/VAS). Sharing these parts of the network will only rarely have a considerable cost-cutting effect in themselves, and “sharing” of backhaul facilities often verges on the express exclusions we have made above.
National roaming	Traditionally viewed as network sharing. Here, subscriber traffic from the served areas is served by one operator (the host) by routing this traffic to the guest operator, handing it over to the latter at certain central points of exchange, and then routing back traffic to the user the same way. In this case, the guest operator is using the host operator’s network as a complete access network for the roaming sites and for routing traffic to and from that place.

CMS' views

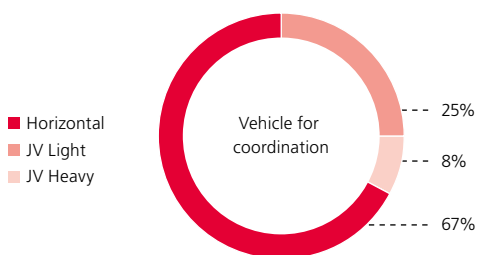
There have been two major developments since our last study: whereas earlier 4G was not necessarily part of the agreements, it is fast becoming a fundamental element of sharing arrangements. We believe this is attributable to the early successes of network sharing deals which have proved that they can serve as a true alternative to consolidation of corporate ownership. Also, wherever the regulatory authorities were ready to provide guidance, companies were feeling safer. Ultimately, consumers will be the beneficiaries of the quicker expansion of 4G networks.

When looking at the elements shared, although the available data is not massive, we have seen a deeper penetration into the network level also. In our previous report, we said RAN sharing has become a commodity. We see now a growing trend for the inclusion of core network elements and/or national roaming which means even "crown jewels" are included. This should be attributable to the fact that companies feel that, even while sharing networks, they are able to compete – on the retail services offered to end users. As a result telcos seem to be more and more comfortable in an environment where infrastructure based competition is competing with pure service based competition.

Network deal characteristics



Vehicles of coordination for sharing



When looking at the coordination structure for the network sharing, two major forms have emerged. One is the *stand-alone horizontal agreement*, where competing service providers enter only into a commercial agreement and this agreement covers all elements of the cooperation.

The second coordination is where parties form a joint venture for network sharing. This kind of cooperation can be further subdivided into two distinct types – light

CMS' views

In contrast to the approach of telcos who are keen to merge, we are seeing increasing regulatory scrutiny of merger control approvals. Also it seems there is still less regulatory certainty available in relation to such mergers. Consequently, it is still more common to remain on a virtual JV/co-operation level rather than establish a joint venture. Outside Europe, we can see that asset heavy JVs also happen. Similar to the deal reported in 2013 for Russia, the new Chinese JV for sharing network towers of the Chinese mobile network operators (MNOs) is also expected to be a JV of this nature. It therefore seems that this form of cooperation is something, which, for now, can only take place outside the EU.

or heavy. In "asset heavy" joint ventures (JVs), the new joint venture will own all network assets to be shared and, optionally, operators may also transfer their existing network elements to the joint venture (if they want to share that as well). In "asset light" joint ventures, the joint venture will not own network elements, but only serve as a vehicle for coordination and for settlement.

Of the twelve deals, eight were of the horizontal type, three were asset light and one was asset heavy.

Regulatory developments

Regulatory developments: OECD study on network sharing

In November 2014, the Organisation for Economic Co-operation and Development (OECD) published a study on network sharing.² The study confirms one of the main conclusions of our first CMS Network Sharing Study: namely that sometimes more investment in a given sector can be achieved by allowing more space for service based competition, even at the expense of infrastructure based competition. The OECD study concludes that *“the coming together of MNOs, through network sharing arrangements, may actually increase competitive choices for people in those locations.”* Further, the OECD compared network sharing to mergers and also highlighted that *“the potential savings from network sharing may represent a significant proportion of the savings that are used to justify a full merger; and in the case of network sharing without merger; the benefits of these savings are more likely to be passed on to consumers.”* Therefore, in the OECD’s opinion, network sharing is beneficial when it leads to more players at the wholesale and retail level, and they also reinforce the role of mobile virtual network operators (MVNOs) in such markets, provided that there is sufficient independence at the operational and commercial levels.

Finally, the study draws attention to the important role of international data roaming offerings intended to serve machine-to-machine services (e.g. for trans-border vehicle monitoring capabilities).

Regulatory developments in the European Union

The European Commission’s work towards more efficient broadband mobile networks is operative on two very different levels.

As part of the review of the current Radio Spectrum Policy Programme (RSPP), the Commission drew attention that the RSPP’s usefulness is limited by the vast differences in Member States’ authorisation conditions and procedures. In order to move forward, it is no longer sufficient just to share principles and exchange best practices;³ more depth has to be granted to the coordination.

We agree with this assessment: although the tools of spectrum coordination have historically been very rich (e.g. coordination at the standardisation bodies, e.g. ECC/CEPT, ITU, ETSI, cross-border negotiations, RSC etc.), certain thorny issues have always remained the exclusive competence of national regulators, e.g. how assignment procedures are carried out. In other areas, national regulators could create considerable differences in the economics of the use of a certain spectrum by setting out further requirements on the use of the spectrum. The Connected Continent package which the Commission published in 2013⁴ can only be successful if the conditions for spectrum authorisations are also more harmonised than earlier – there is no single market for electronic communications without harmonised procedures and conditions of use at the level of spectrum.

New guidelines or other regulatory endorsements of network sharing have been introduced in Romania (by the competition authority in June 2014), in Russia (in several different areas, from sharing of equipment to spectrum), in Switzerland (the Telecom report of 2014), in the United Kingdom (as part of some initiatives related to spectrum sharing) and also in Singapore and Bosnia-Herzegovina (in the latter two cases, both in relation to MVNOs).

² Wireless Market Structures and Network Sharing (November 2014), at http://www.oecd-ilibrary.org/wireless-market-structures-and-network-sharing_5jxt46dzl9r2.pdf?contentType=%2fns%2fWorkingPaper&itemId=%2fcontent%2fworkingpaper%2f5jxt46dzl9r2-en&mimeType=application%2fpdf&containerItemId=%2fcontent%2fworkingpaperseries%2f20716826&accessItemIds=

³ <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014DC0228&rid=1>

⁴ <https://ec.europa.eu/digital-agenda/en/node/67489/#spectrum>

Regulatory developments (continued)

Country	Regulatory measures taken					Published, ongoing or announced investigations, inquiries, analyses or studies by the competition authority or by the electronic communications NRA
	Authority measures introduced or changed in relation to mobile network sharing	Merger clearance decision	Is MNO licensee able to share spectrum with electronic comms provider?	Authority guidelines or decisions on network sharing	Other spectrum regulation	
Albania			✓			
Austria		✓	✓			
Belgium	✓ (2013)		✓			
Bosnia-Herzegovina	✓				✓	
Bulgaria			✓		✓	No – approved July 2013
Croatia			✓			
China	✓ (2008)		✓	✓	✓	✓
Czech Republic			✓			
France	✓	✓	✓	✓	✓	✓
Germany	✓	✓	✓ (but must notify regulatory authority)			
Hungary			✓ (with approval)			
Italy			✓ (with approval)			
The Netherlands	✓ (2001, 2012)		✓ (with approval)	✓		
Poland	✓	✓	✓			
Romania	✓					
Russia	✓		✓			
Serbia	✓		✓ (with approval)			
Slovakia			✓ (generally)	✓	✓	
Singapore	✓					
Slovenia			✓ (with approval)			
Spain	✓ (2015)		✓ (with approval)			
Switzerland	✓		✓ (with approval)			
UK	✓	✓ (provisional)	✓ (mostly)	✓	✓	2 – BT/EE and 3G/O2
Ukraine	✓		✓	✓	✓	No – 2013 inquiry

Spectrum regulations

Although sharing of spectrum has been on the agenda for decades on both national and EU levels, it is far from universally accepted by regulators. The biggest concern still seems to be that it decreases the ability to differentiate services and some regulators see spectrum sharing as an anathema to infrastructure based competition (see the entry on Romania).

However, at the same time, we see that other regulatory authorities see spectrum sharing as an increasingly important issue (see OFCOM's spectrum management strategy). Both the Connected Continent package and the information on the expected new multiannual Radio Spectrum Policy Programme (RSPP 2016–2020) are also pointing towards more specific and harmonised provisions for the implementation of sharing at national levels.

CMS' views

We expect that an important reason for this apparent contradiction may turn out to be that “spectrum sharing” has a much wider meaning in spectrum management (e.g. including different methods of collective use of spectrum or spectrum trading) than in relation to mobile network sharing (where it covers joint operation of a single network and its associated frequencies).

In our view, competition or regulatory authorities should not see “spectrum sharing” as a “super RAN sharing”, i.e. a solution where there is a reduced climate for differentiation of services. On the contrary: spectrum sharing is a collective term describing the many different ways to make the use of a given frequency band more efficient by introducing new services and/or users. Although spectrum sharing can be implemented in a way where active and software network elements (and therefore, service differentiators) are also shared, this is not necessarily what spectrum sharing is about. The same frequency band can be used for different services and different active (radio) equipment; such coordination of shared use can be achieved by technical rules (e.g. by “politeness” rules, different cognitive radio techniques etc.)

The considerable work already done on “Licensed Shared Access” in RSPG, in CEPT/ECC and ETSI shows that public mobile networks will also benefit greatly from

the possibilities of shared use of spectrum. But to make these technical possibilities a reality, and to promote innovative ways of spectrum sharing, national regulators should put more effort into investigating and publicising conditions for sharing spectrum in their own jurisdictions. Our study supports this correlation.

At the same time, at the European level, the most important task is to strengthen the work of harmonising terminology, and the conditions of authorisations and use of spectrum. The Commission's statement made in relation to spectrum management in its 2014 report on the RSPP is very much on target for spectrum sharing as well: *“while each Member State continues to set the authorisation conditions and procedures for spectrum, the large differences in these conditions and procedures contribute to the fragmentation of the internal market with a negative impact on integration of networks across borders, on available handset capabilities and to other disadvantages for consumers.”* Without such harmonised terminology and principles of spectrum sharing, the actual meaning and scope of spectrum sharing will be very different from one jurisdiction to another, and this will be a competitive disadvantage for all European operators against their global competitors. In this respect, we believe that consumers will benefit from better aligned European level spectrum sharing regulations.

Practical aspects of network sharing agreements

This new section provides guidance on certain practical aspects of network sharing as experienced by our colleagues during the preparation and implementation of such deals.

Based on our previous practice in assisting electronic communications operators in relation to network sharing agreements, we note that the entry into such arrangements normally entails (i) several months of planning, (ii) preparing business cases and (iii) thorough assessments of potential benefits and risks. For this reason, as of the moment when a party has considered the possibility of entering into a network sharing agreement, there are several potential deal stoppers which need to be considered, briefly outlined below.

Regulatory considerations

At the very start of the process, any telecom operator will need not only to identify potential regulatory barriers but also to identify all the government authorities that might have a say in relation to the network sharing agreement. If allowed by local law, all relevant authorities need to be approached and engaged in open communication throughout the process.

Technical and commercial constraints

The second most important aspect that would need to be considered is the internal (financial and technical) considerations. In this respect, prior to entering into effective negotiations with another operator, it is essential that an analysis is performed with respect to the interoperability of the two parties' networks. Aspects which should be assessed at the beginning of the negotiation process are, for example, differences in technical equipment, similar locations of infrastructure, high level of investments required or different architectures of the interested parties.

Antitrust risks

One of the major concerns with the negotiation as well as the implementation of a network sharing arrangement is to ensure compliance with competition law provisions. In this respect there are several risks which can arise such as: (i) joint dominance (ii) exclusion of competitors or (iii) coordination of the behavior of the parties on the market etc. As such risk can often be reduced if access to potentially commercially sensitive information is restricted, competitors often choose either to incorporate a joint venture or to use a third party to act as a "black box" to filter sensitive information. Nonetheless, as this could trigger the applicability of merger regulations, a strong "clean team" / "Chinese walls" mechanism should also be considered. Based on our experience in this regard, it is often useful to work in close cooperation with the local competition authority to develop such rules, in particular where such authorities have not issued any regulations/guidelines on the disclosure of information between competitors.

Other matters

In addition to the above mentioned aspects, depending on the specific structure of the network sharing arrangement, a number of other areas of significant importance will need to be considered: (i) IP rights, (ii) real estate, (iii) data protection, (iv) employment, or (v) company law etc. Even though several of the matters mentioned herein could be dealt with internally by operators, the general practice and recommendation is to use a third party consultant experienced in similar deals since the risks are significant.



Individual notes for specific countries

Albania

Eagle Mobile Sh.a. and Albtelecom Sh.a launched 4G. LTE services in September.

Austria

No updates reported for 2014–2015.

Belgium

Although there have been no network sharing deals in Belgium, a merger deal was announced in April 2015: Telenet Group Holding NV (a Liberty Global subsidiary) entered into a definitive agreement to acquire BASE Company NV, the third-largest mobile network operator in Belgium for EUR 1.325bn. So far, Telenet has been an active player in Belgium's as an MVNO since 2006 (with Mobistar as the host MNO). The deal is subject to merger approval from the competition authorities.

Bosnia and Herzegovina

In June 2014, the Communications Regulatory Agency of Bosnia-Herzegovina adopted new license conditions for mobile telephony (rule no.73/2014).⁴ It regulates in detail the relationships between an MVNO and its host MNO. These new licensing conditions thus facilitate MVNO network sharing, and the more effective use of spectrum. The license conditions prohibit the MNO requiring access to the MVNO's network. The actual use of the new license conditions have been postponed until the Agency issues its new policy of the telecommunication sector, which is still yet to be published.

⁴ <http://rak.ba/bos/index.php?uid=1267325699>

Bulgaria

On 28 July 2015, M-Tel (part of Telekom Austria Group, the market leader GSM operator in Bulgaria) and Max Telecom entered into a contract for national roaming. Max Telecom is a 4G LTE operator, with 40% coverage of the total population. The commercial agreement between the parties allows Max Telecom to access the 2G and 3G infrastructure of M-Tel and to start offering services using this network.

China

The Chinese telecommunication market is controlled by three state-owned telecommunications operators: China Telecom, China Mobile and China Unicom. In the past, they have not had any network-sharing cooperation project. On 28 September 2008, the PRC Ministry of Industry and Information Technology and the PRC State-owned Assets Supervision and Administration Commission jointly issued the Notification on Promoting the Sharing and Co-construction of the Telecommunications infrastructure in order to promote resource sharing. Based on this, on 15 July 2014, the three operators finally established a JV for sharing of their network towers, China Tower. The deal on selling the complete tower portfolio to China Tower was entered into in October 2015. The registered capital of this new JV is approximately EUR 1.4bn. After the share transfer, China Telecom, China Unicom, China Mobile and China Reform will hold 27.9 %, 28.1%, 38% and 6% of the shares of the JV respectively. This is an asset heavy JV."

Croatia

No updates reported for 2014–2015.

Czech Republic

No updates reported for 2014–2015.

France

In our last study, we reported on the 2G–4G network share between SFR and Bouygues from early 2014. The deal covered most of the country, except for large cities (with population of more than 200,000) and “white zones” (with low population density) and did not involve sharing of the spectrum. The two companies established a JV to operate their towers.

In May 2014, Orange, being left out of the sharing, filed a complaint with the French competition authority, and requesting suspension of the deal until a more detailed analysis of its competition law effects is completed. The regulatory authority has voiced concerns over the advantage of SFR in LTE coverage. However, in 31 September 2014, the competition law authority decided not to suspend the sharing, as “there was no serious and immediate threat to the interest of the sector, consumers or the plaintiff company” to justify immediate suspension.⁵

SFR and Bouygues have now started the actual pooling of their LTE networks in certain municipalities. Important merger deals in 2014 in France, included the acquisition of SFR and Virgin Mobile by Numericable (in June and November respectively).

Germany

In 20 June 2014, MS Mobile Services, a subsidiary of Drillisch AG (an MVNO in Germany) agreed with Telefónica Deutschland terms for mobile bitstream access.⁶ Telefónica grants MS Mobile Services access for five years for up to 30 % of the available capacity, while MS Mobile Services has agreed to take over at least 20 % of the same. MS Mobile Services has an option of extending the five-year term twice. In August 2014, the European Commission started an investigation examining whether this deal is compatible with the 2013⁷ approval conditions of the Telefónica-E-Plus deal.

In November 2014, Drillisch AG and Telefónica Deutschland announced that Drillisch AG will acquire one of the E-Plus subsidiaries from Telefónica

Deutschland, called yourfone GmbH. The deal was closed in 2 January 2015.

Hungary

While passive infrastructure sharing had been common in Hungary previously, Magyar Telekom and Telenor Hungary announced in early 2015 the sharing of their freshly awarded spectrum in 800MHz, and joint operation and development of their 4G mobile networks in all parts of Hungary except Budapest. The deal is expected to double the internet speed available in the 800MHz band, and to provide earlier access to fast mobile internet services and better coverage.

The spectrum sharing part element of the agreement was approved by the authority as a “mutual lease of spectrum” licensed to Telekom and Telenor.

Iran

Iranian Communication Regulatory Authority (CRA) approved key principles of national roaming came into effect in June 2014. Based on these principles, when subscribers of each three mobile operators (MCI, Irancell and Rightel) exit from their provider’s coverage area, they must automatically connect to their host operator network and can use its services.

This is mainly welcomed by Rightel which has just good coverage in main cities and needs huge investment and time to cover all cities and rural areas in the country.

Also because of limitations in metropolitan areas and conflict between municipalities and telecom operators on sharing of mobile sites, a company called Ertebat Moshtarak Shahr Co. was established as a joint-venture of Tehran Municipality and mobile operators in October 2006. This company is responsible for coordinating the operators’ usages of common sites and spaces in order to install and manage base transceiver station (BTSs) sites.

⁵ http://www.autoritedelaconurrence.fr/user/standard.php?id_rub=592&id_article=2434

⁶ Please note that mobile bitstream access deals are not reported in the chart, but we mention in the country specific section.

⁷ <http://www.dgap.de/dgap/News/corporate/drillisch-commission-confirms-mba-mvno-agreement-between-drillisch-and-telefonica-deutschland/?newsID=814498>. For the approval, please see http://europa.eu/rapid/press-release_IP-14-771_en.htm

Based on the approved regulations, it is clear for operators how to interact with each other and how much is their right and responsibility for each BTS.

It is worth noting that CRA is going to grant licenses to MVNOs. It is predicted that licensing process will be completed in first half of 2016. After that, the recipients should sign a wholesale contract with at least one host operator (MCI, Irancell, Rightel) and then, apply CRA for the license.

Italy

No updates reported for 2014–2015.

The Netherlands

KPN, T-Mobile and Vodafone entered into a special network sharing deal for 2G–3G, which is effectively a national roaming deal that applies only in case of major service disruptions, i.e. more than 500,000 customers affected for more than three days in the country. This deal only applies to telephony and short messaging services. This is the first agreement of its kind in the world. The Ministry of Economic Affairs contributed research and financing for developing the infrastructure required for the regional roaming.⁸

Poland

No updates reported for 2014–2015.

Romania

In January 2014, Orange Romania S.A. (Orange) and Vodafone Romania S.A. finished setting up NetGrid Telecom, the vehicle for sharing their infrastructure as set out in the deal of 2013 (see last year's Network Sharing Study).

In April 2014, Vodafone Romania S.A. and RCS&RDS S.A. (better known for its services under the brand name "Digi" in CEE, and a dominant operator in the cable

industry and fixed internet in Romania) entered into a national roaming agreement providing Digi.Mobil users wider coverage for phone calls and internet access.

In December 2015, Orange signed a wholesale network agreement with quadruple-play fixed and mobile network operator Telekom Romania (Telekom Mobile Communications S.A. and Telekom Communications S.A.), which gives the latter roaming access to Orange's 4G LTE network on a national basis, while allowing Orange to offer fixed services via Telekom's nationwide fixed infrastructure.

As previously reported in the last Network Sharing Study, the Romanian competition authority published new guidelines on network sharing in June 2014. The guidelines draw a clear line between passive, RAN and spectrum sharing in terms of how much competition law risk they mean, which analysis mostly took into account the level of differentiation made possible by services being based upon such sharing deals.

Russia

Since 2012, the Ministry of Communications of Russia has consistently been active in making various regulatory changes aimed at helping RAN sharing by mobile operators, thus decreasing costs of network construction, a significant problem in the low population zones of the Russian Federation. This continued in 2014 in the areas of network construction and the rules applicable in 900/1800MHz bands and LTE subscriber terminals. In December 2014, Vimpelcom and Mobile TeleSystems (MTS) entered into a cooperation deal for the building, rollout and sharing of new 4G network. The deal covers Russia and other areas of the CIS. The companies have agreed to build and share networks in the defined areas. Rolled-out infrastructure (including passive, RAN and also some core network elements like transport) will be shared for an initial period of seven years.

Serbia

No updates reported for 2014–2015.

⁸ Considering the special scope, we do not report this deal as a network sharing deal.

Singapore

There has been no network sharing deal in Singapore, and more generally, it can be said that there has been no market push for this kind of cooperation. Nonetheless, detailed infrastructure sharing regulatory provisions exist in relation to aspects of rights of way, construction and planning (see the Code of Practice for Info-communication Facilities in Buildings, 2013) to ensure that developers/ owners provide adequate space and facilities for the deployment and operation of installations and equipment for telecommunications.

The local regulator, IDA has been keen to explore how competition can be enhanced in the saturated telecommunications market of Singapore, reviewing barriers to MVNO entry facilitating access to spectrum, encouraging hosting of MVNOs by MNOs, through regulatory measures, e.g. spectrum conditions requiring hosting of MVNOs, or through the use of government demand for wireless data connections.

For this reason, IDA launched a public consultation in April 2014 to gather views on MVNO arrangements. So far, MVNO market uptake has not been strong.

Slovakia

No updates reported for 2014–2015.

Slovenia

In Slovenia, the mobile market saw substantial consolidation. In October 2014, Telemach (the country's biggest cable operator) took over Tušmobil, the third biggest mobile operator.

Since 8 April 2015 T-2 d.o.o. has been acquiring national roaming services from Telekom Slovenije d.d. (i.e. no longer from Si.mobil d.d. as in 2014).

In 27 February 2015, the incumbent Telekom Slovenije acquired a 100% stake in the country's fourth largest mobile service provider Debitel, previously an MVNO using the network of Telekom Slovenije. At the time of publishing, there is no news yet of any competition authority clearance.

Spain

Following the August 2013 national network sharing deal between Yoigo and Telefónica, Yoigo wanted to offer its 4G network to Spanish MVNOs. Reportedly, the network sharing agreement prevented Yoigo from doing so. In April 2014, Yoigo turned to the Spanish regulatory authority to compel Telefonica to allow it to offer 4G services to MVNOs (especially Pepephone, which had previously used Vodafone Spain, but was no longer allowed to provide 4G on that network). As reported last year, in November the Spanish regulatory authority initiated an investigation into the aforementioned network sharing agreement, but refused the request of Vodafone and Orange to suspend the agreement. In 22 April 2015, the Spanish Competition Authority approved the network sharing agreement between Telefónica and Yoigo (with certain commitments).

However, in July 2015, the Spanish regulatory authority imposed a fine on Telefonica (for a total of EUR 6m) and Yoigo (for EUR 300,000), precisely because of the anti-competitive provisions contained in that network sharing agreement requiring Yoigo to seek Telefonica's permission to offer 4G services to other MVNOs, and also the provisions allowing Yoigo to access Telefonica's 4G network.

Switzerland

The current legislation does not provide for any specific provisions concerning network sharing and it is therefore not clear if (and to what extent) network sharing is allowed in Switzerland under the existing law. Moreover, there is no decision rendered by the Swiss Competition Commission or by a court. However, the Swiss Communications Act is currently undergoing amendments which also provide for a short provision regarding network sharing. If this proposed provision enters into force, network sharing requires the consent of the licensing authority as it is already required for transfers of licenses under the existing law.

Although there have been no network sharing agreement so far in Switzerland, in January 2014, Sunrise and Orange (who together have 40 % market share against the 60 % of Swisscom) started examining the possibilities of “having a common network”, and are interested reaching a network sharing agreement. The planned form of sharing is not yet public. The Swiss ECS regulatory authority, BAKOM, published its “Telecommunications report” on 19 November 2014.⁹ The report states that “there is legal uncertainty regarding network sharing and that this question has not been subject of a decision so far” and “that network sharing can be seen as a transfer of the license.”¹⁰ Although in 2010 the two companies sought approval of a merger, this was prevented by the competition authority. The main motivation for the sharing now is the higher level of cost saving that can be achieved. Both these developments show that we can expect to have news for Switzerland in our next study.

Ukraine

No updates reported for 2014–2015.

United Kingdom

There are several 2014–2015 updates to report.

Sharing deals

The first concerns the EE-Three deal reported in our previous study. EE (a joint venture by T-Mobile and Orange, formed back in 2010) and Three UK (Hutchinson Whampoa) agreed in February 2014 to share 4G network elements. At the time of writing this study, it is still unclear if this network sharing deal will be preserved beyond the acquisition by BT. Both parties seem equally happy to continue the network sharing – which has focused primarily on 3G sharing – with Three CEO Dave Dyson and EE CEO Olaf Swantee both giving public support for the ongoing relationship in February and June 2015 respectively. However, Vodafone CEO Vittorio Colao has stated that the deal conflicts with Cornerstone (see below) and the two deals will be incompatible when the market consolidates. Since early 2015 Vodafone has called for Hutchison to pull out of the EE deal, and regulators may yet intervene if they agree with Vodafone’s stance.

On 30 April 2014, Ofcom published a regulatory update on spectrum management strategy.¹¹ Ofcom emphasised that spectrum sharing will become increasingly important, and that they will explore what further regulatory support it could provide for enabling new forms of sharing.

On 7 August 2014, Arqiva announced a site-sharing deal with Cornerstone. Cornerstone itself is also a joint venture formed by Vodafone and Telefonica in 2012 to create and manage a single grid network of telecommunication installations, now owned by both Vodafone and Telefónica UK. Under the ten year agreement, Arqiva will provide support on network consolidation and 4G LTE deployment across the UK.

⁹ <http://www.bakom.admin.ch/dokumentation/gesetzgebung/00512/03498/index.html?lang=de>

¹⁰ <http://www.20min.ch/finance/news/story/Orange-und-Sunrise-arbeiten-am-Einheitsnetz-15240070>

¹¹ <http://stakeholders.ofcom.org.uk/binaries/consultations/spectrum-management-strategy/statement/statement.pdf>

Three new deals were announced in 2015. In January 2015, Telefónica UK (O2) and Sky (an MVNO) agreed that Telefónica UK will give Sky wholesale access to 2G, 3G and 4G services over its nationwide network. Sky plans to launch its first mobile telephony services to customers in 2016.

Arqiva announced on 19 February 2015 that it signed a deal with Virgin Media Business to provide MNOs with access to over 400,000 street assets, including lamp posts and CCTV cameras, providing an end-to-end solution for small cell deployment together with Virgin's high capacity fibre network in order to deliver faster and more consistent 4G connections in built up areas.

M&A

On 5 February 2015, BT signed a landmark deal to acquire EE for GBP 12.5bn. Ofcom found no issues with the deal, and provisional approval was given by the UK Competition and Markets Authority (CMA) in October 2015, with final approval granted on 15 January 2016.

On 24 March 2015, the parent of Three – Hutchison – signed a deal to acquire Telefónica's operations in the UK (O2 UK) for GBP 10.25bn. The contentious deal will face an in-depth probe from the European Commission (EC), with the decision deadline set for 16 March 2016. The EC's recent decision to effectively block a similar merger in Denmark between Telenor and TeliaSonera has dealt a blow to Hutchison and Telefonica's hopes that the EC will approve the deal without considerable concessions. Ofcom also announced in December 2015 that the upcoming UK 4G spectrum auction will be delayed until a resolution is reached for the proposed merger.

Regulation

Ofcom has varied the licences of the UK's four MNOs to improve mobile network coverage across the country. Following an "agreement" reached between the UK Government and EE, O2, Three and Vodafone in December 2014 to increase mobile coverage. The MNOs have agreed (amongst other things) to a guaranteed GBP 5bn investment programme to improve mobile infrastructure by 2017 and that full coverage from all 4 MNOs would increase from 69% to 85% of geographic areas by 2017. This may encourage the MNOs to share their network in order to meet their obligations under the agreement.

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We are one of the market leaders in the communications sector, having advised on the earliest network sharing deals completed in 2002 in the UK and Germany as well as on the deals completed in 2013 in Spain, Romania, Poland and Albania plus providing advice to clients in several other countries during 2014.

Our specialist lawyers are recognised experts in this space and are regularly asked to speak at industry leading events; most recently we held a successful workshop on Network sharing for ECTA, (the European Competitive Telecommunications Association).

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