RTR

COMMUNICATIONS REPORT 2016

WE STAND FOR COMPETITION AND MEDIA DIVERSITY

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We stand for competition and media diversity

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Preface

Dear readers,

Exercising transparency in our official duties has always been of great concern to us. Our highly comprehensive web presence, the many reports issued and the use of social media are just some of the tools included in the 'information portfolio' used by the regulatory institutions to shed light on the broad spectrum of regulatory activities and the administration of the funds that have been entrusted to us. While the quality, objectivity and independence of the content, along with service orientation, are naturally our foremost concerns, the design or 'look and feel' of information should also match contemporary standards, in order to meet the goal of dealing better with the flood of information that confronts us daily.

We took a first step in 2015 with the relaunch of our website. In 2016 we were intensively involved in redesigning our logo and defining a new corporate design. The emblem, which is the same for the regulatory institutions RTR, KommAustria, PCK and TKK, includes elements of the previous emblem and ensures that we will be recognised in public relations activities. To meet the requirement of enhanced readability, we have introduced a new typeface to be used with all documents.

This Communications Report, which meets all statutory reporting requirements under the KommAustria Act (KOG) and the Telecommunications Act (TKG 2003), is a central component of our reporting activities, documenting the activities of the regulatory authorities in 2016 and providing insights into changes in the communications market. We hope that the report's new look will help make it easier to read and the contents, which are sometimes rather dry, more readily understood.

We have also taken another important step towards transparency, specifically in relation to authorities. In fulfilling our duties under law, we have for years been publishing a large volume of statistics and market details covering all our areas of responsibility. In November 2016 we launched the open data portal, where we now make the majority of these data material available in a format suitable for further digital processing. Interest has been tremendous: we recorded 2,000 views of the open datasets in the fourth quarter of 2016 and already more than 5,500 in Q1 2017!

We stand for competition and media diversity – and for transparency.

Vienna, June 2017

Elfriede Solé

Chairperson
Telekom-Control-Kommission and
Post-Control-Kommission

Michael Ogris

Chairperson
Austrian Communications Authority

Alfred Grinschgl

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Media Division
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Johannes Gungl

CEO
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RTR

Fake news versus quality journalism

Nowadays, when you discuss the quality of media with one or other expert on the topic, talk soon turns to subjects such as 'fake news', the social media bubble, the 'lugenpresse' or – as newly elected US President Trump's spokeswoman framed it – 'alternative facts'.

Such a derogatory approach to today's media, especially when taken consistently, is simply getting on my nerves!

It is true, of course, that in many cases amateurs use social media to present things as the complete and undiluted truth. And in many cases it is not about relevant information but instead about who's doing what, when and where, about beauty tips or any sort of entertaining anecdotes that have nothing to do with presenting facts or information. Not to mention the ostensibly political information offered at unzensuriert.at or the statements published by right-wing populist Breitbart News Network.

Yet do the media phenomena described above actually represent the key trends shaping the major spectrum of opinion in our country? Or do even the younger members of the population, and to a greater degree, naturally, the older members as well, when forming their personal opinions, refer to various quality media products – of which many exist in Austria as well as in other countries and which will hopefully continue to thrive for a long time?

By naming concrete examples at this point, I obviously make myself vulnerable to criticism, especially from those representing the avenues of quality media I fail to mention here: in television I am thinking here especially of public broadcasters, whether it be ZDF, ARD and ORF, but also ARTE and ServusTV. Among newspapers, I would cite as examples Die Presse, Der Standard, many of Austria's regional newspapers and also Germany's Die Zeit. In online journalism: the online media products offered by the ORF and by the Austrian media houses that employ experienced journalists to report news.

That is right: I mean real, experienced journalists.

Some time ago I attended a media event where Ms Alexandra Föderl-Schmid, co-publisher and editor-in-chief of Der Standard, participated in a panel discussion centred on the topic of social media and citizen journalism. The view expressed by Ms Föderl-Schmid at the time could be summed up as: "It is wonderful that we have citizen journalists ... but which of you here would agree to an operation by a citizen surgeon?" The point was well made.

We know all too well how difficult it is to acquire the skills of a journalist through university studies. It's true that a solid education will at least get you off to a good start. Yet, as in many other fields, special skills play a key role in this profession. Certain talents, such as a special brand of curiosity, the will to research to discover truth and reality, and the ability to approach important people in a straightforward manner, are essential. Viewed in this way, journalism is a vocation more in the sense of a calling than a line of work.

With that said, I also consider it particularly important that the reform of the press subsidy system in Austria – a move firmly supported by Federal Minister Thomas Drozda – should focus particularly on quality journalism. Specifically, an important part of the content offered by newspapers is reporting on international affairs and especially on the European Union.

One objective of the reform is obviously to raise more money overall for the press, but another important aspect is to considerably raise the level of media quality – above and beyond that of social media and citizen journalism.

Dr. Alfred Grinschgl

CEO
Media Division
RTR

Net neutrality – a continuing discussion?

Chapter 1: Europe finally establishes net neutrality rules

Rules governing net neutrality were first issued at EU level in November 2015. The legislation was preceded by heated controversy – if not to say ideological warfare – that reached its climax in telecoms announcing an end to investments and innovations. Those on the other side of the argument, light-heartedly dubbed by their opponents as the 'net-neutrality Taliban', literally prophesied the downfall of Western civilisation. The fierce struggle ended in a compromise that was sharply criticised by both sides. One criticism in particular stood out: compared with the new rules adopted by the United States in April 2015, the European rules were considered too feeble, frail and fuzzy, and tantamount to bowing down to industry wishes.

At this juncture the Body of European Regulators for Electronic Communications (BEREC) – of which RTR is a voting member – entered the game. EU legislators mandated BEREC with the challenging and thankless task of detailing guidelines for the harmonised implementation of net neutrality – within just nine months, whereas legislators had taken more than two years to pass the Regulation. After heated discussion, on 28 August 2016 BEREC adopted the guidelines aimed at ensuring consistent EU-wide application of the Net Neutrality Regulation and providing answers to the unresolved issues raised by the legislation. Here it should be noted that these guidelines only represent an interpretation of the Regulation; their limits were defined in the Regulation. Still, the guidelines have since been described as saving net neutrality in Europe.

Chapter 2: Regulatory authorities take up implementation

Now, barely a year after the guidelines were adopted, the national regulatory authorities (NRAs) in Europe have begun implementing the Regulation. Two facts stand out here. Firstly, the NRAs are engaged in a lively exchange of views. With all of them very keen on defining uniform procedures, the contours of such a consistent approach are already taking shape. Even those NRAs that initially expressed deep scepticism towards net neutrality are now passing decisions in complete harmony with the guidelines. Secondly, sanctions are now being taken primarily in response to clear and blatant cases of net neutrality violation and technical discrimination, such as zero-rating of data outside the data cap. Other matters, including the blocking of internet content by internet service providers (ISPs) to protect children and young people, are not currently receiving priority attention, unless, as in countries such as France, a legal basis already exists for doing so. A corresponding legal basis for such blocking, cited as necessary in the Regulation, is currently under preparation in countries such as the UK and Sweden, which have previously relied on a voluntary code of conduct or on policymakers calling for action. In summary, after getting off to a hesitant start, implementation of the Net Neutrality Regulation in certain highly sensitive areas (including zero-rating) is now gathering momentum, without NRAs losing sight of the goal of a harmonised European approach to the issue.

Chapter 3: Does Trump put us back to square one?

Donald J. Trump was elected 45th President of the United States of America on 8 November 2016. Only days after his inauguration in January 2017, Trump appointed Ajit Pai as the new head of the Federal Communications Commission (FCC) in the US. A member of the FCC since 2008, Mr Pai voted at the time against the net neutrality rules currently in effect. Then, in February of this year, he announced that the FCC had made a mistake with the rules and that changes would be necessary. It goes without saying that Mr Pai is committed in principle to an open internet. From his public statements it can currently be deduced that he takes issue mainly with the classification of ISPs in the regulations as 'common carriers', as this entails meeting certain substantial criteria, which he does not consider to be proportionate. What direction the changes will take is relatively clear. There will be a softening of the rules – but to what extent this will be remained unclear to me even from a personal discussion with Mr Pai. The FCC assumes, however, that the United States' current net neutrality rules involve much uncertainty and therefore have a negative impact on investment activity. In any case the signs are clearly pointing to a modification of the US rules, meaning that Europe will also be unable to avoid renewed discussions.

Chapter 4: 5G enters the scene

What is more, a new generation of mobile telecommunications – seen by many as revolutionary – is now about to enter the scene: 5G. Taking advantage of all the features offered by this technology could lead to conflicts with existing net neutrality rules. One important aspect of 5G is being discussed under the heading of 'network slicing'. This involves reserving partial network capacities for services which, in terms of factors such as latency, bandwidth and security, can be configured differently from best-effort internet access. Such services are thus ideal for certain uses in mobility, healthcare and industry, and consequently represent potential special service applications. Under the current rules, specific and very restrictive conditions apply to the provision of 5G services or even other services with special requirements, including special services. Potential conflicts between net neutrality rules and the new 5G technology are thus entirely conceivable.

Chapter 5: What remains to be done?

A first report by the NRAs on implementation of net neutrality will be issued by the end of June 2017. I view such reports as a significant contribution to a fact-based discussion of the issue. It will be especially important to observe how the quality of open internet access develops.

The Telecoms Single Market Regulation (TSM Regulation) already provides for an evaluation of the net neutrality provisions by 30 April 2019. That evaluation is to also include where applicable appropriate amendment proposals for the Regulation. We should in any case take advantage of this opportunity to examine the provisions in the light of 5G, if and where doubts exist as to the applicability of the current rules. RTR will certainly put forth efforts in this direction when it takes over the chair of BEREC in 2018.

Another issue for consideration at national level is an exception, as specified in the Net Neutrality Regulation, for traffic management measures to be taken by internet service providers. Such an exception would allow ISPs to set up child protection services within their networks (i.e. blocks on certain websites). The initial experience with implementing the rules show that this is an area in which it might be necessary to modify current practice.

Another key activity will be to observe developments in the United States. The internet is a global network, and as such it is very important to have uniform rules in place at global level if possible. Differing sets of rules hold the potential for distorting competition. It is obviously not yet possible to anticipate which of the provisions of the United States' open internet rules in particular will be affected by the policy change.

RTR is fully committed to an open internet, to the end of ensuring the role of the internet as an innovation driver in the interests of users and providers. 'Innovation without permission' best describes this approach. In a highly dynamic technological environment, attention nonetheless has to be focused on ensuring that regulation meets today's requirements. These remain exciting times!

Johannes Gungl

CEO
Telecommunications and Postal Services Division
RTR

1 Mobile telecommunications market

1 Mobile telecommunications market

The mobile telecommunications market played a special role in activities in 2016, with the plan to abolish roaming fees representing a major issue here.

Efforts to reduce the costs of roaming services (e.g. calls, text messages and data) to consumers have already been ongoing at European level for several years now. The process began back in 2007 with the Roaming I Regulation, the scope of which was limited to defining maximum charges and specifying measures for enhanced transparency. In 2010 and 2012 the process continued with further gradual reductions in the maximum rates charged.

Roaming charges will be completely eliminated as of 15 June 2017. After that it will not be permitted to charge any additional fees to domestic users who remain within a specified 'fair use limit'; in other words, customers will be able to use their mobile phones in other EU countries as they would at home, without having to reckon with any extra charges. Varying approaches to setting a fair use limit have been discussed. Originally it had been planned to specify a certain number of days during which roaming services could be used at no extra charge. Later, in December 2016, the plan to specify a certain number of days was dropped in favour of a fair use policy. According to the arrangement, providers are authorised to prevent any "abusive or anomalous usage". It is not yet completely clear what is meant by abusive or anomalous usage. Examples mentioned include: "long inactivity of a given SIM card associated with use mostly, if not exclusively, while roaming"; and "subscription and sequential use of multiple SIM cards by the same customer while roaming". This will give way to a high degree of legal uncertainty both for network operators and roaming customers.

In regulating roaming, the envisioned goal was to abolish roaming surcharges and maintain the availability and quality of roaming services while at the same time avoiding any rate hikes for domestic telecommunications services.

When the changes in mobile rates in Austria are examined, beginning in 2016 a trend can be observed of mobile network operators offering rates that exclude roaming services. For customers this means that under their subscription they are unable to use any mobile services or be reached via their mobile devices while in another country. Such a trend entails the risk of a growing number of customers being unable to use roaming at all because, due to cheaper domestic rates, they agree to subscriptions that do not include roaming services. This could result in a failure to meet the original objective sought in regulating roaming.

The actual consequences of abolishing customer roaming charges will only become evident during 2017 or later.

Other changes in the rate structures for mobile services can also be observed. A trend is emerging for additional services to be included in the basic monthly fee. The buzzwords often used here are 'unlimited minutes' and 'unlimited texting'. Subscription documents reveal that under certain terms mobile providers are entitled to verify usage and may suspect abuse where customers exceed certain usage levels, specifically 10,000 minutes (equal to roughly 5.3 hours daily assuming a 31-day month) or 10,000 text messages (equal to roughly 322 messages daily, again assuming a 31-day month). Where usage is solely for private communications, it can be assumed that allowing customers to spend 5.3 hours per day talking on the phone or to send 322 text messages each day amounts to de facto unlimited usage. A tendency for larger data volumes to be included in the basic monthly fee could also be observed in 2016.

Another trend seen in 2016 involved making increasingly more bandwidth available. With several mobile service products, the available bandwidth was increased not only for new customers but also for existing ones. For customers this means better service quality at the same monthly rate.

Besides enhanced quality of services, price developments are a factor in the mobile telecommunications market.

The price situation in the consumer market for mobile services is reflected in the mobile services index regularly published by RTR. To calculate the index, the average monthly prices for four different user categories are derived from the rate information published each month by the Austrian Chamber of Labour. Three of the user categories refer to 'smartphone users' who make use of both voice service and text messaging as well as data services. The fourth user category, the 'low users', refers to a group that uses only voice service and text messaging. For each category, the index is based on the five cheapest rates per brand. The index consequently provides a good picture of changes in consumer prices for mobile services in the course of a year.

For 2016 the index reveals a mostly stable price curve at the same level as that recorded at the end of 2015. Following an increase in the average prices for mobile services in 2014 (of more than 100 index points), the index dropped to a level of roughly 85 points at the end of 2015, where it continued to remain in 2016. It nonetheless needs to be pointed out that prices decreased considerably for the rate category of 'power users', in other words users mainly characterised by high data usage, with the lower price levels remaining stable in 2016. In detail, between March 2015 and January 2016 the index for this user group dropped below 60 points, where it remained for the rest of 2016. After dropping to approximately 77 points at the beginning of 2016, the index for 'high users' similarly remained more or less at this same level during the remainder of the year. This development is primarily attributed to increased price competition introduced in this segment by low-price virtual network operators, and in fact price reductions in these sub-markets were observed in some cases in 2016 even for rate plans already offered by 'discounters'.

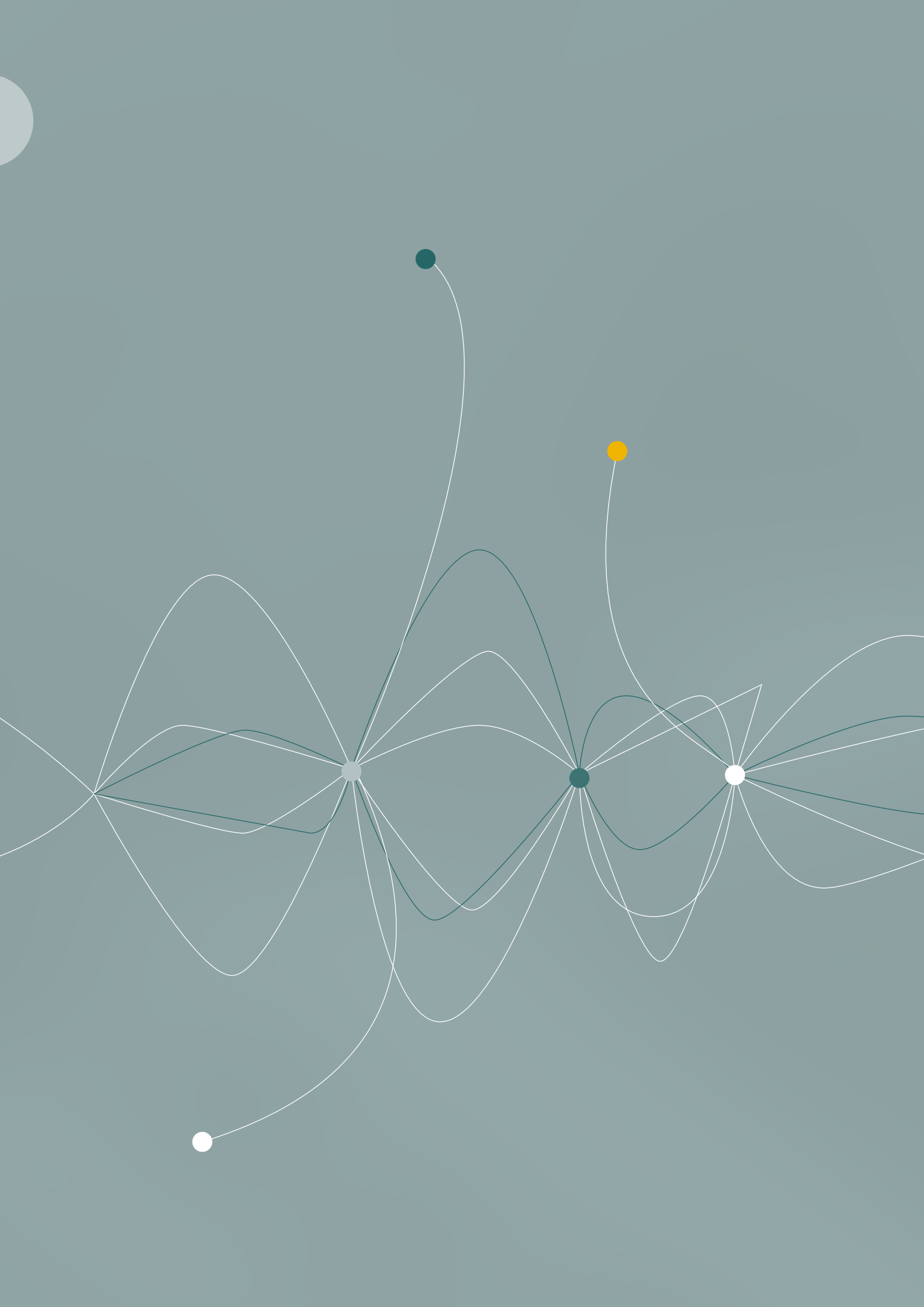
Following record highs in 2014 that lasted until June 2015, a continued trend towards moderate price reductions was seen in the 'low user' category, whose rate plans typically include only small amounts of voice call minutes and text messages. In specific terms, the index for this user group decreased slowly and steadily to a level below 140 points, from the record high of 150 points in June 2015. This development can be attributed to a substantial renewal of competition in this segment, brought on especially through the price battles triggered by virtual network operators.

In summary, the survey of the mobile telecommunications market reveals an increase in the amount (free minutes, text messages and data volumes) and quality (bandwidths) of services included in subscriptions – while at the same time prices have been reduced with lasting effect, especially in the 'power users' category. The actual consequences of abolishing roaming charges will become apparent only after developments in 2017, although a trend can already be recognised of providers no longer offering roaming services.

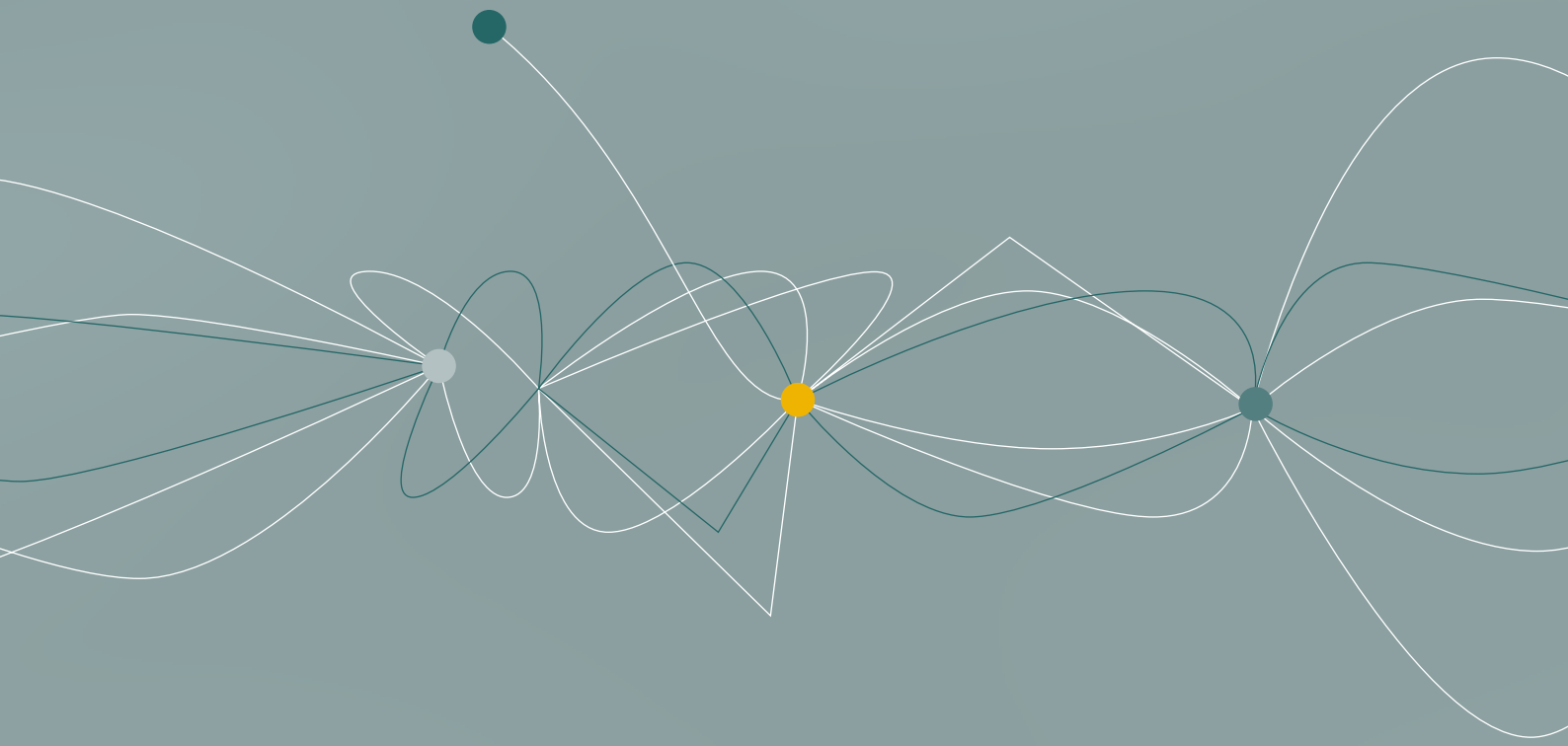
Alongside these developments in conventional mobile services, the attention of the industry, and consequently of the regulatory authority as well, is in the meantime already shifting to the next generation of mobile telecommunications. The acronym 5G does not only stand for a technical system hub that enables even higher data transmission rates, considerably shorter latencies and enhanced availability to be achieved within fourth generation (LTE) mobile networks. The new standard is also envisioned as the communications technology base to support in future a great many mobile services and applications in a society that is becoming increasingly closely interlinked. Alongside this technological progress, 5G is also perceived as playing a role in the emergence of new ecosystems within the mobile sector and the transformation of established business models.

Within the framework of its capacities and responsibilities, RTR is committed to supporting the 5G rollout and to helping achieve the goal set by the federal government of making Austria a pilot country for 5G telecommunications. Examples of efforts in this regard include activities to furnish operators with the necessary frequency resources at an early stage, accelerated expansion of network infrastructures through the use of the ZIS database[1] and by completing procedures for awarding rights of way and wayleave rights, cooperation in defining Austria's position for reviewing the new EU legal framework, and active involvement in national and international bodies working in this area.

1 ZIS = Single Information Point for Infrastructure Data (Zentrale Informationsstelle für Infrastrukturdaten).



2 Emergency calling service – a matter of vital importance



2 Emergency calling service – a matter of vital importance

Emergency calling is a service to which people usually give little thought. Yet, when faced with an emergency, people suddenly expect a great deal from this service. Especially in stressful situations, we want to have an emergency number that is easy to remember, and we want our call answered immediately and to receive fast and competent assistance. This is only possible where a complex, perfectly tuned system is in place in the background – starting with the competent authorities at national and regional levels and including providers of fixed network and mobile phone services as well as the various organisations and institutions that respond to emergency calls, such as ambulance services, fire brigades and police authorities, each with their control centres and emergency response organisations.

The Austrian Regulatory Authority for Broadcasting and Telecommunications (RTR) is an integral part of the community providing emergency response in Austria. Drawing on its responsibilities in matters relating to phone numbers and to the supervision of competition in the Austrian telecommunications market, RTR has been able to gather expert knowledge and skills in the area of emergency calling and has even set up a specialised working group known as Plattform Notrufe, within which representatives of all relevant players within the Austrian emergency calling system meet twice a year. Through many years of in-depth exchange, the authorities, network operators and emergency response organisations participating in the working group have deepened their understanding of each others' roles and built a more solid basis of cooperation, which has additionally resulted in concrete improvements in Austria's emergency calling system. Examples of the improvements resulting from Plattform Notrufe include a digital interface for querying personal and location information when an emergency call is received and a central administration point, soon to go into operation at RTR, to facilitate data exchange between network operators and control centres handling emergency calls. A total of three sub-groups are currently working on topics related to emergency calling service, specifically: improved techniques for determining and identifying personal and location information of emergency calls received through fixed networks, procedures for properly routing emergency calls, and activities in preparation for implementing a central emergency number database at RTR. A key factor for success in all of these areas is close cooperation among the various stakeholders.

Technological advances pave the way to new possibilities

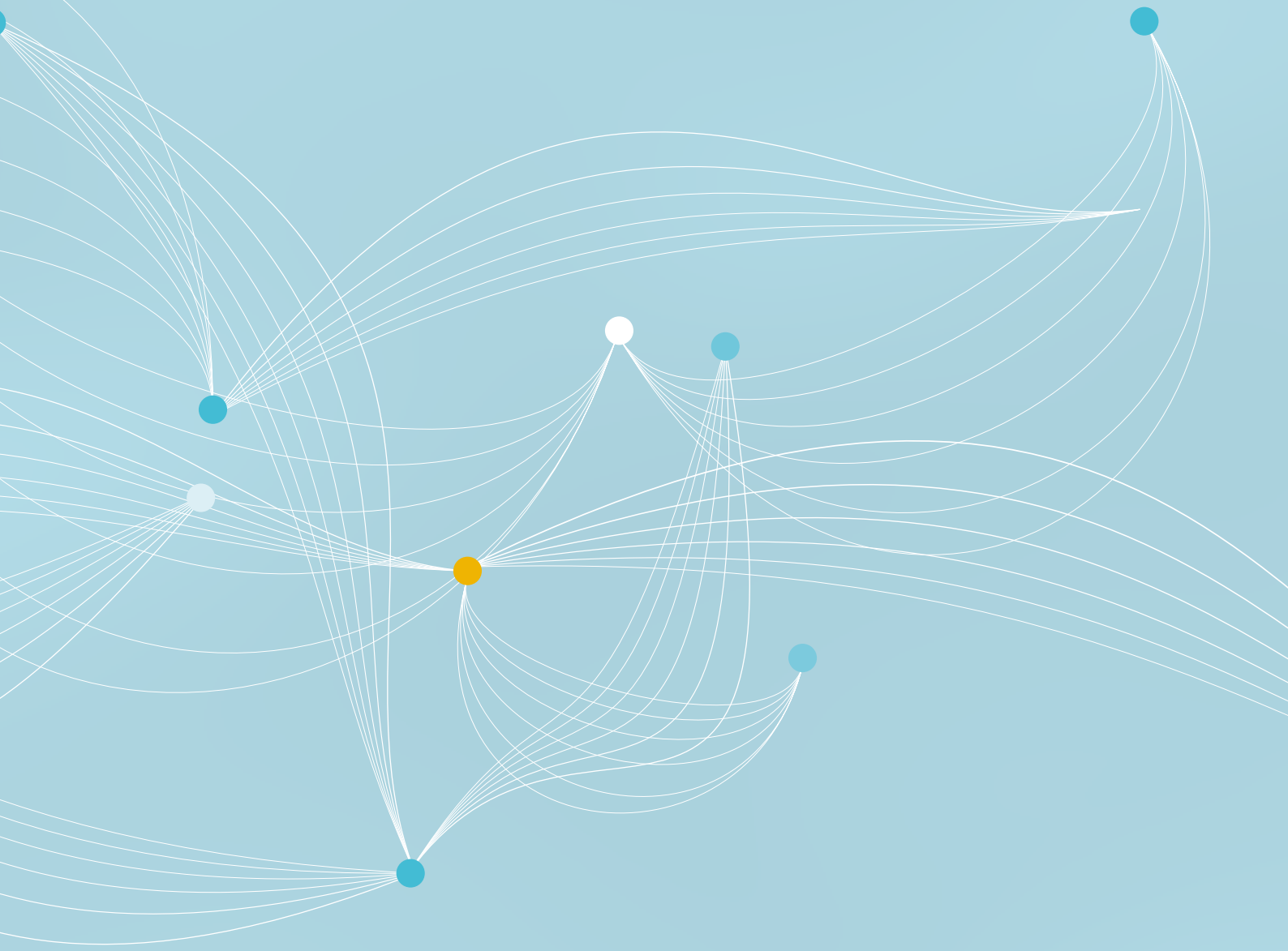
Even though Austria's emergency calling system has indeed lived up to all the requirements of policymakers and society so far, technological advances are still progressing in the area of emergency communications. One might well ask why the location of a person requiring assistance is still identified at the granularity level of the mobile cell or antenna sector, even though modern mobile phones equipped with GPS allow location detection accurate to a few metres and commercial internet services have already been using this feature for some time. The same applies to the method of communication: even though many people communicate nowadays through text messaging, it is still only possible to make an emergency call via voice telephony. Technological advances in this area have paved the way to new possibilities which, in the next few years, are to be used to the benefit of emergency response organisations and thus, ultimately, individuals requiring assistance. The recital of the draft framework for a recast EU telecommunications directive expressly refers to these topics while calling on the Member States to take corresponding action. This specifically entails broadening the scope of the term emergency calling to include SMS and other messaging and video services as well as the use of the location data provided by end-user devices (for example via GPS or WiFi) or making emergency call routing data publicly accessible for communications service providers.

Will RTR play an integral part?

RTR is committed to continuing to contribute actively towards successively improving Austria's emergency calling system and has offered to play an even stronger role in this area in future. This would involve areas such as improving location detection of incoming emergency calls, whereby RTR could be given the responsibility of issuing ordinances on matters relating to location information. Another potential area would be to take over a key function in administrative and operational matters relating to emergency calling. Examples that come to mind here include the operation by RTR of a location or routing server, which would allow VoIP or app providers simple yet nonetheless legal access to emergency calls.

In any case, technological advances offer numerous possibilities for raising the quality of the emergency calling system to a new level and for further minimising the risk to life and limb or to property. The expectations of those requiring assistance are high, but should be matched by the efforts of the competent authorities.

3 RTR and the regulatory authorities



3 RTR and the regulatory authorities

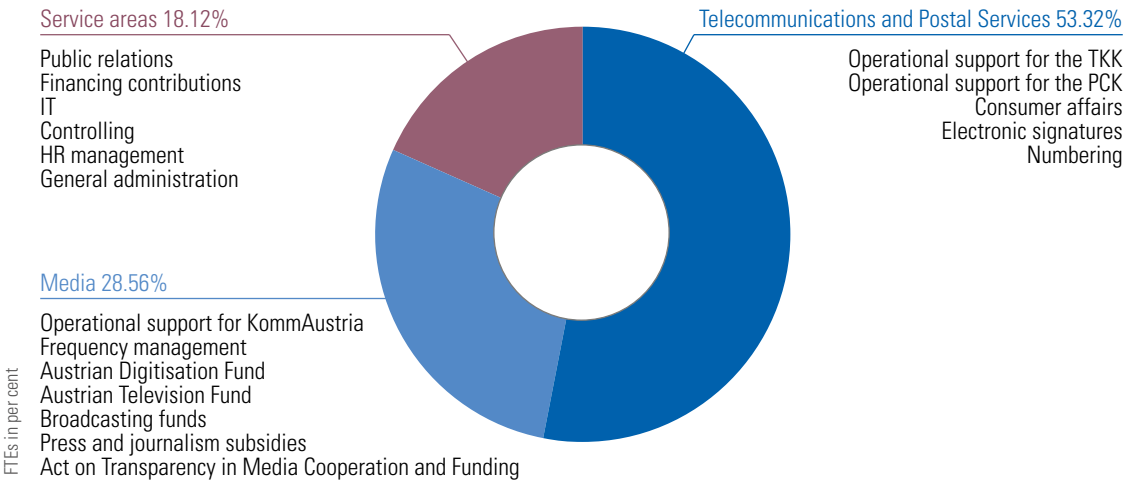
3.1 Our company: we stand for competition and media diversity

The Austrian Regulatory Authority for Broadcasting and Telecommunications (RTR) was established under law with the purpose of regulating competition on the Austrian markets for media, telecommunications and postal services as well as achieving the objectives set forth in legislation. Its powers and responsibilities are enshrined in relevant legislation. The organisation fulfils its own official duties as well as providing operational support for the Austrian Communications Authority (KommAustria), the Telekom-Control-Kommission (TKK) and the Post-Control-Kommission (PCK). It also administers funding used to support projects in the media field.

RTR is wholly owned by the Republic of Austria. It is headed by two managing directors and is structured in two specialist divisions. During the year under review, Dr. Alfred Grinschgl was responsible for the Media Division, including all grant funds, while Johannes Gungl was in charge of the Telecommunications and Postal Services Division.

Figure 1 shows the relative proportion of personnel assigned to the two specialist divisions and the service areas.

FIGURE 1: Service areas, Media Division and Telecommunications and Postal Services Division as of 31 December 2016



Source: RTR

Personnel: focus on efficiency

Changes in the Media Division, the Telecommunications and Postal Services Division and the service areas reveal a drop of 0.850 FTEs in the headcount compared to the previous year (31 December 2015).

TABLE 1: Staff size between 2014 and 2016

Staff as of 31 December (in FTEs)	2014	2015	2016
Telecommunications and Postal Services Division	57.104	55.015	54.495
Media Division	28.584	29.870	29.185
Service areas	18.637	18.165	18.520
RTR	**104.325**	**103.050**	**102.200**

Source: RTR

The decline in the number of conciliation cases meant that resources could be reallocated to other areas of the Telecommunications and Postal Services Division. Thus additional tasks, such as the statutory requirement to set up the Single Information Point (ZIS), could partly be achieved without having to increase personnel.

Audit by the Court of Audit: transparency is crucial

In June the Court of Audit announced an audit for the second half of the year. This is a cross audit by the competition authorities and their superior authorities in Austria (with the exception of the Financial Market Authority), including the associated ministries as their owners.

The Court of Audit subjects organisations to a systematic evaluation, checking whether the organisations carry out their statutory tasks in accordance with the principles of economy, efficiency and expediency, and how they cooperate with the authorities. Account statements and the strategic plans of the competition authorities are also audited.

Risk management: we are prepared for many contingencies

One of the focal points in the reporting year was reviewing the prevailing risk management system. All discernible risks were recorded in a structured manner according to probability of occurrence and the extent of loss, through interviews with internal and external stakeholders, while the measures in place to tackle and avoid risks were evaluated.

Based on this review, the risk management system was expanded in accordance with guidelines from the Court of Audit and implemented within the organisation.

Company location: evaluation of office alternatives

Since RTR's lease agreement for the office premises on Mariahilfer Straße runs out at the end of January 2018, RTR surveyed the Vienna real estate market in good time. With the help of an external adviser, planned and existing properties located in modern office buildings at easily accessible traffic hubs in the city were evaluated.

Using this information as a basis for negotiations, discussions were held with the current lessor on a possible extension to the contract. Alongside a reduction in the rent, an investment grant was also obtained. The lessor was very accommodating towards RTR's ideas regarding an extension of the contract for a further five years, which means RTR will be staying at the current address until 2023.

Focus on staff training

RTR's most important asset is its people. This is why such great emphasis is placed on the continuous professional and personal development of personnel in the company. A total of 335 days were invested in training and education in the reporting year, which amounts to 2.8 days per person.

communicate! 2.0 – focus on communication

Based on the results of an internal RTR working group, which dealt with innovation and issues about the future, the staff working at RTR expressed the wish for instruments to improve communication. This led to a plan, drawn up with the help of an external adviser and entitled 'communicate! 2.0', which aims at promoting interdisciplinary cooperation both among divisions, departments and teams as well as with external stakeholders, alongside establishing a feedback culture and a more open-minded conflict culture. Respectful communication between staff members and between management and staff facilitates cooperation and promotes the creation of convergent and innovative results.

With a view to encouraging interested young people, school pupils take part in practical work experience at RTR every year. Four pupils availed themselves of this opportunity in 2016.

Staff health

As part of a workplace health promotion initiative, staff were able to obtain advice on dental health in 2016, with other key areas including vaccinations (flu, TBE) and immunisation advice. Courses promoting healthy back postures were offered as well, to compensate for the mostly sedentary activities in the office. A twelve-week running initiative was organised with the help of the works council.

3.1.1 Equal opportunities at RTR in 2016

After the Equal Opportunity and Family Support Plan was completed and signed in December 2015, it was presented to all staff in January 2016.

Amongst other things the Equal Opportunity Plan tackled the issue of the 'father month', which was the result of several preliminary discussions internally. The new Family Time Bonus Act (*Familienzeitbonusgesetz*), which was adopted by the National Council in the summer of 2016, now provides a statutory framework that covers the aspects discussed within RTR. This framework does not provide for any compulsory company schemes to introduce a father month. Yet if agreement is reached with a male member of staff (or in rarer cases with a female member of staff) on 'family bonus time', there is now a statutory framework for this.

The topic of equal opportunities is not just about gender equality, it also concerns topics such as dealing with older members of staff. In this respect there was dialogue and an exchange of experiences in the first six months with RTR's occupational health physician and safety officers, which will form the basis for further talks on this issue going forward.

Additionally, there were preparations in the reporting year for a management workshop on issues of equal opportunities, which will take place in the first quarter of 2017.

As foreseen in the equality plan (*Gleichstellungsplan*), surveys were carried out in 2016 on training and education courses attended by staff, with a view to identifying any unequal treatment. No systematic discrimination of individual groups was identified in this analysis.

To enhance the transparency of the equal opportunities team along with awareness for issues of equality, preparations were carried out in the reporting year for a regular, annual internal event to take place in Q1 2017 for the first time.

3.1.2 RTR's financial statements for 2016

RTR aspires to be modern and contemporary, and to act in accordance with the principles of expediency and economy.

The external auditors at Deloitte Audit Wirtschaftsprüfungs GmbH have issued an unqualified audit certificate confirming RTR's financial statements for the 2016 business year (1 January to 31 December 2016). The financial statements presented below were prepared in accordance with the Austrian Commercial Code (UGB) as amended.

The profit and loss account and balance sheet, as shown in RTR' financial statements, are presented below.

The Regulatory Authority for Broadcasting and Telecommunications is financed from different sources depending on the areas of activity in question. The markets are required by law to assume a portion of the financing, while public funds are also used. The financing contribution is calculated using the planned revenues of each company in relation to the total revenues of the sector. Once the actual revenues have been determined, the actual financing contributions are calculated and compared with the planned financing contributions. To simplify administration, companies that fall below a certain revenue limit, or threshold, are not required to pay financial contributions.

In 2016, RTR received federal funds amounting to EUR 1.587 million to finance media regulation; the share for financing the market was 58.72%, equivalent to EUR 2.257 million. Including a one-off payment for setting up the Single Information Point, public funds totalling EUR 3.859 million were contributed for the regulation of the telecom market, of which EUR 3.046 million was recognised as income in the reporting year; market participants contributed EUR 3.724 million to regulation, corresponding to 55.01% of the total. Of the federal funds, EUR 0.214 million was allocated for postal service regulation. The remaining expenses amounting to EUR 0.410 million, which corresponds to 65.66% of the total, were contributed by market participants.

RTR closed the 2016 business year (1 January to 31 December 2016) with a balanced result.

TABLE 2: Profit and loss account for the 2016 business year (1 January to 31 December 2016)

		2016 EUR		2015 EUR (thousands)	
1.	Net income		12,829,836.74		12,325
2.	Other operating income				
a)	Income from the disposal of fixed assets (excluding financial assets)	0.00		1	
b)	Income from the release of provisions	12,010.31		18	
c)	Other	837,877.53	849,887.84	931	950
3.	Personnel expenses				
a)	Salaries	-7,058,545.54		-6,877	
b)	Social expenses				
ba)	Pension insurance expenses	-246,277.05		-242	
bb)	Severance pay expenses and contributions to staff provision funds	-114,988.04		-114	
bc)	Statutory social insurance contributions as well as payroll-related fees and mandatory contributions	-1,806,294.50		-1,753	
bd)	Other	-111,707.77	-9,337,812.90	-108	-9,094
4.	Amortisation and write-downs of intangible assets, depreciation and write-downs of tangible assets				
a)	Depreciation, amortisation and write-downs	-318,088.36		-301	
b)	Release of investment grants	36,132.40		0	
c)	Revenues from passing on the expense of low-value assets	1,416.63	-280,539.33	0	-301
5.	Other operating expenses				
	Other		-4,046,215.26		-3,923
6.	**Subtotal of Items 1 to 5**		15,157.09		-43
7.	Income from other securities held as long-term investments		46,917.67		81
8.	Other interest and similar income		4,239.69		5
9.	Income from the disposal of and additions to financial assets		1,719.45		0
10.	Expenses for financial assets				
	Impairment		-35,701.36		-9
11.	**Subtotal of Items 7 to 10**		17,175.45		77
12.	**Result before taxes**		32,332.54		34
13.	Taxes on income		-20,462.89		-27
14.	**Result after taxes = net annual income**		11,869.65		7
15.	Appropriation to profit reserves				
	Appropriation to free reserves		-11,869.65		-7
16.	Profit carried forward		0.00		0
17.	**Net result**		**0.00**		**0**

Source: RTR

The annual financial statements prepared by RTR do not itemise funding use by division. For this reason, Table 3 below provides a breakdown of the main items listed in RTR's income statement for the Telecommunications and Postal Services Division and the Media Division (as specified in Art. 19 Par. 3 no. 3 of the KommAustria Act, KOG).

TABLE 3: RTR income and expenses by division

Amounts in EUR (thousands)	Telecommunications and Postal Services	Media	TOTAL
Net income	7,603	5,227	12,830
Other operating income	198	652	850
Personnel expenses	-5,993	-3,345	-9,338
Depreciation, amortisation and write-downs	-185	-96	-281
Other operating expenses	-1,609	-2,437	-4,046
Operating result	**14**	**1**	**15**
Financial result	**10**	**7**	**17**
Result before taxes	**24**	**8**	**32**
Taxes on income	-12	-8	-20
Net annual income	**12**	**0**	**12**
Appropriation to profit reserves	-12	0	-12
Profit carried forward	0	0	0
Net result	**0**	**0**	**0**

Source: RTR

RTR's income and expenses for the individual areas of activity within each division are presented in the annex to the annual accounts as of 31 December 2016 as adopted by the general assembly. The individual areas within the Telecommunications and Postal Services Division are: telecommunication regulation, electronic signatures and postal services regulation; and the areas within the Media Division are: media regulation, Austrian Digitisation Fund, Austrian Television Fund and broadcasting funds (refer to www.rtr.at).

TABLE 4A: Balance sheet as of 31 December 2016 – assets

		31 December 2016 EUR		31 December 2015 EUR (thousands)	
A.	Fixed assets				
I.	Intangible assets				
	1. Industrial property and similar rights	567,382.09		404	
	2. Prepayments	27,517.50	594,899.59	7	411
II.	Tangible assets				
	1. Buildings on third-party land	40,856.52		68	
	2. Other equipment, operating and office equipment	80,378.39	121,234.91	132	200
III.	Financial assets				
	Long-term securities		3,436,638.16		3,383
			4,152,772.66		3,994
B.	Current assets				
I.	Receivables and other assets				
	1. Trade receivables (Thereof with a maturity >1 year EUR 0; previous year: EUR 0)	665,212.08		509	
	2. Other receivables and assets (Thereof with a maturity >1 year EUR 46,492.21; previous year: EUR 6 thousand)	355,468.26	1,020,680.34	491	1,000
II.	Cash at bank and in hand		3,368,226.99		2,976
			4,388,907.33		3,976
C.	Prepaid expenses		105,157.46		104
D.	Trustee accounts – funds		22,210,845.95		19,115
			30,857,683.40		**27,189**

Source: RTR

TABLE 4B: Balance sheet as of 31 December 2016 – liabilities

		31 December 2016 EUR		31 December 2015 EUR (thousands)	
A.	Equity capital				
I.	Called-up and paid-in nominal capital	3,633,641.71		3,634	
II.	Capital reserves Appropriated	1,924.59		2	
III.	Profit reserves Other reserves / free reserves	19,410.35		8	
IV.	Net result Thereof profit carried forward (previous year: EUR 0)	0.00	3,654,976.65	0	3,644
B.	Special item: investment grant		283,867.60		0
C.	Provisions				
1.	Provisions for severance pay	228,050.00		207	
2.	Other provisions	1,252,110.09	1,480,160.09	1,530	1,737
D.	Liabilities (Thereof with a maturity <1 year EUR 2,677,216.55; previous year: EUR 3 thousand; thereof with a maturity >1 year EUR 0.00; previous year: EUR 0)				
1.	Trade payables (Thereof with a maturity <1 year EUR 866,688.03; previous year: EUR 567 thousand; thereof with a maturity >1 year EUR 0.00; previous year: EUR 0)	866,688.03		567	
2.	Other liabilities (Thereof with a maturity <1 year EUR 1,810,528.52; previous year: EUR 2 thousand; thereof with a maturity >1 year EUR 0.00; previous year: EUR 0; thereof from taxes EUR 395,321.13; previous year: EUR 423 thousand; thereof from social insurance obligations EUR 171,818.20; previous year: EUR 164 thousand)	1,810,528.52	2,677,216.55	1,944	2,511
E.	Deferred income		492,753.27		25
F.	Trustee obligations – funds		22,268,709.24		19,272
			30,857,683.40		**27,189**

Source: RTR

3.2 The regulatory authorities KommAustria, TKK and PCK

RTR is the operative arm for the following three authorities:

KommAustria

The Media Division provides operational support to KommAustria. The authority consists of five members who are nominated by the federal government and appointed by the Austrian president for a term of six years. The members of KommAustria are independent in the performance of their duties and not bound by instructions from any other authority. Michael Ogris was the chair in the reporting year.

TKK

The Telecommunications and Postal Services Division serves as the operative arm of the TKK and the PCK. The TKK consists of three main members and three substitute members who are appointed by the federal government for a five-year term. Elfriede Solé, senior official with the Austrian Supreme Court of Justice, chaired the TKK during the year under review.

PCK

The PCK presents a similar picture. It also consists of three main members and three substitute members who are appointed by the federal government for a five-year term. Elfriede Solé, senior official with the Austrian Supreme Court of Justice, also served as chair of this authority.

4 Activities of KommAustria

4 Activities of KommAustria

The Austrian Communications Authority (KommAustria) is responsible for performing administrative and regulatory duties in the field of electronic audio media and electronic audiovisual media. Its mandate entails a broad spectrum, including the regulation of market access for content services, general and specific monitoring of compliance with statutory provisions, infrastructure regulation, and press and journalism subsidies. It is responsible for private organisations (broadcasters, media service providers, communications network operators) as well as the Austrian Broadcasting Corporation (ORF) and its subsidiaries.

4.1 Access to media markets

Access to the media market is regulated through assigning broadcasting frequencies, issuing licences for broadcasting, accepting and reviewing notifications from cable broadcasters and other providers of audiovisual media services, and reviewing new content services prior to launch by ORF or its subsidiaries.

4.1.1 Private radio broadcasting licences

The licensing procedures conducted by KommAustria during the period under review concerned on the one hand applications for creating new or expanding existing coverage areas as well as official invitations to tender, due to previously granted licences expiring at the end of the legal term. Furthermore, numerous licences for radio event broadcasting and educational broadcasting were also granted.

Nationwide radio broadcasting

Since December 2014, KRONEHIT Radio BetriebsgmbH has been the (renewed) holder of a nationwide private terrestrial broadcasting licence limited to ten years. The station broadcasts its adult contemporary radio content in vast parts of the country as KRONEHIT.

In 2016 the licensee was assigned a total of two frequencies to expand its coverage throughout Austria, and its licence was amended accordingly. As a result, KRONEHIT Radio BetriebsgmbH was again able to increase its coverage level in 2016. KRONEHIT Radio BetriebsgmbH had consequently been assigned a total of 157 frequencies as at the end of this reporting period, after relinquishing one licence. In addition, seven changes to radio equipment were approved at the request of KRONEHIT Radio BetriebsgmbH during the reporting period. Four procedures concerning the expansion of the nationwide license and one procedure concerning changes to the radio equipment of KRONEHIT Radio BetriebsgmbH were still pending at the end of the reporting period.

Regional and local radio broadcasting

In the local and regional terrestrial broadcasting sector, a total of 31 procedures were carried out in 2016, 17 of which were still pending at the end of the reporting period.

As a result of applications by relevant parties, four licensing procedures were conducted: one application was afterwards withdrawn, the frequency INNSBRUCK 103.8 MHz was assigned to T-ROCK GmbH to create a new coverage area, and the remaining two

applications (regarding coverage areas in Vienna and Salzburg) were still pending at the end of the reporting period.

Three further licensing procedures were conducted as a result of official invitations to tender and subsequently completed. All of these procedures concerned licences that were due to expire in 2016 and therefore had to be reissued. In all cases the former licence holders were again granted licences; the specific coverage areas were: Jenbach and Zillertal, covered by the association Radio Maria – Der Sender mit Sendung; Stadt Salzburg 106.6 MHz, covered by Alpenfunk GmbH; and Mur-, Mürz- and Ennstal, covered by Radio Grün Weiß GmbH. Four additional licensing procedures, conducted on the basis of an official invitation to tender due to the expiry of the licence term in 2017, were still pending at the end of the reporting period.

In addition, a procedure for the pooling of existing radio licences – an option which has been available since the amendment of the Private Radio Act (PrR-G) in 2015 – was conducted and concluded for the first time. The existing licences for programmes (differing according to region) under the name '88.6 – Der Musiksender' have now been combined to form a licence for Radio Eins Privatradio GmbH, authorising it to produce a uniform programme in the coverage area of Vienna, Lower Austria and Burgenland.

In a number of other instances, the parties' applications were aimed at extending existing coverage areas. As a result, Superfly Radio GmbH was assigned the frequency S POELTEN 3 (Schildberg) 93.2 MHz in order to expand its existing coverage area of Vienna 93.2 MHz; Entspannungsfunk Gesellschaft mbH was assigned the frequency KLAGENFURT 3 (Pyramidenkogel) 107.1 MHz in order to expand its coverage area of Klagenfurt 93.4 MHz; Vorarlberger Regionalradio GmbH was assigned more frequencies in order to expand its coverage area of Vorarlberg; Radio Oberland GmbH was assigned another frequency in order to expand its coverage area of Upper Tyrol; the association Dachverband für Kultur- und Medieninitiativen und Jugend was assigned another frequency in order to expand its coverage area, now referred to collectively as Dornbirn 101.1 MHz; Radio Arabella Oberösterreich GmbH & Co KG was assigned another frequency in order to expand its coverage area of Traunviertel and parts of the Hausruckviertel region; and Freier Rundfunk Oberösterreich GmbH was assigned another frequency in order to expand its coverage area of Linz 105.0 MHz. Fifteen such procedures were still pending at the end of the period under review.

Event and educational radio licences

Event radio refers to radio broadcasting licences that are granted for a maximum of three months and that are used locally during and around the time of an independent public event in the surrounding area. A total of eleven event radio licences were issued in 2016, which were used to provide radio coverage for the following events:

- Ball der Wirtschaftsuniversität 2016, 9 January 2016 to 16 January 2016 (LoungeFM)
- Wiener Eistraum 2016, 17 January 2016 to 13 March 2016 (LoungeFM)
- Vienna City Marathon (VCM) 2016, 14 March 2016 to 16 April 2016 (LoungeFM)
- Sand in the City 2016, 17 April 2016 to 17 July 2016 (LoungeFM)
- Fest der Jugend – Pfingsten in Salzburg, 5 May 2016 to 5 June 2016 (Radio Maria)
- 2016 Youth Forum of the Red Cross Lower Austria, 5 July 2016 to 10 July 2016 (Datamatix Datensysteme GmbH)
- Sommer im Museumsquartier 2016, 18 July 2016 to 7 October 2016 (LoungeFM)
- video&filmtage, 13 October 2016 to 19 October 2016 (LoungeFM)
- Viennale 2016, 20 October 2016 to 9 November 2016 (LoungeFM)
- Winter im Museumsquartier 2016, 10 November 2016 to 30 December 2016 (LoungeFM)
- Wiener Eistraum 2017, 31 December 2016 to 19 March 2017 (LoungeFM)

An application for permission to hold a radio event (Kunstschatzi) was rejected in the absence of an event within the meaning of the PrR-G.

Educational radio licences refer to licences granted to an institution of education or training for the purpose of radio broadcasting within the vicinity of the institution, where the programmes have a functional relationship to the duties to be fulfilled by that institution. Such licences can be granted for a maximum of one year. Six different educational radio licences were granted in 2016:

- Radio SOL in Bad Vöslau
- Campus Radio in St. Pölten
- RADIUS 106.6 in Freistadt
- NJOY 91.3 in Vienna
- Radio Gymnasium in Oberpullendorf
- NJOY 88.2 in Deutschlandsberg

Procedures under telecommunications law

For the sake of simplifying administration (that is, to enable one-stop-service), pursuant to the 2003 Telecommunications Act (TKG 2003), KommAustria is also responsible for issuing the permits under telecommunications law that are required for the radio equipment used in broadcasting. Permits under telecommunications law are issued either in conjunction with a permit under broadcasting law or with no direct reference to broadcasting law, in the latter case solely on the basis of an application under telecommunications law. Such cases usually involve technical changes planned for radio equipment, such as the use of new transmitter antennas, the relocation of transmission sites or increased transmission power.

In addition to the afore-mentioned procedures regarding the nationwide radio broadcasting licence for KRONEHIT, in 2016 KommAustria approved eight changes to radio equipment and ten applications allowing private radio broadcasters to conduct test transmissions. The procedures in the case of six applications for changes to radio equipment were pending at the end of the period under review. In addition, KommAustria issued approvals in 20 cases for radio equipment to be used within broadcasting frequency bands for purposes other than broadcasting (for example to cover drive-in cinemas, conferences and similar events).

Assignment of radio broadcasting frequencies to the ORF

In the context of its responsibility for the assignment of spectra for radio broadcasting and for issuing corresponding permits under telecommunications law, KommAustria is also active in cases involving the radio transmission equipment used by the ORF.

In this area of activity, a total of six procedures were carried out in 2016. In three procedures, frequencies were assigned and telecommunications permits were (re-)issued to the ORF that had expired after the statutory period of ten years, while three procedures related to telecommunications permits for ORF tunnel radio equipment.

Additional information can be found on the RTR website at www.rtr.at/de/m/EntscheidungenGesamtRF (in German).

4.1.2 Approvals and notifications relating to audio-visual media services and multiplex platforms

Nationwide television

With regard to the extension of the level of coverage of the nationwide multiplex platforms Multiplex A and B and Multiplex D, E and F, reference is made to Chapter 5 which describes progress in digitisation. In November 2015, a licence to operate a

nationwide multiplex platform for terrestrial broadcasting with two types of coverage (Multiplex A/B) was issued.

A total of six permits under telecommunications law were issued in the 2016 reporting period for the extension of the nationwide multiplex platforms A and B as well as multiplexes D, E and F; these concerned licences for the erection and operation of transmitters for radio broadcasting and changes to the technical parameters of the respective multiplex platforms. Furthermore a total of five amendments to the programme line-up/programme package for the nationwide multiplex platforms A and B were approved.

Regional and local television broadcasting

In the period under review, no licences for operating new regional multiplex platforms (Multiplex C) were issued. As of the end of the period under review, 16 licences to operate local multiplex platforms were valid, covering a total of 64% of the Austrian population.

Also in the period under review, four changes to the programme line-up/programme package were approved and five licences for digital terrestrial channels were issued.

Event licences and licences for satellite television

No event television broadcasts were approved during the period under review.

KommAustria issued satellite licences for three television channels in 2016 (HT1, kabel eins Doku austria and oe24.TV).

Media services subject to notification requirements

A total of seven cable television channels, two (linear) television channels broadcast via the internet and 24 on-demand media services, were registered with KommAustria in the 2016 reporting period.

4.1.3 Approvals and notifications of new ORF services

In 2016, the ORF reported only minor changes to two service plans (one for a specialised information and cultural programme and online service and the other for TV.ORF.at); due to their scope, these changes were not subject to requirements regulating reporting to KommAustria. In these cases, therefore, no official action was necessary.

4.2 Legal supervision

In addition to monitoring compliance with regulations on commercial communication, KommAustria is also responsible for the legal supervision of private broadcasters and media service providers (as well as multiplex operators) under the provisions of the PrR-G and Audiovisual Media Services Act (AMD-G). Under the ORF Act (ORF-G), KommAustria also serves as the legal supervisory authority for the ORF and its subsidiaries.

Violations of those laws may occur through programming (in addition to advertising violations, these may include violations of fundamental programming principles such as youth protection) or through other conduct on the part of broadcasters and media service providers (such as violations of notification requirements or imposed requirements). Specifically, 30 procedures were conducted in 2016 owing to violations of the annual obligation of media service providers to update information.

In general, KommAustria can initiate procedures on the basis of a complaint (under certain legally defined prerequisites), on the basis of a petition (regarding the ORF) or as part of official duties (ex officio). Such procedures may result in an official decision identifying a legal violation and, in the case of repeated or severe violations, the licence may as a last resort be revoked, thereby prohibiting radio broadcasting activity or provision of the media service (the latter option does not apply to the ORF). In addition to these activities, in response to the violation of certain rules KommAustria has the mandate to conduct administrative penal proceedings that may result in fines.

In the course of issuing a private broadcasting licence, the programming plan submitted is also approved by official decision: as a rule, the programming plan is a key consideration in choosing to allocate available transmission capacity to one of a number of qualified applicants. Consequently, a licensee can later make fundamental changes to the programming format only after a special procedure and after meeting certain requirements. Fundamentally modifying the programming format without approval may result in the broadcaster's licence being revoked.

In addition, KommAustria has specific powers for the legal supervision of the ORF and its subsidiaries, especially with regard to the business purpose of the corporation, its legal mandate and the supervision of its business activities).

4.2.1 Commercial communication

ORF channels as well as those of private broadcasters and media service providers were regularly subject to ex officio evaluations during the period under review.

In the case of ORF channels, monitoring activities were carried out in 2016 for the regional radio stations in Burgenland, Styria, Lower Austria, Salzburg, Carinthia (for 24 hours in each case) and in Vorarlberg as well as for the nationwide radio station Ö1 (once each) and the television channels ORF eins (on six occasions), ORF 2 (on four occasions) and ORF III (once). Legal violations were identified in a total of seven procedures (six of which have not yet taken legal effect). Two procedures have not yet been completed.

In the case of private radio broadcasters, monitoring activities were carried out or recordings were requested for the following programmes: Soundportal Graz GmbH, Antenne "Österreich" und Medieninnovationen GmbH, Regionalradio Tirol GmbH, Radio Eins Privatradio GmbH, Klassik Radio Austria GmbH, Radio Oberland GmbH, RTG Radio Technikum GmbH, Dachverband für Kultur- und Medieninitiativen und Jugend, Radio Osttirol GmbH, ERF Medien Österreich GmbH, ARBÖ association, STEVIA Communications GmbH, N & C Privatradio Betriebs GmbH, Mega Radio Austria – Peter Valentino, and Radio Helsinki – Verein Freies Radio Steiermark. In these activities, KommAustria identified violations of advertising regulations in four procedures.

Programmes from the following private television broadcasters were selected: Mema Medien Marketing GmbH, W24 Programm GmbH, kanal3 Regionalfernseh GmbH, Wirth GmbH, Bezirks TV Vöcklabruck GmbH, Bohmann Druck- und Verlag – Gesellschaft m.b.H. & Co KG, and R9 Regional TV Austria GmbH. Violations of advertising regulations were identified in three procedures (two of which are not yet legally effective).

4.2.2 Programming principles

Television and radio programmes are required to uphold the principles of objectivity and the diversity of opinions.

Similar principles are stipulated in the ORF-G for the ORF, where the ORF, in its overall service policy, is required to strive for quality, innovation, integration, equal rights and mutual understanding. The information must be comprehensive, independent, impartial and objective, and help freely form public opinion and so contribute to democratic discourse.

Based on its public mandate, the ORF is also obliged to reflect the diversity of opinions represented in public life and to respect human dignity, personality rights and individual privacy rights. Commentaries, analyses and presentations must be objective and based on verifiable facts.

During the period under review, twelve complaints were filed against the ORF involving alleged violations of programming principles. The complaints objected in particular to violations of the principles of objectivity and impartiality in reporting, for example due to failure to invite an individual to participate in a programme. No violations were found against the ORF in respect of any complaint lodged during the reporting period, with seven proceedings still pending. One complaint was withdrawn. One complaint put forward against a private broadcaster during the period under review was granted in part (but is not yet legally enforceable).

4.2.3 Conciliation procedures – media

RTR can also act as a conciliation body for complaints regarding communication networks and services for broadcasting in the Media Division. The main prerequisite for the initiation of a conciliation procedure is that the customer and operator have unsuccessfully attempted to reach an agreement on their own beforehand. In the course of a conciliation procedure, RTR attempts to negotiate an amicable solution or informs the participants of its position on the case in question.

In the period under review, the RTR conciliation body received 111 complaints. Compared to the number of conciliation cases handled in the Telecommunications Division, this figure accounts for a very small part of all conciliation cases filed in 2016. However, 2016 did see a marked increase in the number of conciliation procedures relating to broadcasting networks and services. For more information, refer to Chapter 8.1.

4.2.4 Specific supervision of the ORF and its subsidiaries

Purpose of business, public mandate and bodies

In the period under review, penal proceedings were initiated due to a failure to comply with the obligation to publish decisions in compliance with the procedure governing the quality assurance system for the period 2011–2012. The ORF filed a complaint with the Federal Administrative Court (BVwG) against the penal decision of KommAustria.

Moreover, the procedure launched in 2015 regarding verification for 2013 and 2014 of compliance with Art. 4a ORF-G was completed during the reporting period; this provision specifies the procedure for defining and revising the quality assurance system.

Also in the reporting period, a complaint concerning an objection to the election of the ORF Director General was rejected as having been filed too late.

Finally, two procedures were carried out in 2016 on the basis of complaints made by a private television broadcaster concerning a violation of the ban on broadcasting premium sporting events on the special-interest sports channel ORF SPORT +. The two complaints were dismissed as inadmissible or rejected.

Supervision of business activities

A key part of the supervision of ORF business activities is the auditing of the consolidated financial statements and the individual financial statements. In the 2016 reporting year this affected the annual accounts as of 31 December 2015. In this case, the KommAustria audit commission issued, based on the service agreement, audit reports with unqualified opinions.

In addition, in the 2016 reporting year the business audits for the 2014 business year were materially concluded with the audit report submitted by the audit committee.

A further area of economic oversight during the period under review concerned monitoring the restructuring of three ORF subsidiaries in light of the separation provisions provided for in the ORF-G.

Finally, two complaints were filed against the ORF for violating normal market behaviour by acquiring broadcasting rights at inflated prices; these are still pending.

Moreover, the ORF's request to review the decision of the Foundation Council regarding the revision of programme fees as of 2017 was still pending in 2016.

4.2.5 Specific supervision of private providers

One main area of KommAustria's responsibilities in the way of legal supervision involves monitoring private broadcasters and media service providers as well as multiplex operators with regard to ownership shares.

The aim in this case is to ensure that providers continue to fulfil the legal prerequisites for broadcasting or for providing a media service even after a licence is issued or a service is notified. These prerequisites include professional, financial and organisational qualifications, absence of grounds for disqualification, and safeguarding of a diversity of opinions (avoidance of excessively high media concentration). Violating or failing to meet these (licensing) prerequisites constitutes grounds for revoking the broadcasting licence or prohibiting broadcasts.

In order to enable the regulatory authority to monitor compliance by broadcasters with these legal prerequisites, the PrR-G and the AMD-G require that any and all (direct or indirect) changes in ownership or membership shares be reported to the regulatory authority. For channels or stations subject to notification requirements, it is has been sufficient since 1 August 2015 to report changes in ownership that amount to less than 50% of shares as part of meeting the requirement to update. Moreover, in those cases where new partners acquire more than 50% of the shares in a radio broadcaster, prior to the transfer of shares an official assessment must be obtained from KommAustria in order to determine whether the relevant legal prerequisites for radio broadcasting will continue to be met under the new conditions.

Another area of activity under the legal supervision of KommAustria is the option for radio broadcasters to request an official assessment decision from KommAustria as to whether a planned programming change actually represents a fundamental change of the programme format. The ruling as to whether a change in programme format is fundamental is to be made in light of the original licence decision. No official approval is necessary for implementing the programming change in cases where KommAustria's assessment decision does not conclude that there is a fundamental change of the programme format. However, if KommAustria determines that a planned change does constitute a fundamental change in programming, the broadcaster is required to obtain official approval. In the 2016 reporting period, two assessment procedures were conducted and completed with legal effect, with the proposed programme changes being classified as fundamental. Individual procedures for the approval of the fundamental programme changes were subsequently carried out. While one of the procedures was completed with legal effect, it has not yet been possible to conclude the second procedure due to a programme complaint lodged by a competitor.

Under the AMD-G, holders of broadcasting licences for satellite and digital terrestrial television channels also have the option of applying for approval of major changes to their satellite or digital television programmes. As these licences are not issued by way of a competitive selection procedure, there are fewer restrictions with regard to introducing programme changes.

4.3 Public communications networks and services

The planned operation of a public communications network or provision of a public communications service for the transmission of broadcasts (radio and television programmes) and additional broadcasting services and changes to or discontinuation of these must be notified to KommAustria. Regardless of their domicile, all operators of such a communications network and all providers of such services in Austria are subject to this notification requirement. After receiving a complete notification report, KommAustria issues a confirmation (general authorisation) pursuant to Art. 15 Par. 3 in conjunction with Art. 120 TKG 2003.

In practice, this notification requirement is especially important in the case of broadcasting activities by cable network operators. On the basis of the legal opinion of the European Court of Justice and its verdict of 30 April 2014 in case no. C-475/12, UPC DTH, certain services are considered broadcasting services and thus subject to notification requirements.

Such services specifically consist of providing access rights to a programming package that consists of radio and television programmes and that is distributed via satellite or cable in return for a fee.

In the period under review, four new broadcasting networks and one broadcasting service were registered; six broadcasting networks were discontinued.

Additional information can be found on the RTR website at www.rtr.at/de/m/RFAGGVerzeichnis (in German).

Pursuant to the TKG 2003, public communications networks and services used for radio and TV broadcasting are also subject to competition regulation by KommAustria. The adherence of Österreichische Rundfunksender GmbH & Co KG and ORS comm GmbH and Co KG to imposed obligations with regard to two wholesale markets (FM radio on the one hand and access to digital terrestrial TV transmission systems on the other) was also reviewed in the reporting year 2016, specifically with regard to the cost accounting system and the question of whether the rates offered were aligned with the costs of efficient service provision. In addition, in its decision of 2 March 2016, KommAustria introduced a procedure for the market analysis and definition of markets in the area of electronic communications services and communications networks for transmitting broadcasts pursuant to the Federal Constitutional Act Ensuring the Independence of Broadcasting (BVG-Fundfunk) or additional broadcasting services. The procedure will likely be completed in 2017.

4.4 Act on Transparency in Media Cooperation and Funding

The main objective of the Act on Transparency in Media Cooperation and Funding (MedKF-TG) is to ensure comprehensive transparency when advertising contracts and funding are awarded by public authorities (cf. government bill in annex 1276 to the shorthand verbatim records of the National Council, 24th legislative period). The MedKF-TG consequently requires all legal entities that are subject to business auditing by the Court of Audit, as specified in the applicable provisions of the federal constitution and ordinary law, to provide KommAustria with quarterly reports of expenses incurred for advertising placed in periodical media and grants awarded to media owners. KommAustria serves as the independent recipient of the reports and has the mandate to verify compliance with reporting requirements.

To achieve the objective of comprehensive transparency of advertising contracts and funding, the act sets out two disclosure measures.

Firstly, KommAustria publishes quarterly lists indicating the legal entities which have fulfilled their reporting obligations by the regular reporting deadline and which have not. These lists – referred to as *Ampellisten* or 'watch lists' – can be viewed (in German) at www.rtr.at/de/m/veroeffentl_medkftg_ampel.

The second measure is publication, here again on a quarterly basis, of the data reported by the legal entities. This involves data on those media in which advertising contracts were actually awarded, as well as details of the particular (legal) persons who received media funding. This information can be viewed (in German) at www.rtr.at/de/m/veroeffentl_medkftg_daten.

A total of 18 quarterly reports have taken place since the MedKF-TG entered into force on 1 July 2012. While a clear trend towards increasing reporting discipline was recorded during the initial quarters, the reporting rate became stable at a high level in 2016. Over the year on average, over 99% of the legal entities subject to reporting requirements complied with these. Some four penal procedures were initiated on average each quarter as a result of failure to report. In addition to this, numerous administrative penal procedures were initiated due to reports having obvious inaccuracies or being incomplete. Full data for Q4 2016 were not yet available when this report was prepared.

An analysis of recent quarters also revealed that about 80% of the legal entities examined regularly submitted zero reports. The majority of these cases involve associations founded by municipalities (sewage treatment associations, water supply associations, district social and healthcare bodies, citizenship associations, civil registrar's associations, and planning associations). Municipal associations account for just under 2,000 of the roughly 5,400 legal entities currently required to file.

4.5 Administration and coordination of broadcasting frequencies

In 2016, the focus lay once again on international frequency negotiations in the context of the revisions of the UHF range, in order to be able to clear the 700 MHz band from broadcasting services in the near future. An agreement was reached with the neighbouring countries of Switzerland, Liechtenstein and Germany in relation to the future DVB-T2 frequency plan, which will have to do without the 700 MHz frequency band. With regard to the Austria's Czech neighbours to the north, there already exists a relatively stable proposal on the future use of the remaining TV channels, however, the timetable for implementing this proposal has yet to be defined. Planning and negotiations were pursued with the neighbouring countries to the east and to the south of Austria as well. The aim is for a new frequency plan, accepted by all neighbours concerned, to be available by the end of 2017, one that will subsequently be possible to implement quickly.

4.5.1 Participation in licensing and assignment procedures

In 2016 several coverage areas in the radio sector were subjected to expert assessment within the context of being put out to tender again or reassigned following the expiry of the ten-year approval period.

In 2016, for the first time, a summary of a licence as per Articles 28e et seq. Private Radio Act (PrR-G) for Vienna, Lower Austria and Burgenland was subject to comprehensive expert evaluations of frequency use within the context of an application by Radio Eins Privatradio GmbH (88.6 – Der Musiksender).

In addition, the telecommunications applications of the ORF and of private radio broadcasters, as well as numerous technical modifications to existing radio stations, were subjected to expert evaluation and the corresponding international coordination carried out.

In the field of digital terrestrial television, the five nationwide digital terrestrial coverage areas were further optimised again in 2016, as in previous years. For the migration of Multiplex A to DVB-T2 in the region Lower Austria, Vienna and northern Burgenland in particular, various channel modifications have been worked out together with the network operator and have already been implemented. As a result of the future discontinuation of 700 MHz TV channels due to the second digital dividend, the single frequency areas within the existing broadcasting network will have to be successively expanded. The Austria-wide migration of Multiplex A to DVB-T2, which began in the fourth quarter of 2016, is set to be completed in 2017 with two further conversion dates (Q1 and Q4).

The broadcasting networks of multiplexes B, D, E and F were likewise further expanded and harmonised, so that all these multiplex broadcasting networks now have the same structure. A total of 43 broadcasting systems per multiplex cover approximately 92% of the Austrian population.

As of the conversion date in October 2016, the last remaining DVB-T transmitters in Multiplex B were migrated to the DVB-T2 standard. Thus the entire national Multiplex B now uses the DVB-T2 standard and is capable of transmitting higher data rates than before.

Changes were also made with respect to local Multiplex C broadcasting networks. The network within the Vienna agglomeration, for example, was expanded to include additional broadcasting locations. The operation of the transmitter systems for the licence holder Stadtwerke Judenburg was completely discontinued in 2016.

4.5.2 Frequency coordination procedures and frequency usage

Table 5 lists the number of coordination procedures that were initiated internationally in which Austria was involved in 2016.

TABLE 5: Number of frequency coordination procedures in 2016

Country	Analogue radio	Digital radio	Digital Television
Austria	37	60	22
Bosnia and Herzegovina	-	-	-
Croatia	7	-	-
Czech Republic	27	27	105
Germany	4	37	17
Hungary	7	171	68
Poland	4	1	3
Slovak Republic	9	43	13
Slovenia	20	-	1
Switzerland	67	55	6
TOTAL	**182**	**394**	**235**

Source: RTR

ADSL working group meetings

The reporting year 2016 once again saw intensive negotiations within the German-speaking working group (Germany, Switzerland, Liechtenstein and Austria). During the three meetings in Graz, Munich and Bern with the representatives of the frequency administrations as well as with the participating frequency planners of the network operators, the restructuring for the freeing of the 700 MHz band was finalised and the next steps were taken towards the creation of a T-DAB+ plan. The differently scheduled migration dates in Germany, Switzerland and Austria also required additional coordination, yet it was still possible within this working group to set a rough schedule for the necessary changes in the 700 MHz band.

AUT-CZE-SVK-HNG working group meetings

This working group comprising the Czech Republic, Slovakia, Hungary and Austria also dealt with the definition of a common frequency plan along the geographical boundaries of the countries involved, required as a result of freeing the 700 MHz band. Due to the domino effect of frequency planning and the limited topographic isolation options in the area concerned, planning and negotiations were very difficult. In the Vienna area in particular, the Czech representatives were not yet able to make a commitment on whether the planned replacement channels for Vienna could be freed in time by mid-2020. A further topic addressed by the group related to fundamental questions in the field of digital terrestrial radio (T-DAB+). It was shown that different national requirements can severely limit the possible implementations of T-DAB+ networks. T-DAB+ plans are set to become more important within this working group in the coming year as a result of the tender taking place in Austria in 2017.

SEDDIF working group meetings

The SEDDIF (South East Digital Dividend Implementation Forum) working group is comprised mainly of South-Eastern European telecommunications administrative authorities, including Austria and Turkey, with Hungary presiding. Some participating countries in this group currently have observer status.

The most important coordination partners for Austria in the group are Hungary, Slovenia, Croatia, and Bosnia and Herzegovina.

The aim of this working group is to create a compatible frequency plan for digital television in the participating countries so that the 700 MHz band can be used for mobile broadband in future. A viable result should be available at the end of 2017. In the year under review this group met three times.

4.5.3 Measurement activities

In 2016, several test transmissions with FM stations in Austria were conducted and then evaluated using measurement equipment. In the federal states of Lower Austria and Upper Austria in particular, a high number of test transmissions were conducted during the reporting year in response to the challenging frequency situation in the FM band.

With regard to test transmissions in the Salzburg and Tyrol area, joint measurements were carried out with the German Federal Network Agency in order to assess possible disruptions to existing German FM transmitters.

In the 2016 reporting year a total of 32 measurements were carried out using the RTR's measuring bus.

4.5.4 Frequency register

At present, the frequency register and transmitter map include approximately 1,300 radio transmitters in the FM band, with power output ranging from less than 1 W to 100 kW.

Approximately 850 transmitters can be attributed to the ORF, while the roughly 450 other transmitters are used by private broadcasters.

The frequency register also shows a total of 32 high-power FM frequency transmitters for Austria. The ORF uses 26 of those transmitters, and the remaining six are used by private radio broadcasters.

With regard to the 470 to 790 MHz television frequency band, the currently approved DVB-T transmitters and the new additional DVB-T2 transmitters in the frequency register were distributed among the individual multiplex platforms as shown below at the end of 2016.

TABLE 6: Number of approved DVB-T/T2 transmitters (as of 31 December 2016)

DVB-T/T2 Multiplex A (ORS multiplex)	322 transmitters
DVB-T2 Multiplex B (ORS multiplex)	43 transmitters
DVB-T/T2 Multiplex C (regional/local multiplex platforms)	33 transmitters
DVB-T2 Multiplex D (ORScomm multiplex)	43 transmitters
DVB-T2 Multiplex E (ORScomm multiplex)	43 transmitters
DVB-T2 Multiplex F (ORScomm multiplex)	43 transmitters

Source: RTR

Data on approved broadcasting transmitters are available to the public on the RTR website (www.rtr.at) in the form of a transmitter map as well as in tables.

4.5.5 Participation in international working groups

Participation in ITU study group 6

Within the scope of study group 6 of the ITU (International Telecommunication Union), numerous standards in the broadcasting sector have been revised with a focus on terrestrial television. In addition, the first studies on UHDT (Ultra High Definition Television) field tests of terrestrial digital transmission networks were presented. There were two working group meetings in the reporting year.

Participation in the RSPG sub-group: Good Offices

To be able to implement European objectives in the area of radio frequency management efficiently, a sub-group entitled 'Good Offices' was established within the RSPG working group. In the year 2016, the working group focused on the actual usability of the results of the RRC-06 (Regional Radiocommunication Conference) in countries that border the Adriatic. Following intensive discussions with the administrations concerned, the first positive result was achieved at the beginning of November 2016. One further topic of this group is the support of member states in implementing the second digital dividend. In this context, a questionnaire was created and distributed as the first step. This will be evaluated in early 2017.

4.6 International activities

4.6.1 KommAustria and ERGA

The European Regulators Group for Audiovisual Media Services (ERGA) was created as an association of leading or high-level representatives from the independent national European regulatory authorities in the field of audiovisual media services to advise the European Commission regarding the implementation of the Audiovisual Media Services (AVMS) Directive.

ERGA objectives include:

- Ensuring the consistent implementation of the AVMS Directive
- Facilitating cooperation between regulators within the EU
- Enabling the mutual exchange of information based on good practice

In 2016 activities focused on the cooperation among regulatory authorities and the analysis of the review of the Audiovisual Media Services (AVMS) Directive. The ERGA produced several reports[2] on the basis of activities in several working groups.

In the working group on creating a Digital European Toolkit (DET) for efficient and flexible regulation, various possibilities for increased cooperation and exchange of knowledge between the European regulatory authorities were discussed and a common electronic platform for the provision of documents from the individual authorities was created.

In the working group 'Exploring key themes which are of high relevance and beneficial to future-proof European Audiovisual Regulation', the topics 'protection of minors' and 'representation of people with disabilities' were discussed in greater detail.

The ERGA report on the Audiovisual Media Services Review Subgroup subjected the planned review to an analysis from the point of view of the regulatory authorities and submitted to the European Commission proposed amendments from the perspective of enforcement authorities.

4.6.2 KommAustria and EPRA

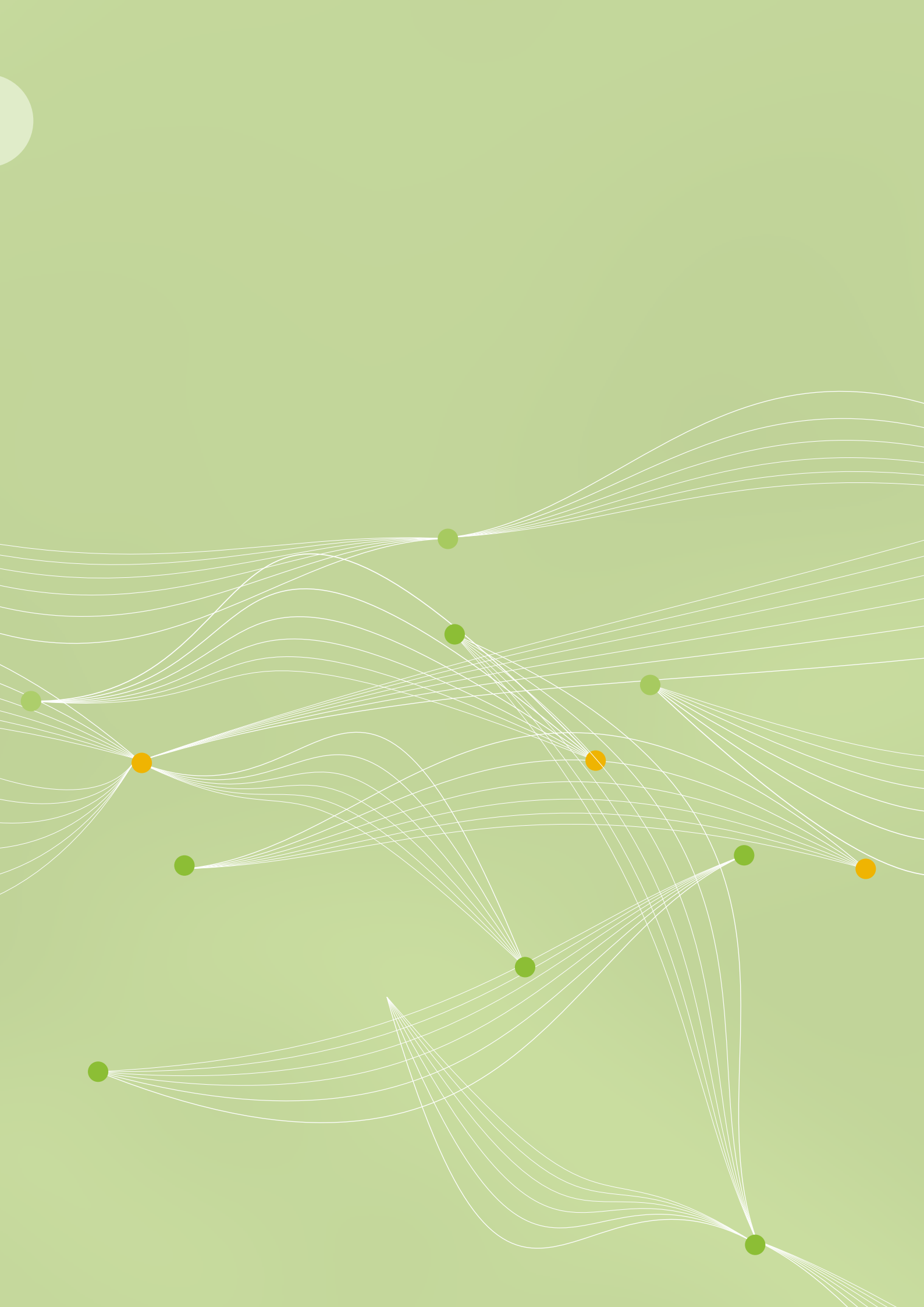
Within the framework of the European Platform of Regulatory Authorities, which currently comprises 52 European regulatory authorities, the two questions "Is there still a future for free TV?" and "Compliance and enforcement – how do they function in regulatory practice and which strategies do the regulatory authorities have at their disposal?" were examined in greater detail in 2016 by means of comparisons across the whole of Europe and best-practice models. In addition, topics discussed in various working groups included: questions relating to platform regulation, issues such as commercial communication and the role of media suppliers and regulators in times of the media crisis, a case study on the protection of minors in reality shows, as well as questions relating to the effects of big data on media regulation.

4.6.3 Cooperation of consumer protection authorities

Based on Regulation (EC) No. 2006/2004 on cooperation in the area of official assistance between national authorities responsible for the enforcement of consumer protection laws, KommAustria exercises its role as the competent authority in the area of commercial audiovisual communications.

As part of this activity, in 2016 KommAustria was involved in the review process for Regulation (EC) No 2006/2004 of the European Parliament and of the Council of 27 October 2004 on cooperation between national authorities responsible for the enforcement of consumer protection laws (the Regulation on consumer protection cooperation).

2 The individual reports are available on the ERGA website: http://erga-online.eu/.



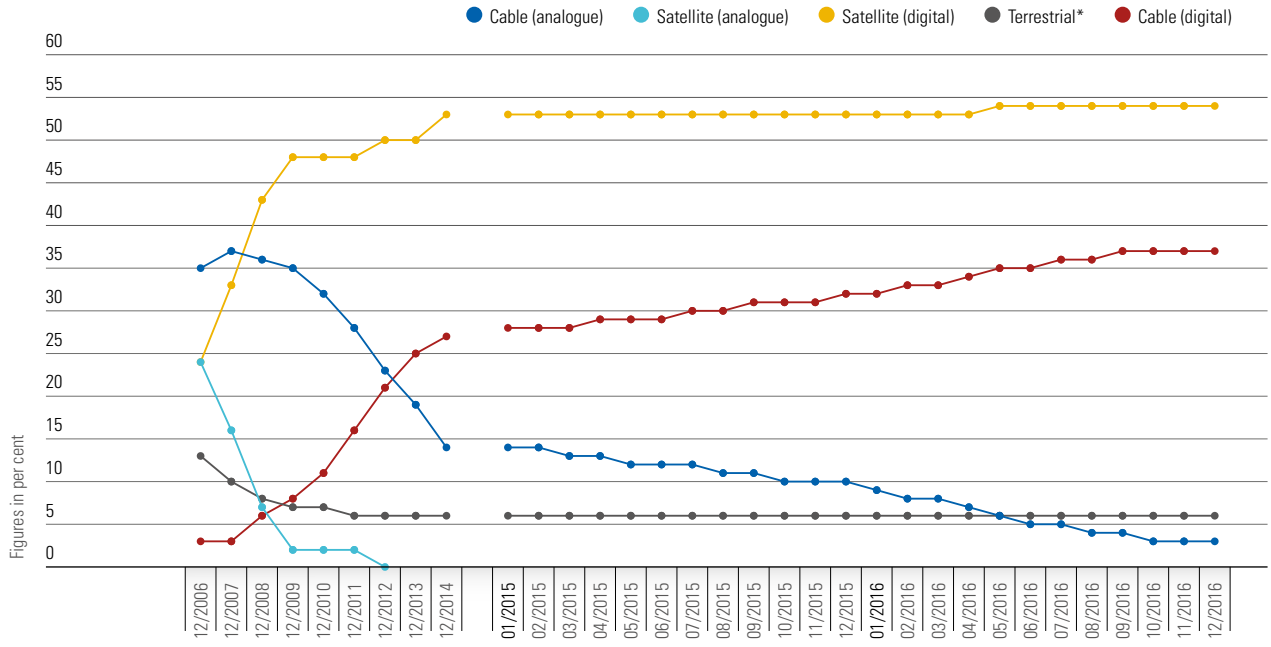
5 Progress report on digitisation of broadcasting

5 Progress report on digitisation of broadcasting

By the end of 2016, the digitisation of television reception in Austrian television households had been largely completed. For December 2016, the data collected by GfK Austria for the TELETEST Working Group (AGTT) show a level of digitisation of 97% in the 3.694 million television households.[3] This equates to a growth of six percentage points compared to the figure at the end of 2015.

As the terrestrial and satellite reception platforms have been fully digitised for several years (since June 2011 and April 2012 respectively), progress in the digitisation of television households is solely the result of previously analogue cable households switching over. As part of a joint initiative with the specialist association for telecommunications and broadcast enterprises within the Austrian Federal Economic Chamber, the broadcasting of analogue TV signals was discontinued in the course of 2016 by the larger and mid-sized cable companies, as well as most smaller providers. For the Vienna area, only the cable network operator UPC Austria postponed its analogue shutdown to 2017. In the medium term, only some smaller cable network operators will not be participating in the analogue shutdown: some of them supply hotels in holiday regions, for example, or retirement homes or hospitals in other areas, for which the switchover to digital reception would require a major capital investment, while the cable network operators affected lack the resources to offer a solution themselves. Accordingly, a 'rump' of analogue cable receivers will still persist into the medium term. On the other hand, analogue cable households now constitute only about 3% of television households in total (or 7% of all cable households).

FIGURE 2: Distribution of reception modes among Austrian television households



* Terrestrial includes around 25,000 cable households with basic coverage (reception of around eight TV channels).
Source: AGTT/GfK Austria

3 Unless otherwise specified, all data are derived from the TELETEST Working Group (AGTT)/GfK Austria (2016).

The level of digitisation among the viewing population (7.302 million aged twelve and over) is now already at 98% (7.135 million), with 97% of households having digital reception. This can be attributed to the large share of satellite households in Austria with an average of 2.1 household members aged twelve and over, while the comparable average figure for cable households is only 1.8 persons.

In 2016 satellite reception usage increased for the first time in 18 months. Compared to the year-end figure for 2015, the proportion of satellite households rose by one percentage point to 54%.

The proportion of cable television households fell by one percentage point to 40%. In absolute terms, the loss equates to around 44,000 cable television households which switched to satellite reception at a fairly even rate in the first three quarters of 2016. The number of cable households has now stabilised at around 1.484 million.

The switchover from the old DVB-T transmission standard to the significantly more powerful DVB-T2 standard with basic encryption began back in October 2014 in Carinthia, with the other federal states to follow. Terrestrial television nonetheless continues to be used for reception via the sole or primary TV set by a stable proportion of 5% to 6% of television households. It should be noted, however, that the switchover in Carinthia, Vorarlberg, Tyrol, Upper Austria, Salzburg, Styria and southern Burgenland was initially limited to Multiplex B and the channels ORF III, ORF SPORT +, PULS 4, 3sat and ServusTV, while the switchover of Multiplex A with the television channels ORF eins, ORF 2 and ATV took place in October 2016 only in Vienna, Lower Austria and northern Burgenland. In the other regions of Austria, the switchover of Multiplex A to DVB-T2 will be completed in 2017 (spring: Styria, Upper Austria, Salzburg, southern Burgenland; autumn: Carinthia, Tyrol and Vorarlberg).

In absolute terms, the number of terrestrial households grew slightly to 214,000 households, a rise of 3,000 from the end of 2015. This figure includes some 25,000 TV households with 'basic cable coverage', i.e. they are technically cable television households but receive only a basic package of around eight cable TV channels and are therefore traditionally included in terrestrial figures.

12% of the "12+ television public" have access to digital terrestrial television

In addition to the 6% of TV households in which digital terrestrial television constitutes the only form of reception, DVB-T/DVB-T2 is also used as an additional reception platform for secondary TV sets in satellite or cable television households. While 357,000 viewers[4] aged twelve and over live in terrestrial-only television households, another 475,000 persons must be added to this figure from satellite households with additional terrestrial usage, and a further 35,000 persons from cable households with supplementary terrestrial usage. In all, some 867,000 persons – or 12% of the viewing population aged twelve and over – live in households with terrestrial TV reception.

Around 70% of new TV sets sold in 2016 can receive broadcasts over DVB-T2

In the first three quarters of 2016, Austrian electrical goods retailers sold 508,053 TV sets, with the volume of flat-screen TVs sold rising again by roughly 9% when compared year-on-year.[5] No less than 70% of these sets feature a built-in receiver for DVB-T2 signals. In 2015 only 45% of TV sets sold featured DVB-T2 capability.

4 Already excluding the almost 50,000 persons (aged twelve and over) in cable households with basic coverage.

5 GfK panel market, sales figures from January to September 2016. All sales figures for TV sets relate to the first three quarters of 2016.

Two-thirds of TV sets are 'smart' – slight decline in HbbTV-capable sets

In the first three quarters of 2016, 63% (2015: 62%) of the flat-screen televisions sold were able to connect to the internet ('smart TVs'), a feature that permits the use of online video services such as Netflix, Amazon Video, maxdome or YouTube. Generally, it is now only the smaller television sets with screen diagonals under 37 inches (and often used as secondary sets) that do not offer this functionality. These sets made up around 35% of the TV sets sold between January and September 2016. Yet even these sets can often be simply and cheaply retrofitted to access internet-based video, for example with Google's Chromecast or Amazon's Fire TV stick (each costing less than EUR 40).

There has been a decline in internet-capable TV sets that also support the HbbTV standard. While the figure for 2016 was still 80%, the share had been 89% in 2015 and 91% in 2014. With HbbTV, television broadcasters can include a web link in their broadcasting signal and thus guide their viewers with an HbbTV-compatible TV set directly from the television programme to the broadcasters' online media libraries. Unfortunately, some cable providers in Germany and Austria (and especially market leader UPC in the latter case) continue to block carriage of the television broadcasters' HbbTV signals. The fact that smart TVs also often allow access to the broadcasters' media libraries via an app could also be a factor contributing to the decline in TV sets supporting this functionality. For the end user, however, the loss of HbbTV functionality also translates to a loss in ease of use: with HbbTV, merely pressing the red function button on the TV remote control opens up the online video portal for the programme currently being viewed.

Trend towards large-screen TV sets continues

Large TV screens with diagonals exceeding 42 inches (107 cm) clearly continue to gain ground. Following a 2015 leap in market share by seven percentage points to 40%, large-format displays achieved a share of 45% in 2016 and now make up the largest segment of the market by a wide margin.

While the smallest TV sets featuring screens with diagonals of less than 37 inches (<94 cm) topped sales charts until 2014, this segment had already dropped to second place and a market share of 32% in 2015. In 2016, however, this segment managed a slight upturn in sales to achieve around 35% market share.

The medium-sized segment, for screens with diagonals of 37 to 42 inches, fell sharply to 20% (2015: 27.5%) and now represents the least-popular size for TV screens.

Over one in four TV sets sold in 2016 now offers 4K resolution

While traditional television broadcasters still effectively offer no content in this format and the choice of 4K Blu-ray players remains modest despite the successful launch of the 4K Ultra-HD disc in 2016, the appeal of the new 4K TV sets shows no signs of abating, either in terms of consumer interest or market penetration. No less than a quarter (27%) of TV sets sold in 2016 support 4K screen resolution (3840 x 2160 pixels – compare Full HD = 1920 x 1080 pixels). While sales of these sets had strengthened considerably by 2015, their market share was still only 12% of all TV sets sold.

Between 2013 and 2016, the average cost of a 4K TV set fell from a starting price of EUR 5,553 to the present figure of EUR 1,107.

Indeed, given the fact that around 80% of all TV screens sold now offer at least Full HD and often support even 4K resolution (and all others are at least HD-ready, i.e. support the 'bare minimum' 720p resolution), television broadcasters' current practice of offering HDTV only in the lower-end 720p format or requiring consumers to pay a premium to access their HD broadcasting (in 1080i) is surprising to say the least. Alternative providers such as Amazon Video and Netflix offer their content almost without exception in Full HD while also continuously expanding their 4K programming.

Developments in digital radio

Following an application by the broadcasting network operator Österreichische Rundfunksender GmbH & Co KG (ORS), the pilot project for digital radio based on the DAB+ transmission standard that started on 21 May 2015 in Vienna and was scheduled to run until 1 April 2016 received from the Austrian Communications Authority (KommAustria) a license extension for the period of 2 April 2016 to 2 April 2017. A total of 15 radio stations are broadcast. The pilot is being financed by the Digitisation Fund set up by the Austrian Regulatory Authority for Broadcasting and Telecommunications (RTR). Neither the Austrian Broadcasting Corporation (ORF) nor the nationwide private broadcaster KRONEHIT Radio BetriebsgmbH are taking part in the pilot, nor are most private (FM) radio market leaders in the federal states.

Nonetheless, some radio stations have been digitally 'on air' since October 2016, also as part of regular programming, specifically Ö1, Ö3, FM4, oe24, Radio Maria and KRONEHIT.

5.1 2015 Digitisation Plan

KommAustria has the legal mandate to issue every 24 months an ordinance amending the Digitisation Plan, presenting the objectives and the measures for the further development of digital radio in Austria. On 1 May 2015, the 2015 Digitisation Plan entered into force, with its provisions determining the developments in the digital broadcasting market in 2016.

5.1.1 Rollout of digital terrestrial television

For the further development of digital terrestrial television, the 2015 Digitisation Plan envisages the option of further expansion of the existing platforms. As regards frequencies, initial steps have been taken to re-plan or repurpose the 700 MHz band for mobile telecommunications. As part of a procedure harmonised at EU level, this measure, known as the 'Second Digital Dividend', must be implemented by no later than the end of June 2020. For RTR and KommAustria, it will constitute a key activity over the next few years in terms of implementation, planning and coordination at both national and international levels. KommAustria has already achieved most of these goals with the granting of a license to ORS in 2015 to operate the nationwide multiplex platform with dual Multiplex A and B coverage for the period of 2 August 2016 to 2 August 2026, and the migration, as a condition of the license, of the broadcast technology from DVB-T to the significantly more economical (in terms of frequencies) and powerful DVB-T2 standard. The migration of Multiplex B, which was completed during 2016 and is presented below in this chapter of the Communication Report, and the ongoing migration of Multiplex A have once again expanded the number of terrestrial television channels while enabling the rollout of HDTV to terrestrial television. In addition, a series of new channel licenses within regional Multiplex C coverage, in particular within the Vienna area, have led to a further expansion of digital terrestrial television.

5.1.2 Launch of digital radio

With the 2015 Digitisation Plan, KommAustria has continued along its chosen path of evaluating and potentially launching digital terrestrial radio based on the DAB+ standard. This strategy envisaged the completion of an evaluation and estimate of demand for digital terrestrial radio capacities, while also taking into account the Vienna DAB+ pilot project as well as a study report to be commissioned by the RTR's Media Division on the introduction of digital radio in Austria. In the event of a positive evaluation, the Digitisation Plan envisages organising an invitation to tender for DAB+ transmission capacities in the first half of 2017. As a consequence, between mid-February and mid-March 2016 KommAustria carried out a survey of existing and potential radio broadcasters to gauge

interest, so as to evaluate the market demand for such an invitation to tender and the need for specific coverage areas. The survey findings revealed that station capacity utilisation for a nationwide DAB+ multiplex was likely to be sufficient, and that there was interest in several local and regional multiplexes and corresponding licensing applications could be expected. Accordingly, KommAustria announced a corresponding invitation to tender in 2017.

In September 2016, the RTR's Media Division submitted a report on the general conditions and prerequisites for success for a "digital radio rollout in Austria", which the Division had commissioned from Bertold Heil at Convergent Media Consulting, Vienna. The report concludes that without the participation of the majority of market leaders in radio broadcasting, without unambiguous support through government policy, with only the modest resources available from the Digitisation Fund, and in light of developments in web-based radio proceeding apace and in parallel, the introduction of DAB+ in Austria is likely to represent a risk rather than an opportunity for interested radio broadcasters.

5.1.3 Completion of cable network digitisation

For many cable network operators, the recommendation to shut down analogue TV transmissions in Austrian cable networks, as expressed by KommAustria on behalf of Austrian cable network operators in the 2015 Digitisation Plan, was the sign of support that encouraged operators to take this step in 2016, and it therefore had a positive effect on the successful course of events.

5.2 Developments of individual TV reception platforms (broadcasting)

5.2.1 Terrestrial

At year-end 2016, 214,000 Austrian television households were using digital terrestrial television as their primary form of reception. Compared with 2015, this is a slight increase of 3,000 households, although it does not affect percentage figures. At the same time, the number of viewers aged twelve and over living in these households decreased slightly from 398,000 to 394,000, although this group continues to make up around 6% of the viewing population.

As the operator of the national terrestrial multiplexes A, B, D, E and F, ORS proceeded in 2016 with the migration of Multiplex B from DVB-T to the DVB-T2 transmission standard in the federal states of Salzburg, Upper Austria, Lower Austria, in northern Burgenland and in Vienna, thus completing this migration for all of Austria. The corresponding migration of Multiplex A started in October 2016 in parts of Burgenland, in Lower Austria and in Vienna, and this migration will be continued and completed in the course of 2017 within Austria's other regions.

Following migration, the channels previously broadcast in standard definition (SD), i.e. ORF III, ORF SPORT +, 3sat and ServusTV, are now available exclusively in HDTV quality via Multiplex B. As a result of this Multiplex B migration work, ATV will leave Multiplex A and will also broadcast exclusively in HD quality via Multiplex B. PULS 4 remains in SD on Multiplex B, while ATV2 in SD is a new addition. Receiving Multiplex B channels still comes at no extra monthly cost, but basic encryption has been activated that only permits reception after registering with ORS and the subsequent activation of the receiver.

With the conversion of Multiplex A to DVB-T2, the ORF special-interest channels ORF III and ORF SPORT + migrate from Multiplex B to Multiplex A, which thereby becomes a public broadcaster-only multiplex. The national radio stations Ö1, Ö3 and FM4 will also be carried by this multiplex.

The regional multiplexes managed collectively as 'Multiplex C' have also been upgraded to DVB-T2 at the locations of Bregenz, Innsbruck and Vienna: this upgrade enables the addition of further channels. In Vienna, eleven TV channels are now broadcast via Multiplex C, of which six are pay TV channels (simpliTV subscription) while five are free-to-view (oe24.tv, OKTO, W24, SchauTV and Hope Channel). In Innsbruck, nine TV channels are carried by Multiplex C, of which two are free to view (Tirol TV and T eins); in Bregenz, there are eight channels, of which only Ländle TV is free to view, however.

Via the nationwide multiplexes D, E and F launched back in early 2013 under the 'simpliTV' brand, a further 30 pay TV channels are now being broadcast, of which six are offered in HD resolution.

Technical range of DVB-T/DVB-T2 multiplexes in 2016

The technical range of coverage among the population for the national Multiplex A remains unchanged at 98%. With the transition to DVB-T2, a number of smaller broadcasting locations will be retired and their loss compensated for by transmission performance improvements at larger broadcasting locations.

Following the commissioning of three new broadcasting systems, the technical range of Multiplex B rose in 2015 from 91% to 92% of the viewing population and remained unchanged in 2016. Also reaching 92% coverage in 2016 were multiplexes D, E and F, however, for which the technical coverage of the population had only been improved from 88% to 91% the previous year. Each of the four multiplexes B, D, E and F are now broadcast from the same 43 broadcasting locations throughout Austria.

The percentage of the population living in the reception area for Multiplex C, which carries channels varying from region to region, remained unchanged at 64% in 2016. While Stadtwerke Judenburg (the city utilities provider in that Styrian town) with a total of four locations discontinued broadcasting operations in 2016, the broadcast range of Vienna's Multiplex C was expanded by the utilisation of additional broadcasting locations. Multiplex C programming is transmitted by a total of 33 broadcasting systems in Austria.

5.2.2 Satellite

In 2016, satellite further entrenched its position as the most important television reception platform. It is now represented in 54% of television households (2015: 53%). The number of satellite households rose accordingly by 78,000 to 1.995 million. This growth in households is primarily the result of the general rise in television households in Austria, however: while AGTT/GfK Austria recorded a total of 3.631 million TV households in 2015, this figure had already risen to 3.694 million by 2016 – an increase of 63,000 households. A further 19,000 households left the cable reception platform, with around 80% switching to satellite and the rest to terrestrial. In satellite households, the viewing population aged twelve and over also increased compared with the December 2015 figure, rising by around 122,000 people to 4.238 million. The percentage of the viewing population now living in satellite households consequently increased by one percentage point in 2016 to the current figure of 58% (2015: 57%).

5.2.3 Cable and IPTV

The 2016 year-end figure for cable television households in Austria was 1.484 million (2015: 1.503 million). This corresponds to 40% of all television households (2015: 41%). As a result of the analogue shutdown completed by most cable networks during 2016, around 93% of cable households (1.385 million) now access the cable network operators' digital TV programming (2015: 77% or 1.155 million). Slightly less than half of the roughly 100,000 analogue cable households still in existence at the end of the 2016 are customers of UPC in Vienna, according to figures from UPC itself. It can therefore be assumed that

the proportion of digitised cable households will be approximately 96% after UPC Vienna shuts down analogue service by the end of 2017.

The percentage of television viewers aged twelve and above who live in cable households remained unchanged from 2015 at 37%. In absolute terms, viewer numbers fell to 2.671 million, a decline of 20,000 compared to December 2015. Of these, 2.503 million people (94%) now reside in digitised cable households (2015: 80%).

IPTV households (a group almost entirely represented by customers of A1 TV from Telekom Austria) grew by 16,000 households compared with the previous year. This group, included in the 'digital cable' reception platform, accounted for roughly 279,000 households[6] in 2016 (2015: 263,000), representing 20% (2015: 22.7%) of digital cable households.

5.3 Digitisation of radio broadcasting

As was the case in 2015, there were no DAB+ developments of note in 2016, with the exception of the extension of the Vienna pilot project mentioned at the beginning of this chapter. Preparations for the rollout of DAB+ in Austria are presented above under 5.1.2.

Further details of the October 2016 launch of the radio stations Ö1, Ö3, FM4, KRONEHIT, oe24 and Radio Maria using the DVB-T2 broadcasting standard are also given above in the introduction to this chapter, in the subsection entitled "Developments in digital radio".

6 Third-quarter figure from Telekom Austria Group: "Results for the first nine months and third quarter 2016", October 2016.

6 Management of funds and grants

6 Management of funds and grants

6.1 Austrian Digitisation Fund

In 2016, the Austrian Digitisation Fund received an endowment of EUR 0.5 million. The purpose of the fund is to promote digital transmission technologies and digital applications based on European standards relating to broadcasting. Funding is provided from those broadcasting fees which, while collected jointly with ORF programme fees, are primarily allocated to the federal budget.

Just as in the previous year, one of the main issues dealt with by the Austrian Digitisation Fund in 2016 was the test operation of DAB+ in Vienna. The project involves conducting technical trials with established and future radio broadcasters, whereby existing and new radio stations broadcast digitally using the DAB+ standard. Another purpose is to test data services in order to provide a firm basis for the development of additional services within the digital programmes.

Another major project in 2016 was to promote the completion of cable network digitisation. On 1 August 2015 guidelines were issued on procedures for awarding grants from the Digitisation Fund for the purpose of financing the completion of cable network digitisation (*de minimis* aid). The applicability of these guidelines lapsed on 2 September 2016. On 16 September 2015 the specialist association for telecommunications and broadcast enterprises (within the Austrian Federal Economic Chamber), as the legal representative of the interests of all cable network operators established in Austria, submitted an application for funding of the communications costs for the completion of cable network digitisation. The content of the project for which funding was requested is an information campaign that formed part of the effort to complete cable network digitisation and of the accompanying shutdown of analogue television by September 2016.

Afterwards, UPC Austria Services GmbH applied on 12 July 2016 for funding for its own project to communicate plans for cable digitisation. The content of this project is an information campaign on the associated shutdown of analogue television in all federal states by 2017.

Finally, the Digitisation Fund was intensively concerned over the course of 2016 with the funding strategy for the years to follow. The anticipated focal points for funding from 2017 to 2020 were set out in a strategy paper.

6.2 Austrian Television Fund

The FERNSEHFONDS AUSTRIA (Austrian Television Fund), which has been involved for 13 years in contributing to strengthening the Austrian film industry, supports the production and exploitation of features, series and documentaries made for television with an annual fund of EUR 13.5 million.

New grant guidelines as of 1 December 2015

It has now been a year since the entry into force of the new guidelines on 1 December 2015, among the goals of which was to take action to protect producers in relation to secondary exploitation rights. The effects of these guidelines can be viewed positively, particularly against the background of the promising new broadcasting modes via pay TV and non-linear services.

It would also seem that the strategy of making the purchase of rights dependent on financial participation by the television broadcaster has proven effective, to the extent that there would seem to be no need for any further adjustments to this model.

Outlook

Considering the fact that the non-linear markets are set to continue to grow strongly into the future, the Austrian Television Fund is also looking into whether to fund projects which are solely distributed via exclusively via non-linear modes (via Netflix, Amazon and similar services).

The Austrian Television Fund has also set itself the goal of helping achieve an improvement in the employment situation of female filmmakers. Productions in which female filmmakers are involved in senior functions will be given favourable consideration in terms of their specially deserving status for funding.

6.2.1 Support for television films in 2016

Production grants

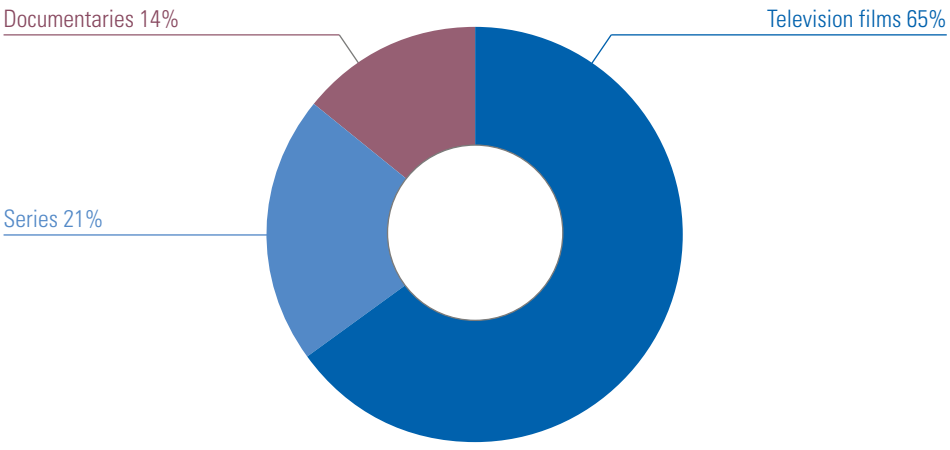
A total of 70 projects were submitted as of the three application dates set during the reporting year. After all applications were examined, 48 projects were granted funding, to a total of EUR 12,586,021.

The total production costs for the projects funded in 2016 amounted to approx. EUR 65.1 million. About EUR 36.9 million was expected to be spent in Austria for the production of these films. Domestic expenditures thus come to 2.9 times the sum of grants approved by the Austrian Television Fund.

Details of production grants

In total, 16 made-for-television films, one series and 31 documentaries were funded. Figure 3 below gives details on how the funding was proportionally distributed: Of the almost EUR 12.6 milion in grant support, 65% was spent on films for television, 21% on series and 14% on documentaries.

FIGURE 3: Austrian Television Fund – grants awarded in 2016



Source: RTR

Women's share in the funded projects

The participation rate for women in the funded projects has increased by five percentage points for the roles of both producer and director. The level of female participation in scriptwriting has remained unchanged.

It was notable that female directors were involved only in documentary productions in 2016, and not in feature films or series.

TABLE 7: Austrian Television Fund – gender statistics for supported projects

	Female Number	in %	Male Number	in %
Executive producers	4	8	45	92
Directors	18	28	46	72
Screenwriters	22	29	55	71

Source: RTR

Exploitation grants

Grants totalling EUR 243,270 were distributed among 21 projects to support their exploitation. This funding provided resources for the creation of versions for viewers with hearing and visual impairments and foreign-language editions of the programmes.

6.3 Broadcasting funds

The Fund for the Promotion of Private Broadcasting (Private Broadcasting Fund) and the Fund for the Promotion Of Non-Commercial Broadcasting (Non-Commercial Broadcasting Fund) were set up in 2009 with the amendment of the KommAustria Act (KOG). The two funds were originally endowed with a total of EUR 6 million. The funding was then steadily increased to a figure of EUR 18 million in 2013. Since then the figure has remained unchanged.

The funds serve the purpose of promoting the Austrian broadcasting system and helping broadcasters deliver diverse and high-quality programming. Broadcasters are eligible to apply for grants if their programmes require a licence or notification as defined in the Audiovisual Media Services Act (AMD-G) or Private Radio Act (PrR-G).

Funding is allocated on the basis of relevant legislation and of approved guidelines. The funding decisions are taken by the managers of RTR's Media Division after the Review Board has submitted an opinion.

6.3.1 Non-Commercial Broadcasting Fund

6.3.1.1 Study on non-commercial broadcasting's education and training contribution

In 2016 Helmut Peissl and Meike Lauggas conducted a study commissioned by RTR to investigate the effect on education and training of non-commercial broadcasters in Austria and their contribution to life-long learning. The study was published under the title "I learn from every programme I make" (*Ich lerne mit jeder Sendung!*) as one of a series of RTR publications: www.rtr.at/de/inf/SchriftenreiheNr22016

6.3.1.2 Application dates in 2016

In 2016, a total of around EUR 3 million was available in the Non-Commercial Broadcasting Fund.

First application date (2016)

In the first round of applications (due by 31 October 2015), 77 applications were submitted by radio broadcasters, four by education and training initiatives, and 24 by television broadcasters. Grants were awarded to 14 non-commercial radio stations, three community television stations, and two education and training initiatives in radio broadcasting.

Second application date (2016)

The second round of applications closed on 23 May 2016. 23 applications were submitted from the field of radio and six from television.

More detailed information on the grant decisions can be found on the RTR website at www.rtr.at/de/foe/EntscheidungenNKRF (in German).

6.3.2 Private Broadcasting Fund

6.3.2.1 Application dates in 2016

In 2016, approximately EUR 15 million was available overall in the Private Broadcasting Fund.

First application date (2016)

In the first round (due by 31 October 2015), a total of 162 applications for grants were submitted in the field of television (from 47 different television production companies), 278 applications in radio broadcasting (from 49 different producers) and three applications from two education institutions.

Second application date (2016)

A total of 239 applications were received in the second round, for which applications had to be submitted by 23 May 2016. Of those applications, 74 related to television broadcasting and 165 to radio. The grant funds were allocated in the second round to 19 private television and 32 private radio operators.

When allocating the 2016 grants, heightened attention was again paid to broadening the geographical distribution of grant recipients in order to include local and regional content and projects, and thus to enhance diversity. Smaller radio broadcasters with technical ranges of less than 100,000 potential listeners as well as broadcasters with a range of 100,000 to 300,000 received grants equalling nearly 100% of the funds requested.

A different ratio of the amount applied for to the amount granted is seen for television broadcasters. Here smaller local and regional broadcasters that generally offer a new information programme once or several times a week mostly received a smaller grant than that specified in their submission. Nationwide television broadcasters, on the other hand, incur substantially higher costs and usually broadcast regular information shows, in many cases several times per day. The nationwide broadcasters consequently received the highest awards by far from the Private Broadcasting Fund. In accordance with the funding guidelines notified to the European Commission, again in this reporting period

grants were especially awarded for information broadcasts, cultural broadcasts and regional broadcasts.

More detailed information on the grant decisions can be found on the RTR website at www.rtr.at/de/foe/EntscheidungenPRRF (in German).

6.4 Press and journalism subsidies

The federal press and journalism subsidies administered by RTR are direct support measures in the form of financial contributions. Decisions on the allocation of subsidies are made by the Austrian Communications Authority (KommAustria), and the administration of grants is assigned to one member of the authority. The Press Subsidies Commission and the Journalism Subsidies Advisory Board have been set up as advisory bodies for these subsidies. One exception is the subsidies allocated to the Austrian Advertising Council as defined in Art. 33 KOG, for which no advisory body is required.

RTR provides specialist technical and administrative support for these funding efforts.

The legal bases for the allocation of grants are the 2004 Austrian Press Subsidies Act (PresseFG 2004), the press subsidies guidelines to be published by KommAustria each year, Section II of the 1984 Journalism Subsidies Act (PubFG) as well as Art. 33 KOG and the guidelines to be published by KommAustria governing the promotion of self-regulation in commercial communication.

6.4.1 Press subsidies

In 2016, KommAustria received 113 applications for subsidies under the PresseFG 2004. KommAustria allocated funding in 105 cases, and in all cases the full amount of funding was approved. In three cases it was no longer possible to pay out the allocated subsidy as the relevant periodicals were no longer being published at the time set for payment, so that the terms set out in Art. 14, Par. 2 of the 2004 Press Subsidies Act were not satisfied. In two cases, only the first partial payment could be made due to cessations between the two set payment times. Five applications had to be rejected because they did not fulfil the relevant legal requirements for funding.

The groups eligible for subsidies under the PresseFG 2004 are as follows:

- Publishers of daily and weekly newspapers
- Institutions for journalist education
- Research projects focused on the press sector
- Press clubs
- A self-regulation body for matters related to the press

TABLE 8: Press subsidies – changes in grant amounts, applications and approval rates, 2012 to 2016

Year	Grant amount (EUR)	Applications	Approvals	Approval rate in %
2012	10,945,800.00	127	122	96.10
2013	10,839,000.00	128	124	96.90
2014	8,649,085.00	125	116	92.80
2015	8,880,406.80	115	114	99.10
2016	8,446,853.85	113	105	92.90

Note: Contributions to the Austrian Press Council that are financed by the funds are included here.
Source: RTR

Details on grant awards can be found on the RTR website www.rtr.at.

6.4.2 Funding for self-regulation of the press

In 2016 the Austrian Press Council dealt with 306 cases, of which 271 cases were deemed within its jurisdiction. A total of 299 cases were submitted from the outside, while in seven cases the body's three senates reviewed cases on the basis of their own observations. For purposes of comparison: In 2011, the first year of its operations, the Austrian Press Council examined a total of 80 cases.

Of Austria's dailies, only Kronen Zeitung, Österreich and Heute have refused to recognise the Press Council's status as arbitrator (as of January 2016).

The Austrian Press Council requested a cost contribution of EUR 155,000 for 2016. KommAustria granted this request.

6.4.3 Austrian Advertising Council

In 2016, the Austrian Advertising Council was again the only applicant for a subsidy from the fund for the promotion of self-regulation in commercial communication in media, once again receiving the entire amount allocated to the fund (EUR 50,000).

6.4.4 Journalism subsidies – promotion of print periodicals

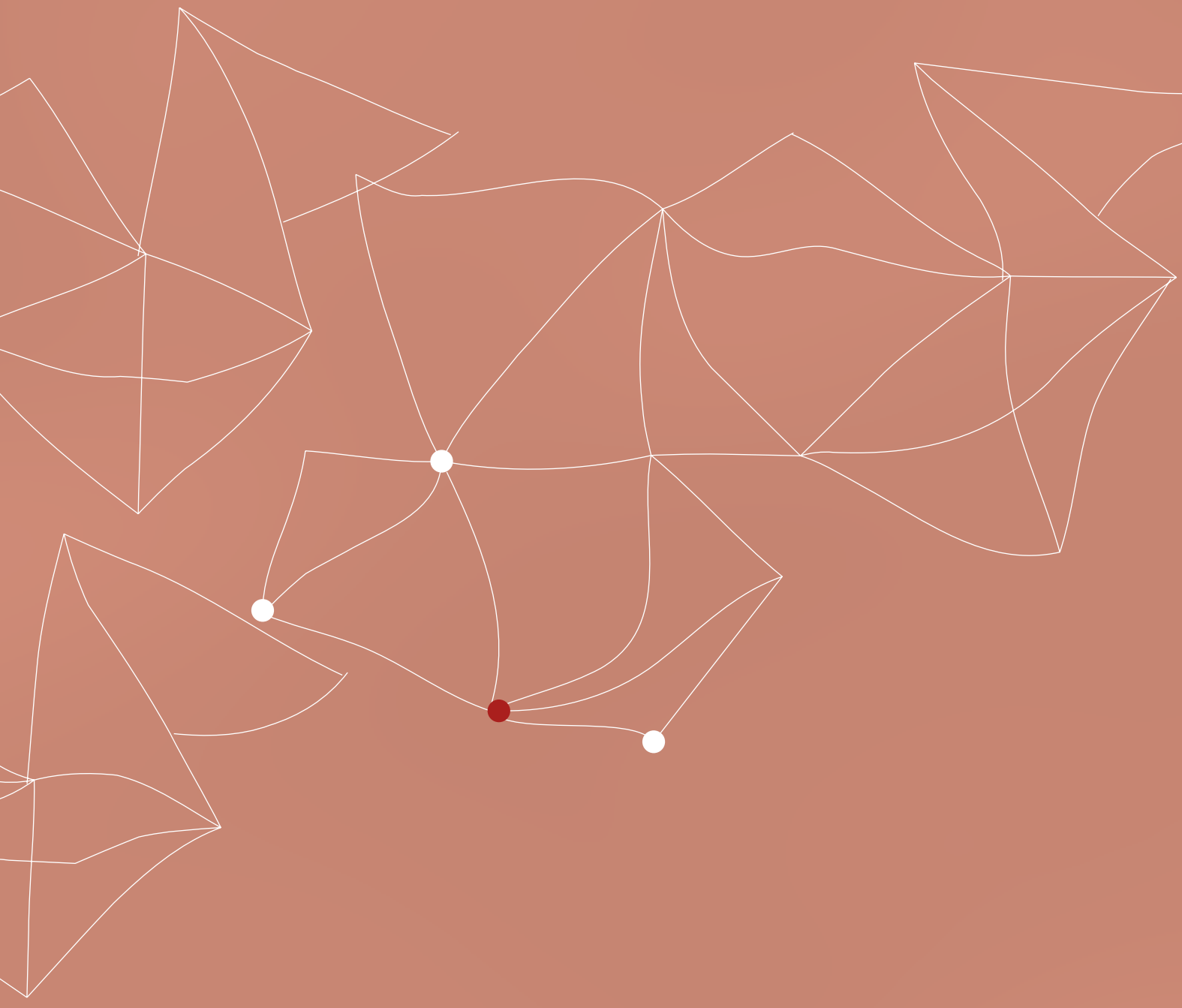
Section II of the 1984 Federal Act on Subsidies for Political Education and Journalism (PubFG) provides for the promotion of journalism that serves the purpose of educating citizens. These subsidies are provided for periodicals which address at a high level issues related to politics, culture and world views. Overall, the periodicals that receive funding represent a broad range of content. The publications include topics ranging from feminism to religion and discussions relating to political and scientific issues. Also included are periodicals of associations that are active in the fields mentioned above and are familiar with the topics through practical experience.

In 2016, KommAustria received 83 applications for journalism subsidies. 76 applications were successful, while seven were rejected, having failed to meet the statutory requirements for funding.

In 2016, funds totalling EUR 340,000 were available. The individual amounts granted ranged between EUR 1,360 and EUR 11,860.55.

Details on grant awards can be found on the RTR website www.rtr.at.

7 Activities of the TKK



7 Activities of the TKK

The independent Telekom-Control-Kommission (TKK) has been responsible for regulating the telecommunications market in Austria since 1997. Its tasks and responsibilities are specified in detail by law. Amongst other things it is responsible for the regulation of competition, frequency award procedures and the approval of general terms of business as well as the fees charged by telecommunications operators. The commission also acts as the supervisory authority for electronic signatures. What follows is an overview of the main areas of regulatory activity in 2016.

7.1 Market analysis to ensure competition

The regulatory authority has the remit to carry out market analysis procedures at regular intervals. These procedures serve the purpose of identifying relevant markets subject to regulation and of determining whether any one or more undertakings possess significant market power; they also serve to identify any difficulties there may be in maintaining competition or whether effective competition already exists in such markets. If effective competition is not present in the market, appropriate obligations will need to be imposed on the company with significant market power.

In spring of 2015, the TKK initiated a new market analysis procedure. During the course of 2016, the TKK produced a set of draft proposals for action in the markets for access provision for private and non-private customers and for fixed network origination, proposals which were still being discussed nationally at the end of the reporting period. Due to the competitive conditions on the market at the time, a number of far-reaching deregulation measures were included along with these proposals. It is expected that this procedure is likely to be completed in the first half of 2017, after completion of an EU-wide coordination procedure.

At the beginning of 2016, the TKK adopted draft enforcement actions aimed at modifying existing fee control requirements applying to fixed and mobile network termination services provided individually by operators; specifically, where individual interconnection services for fixed and mobile termination originate in a European Economic Area (EEA) country in which the charging method deviates from the recommended termination calculation (leading to excessively high termination fees), the maximum (fixed or mobile network) termination fees that can be charged are to be equal to those charged by the relevant fixed or mobile network operator in the relevant EEA country (following the principle of reciprocity).

The draft proposals for action were communicated to the European Commission and the other regulatory authorities of the European Union (EU) as a part of the coordination procedure. As part of this procedure, in July 2016 the European Commission submitted to the TKK a recommendation pursuant to the Framework Directive. The recommendation suggested that the TKK modify or withdraw the proposed corrective measures in relation to charge controls for fixed and mobile network calls and ensure that the calculation of costs for the provision of the call termination service in fixed and mobile networks be based on a pure LRIC method[7], being the method considered most appropriate for regulating fixed and mobile network termination fees. This arrangement should apply even in cases where the termination traffic originates from an EEA country that has not implemented the termination recommendation. As of the end of the reporting period, the TKK has neither implemented nor withdrawn its draft proposals for action but has resolved instead to observe the development of European termination fees.

7 Pure LRIC: bottom-up long-run incremental cost. Long-run incremental costs ("LRICs") are fixed using a cost accounting model ("BU"). The final fees charged are calculated on the basis of these LRICs.

During the reporting period, the Austrian Administrative Court (VwGH) also handed down a number of rulings on previous market analysis procedures: in December 2013 the TKK adopted in the context of procedure M 1.1/12 a decision on what by then was already the second generation of general conditions for the broadband rollout in Austria. This decision facilitated and promoted the development of what is referred to as the NGA network (broadband networks) by means of a number of measures, including for example an improvement in 'virtual unbundling', planning meetings, transparency regulations and compensation for investments. For the first time, the measures also included regulations on what is commonly referred to as vectoring technology.

The complex decision was challenged before the VwGH by a number of parties, though in the end the court did not follow the critique. The supreme court confirmed the TKK decision on 20 December 2016.

On the same day, the VwGH issued a number of rulings on the market analysis carried out in relation to mobile and fixed network termination, confirming decisions of the TKK in which the latter set termination fees on the basis of the pure LRIC methodology (as suggested in a recommendation by the European Commission). In its judgment, the VwGH grounded its decision on the argument that any deviation from the termination recommendation which had referred to the pure LRIC cost accounting method as the appropriate basis for calculation was only possible in concrete cases where the specific circumstances actually required such a deviation, in particular when required by the specific market conditions in the country concerned.

7.2 Network access: TKK as arbitrator

Network access refers to the provision of facilities and/or services to another company for the purpose of providing electronic communications services, for example, access to network components such as the local loop. The obligation to provide network access can apply to companies deemed by the regulatory authority as having significant market power. Beyond that, a general interconnection obligation also applies, requiring each operator of a public communications network to make an interconnection offer to other operators of such networks on request. If no network access or interconnection agreement based on private law is reached, each participant involved has the option of applying to the regulatory authority for a decision in lieu of such an agreement.

Interconnection orders

During the reporting period, an interconnection order was issued between atms Telefon- und Marketing Services GmbH and Mundio Mobile Austria Ltd. (procedure Z 3/15). In the afore-mentioned procedure, the question of a general order for indirect interconnection between the parties to the procedure was negotiated. Four other arbitration procedures before the TKK, which related to various issues connected with origination in mobile and fixed source networks for service numbers, resulted in agreements made under private law – some being reached as early as the preliminary conciliation procedure, and some in the course of the continued procedure relating to interconnection fees – and the eventual withdrawal of the applications for arbitration.

7.3 Wayleave rights and rights of joint use as a contribution to broadband rollout

In order to develop broadband networks, network operators are permitted both to lay new cabling on third-party property and to use the existing masts, ducts, manholes or lines owned by other organisations.

If the affected parties cannot agree on such usage, they may then petition TKK for a binding decision on the matter. In such procedures, before the TKK makes any decision, another attempt at conciliation (mediation) must first be made by the Austrian Regulatory Authority for Broadcasting and Telecommunications (RTR).

Ten applications were made to the TKK during the reporting period: two for shared usage and eight for the grant of wayleave rights. One application was withdrawn, while the parties in one procedure were able to arrive at a contractual agreement. The remaining procedures were still ongoing as of the reporting date.

7.4 Supervisory procedures to ensure fair competitive conditions

Where within its scope of responsibility the regulatory authority has suspicions that a company is in breach of the 2003 Telecommunications Act (TKG 2003) or of one of the ordinances issued on the basis of that Act, it is required to carry out a supervisory procedure pursuant to TKG 2003. If a request to submit a statement on the matter is ignored and corrective action is not implemented within a reasonable period, the regulatory authority is obliged to order any suitable, necessary measures to ensure compliance with the violated provision.

Aside from this, the regulatory authority is free to act directly on the basis of particular requirements of European Union law in order to ensure observance of specific provisions of telecommunications law.

In exercise of this freedom, in late 2016 the TKK initiated supervisory procedures on the grounds of possible violations of the EU's Net Neutrality Regulation (commonly known as the Telecoms Single Market Regulation or TSM Regulation)[8] against mobile and fixed network internet providers. The procedure focused on suspected discrimination against services provided by third parties (in particular by operators allowing their own streaming services to continue to function even after the data volumes included in the subscription were used up) as well as on port, service and content blocking in operator networks, and on the issue of whether particular specific services should count as 'special services' as referred to in the Net Neutrality Regulation. As part of this procedure, affected internet providers have the opportunity to submit a statement on the possible violations. If suspicions of violations against the TSM Regulation should prove true, the TKK can order measures to be carried out to suppress such violations by means of an official decision. The procedures should reach completion during the course of 2017.

7.5 Ensuring legally compliant general terms of business

One important task of the TKK is to ensure that the terms of business of operators of telecommunications services and networks are in conformity with the law. Based on this responsibility, the TKK ensures that the contractual terms of all providers conform equally to the legal requirements, while customers benefit from having the assurance that their contracts are made in accordance with tried and tested contractual conditions.

The TKK was obliged to verify contractual terms in a total of 333 procedures in 2016. In these checks by the TKK, not only does compliance with provisions of telecommunications law play a role, but checking the relevant provisions of civil and consumer protection law is also part of the task. This has the effect of minimising the risk of having to clarify the legal validity of particular clauses after conclusion of a contract, through individual cases being brought before the courts.

8 Regulation (EU) 2015/2120 of the European Parliament and of the Council of 25 November 2015 laying down measures concerning open internet access and amending Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services and Regulation (EU) No 531/2012 on roaming on public mobile communications networks within the Union.

The goal of the procedure before the TKK is to achieve the necessary adjustments to contractual conditions by the telecom companies in the course of the procedure, thus achieving a legally valid situation. No legal decision on an objection should then be required unless this goal has not been achieved.

In the context of the concept of "the normally available speed", in five procedures in 2016 the TKK issued decisions objecting to terms of business on the grounds that the provider had not appropriately adapted provisions. The network operators had selected a definition of the "normally available speed" that differed from that used in the TSM Regulation. The TKK was required to prohibit the practice by issuing a decision. The objection decisions can be viewed under the following link (in German): www.rtr.at/de/tk/EntscheidungenGesamt

In addition to the notification requirement, A1 Telekom Austria AG (A1) is – owing to its position of possessing significant market power as defined in TKG 2003 –under an obligation to obtain prior approval before introducing any contract terms that are relevant in the fixed network access market for private customers and for both private and non-private customers and/or for non-private customers. The obligations incumbent on A1 are derived from TKK market analysis decisions M 1.3/12 (relating to private customers) and 1.4/12 (for non-private customers). In 2016, the TKK made a formal decision to approve the contractual terms for the A1 Festnetz Voice+ product (G 236/16).

7.6 Frequencies – the fairest possible distribution of scarce resources

Review of coverage level in the 800 MHz frequency range

Coverage requirements have been tied to the acquisition of frequencies in the 800, 900 and 1800 MHz bands (TKK multiband auction in 2013); this ensures the supply of broadband services even to regions of Austria that had or have experienced (very) poor coverage to date. The coverage requirements affecting the 800 MHz range (primarily intended for providing LTE services) are reviewed by the regulatory authority, and the review procedure was still ongoing at the end of the reporting period.

According to the coverage obligations, a certain number of the municipalities (very) poorly supplied with broadband services at the time of the multiband auction in 2013 were to be properly supplied by no later than 19 November 2016; these communities were specified by the regulatory authority in two annexes to the assignment decision. This obligation was to be fulfilled solely by using frequencies from the 800 MHz frequency range. A local community on this list was viewed as being properly supplied if the mobile network operator, using the frequencies allocated from the above-mentioned range, was able to supply 50% of the community's residents indoors and 90% of residents outdoors with a minimum bandwidth of 2 Mbps (downlink) and 0.5 Mbps (uplink).

In addition to this, a communications service needs to be set up for 95% of the population that supplies data to consumers at an outdoor rate of 1 Mbps for downloads and 250 kbps when uploading. However, this obligation does not have to be fulfilled solely using frequencies within the 800 MHz band.

The spectrum holders (A1 and T-Mobile) in the 800 MHz range had until the end of December 2016 to provide evidence of compliance with the coverage obligation imposed by the regulatory authority. Based on the information submitted, the TKK decided after appropriate measurements to verify the reported level of coverage.

Review of coverage level in the 450 MHz frequency range

During the reporting year, the TKK carried out the procedure for verifying that the required coverage is provided in the 450 MHz frequency range. The requirement specified that as of the reference date of 30 June 2016 ArgoNET GmbH had to operate base stations at a minimum of 50 locations using the frequencies assigned by the decision of 19 August 2013 (F 13/12-81). Documentation was submitted to the regulatory authority as proof of conformity with the coverage requirements (showing the position/coordinates of the locations, the relevant operation permit and map displays). According to these materials exactly 50 base stations were in operation as of the above-mentioned reference date.

The TKK undertook an evaluation of the documents and data. On the basis of this information and of data subsequently collected by the TKK, the authority concluded that the prescribed coverage requirements had been fulfilled as of 30 June 2016. The TKK therefore terminated the procedure and did not take any further action.

Consultation on future awards and the Spectrum Release Plan

The amended 2013 Frequency Utilisation Ordinance (Frequenznutzungsverordnung) provides for use of the 700 MHz band by mobile telecommunications providers from 1 July 2020. The usage rights for the 2100 MHz band expire at the end of 2020, and those for the 3400 to 3600 MHz band at the end of 2019. In addition, the 3600 to 3800 MHz, 1500 MHz (core band) and 2300 MHz bands have been identified at European level as harmonised ECS bands. At the WRC-15 (the 2015 World Radiocommunication Conference) the 1500 MHz band was expanded and the 1427 to 1452 MHz and 1492 to 1518 MHz ranges were identified for worldwide IMT (International Mobile Telecommunications).

Consequently, award procedures can be expected in the short and medium term for the following frequency ranges:

- 700 MHz
- 1500 MHz
- 2100 MHz
- 2300 MHz
- 3400 to 3600 MHz
- 3600 to 3800 MHz

The regulatory authority has published a Spectrum Release Plan for these bands (an estimated schedule for the award procedures) on its website. This non-binding plan will be designed to reflect the current assessment of the Austrian Ministry for Transport, Innovation and Technology (BMVIT) and the regulatory authority in relation to future frequency awards, and to provide market participant with planning security.

Before the publication of the Spectrum Release Plan, the regulatory authority carried out a consultation with the BMVIT during the course of which it received a number of important suggestions on the upcoming awards. A total of 22 statements were received.

Preparation of the frequency award procedure

To ensure planning security for the sector, the Austrian federal government decided back in 2015 to make the 700 MHz band available to the telecommunications industry as of 2020. The decision on the reallocation of the 700 MHz band – both at European and national level – was taken in consideration of ever-present technological change and market developments. Mobile telecommunications are a fast-growth sector. The penetration rate and the volume of traffic in particular have risen sharply over the last few years. The increase in traffic can be traced to the high proportion of (rapidly growing) broadband traffic – a development that is also clearly seen in other countries. Most experts assume that the relatively high rates of growth will also continue into

the foreseeable future. The timely utilisation of the second digital dividend by mobile telecommunications is therefore associated with a host of benefits, such as a reduction in future network costs or continued improvements in the coverage of rural areas. In 2016 the regulatory authority had already made a start on the preparatory work for awarding the second digital dividend. The authority's dedication to mobile telecommunications was given force by an amendment made by the BMVIT to the 2013 Frequency Utilisation Ordinance.

According to the Spectrum Release Plan, the frequency ranges of 3400 to 3600 MHz and of 3600 to 3800 MHz will be auctioned off in 2018 (planned for the second quarter of that year). The initial preparatory work for that purpose had also already begun during 2016.

Evaluation of future coverage obligations

The preparatory work for the award of the 700 MHz band includes the elaboration of options for coverage obligations. The issue of coverage also affects other frequency ranges to be awarded, including for example the 2100 MHz band. A forecast on future broadband coverage will be drawn up based on current data on mobile telecommunications coverage. In addition, current and future coverage deficits will also be identified and the options for coverage obligations will be defined. These options will then be evaluated by an external consultancy business in relation to rollout costs. This evaluation will in turn provide the basis for the TKK to design the auction, for setting out coverage obligations and, where appropriate, also for the minimum bid for the frequencies.

Revision of the European legal framework (the European Electronic Communications Code)

In September 2016, a proposal was published for a directive by the European Parliament and the Council on the European Electronic Communications Code which contained some very far-reaching changes in relation to frequency administration, with the main goal being to improve coordination of frequency administration in the EU while giving special attention to making adjustments to the coming 5G environment. Negotiations in these issues will demonstrate the extent to which the planned changes will become reality. The regulatory authority will have a significant participation in these negotiation discussions both at the level of the Body of European Regulators for Electronic Communications (BEREC) and in the relevant Council working groups (in support of the BMVIT).

7.7 Electronic signature and trust services

As of 1 July 2016, Directive 1999/93/EC (Signatures Directive) was repealed by Regulation (EU) No 910/2014 (eIDAS Regulation), which introduced a comprehensive set of harmonised rules for signature law. Also as of 1 July 2016, the Austrian Signatures Act (SigG) was replaced by the Signature and Trust Services Act (SVG). The latter act was put into more concrete terms in the Signature and Trust Services Regulation (SVV), which became law on 2 August 2016 and replaced the 2008 Signatures Regulation (SigV 2008). The Telekom-Control-Kommission (TKK) continues to be the supervisory body under the new legal framework.

A focus in 2016 was to modify activities in accordance with the new legal framework. The changes affected both the group of supervised providers as well as the actual system of supervision. The scope of supervision now extends to non-qualified trust service providers (TSPs), who like qualified TSPs are obliged to take measures to control security risks and to report any breach of security or loss of integrity to the supervisory body within 24 hours. Supervisory activities are now related to new types of trust services, such as the issuance of certificates for electronic seals (the 'signatures' of legal persons) in addition to electronic registered delivery service. The supervisory body no longer verifies TSPs directly but rather on the basis of reports submitted by an accredited

conformity assessment body. TSPs are required to submit such reports to the supervisory body every two years. Where grounds exist, the supervisory body can also directly perform a review or request a conformity assessment, as has been the case up to now.

One procedure initiated already in 2014 could be completed before the new legal framework became effective. This procedure was delayed due to the late completion of an evaluation report which the TKK had requested from the confirmation center. The three procedures from 2015 that were still open at the end of 2015 could also be completed. Two of those procedures concerned certain technologies that are deployed by certification service providers (CSPs); research had raised doubts as to the security of these technologies, namely Signalling System 7 (SS7) and the SHA-1 hash function. Changes to the signature and certification services provided by one CSP (alternative registration and authentication procedures) were the subject of the third procedure.

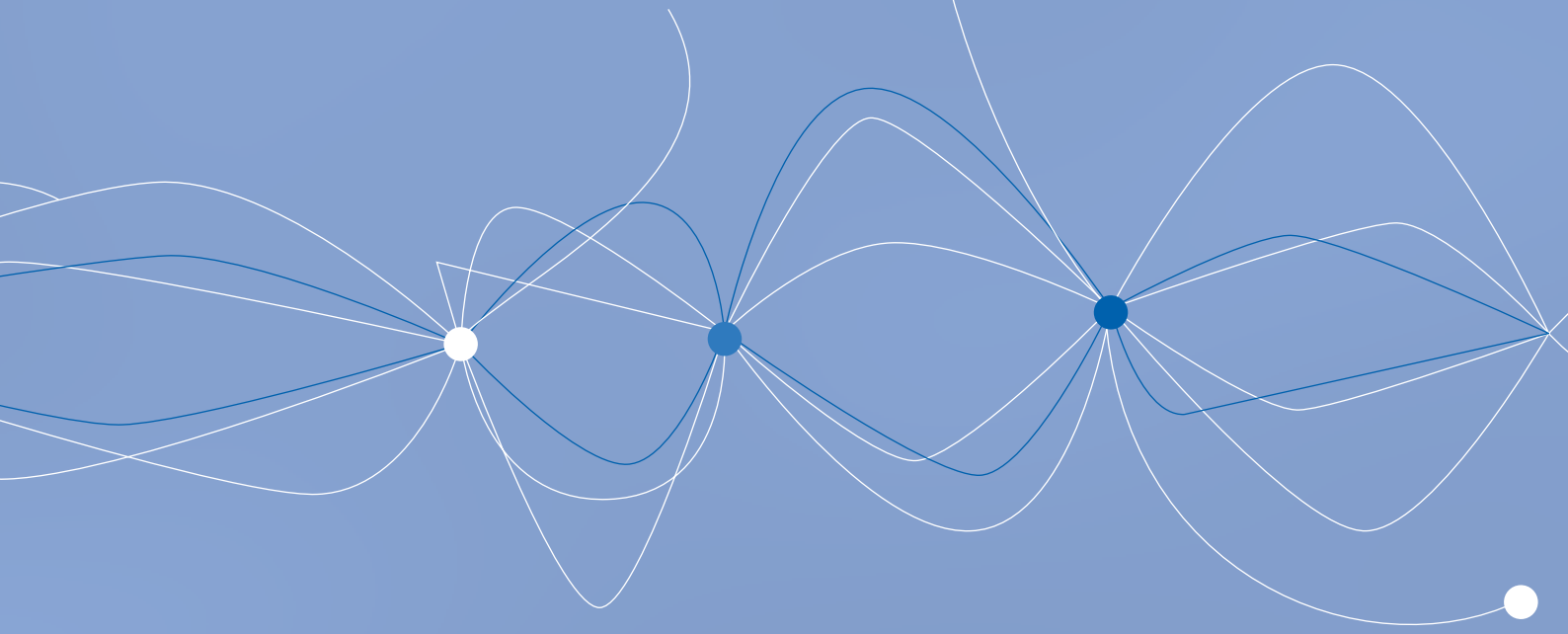
Three of the four new procedures initiated in 2016 were completed in the same year. One of these procedures concerned public statements made by a chartered engineering consultant about the security of the 'Handy-Signatur' mobile phone signature. Another procedure dealt with a meanwhile corrected software fault in a chip card. The third completed procedure concerned certain activities carried out by RTR on a continuous basis under a mandate from the TKK.

The unfinished procedure involves a review of PrimeSign GmbH, which became active as a CSP in June 2016. Thus, in addition to A-Trust Gesellschaft für Sicherheitssysteme im elektronischen Datenverkehr GmbH and e-commerce monitoring GmbH, Austria now has a third provider of qualified certificates.

When supervising compliance with regulations, the TKK continues to operate through RTR, which is independently responsible for certain tasks also under the new legal framework. One of RTR's main responsibilities in this regard is the operation of the infrastructure required for verifying certificates, electronic signatures, electronic seals and electronic time stamps. This includes:

- The 'trusted list' available at www.signatur.rtr.at/currenttl.xml (each Member State is required to provide a standardised list with details of the TSPs and the trust services provided by them)
- The verification service made available at www.signaturpruefung.gv.at/, which supports verification of electronic signatures as well as electronic seals and certificates
- A 'trust infrastructure', allowing the supervisory body to take over the certificate database of a TSP that discontinues services

8 Activities of RTR



8 Activities of RTR

In the field of telecommunications the Austrian Regulatory Authority for Broadcasting and Telecommunications (RTR) is not just an agency of the Telekom-Control-Kommission (TKK), it also has its own official responsibilities. These include alternative dispute resolution, the administration of Austrian phone numbers and the issuing of ordinances. Key focal points of work in the reporting year are presented below.

8.1 Conciliation procedures: we are here to help consumers

Within the area of users' rights, conciliation procedures represent the main focus of the work of the Austrian Regulatory Authority for Broadcasting and Telecommunications (RTR). While most of the other activities, such as supervisory procedures involving operators and providers, benefit users only indirectly, conciliation procedures provide users with a direct service. The conciliation procedure itself is an alternative form of legal protection. Instead of taking recourse to the courts, thereby having to accept a considerable cost risk, consumers can have their disputes with providers resolved quickly and at no expense. Meanwhile, the high settlement rate of such procedures demonstrates that final and satisfactory solutions can be found for most complaints.

Conciliation procedures are also favoured at European level as an ancillary instrument for ensuring legal protection. The ADR Directive (Directive on alternative dispute resolution for consumer disputes), which has established a framework of rules with guaranteed access to procedures, has also been applicable in Austria since 9 January 2016. In passing the Alternative Dispute Resolution Act (AStG), Austrian legislators have elected to set up a complete system of eight ADR or conciliation bodies. Two of these bodies are established with RTR:

1. Conciliation body for telecommunications services
2. Conciliation body for postal services

The conciliation body for media is another conciliation body in which RTR is active (providing operational support to the Austrian Communications Authority). While this body does not fall directly under the AStG, internally all procedures of this kind are conducted in conformance with that statute.

This means that a total of three conciliation bodies are active at RTR on behalf of users.

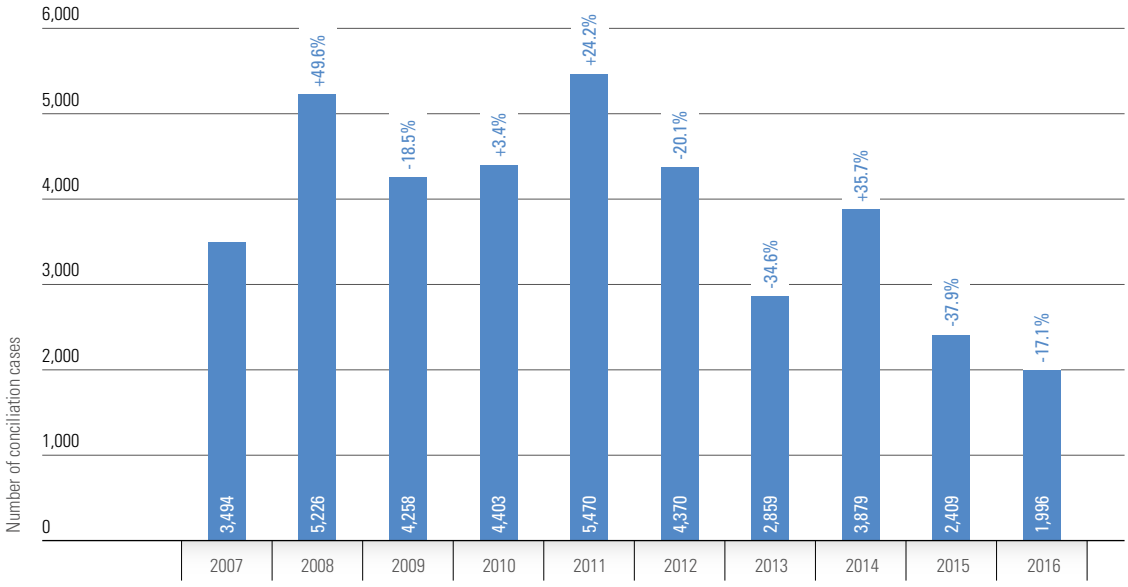
Comparison of the three conciliation bodies with one another revealed a reverse trend with respect to applications filed for conciliation: Whereas the number of telecommunications cases fell, the cases involving postal and media complaints rose considerably. Nonetheless, in absolute terms, complaints involving telecommunications services predominate.

8.1.1 Conciliation procedures

A total of 1,996 conciliation cases were filed by consumers in 2016, representing a further significant drop from the previous year. A comparably low number has not been recorded since 2002. Several reasons account for this, one being that in that in the last three years RTR has taken steps to gradually intensify its direct cooperation with network operators in the area of consumer dispute resolution. Instead of resorting to legislative intervention or ministerial ordinance, procedures have been reduced to their current low level through dialogue and cooperation. There has also been an increased willingness among

network operators to make concessions, while most products are now designed in such a way that unpleasant surprises on the phone bill are largely avoided.

FIGURE 4: Conciliation procedures filed, 2007 to 2016 – telecommunications and media



Source: RTR

In terms of subject matter, there was a continued reverse trend in 2016 in complaints filed due to billing for third-party services (content services). While such issues still represent the second most frequent reason for complaints, the absolute number of cases of this kind fell considerably for the second year in succession. If the industry continues to make progress in reducing cases involving content services, intervention by regulators will no longer be required. This observation does assume that the settlement rate remains relatively constant in cases of this kind, however. Currently, this rate is almost 100%.

Contract issues have in the meantime become the most frequent reason for conciliation procedures. Such cases, which have clearly surpassed those involving content services, also increased in absolute numbers in 2016. The grounds for such conciliation procedures vary widely, encompassing a broad spectrum ranging from ambiguous subscription terms to legal issues relating to agreement termination.

Despite the complex nature of many procedures, about 93% of all cases could be completed within the 90-day period specified in the relevant guidelines. It is gratifying to be able to report a high settlement rate reaching almost 83%.

8.1.2 Conciliation procedures in postal services

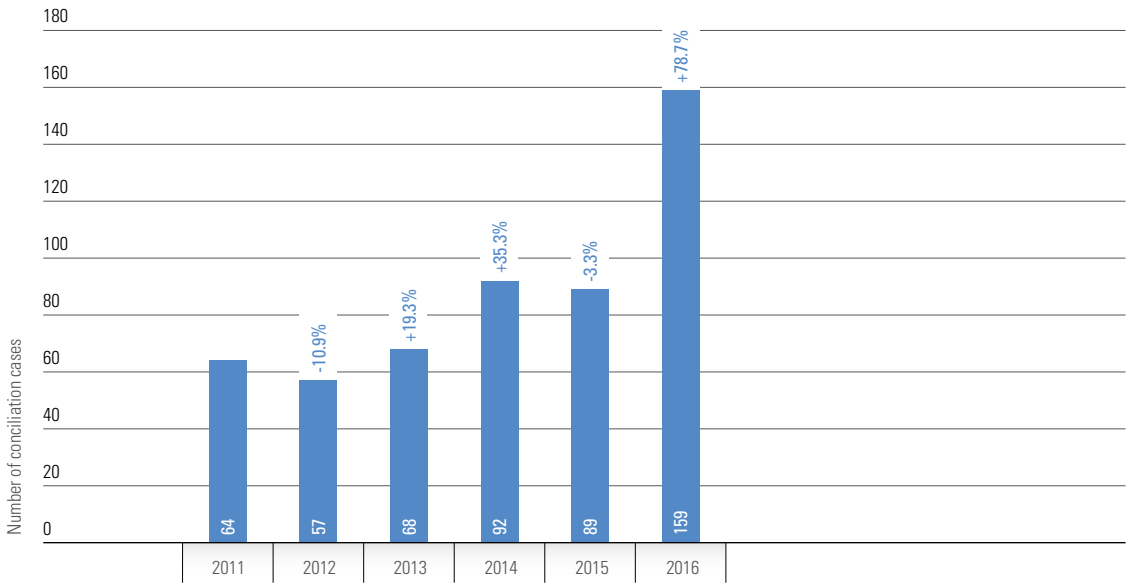
In 2016 consumers made much more frequent use of the option to request a conciliation procedure to deal with complaints concerning parcel services. In total 159 applications for conciliation were filed, representing a 78% increase over the previous year. There appear to be two reasons for this major increase: firstly, the renaming of the conciliation body for postal services in accordance with the AStG along with the accompanying media attention received, and, secondly, the entry of a new competitor into Austria's market for parcel services. Problems arose most frequently in the area of delivery.

Issues such as parcel loss, forwarding orders and orders to have mail saved during holidays, drop-off orders, and questions about postal service points and franking

machines were much less frequently the subject of conciliation. In relation to how these cases were completed we can report that in the bulk of the cases it proved possible to satisfactorily resolve the issue for the affected consumers. Examples of positive outcomes include payment of damages or improvements to the service that was the object of complaint or amicable agreements.

The time required for processing complaints could be further reduced thanks to a good basis of cooperation with certain postal service providers. As a result it proved possible to resolve 71% of all complaints within 30 days.

FIGURE 5: Conciliation procedures filed, 2011 to 2016 – postal services

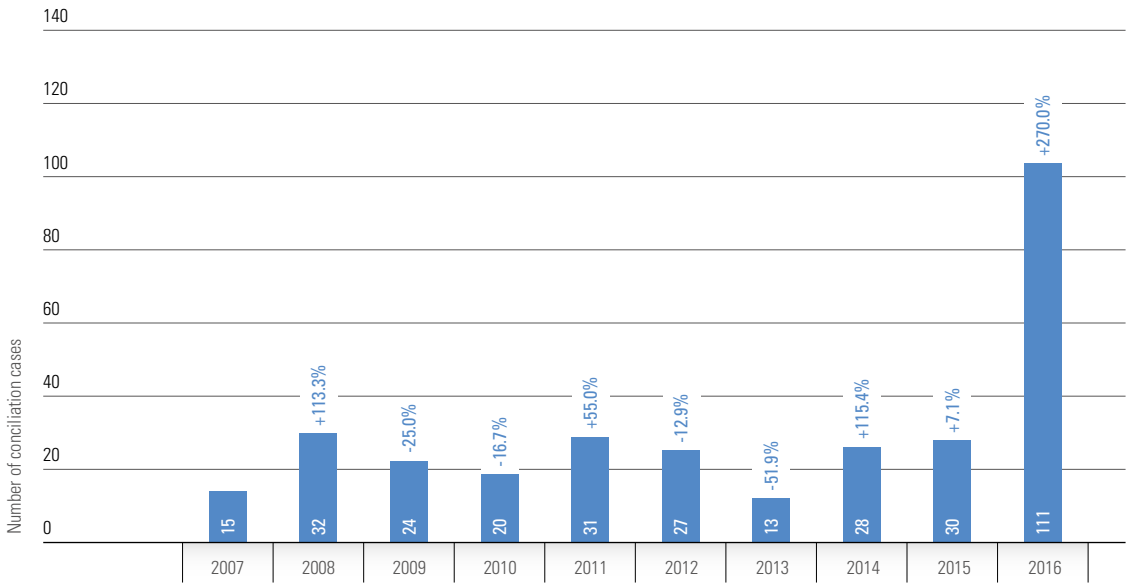


Source: RTR

8.1.3 Conciliation procedures – media

As was the case for postal services, conciliation procedures involving media issues also increased rapidly and are currently at an all-time high. Problems related to subscriptions with a pay-TV provider were mainly responsible for the increase. The growing awareness of recourse to conciliation probably also contributed to the rise. The settlement rate and average duration of cases are comparable to the figures for telecommunications services.

FIGURE 6: Conciliation procedures filed, 2007 to 2016 – media



Source: RTR

8.2 Value-added services: sharp downturn in complaints

In accordance with Art. 24 Par. 2 TKG 2003, the regulatory authority has to provide information on an annual basis regarding unfair practices relating to value-added services and the action taken. Of particular significance in this context is the Communications Parameters, Fees and Value-Added Services Ordinance (KEM-V 2009), the provisions of which resulted in a decline in complaints regarding value-added services.

In the reporting year, 48 of the complaints handled in connection with RTR's duties as a conciliation body were related to value-added voice telephony, and nine to value-added text messaging, which corresponds to 2.4% and 0.5% respectively (2.9% in total) of all conciliation procedures. The corresponding percentage of conciliation procedures handling complaints about value-added services was about 8% in 2012, about 9% in 2013, 3.5% in 2014 and 2.3% in 2015. Accordingly, a slight rise in complaints was recorded for 2016.

TABLE 9: Value-added service complaints, 2012 to 2016

	2012	2013	2014	2015	2016
Total number of conciliation procedures	4,370	2,859	3,879	2,409	1,996
Value-added services	336	255	136	55	57

Source: RTR

Moreover, a web form for complaints about valued-added services has been operational since April 2008. Compared with the previous year, in which 154 complaints were filed in this way, the number of complaints dropped significantly to 42 for the reporting year.

8.3 Media services subject to notification requirements

Under Art. 15 TKG 2003, the regulatory authority must be notified of the intention to provide public communications networks or services, and of any modification or termination of such networks or services, prior to the start of operation or to the modification or termination.[9]

TABLE 10: Notified active services, 2014 to 2016

Service category	31 December 2014	31 December 2015	31 December 2016
Public telephone services at fixed locations and for mobile subscribers	396	394	326
Call shops	95	82	67
Internet cafés	104	88	76
Public internet communications services	414	409	415
Public communications networks	327	403	429
Public leased-line services	75	77	83
Other public communications services	25	10	27
TOTAL services notified	**1,436**	**1,463**	**1,423**

Source: RTR

As of 31 December 2016, notifications for 1,423 active services had been given by a total of 799 operators, of which 88 were operators of call shops and/or internet cafés. Under a 2011 amendment to the TKG 2003, such operators are exempt from a large number of obligations which generally arise from the TKG 2003 for businesses subject to notification requirements pursuant to Art. 15 TKG 2003 (including the notification of general terms and conditions).

An interesting procedure in 2016 involved the report submitted by one operator, who stated that compliance with the regulations of TKG 2003 in terms of data protection, consumer protection and – in particular – the oversight granted to regulators to inspect and raise objections to the general terms of business as notifiable to the public had yet to be enforced for an e-mail service operated by an international provider and offered on the Austrian market.

In commercial terms, the operator argued, this e-mail service constituted a public communications service as defined by TKG 2003: logically, the e-mail service offered should therefore be subject to notification requirements pursuant to Art. 15 TKG 2003, and the current situation meant the provider was in breach of this legislation.

RTR has long held the opinion that e-mail-only services are not public communications services, since the purpose of such services is not primarily considered to be signal transmission. Since the e-mail service as offered does correspond to the definition of a public communications service, no notification requirement pursuant to Art. 15 TKG 2003 applies. Accordingly, RTR did not comply with the operator's request for a supervisory procedure to enforce the e-mail service provider's fulfilment of the notification requirement.

9 For further information on notification procedures, please refer to the Communications Reports of the previous years.

8.4 Universal service – a minimum set of services for all

Art. 26 TKG 2003 defines universal service as the minimum set of public services to which all end users must have access at an affordable price and to a certain standard (Art. 27 TKG 2003), regardless of their place of residence or work, with full coverage throughout the country. The quality parameters are defined by the Universal Service Ordinance (*Universaldienstverordnung*, UDV). Art. 27 Par. 3 TKG 2003 requires A1 Telekom Austria AG (A1 Telekom) to report to RTR annually about its fulfilment of these criteria.

Prior to 2016, the UDV's quality parameters were aligned solely with target values for the fixed network. In 2016 the Federal Ministry of Transport, Innovation and Technology (BMVIT) subsequently issued an amendment to the UDV that adjusted a number of target values, terms and definitions, updating these to make them appropriate for mobile telecommunications. This not only enabled mobile technologies to satisfy the quality parameters defined in the UDV but also accommodated the legally formalised state of affairs that access to a public communications network and to a publicly available telephone service does not necessarily have to be provided by a fixed-line connection.

At the same time, the minimum number of public phones as specified by the UDV was also adjusted. Before 2016, a provision in the UDV had stated that A1, as the universal service provider, was required to maintain the degree of comprehensive public telephone service provision in place as of 1 January 1999, in relation to the affected location and while also taking into account local requirements. After 17 years, this provision had become outdated, since usage of public telephones has declined considerably and has thereby rendered obsolete this reference back to an earlier point in time. In its amended form, the UDV considers public telephone service provision to be comprehensive if quantities of public phones are made available as follows:

a. At least one public telephone in each local community
b. In local communities with 1,500 to 3,000 inhabitants, at least two telephones at separate locations
c. In municipalities with over 3,000 inhabitants, at least two telephones at separate locations as well as one additional telephone at a separate location for every additional 3,000 inhabitants

If this degree of public telephone service coverage was not already in place by 1 January 2015, additional telephones need not be subsequently added.

The decision by the BMVIT released A1 as of August 2016 from its obligation to provide the universal services referred to as "access to a public communications network and to a publicly available telephone service" and "preparation of the telephone directory", whereby the comprehensive provision of these services to the population continues to be assured.

8.5 Communications parameters: administration of the Austrian number range

6. KEM-V amendment brings administration of Austrian numbers up to date

As already announced in the 2015 Communications Report, the expansion of usage options for geographical numbers had been planned for 2016. Two points were discussed with market participants:

1. Expansion of porting options: Currently, a telephone number can be ported only within the local network. Options to allow porting within a federal state or even nationwide were both discussed.
2. Relaxing of usage regulations: A proposal was made to allow operators who do not possess a physical means of access to subscribers (such operators are typically VoIP providers) to offer their subscribers geographical numbers. This would be conditional on subscribers also having a fixed broadband connection, for example. This arrangement primarily supports small providers, since subscriptions with the subscriber network operators are no longer required.

On 15 March 2016, a public consultation was launched on the second point and several minor changes to the KEM-V (Communications Parameters, Fees and Value-Added Services Ordinance). These included the requirement for handling emergency calls placed via text to 112, as well as provisions for eCall and the new 1450 health hotline. Decisions on expanding porting options were shelved.

The sixth amendment to the KEM-V entered into force on 19 October 2016. Since discussions with BMVIT about emergency calls via text message to 112 were ongoing at the time the amendment entered into force, a corresponding provision was not included.

For 2017, another amendment of the KEM-V is envisaged, which is also likely to include an expansion of porting options (as described above), once consultations have been held with the market participants.

Statistical evaluations of telephone number administration

In the 2016 reporting year, only minimal changes to the number of decisions issued are to be reported. In total, ten more decisions were issued than in the previous year. The only item worthy of note is that the number of negative decisions fell from 22 to nine, which can be attributed to RTR's additional efforts to offer advice prior to the formal submission procedure.

TABLE 11: Number of decisions on telephone number requests, 2012 to 2016

	2012	2013	2014	2015	2016
Number of affirmative decisions	**525**	**503**	**630**	**562**	**585**
Geographical numbers	235	243	294	330	323
Non-geographical numbers	290	260	336	232	262
Number of negative decisions	**22**	**15**	**20**	**22**	**9**
TOTAL	**547**	**518**	**650**	**584**	**594**

Source: RTR

Within the framework of administrating special communications parameters, which include Mobile Network Codes, a basic and essential addressing element for mobile networks, RTR issued a total of 13 affirmative decisions in 2016.

8.6 RTR ordinances: working to create a modern legislative framework

8.6.1 Ordinances on the Single Information Point for Infrastructure Data (ZIS)

In 2014, the European Union issued a Directive that was intended to significantly lower the costs of broadband deployment in the EU and therefore enable improved internet connectivity for end customers. The transposition of this Directive into Austrian law was achieved with an amendment to the Telecommunications Act in November 2015.[10] As a key element for achieving these cost reductions, a central directory of existing infrastructure and planned construction projects was established, known as the ZIS (see also Section 8.9).

Two RTR ordinances formed the basic foundation for the ZIS

In May 2016, the RTR issued the ZIS-EinmeldeV (RTR ordinance concerning the registering of data with the Single Information Point for Infrastructure Data) to specify the data and the form of data to be reported to the ZIS. This was followed in November 2016 by a second ordinance, ZIS-AbfrageV (RTR ordinance on the querying of data from the Single Information Point for Infrastructure Data), which provides details of how these data are to be queried. Both ordinances were initially published in draft form and discussed at length with market participants. This was intended to ensure both the practical suitability of the ZIS as well as the protection of the data registered.

The RTR ordinances, including their commentaries, can be downloaded (in German) from the RTR website at www.rtr.at/de/tk/ZIS.

8.6.2 Information Requirement Ordinance (MitV)

In 2016, an amendment was required for the Information Requirement Ordinance (MitV). The MitV regulates the format in which customers are to be informed about changes to the terms of their subscriptions. This first amendment to the MitV accommodates the specifications made by legislators, establishing the option of communicating such information by text message for anonymous prepaid subscriptions. Safeguards for customers who receive a printed invoice were also improved: since the amendment, these customers must now receive information about contractual changes via letter – an email (with a qualified electronic signature) is no longer adequate.

The first amendment to the MitV, including explanatory comments, is available as a download (in German) from the RTR website at www.rtr.at/de/tk/MitV.

8.6.3 KEM-V Ordinance

The sixth amendment to the Communications Parameters, Fees and Value-Added Services Ordinance (KEM-V) entered into force on 19 October 2016 (see Section 8.5 for further details). The ordinance is published (in German) on the RTR website at www.rtr.at/de/tk/KEMV2009Novelle06.

10 Federal Law Gazette I 134/2015.

8.7 RTR's international commitments

For years RTR has been working with various international institutions (ENISA, RSPG, RSC, CEPT, etc.) while contributing its expertise – this commitment benefits the entire Austrian ICT sector. The following sections present details of work with BEREC and ERGP.

8.7.1 RTR and BEREC

In 2016 RTR continued its practice of engaging with various international institutions, contributing its expertise in particular to BEREC, the Body of European Regulators for Electronic Communications.

RTR: numerous inputs for the BEREC Work Programme 2016

The key points of focus for the BEREC Work Programme 2016 were the implementation of the EU TSM (Telecoms Single Market)[11] Regulation adopted in November 2015, which sets out new regulations for abolishing the surcharges for roaming services and codifying net neutrality, as well as the preparation of initial analyses of the proposals made by the European Commission for a European Electronic Communications Code.

In particular, discussions concerning the drafting of the BEREC net neutrality guidelines attracted strong interest from the public. BEREC was obliged to publish these guidelines by 30 August 2016, following a preliminary six-week consultation period. BEREC had only a few weeks to process the volume of nearly 500,000 statements that had been submitted.

RTR once again made substantial contributions to work on international roaming in 2016. Apart from preparing a BEREC input for the European Commission consultation on the wholesale roaming market, BEREC also created guidelines for the implementation of the 'transition period' until the complete abolishment of charges for regulated roaming services. In addition, BEREC also created an input for the Commission proposals for the Commission Implementing Regulation on the fair use of regulated roaming services and the sustainability of the abolition of retail roaming surcharges (see Section 8.7.3 for further details).

In the second half of 2016, BEREC focused primarily on addressing the European Commission drafts for the new legal framework, and published an initial statement on these at the end of the year. Work in this context will continue over the next few years: RTR will continue to make significant contributions to these discussions, and help to shape the European legal framework so as to accommodate the interests of both the Austrian industry and Austrian consumers. This engagement is further underlined by the fact that RTR Managing Director Johannes Gungl will assume the role of BEREC chair in 2018.

2. BEREC plenary meeting 2016 in Vienna

As in 2012, RTR once again organised a BEREC plenary meeting in 2016, and welcomed over 100 participants from all over Europe to the event held in Vienna in early June. The plenum agenda also included a workshop on the topic of NGA/NGN rollout.

8.7.2 Net neutrality

Once again, the topic of net neutrality was an important point of focus in RTR's international work. This resulted in particular from the obligation defined in the European net neutrality regulation (TSM Regulation), which required BEREC to prepare a set of

11 Regulation (EU) 2015/2120 of the European Parliament and of the Council of 25 November 2015, laying down measures concerning open internet access and amending Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services and Regulation (EU) No 531/2012 on roaming on public mobile communications networks within the Union.

guidelines by 30 August 2016. These guidelines were to support national regulatory authorities in their implementation of the new net neutrality provisions and ensure the uniform application of the TSM Regulation within the EU.

In this context it should be emphasised that only nine months separated the enactment of the TSM Regulation (in November 2015) and the deadline for the publication of the BEREC guidelines. This was a tight schedule for the creation of guidelines, not least because this work had to be performed in close collaboration with the European Commission, with various representatives of interest groups needing to be heard and a public consultation to be completed.

During the six-week consultation on the BEREC guidelines, which concluded mid-July 2016, a total of approximately 500,000 statements were submitted by internet service providers (ISPs), civil society organisations (CSOs), public institutions and private individuals, as well as online content/application providers. This unprecedented level of participation in a BEREC consultation indicates the importance of net neutrality for society and the significance of pending issues related to this topic. At the end of the consultation, the statements were analysed thoroughly and discussed at length by BEREC.

RTR was closely involved in the process of preparing the BEREC guidelines and is firmly convinced that the final version of the BEREC guidelines will effectively safeguard net neutrality in Europe into the long term. In addition, the BEREC guidelines help to ensure the uniform application of the TSM Regulation in Europe, while underpinning the predictability of regulatory activities.

RTR will secure comprehensive implementation of the TSM Regulation in Austria and actively monitor developments in relation to net neutrality. Initial insights into the state of the public internet in Austria will be available from a net neutrality report, which the regulatory authority will publish on an annual basis.

The English and German version of the BEREC guidelines and the consultation report are available online at www.rtr.at/en/tk/Netzneutralitaet.

8.7.3 International roaming in the EU

At the international level, RTR contributes to the topic of international roaming in European legislative procedures by providing support to the BMVIT and participating in the BEREC International Roaming working group. Work in BEREC has included preparing an input for the analysis of the wholesale market and the revision of the BEREC guidelines on the Roaming Regulation, especially in terms of the adjustment to the changes made to the Roaming Regulation by the TSM Regulation, as well as contributing to an input for the Commission Implementing Regulation concerning fair use and the sustainability of the abolition of retail roaming surcharges[12].

The revised BEREC guidelines, which can be consulted for help in interpreting the Roaming Regulation,[13] also consider the profound changes to the Roaming Regulation brought about by the enactment of the TSM Regulation, which have led to the modification of the roaming regime in effect to date. The changes address in particular the interpretation of the regulations on the transition period. A further update of these guidelines, dealing with the topic of 'roam like at Home' (RLAH), is planned for 2017.

An additional step towards the abolition of roaming surcharges in the EU is the analysis of the wholesale roaming market. To this end, the European Commission has carried out a public consultation in which BEREC also participated by identifying and analysing various options for a wholesale regulation.

12 Commission implementing regulation (EU) 2016/2286 of 15 December 2016, laying down detailed rules on the application of fair use policy and on the methodology for assessing the sustainability of the abolition of retail roaming surcharges and on the application to be submitted by a roaming provider for the purposes of that assessment.

13 Not an official legal interpretation.

In addition, RTR's participation in the BEREC working group also involved contributing to an input for the Commission Implementing Regulation setting out the weighted average of maximum mobile termination rates across the Union,[14] which specifies the maximum possible surcharge to be billed for incoming telephone calls in a roaming situation. In addition, BEREC regularly creates benchmark reports and the 'Transparency and Comparability of Roaming Tariffs Report', which looks in particular at the transposition of the transparency provisions from the Roaming Regulation into national law within the member states.

Applicable retail roaming surcharges from 30 April 2016 to 14 June 2017

The transition phase marking the first step on the way to the abolition of roaming surcharges in the EEA commenced on 30 April 2016.

Within this transition period, which is to last until 14 June 2017, the provider may levy a roaming surcharge in addition to the domestic end user price but this surcharge may not exceed certain maximum charge levels. For tariff plans featuring included units, the new regulation requires roaming units to be deducted from the included quantity as if they were domestic units – although a surcharge may also be levied per minute, per text message or per MB. As previously, an alternative roaming plan may also be selected.

TABLE 12: Maximum charges when levying a surcharge in addition to the domestic end user price

Tariff plans with included units: Deduction of included unit (domestic price) plus surcharge (incl. VAT), maximum for	Tariff plans with billing per min/text message/MB; domestic end user price per min/text message/MB plus surcharge (incl. VAT), maximum for
Outgoing calls: EUR 0.06	Outgoing calls: EUR 0.228
Incoming calls: EUR 0.01296	Incoming calls: EUR 0.01296
SMS: EUR 0.024, no surcharge may be levied for message receipt	SMS: EUR 0.072
Data: EUR 0.06/MB, this also applies to MMS if these are included	Data/MMS: EUR 0.24/MB or per MMS

Source: RTR

Once the free units included have been used up, the provider may then bill the domestic end user price plus a surcharge.

If an additional surcharge is not levied, then the maximum charge that the provider may bill is the domestic price charged for the respective service provided into a different network (the 'off-net' price) in a domestic context. The maximum charges stated above do not then apply in this case.

Analysis of the wholesale market

Proposed legislation for regulating wholesale prices is currently being discussed at European level. Adjustments to wholesale prices constitute another step towards the abolition of roaming surcharges.

14 Commission implementing regulation (EU) 2015/2352 of 16 December 2015, setting out the weighted average of maximum mobile termination rates across the Union.

Outlook Abolition of roaming surcharges – RLAH and fair use policy

From 15 June 2017 (assuming the proposed legislation for wholesale price regulation is applicable), domestic providers of roaming services in the context of the fair use policy may charge only the domestic price without any supplementary surcharges. Further details governing the fair use policy were specified by the European Commission in a Regulation dated 15 December 2016.

This Regulation states that customers able to prove normal residence in the Member State or stable links to the Member State must be provided with roaming services at domestic prices when periodically travelling in the Union; such proof includes a full-time and durable employment relationship, participation in full-time recurring courses of study etc.). To prevent abusive or anomalous usage of roaming services, providers may apply control mechanisms that must be based on objective criteria (in particular, primarily domestic consumption rather than roaming consumption or primarily domestic presence of the customer rather than presence in other Member States of the Union).

For certain tariff plans (prepaid card plans, open data bundles), the provider may apply volume-dependent limits for data roaming services at the domestic price, which are to be determined using a calculation mechanism defined in the Regulation. After this limit is exhausted, the provider may levy surcharges at the domestic price.

8.7.4 RTR and ERGP

As is true in the case of electronic communications, an international regulatory committee also exists for postal services – the European Regulators Group for Postal Services (ERGP).[15] The purpose of this Group is to advise the European Commission by providing expertise of practical relevance from the domain of the national postal markets. To this end, the postal regulatory authorities in the 28 EU Member States as members of the ERGP work together in a close and collaborative manner with the representatives of the postal regulatory authorities of the European Economic Area (EEA) under the umbrella of the group.

Internally, the work of the ERGP is divided among five expert groups, whose members are appointed from the individual representatives of the national postal regulatory authorities. RTR's commitment to the work of the ERGP has been through the long-standing and continuous contribution of expertise. This has produced a set of international comparisons and benchmarks that enable classification work, and the identification of potential for changes and improvements. The entire Austrian postal sector therefore stands to benefit from this commitment.

Alongside topics that recur on an annual basis, key points of focus in 2016 were

- the developments, changes and standards in relation to universal service provision as a result of the changing parameters caused by the decline in the volume of consignments, substitution with electronic mail and changing user requirements;
- comparative surveys of postal service quality across Europe;
- complaint management and handling by European postal service providers;
- comparative analyses of consumer protection in Europe;
- the preparation of a multi-year strategy paper with the specification of key priorities for the years 2017 to 2019, based on the underlying concept and regulatory principles of the European Union's third Postal Services Directive. These principles include safeguarding a reliable and sustainable universal service, contributing to the development of a uniform market for postal services (including the promotion of competition) and, finally, protecting the postal service users.

In addition, the work completed by ERGP in 2016 also focused in particular on cross-border parcel delivery for e-commerce purposes. The initiative launched by the European Union in the previous year, which aimed at creating transparency and comparable,

15 http://ec.europa.eu/growth/sectors/postal-services/ergp_en

affordable rates for this sector, was accordingly furthered by a draft regulation published by the European Commission. This draft regulation[16] is currently being discussed and worked on in accordance with the European legislative procedure. ERGP continues to play an advisory role in this procedure by contributing experience from practice, as does RTR by submitting input concerning the needs of the Austrian postal markets.

During 2016, the post of ERGP Chair was held by the Bulgarian regulatory authority CRC, to be succeeded in 2017 by the Italian regulatory authority AGCOM.

8.8 Security of networks and services

Since November 2011, operators of public communications networks or services have been required to report to RTR, according to a form specified by RTR, any security violation or impairment of integrity that has considerable impact on network operations or the provision of services. Each year, RTR is required to submit a report to the European Commission and to ENISA (European Network and Information Security Agency) concerning the notifications received and the measures taken. Moreover, RTR can inform regulatory authorities in other Member States, ENISA or the public about certain notifications on an ad hoc basis. The enhanced transparency sought thereby is offset by requirements intended to protect the privacy of operators' data.

In 2016, RTR received six notifications of security violations or impairments to the integrity of electronic communications networks or services. Three of these notifications related to limitations affecting the availability of internet access from one provider as the result of a wave of DDOS (distributed denial of service) attacks. In this particular case, some 2.5 million subscribers were without internet access via the mobile network for a period of over eleven hours, with a further 1.5 million subscribers being without internet access for over an hour via the fixed network. In another case, cable failure as a result of construction work resulted in 155,000 subscribers being unable to use mobile network services for a period of over nine hours. In another case, a software error led to the failure of the text messaging service nationwide for 2.6 million subscribers for over an hour, and the non-availability of internet access via the mobile network for 500,000 subscribers. An IT problem also led to 35,000 subscribers being unable to access the internet via the mobile network for over 36 hours.

The Austrian Cyber Security Strategy (ACSS) and the Austrian Programme for Critical Infrastructure Protection (APCIP) envisage the creation of risk analyses for the sector that are to be worked on collectively by members of public organisations, industry, research and civic society, and updated at regular intervals. Risk analyses of this kind, which have already been prepared for the energy sector under the auspices of E-Control, should form the basis for defining standards of protection for strategic companies on the one hand, while underpinning state crisis and continuity management planning on the other. The concept of risk analyses for the telecommunications sector was floated at two of the workshops RTR organised in 2016 with representatives of providers and security specialists, and the idea was welcomed overwhelmingly by delegates. Accordingly, RTR has initiated a multi-stage process for creating a risk analysis of this kind. Findings are scheduled to be presented by the end of 2017.

16 http://ec.europa.eu/DocsRoom/documents/17084/attachments/1/translations?locale=en

8.9 ZIS – Single Information Point for Infrastructure Data: an information hub for telecommunications network operators

The Single Information Point for Infrastructure Data (ZIS) was established at RTR in 2016 and consists of a directory of all existing and planned infrastructure that is suitable for telecommunications purposes. In setting up the ZIS, the aim was to create an information hub for telecommunications network operators that permits the efficient exchange of information concerning existing infrastructure and planned construction work, and therefore, as a consequence, to permit the efficient shared use and shared creation of infrastructure.

Who provides data?

All Austrian municipalities are required to provide information, as are all other public bodies that supply GIS data by way of administrative cooperation procedures. Information must also be supplied by providers of public communications networks who are subsequently permitted to query the data collected. Companies operating physical infrastructure for oil, gas, electricity, district heating, water and transportation (including funicular operators) must also supply data. The group of organisations obliged to contribute data is referred to as 'network providers'.

What kinds of data are stored in the ZIS?

Electronic GIS data on supply lines and access points are uploaded by data suppliers to the ZIS Portal, which is accessible from the RTR website, and this data is then imported into a database. Data providers are not obliged to generate new GIS data for networks or to digitise existing analogue planning materials. If the electronic corpus of data changes, then network providers must supply updates via the ZIS Portal.

Since June 2016, over 2 million data records have been supplied by around 3,000 parties required to report – including 2,100 Austrian municipalities.

Who is allowed to query the data?

The ZIS is not a publicly accessible directory: only providers of public communications networks are entitled to query data, since only these parties have a right of concurrent usage. An application for rights of query and access must be submitted to RTR beforehand, and the persons in the telecommunications company who will perform the queries must be granted authorisation to do so.

How is a query performed?

Authorised employees of companies entitled to query the directory use the ZIS Portal to submit their query requests. To do so, they use a graphical user interface to select an area that is relevant for a rollout project planned by their company. Once RTR has approved the query, a map of the area together with the results of the query and the contact details of the network provider (who is also informed that the query has been performed) can be downloaded from the ZIS Portal. These documents form the basis for discussions between the querying party and the network provider to sound out options for concurrent use or shared construction.

ZIS-EinmeldeV

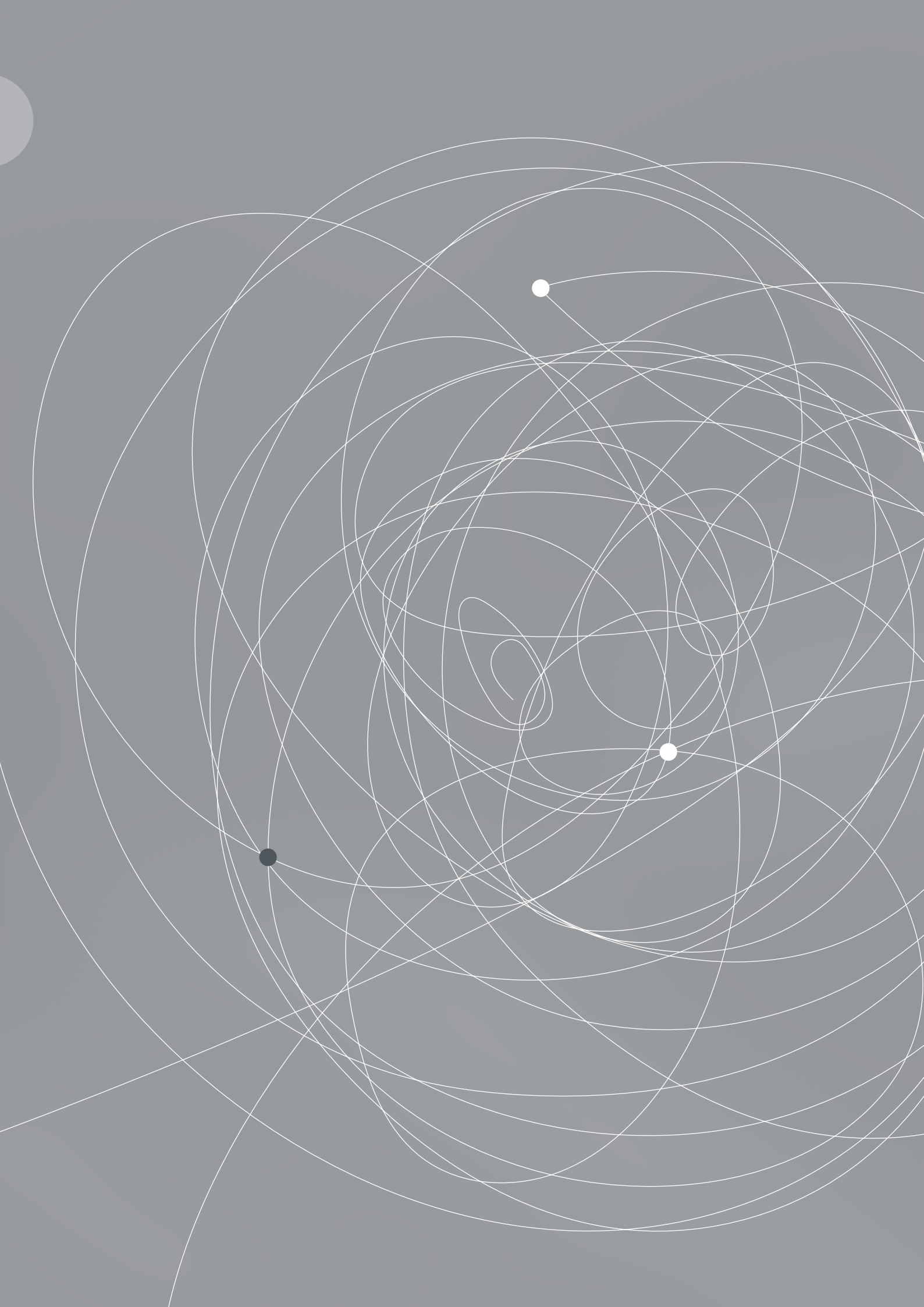
The legal framework for registering data with the ZIS is supplied by the ZIS-EinmeldeV ordinance, which RTR drafted, submitted for public consultation and finally published on 6 May 2016. The ordinance sets out all of the provisions for data registration.

ZIS-AbfrageV

The legal framework for querying data from the ZIS is supplied by the ZIS-AbfrageV ordinance, which RTR drafted, submitted for public consultation and finally published on 21 November 2016. The ordinance sets out all of the provisions for querying data.

Background

In late 2015, the EU Directive on reducing the costs of broadband expansion was implemented in Austria through an amendment to the TKG 2003. The TKG 2003 not only assigns RTR the task of technical implementation as well as a support role for the Single Information Point for Infrastructure Data but also authorises RTR to issue ordinances in this context.



9 Regulatory activities in the postal sector

9 Regulatory activities in the postal sector

The Post-Control-Kommission (PCK) and the Regulatory Authority for Broadcasting and Telecommunications (RTR) are both responsible for safeguarding competition in the postal services market. In addition to providing operational support to the PCK, the RTR has separate official duties with regard to the notification of services and to alternative arbitration. The most significant regulatory activities pursued by the two authorities in 2016 are briefly presented below.

9.1 Procedures before the PCK

Closure and discontinuation of postal service points

A postal service point (PSP) operated by Österreichische Post AG (Post AG) may be closed only on condition that certain preconditions set out in the Austrian Postal Market Act (*Postmarktgesetz*, PMG) are fulfilled. In particular, the provision of the universal service must be ensured by another PSP (e.g. by an already existing Post AG PSP or by a postal service partner). Post AG must notify the PCK in advance of its intention to close any directly operated PSP. The PCK may either: prohibit any such closure if the preconditions for the closure specified in the PMG are not satisfied, make authorisation of the closure contingent on another specified PSP taking up replacement service, or choose to discontinue the procedure and decline to prohibit the closure. More information on procedures relating to the closure of PSPs operated by Post AG can be found in the communication reports for past years.

Post AG notified the regulatory authority of the planned closure of a total of 59 directly operated PSPs in 2016. These notifications resulted in a total of eight 'contingent' prohibitions, meaning that the closure was prohibited pending the commencement of operations by the postal partner designated as a replacement. As all closure requirements were met in the remaining cases, the closures were not prohibited.

As in previous years, supervisory procedures initiated due to the discontinuation of third-party PSPs (for instance due to bankruptcy of postal service partners or the termination of contracts) played a major role in the year under review. Even in these cases, Post AG is nonetheless required to provide universal service and ensure comprehensive coverage. Under certain circumstances, this may also be ensured through alternative service supply solutions, such as rural delivery personnel. In 2016 a total of 74 closures of third-party operated PSPs were dealt with through supervisory measures by the PCK.

The overall number of PSPs in Austria remained almost the same during the reporting year (with 1,775 such points as of 31 December 2016 as compared with 1,777 PSPs as of 31 December 2015). As of 31 December 2016, a total of five rural delivery employees were engaged to provide alternative coverage.

TABLE 13: Postal service points operated by Post AG and by third parties, 2012 to 2016

	2012	2013	2014	2015	2016
Post AG-operated PSPs	550	533	514	499	442
Third party-operated PSPs	1,377	1,357	1,290	1,278	1,333
Total PSPs	**1,927**	**1,890**	**1,804**	**1,777**	**1,775**

Source: RTR

Payment orders for the financing contribution under Art. 34a KOG

The provisions of the KommAustria Act (KOG) also specify for the postal sector that one portion of RTR's expenses is to be covered by funds from the federal budget and another portion by financial contributions from the postal service industry. Where postal service providers fail to meet their obligation to pay financial contributions, the PCK is required to issue an official decision ordering payment of the contribution.

The PCK issued decisions on 2 May 2016 and 17 May 2016 to impose on four companies the payment of financial contributions due for 2015. All four companies filed a complaint against the decision with the Federal Administrative Court (BVwG). A ruling by the BVwG was still outstanding when this report was prepared.

As of 31 December 2016, a further eleven procedures were pending with the BVwG and another three with the Austrian Administrative Court (VwGH).

The reference for a preliminary ruling placed by the VwGH to the European Court of Justice (ECJ) relating to a procedure on financial contributions dating from the year 2012 and involving the PCK was finally settled through a judgement handed down on 16 November 2016. The two issues upon which ECJ was requested to make a preliminary ruling mainly involved the need for a clarification as to whether a discrepancy exists between the EU Postal Services Directive and provisions of national legislation requiring postal service providers to contribute to funding the national regulatory authority's operating expenses, regardless of whether or not they provide universal services.

Among other issues, the ECJ ruling clarified that "given that the EU legislature intended the role and tasks devolved to the national regulatory authorities to have to be of benefit to all operators in the postal sector", for which reason one might reasonably conclude that "all postal service providers may, in return, be made subject to the obligation to contribute to the financing of the operations of those authorities."

The EU Postal Services Directive thus does not conflict with Austrian regulations that impose a financial contribution from all providers in the sector. This decision was also confirmed by the VwGH in its decision of 20 December 2016, in which it rejected as groundless a complaint made by a postal service provider against the imposition of the financial contribution. From the point of view of the RTR, one effect of this decision is that the current model for financing the postal service's regulatory authority is not in need of modification.

Issuing licences

Commercial activities for the purpose of conveying letters up to 50 g require a licence from the PCK. In the year 2016, two extensions to an already existing licence were granted to noebote GmbH, and a new concession was granted to HPC Duale Zustellsysteme GmbH. As of the end of 2016, six companies held a licence: feibra GmbH, Klaus Hammer Botendienste, Medienvertrieb OÖ GmbH, RS Zustellservice Rudolf Sommer, noebote GmbH and HPC Duale Zustellsysteme GmbH.

General terms and conditions and tariffs

For services in the universal service sector, the universal service provider (Post AG) is required to issue general terms and conditions specifying conditions for the services offered and their associated tariffs. The general terms and conditions are to be notified to the PCK on publication. Where the notified general terms and conditions contradict certain provisions of law, the PCK can raise an objection within two months.

Eleven procedures relating to changes in the general terms of service used by Post AG were pending at the start of the 2016 reporting year, of which nine were completed during the course of that year.

The most far-reaching modifications related to a change of the product and tariff scheme used for letter and parcel services, specifically as defined in the general terms of service for delivery of domestic letters, international letters, international parcels, newspaper delivery, Sponsoring.Post and official letters with advice of receipt. The new arrangement came into force on 1 January 2017. The changes involved a reduction in the weight categories from five to four and the introduction of a new product referred to as *Päckchen* (a partially registered dispatch). The new scheme resulted in an increase in fees in some areas but also a reduction in others.

A review procedure pursuant to the PMG was carried out by the PCK in relation to the new fees. The PCK's decision was preceded by an expert evaluation. The relevant fees, where they affected (both national and international) universal service obligations, were examined in relation to their general affordability, cost-related pricing structure, transparency and non-discrimination.

Some clauses in the affected general terms of business (in particular those relating to restrictions on liability) were adjusted by Post AG in the course of the procedure in response to the concerns expressed by the PCK.

All changes to the terms and conditions that were notified to the PCK ultimately complied with the criteria defined in the Postal Market Act (PMG) and no objections were raised.

Other procedures

Five years after the coming into force of the PMG, the PCK was required to examine whether aside from Post AG there are any postal service providers in existence capable of providing nationwide universal service. The RTR was therefore commissioned by the PCK to investigate whether any such other postal service provider was in existence and whether that provider had any firm interest in providing nationwide universal service.

These investigations resulted in the conclusion that there appeared to be no interest by any other postal service provider in taking over the nationwide universal service even in part, and the procedure was therefore concluded.

In addition to this, a procedure was carried out for the first time during the reporting year of 2016 in relation to access to address data as referred to in Article 35 PMG. Wherever postal service providers make use of address data for forwarding or returning mail, they have a duty to provide other postal service providers with transparent and non-discriminatory access to these address data. Such data must be used by postal service providers exclusively for that purpose and no other. The concrete terms according to which the above is put into practice remain to be agreed between the relevant postal service providers. Licensed postal service provider noebote GmbH was unable to reach an agreement with Post AG on access to the address data referred to above, and as a result the PCK, in response to a petition by noebote GmbH, issued a decision setting out the conditions under which that access should be conceded, including the fees payable based on the costs incurred.

9.2 Procedures before RTR

Notification of provision of postal services

Postal service providers are required to notify RTR in advance of the intended provision of a postal service as well as any change to or discontinuation of the service. The list of reported postal services, including the name of the postal service provider, is to be published on the internet by RTR. In the 2016 reporting year four companies reported to the RTR that they were providing postal services: redmail Logistik & Zustellservice GmbH, connect724 GmbH, HPC Duale Zustellsysteme GmbH and Express4Real Trans KG. As a result, the list of postal service providers maintained by RTR comprised of a total of 23 companies at the end of 2016.

Review of Post AG's cost accounting system

The regulatory authority has the mandate to periodically review the cost accounting system used by the universal service provider Post AG. The universal service provider is required to maintain separate accounts in its internal cost accounting systems for services classified as universal services and for those not classified as universal services. The internal cost accounting systems must be based on uniformly applied and objectively justifiable principles of cost accounting. As in previous years the review carried out in the reporting year again revealed that the 2015 cost accounting system complied with the criteria referred to above.

Measurement of average transit times of letters and parcels

At least once a year, the regulatory authority is required to measure and verify, based on the method specified in the ÖNORM EN 13850 standard, the average transit times of letters handled by all providers and, based on real-time data, the average transit times of parcels handled by all providers. The PMG requires that postal service providers meet certain transit times when providing services as part of the universal service mandate.

Postal service providers are required to publish comparable, appropriate and current information on the quality of their services at least once a year, in particular the transit times of conveyed postal items based on the methods specified in ÖNORM EN 13850 and to provide this information to the regulatory authority on request. This implies that postal service providers are obliged to take appropriate measurements.

Based on the review of the transit times for letters and parcels conveyed as part of universal services in 2016, the transit times met by the following postal service providers comply with applicable requirements:

- Österreichische Post AG
- GLS General Logistics Systems Austria GmbH
- Klaus Hammer Botendienste

The other postal service providers for whom the review procedure was initiated did not provide any services falling within the scope of universal services during the period reviewed, consequently no measurements were required.

9.3 Conciliation procedures: we are here to help consumers

In accordance with the Postal Market Act (PMG), since 2011 users and interest groups have had the right to appeal to the regulatory authority in the event of disputes or complaints involving a postal service provider which they could not satisfactorily resolve with that postal service provider directly. In addition, as of January 2016, the Alternative Dispute Resolution Act (*Alternative-Streitbeilegung-Gesetz*, AStG) now provides another option for the resolution of disputes with postal service providers. As of 9 January 2016, the RTR's postal conciliation body was named one of the nine new Austrian bodies (*AS-Stellen*) that provide an alternative means of resolution of disputes.

As a result of this change, consumers now enjoy substantially improved conditions under which to settle disputes with postal service providers:

However, the precondition remains that in order to apply for conciliation the consumer must have already attempted to reach an acceptable solution by making a written complaint to the relevant postal service provider.

Use was made of this option to a substantially increased extent in 2016. In total 159 applications for conciliation were filed, representing a 78% increase over the previous year. There appear to be two reasons for this major increase: firstly, the renaming of the conciliation body for postal services in accordance with the AStG along with the accompanying media attention received; and, secondly, the entry of a new competitor into Austria's market for parcel services. The most frequently encountered problem areas included delivery problems (41%), loss of international parcels (9%), loss of domestic parcels (7%), mail forwarding orders and orders to have mail saved during holidays (7%), as well as assorted complaints classified under miscellaneous (13%). Within the category of miscellaneous complaints were such issues as drop-off orders, questions about postal service points, franking machines, legal issues, online services and similar).

In relation to how these cases were completed we can report that in the bulk of the cases it proved possible to satisfactorily resolve the issue for the affected consumers, including the payment of damages (in 43% of cases), improvements to the service that was the object of complaint (20%) and amicable agreements (10%).

The time required for processing complaints could be further reduced thanks to a good basis of cooperation with certain postal service providers. As a result it proved possible to resolve 71% of all complaints within 30 days.

10 The Austrian communications markets in 2016

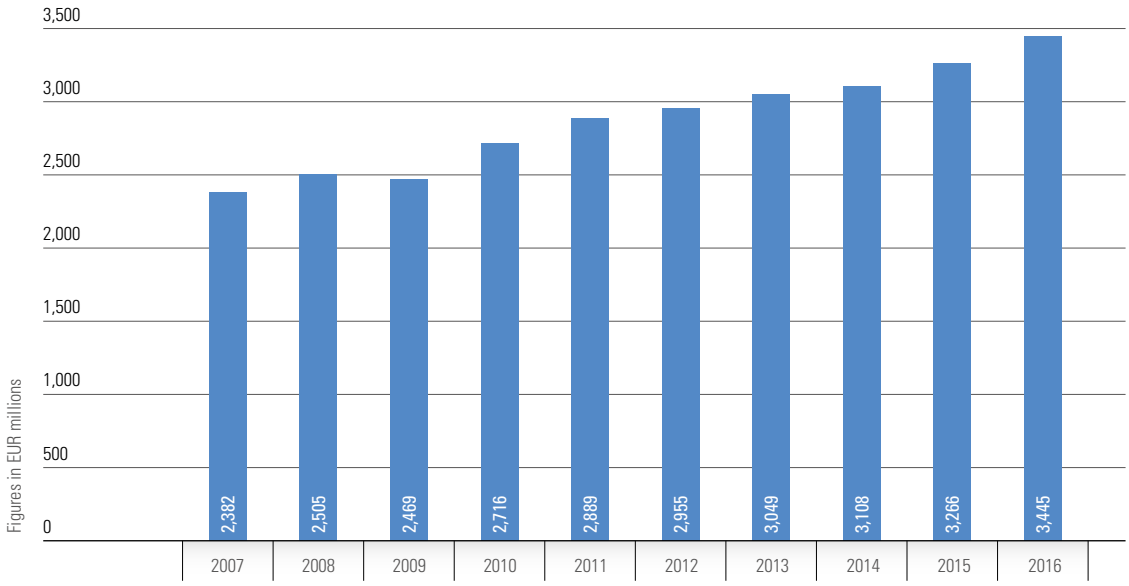
10 The Austrian communications markets in 2016

10.1 The Austrian communications and advertising market

10.1.1 Development of the advertising market

In 2016 Austrian businesses ordered advertising in conventional media equalling a gross figure of EUR 3.445 billion, in the form of radio and television spots, advertisements in print media and posters. The volume increased by EUR 179 million compared with 2015.

FIGURE 7: Change in total advertising expenditure in Austria, 2007 to 2016



Source: FOCUS Media Research (excluding cinema, conventional flyer and online advertising)

Representing a year-on-year increase of 5.5%, this was the highest growth rate in gross advertising sales recorded for conventional media since 2011 (when it was 6%). During the intervening years, the growth rate had ranged between 2% and 3%.

As always, it needs to be mentioned at this point that the advertising revenues from conventional media presented here represent gross figures.[17] They do not include any discounts. Specifically, the figures given here refer to the value of radio and TV commercials and of advertising space in print media and on posters and billboards as indicated by providers' official price lists. Yet, the gap between gross and net prices can often be sizable in this case and is probably the largest with private television, where discounts of up to 50% (or even more) can be granted, usually in the form of non-monetary discounts such as free additional broadcasts. With this in mind, while considering that gross advertising sales provide only a limited picture of how well media businesses are performing, they nonetheless give a relatively good view of general changes in the advertising market and of how attractive individual media categories are from the perspective of the advertising industry.

17 All figures for gross advertising sales in Austria: FOCUS Media Research

Measured relative to Austria's population and the correspondingly small advertising market, especially when compared with neighbouring Germany, conventional television in this country generally finds itself in a fairly good revenue situation, albeit one which, on the other hand, does not allow for exceptional growth. This is seen for example in ATV, which was finally sold to competitor ProSiebenSat.1 PULS 4 early in 2017 after having recorded heavy losses in the previous years. The fact that TV nonetheless offers potential is demonstrated by the Österreich media group's move in 2016 to launch its new television channel oe24TV.

In contrast, the positive balance reported for gross advertising revenues by print media is hardly realistic. That industry's advertising income has been shrinking noticeably for years. 'Special interest' periodicals, which by nature cater for a small readership, are always the first to feel the brunt of such changes; one example is the Wirtschaftsblatt belonging to Styria Media Group AG, which had to be discontinued in late 2016. In the final issue, editor-in-chief Eva Komarek wrote: "The newspaper is a victim of the crisis in the media industry. We are not the first victim, and it must be feared that we will not be the last." The reform of the system of press and journalism subsidies announced by media minister Thomas Drozda is a consequence of the press sector's plight and symptomatic of the situation.

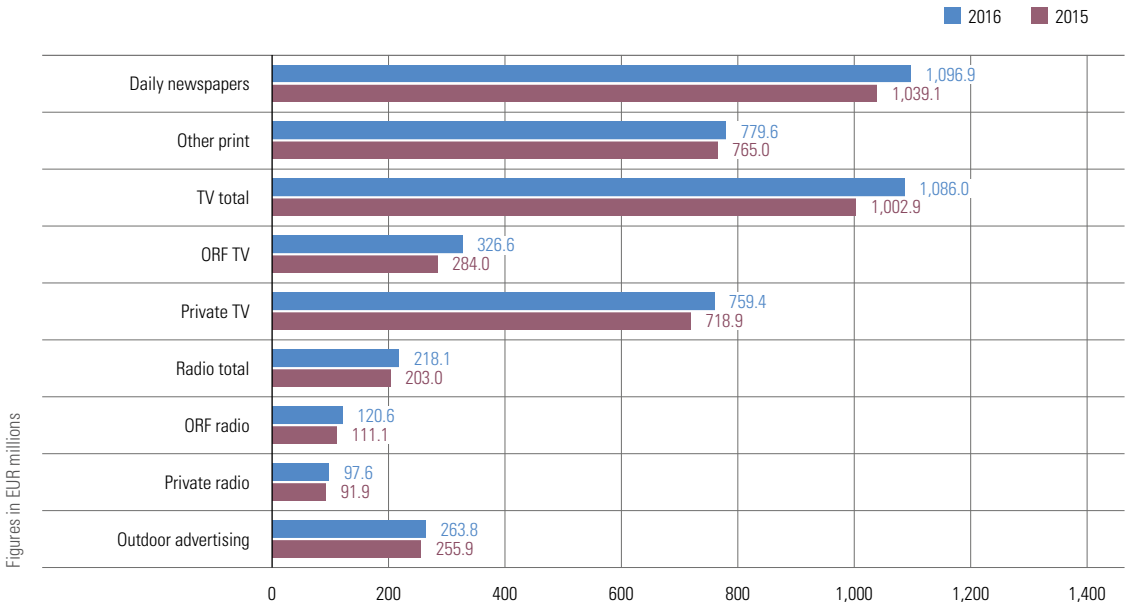
Despite a slight decline in recent years, radio continues to be the conventional medium with the greatest reach. About 77%[18] of Austrians switch on the radio every day, according to a finding in the 2016 Radiotest, the perennial radio market survey carried out by GfK Austria under a mandate from the Austrian Broadcasting Corporation (ORF) and private radio broadcasters. The affair known as the 'Radiotest scandal', which came to light in early 2016, damaged confidence in this advertising category. Employees at GfK had modified the collected usage data to suit their own purposes, in many cases to the detriment of private radio stations while especially enhancing the results for ORF radio station Ö3. The effects are tangible, with the ORF probably taking in several million euros extra in advertising revenues and private radio stations earning that much less.

All categories see gains, ORF TV and radio show the strongest percentage growth

Television advertising achieved the highest growth rate in 2016, increasing by 8.3% or EUR 83.1 million to a total volume of EUR 1.086 billion. The ORF accounted for the majority of growth in total TV advertising revenues in 2016, even though the public broadcaster only had a 30% share (EUR 326.6 million) in this market. While private television broadcasters increased gross revenues by EUR 40.5 million or 5.6%, the ORF's gains amounted to EUR 42.6 million or an impressive 15%. This is all the more noteworthy, considering that the ORF had taken a 7% or EUR 20 million hit in 2015 compared with the previous year. This makes ORF television the clear leader in the 2016 growth rankings among conventional media categories. This growth is clearly attributed in no small part to the European Football Championship in France, in which Austria participated. The Summer Olympic games in Rio de Janeiro probably also benefited the ORF's advertising sales. Slightly surpassing the one-billion-euro mark for the first time in 2015 with gross advertising sales of EUR 1.003 billion, television advertising took another sizable step forwards, diminishing the lead held by daily newspapers, traditionally the strongest category, to only about EUR 11 million. In the previous year, the difference separating the two categories had still been about EUR 36 million.

18 Radiotest 2016, population aged ten and above

FIGURE 8: Advertising expenditure in Austria by category, 2015 and 2016



Source: FOCUS Media Research (excluding cinema, conventional flyer and online advertising)

The long-term trend clearly points to television taking over the lead currently held by daily newspapers in gross advertising income, but daily newspapers are nonetheless continuing to successfully postpone the point in time when that occurs. Many industry experts had confidently predicted the switch for 2016. Yet daily newspapers followed a more aggressive discount policy, which was probably a major reason for the positive gross advertising balance. It is difficult to identify any other explanation, both for the 4.8% increase in gross advertising sales in 2015 and the 5.6% growth in 2016, especially considering that, for several successive years, newspapers have been losing roughly a full percentage point of their daily reach in the category of readers among the total population aged 14 and above (2016: 66.7%) and even had to absorb a loss (minus 2.9%) in gross advertising income for the first time in 2014. Nevertheless, daily newspapers obviously continue to be a major factor in the media mix making up the advertising industry, with the Austrian advertising market still clearly dominated by print media. When the 'other print media' such as weekly newspapers and magazines are additionally taken into account, still more than one in two euros of gross advertising expenditure[19] is invested in print ads. On the other hand, other print products was the category with the poorest growth by far in 2016, at only 1.9%.

In the 'charts' of conventional media with the strongest percentage growth in gross advertising sales, the ORF also takes second place: ORF radio took 8.6% more or an additional EUR 9.5 million euros in revenue, reaching EUR 120.6 million. Private broadcasters improved advertising sales by 6.2% or EUR 5.7 million to a total of EUR 97.6 million. While private radio stations were able to maintain the advertising growth rate seen in previous years (2014: 6.3%; 2015: 6.7%), ORF radio's growth was substantial both in absolute terms and relative to the preceding years, improving its gross advertising sales by 1.3% in 2015 and by 2% in 2014. Overall, 2016 was a very successful year for Austria's radio broadcasters. With a total increase in gross advertising revenue of 7.4% or EUR 15.1 million to a total of EUR 218.1 million, the radio industry achieved a growth rate of roughly double the figure recorded in 2014 (plus 3.8%) and in 2015 (plus 3.7%).

The superior performance of the ORF's radio sector in gross advertising sales might nonetheless appear dubious in the light of the 'Radiotest scandal': after all, when the affair came to light in Q1 2016, it was discovered that the GfK Austria (GfK) market research institute had for years been partially modifying the market shares held by Austrian radio stations, in the majority of cases in favour of the ORF. According to market

19 See Figure 9: Shares of gross advertising expenditure in Austria in 2016, conventional media

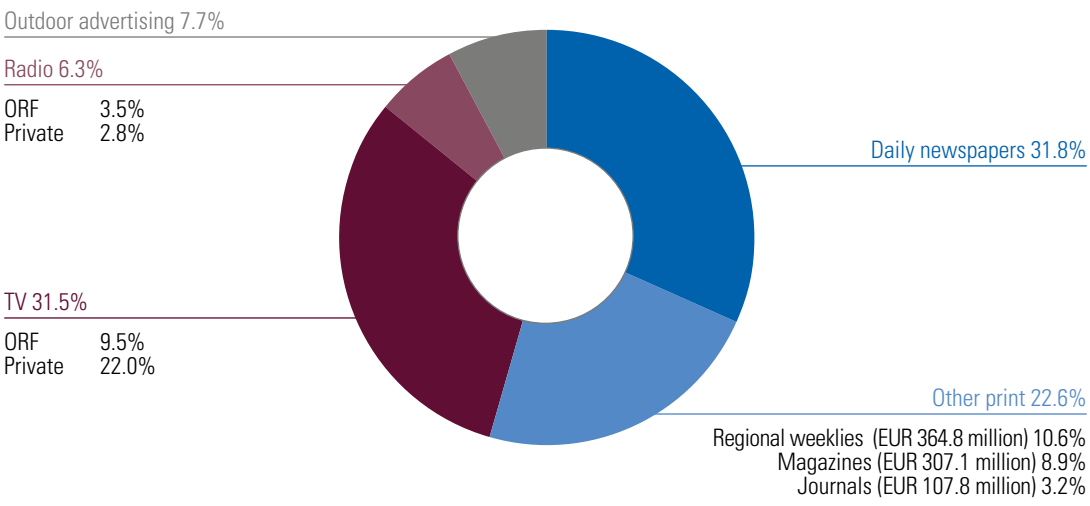
sources, the ORF apparently responded to the affair by offering customers one-time discounts to allay uncertainty. This move needs to be taken into account accordingly when analysing ORF radio's above-average increase in gross advertising sales. As it took most of 2016 to clarify the facts and the scope of the Radiotest incident, it remains to be seen what impact the affair might have on advertising sales by the ORF and by private broadcasters in 2017 and the extent to which it will perhaps be necessary to correct the advertising sales figures reported for earlier years.

Outdoor advertising put on a disappointing showing in 2016, considering that it is in fact currently proving to be the most innovative of the conventional media categories, by expanding Digital Out-of-Home (DOOH) offerings such as lightboxes with videos and other digital screens in public areas. However, following the 'super election year' of 2015 with a 12.4% increase, outdoor advertising was only able to improve sales by 3.1% or EUR 7.9 million in 2016, a poorer performance even than in 2014 (plus 4.7%). Whereas DOOH is still the main driver in outdoor advertising, with an increase of a 'mere' 15.6% this category managed only half the growth rate achieved in 2015 – an astonishing 32.4%.

Little change in share of advertising revenues for conventional media

Even though the 'gross advertising sales pie' grew again moderately, the percentage shares distributed among the individual categories changed little from the previous years, since the growth champions, namely ORT TV and ORF radio, belong to the advertising categories holding the smallest 'pieces of the pie'. Consequently, daily newspapers were able to hold onto the share that they had had the year before, exactly 31.8% of total gross advertising expenditure for conventional media. The radio sector improved from 6.2% to 6.3%, while outdoor advertising fell back slightly, from 7.8% to 7.7%. The most significant redistribution of share was between TV advertising and other print media. The latter dropped by eight tenths of a percentage point to 22.6%, whereas television increased by this exact same amount to 31.5%. Of this share, the percentage held by private TV remained unchanged at 22%, while ORF television's 'piece of the pie' grew to 9.5%. A similar picture is seen for the radio sector: here too, private broadcasters' share remained the same at 2.8%, whereas ORF radio's percentage grew to 3.5%, which, however, is only one tenth of a percentage point larger than the year before.

FIGURE 9: Share of gross advertising expenditure in Austria in 2016, conventional media



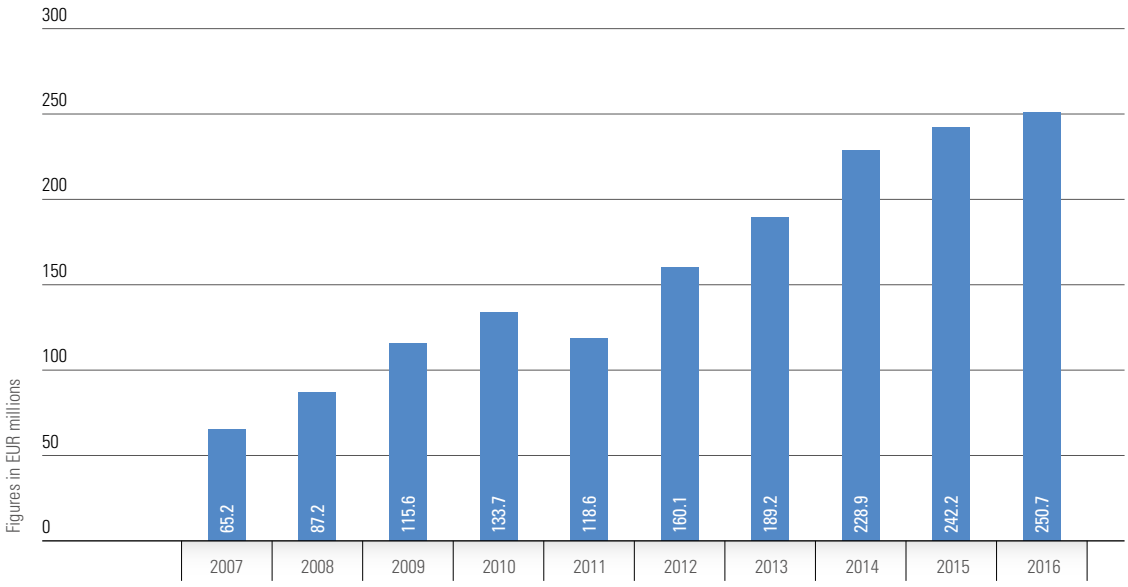
Basis: EUR 3.445 billion
Source: FOCUS Media Research

Renewed poor performance of 'conventional' online advertising

Following 5.8% growth in 2015, conventional online advertising in 2016 experienced an increase of only 3.5% or EUR 8.5 million from the previous year (2015: plus EUR 13.3 million) to a total of EUR 250.7 million in gross advertising sales at year's end. Conventional online advertising mainly includes banner ads and direct response advertising on websites (interactive banners linking directly with an online shop) as well as mobile marketing (via smartphone) and in-stream video advertising (such as pre-rolls but not including YouTube and Google). Based on surveys among marketing experts from the advertising industry, FOCUS Media Research estimates that conventional online advertising accounts for about half of total expenditure for online advertising, specifically 49% in 2016. In total, this amounts to estimated gross advertising expenditure of over EUR 500 million for online ads in Austria, including social media and search marketing.

The annual figures for conventional online advertising shown in the figure below are reliably comparable for the period since 2013, according to FOCUS Media Research. Prior to that year, repeatedly adapted survey methods, the lack of full survey coverage of existing online offerings (or changes to the range of online offerings surveyed) and often unclear pricing models had allowed only an approximate representation of the situation and limited comparability of figures from year to year. Surveys of online advertising market data nonetheless continue to be more of a presentation of trends, relying in part on estimates, projected figures and direct surveys by advertising firms.

FIGURE 10: Online advertising expenditure in Austria excluding search engines and social media, 2007 to 2016



Figures can only be compared from year to year to a limited extent. 'Search engines' refers to search engine advertising.
Source: FOCUS Media Research

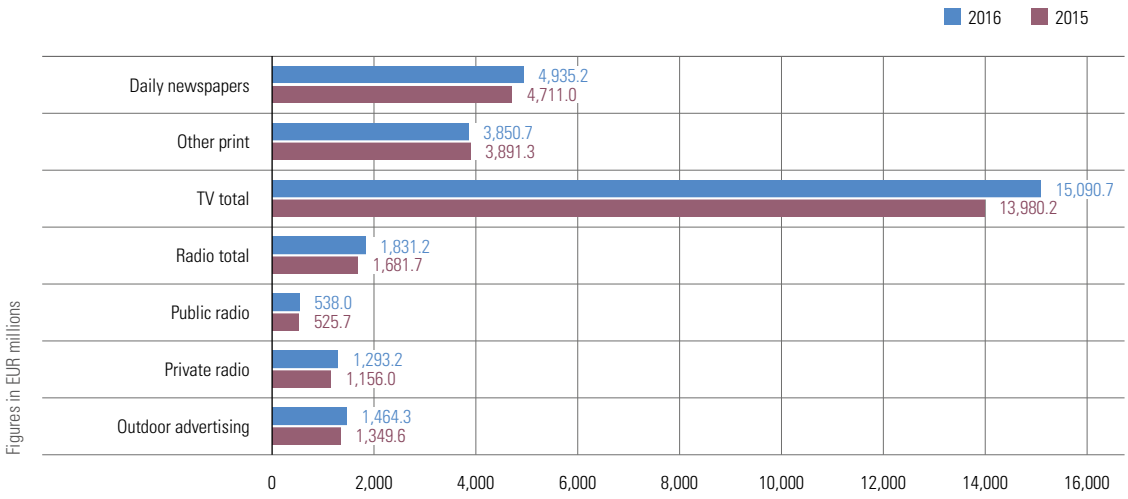
While FOCUS Media Research does in fact base its surveys on sales as reported by most of the major Austrian online platforms – for example, websites run by print media and TV and radio broadcasters – as well as by major marketing firms such as Goldbach and Styria digital one, the major US players continue to be discreet on this matter. Another factor is that, as FOCUS observes, discounts are practically boundless in the online sector.

Nor do the figures reflect direct investment by Austrian businesses in online services such as sending direct mails and newsletters using a company's customer database.

10.1.1.1 Comparison with the German advertising market

The German advertising market grew more strongly in percentage terms in 2016 than the Austrian market. Conventional media increased gross advertising sales by 6.1% (2015: 3.9%) or EUR 1.56 billion to a total of EUR 27.172 billion (2015: EUR 25.614 billion).[20]

FIGURE 11: Advertising expenditure in Germany by category, 2016 and 2015



Source: Nielsen Media Research

As always in Germany, television contributed most strongly to advertising growth, yet the percentage last year was considerably lower than in previous years. The reason, however, was not the poor performance of television advertising, but the positive results for the other categories as well. With a EUR 1.11 billion increase in gross sales of commercial time, the German TV industry even surpassed the mark set in 2015 (at plus EUR 912 million) and contributed almost three quarters (71.2%) of the total growth among conventional media, with the comparable figure being 95% in 2015 and 92% in 2014. In Austria, meanwhile, the television broadcasting industry was responsible for a respectable 46% of the total sales increase among conventional media in 2016, while the share had still been only 36% in 2015.

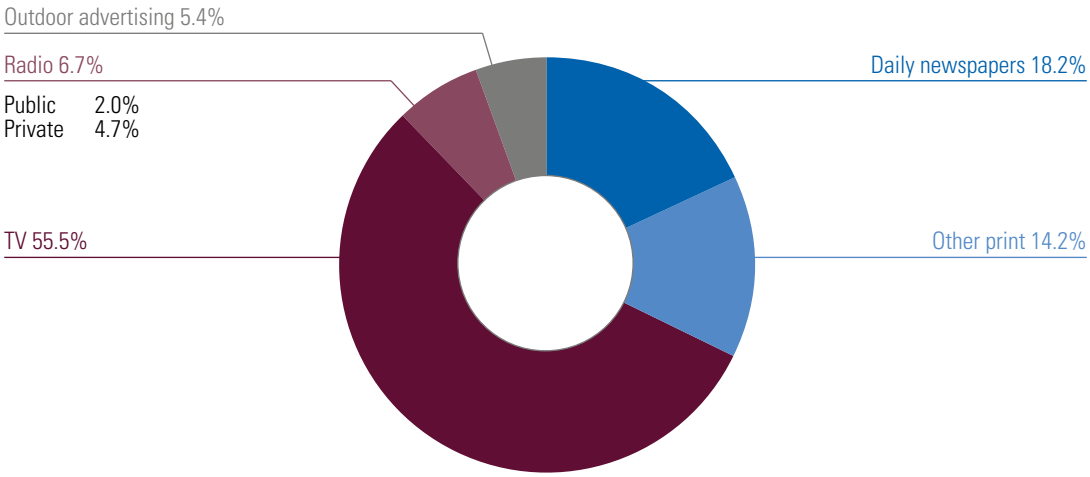
Germany's radio broadcasters took EUR 1.831 billion in gross advertising sales (2015: EUR 1.682 billion), an increase of 8.9% from the previous year (2015: plus 2.9%). It was mainly private radio that contributed to the growth, where gross advertising revenues increased by about 11.9%, while sales among ARD stations grew by only 2.3%.

Recovering from the roughly 1% drop seen in the previous year, daily newspapers succeeded in improving their annual gross revenue from printed ads by about 4.8%, while magazines and other print media took approximately 1% less in revenues. Overall, Germany's print media market improved its earnings by 2.1% (2015: minus 0.8%).

Measured by gross revenue, outdoor advertising in Germany grew by 8.5% in 2016.

20 All figures on gross advertising sales in Germany: Nielsen Media Research

FIGURE 12: Share of gross advertising expenditure in Germany in 2016, conventional media



Basis: EUR 27.172 billion
Source: Nielsen Media Research

Of the EUR 27.172 billion in gross advertising expenditure in Germany in 2016, 55.5% went to German TV broadcasters (AT: 31.5%), 32.4% to the print sector as a whole (AT: 54.4%), while the radio market took a 6.7% share (AT: 6.3%) and outdoor advertising claimed a share of 5.4% (AT: 7.7%).

10.1.2 The Austrian television market

10.1.2.1 Television viewing

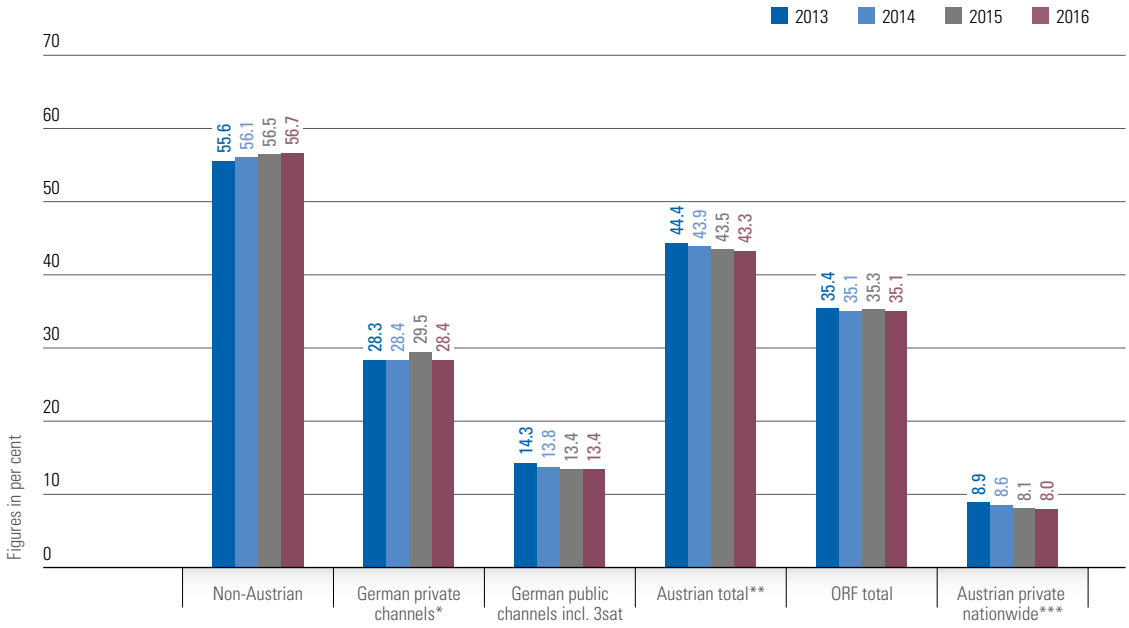
Each day on average in 2016, television reached 62.7% of Austrians aged twelve and over, thus achieving practically the same daily reach as in 2015 (62.4%). While daily viewing time has been increasing for years, in 2016 it climbed at an above-average rate compared with 2015, adding seven minutes for a daily average total of 178 minutes.[21]

10.1.2.2 Proportional market share of Austrian and non-Austrian television channels

For years Austrian TV channels have been gradually losing their share of the market defined as the total amount of television watched by Austrian households; while the long-term trend continued in 2016, the share loss was only marginal. In 2016 Austrian television channels achieved a market share of 43.3% of the viewers aged twelve and above, compared with 43.5% the year before. In total, non-Austrian channels held a market share of 56.7% in 2016, up from 56.5% in 2015 (2014: 56.1%). The trend becomes more evident when viewed over a ten-year period: in 2006 non-Austrian channels held 49.2% of the Austrian television market and still 'only' 46.9% in 2005. One of the main reasons is the switch to digital technology, which favours a steadily increasing number of TV channels, including more and more targeted special-interest programmes, made available via satellite and cable networks.

21 All figures for TV from: GfK Austria/TELETEST working group 2016, representative survey of 1,628 Austrian households

FIGURE 13: Market share of Austrian and non-Austrian TV channels, 2013 to 2016



*German channels with Austria-specific content: SAT.1, ProSieben, kabel eins, kabel eins Doku, sixx, ProSieben MAXX, SAT.1 Gold, RTL, RTL 2, SUPER RTL, RTL NITRO, VOX, Comedy Central/VIVA (A+D), Nickelodeon, DMAX (A+D)
**Austrian channels total, ORF 2, ORF III, ORF SPORT +, ATV, ATV2, PULS 4, ServusTV, R9 gesamt, gotv, OKTO TV, oe24.TV
***Private Austrian nationwide channels: ATV, ATV2, PULS 4, ServusTV

Persons aged twelve and over in all of Austria, all reception modes
Source: TELETEST

The most striking change in 2016 involved the overall group of German private channels (RTL, SAT.1, ProSieben and others). They collectively lost a full percentage point in market share, which was 28.4% at year's end. The decrease is accounted for completely by those German private broadcasters within this group that have a separate advertising slot for Austrian viewers. The market share for these channels shrunk year-on-year from 23.5% to 22.5%, the same share as in 2014. This represents a break with the previous trend in which, within the group of 'German private broadcasters', those channels with Austrian advertising had continuously gained market share. The distinction between 'German private channels' and 'German private channels with specific advertising for Austria' is to be attributed to the fact that many Austrian satellite households have their receivers tuned to the 'original versions' of the German channels, with largely identical content but advertising aimed at the German market.

The five most successful German private channels in the Austrian television market in 2016 were: RTL (4.7%), ProSieben (4.6%), SAT.1 (4.4%), VOX (3.9%) and kabel eins (2.6%).

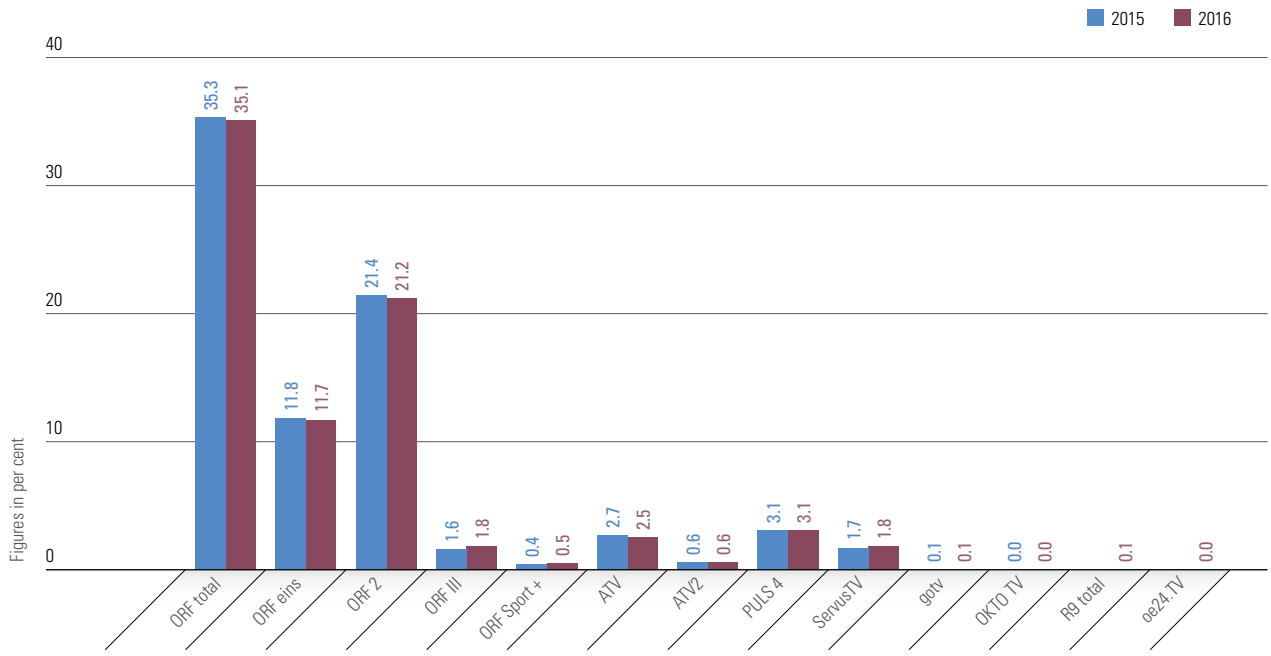
The German public channels also play a major role in the Austrian TV market: together with 3sat, a channel produced cooperatively by Germany, Austria and Switzerland, this group was able to defend the previous year's market share of 13.4% in 2016 (Das Erste/ARD: 3.2%; ARD regional channels collectively: 4.2%; ZDF: 4.2%; 3sat: 1.8%).

In detail, the marginal loss in the market share held by Austrian national television channels was accounted for by the ORF TV channels, with a decrease of two tenths of a percentage point to a 35.1% share, and by the private channels ATV, ATV2, Puls 4 and ServusTV, which together lost one tenth of a percentage point and finished with an 8% share.

10.1.2.3 Changes among Austrian television channels

In 2015, ORF eins had to surrender 1.5 percentage points of its market share, while the ORF had been able to compensate largely through gains made by ORF 2. In 2016, in contrast, there were hardly any significant changes in market share within the group of Austrian TV channels. When examining the decimal-range changes, ATV is seen to have lost two tenths of a percentage point to fall to a 2.5% market share, while continuing to lose share since 2012. ATV's all-time high had been six years earlier, with a 3.6% market share (among viewers aged twelve and above). ATV2 continues to hold a 0.6% market share. While PULS 4 defended its 3.1% market share, this was no cause for celebration, since in 2015 PULS 4 had suffered a setback by half a percentage point from which it was unable to recover in 2016. Continuing its steady upwards trajectory, ServusTV improved its standing by one tenth of a percentage point to reach 1.8%. oe24.TV appears in the standings for the first time after a relatively recent nationwide launch in October 2016, so that its market share cannot yet be really recognised.

FIGURE 14: Market share of Austrian television channels, 2015 and 2016



Persons aged twelve and over in all of Austria, all reception modes
Source: TELETEST

With a loss of two tenths of a percentage point, the ORF channel group fell back to its 2014 position, which was in line with the slightly decreasing trend observed in recent years. While ORF III bettered its share by two tenths of a percentage point to a 1.8% market share, ORF 2 lost viewers by the same magnitude. As a result, ORF III is now on a par with ServusTV, considered by many to be the 'most public-like' private channel of all. ORF eins again lost a slim market share of one tenth of a percentage point to slide back to 11.7%, while ORF SPORT + increased by the same amount to an enlarged market share of 0.5%.

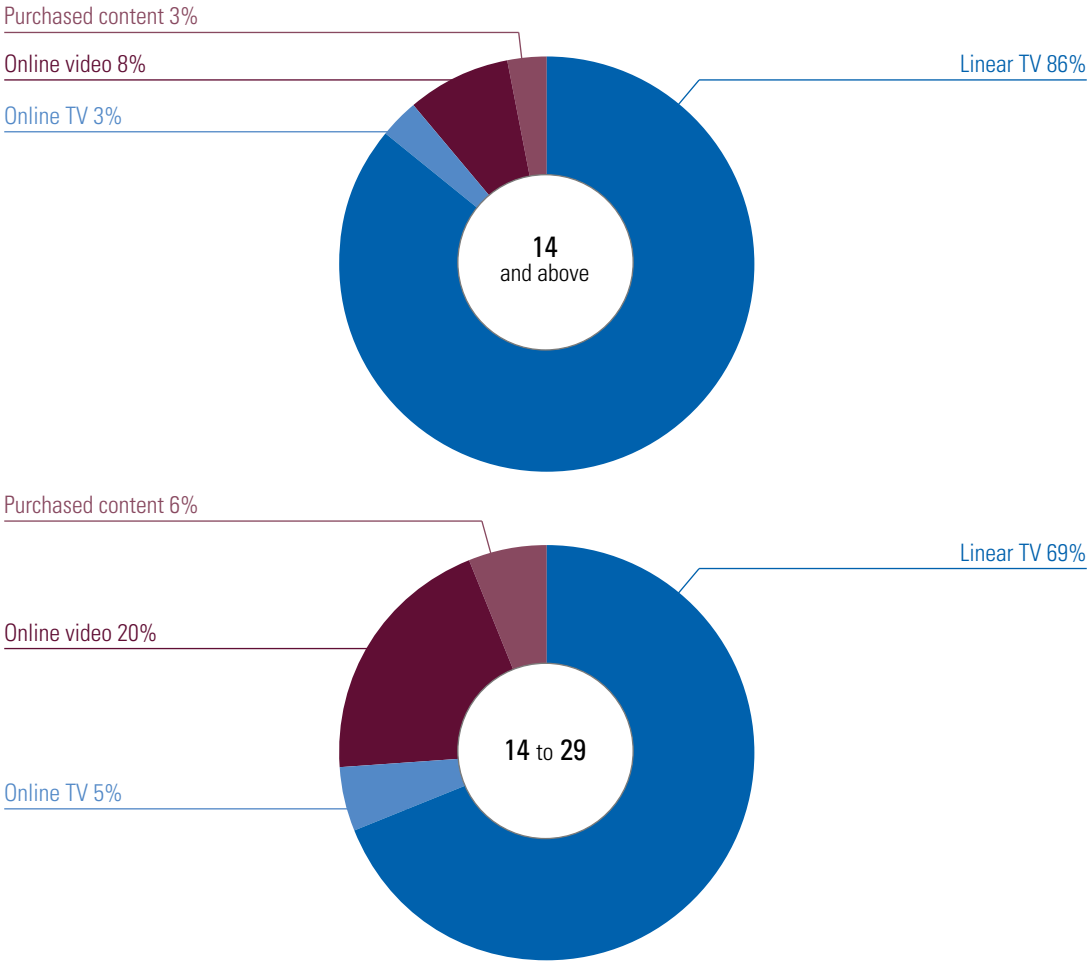
10.1.2.4 Daily video usage: share of linear TV and online TV viewers

For the first time, in 2016, the TELETEST Working Group (AGTT) conducted a representative survey of 4,000 Austrians to discover the extent to which the TV population uses conventional linear television for video consumption compared with online programmes. The 'Video Study' (*Bewegtbildstudie*) reveals that conventional linear television accounts for 86% of the time that members of the population aged 14 and above spend on daily video consumption. The corresponding percentage for video from online sources is 11%,

with 3 percentage points attributed to the media libraries and live streaming services provided by conventional television and 8 percentage points by alternative video sources such as YouTube, Netflix and Amazon Video as well as Facebook and WhatsApp. Purchased content in the form of DVDs, Blu-ray discs and similar media accounts for 3%.

Among the target group of young persons aged 14 to 29, in contrast, online sources already account for a 25% share of video consumption (with 20% attributed to YouTube, Amazon and similar sources, and 5% to TV media libraries), while the share attributed to conventional television is 69%. Yet purchased content still plays a significant role for this group, accounting for a 6% share.

FIGURE 15: Usage of video sources in 2016, all persons aged 14 and above and 14 to 29-year-olds



Source: AGTT Video Study 2016

When the question is narrowed down as to whether or not people view online content, not considering the length of daily use, an average of 27% of the surveyed population is seen to already use online video on a daily basis. Among young people between 14 and 29, online video can already claim a daily reach rate of 47%.

10.1.3 The Austrian radio market

10.1.3.1 Introductory note

In April 2016, during the final stages of preparation of our Communications Report for 2015, it became known that our database had been modified. Specifically, the survey results of the Radiotest, which is the gold standard of the radio market for coverage of this media category, were revised partly for the period 2011 up to and including 2015, resulting in figures that in some cases deviated significantly from the data actually leveraged. This fact was disclosed directly by GfK, the market research institute tasked with carrying out the survey and analysing the results. GfK stated that institute staff had modified statistics on their own accord and to suit their own purposes, modifying values not appearing to conform with their expectations and experience. Such changes affected the data resulting from the question on listeners' daily routine, from which figures including the daily reach and market share are calculated for ORF stations and private broadcasters. Investigations subsequently revealed that, especially in relation to market share, in a large majority of cases the changes had resulted in a better position for ORF stations and often a less favourable position for private radio.

By the end of April 2016, GfK presented at least preliminary corrected figures for all of 2015, which were then able to be considered in our Communications Report for 2015. Nonetheless, these figures did not allow us to prepare the otherwise customary retrospective comparison of changes in the radio market over several years. In the meantime, the figures going back to 2011 have been corrected by GfK and verified by an external auditor, so that we are now again able to present such a retrospective comparison in this 2016 Communications Report.

In the Communications Report for 2015, we already provided examples of the discrepancies between the false and subsequently corrected figures for that particular year, and we thus refrain from going into such detail in this report, while nonetheless bringing to light certain specific items.

10.1.3.2 Radio usage in 2016

The steady decline in listening time seen in previous years was interrupted in 2016. At an average of 180 minutes daily, radio listening time was in fact one minute longer in 2016 than in the previous year among 14 to 49-year-olds, the target group particularly relevant for advertisers. For all radio listeners aged ten and above, daily listening time increased by a full four minutes to a total of 184 minutes per day.[22]

On the other hand, the gradual decrease in radio's daily reach by about one percentage point per year continued. In 2016, 75.1% of 14 to 49-year-olds switched on the radio once a day, whereas the comparable figure had been 80.2% in 2011. Among all radio listeners aged ten and over, radio achieved a daily reach rate of 76.7% in 2016, this being 82.2% in 2011.

10.1.3.3 Market share and daily reach of ORF and private radio nationwide

While radio broadcasters prefer to speak of their station's daily reach, what really translates into money for the advertising industry is a radio station's market share. The daily reach of a radio station expresses the percentage of people within a target age group who tuned into that station 'yesterday' and listened for at least 15 minutes. When for example a listener tunes into three stations for at least 15 minutes each, that listener has a positive impact on the daily reach of all three stations, even if she listened to two of the stations for only 20 minutes each and the third for two hours. Market share, in contrast, expresses the share in average listening minutes per day attributed to a particular radio station. A radio station's market share consequently increases if people listen to it for

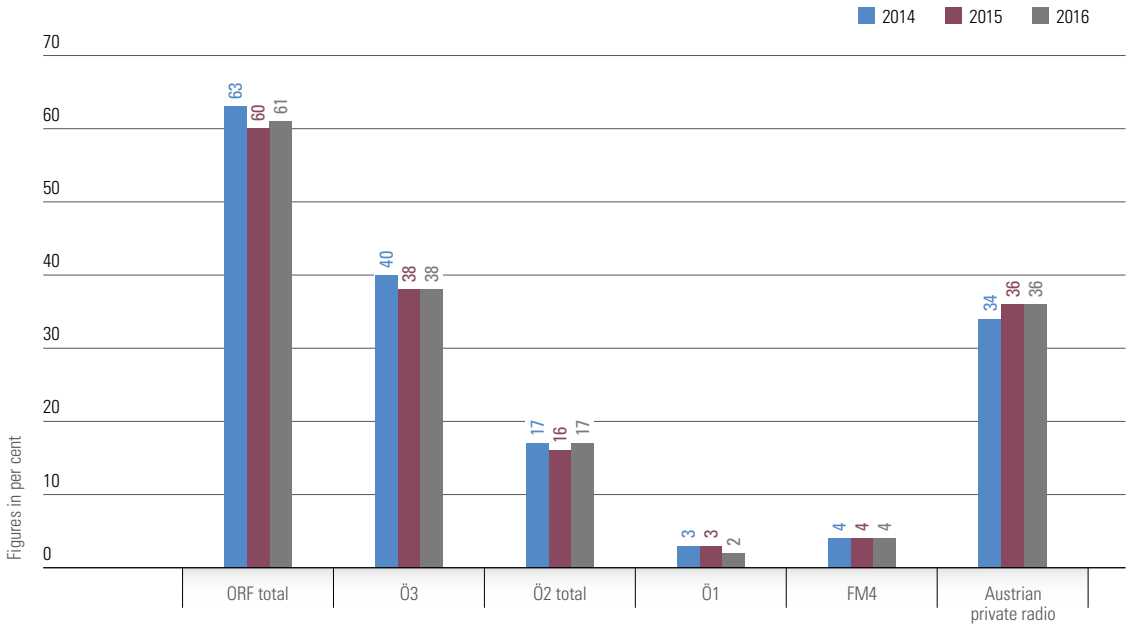
22 Source of all data on the Austrian radio market: Radiotest

a long time each day. Hence it is theoretically possible for two radio stations to have identical daily reach figures but highly differing market shares. While stations with a high daily reach rate are moderately attractive for advertisers, ultimately the probability of listeners hearing a commercial one or more times is significantly greater for a station with a larger market share.

Within the segment relevant for advertising, that is, listeners aged 14 to 49, the entire chain of ORF stations achieved a total market share of 61%, one percentage point more than in 2015.

At 38%, the market share claimed by Ö3 in 2016 remained unchanged from the previous year. Its direct competitors at the regional level, along with the nationwide chain of KRONEHIT radio stations, achieved a total market share of 36%, also remaining unchanged from 2015.

FIGURE 16: Nationwide radio market share among the target age group of 14 to 49-year-olds, 2014 to 2016



Source: Radiotest

Here it is worthwhile looking again at a part of the previously falsified Radiotest data for 2015, in order to more clearly appreciate the magnitude of the scandal. Originally the ORF radio stations had been reported to have achieved an aggregated market share of 64%. It was in fact 60%. According to the falsified figures, Ö3 held a nationwide market share of 40% in 2015 and Austrian private stations a total market share of only 33%. The seven percentage-point difference withered to only two after correction (Ö3: 38%; private stations: 36%).

The Ö2 regional radio stations were able to slightly improve their market share in 2016, together achieving a total of 17% (2015: 16%). Advertising-free cultural and information programme Ö1 was the only ORF station to benefit from the corrected Radiotest data, improving from a 2% to a 3% market share in 2015, only to fall back down to 2% in 2016. ORF youth station FM4 had a market share of 4% in 2016, the same as in the year before.

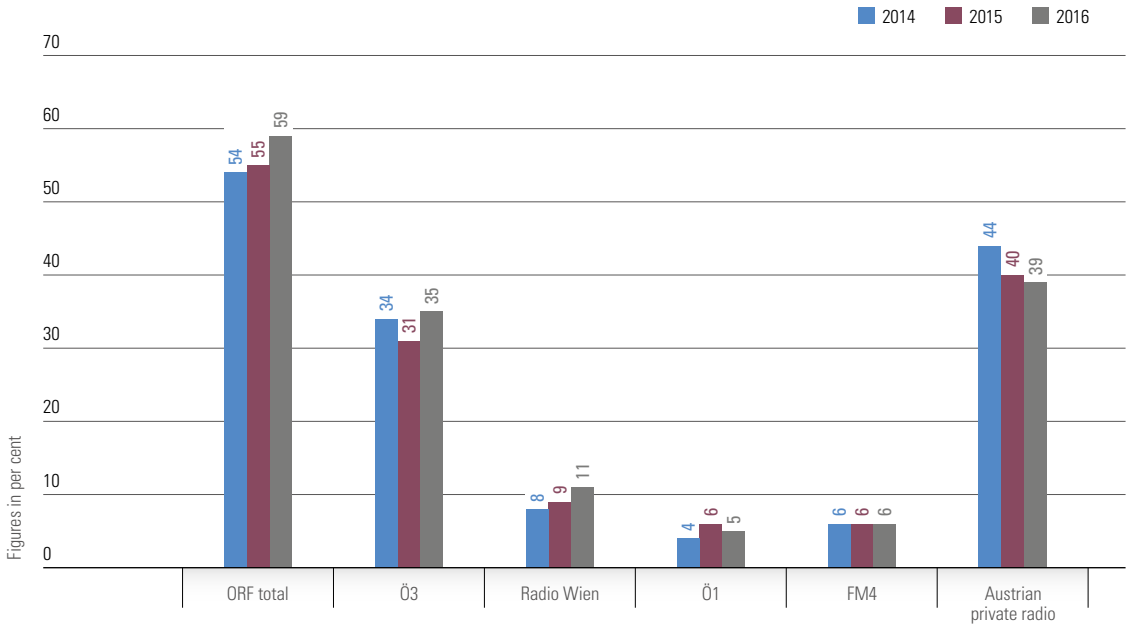
In terms of daily reach among the target age-group of 14 to 49-year-olds, the ORF radio group slightly lost ground again in 2016. Compared with the previous year, the group as a whole relinquished just under one percentage point, to 54.8%. The changes for the individual stations are all within a minimal range of less than one point and thus within the margin of variation. Special mention is made of Ö3, which lost six tenths of a percentage point to finish with a daily reach rate of 39.9%. Yet in principle this is hardly

significant and worth just as little mention as the two tenths of a percentage point increase achieved by private radio as a whole, finishing 2016 with a total daily reach rate of 37.6%.

10.1.3.4 Radio market in Vienna

Especially when the earlier, illegally altered Radiotest figures are considered, the results for 2016 in terms of shares in the highly competitive Vienna radio market offer something of surprise, with private radio and ORF station Ö3 ending up in 2016 at precisely the same positions at which the falsified data had initially put them in 2015.

FIGURE 17: Radio market share in Vienna among the target age group of 14 to 49-year-olds, 2014 to 2016



Source: Radiotest

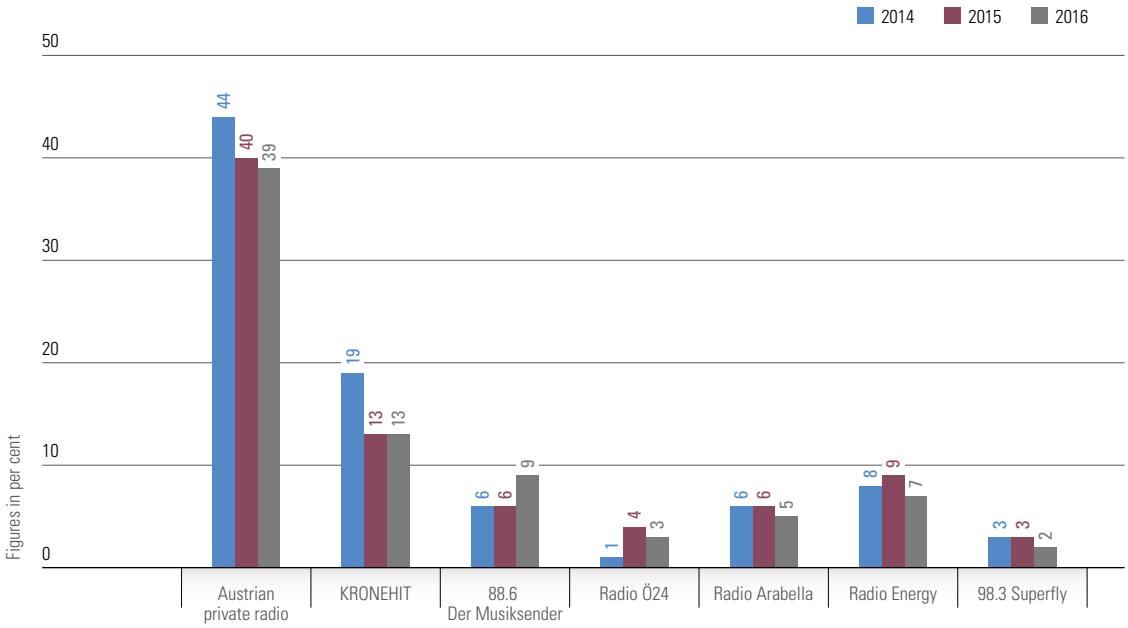
In brief retrospect, while the overall market share of Vienna's private radio stations among the 14 to 49-year-old group in 2015 had to be moved up by one percentage point to 40% after correction, the greatest need for correction applied to the annual market share of Ö3, which had to be revised from the previous 35% to 31% in that year. This meant that the lead in market share enjoyed by private radio over Ö3 all of a sudden expanded through correction from four to nine percentage points.

The current Radiotest for 2016 now shows Vienna's private stations collectively holding a 39% market share and thus having suffered a year-on-year loss of one percentage point. Ö3, in contrast, achieved an above-average gain of four percentage points to a 35% market share. Private radios subsequently had only a four percentage-point lead over Ö3 in 2016 again, which corresponds exactly to the illegally modified and falsified figures for 2015, as already mentioned above.

Radio Wien, the Vienna station belonging to the ORF's Ö2 regional chain, also succeeded in gaining appreciably in 2016, with a two percentage-point increase in market share to reach 11%. The total market share of the ORF station group in Vienna (including the regional stations Radio Burgenland and Radio Niederösterreich) in 2015 was corrected from the initially claimed 58% down to 55%, but then rose to 59% in 2016.

Within the group of private stations in Vienna, a loss of market share in 2016 can be identified in several cases (see Figure 18); but there is also one big winner. 88.6 Der Musiksender was able to improve its share by 50% to a total market share of 9% and move into second place behind KRONEHIT (stable at 13%), displacing Radio Energy (7%, minus 2 percentage points).

FIGURE 18: Private radio market share in Vienna among the target age group of 14 to 49-year-olds, 2014 to 2016

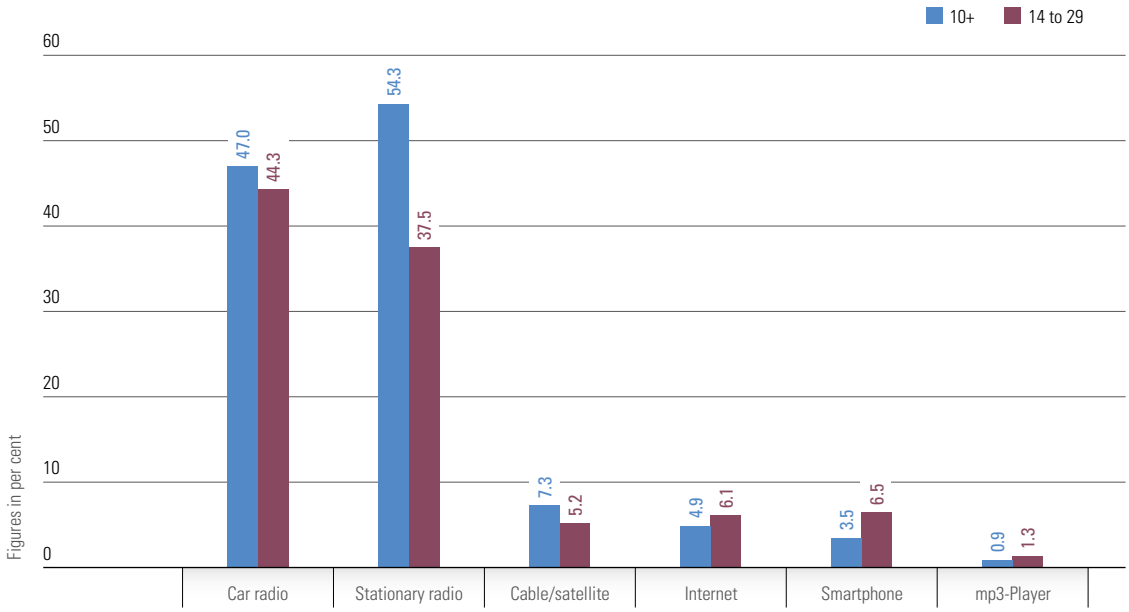


Source: Radiotest

10.1.3.5 Use of radio transmission modes

Radio reaches an average of 76.7% of the population aged ten and above on a daily basis, according to Radiotest. Among the age group of 14 to 29-year-olds, however, the daily reach has been declining for years, falling to 68.9% in 2016. While only 37.5% of 14 to 29-year-old listeners use a conventional FM radio, more than half of the overall population (54.3%) switch on such a device on a daily basis.

FIGURE 19: Daily use of radio sources in 2016, listeners aged ten and above and 14 to 29-year-olds



Source: Radiotest

Younger listeners do not make up the difference by listening to the radio via the internet (using a laptop, internet radio or tablet) or via smartphone. While use of a smartphone for radio listening is more common among young people (at 6.5%) than in the general population (3.5%), the smartphone as a radio source is declining among young people (2014: 7.6%; 2015: 7.4%). Like the smartphone, the internet is also used to access radio more widely by young people (6.1%) than by the overall population (4.9%). Nonetheless, these percentages hardly support the interpretation that the internet shows promise as a future radio transmission mode, especially considering that the percentage of young persons using this mode on a daily basis has practically stagnated in the last three years. As a source of radio, only car receivers enjoy a fairly similar level of use among both the general population (47%) and young listeners (44.3%). After all, either you drive the car or you are a passenger.

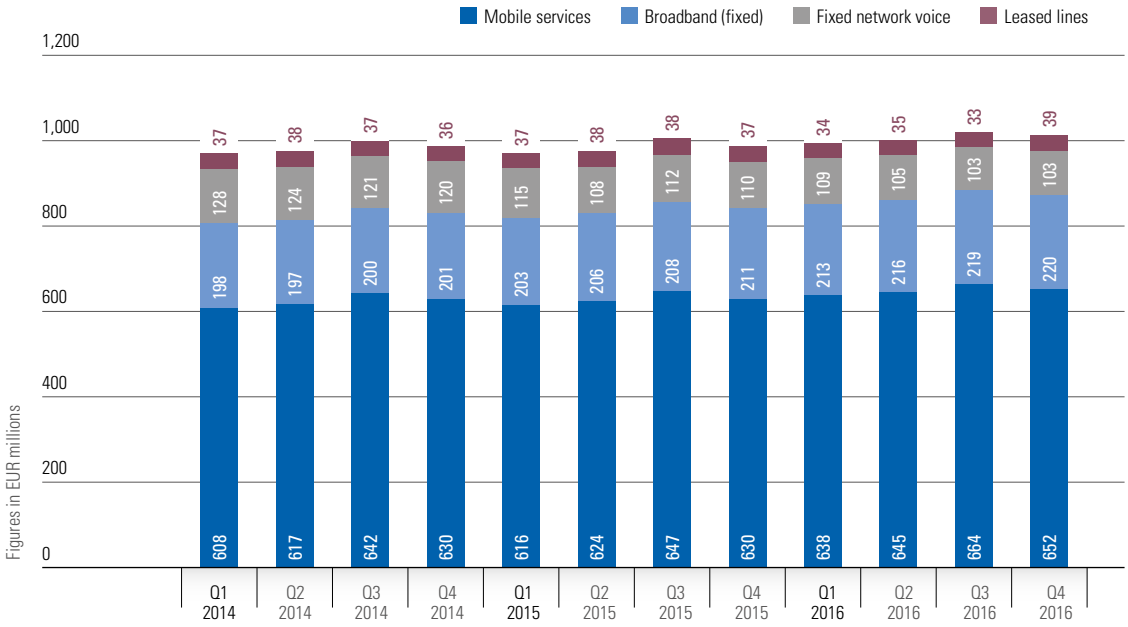
10.2 Development of the Austrian telecommunications markets

The sections below provide a summary of the most significant market developments in the segments of mobile telecommunications, broadband, fixed network and leased lines, and Ethernet services.

10.2.1 General market development

As in previous years, 2016 saw a decline in revenues in the segments of fixed network voice telephony and leased lines, while revenues from broadband services increased. There were also increased revenues from mobile services in 2016, with these already accounting for roughly two thirds of all revenues as at the end of 2016 (see Figure 20).

FIGURE 20: Revenues from mobile services, fixed broadband, fixed network voice and leased lines, 2014 to 2016



Source: RTR

The most important market developments in 2016 are listed below and described in detail in the following sections:

Mobile telecommunications

- Market share: T-Mobile and Hutchison battle for second place, new entrants continue to gain
- Data transmission rates and volumes transferred increase significantly
- Text messages and, increasingly, voice calls are replaced by apps and social networks

Broadband

- Mobile broadband again growing after the 4G rollout
- NGA rollout results in higher bandwidths in fixed networks
- T-Mobile concludes agreement with A1 on virtual unbundling

Fixed network voice service

- Fixed network telephony continues to decline
- Consistent trend towards package products
- CS/CPS soon to be deregulated
- Industry working group specifies IP interconnection

Leased lines

- Migration trend from conventional leased lines to Ethernet services continues
- T-Mobile concludes agreement with A1 on linking transmission towers

10.2.2 Mobile telecommunications

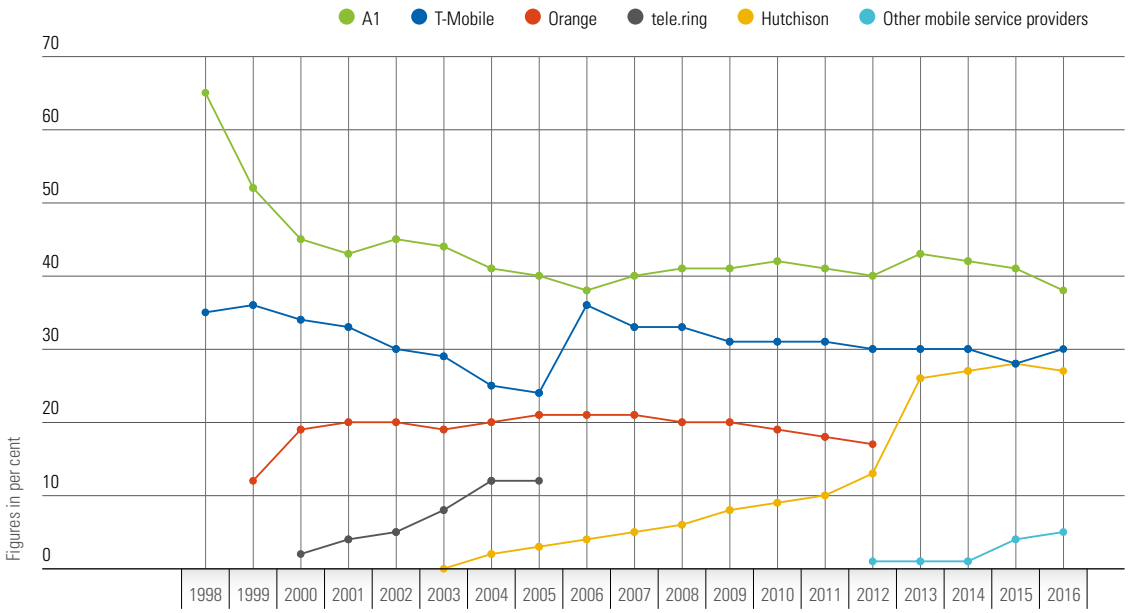
The most significant trends affecting the mobile services market in 2016 are described in Chapter 1. The changes in market share and in the use of mobile services are discussed in detail in the following.

Market share: T-Mobile and Hutchison battle for second place, new entrants continue to gain market share

Measured by the number of subscribers, A1 (including its bob and yesss! brands) continued to hold the largest share of the market at about 38.4% at the end of 2016. After taking over Orange, Hutchison moved very close to gaining an equal market share with T-Mobile, but was still in third place with 26.8% as at the end of 2016. T-Mobile continues to hold the second-largest market share among Austrian mobile network operators, reaching 29.5% by the end of 2016.

MVNOs and resellers with independent ownership have been listed separately since 2012. New market entrants such as HoT, UPC, Lycamobile and Spusu, which fall under the category of 'Other mobile service providers', have together already achieved a 5.2% share of the subscriber market as at the end of 2016.

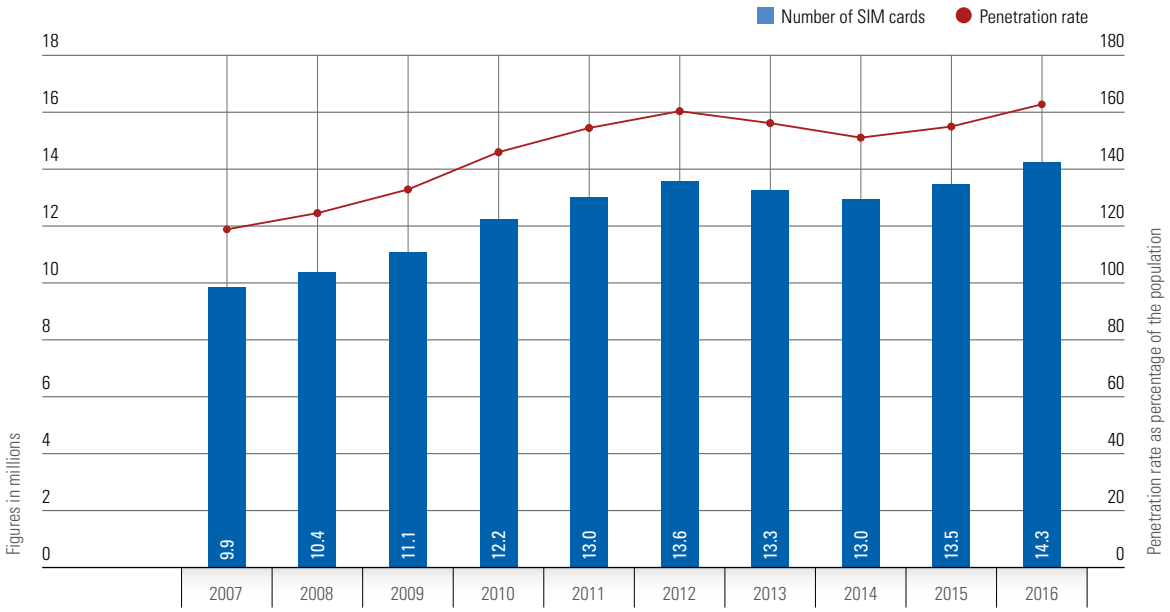
FIGURE 21: Mobile market share based on number of subscribers, 1998 to 2016



The chart displays Orange including yesss! until 2013. From 2013 onwards, A1 Telekom is shown including yesss! and Hutchison including Orange. The category of 'Other mobile service providers' was first listed in 2012.
Source: RTR

Figure 22 shows the number of activated SIM cards as well as the penetration rate. The penetration rate increased slightly in recent years to reach 163% by the end of 2016.

FIGURE 22: Number of SIM cards, 2007 to 2016

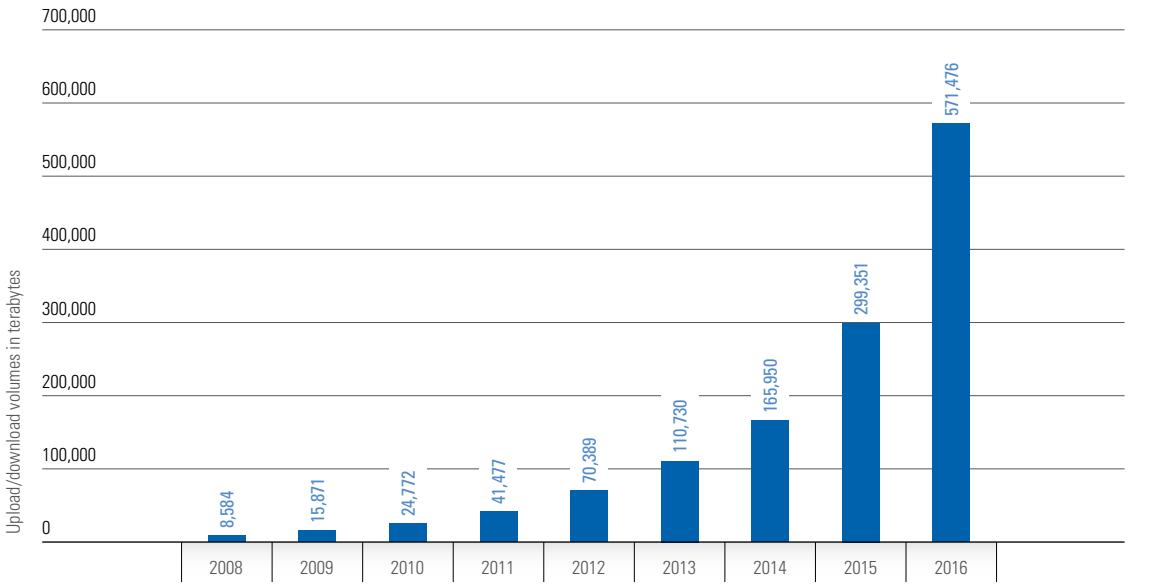


Source: RTR

Volumes transferred and data transmission rates increase significantly

It is impressive to note the steeply rising demand for data by mobile telecommunications customers. While 8,600 terabytes (TB) were uploaded or downloaded in 2008, the figure in 2016 totalled roughly 571,000 TB – 66 times the data volume in 2008. The ever-broadening assortment of services over the years has strongly affected the pattern of customers' everyday data use. The largest share of data is attributed to streaming services, such as TV programmes, videos and films which can be viewed 'on demand'. Data consumption is expected to grow even further in future, in particular due to factors including: LTE and the higher data transfer speeds it supports, the trend towards increased video viewing, and the interlinking of devices via the internet, known as the 'Internet of Things'.

FIGURE 23: Data volumes in the retail mobile market, 2008 to 2016

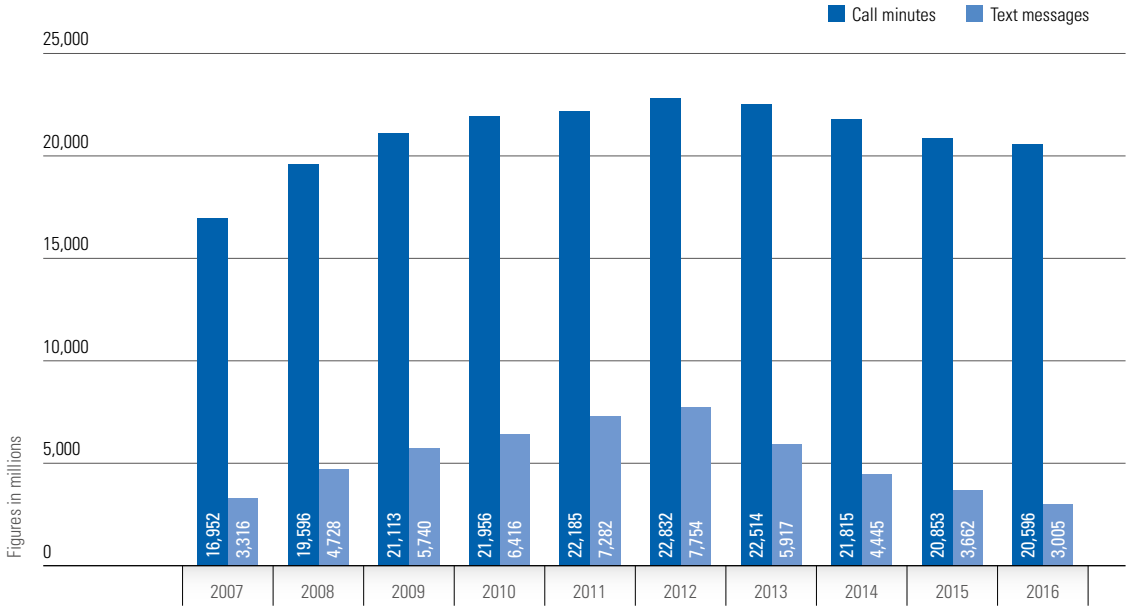


Source: RTR

Text messages and, increasingly, voice calls are replaced by apps and social networks

The trend characterising call minutes and text messages is exactly opposite to that for data services: the number of text messages and minutes has been dropping continuously since 2012. Six hundred and fifty million fewer text messages were sent in 2016 than in the year before, while call minutes decreased by 250 million. This is primarily attributed to the increasing popularity of mobile apps such as instant messaging services (including WhatsApp, iMessage and others), social networks and voice-over-internet services (including Skype, FaceTime and similar).

FIGURE 24: Call minutes and text messages in the retail mobile communications market (technical measurement)*, 2007 to 2016



* Technical measurement refers to the call minutes or text messages actually used or sent by Austrian retail customers. The billed quantity, on the other hand, is the number of minutes or messages charged to retail customers.
Source: RTR

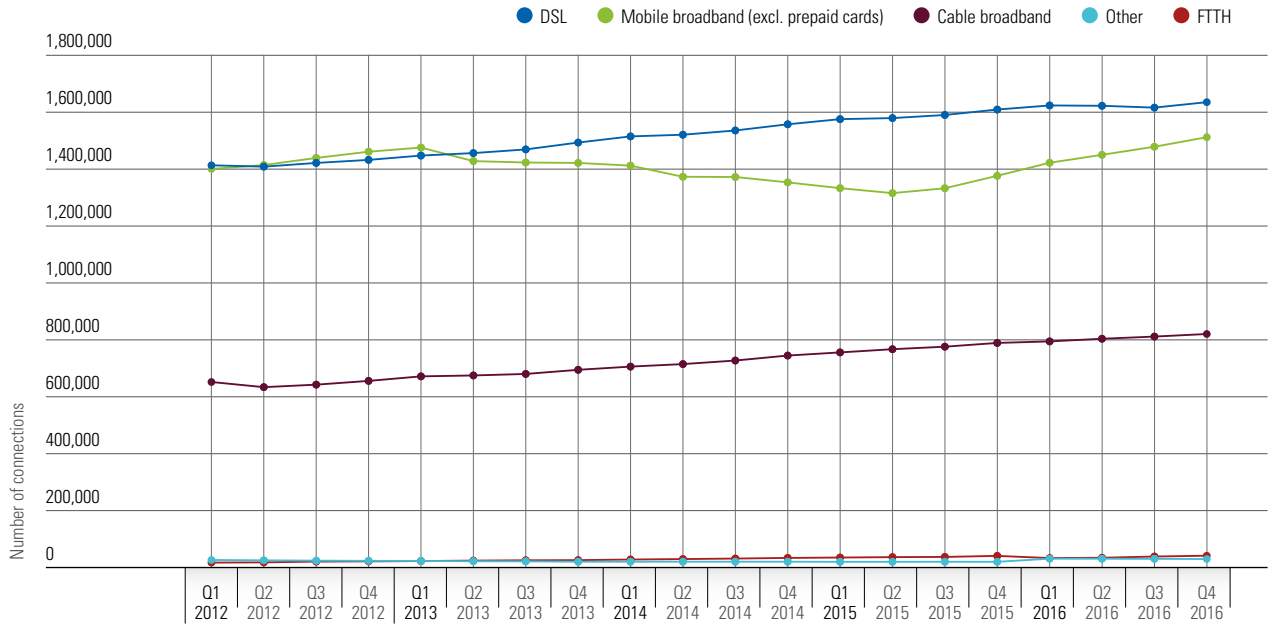
10.2.3 Broadband

Broadband internet access is provided in Austria mainly via DSL, cable broadband and mobile broadband. The major providers in the fixed network segment, in addition to A1 and UPC, are cable network operators LIWEST, Salzburg AG and kabelplus, as well as Tele2, which uses unbundled copper wire pairs supplied by A1.

Mobile broadband growing again after the LTE rollout

Following significant declines between 2013 and 2015, the number of mobile broadband subscribers rose again in 2016 (see Figure 25). After largely completing the rollout of LTE (or 4G) networks in 2015, mobile service providers concentrated their advertising efforts on stationary mobile broadband products ('cubes'). Such products have met with tremendous market success, since the data transmission rates able to be achieved in the still relatively unused LTE networks were (and are) high, flat rates were offered and product installation was easy. The growth rate for DSL and cable broadband, on the other hand, declined somewhat. Yet it remains to be seen whether the success of such mobile broadband products will be prolonged, as LTE networks see increasingly heavier traffic.

FIGURE 25: Number of broadband subscribers, 2012 to 2016

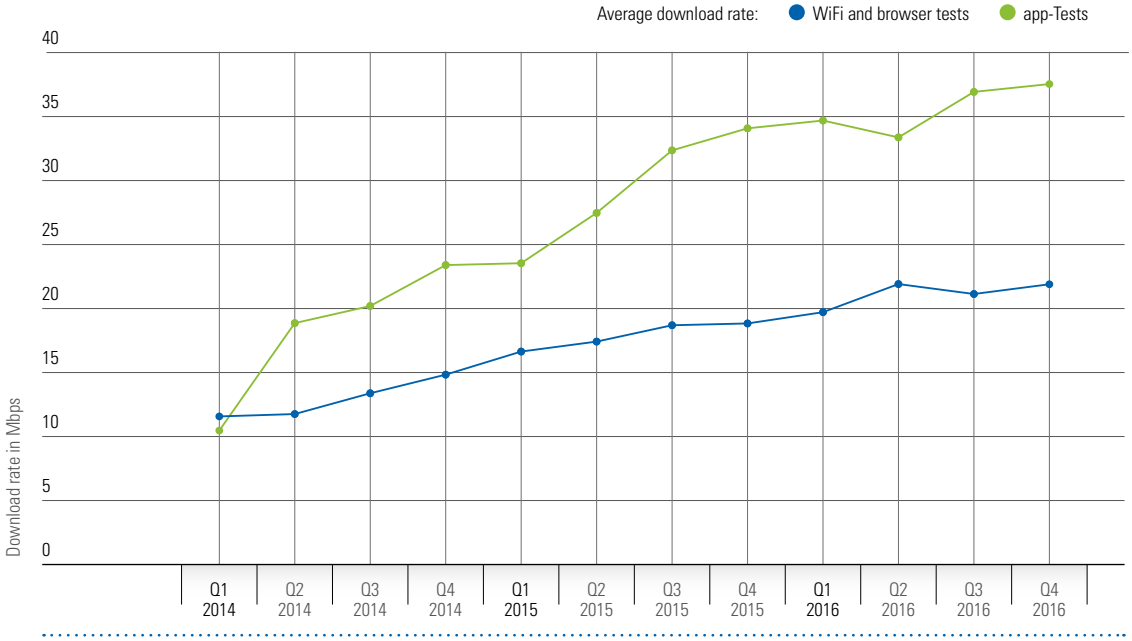


Mobile broadband: mobile data rates charged at a set monthly fee (not including prepaid cards).
Source: RTR

LTE and NGA rollouts yield significantly higher bandwidths

The LTE rollout and consumers' more frequent use of LTE rate plans have led to a significant increase in the bandwidths actually used. This is shown by the figures obtained through the RTR NetTest (see Figure 26). Specifically, the average download speed for mobile services as tested (using the app) increased by about 10% between Q4 2015 and Q4 2016. There was a similarly significant increase, by roughly 16%, in the case of WiFi and browser tests, which include fixed network connections (DSL, cable networks and fibre to the home or FTTH) as well as stationary mobile service products. The bandwidths supported by fixed networks have increased due to the rollout of next generation access (NGA) networks, which entails laying fibre-optic lines in proximity to or even in consumer households. Provider A1 usually lays fibre optics to the street cabinet (fibre to the cabinet or FTTC), most often with new buildings but also directly in households; this provider, along with others, frequently takes advantage of the grant incentives offered by the federal government to roll out regional FTTH networks. The bandwidths supported by cable networks are also being further enhanced through the laying of fibre optics or through the use of more efficient transmission technologies.

FIGURE 26: Average bandwidths according to RTR NetTest, 2014 to 2016



Source: RTR

T-Mobile concludes agreement with A1 on virtual unbundling

Seen overall, for years there has been a decline in the use of the broadband wholesale services provided by A1 (unbundling of subscriber lines, virtual unbundling and bitstream products). An agreement concluded between A1 and T-Mobile now gives reason to hope for a reversal of this trend. The subject of the agreement is the virtual unbundling product, which allows the use of A1's wholesale services to supply broadband connections to private and business customers. Although a (regulated) offer of virtual unbundling has existed for several years, alternative operators have barely made use of this service because it is only offered in rollout areas and handover is required at local level. Also with a view to the ongoing procedure for this market,[23] T-Mobile has negotiated favourable terms for handover at a central point beginning as of 31 May 2017. The agreement has been published by A1 as a reference offer[24] and is also open to other alternative operators.

10.2.4 Fixed network telecommunications

A variety of business models can be observed within the fixed network sector, which differ in terms of the type and amount of network infrastructure used. As the incumbent operator, A1 Telekom is the only one with a nationwide network infrastructure, whereas alternative subscriber network operators only have very limited access to their own infrastructure. Carrier network operators and resellers provide primary carrier services on a call-by-call (CbC) and carrier pre-selection (CPS) basis.

23 See (in German) www.rtr.at/de/inf/Konsult_M_1_5_15_Zugang_lokal and www.rtr.at/de/inf/Konsult_M_1_6_15_Zugang_zentral.

24 See (in German) https://cdn2.a1.net/final/de/media/pdf/Virtuelle_Entbuendelung.pdf.

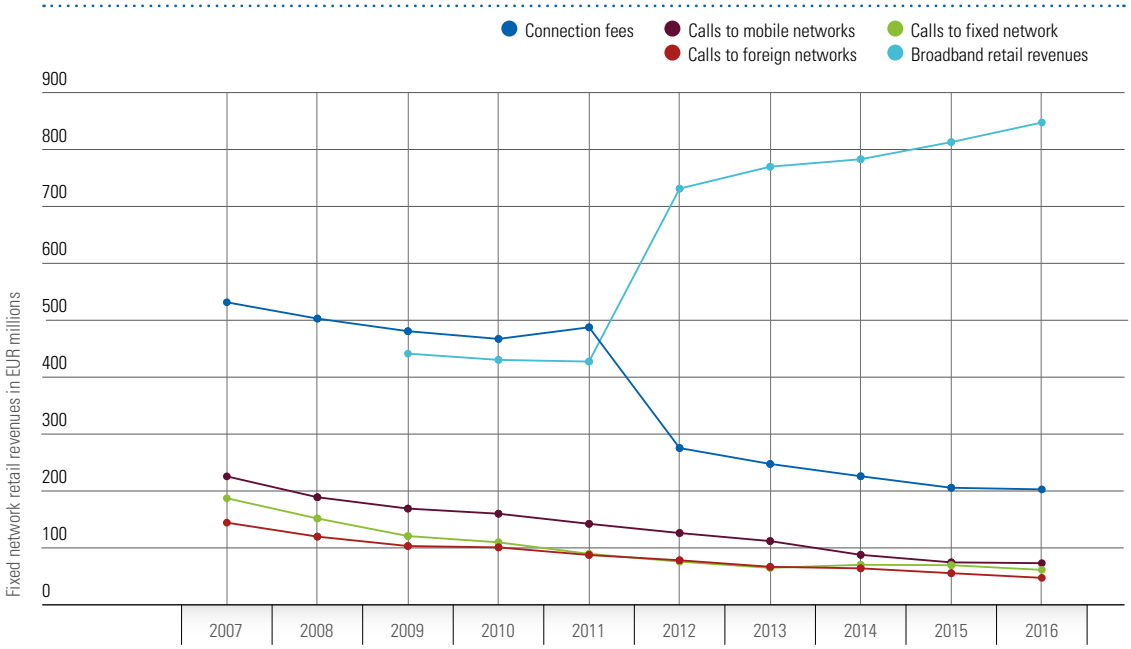
Retail markets

Fixed network telephony continues to decline

Developments in fixed network retail markets in recent years have been substantially influenced by the pressure for substitution arising from mobile networks; this trend continued in 2016. The market share held by A1 Telekom stagnated at a high level (>50%), while CbCs and CPSs continued to lose share in the overall market. The five largest providers in the fixed network retail market collectively account for more than 80% of the call minutes.

Figure 27 shows the changes in revenues for each charge category (line charges, calls to mobile networks, calls to fixed networks and international calls) in recent years. The trends observed in recent years thus continued in 2016. Revenues fell again slightly in 2016 (minus 5%, except for revenues from broadband customers). Significant decreases were recorded in the revenues from charges for calls to other countries (minus 15%) and to fixed networks (minus 12%). In contrast, the decline for calls to mobile networks was only 2%. Line charges also decreased in 2016, but only slightly, by 1%.

FIGURE 27: Fixed network retail revenues by type of business, 2007 to 2016



Note: Due to subsequent corrections by operators, the figures shown here differ slightly from those given previously in the 2015 Communications Report.
Source: RTR

Consistent trend towards package products

With a 4% increase in 2016, revenues from broadband package products were in line with the continued trend towards package products. Revenues from line charges had plummeted by 44% in 2012 in the wake of a revision of the data query as specified in the Communications Survey Ordinance (KEV), as a result of which fees collected as part of broadband packages were subsequently classified under broadband fees. Broadband retail revenues rose reciprocally as such revenues now also included revenues from products bundled with a fixed network (and other services). Figure 27 allows this effect to be clearly recognised.

Wholesale markets

Telecommunications network operators charge one another fees for transferring voice traffic from one network to another. Specifically, what is referred to as a 'termination fee' is charged for conveying traffic to another network. Such charges are set for all operators by the regulatory authority. The regulator has also obliged A1 to allow customers to select or pre-select a network operator (CS/CPS)[25] and in turn to make available to other operators, at a fee, A1's fixed network origination service (transfer of customer voice traffic to the alternative operator's network).

CS/CPS soon to be deregulated

There is increasingly stronger pressure on fixed networks in the area of carrier services (in other words, voice calls) through competition from mobile services, while CS/CPS is becoming less relevant. In view of these developments, the Telekom-Control-Kommission (TKK) is considering deregulation of the fixed network origination market. A draft decision to this effect was put out for consultation in December 2016 and January 2017.[26] Deregulation does not, however, automatically mean that CS/CPS services can no longer be offered in future. In several earlier cases already, A1 continued to offer deregulated wholesale services based on a private business model.

Industry working group specifies IP interconnection

The general trend of converting telecommunications networks to all-IP networks has led to growing demand among network operators for IP-based solutions to support the interconnection of (fixed and mobile) voice telephony networks. A workshop focused on this issue, initiated by RTR, took place back in February 2015.[27] This subsequently led to discussions among network operators within the framework of AK-TK, in which RTR also participated.[28] Finally, in early 2016 an agreement was reached on the technical specifications for an IP-based interconnection of voice service.[29] In this way an important prerequisite has been met for efficient provision of voice telephony services within advanced telecommunications networks.

25 Carrier selection and carrier pre-selection.

26 See (in German) www.rtr.at/de/inf/Konsult_M_1_7_15_Originierung.

27 See (in German) www.rtr.at/de/inf/IPICSprache.

28 AK-TK stands for the Working Group for Technical Coordination of Public Communications Networks and Services (Arbeitskreis für technische Koordination für öffentliche Kommunikationsnetze und -dienste), see (in German) www.oefeg.at/ak-tk/.

29 See (in German) www.rtr.at/de/tk/NGNNGAInfrastruktur/EP022_Ausg_1.pdf.

10.2.5 Leased lines and Ethernet services

Leased lines and Ethernet services are data services made available to the customer as exclusive and uninterrupted connections with a guaranteed minimum bandwidth (dedicated connections). Demand for such connections arises among telecom network operators for the purpose of setting up networks (for example for connecting cell towers and main distribution frames) and for re-sale to end users (business customers). There is also direct demand from businesses, for instance as a means of interconnecting multiple locations.

Migration trend from conventional leased lines to Ethernet services continues

As in past years, in 2016 the trend continued of migrating from 'conventional' leased lines, based on line transfer technology, to Ethernet services that use package transfer technology. Behind this development is the transformation of telecommunications networks which, originally designed as voice carrier networks that were later used to transfer data as well, have become data networks that are used to carry voice service as well.

Whereas the share of Ethernet services in terminating segments – i.e. lines connecting a terminating point such as a base station or end user location – was only 25% in early 2012, the share had grown to about 65% by the end of 2016.

T-Mobile concludes agreement with A1 on linking transmission towers

In September 2016 T-Mobile concluded an agreement with A1 stipulating the provision of connections via Ethernet services to a total of 1,180 transmission towers (base stations).[30] The agreement is of particular interest inasmuch as it provides for bandwidth upgrades and decreasing monthly charges – in exchange for one-time fees in 2019 and 2022. Upgrades include increasing the bandwidth at 100 Mbps locations to 1 Gbps and at 200 Mbps locations to 10 Gbps by 2023. T-Mobile's objective was apparently to ensure that no additional costs would be incurred through the rising demand for bandwidth, considering that the significant increase in bandwidths and data volumes consumed in the end user segment are hardly expected to result in higher average earnings. In accordance with the reference offer made by A1, other network operators are also free to negotiate, on a project basis, similar agreements covering their connections.

30 See the agreement by A1 Ether Link Services concerning terminating services with guaranteed bandwidth (in German): http://cdn2.a1.net/final/de/media/pdf/Vertrag_betreffend_terminierende_Segmente_von_A1_Ether_Link_Services_mit_garantierter_Bandbreite.pdf; see also Annex 8 containing the details of the agreement concluded with T-Mobile (in German): http://cdn1.a1.net/final/de/media/pdf/Projekhafte_Abwicklung_Wholesale.pdf.

11 RTR's activities as a competence centre

11 RTR's activities as a competence centre

11.1 Media Division

11.1.1 Study on "Introduction of digital radio in Austria"

Entitled "Introduction of digital radio in Austria", the Media division of the Austrian Regulatory Authority for Broadcasting and Telecommunications (RTR) published a study in June 2016 examining the general conditions for the possible introduction of digital radio based on transmission standard DAB+ in Austria. The study comprising roughly 220 pages was brought out in the RTR publication series. It was produced on behalf of RTR by Convergent Media Consulting Vienna.

Study director Bertold Heil presented the key points of the work, which painted a rather gloomy picture of the prerequisites for DAB+ in Austria. Many established radio broadcasters lack a convincing DAB+ growth story and a realistic DAB+ business model, which is why they often do not support a rollout. Making a start with predominantly new radio broadcasters and a few also active in the FM domain would be a significant challenge for them in competition with the FM market leaders.

In the event of a DAB+ rollout, RTR Managing Director Alfred Grinschgl held out the prospect of a total grant from the Digitisation Fund of roughly EUR 3 million, to be used digressively between 2017 and 2020.

Michael Ogris, Chair of the Austrian Communications Authority (KommAustria), revealed the results of a survey conducted to gauge interest in DAB+ among market participants. This showed there was sufficient interest and a tender is being prepared for early 2017.

The study and the results of the survey are published on the RTR website (in German): www.rtr.at/de/inf/SchriftenreiheNr12016

11.1.2 Trimediale 2016 event

Trimediale is part of a joint series of events between German state media authorities, the Federal Office of Communications in Switzerland and the Austrian Regulatory Authority for Broadcasting and Telecommunications. The meetings focus on current developments on the media market, which are addressed by media experts of the three countries and evaluated in accordance with their challenges for the regulatory authorities.

The event took place in June, managed by RTR's Media division, and was entitled: "Valuable, neutral, or worthless? – The future of media and regulation in converging competition".

The agenda included three panel debates. The topics: "Quality of information in the media", "Point and purpose of public information – do we still need it (more than ever?)" and "New forms of advertising. Is everything now just commercial information?".

Some of the many taking part included Lutz Marmor, director of Norddeutsche Rundfunk and deputy chairman of ARD (Consortium of public broadcasters in Germany), Eva Weissenberger, editor-in-chief of NEWS, Christian Nusser, editor-in-chief of the daily heute, Corinna Milborn, director of information for PULS 4, Lisa Totzauer, director of information for "ORF eins", and Oliver Böhm, managing director of ORF-Enterprise. The resultant findings were summed up by Philipp Metzger, BAKOM director, and Thomas Langheinrich, commissioner of European Affairs of the Directors' Conference of the

German Regulatory Authorities for Broadcasting and president of the Media Authority of the State of Baden-Württemberg (LFK), Michael Ogris, chair of KommAustria, and Alfred Grinschgl, Managing Director of the RTR Media division.

11.1.3 Research Institute for Electronic Mass Media Law (REM)

REM was founded in 2005 and is established as a non-profit association within RTR. Also in the year 2016, REM devoted its efforts to the scientific study of the legal issues affecting electronic mass media.

The current members of REM's Board of Directors are: Prof. Michael Holoubek (Vienna University of Economics and Business, Austrian Constitutional Court, chair), Prof. Hans Peter Lehofer (Austrian Administrative Court), Prof. Barbara Leitl-Staudinger (University of Linz, Constitutional Court), Alfred Grinschgl (RTR), Prof. Walter Berka (University of Salzburg), Prof. Christoph Grabenwarter (Vienna University of Economics and Business, Constitutional Court), Michael Ogris (KommAustria) and Michael Traimer (Austrian Federal Chancellery).

REM held a workshop on 21 April 2016 on the topic of non-commercial private broadcasting. REM's Austrian Broadcasting Forum (Österreichisches Rundfunkforum), which facilitates an exchange of views among researchers and practitioners on issues affecting broadcasting law, took place for the twelfth time on 20 and 21 October 2016. The forum dealt with continuities and new challenges in connection with the basic right of freedom of opinion under the heading of "Freedom of opinion and media in the digital era: remapping the freedom of communication".

11.2 Telecommunications and Postal Services Division

11.2.1 RTR as operative arm of KIG: driving ICT forward

Information and communication technologies (ICT) are a crucial factor for growth and employment. Sales of roughly EUR 31.3 billion were generated in Austria in 2015 by companies in the ICT sector, which accounts for about 9.3% of GDP. Approximately 106,000 people are employed in almost 16,000 enterprises. Spending on research and development in Austria totalled EUR 10.74 billion in 2016. The research ratio (R&D spending relative to GDP) puts Austria in second place in Europe, behind Sweden (3.26%).

The Internet Society Competence Centre (KIG) was established in 2010 and operates as a central, non-bureaucratic and implementation-oriented institution. The KIG management board comprises one representative each from the Federal Ministry of Finance, the Ministry of Transport, Innovation and Technology, and the Ministry of Science, Research and Economy, and one from the Federal Chancellery. The Austrian Internet Offensive and RTR fulfil advisory roles.

The KIG aims to put Austria at the forefront of ICT countries, to raise the penetration and use of broadband, to grasp the internet as an opportunity for all people, and last but not least to coordinate ICT policy.

Strategically, the KIG focuses on the cluster of education, health and enterprise (so-called 'spearheads'). To facilitate this, the KIG has identified the fields of infrastructure and eGovernment, security, mobility and financing as 'enablers'.

To achieve these objectives, specific measures are taken in the form of projects in the areas of public administration and the economy, which are supported with concrete funding proposals, can be implemented quickly, and have been proven at international level. They are also designed to help improve Austria's position in the Networked Readiness Index (NRI). The measures are bundled into priority lists.

Flagship projects are presented in the priority lists

The fourth list of priorities is currently being prepared. To this end, measures and projects are envisaged, including: a legal system suitable for digitisation, achieve 5G readiness in Austria, a Future Learning Lab to get teachers up to speed on ICT, electronic proof of identity and electronic ID cards, and an Industry 4.0 map. A total of 22 new projects are planned for the fourth list of priorities.

The afore-mentioned NRI helps the KIG measure progress towards achieving its goals. Since 2003 the World Economic Forum has surveyed the ICT readiness of more than 140 countries worldwide based on the NRI. The NRI has a hierarchical structure and comprises the sub-indices of environment, readiness, usage and impact. Each of these sub-indices contains several pillars, and underlying each pillar are various parameters. Every parameter carries the same weight in the calculation. Listing the 143 participating countries based on their results produces the NRI ranking. Austria remains in 20th position, the same as last year, with Singapore topping the ranking.

11.2.2 RTR in advisory capacity: preparing buildings for fibre optics

From the start of 2017 it is compulsory by law to equip all new or newly renovated buildings with high-speed cables (fibre optics or empty cable ducts). The provisions on buildings are designed to support the overarching goal of driving broadband development forward (in accordance with the Austrian broadband strategy) and thereby make a significant contribution to the sustainability of Austria as a business location. Furthermore, the Cost Reduction Directive (Directive 2014/61/EU) also provides for such an obligation.

This new requirement concerns people who were barely affected by the provisions of the Telecommunications Act so far (especially in the fields of construction, planning, real estate and administration), and triggered the need to provide corresponding information. This is why RTR organised an event in November 2016 together with the Austrian Federal Economic Chamber (Legal Policy Department), to provide comprehensive information about these obligations.

Presentations addressed legal, technical and economic aspects

The expansion of broadband using fibre optics, which is economically important but costly, can be supported not only with financial assistance and the provisions on preparing buildings, but also through shared use of infrastructure, coordinating construction projects (shared installation), the approval of alternative laying and building methods, simplifying and accelerating approval procedures and determining uniform standards for in-house cabling.

From a technical perspective, implementing fibre optic broadband and gaining access to houses via empty cable ducts is not a great challenge. Care should be taken though to ensure exchange points and sockets are positioned appropriately in homes, are of an adequate size, and are connected to the power grid. The Indoor Planning Guide (Planungsleitfaden Indoor) by the Federal Ministry of Transport, Innovation and Technology (BMVIT) is a comprehensive source of information for the purpose of preparing buildings.

From a legal perspective, the current situation in Austria with regard to competence (with telecommunications falling under national authority vs. construction law falling under federal state authority) presents a particular challenge for implementing statutory EU obligations. This leads to different applications in the construction regulations of the federal states. Concurrent use and entry in the Single Information Point (ZIS) are also relevant for in-house infrastructure. Further information is published on the websites of the Federal Ministry of Transport, Innovation and Technology (BMVIT) and the RTR.

11.3 Public relations: continuity of information

In order to communicate regulatory activities, the Austrian Communications Authority (KommAustria), the Telekom-Control-Kommission (TKK), the Post-Control-Kommission (PCK) and RTR employ various public relations measures.

In the reporting year a total of 58 press releases were published and three press conferences held to provide timely information about regulatory decisions and related topics. Furthermore, RTR responded to numerous media inquiries, held interviews with media representatives and appeared on TV, mainly discussing issues relevant for end users.

Pertinent information was also circulated on Twitter and via the web-based information service to ensure a more widespread impact.

Enquiry management: individual responses and short reaction time

A variety of written and telephone enquiries were addressed in 2016 as well. While the number of enquiries did fall again from 2015 to 2016, the complexity of the problems is rising steadily. The content of these enquiries in the reporting year focused on all the activities of the regulatory authority, with issues concerning end-user matters at 65% dominating written enquiries overall.

Most of the telephone enquiries on topics for end users are received via the hotline on 0810 511 811. A total of 2,301 telephone enquiries were answered in 2016. The topics revolved around contractual problems, content services and general settlement disputes.

TABLE 14: Volume of enquiries, 2012 to 2016

	2012	2013	2014	2015	2016
Number of enquiries to rtr@rtr.at	3,572	2,817	3,300	2,262	2,149
Number of phone enquiries	4,909	3,497	4,034	2,640	2,301

Source: RTR

Website www.rtr.at: comprehensive information and services

The www.rtr.at website is the main means of communication for the regulatory authority and guarantees transparency for all activities. In the reporting year there were approximately 800,000 visitors with more than 2.9 million page views and almost 90,000 downloads. The most popular pages include, among others, the NetTest page, the assigned number search, the conciliation body and consumer services, frequencies, the transmitter map and media transparency.

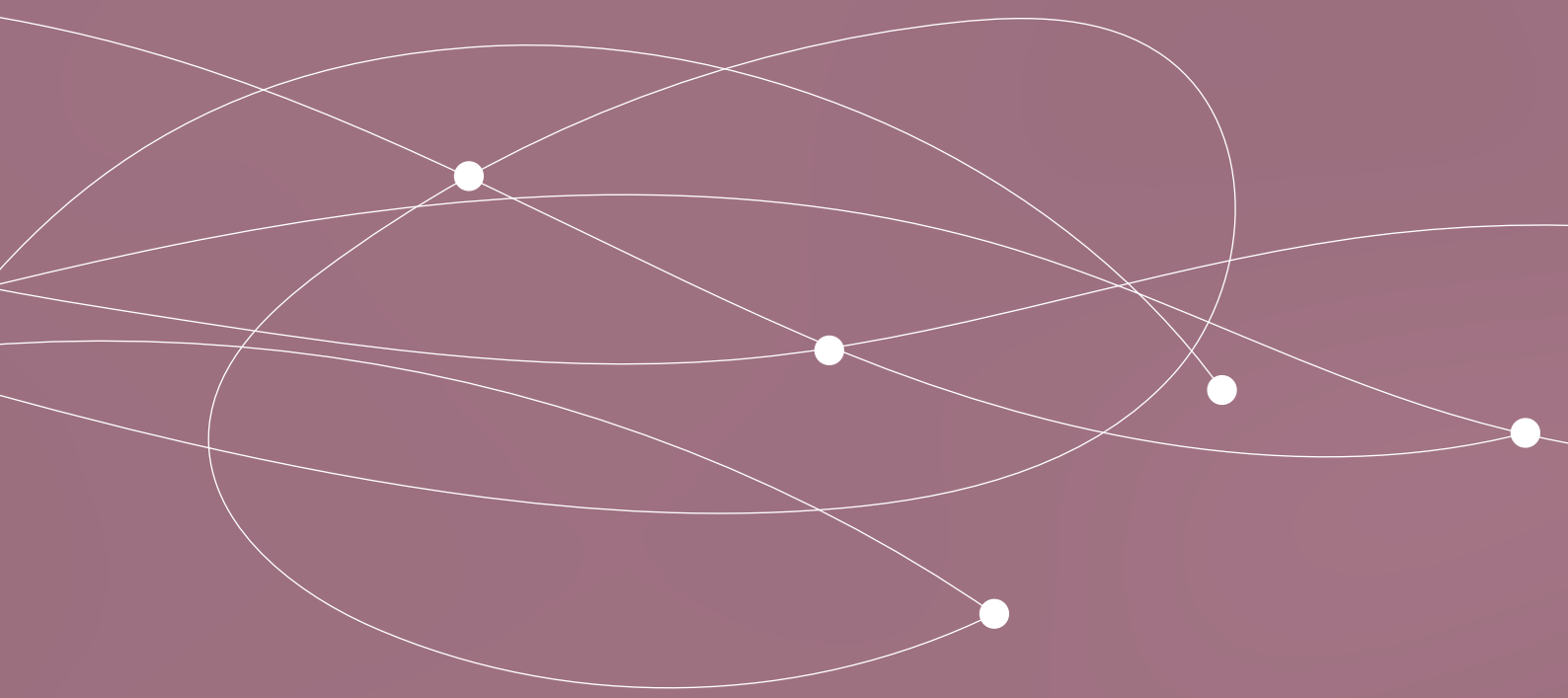
A variety of indicators and market information from the areas of media, telecommunications and postal services have been published since November 2016 in formats suitable for further electronic processing ('open data').

Publications

Every year, RTR's list of publications includes the Communications Report covering statutory reporting requirements, the Activity Report of the conciliation bodies on developments and problems related to arbitration on behalf of consumers, newsletters from both divisions as well as the RTR Post Monitor and RTR Telekom Monitor.

RTR Telekom Monitor, published four times per year, contains data on the Austrian telecommunications market, and once a year includes international comparisons and technology indicators. This is the information source of the regulatory authority that is demanded and quoted the most.

Additionally, RTR's publication series included the studies "Introduction of digital radio in Austria" and "I learn with every programme! Education services and contributions to lifelong learning in non-commercial broadcasting in Austria".



12 Appendix

12 Appendix

12.1 Tables

12.2 Figures

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