

COMMUNICATIONS REPORT

2017

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Austrian Regulatory Authority for Broadcasting and Telecommunications

(Rundfunk und Telekom Regulierungs-GmbH)

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2017

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Preface

Dear readers,

Digitisation and 5G – the new high-speed mobile standard – are the bywords on everyone’s lips in recent months and weeks. 5G is revolutionary. 5G is the future. There is no getting around 5G – digitisation hinges on 5G. We are in the midst of profound industrial and social transformation!

Back when it announced its work programme, the Austrian federal government underscored the urgent priority of digitisation, expanding broadband networks and rolling out the 5G standard. The government also recently presented its ‘5G Strategy’ to the public. These plans build on the vision pursued by the European Commission, namely to ensure Europe’s, and consequently Austria’s, position as a centre of innovation at the forefront of global 5G competition.

Our key task as regulatory authorities is to identify innovative approaches and exercise foresight in regulatory activities for the benefit of all market participants, in this way developing stable conditions to carry us into the future and ensuring legal certainty. Our regulatory structure, with media and telecommunications authorities under one umbrella, allows us to respond to convergence – a tremendous advantage, not least considering the Austrian federal government’s plans for digitisation. We are pleased to have the opportunity to help shape progress in this area and to contribute our expertise. The Communications Report is the key item in our annual reporting activities. It serves primarily to document our regulatory activities in compliance with the statutory reporting requirements set out in the KommAustria Act (KOG) and the Telecommunications Act (TKG 2003). The report also provides insights into changes in the telecommunications markets as well as an overview of our areas of activity beyond the scope of mere regulatory duties.

We hope that this report will provide you with interesting reading.

Vienna
June 2018

Mag. Michael Ogris

*Chairperson
KommAustria
Austrian Communications Authority*

Mag. Nikolaus Schaller

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

Mag. Oliver Stribl

*Managing Director
Media Division
RTR*

Mag. Johannes Gungl

*Managing Director
Telecommunications and Postal Services Division
RTR*

From the 95 Theses

to 5G

The dialectic between media, information and technological progress

Like a cloudburst, pamphlets in the hundreds of thousands rained down upon Germany in November 1517. Martin Luther had just publicised his 95 Theses, on October 31. In the wee town of Wittenberg. The theses were then printed in nearby Leipzig, a much more progressive city.

Without Gutenberg's printing technology, Luther's theses might have remained local news. Instead, they were read by the masses – and called forth a revolution. At a speed thought unimaginable in those days – in 'real time', to use a current term. Technological progress and practical innovations in democracy go hand in hand, preparing the ground for each other. The knowledge disseminated by technology generates new knowledge. Since Gutenberg, the only factors profoundly affecting communications on a mass scale have been the internet and digitisation, both progressing at a speed again considered unimaginable.

And now for the next turbo boost: it goes by the name of 5G.

We are talking today about innovations for tomorrow – personalised radio and TV, one-to-one entertainment and an individualised mass society. Such things require technology. Even today, roughly 65 per cent of the data transferred globally is accounted for by video, films, series or similar fiction productions. And the percentage is growing. Individualised mass society, presupposing one-to-one service, requires all such content to be supplied immediately and to the highest standards. In its media use, our post-modern society has come to expect only streamed content and continuous online access. Enormous bandwidths are required to meet these demands. Existing technologies will soon no longer be equal to the task. What we need is a combination of strong fixed networks, for example those based on fibre optics, and sturdy, high-performance mobile networks.

Without these networks, an individualised consumer, entertainment and information society would be inconceivable, as would the Internet of Things, which will soon relieve us of much of the day-to-day drudgery while affecting our daily lives even more than the average consumer can imagine.

Faced with the overwhelming, massive supply of news, what we now need is corresponding access in line with democratic principles. Democracy means diversity of opinions – and above all access to knowledge and information. Exclusion today means not being a part of modern communications networks. "Am I in?" Boris Becker once asked when accessing the internet, and now whoever is 'not in' is doomed to exclusion. This is why implementing 5G as quickly as possible is not only in the interests of the industry but also of achieving an informed society with full media access.

It is also a further step towards net neutrality. Full nationwide coverage can only be achieved if everyone joins forces – the state, communities and network operators. This needs to be our goal.

Mag. Oliver Stribl

*Managing Director
Media Division
RTR*

'Roam like at home'

the first results

Just in time for summer holidays, the new EU Roaming Regulation took effect as of 15 June 2017, implementing 'roam like at home' (RLAH) and setting the prices for roaming services on par with services in the mobile customer's home country. Any services included in a customer's tariff (minutes, text messages or data) are still deducted from the included amount, even when roaming. Customers with tariffs that do not include any services are charged the same mobile rates as in their home countries. This means that concerns about expensive phone bills are now largely a thing of the past.

A delight for some.

From the standpoint of consumers, RLAH is a huge success – and consequently is supported by the regulatory authority. Its popularity is shown by the statistics for data volume use, for example (see page 134, figure 24). The amount of GB used continued to rise steadily until Q2 2017 and peaked later during each of the summer holiday months in Q3 2017. The data volume used increased by 73% between the third quarters of 2015 and 2016. Yet, when the same quarter is compared between 2016 and 2017, the increase at 388% is astronomical, amounting in a data volume of almost 2 million gigabytes. Similar growth is expected for coming years as well.

For others a more or less bitter pill to swallow.

By introducing RLAH, regulators have heavily intervened, with the ultimate goal of strengthening the single market. Yet mobile network operators take quite a different view.

The prices for all mobile services have dropped radically in the wake, resulting in substantial revenue losses despite highly increased volumes. The revenues from voice, data and text message services declined by EUR 18 million between the third quarters of 2016 and 2017. The loss is so great that retail roaming revenues will no longer play a significant role in future within the EEA.

RLAH is simultaneously impacting mobile virtual network operators (MVNOs, including Spusu, MTel, HoT, Lycamobile and Vectone) and mobile network operators (MNOs) to varying degrees.

Not owning their own mobile networks, MVNOs have to purchase the required services in each case from a foreign operator, now frequently under other, even less favourable terms and specifically at regulated prices (that is, relatively high wholesale prices). And they cannot sell any services to foreign operators.

Many MNOs belong to a group of affiliated companies; while services charged within a group often represent only minor items in accounts, such groups enjoy greater power when negotiating prices. Domestic MNOs can also sell roaming services to foreign operators (actually to their customers) and thereby generate additional revenue. In a tourist country like Austria, such income is to a large degree able to make up for the revenue that MNOs no longer receive from their own customers.

Is the current roaming regime competition-neutral? No!

The substantial distortion of conditions for the two categories of operators was the subject of a written report by the Austrian regulatory authority to the competent commissioners of DG Connect and DG Competition. One gigabyte costs EUR 3.00 at the retail level, whereas the provider has to pay EUR 7.70 at the wholesale level for roaming customers. Regulation based on RLAH correspondingly means continuous losses for operators who are unable to reduce these costs or make up for losses through wholesale revenues. The EU's timetable for incrementally decreasing wholesale charges by 2022 should, therefore, be rapidly accelerated. Allowing operators (principally MVNOs) to charge higher retail prices – surcharges based on a 'sustainability clause' – in exceptional cases and under certain circumstances does relieve some pressure, but it also has detrimental impact on such providers' competitiveness.

Mag. Johannes Gungl

Managing Director
Telecommunications and Postal Services Division
RTR



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RTR

and the regulatory authorities

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01 RTR and the regulatory authorities

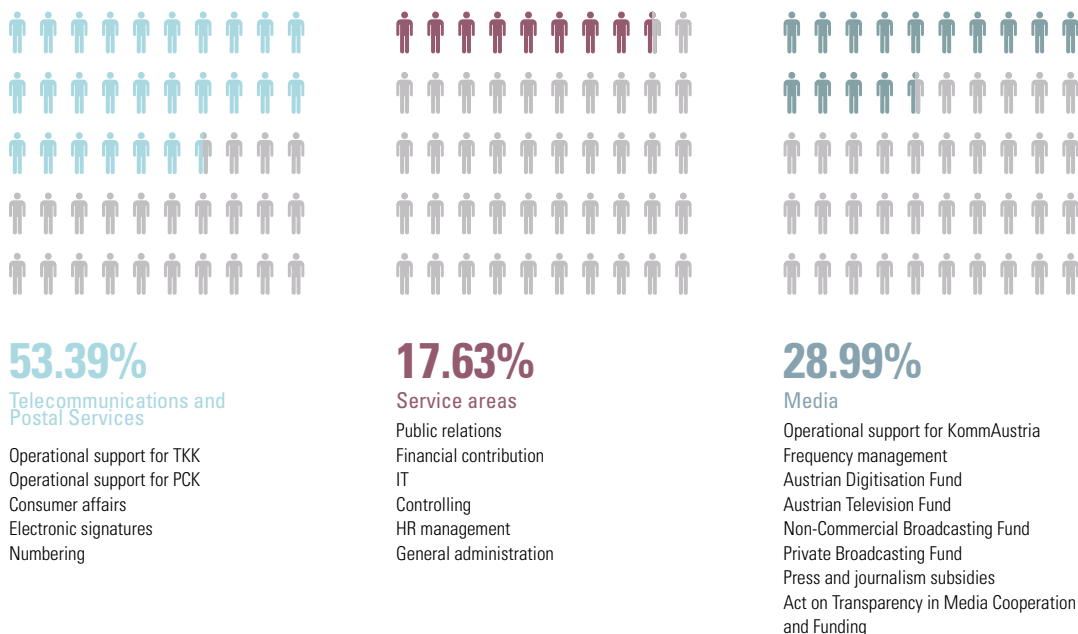
1.1 Our company: we stand for competition and media diversity!

The Austrian Regulatory Authority for Broadcasting and Telecommunications (RTR) was established under law to regulate competition in the Austrian markets for broadcasting, telecommunications and postal services and to achieve the objectives set forth in the KommAustria Act and the Telecommunications Act. Its powers and responsibilities are set out in specific legislation. Alongside fulfilling its own official duties, the organisation also provides operational support to 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 sector.

RTR is wholly owned by the Republic of Austria. It is headed by two managing directors and divided into two specialist divisions, the Media Division and the Telecommunications and Postal Services Division. During the reporting year, Alfred Grinschgl was the head of the Media Division, including all funds, until 15 August 2017. He was succeeded in this role by Oliver Stribl, as of 16 August 2017. Johannes Gungl was the Managing Director of the Telecommunications and Postal Services Division during the year under review.

The chart below shows the relative share of personnel assigned to the two specialist divisions and the service areas.

FIGURE 01: PERSONNEL IN THE SERVICE AREAS, THE MEDIA DIVISION AND THE TELECOMMUNICATIONS AND POSTAL SERVICES DIVISION, AS OF 31 DECEMBER 2017



Based on FTEs.

Table 01 below shows the changes in staff size within the Media Division and the Telecommunications and Postal Services Division for the past three years.

TABLE 01: STAFF SIZE 2015 – 2017

STAFF AS OF 31 DECEMBER (IN FTEs)	2015	2016	2017
Telecommunications and Postal Services Division	55.015	54.495	52.825
Media Division	29.870	29.185	30.175
Service	18.165	18.520	17.800
TOTAL RTR	103.050	102.200	100.800

Source: RTR

Personnel: focus on efficiency

The decrease in FTEs between December 2016 and December 2017 is accounted for by natural attrition as well as by mothers and fathers on parental leave.

Staff survey to evaluate psychological stress

In 2017, for the second time, a working place evaluation was carried out based on the requirements of the Workers Protection Act to assess the level of psychological stress at work. The goal was to assess the level of psychological stress throughout the organisation as a whole and to draw up a corresponding catalogue of measures to further improve working conditions at RTR to the best possible extent.

Continued training: we support our staff in continued professional development

We put priority on continuously providing incentives to encourage staff commitment and motivation. We correspondingly promote activities related to basic and advanced training and to the transfer of skills and knowledge. A total of 434.5 days was invested in training and education in the reporting year, which amounts to 3.6 days per person. The communicate! 2.0 training initiative was launched in 2016, with the goal of helping participants become familiar with the concept of nonviolent communication, as well as to develop tools for improving communication. In response to the high level of staff acceptance, the programme was continued in 2017.

RTR has also set the goal of providing young people with insights into the regulatory authority's areas of activity. Each year school pupils are given the opportunity to participate in practical work experience at RTR. Internships during university holidays also allow students to become acquainted with the regulatory authority. A total of seven young people took advantage of such an opportunity in 2017.

Federal Public Corporate Governance Code

As a public corporation, RTR follows the requirements of the Federal Public Corporate Governance Code, which was revised in 2017 based on experience in practice and to comply with new laws. As owner of state property, the state has a special responsibility and duty to exercise diligence towards such property and thus towards the public. This is reflected in the special significance of corporate governance rules for state-owned and state-affiliated businesses. The RTR Corporate Governance Report is published (in German) on the RTR website at www.rtr.at/de/rtr/Aufsichtsrat.

Equal opportunities at RTR in 2017: a major concern

In 2015 the management of RTR took the decision to establish an equal opportunities team, thereby giving appropriate priority to the topic of equal opportunities. Following the signing of a corresponding works agreement, two female staff members were appointed as equal opportunities officers. One of the two employees left RTR in the course of 2017; consequently only one equal opportunities officer is taking care of duties for the time being. The works agreement provides for a new call for applications in March 2018 to fill the opening of equal opportunities officer.

In related activity, the first equality and family support plan was prepared for RTR in 2015. The plan is intended to help create and maintain an appropriate environment that accommodates very highly differing personal situations, as well as to ensure equal opportunities for all employees. It was revised during 2017, with both statistics being brought up to date and the targets and corresponding activities adapted to reflect changes in the organisation. Management and the equal opportunities officer signed the revised plan in December 2017.

RTR is committed to continuing to promote the reconciliation of work and family life and, as part of the equality and family support plan, it now has its own dedicated guidelines on the subject of parental leave management. Another set of guidelines is planned to ensure that the language used in all RTR texts reflects non-biased treatment of men and women.

The equality and family support plan is available (in German) on the RTR website: https://www.rtr.at/de/rtr/Gleichstellung/Gleichstellungsplan_RTR_2017.pdf.

CO2 footprint project

The CO2 footprint project was initiated at RTR in late 2017, the goal being to draw up a CO2 balance sheet for RTR and to detail action proposals aimed at reducing CO2 emissions. The proposals are to be subsequently evaluated, prioritised and reviewed in terms of feasibility.

E-Government Next Generation: towards efficient administration

Many stakeholders communicating with RTR still do so by letter, fax or e-mail. For even more efficient official communication with RTR, we are working on expanding the current e-government solution at RTR, for example by developing a central submission portal. Vital features here include an 'intuitive' form for uploading documents and attachments for official submission and a clearly designed menu system, as well as extensive support for direct administration by users and easy personal data administration.

RTR's financial statements for 2017

The external auditors at Deloitte Audit Wirtschaftsprüfungs GmbH have issued an unqualified audit certificate confirming RTR's financial statements for the 2017 business year (1 January to 31 December 2017). 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's financial statements, are presented below.

The Regulatory Authority for Broadcasting and Telecommunications (RTR) is funded 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 financial 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 financial contributions are calculated and compared with the planned financial contributions. To simplify administration, companies that fall below a certain revenue limit, or threshold, are not required to pay financial contributions.

To finance media regulation in 2017, RTR received EUR 1.601 million (39.23%) from the federal budget and EUR 2.480 million (60.77%) from market participants. Public funds totalling EUR 2.928 million (41.97%) were allocated to the regulation of the telecom market, while market participants provided a contribution of EUR 4.048 million (58.03%). Of the funding for postal service regulation, EUR 0.216 million (34.80%) was provided from the federal budget; the remaining expenses, amounting to EUR 0.405 million (65.20%) of the total, were covered by market participants.

The funds (Digitisation Fund, Austrian Television Fund, Private Broadcasting Fund, Non-Commercial Broadcasting Fund) and the supervisory body for electronic signatures are publicly funded.

More information is available at www.rtr.at.

When awarding grants from the Digitisation Fund, the Austrian Television Fund, the Private Broadcasting Fund and the Non-Commercial Broadcasting Fund, approved guidelines, which can be viewed on the website, are followed to ensure that the funding objectives specified in each case are fulfilled. The expenses incurred in the administration of those funds are itemised under separate accounting entities and reimbursed to RTR from the relevant fund (refer in detail to the chapter entitled "Management of funds and grants").

RTR closed the 2017 business year (1 January to 31 December 2017) with a balanced result.

**TABLE 02: PROFIT AND LOSS ACCOUNT FOR THE 2017 BUSINESS YEAR
 (1 JANUARY TO 31 DECEMBER 2017)**

	2017 in EUR		2016 in EUR thousands	
1. Net income		13,184,767.43		12,830
2. Other operating income				
a) Income from the disposal of fixed assets (excluding financial assets)	968.33		0	
b) Income from the release of provisions	19,283.78		12	
c) Other	1,180,797.49	1,201,049.60	838	850
3. Personnel expenses				
a) Salaries	-7,194,890.25		-7,059	
b) Social expenses				
ba) Pension insurance expenses	-242,819.92		-246	
bb) Severance pay expenses and contributions to staff provision funds	-105,815.25		-115	
bc) Statutory social insurance contributions as well as payroll-related fees and mandatory contributions	-1,793,640.74		-1,806	
bd) Other	-105,315.24	-9,442,481.40	-112	-9,338
4. Amortisation and write-downs of intangible assets, depreciation and write-downs of tangible assets				
a) Depreciation, amortisation and write-downs	-300,111.26		-318	
b) Release of investment grants	57,671.44		36	
c) Revenues from passing on the expense of low-value assets	0.00	-242,439.82	1	-281
5. Other operating expenses				
Other		-4,718,261.09		-4,046
6. Subtotal of Items 1 to 5		-17,365.28		15
7. Income from other securities held as long-term investments		48,641.28		47
8. Other interest and similar income		828.60		4
9. Income from the disposal of and additions to financial assets		160.00		2
10. Expenses for financial assets				
Impairment		-9,870.00		-36
11. Subtotal of Items 7 to 10		39,759.88		17
12. Result before taxes		22,394.60		32
13. Taxes on income		-22,960.95		-20
14. Result after taxes / net annual income		-566.35		12
15. Release of profit reserves		566.35		0
16. Appropriation to profit reserves				
Appropriation to free reserves		0.00		-12
17. Profit carried forward		0.00		0
18. Net result		0.00		0

Sector-specific expenses in RTR's specialist divisions

In the annual financial statements submitted by RTR, funding use is not reported by division. For this reason, Table X3 below provides a breakdown of the main items listed in RTR's profit and loss statement according to the Telecommunications and Postal Services Division and the Media Division (as set out in Art. 19 Par. 3 no. 3 of the KommAustria Act, KOG).

TABLE 03: RTR INCOME AND EXPENSES BY DIVISION

In EUR thousands	Telecommunications and Postal Services	Media	Total
Net income	7,719	5,465	13,184
Other operating income	354	847	1,201
Personnel expenses	-5,988	-3,454	-9,442
Depreciation, amortisation and write-downs	-173	-70	-243
Other operating expenses	-1,923	-2,795	-4,718
Operating result	-11	-7	-18
Financial result	24	16	40
Result before taxes	13	9	22
Taxes on income	-14	-9	-23
Result after taxes / net annual income	-1	0	-1
Release of profit reserves	1	0	1
Profit carried forward	0	0	0
Net result	0	0	0

RTR's income and expenses for the individual areas of activity within each division are presented in the annex to the annual accounts as at 31 December 2017 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 04: BALANCE SHEET AS AT 31 DECEMBER 2017 – ASSETS

	2017-12-31 in EUR		2016-12-31 in EUR thousands	
A. Fixed assets				
I. Intangible assets				
1. Industrial property and similar rights	440,135.92		567	
2. Prepayments	4,547.50	444,683.42	28	595
II. Tangible assets				
1. Buildings on third-party land	48,083.24		41	
2. Other equipment, operating and office equipment	89,516.17		80	
3. Equipment under construction	22,968.27	160,567.68	0	121
III. Financial assets				
Long-term securities		2,926,928.16		3,437
		3,532,179.26		4,153
B. Current assets				
I. Receivables and other assets				
1. Trade receivables	411,666.52		665	
(Thereof with a maturity >1 year EUR 0 thousand; previous year: EUR 0 thousand)				
2. Other receivables and assets	660,144.69	1,071,811.21	356	1,021
(Thereof with a maturity >1 year EUR 152,092.74; previous year: EUR 46 thousand)				
II. Cash at bank and in hand		3,210,077.37		3,368
		4,281,888.58		4,389
C. Prepaid expenses		84,266.77		105
D. Trustee accounts – funds		21,461,973.41		22,211
		29,360,308.02		30,858

TABLE 05: BALANCE SHEET AS AT 31 DECEMBER 2017 – LIABILITIES

	2017-12-31 in EUR		2016-12-31 in 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	18,844.00		19	
IV. Net result	0.00		0	
Thereof profit carried forward (previous year: EUR 0 thousand)	0.00	3,654,410.30	0	3,655
B. Special item: investment grant		175,846.56		284
C. Provisions				
1. Provisions for severance pay	123,480.00		228	
2. Other provisions	1,306,460.00	1,429,940.00	1,252	1,480
D. Liabilities				
1. Trade payables (Thereof with a maturity <1 year EUR 821,213.71; previous year: EUR 867 thousand; thereof with a maturity >1 year EUR 0 thousand; previous year: EUR 0 thousand)	821,213.71		867	
2. Other liabilities (Thereof with a maturity <1 year EUR 1,529,705.36; previous year: EUR 1,811 thousand; thereof with a maturity >1 year EUR 0 thousand; previous year: EUR 0 thousand; thereof from taxes EUR 344,856.51; previous year: EUR 395 thousand; thereof from social security obligations EUR 177,000.27; previous year: EUR 172 thousand)	1,529,705.36	2,350,919.07	1,810	2,677
E. Deferred income		157,237.14		493
F. Trustee obligations – funds		21,591,954.95		22,269
		29,360,308.02		30,858

1.2 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 and PCK

The Telecommunications and Postal Services Division serves as the operative arm of the Telekom-Control-Kommission (TKK) and the Post-Control-Kommission (PCK). The TKK consists of three main members and three substitute members who are appointed by the federal government for a five-year term.

The PCK is similarly organised. It is also composed of three main members and three substitute members who are appointed by the federal government for a five-year term. As of 5 November 2017, Nikolaus Schaller, judge at the Vienna Regional Court (Oberlandesgericht), was appointed chair of the Telekom-Control-Kommission (TKK) and Post-Control-Kommission (PCK) regulatory authorities. Nikolaus Schaller is the successor to Elfriede Solé, who requested to be relieved of office after chairing the telecommunications and postal market regulatory authorities for a ten-year term. Elfriede Solé has since been serving as deputy to Nikolaus Schaller.



©RTR/Stögmüller

We are deeply saddened by the passing of

Mag. iur. Michael Truppe (1980 – 2017)

Member of the Austrian Communications Authority

Michael Truppe became one of the five members of the Austrian Communications Authority (KommAustria) upon its establishment as an independent media authority in 2010. He was an outstanding media law specialist, author of numerous publications on the topic and a co-author of the reference commentary on broadcasting law. In these roles, he was esteemed and respected to the highest degree by the industry as a whole and his peers, as well as by the management and staff of the Austrian Regulatory Authority for Broadcasting and Telecommunications (RTR), which provides operational support to KommAustria.

We will truly miss not only an exemplary legal expert, but also our dear friend and colleague Michael, who consistently esteemed others and was esteemed by all.

Our thanks go to Michael Truppe for so strongly enriching our lives both professionally and personally, with a contribution that will continue to guide us unceasingly.

Austrian Communications Authority (KommAustria)

Michael Ogris
Susanne Lackner
Martina Hohensinn
Katharina Urbanek

Austrian Regulatory Authority for Broadcasting and Telecom- munications (RTR)

Oliver Stribl
Johannes Gungl
and the RTR team



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Regulatory activities

of KommAustria

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02 Regulatory 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 providers under private law (broadcasters, media service providers and communications network operators) as well as the Austrian Broadcasting Corporation (ORF) and its subsidiaries.

2.1 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 the ORF or its subsidiaries.

2.1.1 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 holder, for another term, 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 2017 the licensee was assigned a total of seven 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 2017. KRONEHIT Radio BetriebsgmbH. had consequently been assigned a total of 164 frequencies as at the end of this reporting period, after relinquishing one licence. In addition, three changes to radio equipment were approved at the request of KRONEHIT Radio BetriebsgmbH. during the reporting period. Three procedures concerning the expansion of the nationwide license 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 50 procedures were carried out in 2017, 17 of which were still pending at the end of the reporting period.

The large majority of procedures in this sector related to expired licences that had to be put to tender again and re-awarded as part of official duties. While one such procedure was still ongoing at the end of the reporting period, in all of the 17 completed procedures, the previous holders were reissued radio broadcasting licences for their respective coverage areas:

- 'Kärnten', to Antenne Kärnten Regionalradio GmbH & Co. KG
- 'Oberösterreich', to Life Radio GmbH & Co.
- 'Tirol', to Regionalradio Tirol GmbH
- 'Baden and Waidhofen/Ybbs', to Radio Maria Österreich – Der Sender mit Sendung
- 'Salzkammergut', to Freies Radio Salzkammergut – Verein zur Förderung freier, nichtkommerzieller Radioprojekte im Salzkammergut (FRS)
- 'Oberösterreichischer Zentralraum', to Welle 1 Oberösterreich GmbH
- 'Linz 91.8 MHz, Wels und Perg', to Welle Salzburg GmbH
- 'Oberösterreich Mitte', to Entspannungsfunk GmbH
- 'Ennstal', to CULTURCENTRUM WOLKENSTEIN
- 'Raum Köflach', to Weststeirische Regionalfernseh GmbH
- 'Osttirol und Oberkärnten', to Radio Osttirol GmbH
- 'Östliches Nordtirol 2', to Antenne „Österreich“ und Medieninnovationen GmbH
- 'Innsbruck and parts of Innsbruck Land district', to Klassik Radio Austria GmbH
- 'Innsbruck 99,9 MHz und Teile des Bezirkes Innsbruck Land', to N & C Privatradio Betriebs GmbH
- 'Bludenz und Feldkirch', to Dachverband für Kultur- und Medieninitiativen und Jugend
- 'Wien 98,3 MHz', to Superfly Radio GmbH

As a result of applications by relevant parties, seven licensing procedures were conducted: the frequencies 'WIEN INNERE STADT (Donaukanal) 102,1 MHz' and 'RADENTHEIN 3 106,2' were assigned to create new coverage areas, one application was later withdrawn, and four applications (involving coverage areas in Vienna, Lower Austria and Salzburg) were still pending at the end of the reporting period.

In a number of other instances, the parties' applications were aimed at expanding existing coverage areas or improving coverage in existing areas. In these cases, frequencies as listed below were assigned (through a total of 15 decisions relating in part to multiple frequencies):

- 'PERG (Lanzenberg) 89,7 MHz' and 'KREMSMUNSTER (Gusterberg) 99,2 MHz', to Radio Arabella Oberösterreich GmbH & Co. KG
- 'PERG (Lanzenberg) 94,5 MHz' and 'WELS 2 (Sternhochhaus) 87;7 MHz', to Welle Salzburg GmbH
- 'PETTENBACH (Friedenskreuz) 94,2 MHz', to Freies Radio B138
- 'PERG (Lanzenberg) 103,6 MHz' and 'KREMSMUNSTER (Gusterberg) 98;6 MHz', to Radio Ö24 Oberösterreich GmbH
- 'ALTLENGBACH (Steinhutberg) 95,0 MHz' and 'HOCHSTRASS (Hasenriegel) 107,8 MHz', to Radio Arabella GmbH
- 'ZWETTL NOE 3 (Loschberg) 99,3 MHz' and 'ZWETTL NOE 2 (EVN Mast) 94,9 MHz', to Radio Arabella Niederösterreich GmbH
- 'KNITTELFELD 2 (Feistritzer Wald) 101,1 MHz' and 'KAPFENBERG 3 (Burg Oberkapfenberg) 95,0 MHz', to Radio Grün Weiß GmbH

- 'INNSBRUCK 1 (Patscherkofel Feratelmast) 90,7 MHz', 'EHRWALD 4 (Wettersteinlift Bergstation) 107,9 MHz', 'REUTTE 3 (Hahnenkamm) 93,9 MHz' and 'REUTTE 3 (Hahnenkamm) 96,2 MHz', to U1 Tirol Medien GmbH
- 'EBBS 2 (Oberbuchberg) 99,7 MHz', to Radio Maria Österreich

Thirteen 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 which, granted for a maximum of three months, are used locally during and around the time of an independent public event in the surrounding area. A total of nine event radio licences were issued in 2017, which were used to provide radio coverage for events in Vienna and Salzburg.

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. Seven different educational radio licences were granted in 2017.

Procedures under telecommunications law

For the sake of simplifying administration, the Telecommunications Act 2003 (TKG 2003) empowers KommAustria as a kind of 'one-stop shop', giving the authority the additional responsibility of issuing 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 aforementioned procedures regarding the nationwide radio broadcasting licence for KRONEHIT, KommAustria approved 13 changes to radio equipment in 2017 and three applications allowing private radio broadcasters to conduct test transmissions. The procedures in the case of five applications for changes to radio equipment were pending at the end of the period under review. Tunnel broadcasting equipment was approved for one private radio broadcaster, while in two cases radio broadcasters in other countries were issued Austrian radio equipment permits. In addition, KommAustria issued approvals in 23 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 two procedures were carried out in 2017, both of which related to tunnel radio equipment operated by the ORF.

Additional information has been published (in German) on the RTR website at www.rtr.at/de/m/EntscheidungenGesamtRF.

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

Nationwide television

Reference is made here to chapter 3, which describes progress in digitisation as well as the expansion of coverage by the nationwide multiplex platforms A and B as well as multiplexes D, E and F.

As part of expanding the nationwide multiplex platforms A and B as well as multiplexes D, E and F, a total of eight telecommunications permits were issued in the 2017 reporting period, in all cases involving licences for the erection and operation of broadcasting systems and changes to the technical parameters of the respective multiplex platforms. A total of four changes to programme line-ups were also approved.

This completed migration of the multiplex platform A from DVB-T to DVB-T2 in the provinces of Tyrol, Carinthia and Vorarlberg in 2017.

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 roughly 64% of the Austrian population.

Other activities in the reporting period included approving four changes to programme line-ups as well as issuing four telecommunications permits, in all cases involving licences for the erection and operation of broadcasting systems and changes to the technical parameters of the respective multiplex platforms.

Event licences and licences for satellite television

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

KommAustria issued satellite licences for four television channels in 2017 (KRONOS TV, SCHAU TV, PULS 4 and LT1).

Media services subject to notification requirements

A total of two cable television channels, one (linear) television channel broadcast over the internet and 32 on-demand media services were notified to KommAustria in the 2017 reporting period.

2.1.3 Approvals and notifications of new ORF services

In 2017, the ORF reported only minor changes to several online services (affecting fm4. ORF.at, news.ORF.at, kundendienst.orf.at, der.orf.at and themenschwerpunkt.orf.at); these changes were of a scope not requiring notification to KommAustria. No official action was subsequently necessary in these cases.

In the 2017 reporting year, the ORF also applied for approval to change online services relating to social media, as well as for approval of a new public on-demand service to provide films and series; a prior evaluation procedure was subsequently introduced in each case. The two procedures have not yet been completed.

In another case, a procedure was initiated against the ORF to investigate a possible breach of law resulting from the new feature called Mein Bundesland (My Province), offered under news.orf.at. Specifically, the current service plan for news.orf.at is presumed not to cover provision of the new feature, which would mean it is new and represents more than just a 'minor change' as defined in Art. 5a Par. 2 of the ORF Act (ORF-G). This procedure has also not yet been completed.

2.2 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 Private Radio Act (PrR-G) and Audiovisual Media Services Act (AMD-G). By virtue of the ORF-G, KommAustria also serves as the legal supervisory authority for the ORF and its subsidiaries.

Breaches of those laws may occur through programming (in addition to advertising infringements, these may include breaches of fundamental programming principles such as youth protection) or through other conduct on the part of broadcasters and media service providers (such as breaches of notification requirements or imposed requirements). Specifically, 41 procedures were conducted in 2017 against media service providers due to failing to meet the requirement to update information on an annual basis.

In principle, KommAustria can initiate procedures in response to a complaint (based on certain conditions defined in law), a petition (regarding the ORF) or as part of official duties (*ex officio*). Such procedures may result in an official decision identifying a breach of law and, in the case of repeated or severe infringements, the licence may be revoked as a last resort, thereby prohibiting radio broadcasting activity or provision of the media service (the latter option does not apply to the ORF). In addition, when certain rules are breached, KommAustria has the duty to conduct administrative penal proceedings, potentially resulting in fines.

In the course of issuing a private broadcasting licence, an official decision is always issued as approval of the submitted programming plan: as a rule, the programming plan is a key consideration in choosing to assign 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 modification of the programming format without approval may result in the broadcaster's licence being revoked.

In addition, KommAustria has specific powers relating to 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.

2.2.1 Commercial communication

Audiovisual media services and radio stations were regularly subject to *ex officio* evaluations during the period under review.

Monitoring activities were carried out for ORF broadcasts as follows in 2017: the regional radio station Radio Oberösterreich (once), the nationwide radio stations Ö3, Ö1 and FM4 (once each), the regional television channel ORF 2 Niederösterreich (once), as well as the nationwide television channels ORF eins (three times), ORF 2 (once), ORF III (twice) and ORF Sport Plus (once). KommAustria identified breaches in a total of two procedures, neither of which is yet final. Three procedures have not yet been completed.

In the case of private radio broadcasters, monitoring activities were carried out or recordings were requested for programmes by: Radio Alpina Media KG, Mein Kinderradio Limited, Radio Sol GmbH & Co KG, Antenne Kärnten Regionalradio GmbH & Co. KG,

Vorarlberger Regionalradio GmbH, Freies Radio B 138 – Verein zur Förderung freier, nichtkommerzieller Radioprojekte im Kremstal, “Freier Rundfunk Salzburg” – Verein zur Förderung von freien, lokalen Radio- und Fernsehprojekten, and Radio Ypsilon – Verein Medien- und Kommunikationszentrum nördliches Niederösterreich. Two procedures have not yet been completed. In these activities, KommAustria identified breaches of advertising rules in five procedures.

Among audiovisual media service providers, programmes were sampled from: Red Bull Media House GmbH, gotv Fernseh GmbH, Sky Österreich Fernsehen GmbH (two), ProSieben Austria GmbH, and ATV Privat TV GmbH & Co KG. Breaches of advertising rules were identified in five procedures.

2.2.2 Programming principles

In their television and radio programmes, broadcasters are required to uphold the principles of objectivity and the diversity of opinions.

Similar principles are set forth in the ORF-G for the ORF, which in all of its service offerings is required to strive for quality, innovation, integration, equal rights and mutual understanding. Information must be comprehensive, independent, impartial and objective, and help freely form public opinion and so contribute to democratic discourse.

Based on its public service remit, 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, eleven complaints were filed against the ORF involving alleged breaches of programming principles. The complaints objected in particular to breaches of the principles of objectivity and impartiality in reporting. In three cases, KommAustria affirmed and dismissed the complaints in part, or partially rejected the complaints because they were lodged too late. In one complaint procedure, KommAustria found that the ORF had not breached the principle of objectivity and accordingly dismissed the complaint. In two other complaint procedures, KommAustria identified a breach of the principle of objectivity. One complaint was lodged too late and subsequently rejected, another was rejected as obviously unfounded, and another complaint was withdrawn. Two complaint procedures are still pending before KommAustria.

Within the scope of legal supervision of private broadcasters, one petition was submitted to KommAustria during the reporting period, alleging that one programme by a nationwide radio broadcaster infringed programming principles and suggesting an ex officio review. The review by KommAustria did not reveal sufficient grounds allowing official ascertainment of any breach of programming principles. Another complaint lodged against a private television broadcaster due to a breach of programming principles has not yet been processed to completion.

2.2.3 Conciliation procedures – media

RTR can also act as a conciliation body for complaints which, falling under the Media Division, relate to communications networks and services used in broadcasting. The main prerequisite for a conciliation procedure is a previously unsuccessful attempt by the customer and operator or provider to reach an agreement. 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 conciliation body received 79 complaints. Compared to the number of conciliation cases falling under the Telecommunications Division, this figure accounts for a very small percentage of all conciliation cases filed in 2017.

For more information, refer to section 6.1.

2.2.4 Specific supervision of the ORF and its subsidiaries

Purpose of business, public mandate and bodies

During the period under review, a penal procedure was held against the Director General of the ORF in response to the publication of a print product not predominantly for the purpose of providing information on programmes and broadcasting content, thereby surpassing the scope of the remit of the ORF and its subsidiaries. The ORF filed a complaint with the Federal Administrative Court (BVwG) against the penal order by KommAustria.

Also in the reporting period, the procedure for defining and revising the quality assurance system under Art. 4a ORF-G was initiated for the years 2015–2016. The procedure could not be completed within that period.

In addition, a complaint was lodged during the reporting period on account of failure to include an individual in the list of persons eligible to vote for editors' spokesperson. Also in 2017, a procedure was carried out in response to a complaint by several private television broadcasters who had objected that the ORF did not normally offer a selection of quality programmes during evening prime time, as required by Art. 4 Par. 3 ORF-G. The procedure could not be completed within that period.

Finally, complaints were lodged against the ORF during the reporting period that related to various issues, including DVB-T2 reception, phone access to contests, and the information campaign on HD migration. One of the complaints was rejected by KommAustria due to lack of competence, one complaint procedure is still pending and two other such cases were dropped.

Supervision of business activities

On 16 December 2016, the Director General presented on behalf of the ORF the resolution by the Foundation Council dated 15 December 2016, which set the new programme fees effective as of the first day of the month following the end of the three-month period defined in Art. 31 Par. 9 ORF-G, pending no objection during that period. That provision defines KommAustria's duty to repeal the resolution adopted by the Foundation Council to set the new programme fees within a period of three months from receipt of the resolution, if the resolution does not comply with the provisions of Art. 31 Paragraphs 1 to 8 ORF-G. Any new programme fees set do not become effective before the end of the three-month verification period.

A formal official decision (Bescheid) by KommAustria is required only for repealing the Foundation Council resolution. In the event that KommAustria does not decide to repeal the resolution, the statutory arrangement implicitly provides for the regulatory authority to withhold its opinion.

The review of the Foundation Council resolution entails two aspects: firstly, verification of compliance with the formal requirements specified for setting the new fees (i.e. request by the Director General, resolution by the Foundation Council, approval by the Audience Council) and secondly, a review of the specific content of the request or resolution with regard to compliance with the terms of the cited provisions (in particular, correct calculations, comprehensibility and plausibility of the underlying figures and assumptions).

In late 2016, KommAustria requested a review by the ORF audit commission to determine whether the assumptions underlying the request by the Director General and, similarly, the Foundation Council resolution were plausible and whether the assumptions complied with the specifications listed in Art. 31 ORF-G. On the basis of the report subsequently submitted to KommAustria by the audit commission, the regulatory authority concluded that the Foundation Council resolution did not conflict with the provisions of Art. 31 Paragraphs 1 to 8 ORF-G. KommAustria consequently did not repeal the resolution by the Foundation Council. The resolution of the Foundation Council setting the new programme fees subsequently took effect as of 1 April 2017, on expiry of the three-month period.

Another key part of supervising ORF business activities involves auditing the consolidated financial statements and the individual financial statements. In the 2017 reporting year this affected the annual accounts as of 31 December 2016. In this case, the KommAustria audit commission issued, based on the service agreement, audit reports with unqualified audit certificates.

In addition, in the 2017 reporting year the business audits for the 2015 business year were materially concluded with the audit report submitted by the audit committee. A further area of economic oversight during the reporting period concerned verifying compliance of the restructuring of one ORF subsidiary with the separation provisions set out in the ORF-G.

Finally, two complaint procedures involving the ORF were pending on account of breaches of the requirement to conform to market practices, specifically by acquiring broadcasting rights at inflated prices. The corresponding procedures have not yet been completed.

2.2.5 Specific supervision of private providers

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

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). Any breach of or failure to meet these (licensing) prerequisites constitutes grounds for revoking the broadcasting licence or for 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 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. In a total of seven cases in the 2017 reporting year, KommAustria carried out procedures to identify an infringement involving failure to notify changes in ownership. In an additional four cases, administrative penal procedures initiated due to failure to notify changes in ownership were completed.

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 decision must be obtained from KommAustria to determine whether the relevant legal prerequisites for radio broadcasting will continue to be met under the new conditions. To determine whether the legal prerequisites were still being met after a transfer of more than 50% of ownership, a total of three procedures – one pursuant to the PrR-G and two based on the AMD-G – were completed with final effect during the 2017 reporting period.

Another area of activity under the legal supervision of KommAustria is the option for radio broadcasters to request an official decision from KommAustria to determine whether a planned programming change actually represents a fundamental change of the programme format. Whether a change in programme format is fundamental is to be decided based on a consideration of the original licence decision. No official approval is necessary for implementing the programming change in cases where in its decision KommAustria does not identify any resulting fundamental change of the programme format. However, if KommAustria determines that a planned change does in fact constitute a fundamental change in programming, the broadcaster is required to obtain official approval. In the 2017 reporting year, acting on a complaint by a competitor, KommAustria found a radio broadcaster to have made a fundamental change to the programme format without prior approval by the regulatory authority. The party subsequently lodged a complaint with the BVwG to appeal the KommAustria decision. The complaint proceedings are still pending before the BVwG.

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.

Holders of licences for multiplex platforms similarly have the option of making changes to the programme line-up being broadcast via their platforms and can request a decision to determine whether the prerequisites for the licence to operate a multiplex platform will continue to be met after making the change. KommAustria carried out and completed a total of eight such procedures during the 2017 reporting year.

2.3 Public communications networks and services

Operators and providers must notify to KommAustria any planned operation of a public communications network or provision of a public communications service for the purpose of transmitting broadcasts (radio and television programmes) and additional broadcasting services, as well as any changes to or discontinuation of such services. Regardless of their domicile, all operators of such communications networks 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 of the Telecommunications Act 2003 (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 ruling of 30 April 2014 in case 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, notification of four new broadcasting networks was made; six broadcasting networks were discontinued.

Additional information can be found on the RTR website at www.rtr.at/en/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. In the 2017 reporting year, 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 for 2016, specifically with regard to the cost accounting system and the question of whether the rates offered were in line with the costs of efficient service provision. On 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. In the context of that procedure, the European Commission expressed serious objections to the market delineation proposed by KommAustria for the FM radio market and subsequently initiated a more detailed review, referred to as a Phase II procedure, which had not yet been completed by the end of the reporting year.

2.4 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 set out 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. As the independent recipient of the reports, KommAustria has the duty 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 that have fulfilled their reporting obligations by the regular reporting deadline and those that have not. These lists, referred to as 'watch lists' (Ampellisten), 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 products that were actually awarded advertising contracts, 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.

Reports have been submitted for a total of 22 quarters since the MedKF-TG entered into force on 1 July 2012. After seeing a clear trend towards increasing reporting discipline in the initial quarters, the reporting rate became stable at a high level in 2017. Over the year on average, more than 99% of the legal entities required to report had complied. Some seven penal procedures were initiated on average in each quarter in response to failures 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 2017 were not yet available when preparing this report.

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 municipal associations (sewage treatment associations, water supply associations, district social and healthcare bodies, citizenship associations, register office associations, and planning associations). Municipal associations account for just under 2,000 of the roughly 5,400 legal entities currently required to file.

2.5 Administration and coordination of broadcasting frequencies

The 2017 reporting year was marked by numerous rounds of bilateral and multilateral frequency negotiations with administrations of Austria's neighbouring countries, aimed at freeing up the 700 MHz band from current use by DVB-T and DVB-T2 transmitters. Decision (EU) 2017/899 of the European Parliament and the Council provides the basis for vacating the 700 MHz band. The Decision includes a commitment by the Member States to prepare a new frequency plan for digital terrestrial television in the 470 to 694 MHz frequency range by the end of 2017, with this lower band becoming the home of as many of the TV channels as possible that have to be discontinued in the 700 MHz band.

Alongside the bilateral and multilateral working groups set up for those talks, Austria also participated in the South European Digital Dividend Implementation Forum (SEDDIF), a trans-regional working group of countries, including non-EU states, similarly interested in mobile telecoms use of the 700 MHz band.

In the end, Austria had signed a total of seven bilateral and multilateral agreements with neighbouring country administrations, to serve as the basis for coordinating the imminent TV channel migration facing Austrian operators. In implementing the new frequency plan, another aspect to be considered is the need in some cases to coordinate the channel migration schedules with neighbouring countries, in order to avoid any interference with television reception. The transition phase is already under way, particularly in northern and western Austria, and should be completed by 30 June 2020. The schedules for migration in greater Vienna and northern Burgenland still need to be finalised with the Czech Republic and Hungary as neighbouring countries in the course of the coming year. To make a sufficient number of target channels available within the spectrum below the 700 MHz frequency band, in certain regions it was also necessary to relocate to the remaining broadcasting spectrum some of the currently used TV channels that were similarly scheduled for migration during the period in question.

Due to the transitions explained above, significantly larger single frequency networks (SFNs) than previously will soon be in operation in Austria.

2.5.1 Collaboration in licensing and assignment procedures

Radio

As part of the many procedures in 2017 for renewing radio licences at 10-year intervals, experts were commissioned by KommAustria to prepare the related frequency evaluation reports. Numerous other frequency evaluation reports were prepared for KommAustria in the context of licence application procedures involving newly established or expanded FM coverage areas.

During the reporting year, applications for new radio transmitters were mostly made by local radio broadcasters in the provinces of Upper Austria and Lower Austria.

Digital television

Activities related to digital terrestrial television were mainly concentrated on migrating the multiplex A platform to DVB-T2. Specifically, a total of 112 broadcasting systems had been converted to DVB-T2 by the final deadline in October 2017. Within the eleven-year history of broadcasting DVB-T signals in Austria, it took several stages and five years to fully set up the multiplex A broadcasting network, and another four stages and two years to convert the platform to DVB-T2.

The reporting year saw only minor changes to the multiplexes B, C, D, E and F.

Digital radio

The decision on the local DAB+ multiplex for greater Vienna was issued in December 2017. The related frequency evaluation report had been completed in November 2017.

In the context of the invitation to tender for the nationwide MUX I platform for DAB+, international coordination in eastern Austria encountered more issues than anticipated. Hungary has national rules allowing little flexibility to alter the positions agreed in the GE06 plan and hence improve the situation of all parties involved. The current GE06 plan for DAB+ is partly based on a previously planned 'low power – low tower' network infrastructure that has not yet been installed. Further negotiations will reveal which frequency blocks will ultimately be assigned for MUX I when operation starts.

2.5.2 Frequency coordination procedures and frequency usage

The following table lists the number of frequency coordination procedures for radio, initiated at international level, with Austrian involvement in 2017.

TABLE 06: FREQUENCY COORDINATION PROCEDURES IN 2017

Country	Analogue radio	Digital radio	Digital television
Austria	44	72	27
Bosnia	0	0	0
Germany	12	268	5
Croatia	11	0	0
Poland	17	2	0
Switzerland	14	151	0
Slovak Republic	7	7	93
Slovenia	17	0	0
Czech Republic	39	4	54
Hungary	3	57	0
TOTAL	164	561	179

Source: RTR

ADSL working group meetings

Two topics were the subject of intensive negotiations within the German-speaking working group (Austria, Germany, Liechtenstein and Switzerland). The first was the replanning of all TV channels currently broadcasting in common border areas over the 700 MHz band. Here the varying wishes of the individual countries could be largely accommodated.

The other subject of negotiations was a new VHF frequency distribution plan for DAB+ that would provide for eight national coverage areas along the common borders. For some regions, this led to modification of the results of the GE06 conference. Nonetheless, this replanning allowed an additional DAB+ multiplex, fully covering the area from Bregenz to Upper Austria, to be agreed.

AUT-CZE-SVK-HNG working group meetings

This working group, consisting of delegates representing frequency administration in Austria, the Czech Republic, Hungary and the Slovak Republic, met for frequency negotiations on two occasions in 2017. The main topic of discussion was freeing up the 700 MHz band. Bilateral agreements were reached to mutually consult on future joint use of UHF frequency channels 21 to 48.

SEDDIF working group meetings

The South European Digital Dividend Implementation Forum (SEDDIF) met on four occasions in 2017. Frequency coordination negotiations were completed in December 2017, thus meeting the schedule for vacating the 700 MHz band that had been laid down in Decision (EU) 2017/899.

The working group, which comprises the frequency administrations of Austria and 13 other countries in South-Eastern Europe and bordering regions, signed an agreement in Gödöllő, Hungary on 6 December 2017, stipulating re-allotment of the 470 to 694 MHz frequency range (UHF channels 21 to 48) within the common frequency coordination area.

2.5.3 Measurement projects

As part of evaluation activities in 2017, numerous field measurement tours were undertaken to evaluate coverage situations using measuring equipment. The recorded results were then considered in technical evaluation reports and in assessments for coordination procedures. The RTR measurement bus and team were deployed on over 30 occasions, gathering data along more than 100 routes in addition to numerous stationary points. Five of the measurement tours were undertaken as part of evaluation reports involving test transmissions of radio signals. Eleven other measurement tours were related to evaluation reports not involving test transmissions. The remainder of the tours were to measure both DAB+ and DVB-T2 signals for the purpose of planning and international coordination. Extensive coverage measurements were also taken as part of the DAB+ pilot project in Vienna.

2.5.4 Frequency register

At present, the frequency register and transmitter map include over 1300 radio transmitters in the FM band, with power output ranging from less than 1 W to 100 kW. Approximately 850 frequencies are accounted for by the ORF, while the remaining roughly 450 frequencies are used by private broadcasters.

With regard to the 470 to 790 MHz television frequency band, the currently approved DVB-T/T2 transmitters in the frequency register were distributed among the individual multiplex platforms as shown below at the end of 2017.

TABLE 07: NUMBER OF APPROVED DVB-T/T2 TRANSMITTERS (AS OF 31 DECEMBER 2017)

DVB-T2 multiplex A (ORS multiplex)	316 transmitters
DVB-T2 multiplex B (ORS multiplex)	43 transmitters
DVB-T2 multiplex C (regional/local multiplex platforms)	11 transmitters
DVB-T multiplex C (regional/local multiplex platforms)	22 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 (<https://www.rtr.at>) in the form of a transmitter map as well as tables.

2.5.5 Contributions to international working groups

Participation in ITU study group 6

Working party (WP) 6A of study group (SG) 6 covers the various terrestrial broadcasting systems worldwide. Members of the party met in spring and autumn of 2017, both times at the premises of the International Telecommunication Union (ITU) in Geneva, Switzerland. The topics included revision of numerous ITU recommendations for broadcasting systems. Other items such as current replanning activities (migration to digital terrestrial television) in Central and South America were also presented.

Participation in the RSPG good offices subgroup

Activities in the 2017 reporting year were concentrated on implementing the second digital dividend. A questionnaire was prepared and surveys conducted on two occasions in the year under review, querying the Member States and several EU neighbours on current progress in replanning the 700 MHz band. The surveys allowed several critical regions to be identified that require extra support from the working group. One main goal of the working group was to provide the EU Member States with assistance in preparing new UHF frequency plans for digital terrestrial television by the end of 2017.

2.6 International activities

2.6.1 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, and tasked with advising the European Commission in 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 best practice.

Activities in 2017 focused on knowledge exchange among European regulatory authorities, youth protection and analysis of the existing legal framework for co-regulation and self-regulation. On the basis of activities in several working groups, ERGA produced several reports that have been released to the public.¹

Back in 2016, tools were set up to facilitate improved, electronic exchange of information among regulatory authorities. The system was assessed in 2017, with technical adaptations being subsequently made based on an evaluation of the experience gathered by Member States. Additions were also planned, for instance to support an exchange of staff members.

In the framework of another working group, a workshop on the topic of youth protection was held in 2017 and attended by some 50 participants, among them regulators, researchers and representatives of media businesses. An initial overview was provided of the various classification systems and the varying protection models presented. As an outcome, a strong interest in a harmonised international system was recognised among market participants. It was nonetheless concluded that protection systems alone are not enough to ensure adequate protection of young people against dangerous content. Additional monitoring by parents is also necessary.

In the third working group, dedicated to co-regulation and self-regulation, it was seen that the corresponding instruments are implemented in highly differing ways in Member States. While some Member States use such instruments very extensively, others have hardly any at all. Consequently, a great need for additional exchange over best practice models was recognised to encourage use of co-regulation and self-regulation instruments in Europe.

¹ The individual reports are available on the European Commission website: <https://ec.europa.eu/digital-single-market/audiovisual-regulators>.

2.6.2 KommAustria and EPRA

The European Platform of Regulatory Authorities (EPRA), which currently counts 52 European regulatory authorities as members, held its annual meeting for the first time in Vienna, in late 2017. About 140 delegates from 47 countries were welcomed to Vienna on the occasion.

At the event, as well as at an earlier one in the spring of 2017, the topics of “News in the digital age” and “Perspectives and challenges of digital disruption” were discussed with reference to cross-European comparisons and best-practice models.²

In addition, specific topics were presented and comparisons drawn in various working groups, with the subjects including: licensing models for linear audiovisual media services, the future of radio, issues relating to the promotion of media literacy, and the changing relationship between citizens and regulators.

2.6.3 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 such activities in 2017, KommAustria was involved in the revision of the Regulation, which was published as Regulation (EU) 2017/2394 of 12 December 2017 in the Official Journal of the European Union L 345/1. The revision did not result in any changes to the responsibilities of KommAustria.

² The reports can be accessed on the EPRA website at <https://www.epra.org>.



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Progress report

on digitisation of broadcasting

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03 Progress report

on digitisation of broadcasting

The de facto completion of the digitisation of television reception in Austria was marked by the last major wave of analogue switch-offs in cable networks during 2017, 17 years after the activation of ORF channels ORF eins and ORF 2 as a digital satellite service using the DVB-S broadcast standard, and no less than eleven years after the launch of digital terrestrial television.

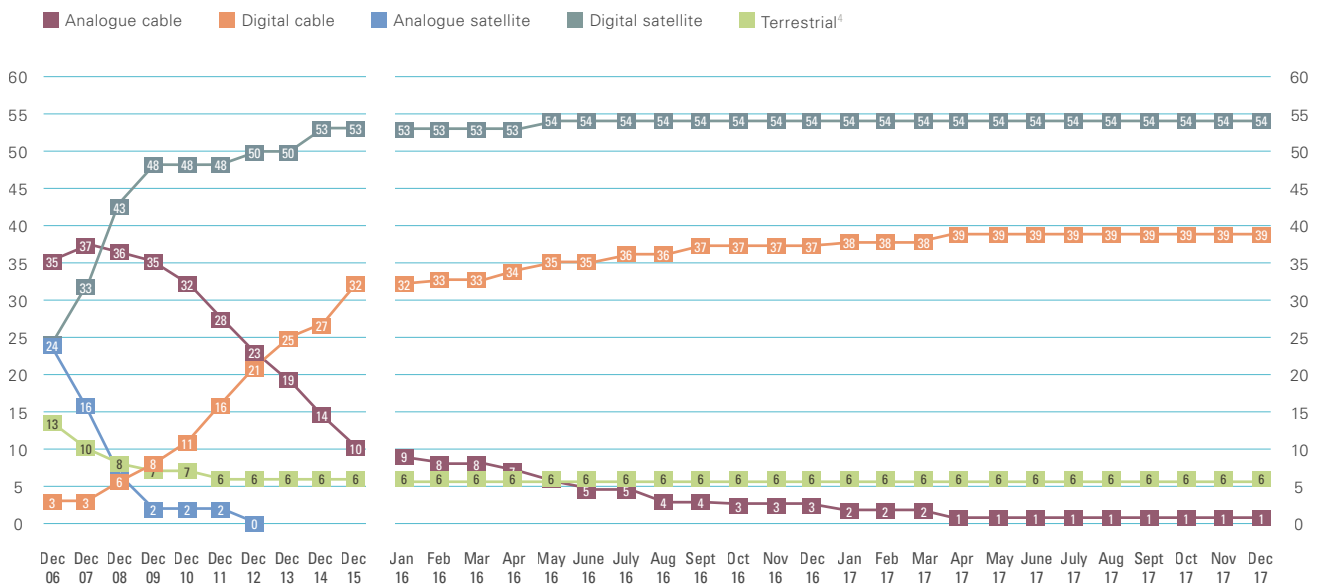
As of the end of 2017, 99% of the 3.795 million³ television households in Austria now receive conventional, radiowave-based satellite, cable and terrestrial television as a purely digital service. The number of Austrian television households rose by 101,000 – a substantial rise compared with the figure for the end of 2016. The number of people aged twelve and over living in these households rose by 169,000 to 7.471 million, of which 99.5% (7.434 million) use digital television exclusively. The slight difference in the degree of digitisation in relation to the population (99.5%) and television households (99%) reflects the large proportion of satellite reception households (54%) in which, statistically speaking, 2.1 persons live aged twelve and over, while the equivalent figure for cable households is 1.8 persons and only 1.7 persons for terrestrial households.

Cable network digitisation (effectively) complete

Following the analogue switch-off completed in full some years ago for the terrestrial television reception mode (June 2011) and the discontinuation of analogue broadcasting for German satellite TV channels (April 2012), further progress in digital television reception in Austrian television households over the next five years was determined solely by the trend in cable reception. In an initiative coordinated with the specialist association for telecommunications and broadcast enterprises within the Austrian Federal Economic Chamber and RTR's Media Division, the vast majority of Austrian cable companies had discontinued analogue TV signal broadcasts by 2016. During 2017, cable network operator UPC then followed suit in the Vienna area as the last industry heavyweight.

³ Unless otherwise specified, all data originate from the TELETEST Working Group/GfK Austria (2017).

FIGURE 02: DISTRIBUTION OF RECEPTION MODES AMONG AUSTRIAN TELEVISION HOUSEHOLDS



Source: AGTT/GfK Austria, Figures in percent

⁴ Terrestrial includes around 20,000 cable households with basic coverage (reception of around eight TV channels).

For full digitisation, one per cent of television households still need to be switched over. This group is accounted for by several smaller cable network operators who have not yet participated in the analogue switch-off and are also unlikely to in the medium term. Customer of these cable network operators include many small- to medium-sized businesses, as well as organisations such as hotels, regional hospitals or retirement homes, which are not prepared to meet the expense of transitioning to digital reception. At the same time, these operators are not economically secure enough to offer their customers any appreciable financial contribution towards the expense incurred.

Although hotels and hospitals play no part in statistics on television households or the viewing population, residential homes for retirees are indeed relevant in this context: such facilities typically comprise single-person households that generally prefer to remain viewers of analogue television reception as long as their cable network operators still offer this option. The same applies to single-person households with older residents in the private residential sector. Expressed in absolute figures, this yields around 17,000 television households in Austria that still use an analogue cable service.

No change to usage share for the three conventional TV reception methods

Compared with figures for the end of 2016, no relative changes were seen in usage share for the three television transmission routes of satellite, cable and terrestrial in 2017. In 2017 usage share for satellite television was again 54% and represented the largest proportion of television households.

In 2016 cable television fell by 1 percentage point to 40% of television households and this figure remained unchanged for 2017. Within this mode, only the proportions of digital and analogue cable households have shifted, as a result of the continuation of analogue switch-offs in 2017. Accordingly, 39% of all television households are now digital cable households (2016: 37%), while 1% of all television households remain analogue cable television households (2016: 3%).

In 6% of television households, terrestrial television (DVB-T2) remains the primary or sole form of television reception.

Transition from DVB-T to DVB-T2 complete

The retention of a 6% usage share in television households by terrestrial television in 2017 was not a foregone conclusion for this reception mode, in light of the fact that the successive migration of digital terrestrial television from the old DVB-T broadcast standard to the significantly more powerful DVB-T2 standard with basic encryption, which began in 2014, reached its critical peak – and simultaneous completion – only in the period from autumn 2016 to autumn 2017. During this period, the last, ‘legacy’ DVB-T multiplexes – multiplex A and its channels ORF eins, ORF 2 and ATV, all with an especially broad audience appeal – were taken offline nationwide in three phases grouped by provinces. Anyone still operating reception equipment that supported only the old DVB-T standard was subsequently obliged to acquire a DVB-T2-capable receiver and complete registration with the terrestrial television operator simpliTV. This mode obviously enjoys a very loyal community: a mass desertion of this reception mode failed to materialise, while terrestrial-only television households actually increased slightly – by 9,000 to 228,000 households compared with the end of 2016.

Decline in the use of digital terrestrial television for second sets

In addition to the 6% of TV households in which digital terrestrial television constitutes the only form of reception, DVB-T2 is also used as an additional reception platform for second TV sets in satellite/cable television households. Compared with previous years, however, terrestrial television lost significant ground here in 2017.

In addition to the 362,000 viewers aged twelve and over⁵ who live in terrestrial-only television households, another 169,000 persons must be included from satellite households with additional terrestrial usage (2016: 475,000), and a further 27,000 persons (2016: 35,000) from cable households with supplementary terrestrial usage. In all, some 587,000 persons – or 8% of the viewing population aged twelve and over – live in households with terrestrial TV reception. At the end of 2016, this figure was still 867,000 persons or 12% of the population. This downward trend was seen without exception in

⁵ Around 30,000 persons (12+) in cable households with basic coverage already subtracted.

satellite and cable households with DVB-T usage on second sets, which had clearly not taken part in the switch from DVB-T to DVB-T2 completed in 2017 and so not acquired the new receivers this migration requires.

Developments in digital radio

The pilot project in Vienna for digital radio based on the DAB+ broadcast standard, which started on 21 May 2015 and is scheduled to run until 2 April 2018, is expected to transition directly to regular commercial operation. The corresponding licence was issued to RTG Radio Technikum GmbH by KommAustria in mid-December 2017. This is the first licence for regular commercial operation of digital terrestrial radio in Austria for the DAB+ standard. The licence, which is valid for ten years from 3 April 2018, has been issued for the Greater Vienna area. As the technical transmission service provider, RTG will initially be broadcasting eleven radio stations, an electronic channel guide and an on-demand emergency alert service. Technical coverage for the broadcasting region of greater Vienna and parts of its neighbouring areas totals 2.25 million people.

Radio stations can also be received in the digital terrestrial mode via the DVB-T2 multiplexes primarily used for terrestrial television. Multiplex A, for example, which achieves the highest technical range of coverage among the population (98%), broadcasts the ORF radio stations Ö1, Ö3 and FM4 without encryption. Multiplex F, which is also nationwide (technical range of coverage among the population 92%), broadcasts the private radio stations oe24, Radio Maria and KRONEHIT. Of these, only KRONEHIT uses basic encryption and can only be received following (free) registration for the freeview television channels offered by simpliTV.

3.1 2017 Digitisation Plan

The KommAustria '2017 Digitisation Plan' Ordinance came into effect on 1 May 2017. In accordance with its legal mandate, KommAustria authored its Digitisation Plan together with RTR's Media Division and in consultation with the Federal Chancellor, and with support also provided by the Digital Platform Austria working group – an industry association with over 300 members from the Austrian media market. The Digitisation Plan offers a preliminary overview of KommAustria's key actions and goals in the context of further developing the digital, audiovisual media market for a period of at least two years. A statutory amendment in August 2015 removed the obligation to publish a revised Digitisation Plan every two years: the plan can now be adapted as necessary to meet requirements. The 2015 Digitisation Plan was issued under the old legislation, however, and accordingly expired on 30 April 2017.

3.1.1 Digital terrestrial television – rollout and spectrum refarming

It is clear from the 2017 Digitisation Plan that the KommAustria media authority will in future strongly focus on significantly more economical usage of broadcasting frequencies, made possible by digitisation, and on the resulting reallocation of television channels in the 700 MHz band to the benefit of mobile telecoms applications. It has been agreed across Europe to free up the 'second digital dividend' – that is, television spectrum above channel 48 (700 MHz band) – by June 2020, primarily for subsequent

use by mobile broadband services. In 2018 this target must be taken into account when putting to tender expiring licences for regional and local terrestrial television transmissions (multiplex C).

In late 2017 the last DVB-T broadcasting systems for the nationwide multiplex A were decommissioned, accompanied by the necessary migration to the DVB-T2 broadcast standard and the completion of all feasible freeing-up of the 700 MHz band. Nine broadcasting systems under multiplex A are now still active in the 700 MHz band because their new target channels remain in use in neighbouring countries. Broadcasting systems in the nationwide multiplexes B and D no longer operate above channel 48. In the nationwide multiplexes E and F, 35 broadcasting systems in Austria are affected by the freeing-up of the 700 MHz band. Of those, eleven are within multiplex E and 24 within multiplex F.

The South European Digital Dividend Implementation Forum (SEDDIF) is a working group that represents 13 regulatory and frequency administration organisations from South-Eastern Europe, including Austria. At the end of 2017, in line with EU-wide scheduling targets and after nearly two years of consultations, SEDDIF signed a coordination agreement in which the 470 to 790 MHz spectrum formerly assigned to television will be reallocated within the joint coordination area. The agreement specifies the frequency ranges each Member State will use from mid-2020. Accordingly, the television broadcasting systems still using the 700 MHz band will be able to migrate to channels in the lower part of the UHF band (470 MHz to 694 MHz) well before mid-2020.

3.1.2 Launch of digital radio

The authority's work in digitisation also focuses on digital radio and the DAB+ standard. KommAustria is adding detail to its frequency planning for the setup and expansion of digital radio, and also preparing for other invitations to tender in this context. The authority laid the initial foundations here at the end of January 2017, by issuing separate invitations to tender for nationwide, regional and local regular DAB+ services. These invitations to tender resulted in an application for nationwide coverage and an application for a regional licence for the Vienna area. The licence for greater Vienna was issued mid-December 2017 and is valid from 3 April 2018.

As regards the invitation to tender for nationwide DAB+ coverage, KommAustria plans to issue a licence in the first quarter of 2018 after completing relatively complex procedures for frequency coordination with foreign authorities.

3.2. Changes among individual TV (broadcasting) reception platforms

3.2.1 Terrestrial

At year-end 2017, 228,000 Austrian television households were using digital terrestrial television as their primary or sole form of television reception. Compared with 2016, this is a significant increase of 14,000 households. At the same time, however, the number of viewers aged twelve and over living in these households decreased slightly from 394,000 to 392,000. This growth trend is clearly being driven by single-person households.

Technical range of terrestrial multiplexes in 2017

The technical range of coverage among the population for the nationwide multiplex A remained unchanged at 98%. The technical range for the other nationwide multiplexes B, D, E and F was also unchanged at 92% of the population.

The percentage of the population also living in the multiplex C reception area, with programming varying from region to region, also remained unchanged at 64%.

3.2.2. Satellite

While the percentage share of satellite households remained unchanged at 54% of television households, the absolute figure rose by 54,000 to 2.049 million. This growth very closely reflects a 54% share of the growth in the television household base population by 101,000 households.

The viewing population aged twelve and over in satellite households rose to 4.345 million people, an increase of 107,000 compared with December 2016. The percentage of the viewing population living in satellite television households was 58%.

3.2.3 Cable (including IPTV)

The 2017 year-end figure for cable television households in Austria was 1.519 million (2016: 1.484 million). This equates to 40% of all television households and is unchanged from 2016. Cable network operator UPC shut down analogue cable television in Vienna in 2017, thereby following the majority of cable network operators who had already taken this step in other provinces in 2016. Subsequently, around 98% of cable households in Austria (approx. 1.5 million) now use digital television.⁶

The percentage of television viewers aged twelve and above who live in cable households remained unchanged from 2016 at 37%. In absolute terms, viewer numbers rose to 2.734 million, an increase of 63,000 compared with December 2016.

IPTV households are included in the 'digital cable' reception mode. This group comprised roughly 291,000⁷ households in 2017 (2016: 279,000), representing 19.4% (2016: 20%, 2015: 22.7%) of digital cable households. In absolute terms, the number of IPTV households (a group made up almost entirely of subscribers to A1 TV from A1 Telekom Austria AG) rose by 12,000 households compared with the previous year.

⁶ For details, see "3. Digital broadcasting progress report – cable network digitisation (effectively) completed"

⁷ FAs of Q3 2017, Telekom Austria Group: "Results for the first nine months and third quarter 2017", Oct 2017



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Management of funds and grants

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04 Management of funds and grants

4.1 Austrian Digitisation Fund

In 2017, 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.

One of the main issues dealt with by the Austrian Digitisation Fund in 2017 was funding for the third and final phase of DAB+ test operation in Vienna. The project, which has been underway since 3 March 2015, involves technical trials of digital radio broadcasts using the DAB+ standard with established and new stations, as well as tests of programme-related developments in digital radio. Another purpose is to test data services in order to provide a firm basis for the development of additional services within the digital programmes.

The test operation is aimed at generating findings, firstly for broadcasters and data service providers, to help them in preparing tenders and business models for digital radio, and secondly for the regulatory authority, as an aid in further developing the Digitisation Plan for the digital radio sector. The plans for the third phase of the project include measurements to test tunnel coverage and potential interference from electronic entertainment devices, as well as to investigate in detail indoor reception and coverage across several locations.

As an infrastructure provider and grant recipient, ORS comm GmbH & Co KG (ORS) applied for funding for the third project phase, to take place between 2 April 2017 and 1 April 2018. The Digitisation Fund is providing a grant for this third test phase, with 40% of the eligible project costs to be paid out degressively. Twelve radio broadcasters are currently participating in the trial operation. The plan is to compile the test findings into a report at the end of the funded project term, and for this to be made available to RTR for publication as part of the reporting obligations for the Digitisation Fund.

On presentation of the final report, UPC Austria Services GmbH (UPC) completed the project launched in 2016 with the aim of promoting communication during cable digitisation. Specifically, the project was intended to support an initiative, carried out to supplement a similar campaign by the Economic Chamber, to directly inform existing UPC customers of the planned shutdown of analogue cable television in all provinces of Austria by 2017 and to respond to customers' individual concerns.

The Digitisation Fund was also intensively concerned in early 2017 with the funding strategy for the years to follow. The anticipated funding targets for 2017 to 2020 have been set out in the plan for awarding grants from the RTR Digitisation Fund during the period of 2017 to 2020. Finally, the Digitisation Fund began preparing guidelines on procedures for awarding grants from the Digitisation Fund to support the introduction of the regular DAB+ service.

4.1.1 Notes on the 2017 annual accounts

Based on the statement for the trustee account as at 31 December 2016 and considering the credits and debits as well as the grants already approved but not yet disbursed, about EUR 3.140 million was available in the fund as at 31 December 2017; see table 08 below for details.

TABLE 08: DIGITISATION FUND – EXCERPT FROM THE 2017 ANNUAL ACCOUNTS

Income and expenditure statement	EUR	
Trustee account balance as at 31 December 2016		2,968,360.57
Credits		
Revenues received in 2017	500,000.00	
Repayment of administrative expenses from 2016	6,213.93	
Grant repayments	16,343.67	
Interest	6,033.33	528,590.93
Debits		
Administrative expenses and RTR participation in projects in 2017	-81,500.00	
Grant disbursements in 2017	-158,729.91	-240,229.91
Trustee account balance as at 31 December 2017 (balance resulting from initial amount, credits and debits in 2017)		3,256,721.59
Administrative expenses from 2017 to be repaid to the fund in 2018 and RTR participation in projects in 2017		10,999.66
Balance of trustee obligations as at 31 December 2017		3,267,721.25
Approved grants pending disbursement		-127,990.66
Funds available in 2018		3,139,730.59

Source: RTR

4.2 Austrian Television Fund

The Austrian Television Fund (FERNSEHFONDS AUSTRIA) was set up in 2004 by the Austrian federal government in order to provide support for the Austrian film industry. The fund supports the production and commercial exploitation of television films. Each year, the fund has EUR 13.5 million at its disposal. These funds are provided by the federal government and administered by RTR. Articles 26 to 28 in conjunction with Articles 23 to 25 of the KommAustria Act (KOG) provide the legal basis for the activities of the Austrian Television Fund.

The grant money is intended to strengthen independent producers as well as Austria as a media sector location, to contribute towards the improved performance of the Austrian film industry and to ensure diversity within the cultural landscape. The grants are also intended to contribute towards strengthening the audiovisual sector in Europe. To regulate the awarding of grants from the Austrian Television Fund, RTR has drawn up a set of guidelines, which have been notified to the European Commission. The current guidelines for grants from the fund can be viewed on the website of the Austrian Television Fund (www.fernsehfonds.at).

4.2.1 Television Film Fund in 2017

Production grants

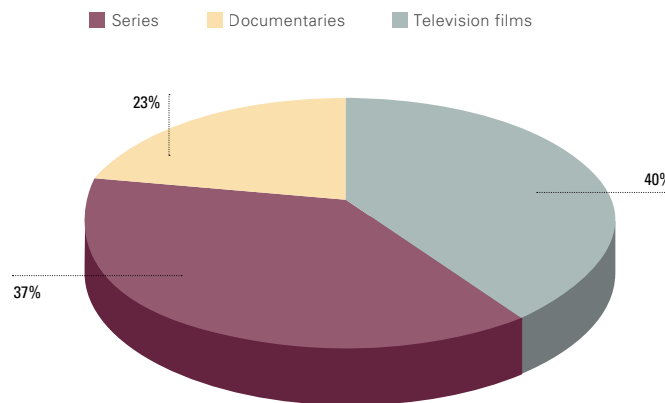
In 2017 the total amount of available grant money had been committed after two rounds of applications. A total of 69 project proposals were submitted. Grants totalling EUR 12,891,531 were approved for 54 projects.

The planned total production costs of the approved projects were roughly EUR 69.3 million, of which EUR 39.5 million are expected to be spent in Austria for production. The latter figure represents 3.06 times the sum of the grants awarded by the Austrian Television Fund.

Details of production grants

With the 54 approved grants, support was given to ten television films, three series and 41 documentaries. The figure below gives details on how the funding was proportionally distributed:

FIGURE 03: AUSTRIAN TELEVISION FUND – GRANTS APPROVED IN 2017

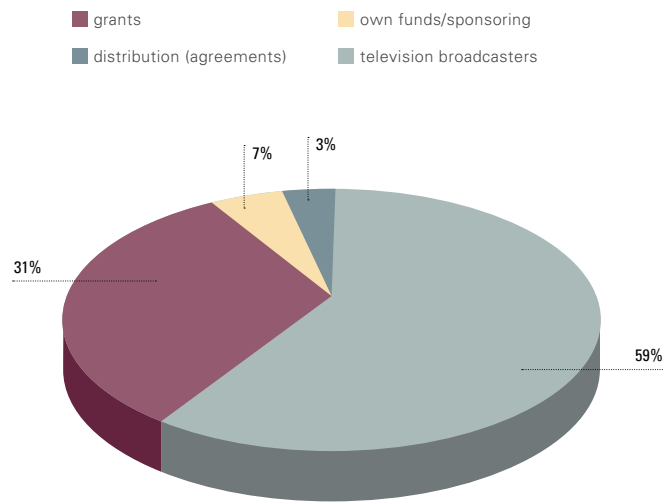


Source: RTR

The general trend towards television series is also reflected in the Austrian market. Television films accounted for 40% of the approved grants in 2017, this being 65% the year before. In other cases, grant shares increased from 21% to 37% for series and from 14% to 22% for documentaries.

Of the 54 approved projects, 13 were agreed as co-productions with international producers (six films, two series and five documentaries).

FIGURE 04: AUSTRIAN TELEVISION FUND – SHARE CONTRIBUTED TO PROJECTS FUNDED IN 2017⁸

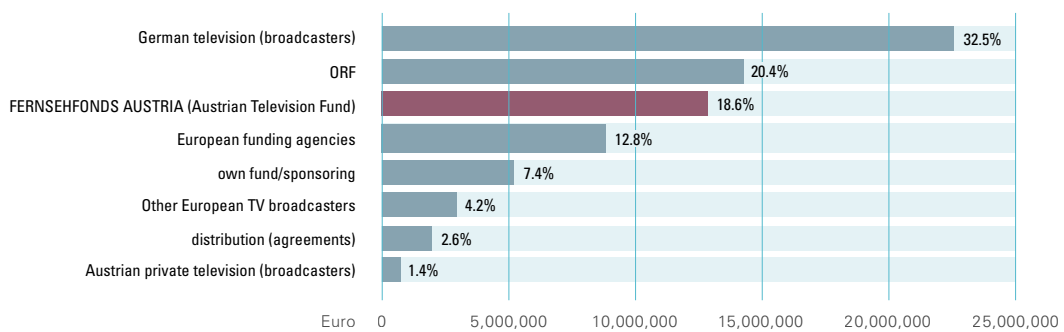


⁸ figures rounded

The shares contributed to the approved projects remained roughly the same compared with the previous year. The supported projects received 59% of their funding from television broadcasters, 31% from grants, 7% from own funds and sponsoring and 3% through distribution agreements.

The figure below gives a breakdown of the funding in detail:

FIGURE 05: CONTRIBUTIONS TO FINANCING OF PROJECTS SUPPORTED IN 2017



Source: RTR

Details on participation by television broadcasters

The ORF contributed funding for 45 of 54 approved projects. Participation by Austrian private television broadcasters increased to seven projects from one in the previous year. Two projects were produced solely with the aid of television broadcasters from other countries and without the support of an Austrian broadcaster.

German television broadcasters contributed to 26 projects. Only one of those projects received support from a private German broadcaster and the remainder from public broadcasters.

International television broadcasters contributed to twelve projects, with funding coming from Belgium, Canada, the Czech Republic, Denmark, France, Hungary, Italy, Norway, Switzerland and the United States.

Women's share in the funded projects

The share of women among producers of projects decreased from the previous year by 1 percentage point. The percentage of women among directors increased from 28% to 32%. Female screenwriters were involved in 36% of the funded projects, 7 percentage points more than the year before.

TABLE 09: AUSTRIAN TELEVISION FUND – GENDER STATISTICS FOR FUNDED PROJECTS

	Female Number	Female in %	Male Number	Male in %
Executive producers	4	7%	52	93%
Directors	25	32%	54	68%
Screenwriters	29	36%	51	64%

Exploitation grants

Grants totalling EUR 107,721.34 were approved in 14 cases in 2017. Producers received support in distributing their film projects from the Austrian Television Fund, in the form of grants for versions suitable for viewers with hearing and visual impairments, versions in other languages and for participation in film festivals.

Detailed information on the supported projects is published on the Austrian Television Fund's website (www.fernsehfonds.at) and in the film library (www.rtr.at/en/ffat/filmarchiv).

Notes on the 2017 annual accounts

Based on the statement for the trustee account as at 31 December 2016 and considering the credits and debits as well as the grants already approved but not yet disbursed, about EUR 158,000 was available in the fund as at 31 December 2017; the table below shows the corresponding details.

TABLE 10: AUSTRIAN TELEVISION FUND – EXCERPT FROM THE 2017 ANNUAL ACCOUNTS

Income and expenditure statement	EUR	
Trustee account balance as at 31 December 2016		4,391,246.35
Credits		
Revenues received in 2017	13,500,000.00	
Repayment of administrative expenses from 2016	36,969.97	
Grant repayments	0.00	13,536,969.97
Debits		
Administrative expenses in 2017	-760,300.00	
Interest/fees	-1,769.65	
Grant disbursements in 2017	-12,344,980.11	-13,107,049.76
Trustee account balance as at 31 December 2017 (balance resulting from initial amount, credits and debits in 2017)		4,821,166.56
Administrative expenses from 2017 to be repaid to the fund in 2018 and RTR participation in projects in 2017		60,091.54
Balance of trustee obligations as at 31 December 2017		4,881,258.10
Approved grants pending disbursement		
Committed funds from 2014	-7,333.33	
Committed funds from 2016	-632,355.83	
Committed funds from 2017	-3,982,325.87	
Committed funds from exploitation grants in 2015	-100,849.00	-4,722,864.03
Funds available in 2018		158,394.07

Source: RTR

4.3 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 level of EUR 18 million in 2013.

The funds serve the purpose of promoting the Austrian broadcasting system and helping broadcasters deliver programming marked by high quality and diversity. 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 awarded on the basis of relevant legislation and approved guidelines. Decisions on grants are taken by the managing director of RTR's Media Division after consideration of the opinion submitted by the Review Board.

4.3.1 Non-Commercial Broadcasting Fund

4.3.1.1 Application dates in 2017

In 2017 a total of about EUR 3 million was available in the Non-Commercial Broadcasting Fund.

In the first round of applications (due by 31 October 2016), the fund awarded grants to 14 non-commercial radio stations, three community television stations, and two education and training initiatives in radio broadcasting.

A total of EUR 2,795,842 was awarded. Of the funding, 32.63% (EUR 912,217) went to television, 64.49% (EUR 1,803,165) went to radio and 2.88% (EUR 80,460) was allocated to educational institutions.

In this round, grants of EUR 2,527,849 were awarded for content creation, EUR 262,493 for educational measures and EUR 5,500 to support studies.

The second round of applications closed on 15 May 2017. The remaining funds available, amounting to EUR 101,071, were awarded, with 74.78% (EUR 75,576) allocated to radio broadcasting for content and for educational programmes at 13 radio stations, 24.17% (EUR 24,437) as grants to two television stations, and EUR 1,058 (1.05%) paid out to the Free Radio Association (Verband Freier Radios).

4.3.1.2 Special applications

During the National Council elections in 2017, Freies Radio Oberösterreich (FRO) submitted a special application based on item 5.2 of the guidelines for the Non-Commercial Broadcasting Fund. A grant of EUR 4,950 was awarded in compliance.

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

4.3.1.3 Notes on the 2017 annual accounts

The Non-Commercial Broadcasting Fund received an endowment of EUR 3 million in 2016.

Based on the statement for the trustee account as at 31 December 2016 and considering the credits and debits as well as the grants already approved but not yet disbursed, about EUR 24,000 was available in the fund as at 31 December 2017; table 11 below shows the corresponding details.

TABLE 11: NON-COMMERCIAL BROADCASTING FUND – EXCERPT FROM THE 2017 ANNUAL ACCOUNTS

Income and expenditure statement	EUR	
Trustee account balance as at 31 December 2016		1,025,054.67
Credits		
Revenues received in 2017	3,000,000.00	
Grant repayments	4,043.39	3,004,043.39
Debits		
Administrative expenses in 2017	-113,200.00	
Administrative expenses carried over from 2016	-9,748.99	
Interest	-687.76	
Grant disbursements in 2017	-3,121,470.55	-3,245,107.30
Trustee account balance as at 31 December 2017 (balance resulting from initial amount, credits and debits in 2017)		783,990.76
Outstanding repayment in 2018 of administrative expenses from 2017		3,598.39
Balance of trustee obligations as at 31 December 2017		787,589.15
Approved grants pending disbursement		-763,512.30
Funds available in 2018		24,076.85

Source: RTR

4.3.2 Private Broadcasting Fund

4.3.2.1 Application dates in 2017

In 2017 approximately EUR 15 million was available overall in the Private Broadcasting Fund.

In the first round (due by 31 October 2016), a total of EUR 14,256,732.78 was awarded to 50 private television broadcasters, 48 private radio broadcasters and two educational institutions. Of these funds, EUR 9,605,324 (67.37%) went to television broadcasters, EUR 4,372,659.78 (30.67%) to radio broadcasters and EUR 278,749 (1.96%) to the educational institutions.

A breakdown of grants according to the three grant categories reveals that 93.07% of the total awarded in the first round of applications went to supporting content, 5.65% to education and training, and 1.28% to reach surveys and quality studies.

In the second round of applications (due by 15 May 2018), the remaining funds available, amounting to EUR 727,177, were awarded to 22 private television and 28 private radio broadcasters. Of that total, EUR 418,228 (57.51%) went to television broadcasters and EUR 308,949 (42.49%) to radio broadcasters.

A breakdown of the grants according to the three grant categories reveals that 72.71% of the total awarded in the second round of applications went to supporting content, 21.49% to education and training, and 5.81% to reach surveys and quality studies.

4.3.2.2 Special applications

During the National Council elections in 2017, three special applications were submitted based on item 5.2 of the guidelines for the Private Broadcasting Fund, with a total of EUR 255,612 awarded in compliance.

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

4.3.2.3 Notes on the 2017 annual accounts

The Private Broadcasting Fund received an endowment of EUR 15 million in 2017.

Based on the statement for the trustee account as at 31 December 2016 and considering the credits and debits as well as the grants already approved but not yet disbursed, about EUR 606,000 was available in the fund as at 31 December 2017; table 12 below shows the corresponding details.

TABLE 12: PRIVATE BROADCASTING FUND – EXCERPT FROM THE 2017 ANNUAL ACCOUNTS

Income and expenditure statement	EUR	
Trustee account balance as at 31 December 2016		13,498,295.98
Credits		
Revenues received in 2017	15,000,000.00	
Grant repayments	92,343.86	
Interest	10,757.24	
Administrative expenses carried over from 2016	24,428.38	15,127,529.48
Debits		
Administrative expenses in 2017	-565,588.00	
Grant disbursements in 2017	-15,713,381.70	-16,278,969.70
Trustee account balance as at 31 December 2017 (balance resulting from initial amount, credits and debits in 2017)		12,346,855.76
Outstanding repayment in 2018 of administrative expenses from 2017		55,291.95
Balance of trustee obligations as at 31 December 2017		12,402,147.71
Approved grants pending disbursement		
Committed funds from 2016	-3,701,649.26	
Committed funds from 2017	-8,094,480.15	-11,796,129.41
Funds available in 2018		606,018.30

Source: RTR

4.4 Press and journalism subsidies

The federal press and journalism subsidies are direct support measures in the form of financial contributions. Decisions on the allocation of subsidies are made by the Austrian Communications Authority (KommAustria), while 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 bodies to advise on these matters. One exception is the subsidies allocated to the Austrian Advertising Council under the terms of 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 Austrian Press Subsidies Act 2004 (PresseFG 2004), the press subsidies guidelines published by KommAustria each year, Section II of the Journalism Subsidies Act 1984 (PubFG) as well as Art. 33 KOG and the guidelines published by KommAustria on the promotion of self-regulation in commercial communication.

4.4.1 Press subsidies

In 2017 KommAustria received 105 applications for subsidies under the PresseFG 2004. KommAustria allocated funding in 104 cases, with one application having to be rejected due to failure to meet the 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 training
- Research projects focused on the press sector
- Press clubs
- A self-regulation body for matters related to the press

TABLE 13: PRESS SUBSIDIES –GRANT AMOUNTS, APPLICATIONS AND APPROVAL RATES, 2013–2017

Year	Grant amount EUR	Applications	Approvals	Approval rate in %
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
2017	8,912,000.00	105	104	99.05

Note: Contributions to the Austrian Press Council that are taken from the funds are included here.

Details on grant awards can be found on the RTR website www.rtr.at/de/foe/Foerderungen.

4.4.2 Funding for self-regulation of the press

In 2017 the Austrian Press Council dealt with 320 cases. Of those cases, 317 were submitted by external parties, while in three cases the body's senates took action based on direct observations. By way 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 Kronenzeitung and Heute have refused to recognise the Press Council's authority as arbitrator (as of 2017). The Austrian daily entitled 'Österreich' joined the Press Council at the beginning of March 2017.

KommAustria complied with the Austrian Press Council's request for a cost contribution of EUR 225,000 in 2017.

TABLE 14: PRESS COUNCIL – NUMBER OF CASES HANDLED AND COST CONTRIBUTIONS, 2013 – 2017

Year	Cases	Cost contribution in euros
2013	155	152,000
2014	238	164,000
2015	251	204,000
2016	306	155,000
2017	320	225,000

Source: RTR

4.4.3 Funding for self-regulation of commercial communication

For the first time in 2017, two bodies applied for subsidies under the terms of Art. 33 KOG. While one was long-time funding recipient Austrian Advertising Council, the other was a first-time applicant, the Association for the Austrian Ethics Council for Public Relations (Verein Österreichischer Ethik-Rat für Public Relations).

On the basis of Art. 33 Par. 2 KOG, it is also possible to grant subsidies to a recognised self-regulatory body in the field of commercial communication in media. In particular, bodies that ensure the broad representation of the affected professional groups and sufficient transparency in respect of the basis of decisions, the proceedings and the implementation of decisions are considered recognised self-regulation bodies. Although the public relations sector is represented by the association serving as the legal entity for the Austrian Ethics Council for Public Relations, other stakeholders in the field of commercial communication in media are not, with examples including journalists and media businesses and affiliated organisations. Since the eligibility requirements were not met, KommAustria consequently did not comply with the request by the Association for the Austrian Ethics Council for Public Relations for a subsidy to defray the costs incurred in 2016.

Hence, in 2017 the Austrian Advertising Council was again the only body for the promotion of self-regulation in commercial communication that was eligible for a subsidy, subsequently receiving once again the entire amount allocated to the fund, which was EUR 50,000.

4.4.4 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 issues related to politics, culture and world views at a high level. Overall, the periodicals that receive funding represent a broad range of content. The publications range from feminist periodicals to journals that are centred on religious topics or discuss 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.

KommAustria received 80 applications for journalism subsidies in 2017, complying with 67 requests while rejecting 13 due to failure to meet statutory funding requirements.

The amount of the grant is determined by KommAustria on a case-by-case basis, with due consideration given to the recommendation by the Journalism Subsidies Advisory Board as well as to the scope, circulation, resources and financial situation of the relevant print periodical. By law, grants may be no less than 0.4% and no more than 4% of the funds earmarked for this purpose under the Federal Finance Act. Funds totalling EUR 340,000 were available in 2017, with the individual amounts granted ranging between EUR 1,360 and EUR 13,398.53.

TABLE 15: JOURNALISM SUBSIDIES – GRANT AMOUNTS, APPLICATIONS AND APPROVAL RATES, 2013 – 2017

Year	Grant amount EUR	Applications	Approvals	Approval rate in %
2013	340,000	87	79	90.8
2014	340,000	92	76	82.6
2015	340,000	80	72	90.0
2016	340,000	83	76	91.6
2017	340,000	80	67	83.75

Details on grant awards can be found on the RTR website at <https://www.rtr.at/de/foe/Foerderungen>.



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Activities

of the TKK

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05 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. It is additionally empowered to serve as the supervisory body pursuant to the Signatures Act (SigG). What follows is an overview of the main areas of regulatory activity in 2017.

5.1 Market analysis to ensure competition

The regulatory authority carries out market analysis procedures at regular intervals. Such 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 does in fact even exist in such markets. If effective competition is not present in the market, in response to competition challenges, appropriate obligations will need to be imposed on the company with significant market power.

In the course of the market analysis procedure initiated by the TKK in 2015, one step in 2016 was to separate from the main procedure the parts involving the market for local access (formerly referred to as 'unbundling') and the market for central access (formerly referred to as 'bitstream access'). These markets in particular play a significant role in internet access. In February 2017, the TKK adopted proposals for enforcement action. On completion of a national consultation, the draft measures were notified to the European Commission and the other EU regulatory authorities as part of the coordination procedure. In its statement of 30 May 2017, the European Commission recommended minor changes to the proposal, while not calling into question the TKK's conclusions or the planned regulatory steps.

In decisions on the two procedures adopted on 24 July 2017, the TKK adapted the previously effective set of rules governing local access to reflect the current market situation, specifically with regard to planning meetings, compensation for investments, network compatibility and 'virtual unbundling' (now to include regional-level transfer). To accommodate a related ruling by the Administrative Court, regular testing of wholesale charges to ensure the avoidance of any margin squeeze was simplified and the charges were recalculated. Additional rules were also included to support further propagation of vectoring technology. This technology allows significantly higher bandwidths to be supplied to customers via existing copper networks in areas not yet having access to fibre optical infrastructure. Vectoring thus promises substantial potential for the short-term improvement of broadband services in Austria.

In the draft decision on central access, the TKK expanded the array of available wholesale broadband products. In addition to bitstream access for ISPs, which, due to market delineation, has been limited to business customer products since 2010, an additional wholesale service has been defined for this market. The new virtual unbundling

option involves the transfer of regional network traffic at the provincial capitals and at additional transfer points in Vienna. The decisions are aimed at moving forward fibre optic rollout and improved supply of broadband services to subscribers.

In late September 2017, A1 Telekom disclosed reference offers on access to the local loop (unbundling), broadband internet access solutions (bitstream access) and virtual unbundling. RTR reviewed these offers on behalf of the TKK. The review procedures for the first two reference offers were terminated in late October and mid-November of 2017. The review of the reference offer for virtual unbundling was still ongoing as of the end of the reporting period.

This is already the third tier of rules which the TKK has implemented for NGA (next generation access), in so doing continuing the successful course taken since 2010 to promote broadband rollout in Austria. In view of the Administrative Court's confirmation of previous decisions in 2010 and 2013, none of the parties to the procedures lodged a complaint against the current decision. The TKK decisions will accordingly provide an even firmer foundation for broadband rollout in the next few years, not least by supporting the forthcoming 5G rollout.

The TKK completed another market analysis procedure on 2 May 2017. The subject was the 'market for call origination in the public telephone network at a fixed location'. Based on detailed analysis of the conditions for retail competition, no further need for regulating this sector could be identified.

In view of this finding, the specific obligations previously imposed on A1 Telekom had to be repealed as of June 2017; these obligations had included non-discrimination and fee control.

A1 Telekom was also no longer required to provide carrier selection and carrier pre-selection, because of decisions issued in the past. This obligation had meant that A1 Telekom was required to allow A1 customers to place fixed network calls via another operator while maintaining their subscriber lines with A1 Telekom. Even though this obligation to provide access is no longer in force, under private law A1 Telekom continues to offer this option to end users and operators.

A TKK decision on the access market for private customers was also adopted on 2 May 2017. No further need for regulation of this market was identified in this case either, and the specific obligations previously imposed on A1 Telekom were consequently withdrawn. Another decision was adopted relating to the access market for non-private customers; the findings concerning the two markets identified were as follows:

- The 'access market for non-private customers (multi-ISDN connection)' no longer requires sector-specific regulation.
- The 'access market for non-private customers (POTS connection/basic ISDN connection)' is a relevant market for regulation and A1 Telekom has significant power in this market.

For this access market, A1 Telekom was required to introduce price cap regulation (a maximum fee) to prevent the company from exercising its market power against its customers' interests. A1 was also required to keep separate accounts.

A final item relates to the procedure involving an analysis of the market for high-quality access at a fixed location (previously referred to as 'leased line'). This procedure was continued in the year under review, mainly through obtaining supplementary statements of the facts. This market is becoming highly significant due to various internal developments as well as in view of the pending 5G rollout. Additional reports were requested, specifically to evaluate the price and market situation of the dark fibre required for 5G connections. Further progress in the procedure and a national consultation are expected for the first quarter of 2018.

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

When expanding broadband networks, operators are permitted to lay cabling on private and public property. However, another option is joint use of existing infrastructure (masts, ducts, manholes or lines) owned by other companies, thus reducing the costs of expanding fixed and mobile networks, including 5G in future.

If the parties involved cannot agree on such usage, they may then petition TKK for a decision. Prior to any TKK decision, RTR attempts to arbitrate a conciliation agreement (mediation).

In the reporting period, 16 requests were made to the TKK for wayleave or joint use rights. The majority of cases (13 of 16) involved wayleave rights. Here the TKK was, for the first time, confronted with issues relating to cabling laid on public property in municipalities or provinces. Three of the procedures were for the purpose of joint use of existing infrastructure. During the reporting period, 13 of the procedures were completed, with the remainder still pending. The decisions by the TKK can be viewed (in German) at www.rtr.at/de/tk/EntscheidungenGesamt.

5.3 **Supervisory procedures to ensure fair competitive conditions**

Where the regulatory authority receives any indication from within its scope of responsibility that a company is in breach of any specific requirements of telecommunications law, the authority must conduct a supervisory procedure. 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.

Two procedures during the reporting period are worth mentioning here.

tele.ring rate plans – collection of a surcharge for roaming

With decision R 1/17 of 31 July 2017, the TKK prohibited T-Mobile Austria GmbH from collecting a surcharge for the option of using data roaming services. In breach of the Roaming Regulation, T-Mobile had charged an additional fee for data roaming with certain tele.ring rate plans that in terms of features (such as minutes, text messages, data volumes) were identical with other plans that did not include data roaming. The affected plans were: Passt! Pur Mini EU, Passt! Pur Maxi EU, Passt! Plus Mini EU and Passt! Plus Maxi EU.

Mass Response – collection of a surcharge for data roaming services

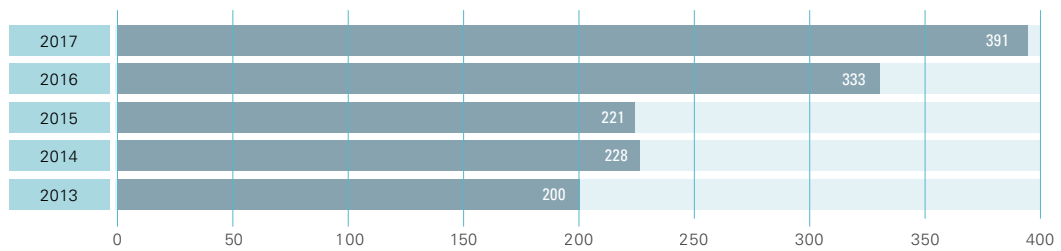
With decision R 2/17 of 18 September 2017, the TKK prohibited Mass Response Service GmbH from collecting a surcharge, in addition to the domestic retail fee, for the use of data roaming services with the firm's prepaid cards, finding that such practice is in breach of the Roaming Regulation.

5.4 **Ensuring legally compliant general terms of business**

One important task for the TKK is to ensure that the contract terms applied by providers and operators of telecommunications services and networks are in conformance with the law; such sets of terms include: general terms and conditions, service descriptions and fee provisions.

Operators and providers are required by law to draw up contract terms and notify them to the TKK. In 2017, 391 procedures were carried out. When viewing the trend in recent years, the number of notifications can be seen to have almost doubled since 2013.

FIGURE 06: SETS OF CONTRACT TERMS NOTIFIED TO THE TKK



Source: RTR

When checking the details, the Telekom-Control-Kommission examines not only compliance with telecommunications law but also with any relevant provisions of civil and consumer protection law. This reduces the customer's risk of having to take private court action to clarify the legal validity of individual clauses later, after conclusion of a contract.

The TKK gives high priority to ensuring that operators and providers make the required changes to the contracts during the procedure itself, in this way establishing legal compliance at the earliest possible stage. In every procedure in 2017, the TKK achieved this goal and thus avoided the need for issuing an objection decision.

In addition to the notification requirement and because of its position of possessing significant market power as defined in TKG 2003, A1 Telekom had previously been under obligation to obtain prior approval before introducing any contract terms that were relevant to the fixed network access market for private customers and non-private customers. This obligation was repealed in 2017 as a result of the market analysis decisions in the procedures M 1.3/15 (concerning private customers) and M 1.4/15 (concerning non-private customers), making future approval unnecessary.

5.5 Spectrum – the fairest possible distribution of scarce resources

Review of coverage based on spectrum awarded in the 2013 multiband auction

Coverage requirements have been tied to the acquisition of spectrum 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 pertaining to the 800, 900 and 1800 MHz bands (planned primarily for providing LTE services) are currently under review by the regulatory authority, with the review procedures still ongoing at the end of the reporting period.

The coverage obligations required, among other things, proper broadband coverage for a certain number of the municipalities that had been (very) poorly supplied with broadband services at the time of the 2013 multiband auction; these communities were specified by the regulatory authority in two appendices to the assignment decision. This obligation was to be fulfilled solely using frequencies from the 800 MHz frequency range. A municipality 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 downstream and 0.5 Mbps upstream.

In addition to this, a communications service needs to be set up for 95% of residents that supplies data to consumers outdoors at a rate of 1 Mbps for downloads and 250 Kbps when uploading. However, this obligation does not have to be met solely using frequencies within the 800 MHz band. Similarly, the requirement to provide 98% of residents with a communications service supporting an end-user data rate of 12.2 Kbps outdoors (for example voice telephone service) can be met using other frequency bands (such as the 2.1 GHz or 2.6 GHz ranges), with certain minimum quality criteria specified for voice services.

The licensees holding spectrum in the 800, 900 and 1800 MHz ranges (A1 Telekom, Hutchison and T-Mobile) were required to provide evidence of compliance with the coverage obligations defined in their particular case by the regulatory authority. Based on the information submitted, the TKK decided to order appropriate measurements to verify the reported level of coverage in specific areas.

Review of coverage level in the 450 MHz frequency range

During the reporting year, the TKK carried out the procedure for verifying compliance with coverage obligations in the 450 MHz frequency range. The requirement specified that as of the reference date of 30 June 2017 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 maps). According to these materials, 65 base stations were in operation as of the above-mentioned reference date.

The TKK then evaluated 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 were met as at 30 June 2017. The TKK therefore terminated the procedure and did not take any further action.

Award of spectrum in the 3.4 to 3.8 GHz ranges

In 2016 the TKK resolved to hold a joint award procedure for the two bands, specifically 3.4 to 3.6 GHz and 3.6 to 3.8 GHz, and to begin preparations for a joint auction. The two bands are equally suitable for 5G, mobile internet and wireless broadband services. To ensure planning security for market participants, the TKK published a general roadmap for future frequency awards (Spectrum Release Plan) in December 2016. This legally non-binding plan reflected the expectations at that time in relation to future frequency awards.

Holding a consultation on the forthcoming frequency award in the 3.4 to 3.8 GHz range, RTR collected valuable feedback from the market and discussed potential approaches with stakeholders. A summary of the statements received has been published on the RTR website. A total of 15 statements were submitted. The regulatory authority also invited all consultation participants to attend a hearing with the TKK on 17 November 2017 to discuss consultation input.

The TKK is focusing the award procedure on these goals: legal certainty, efficient

utilisation of spectrum, ensuring and encouraging effective competition, encouraging innovation, as well as greater connectivity and expanded coverage.

Maximising auction revenue is expressly ruled out as a goal in awarding the spectrum, as is actively supporting new market entrants through actions such as reserving spectra. The TKK is to hold a consultation on the specific tender conditions and auction rules in March 2018. Pending approval by the federal minister, the TKK currently expects to be able to publish the Tender Document by the end of the second quarter of 2018. The auction would then be held as planned in October or November 2018. The 3.6 to 3.8 GHz frequency range could then be used immediately on assignment with legal effect and the 3.4 to 3.6 GHz range only once the current usage rights expire on 1 January 2020. Nonetheless, in view of a number of uncertainties, the regulatory authority reserves the right to deviate from the plan; such uncertainties include any changes to the legal framework (at the European or national level) that might oppose the plan, or unanticipated technical or economic developments having a substantial impact on the market.

Preparations for other awards (700 MHz and 2100 MHz)

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 levels – 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 trend clearly recognised in other countries as well. 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 made a start on preparatory work for awarding the second digital dividend, and continued these efforts in the reporting year. The allocation for mobile telecommunications was implemented through an amendment made by the Federal Ministry of Transport, Innovation and Technology (BMVIT) to the Frequency Utilisation Ordinance 2013. One issue related to the frequency range involves the DVB-T2 multiplex licences for simpliTV (multiplexes D, E and F), which were awarded as recently as in 2013 for a period of ten years. In addition, KommAustria issued a decision as recently as 13 July 2016 approving the installation of radio equipment for multiplex E by ORS and granting operating rights until 31 December 2022.

The 2100 MHz band can be used as of 1 January 2021 after expiry of the current usage rights. Taking into account an appropriate time interval between the auctions as well as the expected availability of the 700 MHz band in mid-2020, the regulatory authority plans to begin the auction in autumn of 2019.

5.6 Electronic signatures and trust services

As set out in the Signature and Trust Services Act, the TKK is the supervisory body for those trust service providers (TSPs) as defined in the eIDAS Regulation (910/2014) that are established in Austria.

Back in 2015 the TKK had initiated a procedure, still ongoing as of the beginning of 2017, on the security of the SHA-1 hash function. A collision of this hash function, involving two files with identical hash values, was first published in February 2017. Since then at the latest, SHA-1 has no longer been suitable for qualified electronic signatures. As part of supervisory activities, efforts were aimed at discontinuing the use of SHA-1 for qualified electronic signatures and for newly issued qualified certificates. It was not necessary to revoke existing qualified certificates. The TKK was able to close the procedure before the end of 2017.

A review launched in 2016 to examine a TSP that had begun operating in that year was still unable to be completed in 2017, as an evaluation report requested by the TKK from a confirmation body was not delivered on schedule.

Twelve new procedures were initiated in 2017, eight of which were completed in that year. Four of the procedures related to reports of security violations or integrity losses. Three of those incidents had no serious consequences or did not directly affect a trust service. In the fourth case, the security of one signature creation device was potentially compromised under certain conditions. The qualified certificates affected by the vulnerability were revoked in June 2017. The keys of a time-stamp service also affected were replaced.

Qualified TSPs are required to undergo a conformity assessment by an accredited conformity assessment body every two years. Based on transitional provisions, the three TSPs that had earlier issued qualified certificates in accordance with Directive 1999/93/EC – the Signatures Directive which was repealed in 2016 – were required to submit conformity assessment reports by 1 July 2017 at the latest. Another conformity assessment report was submitted in November 2017 by a new TSP. With some of the supporting documentation missing, only in one case was the supervisory body able to complete the required examination of the conformity assessment reports by the end of 2017.

While examining one conformity assessment report, it was discovered that attestation for a signature creation device supported by one TSP had expired and not been renewed thereafter. The qualified certificates affected were revoked in September and October of 2017.

In supervisory operations, the TKK continues to work through RTR, with the latter separately responsible for certain tasks. This applies especially to the infrastructure used to verify certificates, electronic signatures, electronic seals and electronic time-stamps: RTR continues to operate this infrastructure.

This specifically includes:

- The 'trusted list' made available at www.signatur.rtr.at/currenttl.xml (a list of information related to TSPs and the trust services they provide, which is required to be made available in a standardised format by each Member State).
- The signature verification service made available at www.signaturpruefung.gv.at, which as of late 2017 allows verification of electronic signatures, electronic seals and electronic certificates from other EU and EEA countries, where these items are listed in the trusted list for the particular country.
- A 'trust infrastructure', enabling the supervisory body to take over the certificate database of a TSP that discontinues service.



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06 Activities of RTR

In the area of telecommunications and postal services, the Regulatory Authority for Broadcasting and Telecommunications (RTR) serves as the operative arm of the Telekom-Control-Kommission (TKK) and the Post-Control-Kommission (PCK). RTR additionally has separate responsibilities as a telecommunications authority. These include alternative dispute resolution, the administration of Austrian phone numbers and the issue of ordinances. Key focal points of work in the reporting year are presented below.

6.1 Conciliation procedures: we are here to help consumers

The regulatory authority supports customers of communications and postal services through a total of three conciliation bodies:

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

Within the area of users' rights, conciliation represents the main focus of activities at RTR, with a total of 2,170 such procedures completed in 2017. In every such case, the task is to support customers who have unresolvable issues with their providers. The goal is to reach an amicable solution that satisfies both the provider and the user. Only where such a settlement is not reached does the conciliation body inform the parties of its legal opinion based on its determination of the facts of the case. Instead of taking recourse to the courts, which entails considerable cost risk, consumers can in this way resolve most issues quickly and at no expense.

The settlement rate in such cases is high, demonstrating the effectiveness of this alternative legal instrument. The figure also highlights the strong willingness on the part of the companies involved in cases to cooperate in reaching a settlement. This basic positive attitude generally seen among the companies involved is a key factor in the overall success of the conciliation bodies.

A look at changes in the number of requests for conciliation reveals a slight drop in cases relating to telecommunications and media, while procedures involving postal services increased considerably.

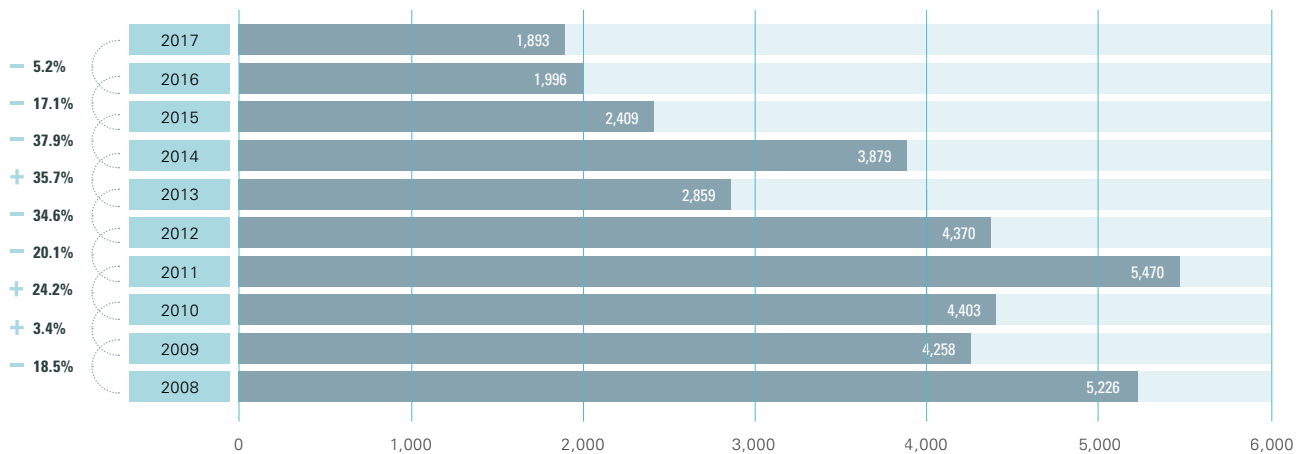
 **1,893**
conciliation
procedures

 **3,525**
conciliation
requests

6.1.1 Conciliation procedures in telecommunications and media

The number of conciliation requests fell again in 2017, if only slightly. It is encouraging to observe that, at 1,893 procedures, the number was the lowest recorded in the past 15 years.

FIGURE 07: CONCILIATION PROCEDURES IN TELECOMMUNICATIONS AND MEDIA FILED 2008 – 2017



Source: RTR

With a view to the subject of disputes, it can be seen once again that the ‘typical conciliation issue’ is a thing of the past. The largest, continually growing category of conciliation cases relates to general disputes over contracts. This category stands for widely varying types of issues that can arise in the course of a service contract and includes unclear items among the provisions of signed contracts or questions related to termination of agreements. With regard to this, most frequent category of conciliation cases, it can be observed that no two cases are the same.

The new EU roaming rules have clearly left their mark. Here a significant increase in related complaints can be recognised, while the same holds true for disputes relating to the quality of internet access. As digitisation progresses, reliable internet access is becoming increasingly important for users.

A total of 93% of all procedures were completed within 90 days. Those cases that took longer usually involved a particularly detailed exchange of information among all parties involved in order to finally achieve a settlement. The high settlement rate of 84% indicates how worthwhile the effort is. The number represents a new record.

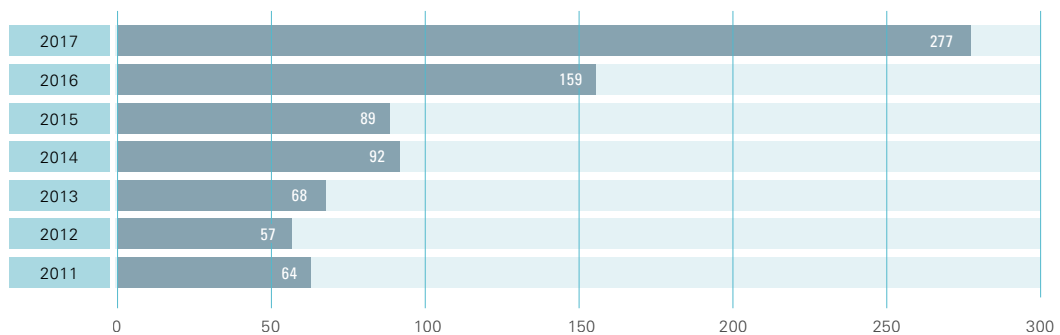
Another positive change was in conciliation procedures relating to media, which dropped again considerably in 2017 following the record number in 2016. The focus of media conciliation continues to be disputes over contracts for pay TV services.

6.1.2 Conciliation procedures in postal services

The number of conciliation requests filed by consumers increased again sharply, reaching 277 in 2017. Of those, a total of 260 conciliation cases were processed and completed, representing a 62% increase over the previous year. The underlying reason for the sharp rise appears to be the strong media presence of the conciliation body for postal services and the associated higher visibility.

As in the previous year, the most frequent occasion for conciliation was a parcel delivery issue. Other issues included parcel loss during handling in other countries as well as other postal services, which refers to a basket category covering various aspects of postal services, such as fees, transit times, return deliveries, addressing and drop-off orders. At 77%, the majority of procedures were resolved positively for consumers. Such solutions included amicable settlements, compensation payments and commitments to improve services in future. In over 200 cases during the 2017 reporting year, responses were also sent to written enquiries or advice given over the phone concerning postal service issues.

FIGURE 08: CONCILIATION PROCEDURES IN POSTAL SERVICES FILED 2011 – 2017



Source: RTR

6.2 Supervisory procedures

Supervisory procedures are required when the regulatory authority receives any indication from within its scope of responsibility that a company is in breach of the Telecommunications Act 2003 (TKG 2003) or of one of the ordinances issued on the basis of that Act. 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 issue a decision ordering suitable and necessary measures to ensure compliance with the violated provision or provisions.

Three supervisory procedures were initiated by RTR in 2017, with two of them completed within the same year. This contrasts with 2016, when no occasion for such a procedure arose.

A brief description of the subject matter of two of the supervisory procedures is given below. The third procedure was still pending at the time of writing and will subsequently be included in next year's report.

1. Instalment agreement for devices

This supervisory procedure concerned the legal soundness of consumer contracts for an agreement known as an 'instalment agreement for devices' that was agreed for a term of up to 36 months, as well as the failure of the provider to notify the authorities of the conditions of this instalment agreement. Hutchison Drei Austria GmbH was in breach of the Telecommunications Act because it designed its consumer contracts in the context of this 'instalment agreement for devices' in such a way that the maximum initial minimum term of 24 months for contracts with consumers is nonetheless exceeded in cases where an instalment agreement with a 36-month term is concluded with a consumer for a device. This decision can be viewed (in German) at www.rtr.at/de/tk/RAUF_1_2017_Bescheid_120517.

2. Missing contract terms

This procedure was initiated against Oja.at GmbH because of the company's failure to notify the regulatory authority of the contract terms applying to services provided by the company. The company rectified the deficiency during the procedure by submitting corresponding notification. This decision can be viewed (in German) at www.rtr.at/de/tk/RAUF_2_2017_Bescheid_27072017.

6.3 Value-added services: complaints continue to decline

Art. 24 Par. 2 TKG 2003 specifies the regulatory authority's duty to provide information on an annual basis regarding any 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, 31 of the complaints handled in connection with RTR's duties as a conciliation body were related to value-added voice telephony, and eight to value-added text messaging, which corresponds to about 1.6% and 0.4% respectively (roughly 2.1% in total) of all conciliation procedures. Thus, a slight drop in complaints was again recorded for 2017.

TABLE 16: VALUE-ADDED SERVICE COMPLAINTS 2013 – 2017

	2013	2014	2015	2016	2017
Total number of conciliation procedures	2,859	3,879	2,409	1,996	1,893
Value-added services	255 8.9%	136 3.5%	55 2.2%	57 2.9%	39 2.1%

Source: RTR

Moreover, a web form for complaints about value-added services has been in service since April 2008. During the period under review, the number of complaints dropped to some 30 from the previous year, when some 42 complaints were filed in this way.

6.4 Services subject to notification requirements

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

TABLE 17: NOTIFIED ACTIVE SERVICES 2014 – 2017

Service category	2014-12-31	2015-12-31	2016-12-31	2017-12-31
Public telephone services at fixed locations	396	394	326	390
Call shops	95	82	67	43
Internet cafés	104	88	76	50
Public internet communications services	414	409	415	418
Public leased-line services	75	77	83	79
Other public communications services	25	10	27	30
TOTAL services notified	1,436	1,463	1,423	1,521

Source: RTR

As of 31 December 2017, notifications for 1,521 active services had been given by a total of 768 operators, of which 62 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 that are required to provide notification as defined in Art. 15 TKG 2003 (including the notification of general terms and conditions).

6.5 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.

A decision by the Federal Ministry of Transport, Innovation and Technology (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', because A1's competitors ensure the comprehensive provision of these services to the population. In the event that, despite competition, no provider responds to the specific request of a potential subscriber for one of the services listed above, Art. 30 Par. 4 TKG 2003 specifies the duty of the Federal Minister of Transport, Innovation and Technology to issue a decision requiring the service to be supplied to the requesting subscriber by the provider that was most recently relieved of the obligation to provide that service in that particular place, in other words A1 Telekom.

A1 Telekom continues to be directly obliged to provide a comprehensive public telephone service, whereby the 2016 amendment to the Universal Service Ordinance (UDV) defines the provision of a public telephone service as comprehensive if quantities of public phones are made available as follows:

- a) at least one public telephone in each municipality,
- b) in municipalities with 1,500 to 3,000 residents, at least two telephones at separate locations,
- c) in municipalities with over 3,000 residents, at least two telephones at separate locations as well as one additional telephone at a separate location for every additional 3,000 residents.

As a consequence of the EU's revisions to the legal framework for electronic communications in the universal service sector, the emergent international trend seems to be that universal service schemes will focus in future on the affordability of functional internet access and voice communications services. The term 'functional internet access' has now also been defined in operational terms. An annex to the current draft of the European Electronic Communications Code contains a minimum list of services that functional internet access is required to support. The list includes the use of social media and video calls, in addition to e-mail, search engines, basic online tools for training and education, and online banking.

The current proposal allows Member States to ensure the continued availability or affordability of services other than functional internet access or voice communications services, provided that the need for such services is adequately demonstrated based on national circumstances. This is to be reviewed no later than three years after the Directive's date of entry into force and then reviewed on an annual basis.

An authoritative definition of the future universal service is expected to be finalised during 2018, pending completion of discussions by the European institutions.

6.6 Communications parameters: administration of the Austrian number range

Amendment to the Communications Parameters, Fees and Value-Added Services Ordinance (KEM-V)

In last year's report, we announced the intention of amending the KEM-V to expand the options for using geographic telephone numbers; this plan has been implemented only in part. While geographic numbers are now permitted to be offered separately from a fixed network termination point (see the section below on the KEM-V amendment), such numbers continue to be tied to the particular local network.

Central reference database

The major focus of related efforts involved detailed preparations for the design of a central reference database, comprising all phone numbers in Austria. To maximise acceptance within the industry for this undertaking, RTR's experts engaged in ongoing discussions with all major providers and operators.

The purpose of a central reference database is to store two types of data: first, the communications service provider authorised to use a given number, and second, the communications network supporting the number. Large providers usually act in both roles, in contrast to small providers such as resellers and certain MVNOs. Since each mobile and/or fixed network operator currently has a separate database, a central database accessible to all providers would be a tremendous benefit, particularly in terms of making number porting procedures more efficient.

The call for tenders is planned for mid-2018, once the specifications are completed.

Reports detailing statistics on telephone number administration

In the 2017 reporting year, 565 decisions were issued in total – 26 fewer than in the previous year. The number of negative decisions (seven) continued to decline in 2017, with most involving non-geographic numbers. Following the more flexible criteria now governing the use of geographic telephone numbers, negative decisions relating to these numbers have dropped to virtually zero.

TABLE 18: NUMBER OF DECISIONS ON TELEPHONE NUMBER REQUESTS, 2013 – 2017

	2013	2014	2015	2016	2017
Number of affirmative decisions	503	630	562	585	558
Geographic numbers	243	294	330	323	318
Non-geographic numbers	260	336	232	262	240
Number of negative decisions	15	20	22	9	7
TOTAL	518	650	584	594	565

In 2017 RTR issued a total of ten affirmative decisions within the framework of administrating special communications parameters, which include mobile network codes as a basic and essential addressing element for mobile networks.

6.7 Emergency calling service – a matter of vital importance at RTR

The progress made in the area of emergency calling in previous years was continued. One noteworthy item from last year is Plattform Notrufe, an event organised by RTR on a semi-annual basis, at which representatives of all major players in the Austrian emergency system meet to discuss current topics and consult on specific steps to continuously improve the situation. Progress made in 2017 included the formation of a special working group as part of efforts to improve the routing of emergency calls.

Work performed by this group focuses on achieving the ideal of routing every emergency call to the correct emergency call handling centre (that is, the locally competent centre for the particular caller) and therefore minimising the time it takes to provide assistance. Plans for the near future provide for the specific routing relationship between the geo-location and the emergency call centre to be made available electronically to support the correct processing of emergency calls, for example by providers of VoIP services or app providers. Design work completed in 2017 on the central reference database for telephone numbers can additionally contribute to improvements in the context of emergency calling, since no list of ported numbers yet exists that is updated on a daily basis. Accordingly, cases can arise where one call handling centre has to query more than one provider before receiving the required location or personal data.

Voice over LTE (VoLTE), which refers to IP-based voice telephony via 4G networks, is a good example of a new technology that is offering new possibilities while also creating new challenges. A general tendency can be recognised whereby user devices are becoming increasingly 'smarter'. While this can be an advantage in emergency calling – by allowing the person calling for help to be geo-located via their user device, for example – it also requires uniform procedures for managing these new possibilities. Organisations responding to emergency calls and network operators have reported a fault whereby an incomplete or incorrectly implemented emergency set-up feature in smartphones results in faulty emergency call routing. RTR has taken this as an opportunity to discuss the situation with network operators and call handling centres. Following this initial step, a working group at RTR will then detail measures for rectifying the issue, as a basis for uniform procedures in Austria.

This year (2018), RTR plans to further devote its attention to emergency calling and to help encourage Austria's emergency calling system to make greater use of options offered by new technologies, such as emergency call routing, user device-supported geo-location, a central telephone number database, and the challenges of new technologies such as VoLTE and VoWiFi as mentioned above – to name only a few of the many topics here.

6.8 RTR ordinances: working to create a modern legislative framework

6.8.1 Seventh amendment to the KEM-V 2009: benefits for both providers and end users

The Communications Parameters, Fees and Value-Added Services Ordinance 2009 (KEM-V 2009) is a key framework for the administration of telephone numbers in Austria. As a result of the 2017 amendment to the KEM-V 2009, the ordinance was supplemented with several new provisions, some directly benefiting users of subscriber numbers and others taking into account altered requirements applying to providers. The three most important changes are as follows:

- 1) Changes to tariff provisions for numbers in the 05 and 0720 ranges. Such numbers are occasionally used for service lines and are frequently excluded from the free units contained in package rates so that separate charges apply. As set out in the ordinance, calls and text messages made or sent to numbers in the 05 and 0720 ranges may cost only as much as calls or messages to fixed or mobile networks and in future must therefore also be included in any free units.
- 2) The range of services used with mobile telephone numbers has been expanded. Innovative personal services can now be offered that are closely related to mobile services but previously did not fall under the category of uses for mobile numbers. An example of such personal services using mobile numbers would be the temporary use of numbers in the context of online platforms or project-related communications.
- 3) The amended KEM-V 2009 also now includes the requirement to use longer subscriber numbers in the mobile number range for M2M services. Experts anticipate that the number of user devices participating in the Internet of Things (IoT) will increase to several billion in the next few years. While only a portion of these devices will be addressable via a SIM card and phone number, it was considered both helpful and necessary to avoid having the availability of mobile numbers jeopardised by the rising demand for such numbers that would result from M2M services. Accordingly, the KEM-V now requires providers to use longer mobile subscriber numbers for the implementation of such services.

The seventh amendment to the KEM-V, which entered into force on 25 October 2017, can be downloaded (in German) from the RTR website at www.rtr.at/de/tk/KEMV.

6.9 RTR's international commitments

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

6.9.1 RTR and BEREC

RTR was elected to chair the Body of European Regulators for Electronic Communications (BEREC) in 2018 and preparations for the year as chair were already underway in 2017. Chairing BEREC not only entails responsibilities at an international level but also generates an impact that is felt in the Austrian telecommunications market. Focal points of Johannes Gungl's work are the revision of the legal framework, achieving progress in harmonising the European telecom market and the key technology of 5G. These points are also naturally closely aligned with the needs of Austrian businesses. The Austrian market also stands to gain from the various position papers that are prepared and adopted.

Every chairmanship involves a three-year period for handing over responsibilities: one year as incoming chair, one year as chair and one year as outgoing chair. Accordingly, Johannes Gungl took on his first tasks as part of BEREC chairmanship in 2017, including responsibility for the 28 staff members at BEREC's office in Riga. Beyond this, RTR played a leading role in the creation of the BEREC Work Programme for 2018.

Alongside preparations for 2018, RTR also participated in many BEREC working groups, just as it has done in previous years. Major points of focus in 2017:

- Drafting of roaming guidelines for the implementation of RLAH (refer to section 6.9.3 below for further details).
- Work on the issue of net neutrality, aimed especially at helping to ensure consistent implementation of the TSM Regulation and the BEREC guidelines based on this Regulation across all Member States.
- Drafting of input papers for the European institutions (European Commission, the Council and the European Parliament) in connection with revising the legal framework for electronic communications.
- Revision of the BEREC Medium-Term Strategy for 2018–2020, which defines a total of five strategic priorities for the next three years (see figure). The Medium-Term Strategy also forms the basis for the BEREC Work Programme for 2018.



While chairing BEREC in 2018, RTR will also once again make major contributions to day-to-day business, and help to shape the European legal framework so as to accommodate the interests of both the Austrian industry and Austrian consumers. Additional information on international relations can be found on the RTR website at www.rtr.at/en/tk/Internationales.

6.9.2 Net neutrality

Net neutrality refers to the equal treatment of all data transmitted via the internet. Such equal treatment is independent of the sender, recipient, location, content, service or application. Net neutrality is important because it allows every internet user to retrieve and share information, content and services. This allows the internet to support freedom of expression, economic growth and innovation.

To protect net neutrality, the Telecoms Single Market (TSM) Regulation has been in force since November 2015 at the European level. The BEREC guidelines on the Regulation were adopted in August 2016 to ensure uniform implementation of the Regulation across Europe.

National procedures are completed or being continued

The TSM Regulation mandates national regulatory authorities with tasks including monitoring compliance with the provisions of the Regulation. Supervisory procedures were soon initiated in October 2016 and RTR has since been able to complete the majority of them. It is gratifying to note that in many cases no decision ordering compliance had to be issued, with the providers making technical changes and adapting their products voluntarily. However, binding decisions did have to be taken in two cases concerning A1 Telekom Austria AG. In late 2017, following an in-depth investigation, A1 was prohibited from prioritising its A1 TV service within the A1 network and dropping IP connections after periods deemed too short. The decision also served to ensure end users' entitlement to a dynamic public IP address free of charge. The other decision ordered discontinuation of traffic shaping in the context of Free Stream, a zero-rated service provided by A1. The practice prohibited in this case was that of handling traffic differently once the user had reached the maximum data volume included in the plan.

Further rounds of investigations and procedures are planned for 2018 where required, to ensure compliance with the TSM Regulation on the part of other providers.

Net Neutrality Report 2016 – 2017

The TSM Regulation additionally tasks national regulatory authorities with publishing an annual report on progress in implementing the Regulation. RTR published the first Net Neutrality Report in June 2017, describing progress in implementing net neutrality. The report presents the action taken by RTR during the reporting period (30 April 2016 to 30 April 2017) towards implementing the TSM Regulation in Austria. Such action included ongoing consultations with providers and operators, both to inform them about the Regulation and to provide advice, assisting with newly introduced products or any issues. Technical studies were also commissioned to identify potential breaches of the TSM Regulation. Other action included an initial round of procedures, initiated in late 2016 against the five major operators; most of the procedures were completed in 2017 (see above).

On the whole, open internet access in Austria can be rated positively. Companies involved in serious breaches of the TSM Regulation generally identified constructive solutions, which were then approved by the regulatory authority and either implemented or scheduled for implementation.

Uniform implementation of net neutrality rules in Europe

Following the adoption of the BEREC guidelines in 2016, uniform application of the guidelines EU-wide was the goal in 2017. This is important because net neutrality is an international issue. While the TSM Regulation is implemented at national level, multinationals providing internet access and services in Europe and beyond wish to develop product portfolios that are as uniform as possible within their footprints. Such providers also want their business to reach as many end users as possible without restrictions. Where practices vary between Member States, there is a risk of distorted competition between national markets, which can result in a negative impact on new products.

The example of zero-rating

Products that include zero-rating are a good example of why coordinated international action is necessary. Zero-rating refers to the practice of exempting certain services such as music or video streaming from the data volume included in a given plan. While customers may find this attractive at first glance, it can lead to serious problems in the long term. Providers could for instance raise the prices charged for the data volumes included in plans, arguing that customers no longer require such a large amount of data now that they are able to use zero-rated services. In addition, smaller providers of services could be excluded from zero-rated products, because they do not meet inclusion requirements, cannot afford the related administrative overhead, or may perhaps wish to avoid the burden of fines. This results in distorted competition in the markets concerned, which in turn has repercussions for innovation and investment incentives. Numerous products including zero-rating were introduced to the European market in 2017. Such services were the subject of detailed discussion at BEREC and frequently among larger companies in several countries.

How will BEREC proceed?

Further effort will be devoted in 2018 to achieving uniform implementation of the TSM Regulation. Specifically, work is being done at European level to develop a tool to measure key connection parameters relevant for net neutrality, such as upload and download speeds, so as to permit verification of compliance with transparency provisions. BEREC will also perform detailed internal reviews of national cases and closely coordinate procedures in cases of cross-border product offerings. Beyond this, another European net neutrality report will be prepared in 2018, which is similarly intended to help ensure uniform application and implementation of the Regulation.

In contrast to the United States, where the FCC under Chairman Ajit Pai voted on 14 December 2017 to lift net neutrality rules, there is no talk of such action in Europe. BEREC will hold a consultation in 2018 to collect material for an evaluation of the guidelines, which will in turn be submitted to the European Commission as an input document for the evaluation of the Regulation. The TSM Regulation provides for an evaluation of the provisions by 30 April 2019. This evaluation aims to review the Regulation in terms of its compatibility with 5G and other new technologies, and to identify any potential issues.

6.9.3 International roaming in the EU

At international level, RTR was involved in this issue in 2017 through its participation in the BEREC International Roaming working group. Work at BEREC included an update of the BEREC guidelines on the Roaming Regulation. This was required in order to adapt both the wholesale and retail market guidelines to reflect the changes to the Roaming Regulation resulting from the TSM Regulation.⁹

The revised BEREC guidelines, which can be consulted for help in interpreting the Roaming Regulation, also consider the profound changes to the Roaming Regulation that have resulted from introducing 'roam like at home' (RLAH) to the roaming regime previously in place.

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,¹⁰ 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 how the transparency provisions of the Roaming Regulation are being implemented in Member States. The report discussed for the first time the implementation of 'roam like at home'. One aspect reviewed in the report is the degree of transparency practised when advertising roaming tariffs, as well as the additional transparency requirements needed to ensure that consumers are better informed and able to take informed decisions. The report also examines the comparability of roaming tariffs to determine how easy or difficult it is for consumers to compare roaming tariffs, in particular when comparing alternative roaming tariffs to regulated roaming tariffs, and whether consumers are capable of identifying the tariff most suitable in their particular case based on the information made available to them.

RTR supported the implementation of the new roaming rules at national level through numerous meetings with market participants and closer monitoring, and by providing information to consumers. In addition, procedures were conducted before the Telekom-Control-Kommission (TKK) based on the supervisory powers defined to address infringements of the Roaming Regulation (see section 5.3 Procedures before the TKK, R 1/17 and R 2/17).

'Roam like at home' – the new EU roaming rules

The amendments to the Roaming Regulation that introduced 'roam like at home' entered into force on 15 June 2017. Since then, 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-

⁹ 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.

¹⁰ Commission Implementing Regulation (EU) 2017/2311 of 13 December 2017 setting the weighted average of maximum mobile termination rates across the Union and repealing Implementing Regulation (EU) 2016/2292 (Text with EEA relevance.)

time and durable employment relationship, and participation in full-time recurring courses of study). To prevent abusive or anomalous usage of roaming services, providers may apply control mechanisms that must be based on objective criteria (in particular, prevailing domestic consumption rather than roaming consumption or prevailing domestic presence of the customer rather than presence in other Member States of the Union).

For certain tariff plans (prepaid tariff plans, open data bundles), the provider may apply volume-dependent limits for data roaming services at the domestic price, with the limits 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. The Roaming Regulation defines a schedule that gradually reduces wholesale charges for data roaming services. This schedule affects the calculation mechanism in such a way that the data roaming volume available to customers increases as the maximum wholesale charge for data roaming is decreased in the coming years.

Where fair use was exceeded, providers were permitted in 2017 to levy the maximum surcharges listed below (wholesale charges specified in the Roaming Regulation) in addition to the domestic retail price:

- 3.84 eurocents per minute for outgoing calls
- 1.2 eurocents per text message; no surcharge may be levied for message receipt
- EUR 9.24 per GB
- 1.296 eurocents per minute for incoming calls¹¹.

In addition, the domestic retail price plus surcharge (including VAT) must not exceed the maximum levels listed below:

- 22.8 eurocents per minute for outgoing calls
- 7.2 eurocents per text message
- 24 eurocents per MB
- In 2017: 1.296 eurocents per minute for incoming calls

The maximum surcharge levied per GB for data roaming services will be reduced in the coming years as listed below:

Date	Per GB inkl. VAT
From 2017-06-15	EUR 9.24
2018-01-01	EUR 7.20
2019-01-01	EUR 5.40
2020-01-01	EUR 4.20
2021-01-01	EUR 3.60
2022-01-01	EUR 3.00

¹¹ The price for incoming calls is set each year through a Commission Implementing Regulation.

Sustainability of eliminating roaming charges

Under certain exceptional circumstances, providers can apply to the regulatory authority for authorisation to levy an additional roaming surcharge to ensure the sustainability of their domestic charging models. Three providers applied for such authorisation. The applications for surcharge authorisation made by Mass Response Service GmbH and MTel Austria GmbH were approved. The application by Vectone (Austria) Ltd. was rejected because the applicant's negative roaming retail net margin fell short of the minimum 3%.

6.9.4 RTR and ERGP

The European Commission issued a Decision in 2010 to establish the European Regulators Group for Postal Services (ERGP), an international body of regulatory authorities in the postal services field. The body engages in international coordination and the mutual exchange of information with the aim of advising and supporting the European Commission with expert practical knowledge concerning national postal markets. Members of the body include representatives of the postal regulatory authorities of the 28 EU Member States, along with representatives of the postal regulatory authorities in EEA countries.

Internally, the work of 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 ERGP has involved the long-standing and continuous contribution of expertise and practical knowledge concerning Austria's postal markets. International statistics and benchmarks are made available for comparison, allowing conclusions to be drawn about developments in international postal markets. This in turn allows potential to be recognised for modifying and improving domestic postal markets. The entire Austrian postal sector therefore stands to benefit from RTR's commitment to ERGP.

The work of ERGP in 2017 focused on these key points:

- developments, changes and standards related to universal service;
- comparative surveys of postal service quality across Europe;
- complaint management and handling by postal service providers in the EU Member States;
- comparative analysis of consumer protection standards across Europe;
- defining an overall strategy aimed at promoting reliable and sustainable universal service, promoting a competitive EU single postal market, and empowering and protecting end users.

In view of the EU's current initiative to strengthen the parcel delivery market by adopting a corresponding framework in the form of a Regulation, cross-border parcel delivery for e-commerce purposes was a renewed focus of ERGP's work in 2017. The Commission Regulation is intended to heighten transparency in terms of the highly varying rates charged. The Regulation is expected to be adopted in 2018. The aim of the Regulation is to allow end users and e-commerce retailers a choice of postal service providers and thus to strengthen competition.

A report prepared by ERGP in the reporting year examines the current situation in the Member States to identify needs and deficiencies within the various markets. The report

is aimed at providing the European Commission with experience from the Member States as a basis for the proposed legislation, so as to help achieve a solution that meets the needs of both user groups and postal markets as closely as possible. The various conditions in the individual Member States are also to be considered as far as possible.

During 2017, ERGP was chaired by the Italian regulatory authority AGCOM. AGCOM will be succeeded in 2018 by the Belgian regulatory authority BIPT.

6.10 Security and integrity of networks and services

Since November 2011, operators of public communications networks or services have been required to report to RTR, according to a format 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 in turn required to submit a report to the European Commission and to the European Network and Information Security Agency (ENISA) 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.

Network outages on the decline

In 2017, RTR received five notifications of security violations or impairments to the integrity of electronic communications networks or services. In June 2017, 2.6 million subscribers were deprived of mobile internet access for a six-hour period, after an overload of a critical network component caused by the failure of an IT component. A total of 1.1 million subscribers had no mobile phone service for half an hour in July 2017, with the cause being human error. Also in July 2017, a defective network component deprived 240,000 mobile network subscribers from roaming service to their home network for a 12-hour period. Failure of a network component in August 2017 affected 600,000 subscribers of a mobile network, preventing call connection and the use of data services for 40 minutes. In October 2017, a broken cable meant that 15,000 subscribers of a mobile network were unable to access their home network for 36 hours; access to communications services was not affected, however, thanks to national roaming.

RTR initiates sector risk analysis

The Austrian Cyber Security Strategy (ACSS) and the Austrian Programme for Critical Infrastructure Protection (APCIP) plan sector risk analyses, to be detailed collectively by members of public organisations, businesses, research and civic society, and updated at regular intervals. Risk analyses of this kind are intended to form the basis for defining standards of protection for strategic companies, as well as underpinning state crisis and continuity management planning. Such a risk analysis was performed under the leadership of RTR for the telecoms sector in 2017. The study was carried out by a body of technical experts, which included representatives from RTR, all mobile operators and several fixed network operators, and from federal ministries, and which met at a series of ten workshops lasting six hours each and moderated by Wolfgang Czerni (Infraprotect GmbH). A steering committee was convened on two occasions to consult on the body's procedures and findings with the management teams of the participating organisations. The steering committee discussed the draft final report in November 2017. Consultations on the final version are envisaged for early 2018.

6.11 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 consequently to facilitate the efficient shared use and installation of infrastructure.

What kinds of data are stored in the ZIS?

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. Funicular operators as well as companies operating physical infrastructure for oil, gas, electricity, district heating, water and transportation must also supply data. The group of organisations obliged to contribute data is referred to as 'network providers'.

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 automatically 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.

ZIS Portal use as of 31 December 2017

Since June 2016, some 2.5 million data records have been supplied by around 3,120 companies required to report – including 2,100 Austrian municipalities. Of the records supplied, almost 2,200 were zero reports, while about 650 companies have previously not supplied any records.

As of 31 December 2017, 132 of the companies required to report had applied to RTR and received authorisation to query the ZIS Portal. A total of 2,378 query requests were made by authorised telecoms operators using the 431 user accounts authorised to access the database, and 2,314 of the requests were approved.

Requests were processed on average within 2 days 6 hours and 23 minutes in 2017, whereby this figure refers to the entire turnaround time.

More detailed information is published on the RTR website at www.rtr.at/de/tk/ZIS (in German).

6.12 Evaluation of the Telecommunications Act in accordance with Art. 113 TKG 2003

Pursuant to Art. 113 Par. 6 of the TKG 2003, the regulatory authority has the duty to periodically carry out an evaluation of the legal provisions of the TKG 2003 and, after consultation with the Federal Minister of Transport, Innovation and Technology, include the results of the evaluation with the Communications Report every two years.

The federal government has adopted a '5G strategy', which is aimed at improving overall conditions towards enabling the introduction of the 5G standard for mobile telecoms, thereby allowing the population, economy, industry and research to profit from the associated potential benefits. RTR has contributed to this 5G strategy.

The 5G strategy provides for a total of 34 measures in the fields of infrastructure and applications. Many of these measures are intended to facilitate the rollout of digital infrastructure and reduce the costs incurred. Other measures encourage the development of 5G services and applications in the near future, thereby aiming to make the technological potential inherent in 5G available to serve society and the economy.

Several of the proposed measures will require amendments to the Telecommunications Act 2003: examples here include new wayleave rights to allow the erection and connection of small-scale base stations, or improving the flow of information to enable better coordination of rollout projects.

RTR therefore proposes fast-tracking the processing of the legislative changes required to implement the 5G strategy, discussing these amendments within the framework of a review process and ensuring speedy progress towards their implementation.



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Regulatory activities

in the postal sector

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07 Regulatory activities

in the postal sector

The Post-Control-Kommission (PCK) and the Regulatory Authority for Broadcasting and Telecommunications (RTR) are jointly responsible for safeguarding competition in the postal services market. In addition to providing operational support to the PCK, the RTR has separate regulatory duties relating to the notification of services, dispute resolution and arbitration in end user disputes. The most significant regulatory activities pursued by the two authorities in 2017 are briefly presented below.

7.1 Procedures before the PCK

Closure and discontinuation of postal service points

Post AG must notify the PCK in advance of its intention to close any directly operated postal service point (PSP). A PSP operated by Österreichische Post AG (Post AG) may only be closed on condition of meeting that certain prerequisites set out in the Austrian Postal Market Act (PMG) are met. Specifically, the provision of universal service must be ensured by another PSP, for instance by a Post AG PSP already in existence or by a PSP operated by a postal service partner, in other words a third-party PSP. The PCK may prohibit the closure if the specific conditions set out for such cases in the PMG are not met. The PCK may make authorisation of the closure contingent on another specified PSP providing 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 by referring to the communication reports for previous years.

Post AG notified the regulatory authority of the planned closure of a total of twelve directly operated PSPs in 2017. In none of the twelve cases was closure prohibited, since the prerequisites for closure were met without exception.

In addition to the planned closure of the directly operated PSPs, the PCK also conducts supervisory procedures to review any discontinuation of third-party operated PSPs, for instance resulting from the insolvency of postal service partners or the termination of contracts. Under the PMG, Post AG is also required to ensure the provision of universal service as well as full geographic coverage with PSPs in such closure cases. Under certain conditions, alternative service supply solutions such as rural delivery personnel can be implemented in such situations. In 2017, closures of third party-operated PSPs were the subject of supervisory measures by the PCK in 57 cases.

The overall number of PSPs in Austria increased during the reporting year, from 1775 (as of 31 December 2016) to 1777 (as of 31 December 2017). As of 31 December 2017, rural delivery personnel were deployed in three cases as an alternative service supply solution.

TABLE 19: POSTAL SERVICE POINTS OPERATED BY POST AG AND BY THIRD PARTIES 2014 – 2017

	2014-12-31	2015-12-31	2016-12-31	2017-12-31
Post AG-operated PSPs	514	499	442	430
Third party-operated PSPs	1,290	1,278	1,333	1,347
Total PSPs	1,804	1,777	1,775	1,777

Source: RTR

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

The provisions of the KommAustria Act (KOG) relating to the postal sector also specify 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 obliged to issue an official decision ordering payment of the contribution.

In cases pertaining to financial contributions due for 2016, the PCK issued decisions to three companies, dated 4 September 2017.

All three companies filed complaints against the decision with the Federal Administrative Court (BVwG). A ruling on the case by the BVwG was still pending when this report was prepared.

As of 31 December 2017, a total of 14 procedures were pending with the BVwG and another three with the Austrian Administrative Court (VwGH).

Issue of licences

A licence issued by the PCK is required in order to operate a business for conveying letters weighing 50 g or less. The scope of a licence previously issued to noebote GmbH was expanded in 2017. As of the end of 2017, six companies held licences: 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

With regard to 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.

Five procedures relating to changes in the general terms of service used by Post AG were pending in the 2017 reporting year, of which four were completed in that year.

7.2 Procedures before RTR

Review of Post AG's cost accounting system

The regulatory authority has the remit to periodically review the cost accounting system used by universal service provider Post AG. Within its internal cost accounting systems, the universal service provider is obliged to maintain separate accounts 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 2016 cost accounting system complied with the criteria referred to above.

A conciliation body for postal services was set up under law in 2011 and has been active since then on behalf of consumers who have lodged grievances with postal service providers that cannot be resolved satisfactorily (refer to the section 6.1 "Conciliation procedures: we are here to help consumers").



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RTR's activities

as a competence centre

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08 RTR's activities

as a competence centre

RTR is tasked with fulfilling the role of a competence centre for broadcasting and telecommunications industry affairs¹² while complying with the general principles of economy, efficiency and expediency.

This competence centre role also encompasses the completion of analyses on matters relating to the activities of KommAustria, TKK and RTR: examples here include the commissioning of study reports or the preparation of expert opinions. The findings from such analysis work are to be appropriately prepared for public disclosure. The following chapter presents activities performed within the competence centre remit (cf. Art. 20 KommAustria Act (KOG)).

8.1 Convergent activities

8.1.1 RTR convergence symposium on OTT services, media and telecoms

In June 2017, RTR hosted the symposium titled “Supplemented or supplanted? Media, telecoms and their online challengers” with a first-class list of speakers. The major attraction was Richard David Precht, who outlined the repercussions of the digital revolution for communication and media from a philosophical perspective, and stimulated a lively debate on these subjects.

Roman Friedrich (Alix Partners) examined the challenges that the telecoms and media industries are now facing as a result of digitisation.

In a panel discussion chaired by Sandra Thier (diego5 studios), panellists Maria Zesch (T-Mobile Austria), Stefan Häckel (VICE), Roman Friedrich (Alix Partners) and Lisa Totzauer (ORF) tackled the question of whether the rise of web-based services means the end of conventional counterparts.

The study report titled “Online challengers: OTT services in media and telecommunications” was published to accompany the event and was presented for the first time at the symposium by the RTR management team. The report seeks to establish whether web-based services compete directly with conventional media and telecommunications services.

A video of the event and the presentations given are available from www.rtr.at/de/inf/Tagung_27072017, and the report can be accessed at www.rtr.at/de/inf/Konkurrenz_aus_dem_Netz_OTT (all in German).

¹² RTR does not act as a competence centre as regards postal service regulation.

8.2 Media Division

8.2.1 RTR symposium: TV – linear or non-linear?

In February 2017, the RTR's Media Division hosted a symposium titled "TV – linear or non-linear? How the industry is shaping the future of video usage" in the Austrian Federal Economic Chamber. Speakers and panelists at the event were drawn from market researchers, producers and staff members with TV broadcasters and funding organisations within the German-speaking markets.

Currently, conventional linear TV is by far the most common form of video consumption in the general population. Individual, time-independent video-on-demand from alternative platforms, in contrast, is now extremely popular, especially among younger viewers. This development raises several interesting questions. Will the younger viewing public retain their habits as they grow older? Is online video changing the future television market? These are apparently the exact scenarios that TV broadcasters are apparently preparing for with their ever-changing online portfolios. Is this just a wise precaution or the start of a migration towards the internet? And is this online trend already making its mark in the order books of television and film producers? How and when should film and TV funding authorities respond?

One topic of discussion was the effects of free-to-view and pay-to-view online video services on the business model of conventional TV broadcasters. Another question addressed was whether television film funding bodies, such as the Austrian Television Fund (part of RTR), should also make funds available to productions streamed online but not provided conventionally by a traditional television broadcaster.

8.2.2 Event: YouTube do's and don'ts

With the public event "YouTube do's and don'ts: business, storytelling and the letter of the law for influencers", media authority KommAustria and RTR launched in April 2017 a public information campaign on the subject of YouTube. Publishing videos on an online platform such as YouTube can be very rewarding. And it can be quite literally rewarding when these videos are used to sell advertising. A number of laws apply here, nonetheless.

In light of the above, KommAustria and RTR both gave presentations looking at the legal niceties – such as compliance with provisions on advertising and youth protection or reporting requirements.

A panel discussion with industry stakeholders discussed the phenomenon of YouTube stars and the wholly new segment they have helped to create within media business. Panel members included representatives from Google, funk.net, ARD and ZDF youth programming, diego5 studios, styria digital one and the VICE news platform.

Presentations from the event can be accessed at:
www.rtr.at/de/inf/YouTube_25042017 (in German).

8.2.3 **Research Institute for Electronic Mass Media Law (REM)**

REM was founded in 2005 and is established as a non-profit association within RTR. In 2017, REM once again devoted its efforts to conducting in-depth research on the legal issues affecting electronic mass media.

The members of REM's management board in 2017 were: 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, Austrian Constitutional Court), Alfred Grinschgl (RTR), Prof. Walter Berka (University of Salzburg), Michael Ogris (KommAustria) and Matthias Traimer (Austrian Federal Chancellery).

In May, REM held a workshop at the RTR premises on the topic of the revised AVMS Directive.

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 thirteenth time on 9 and 10 November 2017. The event was organised around the theme of electronic media in a 'post-factual' age.

8.2.4 **Studies: the economic and societal significance of YouTube channels in Austria**

An investigation commissioned by RTR from the St. Pölten University of Applied Sciences illuminates the significance of YouTube in the Austrian media market.

In terms of reach and market share, YouTube is Austria's most popular online video platform. And Austrian citizens are not merely using YouTube for passive consumption: the number of channels of Austrian origin is also growing steadily. In terms of relative population, Austria's YouTubers can claim a higher proportion of subscribers and video views than YouTubers in Germany. Many of them also earn money from Google's advertising model. But to what extent? Who is producing the most-viewed Austrian channels? Does Austrian origin also imply a contribution to Austrian identity on YouTube? The report traces the contours of a burgeoning new segment in the Austrian media landscape, and marks the continuation of the public information campaign launched in April 2017 by KommAustria and RTR on the topic of YouTube.

The report can be downloaded from www.rtr.at/de/inf/YouTube_Channels_2017 (in German).

8.3 Telecommunications and Postal Services Division

8.3.1 RTR as operative arm of the KIG

The Internet Society Competence Centre (KIG) was established by the federal government in 2010, and acts as a central, service and implementation-oriented institution. The KIG aims to place Austria at the forefront of ICT countries.

The KIG management board comprises one representative each from the Federal Ministry of Finance, the Ministry of Transport, Innovation and Technology, the Ministry of Science, Research and Economy, and the Federal Chancellery. RTR provides operational support to the KIG.

Every year, the KIG publishes a report on the goals, content and progress of ICT projects that have been instigated in cooperation with stakeholders from business, research and public authorities. The annual compendium of measures taken is termed a 'priority catalogue'. A total of 71 projects have now been initiated as part of priority catalogues.

In line with the fourth priority catalogue published in late 2017, 28 new initiatives and projects have been started. The initiatives and projects presented here not only address the conventional ICT agendas but also touch on widely ranging sectors of society such as health, education or mobility.

8.3.2 RTR-NetTest

Launched in 2013, the RTR network test offers users a means of testing the quality of their internet connection. The test is available as an Android and iOS app, as well as a browser-based test at www.netztest.at. With the RTR network test, users can check not only download and upload speeds but also ping response. The mobile app can also measure the signal strength on some devices. In the past year, the RTR network test was used for measurement over 720,000 times in Austria (with a location accuracy of better than 2 km). Mobile service measurements accounted for 220,000 of those tests. The RTR network test is under continuous development to keep pace with new technical requirements. In 2017, the introduction of 'loop mode' marked another major enhancement for the RTR network test. This mode now makes it possible to run tests automatically at regular intervals. This means users can check the quality of their internet connection round the clock without having to run the tests themselves. The repeat mode offered by the RTR network test is user-configurable both in terms of the number of measurements taken and the time interval between individual measurements.

8.4 Public relations: information and transparency

A series of public relations exercises was started in 2017, to familiarise the general public with the regulatory activities of KommAustria, the TKK, the PCK and RTR and to promote transparency.

Media relations

With 50 press releases published and three press conferences held, timely information was provided about regulatory decisions and related topics. RTR also responded to numerous media enquiries and held interviews with media representatives. The numerous radio interviews given and TV appearances were largely used to discuss issues of relevance for end users.

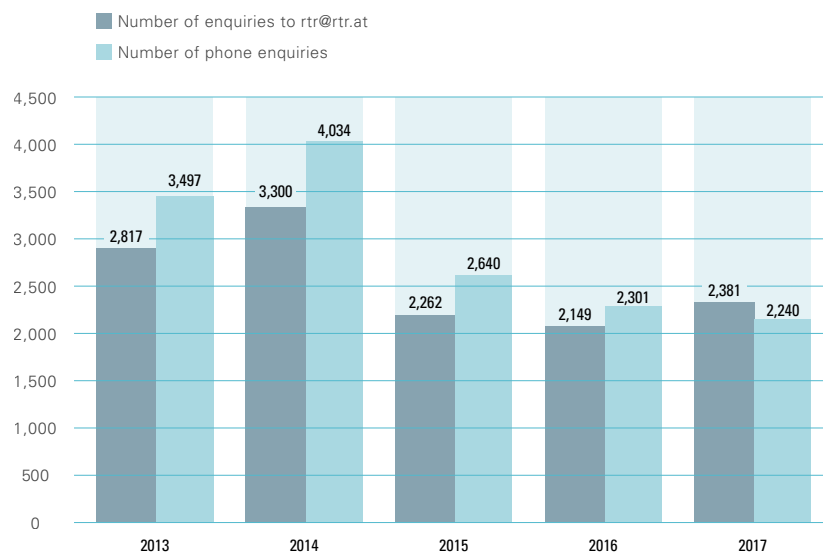
Media relations work was supplemented by disseminating relevant information on Twitter and via the web-based information service.

Enquiry management

RTR handles a large number of enquiries daily, both by telephone and in writing. In 2017, the volume of written enquiries submitted via rtr@rtr.at rose by over 10% to 2,381 enquiries. The content of these enquiries in the reporting year ran the gamut of the regulatory authorities' activities. As in previous years, enquiries predominantly raised issues of interest to end users. The response time for dealing with enquiries is roughly 1.5 working days.

Telephone enquiries about end-user issues are handled by the service hotline number 0810 511 811. In 2017, support and advice was provided to 2,240 callers. General disputes about charges and contracts are the most typical reasons for calling the RTR call centre.

FIGURE 09: VOLUME OF ENQUIRIES, TREND 2013 – 2017



Source: RTR

The www.rtr.at website – the central information platform

The website www.rtr.at comprehensively documents the entire spectrum of activities engaged in by KommAustria, the TKK, the PCK and RTR, while also offering insights into market climate and developments. Decisions as well as information on regulatory activities and grant administration that is designated for disclosure are published in a timely manner.

The website also offers a number of e-government and online services aimed at both businesses and private citizens. This service portfolio is being continuously improved and expanded.

Complementing the public information campaign on YouTube, significant expansions were made in the reporting year to the range of information offered to on-demand service providers such as VoD providers, and to YouTubers and users of other social networks (see www.rtr.at/de/m/InfoAbruf, in German).

Publications

Numerous publications (both print and digital) constitute another focus of public relation activities. All publications can be downloaded from the RTR website at www.rtr.at/en/inf/alleBerichte (partially in English).

The Communications Report comprises annual reports, in accordance with legal reporting requirements, on the activities of RTR, including the Digitisation Fund, the Austrian Television Fund, the Private Broadcasting Fund and the Non-Commercial Broadcasting Fund, and offers an overview of developments in the media and telecommunications market.

The Activity Report of the Conciliation Body for Telecommunications, Media and Postal Services discusses the key problems and developments in consumer arbitration, and provides examples of both typical and atypical cases of arbitration.

Published on a quarterly basis, the RTR Telekom Monitor and RTR Post Monitor are based on data collected by RTR and include market data.

Other RTR publications that appeared in the reporting year included these studies: “Online challengers: OTT services in media and telecommunications” (Die Konkurrenz aus dem Netz. OTT-Dienste in Medien und Telekommunikation), “People with disabilities in Austrian mass media” (Menschen mit Behinderung in österreichischen Massenmedien), and “The economic and societal significance of YouTube channels in Austria” (Die wirtschaftliche und gesellschaftliche Bedeutung von YouTube-Channels in Österreich).

RTR's regular media and telecommunications newsletter RTR AKTUELL provides timely information about regulatory decisions and international topics from the two divisions.

Events

The regulatory authorities convey relevant information to market participants and the general public at a national and international level, both through the organisation of numerous symposiums, discussion forums and workshops, as well as through regular speaking engagements in which RTR experts participate.



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The Austrian
communications markets
in 2017

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09 The Austrian communications markets in 2017

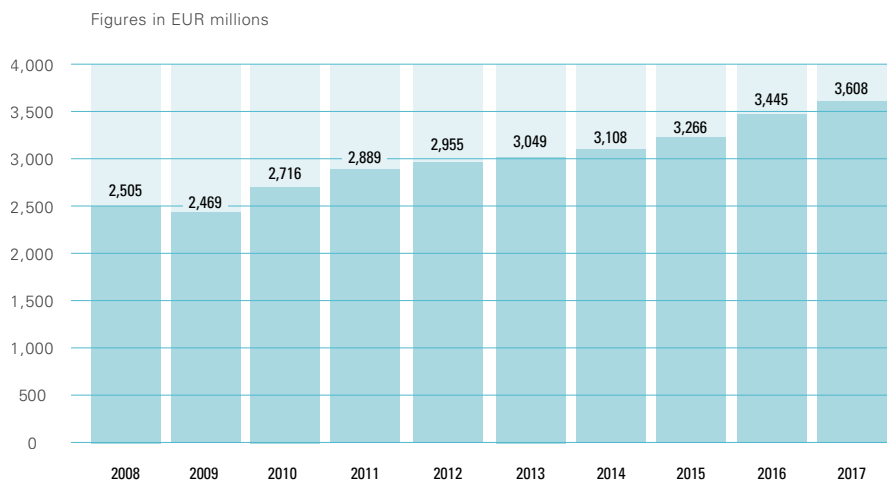
9.1 The Austrian communications and advertising market

9.1.1 Development of the advertising market

The year 2017 was marked by a major change in the shares of gross advertising revenues among conventional media: this trend had also been observed for several years. During the 2017 reporting year, the media category of television achieved EUR 13.8 million more in gross advertising revenue than all daily newspapers together. We are, of course, still very far from the situation in Germany, where television achieves three times as much gross revenue as dailies. Nonetheless, empirical data make it seem highly probable that Austrian television will continue to expand its newly achieved lead, considering the steady trend in recent years. Even though both categories are facing increasingly stiff competition from online advertising, daily newspapers are feeling the impact more. Video in any shape or form is enjoying keen interest, so much so that even dailies have long since taken to enriching articles in online editions with news videos.

In 2017 gross advertising income for conventional media increased by 4.7% from the previous year.¹³ While not quite matching the exceptional growth of 5.5% reported in 2016, the figure for 2017 still clearly represents above-average performance when compared with the average growth rate for the previous five years (3% since 2012).

FIGURE 10: TOTAL ADVERTISING EXPENDITURE FOR CONVENTIONAL MEDIA IN AUSTRIA, 2008 – 2017



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

¹³ All figures for gross advertising sales in Austria: FOCUS Media Research

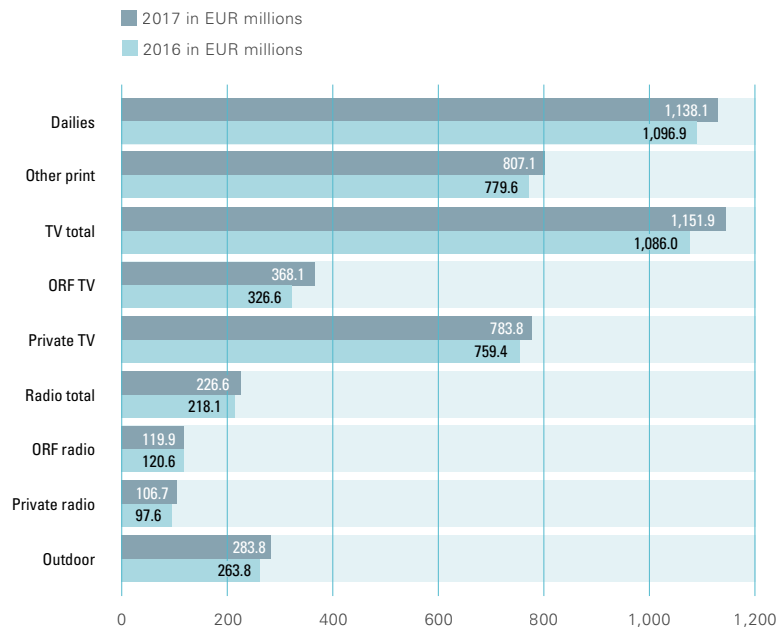
In 2017 Austrian businesses placed radio and television spots, ads in print media and outdoor advertising that equalled a total media value of EUR 3.608 billion¹⁴, thus increasing the volume of advertising in conventional media by EUR 159 million from with the previous year. By comparison, advertising volume grew by EUR 179 million between 2015 and 2016.

As always, it needs to be mentioned at this point that the advertising revenues from conventional media presented here are gross figures. No discounts are reflected. This means that the figures given here refer to the value as indicated by providers' official price lists for radio and TV commercials, and for advertising space in print media and on posters and billboards. The gap between gross and net prices can be very wide here. Discounts are usually given 'in kind' as additional advertising spots or space at no extra charge. From that perspective, gross advertising sales provide only a limited picture of how well media businesses are performing. Such figures nonetheless give a fairly reliable view of general trends in the advertising market and the attractiveness of each of the media categories to the advertising industry.

All conventional media categories shared in gross advertising growth in 2017

Among conventional channels, outdoor advertising enjoyed the highest growth in gross advertising revenue in 2017, followed by television advertising. While significantly smaller, gains were also enjoyed by radio, dailies and other print media.

FIGURE 11: ADVERTISING EXPENDITURE IN AUSTRIA BY CATEGORY, 2016 AND 2017



Source: FOCUS Media Research

¹⁴ Statistical analysis based on the advertising price lists of the media channels in each case

Within outdoor advertising, the biggest change was seen in the digital out-of-home (DOOH) segment, which recorded a growth rate of 7.6%, increasing by EUR 20 million to EUR 284 million. The continued success of 'moving' advertising on a wide variety of outdoor advertising screens underscores the general trend towards video. With an 11.6% increase in gross sales, DOOH continues to be the fastest-growing segment in the outdoor advertising market. DOOH nonetheless grew faster in previous years, at a rate of 15.6% in 2016 and no less than 32.4% in 2015. The 7% growth also achieved by conventional billboard advertising in 2017 can be largely attributed to the National Council elections.

In second place, yet with a clear lead over the categories of radio, daily newspapers and other print media, television advertising (private and ORF) increased by 6.1% (a rise of EUR 66 million to EUR 1.152 billion). Within this category, ORF TV advertising showed a growth rate of 12.7% (a rise of EUR 41.5 million to EUR 368 million), which was well above average for TV but nonetheless short of the growth rate achieved in 2016 (15%). Although the ORF accounted for only 32% of the total gross revenue of TV advertising, it was responsible for almost two thirds of the growth in 2017. Private television channels showed a mere 3.2% improvement in gross advertising sales (an increase of EUR 24.4 million to EUR 784 million), after achieving a growth rate of 5.6% in 2016.

While the ORF was the sales growth winner in the TV category, private broadcasters took the top spot in the radio segment in 2017. Overall, the radio industry improved gross advertising revenues by 3.9% (an increase of EUR 8.5 million to EUR 227 million). This improvement is wholly accounted for by private stations, however, which increased revenues by 9.3% (a rise of EUR 9 million to EUR 107 million) and significantly bettered their steady growth rate of around 6% recorded in previous years (2014: 6.3%; 2015: 6.7%; 2016: 6.2%). ORF radio, in contrast, whose gross advertising income decreased by 0.6% compared with the previous year (a fall of EUR 0.7 million to under EUR 120 million), was the only conventional media channel reporting negative growth in 2017. In 2016 ORF radio had reported an 8.6% increase in revenues. ORF radio's performance in both 2017 and 2016 nonetheless needs to be viewed in the specific context of the affair known as the 'Radiotest scandal', which came to light in early 2016. As the affair unfolded, it was discovered that employees of the GfK Austria (GfK) market research institute had been altering some of the market share figures for Austrian radio stations for years, mostly in favour of the ORF. GfK itself made the case public. According to information received from the market, the ORF seems to have responded to the affair by offering one-time discounts – namely additional advertising broadcasts – to its customers in an attempt to reassure them. This move therefore needs to be taken into account both when examining ORF radio's above-average increase in gross advertising sales in 2016 and when evaluating its 'negative' result in 2017. Accordingly, if ORF radio's gross advertising revenue in 2015 (EUR 111.1 million) is taken as a basis, and the figure for the 'exceptional' year of 2016 is omitted when calculating the increase in revenue between 2015 and 2017 (a rise of EUR 8.8 million to EUR 119.9 million), a growth figure of just under 8% emerges for this two-year period. With this approach, ORF radio's 'loss' in 2017 seems much less dramatic. By way of comparison, ORF radio improved its gross advertising sales by 1.3% in 2015 and by 2% in 2014. The spike in growth shown by the gross advertising revenues of private broadcasters in 2017 similarly needs to be seen in this context. Once the dust had settled on the Radiotest affair and market share figures positively adjusted for some private broadcasters, a redistribution of radio commercial bookings seems to have taken place – in favour of private radio.

For daily newspapers, a long-term trend had already clearly shown that it was only a question of time before television would take over from newspapers to lead conventional media rankings based on gross advertising income. The increasingly

generous advertising discounts offered by newspapers in recent years was probably the main factor that enabled dailies to postpone the inevitable until 2017 and therefore later than predicted. This conclusion appears unavoidable in view of the fact that newspapers have for some time been shedding roughly a full percentage point of their daily reach every year in the category of readers among the total population aged 14 and above, and as many as 2 percentage points between 2016 and 2017 (66.7% in 2016 vs. 64.6% in 2017), whereas gross advertising revenues increased over the same period (+4.8% in 2015 and +5.6% in 2016). While revenues did in fact rise again in 2017, the gain was 'only' by 3.8% (an increase of EUR 41.2 million to EUR 1.138 billion). Here too, a major share of the increase needs to be seen as resulting from the National Council elections. This effect is probably also a factor in the healthy performance of 'other' print media such as weekly newspapers and magazines, with this category showing a 3.5% increase in gross advertising sales in 2017 (a rise of EUR 27.5 million to EUR 807 million). Growth of only 1.9% was reported for this segment in 2016.

In summary, the Austrian advertising market continues to be clearly dominated by print media, even if the largest share of gross advertising revenues in conventional media was claimed for the first time by television – but by only a few tenths of a percentage point.¹⁵ When dailies and 'other' print media are aggregated, advertising industry players (and political parties, of course) continue to invest every other gross advertising euro in print ads.

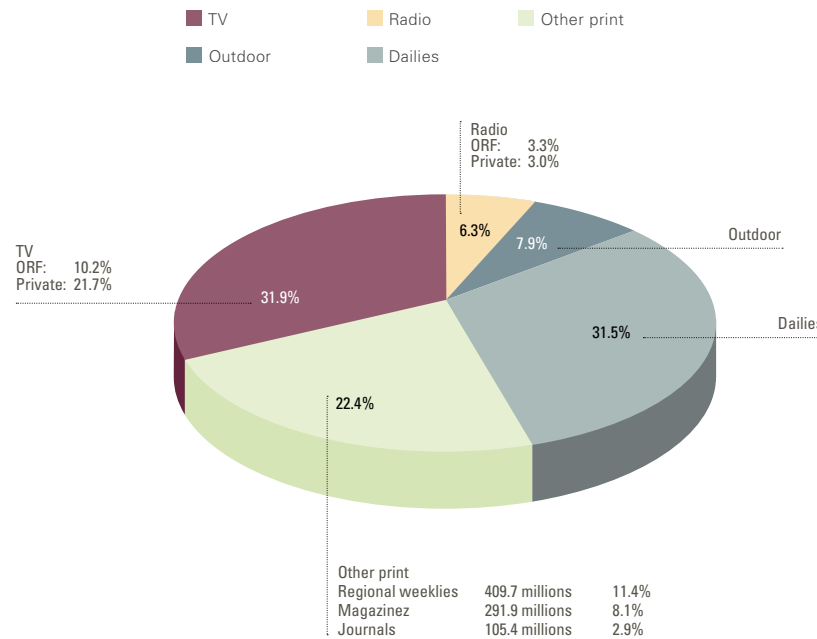
Little change in share of advertising revenues for conventional media

The 5% increase in gross advertising expenditure was distributed among the individual conventional media categories in practically the same proportions as in previous years. Changes were only seen to the right of the decimal point.

Adding four tenths of a percentage point to achieve 31.9%, television became one of two categories (alongside outdoor advertising) to record gains in 2017. Within the category of television, the ORF made significant gains, increasing its share of gross advertising expenditure by a respectable seven tenths of a percentage point to a figure of 10.2%, while private broadcasters as a whole lost three tenths of a percentage point to record a share of 21.7%.

¹⁵ See figure 12: Shares of gross advertising expenditure in 2017, conventional media

FIGURE 12: SHARES OF GROSS ADVERTISING EXPENDITURE IN 2017, CONVENTIONAL MEDIA



Basis: EUR 3.608 billion; percentages; source: FOCUS Media Research Advertising Report

The share of daily newspapers in the total gross advertising expenditure for conventional media was 31.5%, three tenths of a percentage point less than in the previous year, while the same figure for other print media decreased by two tenths of a percentage point for a total share of 22.4%. The latter category had lost eight tenths of a percentage point between 2015 and 2016. On the whole, significantly more than half (53.9%) of gross advertising expenditure is therefore invested in the print segment.

Private radio increased its share by two tenths of a percentage point, from 2.8% to 3%. With ORF radio losing two tenths of a percentage point (falling to 3.3%), the share for the radio segment as a whole remained unchanged at 6.3%.

Compared with 2016, outdoor advertising increased its share slightly by two tenths of a percentage point to 7.9%.

Roughly EUR 580 million invested in online advertising in 2017

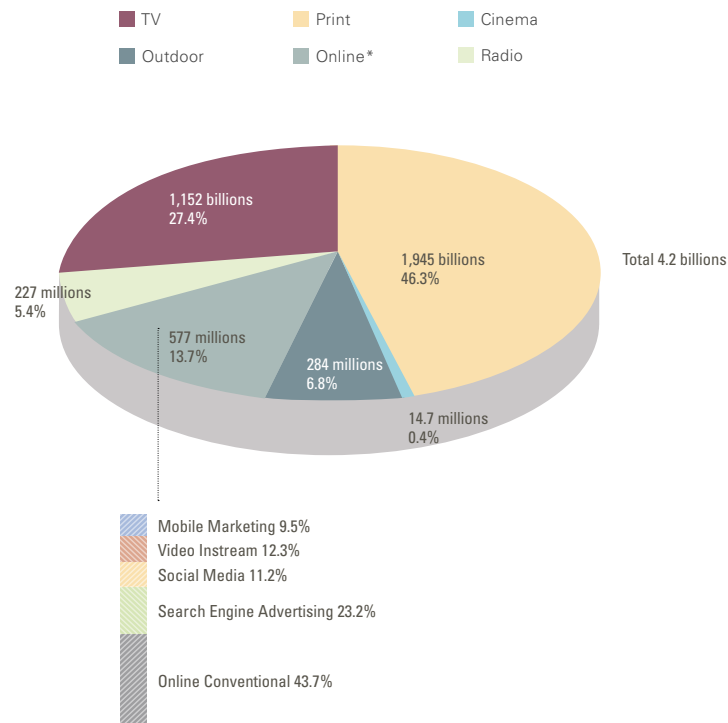
In the past, FOCUS Media Research has provided data on the gross amounts spent by businesses on conventional online advertising, mainly comprising banner ads and direct response advertising on websites¹⁶, but also mobile marketing and in-stream video advertising (such as pre-rolls but not including YouTube). Now, however, thanks to a new cooperative effort with Interactive Advertising Bureau Austria (iab), FOCUS is able to provide a reliable estimate of the online advertising market as a whole that also

¹⁶ Direct response advertising: interactive banners with direct links to an online shop

takes into account keyword advertising and advertising budgets spent on social media channels. The method differs from the quantitative evaluation used with newspaper ads, billboards, and radio and TV commercials in traditional media. The online evaluation is instead based on a projection that draws on the responses given in interviews with 329 representatives of the advertising industry and media agencies.

When online advertising and cinema commercials are added to the distribution of gross advertising expenditure as shown in figure 12 (shares of gross advertising expenditure in 2017, conventional media), the total volume of gross advertising expenditure increases to EUR 4.2 billion.

FIGURE 13: SHARES OF GROSS ADVERTISING EXPENDITURE IN 2017, CONVENTIONAL MEDIA AND ONLINE



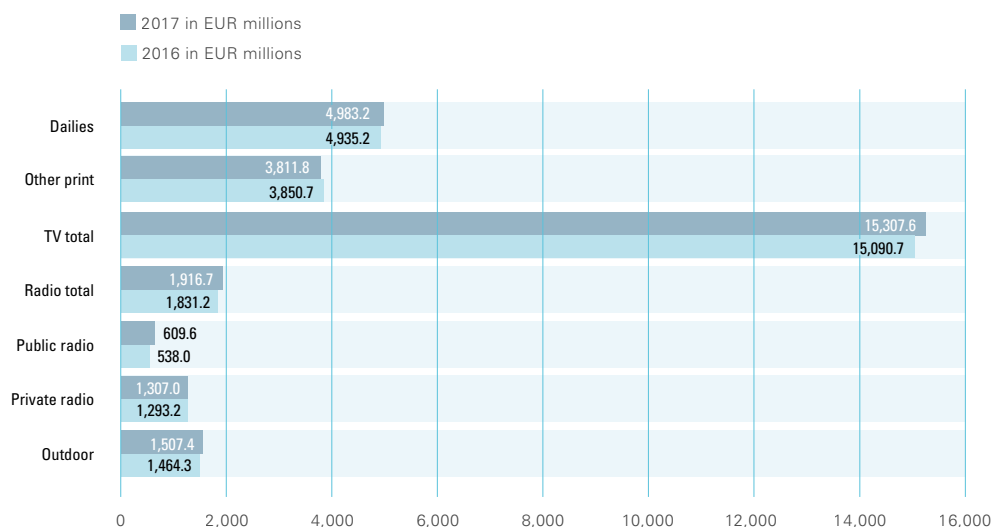
* based on 329 interviews (advertising industry and media agencies)
Basis: FOCUS Media Research/iab. Austria, Advertising Report and estimate for online figures in euros and %

As shown in this chart, online advertising's share of gross advertising expenditure is estimated at just under 14% or EUR 577 million, based on projected figures. The breakdown for online advertising shows that conventional online advertising still accounts for the majority of spending, although keyword advertising and social media ads already account for more than a third of expenditure. However, if we allow for the fact that large US companies do not usually grant discounts for keyword and social media advertising, we should assume that these two categories together represent a significantly larger net share of online advertising budgets.

9.1.1.1 Comparison with the German advertising market

Growing by a mere 1.3% in 2017, gross advertising sales for conventional media in Germany increased at a much lower rate than in the Austrian market: indeed, the rate was actually the lowest for Germany within the last five years, and by a wide margin (2016: 6.1%; 2015: 3.9%; 2014: 4.4%; 2013: 2.6%). Gross advertising expenditure increased by EUR 355 million (2016: EUR 1.56 billion) to total EUR 27.527 billion (2016: EUR 27.172 billion).¹⁷

FIGURE 14: GROSS ADVERTISING EXPENDITURE IN GERMANY BY CATEGORY, 2017 AND 2016



Source: Nielsen Media Research; figures in EUR millions, not adjusted

The development of the advertising market for conventional media in Germany was marked especially by slow growth in television advertising. Increasing by EUR 216.9 million to a total of EUR 15.308 billion, gross advertising sales in the TV sector grew by just 1.4% in 2017 (2016: 7.9%). Accordingly, while TV still accounted for 61.1% of the total increase in gross advertising revenues (EUR 355 million), this contribution to growth was appreciably smaller than in previous years. In 2016 television represented a EUR 1.11 billion share or 71.2% of the overall growth in gross advertising sales among conventional media, and the comparable figure had been as high as 95% in 2015 and 92% in 2014. In Austria, the television broadcasting industry also accounted for only 41.5% of the total sales increase among conventional media in 2017, less than its figure of 46% for 2016.

Germany's radio broadcasters reported a EUR 85.5 million increase in gross advertising revenues for a total of EUR 1.917 billion, thereby improving their performance by 4.7% year on year (2016: 8.9%; 2015: 2.9%). This growth is nonetheless mostly attributable to the ARD network of public broadcasters, whose advertising income rose by 13.3% or EUR 71.6 million, while private radio revenues grew by only approximately 1.1% (an increase of EUR 13.8 million). The situation in the previous year was exactly the reverse. In 2016

¹⁷ All figures on gross advertising sales in Germany: Nielsen Media Research

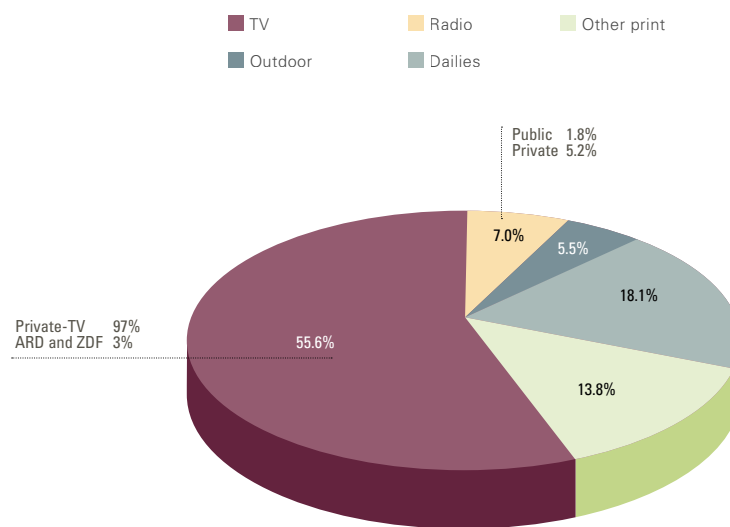
private radio reported a growth rate of 11.9%, whereas ARD stations achieved only a 2.3% increase (public broadcaster ZDF does not provide radio services).

German daily newspapers also closed the year with an increase in gross advertising revenues that amounted to barely 1% (EUR 48 million), which contrasts with the loss of about 1% (EUR 39 million) reported by magazines and other print media. Overall, Germany's print media market improved gross advertising sales by a mere one tenth of a per cent or EUR 9.1 million (2016: +2.1%).

Measured by gross revenue, outdoor advertising in Germany grew by 8.5% in 2017.

The percentage shares of gross advertising income for the individual categories in Germany roughly reflect those typical for Austria, except that the roles played by the overall print market and by television are reversed in Germany.

FIGURE 15: SHARES OF GROSS ADVERTISING EXPENDITURE IN GERMANY IN 2017, CONVENTIONAL MEDIA



Basis: EUR 27.527 billion; source: Nielsen Media Research; percentages

Of the EUR 27.527 billion (gross) spent on advertising in conventional media in Germany, 55.6% went to German TV broadcasters (Austria: 31.9%) and 31.9% to the print sector as a whole (Austria: 53.9%), while the radio market took a 7.0% share (Austria: 6.3%) and outdoor advertising claimed a share of 5.5% (Austria: 7.9%).

German advertisers spent EUR 3.7 billion on online advertising. Adding this figure to the advertising expenditure for conventional media results in an overall share of 11.6% for online advertising (Austria: 13.7%).

9.1.2 The Austrian television market

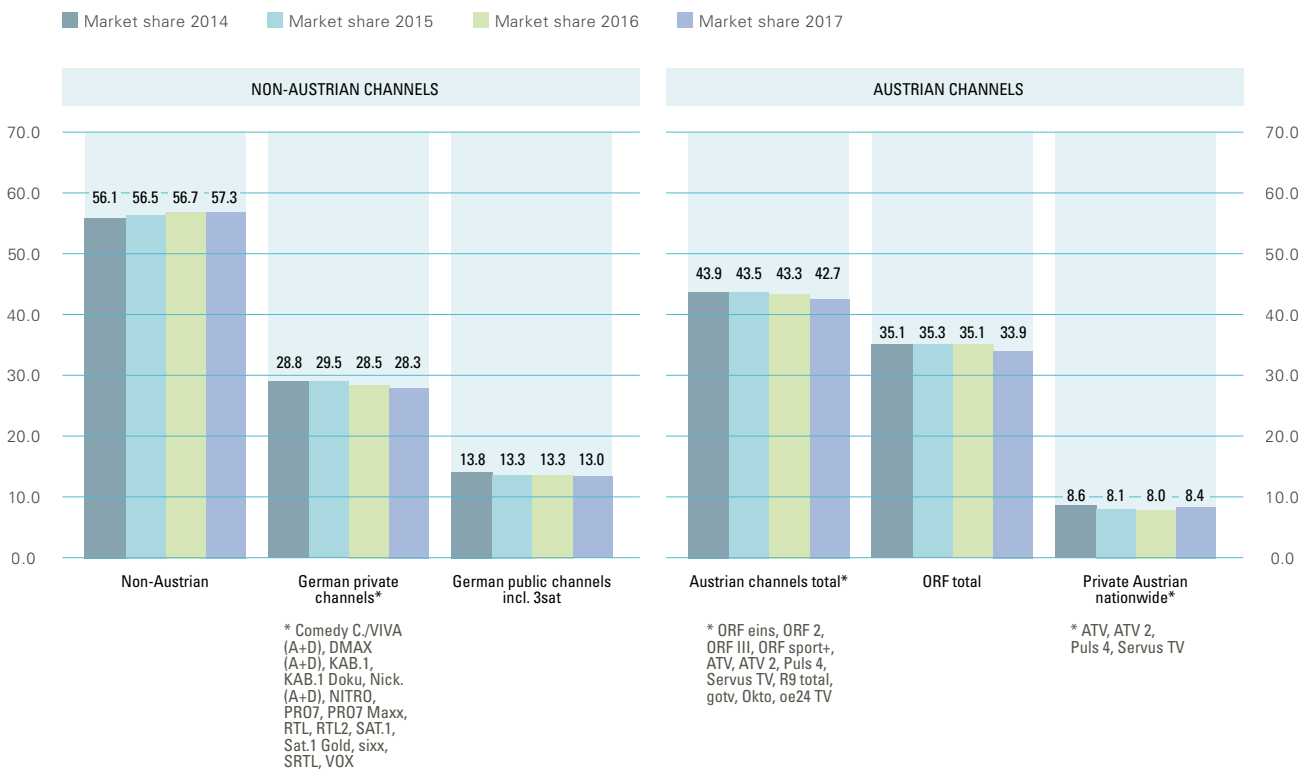
9.1.2.1 Television viewing

With an average daily reach of 65.3% in 2017, television again reached a larger portion of the population aged twelve and over than in the preceding years (2016: 62.7%; 2015: 62.4%). While daily viewing time has been increasing among Austrians for several years, the figure climbed at an above-average rate in the reporting year, repeating a pattern first seen in 2016. After increasing by 7 minutes in 2016, average daily viewing time lengthened again by 8 minutes in 2017 to 186 minutes.¹⁸

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

Non-Austrian television channels were again able to increase their Austrian market share in 2017, thereby continuing a slow-paced but unmistakable trend observed for many years. The market share of non-Austrian channels among the Austrian viewing population grew by six tenths of a percentage point to a total of 57.3%. In 2017 Austrian television channels achieved a market share of 42.7% of viewers aged twelve and above, compared with 43.3% the year before.

FIGURE 16: MARKET SHARES OF AUSTRIAN AND NON-AUSTRIAN TV CHANNELS, 2014 – 2017



Source: TELETEST; market shares in %; persons aged twelve and over in all of Austria, all reception modes

¹⁸ All figures for TV from: GfK Austria/TELETEST working group 2017, representative survey of 1,628 Austrian households

The very minor loss among German private channels, whose market share shrunk by two tenths of a percentage point to a total of 28.3%, does not signify an overall loss of interest in German private channels among Austrian viewers but is attributable to the selection of channels chosen for aggregation in the chart, which remains unaltered to allow comparison with preceding years. The number of private (special-interest) channels originating from Germany has in fact increased in recent years. Yet some of these channels are only included in the overall category of 'Non-Austrian' channels. Examples of such channels are N24 Doku (0.7% market share) and Sport 1 (0.4% share). While diversity in the German channels on offer is increasing as a result of special-interest channels, long-standing channels are recording stagnating or diminishing market shares as newer special-interest channels claim larger shares. In 2017 this change significantly affected the channels Sat.1 and ProSieben, which both lost one half of a percentage point of market share, falling back to 3.9% and 4.1%, respectively. Other channels belonging to the same group recorded increased shares, however. Examples include Sat.1 Gold, which gained three tenths of a percentage point to acquire a market share of 1.4%, and Kabel 1 Doku, which increased its share by four tenths of a percentage point to 0.5%. In contrast, RTL proved capable of maintaining its market share of 4.7% from the previous year to become the most popular German channel by far among Austrians. NITRO, a relatively new channel in the RTL family, increased its share by a full three tenths of a percentage point to reach 1.2%, although this was at the cost of its siblings VOX (3.8% share), RTL 2 (1.8%) and Super RTL (1.0%).

Viewing of German public television declined only marginally in the Austrian market. Das Erste (ARD, 3.1% share), the ARD regional channels (4.0% market share in total) and the three-country cooperative channel 3sat (1.7% share) each lost roughly one tenth of a percentage point. ZDF continues to hold a 4.2% market share.

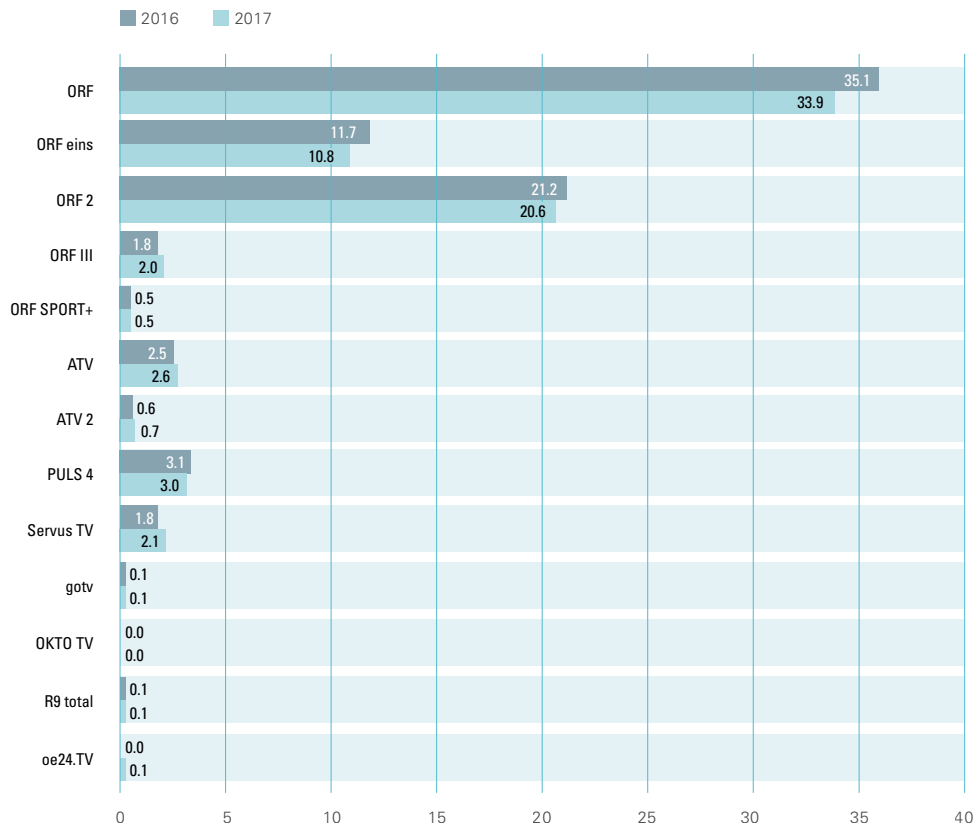
Besides the special-interest channels already mentioned, the overall group of non-Austrian channels features other German-language channels, including Swiss public television and shopping channels such as QVC or HSE 24, as well as naturally including channels broadcast in other languages.

9.1.2.3 **Market share for Austrian television channels**

The renewed loss of market share by the group of Austrian television channels, namely a fall of six tenths of a percentage point to 42.7%, is attributable to the ORF, whose network of channels lost 1.2 percentage points to record a 33.9% market share. This contrasts with the private channels ATV, ATV2, PULS 4 and ServusTV, which improved their collective share by four tenths of a percentage point to 8.4%.

The main factors diminishing the performance of Austrian TV channels in terms of market share in 2017 were the losses by ORF eins (nine tenths of a percentage point, market share 10.8%) and ORF 2 (six tenths of a percentage points, market share 20.6%). In contrast to the consistent, steady decline seen year after year for the ORF's two full-range channels, the culture and information channel ORF III has continued to gradually augment its market share, reaching 1.8% in 2016 and subsequently 2.0% in 2017. Growth for ORF Sport+ has been barely perceptible in recent years: rounded to one decimal place, its share has remained steady at 0.5%.

FIGURE 17: MARKET SHARES OF AUSTRIAN TELEVISION CHANNELS, 2017 AND 2016



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

Source: TELETTEST, market shares in %

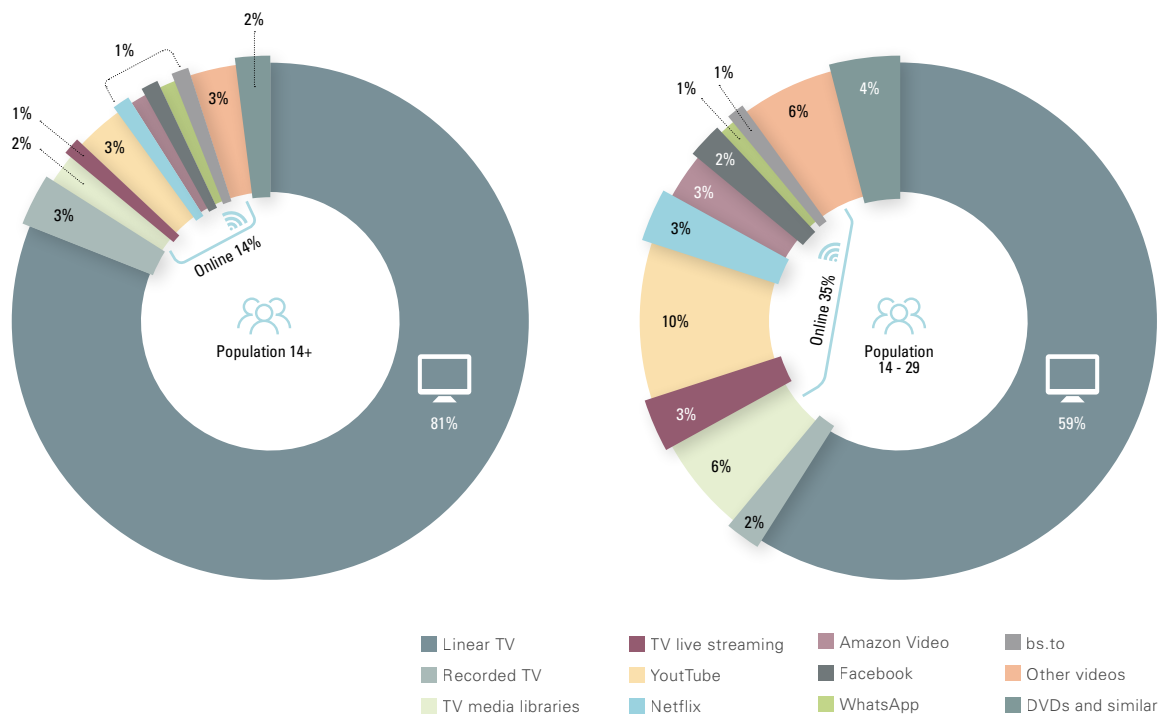
Following the takeover by the ProSiebenSat.1 PULS 4 group in 2017, Austria's oldest private channel ATV managed to increase its market share slightly, which rose one tenth of a percentage point to 2.6%. ATV 2 also improved its share by one tenth of a percentage point to 0.7%. This contrasts with PULS 4, which suffered a slight loss of market share (one tenth of a percentage point) for the third consecutive year, falling to 3%. Compared with these kinds of numbers, the gains achieved by Servus TV, which increased its share by three tenths of a percentage point to 2.1%, are well above average. Launched nationwide in October 2016, oe24.TV recorded a market share of 0.1% in 2017, based on the first complete evaluation of annual TELETTEST panel results.

9.1.2.4 Video viewing: linear broadcasting in relation to online services

The Media Division at RTR has conducted a representative survey of 4,000 Austrians jointly with the TELETTEST Working Group (AGTT) since 2017. The aim is to discover the extent to which the viewing population uses conventional linear television for video consumption compared with online services. The 2017 Video Survey (Bewegtbildstudie) reveals that conventional, linear television via cable, satellite or terrestrial reception accounts for 84% of the 234 minutes each day on average that the population aged 14 and over spends watching video (the figure includes private recordings of linear TV shows: 3%). While this represents a slight decrease of 2 percentage points from 2016¹⁹, this is accounted for solely by a drop in the viewing of live linear television, not private recordings.

The percentage of video viewed from online sources increased by 3 percentage points from the previous year. In 2017, the viewing of such sources accounted for 14% of daily video viewing among the total population, with 3% attributed to YouTube and a total of 2% for TV channel media libraries. A share of 1% or less in each case is represented by online video from sources such as Amazon Video and Netflix, social media platforms including Facebook and WhatsApp, potentially illegal streaming portals, and by video falling under 'adult content'. In contrast, purchased content on physical storage devices such as DVDs or Blu-ray discs lost one third of its market share and now represents only 2% of all video viewed (2016: 3%).

FIGURE 18: VIEWING OF VIDEO SOURCES IN 2017, ALL PERSONS AGED 14 AND ABOVE AND 14 TO 29-YEAR-OLDS



Source: RTR/AGTT 2017 'Video Survey'; shares in %; persons in all of Austria

¹⁹ 2016 'Video Survey' by AGTT, (s yet) without RTR participation

Among the target age group of 14 to 29-year-olds, the use of online sources to meet daily video viewing needs – 211 minutes on average – increased significantly, from 25% in 2016 to 35% in 2017. With its share of 10%, YouTube is also the most popular platform within this group, although TV channel media libraries also appeal greatly to young viewers and account for 6% of the time spent viewing video.

Conventional television accounted for 69% of video use among young viewers in 2016 and its share was still 61% in 2017 (figures for both years include private recordings). Online channels are increasingly serving as a replacement for video recorders and hard disc recorders. Whereas private recordings of linear TV programmes still accounted for 4% of video viewing among 14 to 29-year-olds in 2016, this figure had dropped to 2% by 2017. Purchased content is also coming under pressure from online video libraries. While 4% of young people met their video needs by purchasing their own DVDs or Blu-ray discs in 2017, the share had been 6% in 2016.

9.1.3 The Austrian radio market

9.1.3.1 Radio listening in 2017

A decline in the daily reach of Austrian radio stations and increasingly shorter daily listening times is a trend that has been observed for many years: after a brief recovery in 2016, this trend continued in the year under review. While the decline is real, figures for daily reach are still very high and deterioration is only gradual. The drop in listening times is much more palpable, however, especially among younger segments of the population.

In 2017 76.4% of all listeners aged ten and over switched on the radio daily; compared with the preceding year, this translates into a daily reach loss of three tenths of a percentage point among the overall population. Considered over the period of the last five years, the daily reach achieved by radio among all listeners dropped by 4.5 percentage points (2012: 80.9%).

Of the younger target age group of 14 to 49-year-olds, 73.8% listened to the radio daily, corresponding to a decline of 1.3 percentage points from the previous year (2016: 75.1%) and of 6.4 percentage points since 2012 (80.2%). Among the target group of 14 to 29-year-olds, the daily reach of radio fell between 2016 and 2017 by 1.6 percentage points to 67.3%, a percentage drop that is only slightly greater than that for 14 to 49-year-olds. The decrease in listening time among the groups surveyed is more significant than for daily reach. The strength of the decline is proportional to the age range defining the target group.

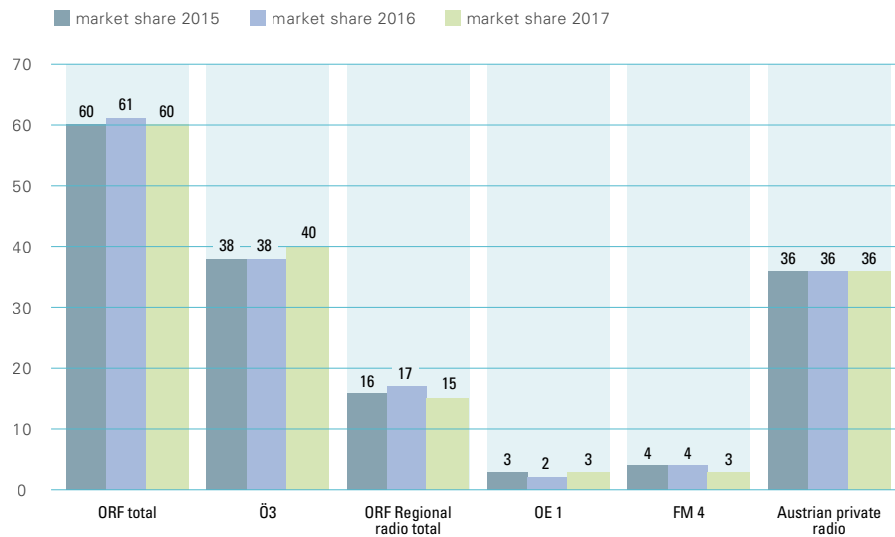
Between 2016 and 2017, the average daily listening time among all listeners aged ten and above decreased by 5 minutes to 179 minutes.²⁰ In 2017 14 to 49-year-olds listened to the radio for 8 minutes less than in 2016, with the figure for average daily listening time now 172 minutes. The group of 14 to 29-year-olds listened to the radio for an average of 129 minutes daily, a full 10 minutes less than in the previous year.

²⁰ Source of all data on the Austrian radio market: Radiotest

9.1.3.2 Market shares and daily reach of ORF and private radio nationwide

While radio broadcasters prefer to speak of their station's daily reach, what is actually relevant for the advertising industry is a 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 and listened for at least 15 minutes. If a listener tunes into three stations for at least 15 minutes each, for example, this listener has a positive impact on the daily reach of all three stations, even if this person listened to two of the stations for only 15 minutes each and the third for 2 hours. Market share, in contrast, refers to the number of minutes of the daily listening time that are attributed to each radio station. A radio station's market share consequently increases if people listen to it for a long time each day.

FIGURE 19: NATIONWIDE RADIO MARKET SHARES AMONG THE TARGET AGE GROUP OF 14 TO 49-YEAR-OLDS, 2015 – 2017



Source: Radiotest; percentages; all of Austria

Between 2016 and 2017, there was little change in the ratio of nationwide market share held by the ORF station network to that claimed by private radio as a group. The target group of listeners aged 14 to 49, which is especially relevant for advertisers, rearranged their listening priorities mostly within the group of ORF stations.

In 2017 the ORF radio station network achieved a total market share of 60% and surrendered the percentage point it had gained in 2016, although mostly due to rounding effects. Radio station Ö3 achieved a significant increase in market share, rising by 2 percentage points to 40%. The total market share for the ORF's direct private competitors at a regional level, plus the nationwide chain of KRONEHIT radio stations, was 36%: this figure is unchanged from 2015 and 2016.

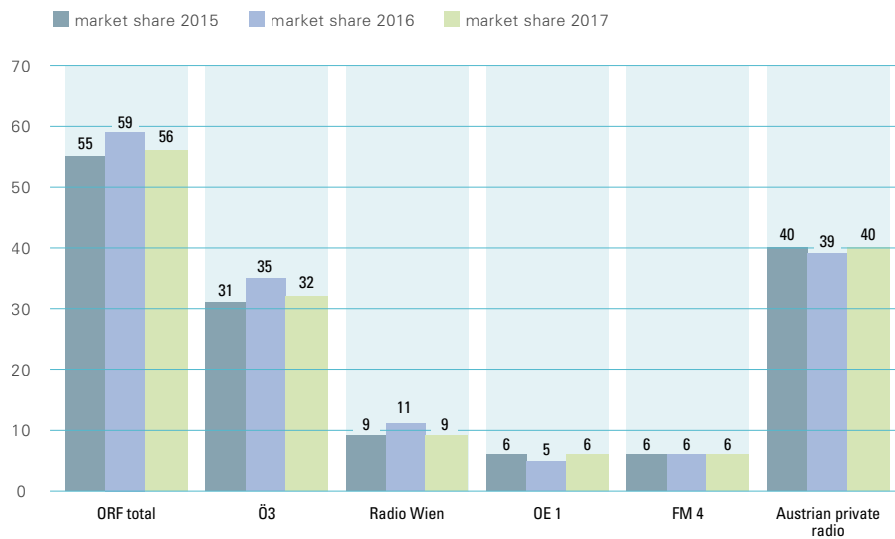
The gain in market share by Ö3 was exclusively at the cost of the ORF's Ö2 chain of regional stations (Radio Wien, Radio Kärnten and others), which as a group lost 2 percentage points of market share in 2017 and fell to 15%. The advertising-free cultural and information channel Ö1, which had for the first time in years lost market share (of 1 percentage point) in 2016, recouped its losses in 2017 and recorded a 3% market share. FM4, the ORF station targeting youth, has wavered between a market share of 3% and 4% over the years. After losing a percentage point in 2017, it was once again left with 3%. Looking more closely at daily reach within the target group of 14 to 49-year-olds, ORF radio stations collectively achieved a daily reach of 53.6%: this is some 1.2 percentage points less than in 2016 and more or less equals the loss in daily reach of 1.3 percentage points that was recorded for this target group in the category of radio overall. Here it is interesting to note that market share leader Ö3 lost four tenths of a percentage point of daily reach, slipping to 39.5%. This contrasts with the ORF regional stations, whose loss of market share was also reflected in their daily reach, which fell 1.3 percentage points to 14.4%. These stations therefore make up the segment in the ORF network that was hardest hit by loss in daily reach. Also within the target group of 14 to 49-year-olds, FM4 lost seven tenths of a percentage point to see its daily reach fall to 5.1%. Only Ö1 bucked the trend to maintain its daily reach at 5% (2016: 4.9%).

In 2017 private radio stations were tuned into daily by an average of 36.8% of 14 to 49-year-olds, the group targeted almost exclusively by these stations' programmes. This translates to a loss in daily reach of eight tenths of a percentage point compared with 2016. A big part of this loss is accounted for by KRONEHIT, the only nationwide private radio station, which lost 1.1 percentage points and saw its national daily reach fall to 16.4%. Yet several regional market participants also lost considerable ground in terms of daily reach. Examples include Antenne Kärnten, which slipped 1.9 percentage points to 28.1%, Antenne Salzburg, which fell from 13.9% to 10.2%, and Radio Osttirol, whose reach within its coverage area plummeted from 22.4% to 17.1%. Others were able to significantly improve their daily reach, however. These include Antenne Vorarlberg (from 29.2% to 30.6%), Radio Energy Tirol (from 4% to 6.7%), Life Radio Tirol (from 11.9% to 13.8%) and Life Radio Oberösterreich (from 15.4% to 16.5%).

9.1.3.3 Radio market in Vienna

Within the Vienna radio market, which is marked by strong competition, the changes for ORF station Ö3 ran counter to the nationwide trend. While Ö3 improved its market share nationwide by 2 percentage points, the station lost 3 percentage points in Vienna, finishing 2017 with a 32% share among listeners aged 14 to 49.

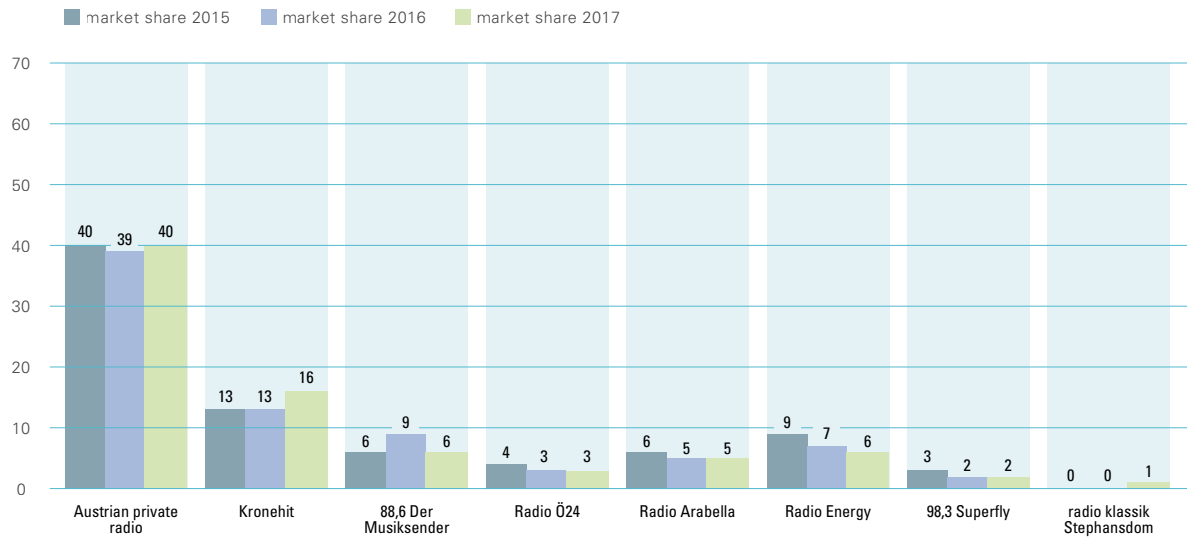
FIGURE 20: RADIO MARKET SHARES IN VIENNA AMONG THE TARGET AGE GROUP OF 14 TO 49-YEAR-OLDS, 2015–2017



Source: Radiotest; percentages

This contrasts with Radio Wien, the ORF’s regional station in Vienna, which, in line with the national trend for ORF regional radio, shed 2 percentage points of market share to fall back to its 2015 figure of 9%. Ö1 gained 1 percentage point of market share to reach 6%, while FM4 defended its 6% share in Vienna, putting on a better showing there than overall in Austria. As a group, private radio was able to improve its Vienna market share by 1 percentage point to 40%, although almost exclusively as a result of KRONEHIT gaining significantly by 3 percentage points to achieve a 16% market share in Vienna. Of the other stations, radio klassik Stephansdom was the only one to put on a positive showing, increasing its share from just over 0% to 1%. In 2017, 88.6 Der Musiksender took the greatest loss in the Vienna market, forfeiting 3 percentage points to fall back to the 6% market share it last held in 2015. The listening time lost by 88.6 apparently passed almost directly to KRONEHIT, as most other stations except for one were able to defend their 2016 market shares in 2017 (Radio Ö24: 3%; Radio Arabella: 5%; Superfly: 2%). Radio Energy was the only other station to lose market share, slipping 1 percentage point to 6%.

FIGURE 21: PRIVATE RADIO MARKET SHARES IN VIENNA AMONG THE TARGET AGE GROUP OF 14 TO 49-YEAR-OLDS, 2015 – 2017

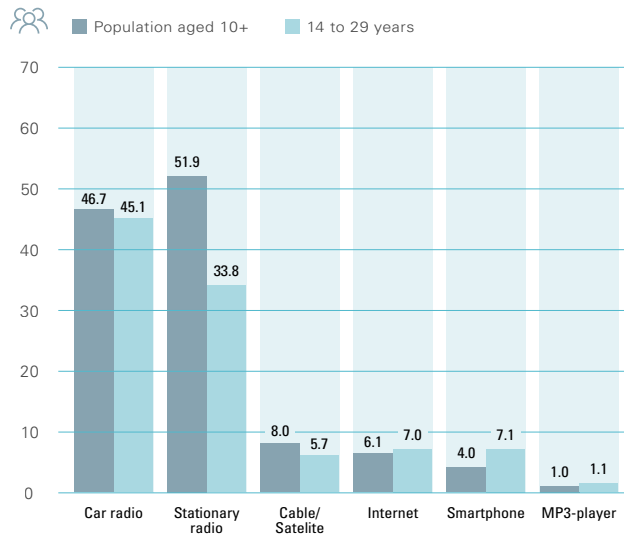


Source: Radiotest; percentages

9.1.3.4 Use of radio transmission modes

In 2017 listeners made notably less use of conventional, stationary devices for radio reception than in 2016. Only 51.9% of the total population aged ten and above still switched on a kitchen radio, stereo tuner or similar device for their daily radio listening. This represents a significant decrease of 2.4 percentage points compared with the previous year. Among young listeners, only 33.8% still used such devices on a daily basis, which corresponds to an even more striking drop of 3.7 percentage points.

FIGURE 22: DAILY USE OF RADIO SOURCES IN 2017, PERSONS AGED 10 AND ABOVE AND 14 TO 29-YEAR-OLDS



Source: Radiotest; percentages

The use of car radios, on the other hand, has remained relatively constant. This radio listening mode was used daily by 46.7% of the overall population (2016: 47%) and by 45.1% of the target group of 14 to 29-year-olds, which actually equates with an increase of eight tenths of a percentage point (2016: 44.3%). Radio listening via cable or satellite became more popular among both age groups. The share of the population using this means of radio reception increased by 7 percentage points among persons over ten to 8%, and by five tenths of a percentage point among 14 to 29-year-olds to 5.7%. The percentage of the overall population listening to radio via the internet (using a laptop, internet radio set or tablet) rose significantly by 1.2 percentage points to 6.1%, while the figure for 14 to 29-year-olds grew by nine tenths of a percentage point to 7%. Radio listening via smartphone, in contrast, was barely more common than a year before. The share of the population aged ten and over using their phones for daily listening rose by only five tenths of a percentage point to reach 4%, with the figure for 14 to 29-year-olds similarly increasing by just six tenths of a percentage point to 7.1%. An MP3 player was used daily for radio listening by 1% of the total population (2016: 0.9%), while the share among 14 to 29-year-olds was also only 1.1% (2016: 1.3%).

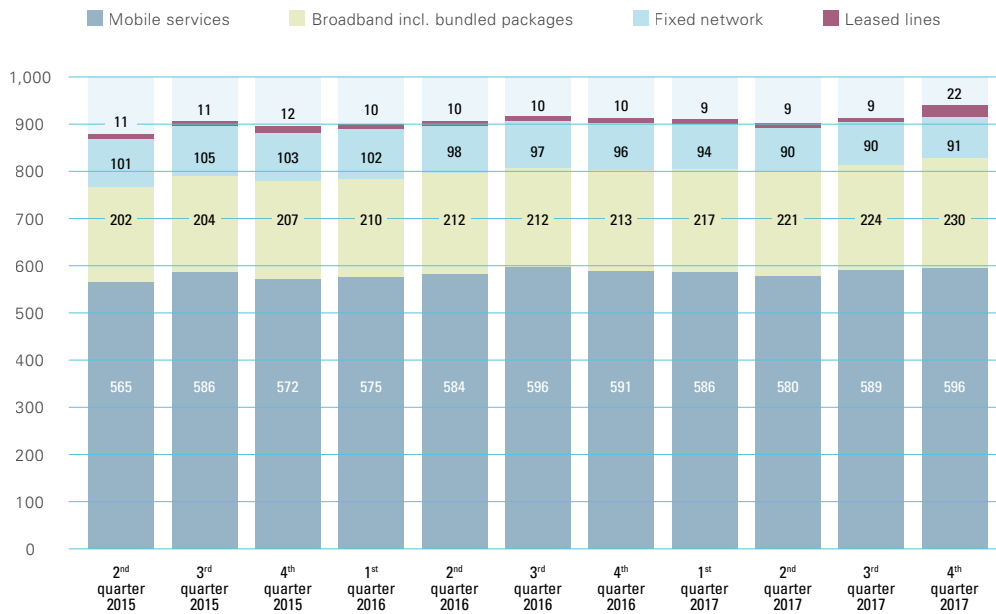
9.2 Development of the Austrian telecommunications markets

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

9.2.1 General market development

In 2017 growth was seen both in mobile services and broadband, the latter including combined fixed network and TV packages. At 6%, growth was especially pronounced in the broadband segment. Viewed over the year as a whole, fixed network revenues continued to decline. Data on Ethernet services was collected at the retail level for the first time in the fourth quarter of 2017. This is reflected in the revenue figures and accounts for the significant increase in leased line sales (see figure 23).

FIGURE 23: RETAIL REVENUES FROM MOBILE, FIXED BROADBAND, FIXED VOICE AND LEASED LINE SERVICES



Source: RTR, figures in EUR millions

The table below summarises the major market developments in the 2017 reporting year:



Mobile services

- Roaming charges abolished within the EU – data usage increases sharply
- Messaging services replace not only text messages but even voice calls
- Strong growth in machine-to-machine (M2M) SIM cards



Broadband

- Growth in mobile broadband connections despite declining transmission speeds
- Mobile data volume rapidly increasing but still less than half the fixed network volume
- Convergence of fixed and mobile networks: Hutchison takes over Tele2 – T-Mobile intends to acquire UPC
- T-Mobile launches hybrid products



Fixed voice services

- Deregulation of carrier pre-selection

9.2.2 Mobile services

Several major trends in the mobile telecommunications market are described in detail below.

End of EU roaming charges – data usage increases sharply

Nach vielen Jahren Roaming-Regulierung durch die Europäische Kommission (in Form The European Commission's long-standing system of regulating roaming through incremental reductions of price caps finally came to an end on 15 June 2017: in general, consumers can now use their mobile phone in another country as they would at home without incurring additional charges²¹. The new roaming rules apply in all EU Member States as well as Iceland, Liechtenstein and Norway (see section 6.9.3).

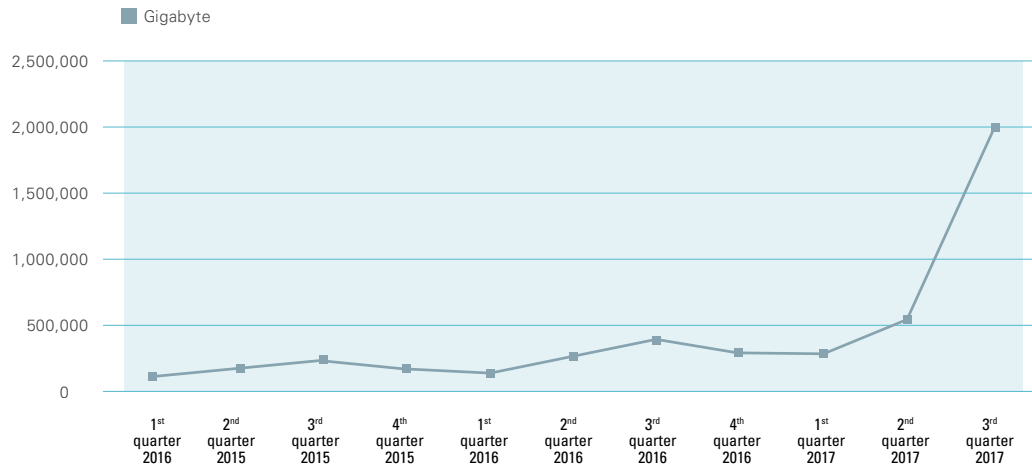
The new arrangement, also known as 'roam like at home', resulted in a more than fourfold increase in roaming data volumes between the third quarters of 2016 and 2017 (see figure 2). Although consumer-friendly, this change is potentially problematic for others, especially small operators without a proprietary network (known as MVNOs²²). An MVNO is charged a fee by the operator of the network hosting the MVNO's customer while roaming, but it receives no reciprocal revenue. Some MVNOs have therefore applied for exemptions (see section 5.3).

End of EU roaming charges – data usage increases sharply

²¹ Potential restrictions are described at https://www.rtr.at/de/tk/TKKS_RoamingEU2017 (in German).

²² Mobile virtual network operators

FIGURE 24: ROAMING DATA VOLUMES



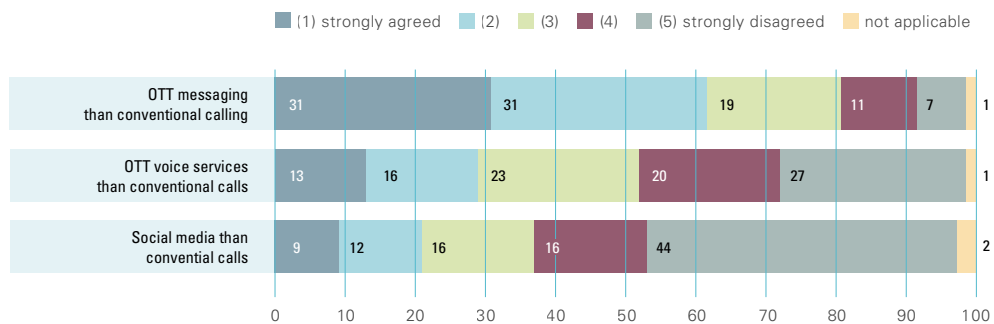
Source: RTR

Messaging services replace not only text messages but even voice calls

As shown by a recent RTR report published in 2017²³, internet-based ‘over-the-top’ (OTT) services are starting to replace not only text messaging but even phone calls. What stands out here is that conventional calling is being substituted not primarily by internet-based voice services (such as Skype) but by messaging (including WhatsApp). In a survey conducted in early 2017, for instance, 62% of users expressed strong or general agreement with the statement that they make more use of OTT messaging than conventional calling (see Figure 25). This compares with only 29% of users who strongly or mostly agreed that they were now making more use of OTT voice services than conventional calls.

Nonetheless, the number of text messages has declined much more sharply than mobile voice minutes in recent years. Voice minutes actually increased in 2017 compared with 2016 (see Figure 26).

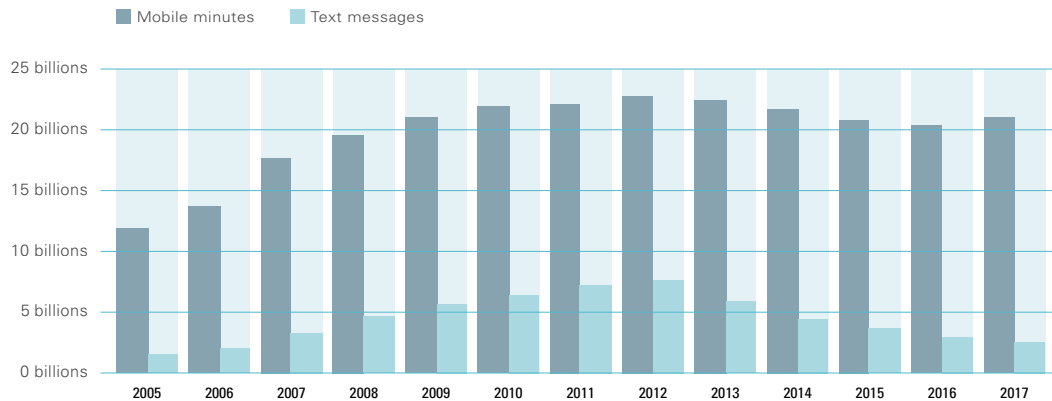
FIGURE 25: AGREEMENT WITH STATEMENTS CONCERNING THE SUBSTITUTION OF CONVENTIONAL VOICE TELEPHONY BY OTT SERVICES



Source: RTR

²³ RTR (2017): Die Konkurrenz aus dem Netz. OTT-Dienste in Medien und Telekommunikation (Competition from the Network: OTT Services in Media and Telecommunications), June 2017, https://www.rtr.at/de/inf/Konkurrenz_aus_dem_Netz_OTT

FIGURE 26: MOBILE MINUTES AND TEXT MESSAGES



Source: RTR, figures in EUR millions

Strong growth in machine-to-machine (M2M) SIM cards

Since mid-2016 there has been significant growth in the number of SIM cards used in machine-to-machine communications, in other words between devices. Over 1.8 million M2M SIM cards were already in use by Q4 2017 (see figure 27). The number represents roughly a tenfold increase within the past year and a half and now accounts for just over 12% of all SIM cards in Austria.

Although RTR does not collect specific data on how M2M SIM cards are used, related information is in fact published directly by mobile service providers. As examples for the use of M2M²⁴ A1 refers to security cameras that send messages when unusual activity is recorded near the owner’s home, or lifts that report trapped passengers in the event of failure. Another application is in asset tracking: SIM cards can be used to monitor the movements of construction equipment.²⁵ T-Mobile reports that M2M mobile technology from T-Mobile Austria is now being rolled out to vehicles from a German automobile manufacturer, with one million M2M SIM cards already in use worldwide²⁶. Hutchison cites the main applications of M2M SIM cards as industrial control systems, environmental technology, home and building technology, as well as scalable IoT solutions for companies across all sectors.²⁷

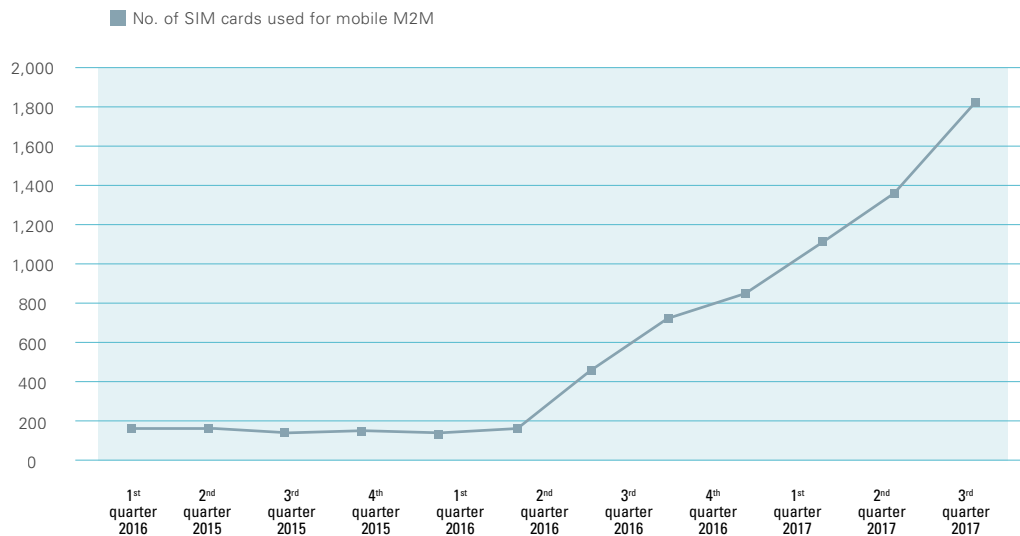
²⁴ <https://www.a1.net/wie-maschinen-fuer-erhoehte-sicherheit-sorgen>

²⁵ <https://www.a1.group/de/newsroom/2016-5-20-telekom-austria-group-m2m-digitalisiert-baumaschinen-von-porr-ag-groesstes-telematik>

²⁶ See: Eine Million M2M-SIM-Karten im weltweiten Einsatz (One million M2M SIM cards in use worldwide) <https://blog.t-mobile.at/2017/07/12/eine-million-m2m-sim-karten/>; article from 12 July 2017.

²⁷ <https://www.drei.at/de/business/referenzen/>

FIGURE 27: M2M SIM CARDS



Source: RTR, figures in EUR thousands

9.2.3 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 connections supplied by A1.

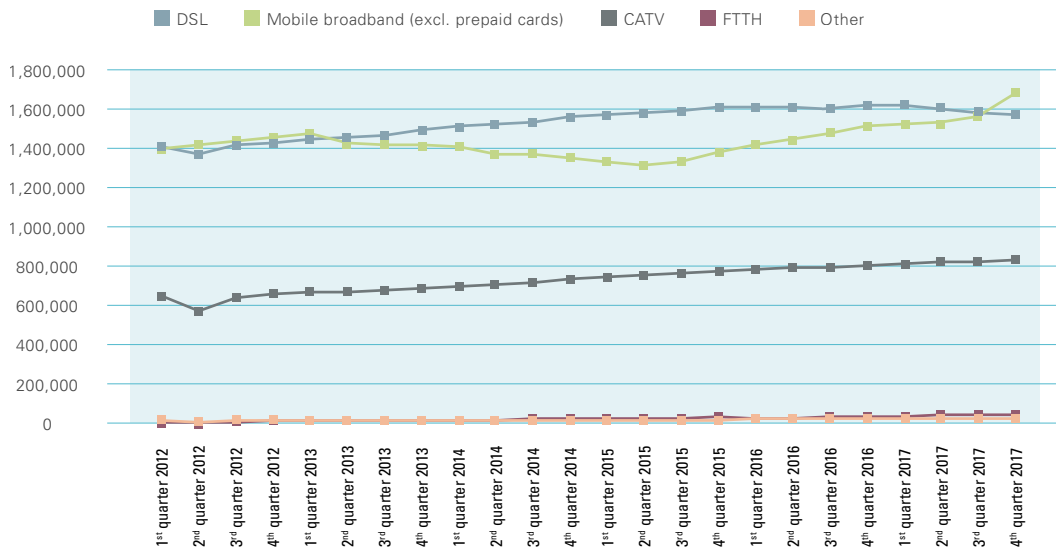
Growth in mobile broadband connections despite declining transmission speeds

The trend towards broadband connection growth first observed in 2016 continued in 2017 (see figure 28)²⁸. Alongside data products for mobile use, all mobile network operators also offer broadband connections for fixed access use (via 'cubes' or WiFi routers with built-in modems). The latter are flat-rate products, marketed as substitutes for fixed network broadband connections. This could be one of the reasons for the slight decline in DSL connections in 2017.

A simultaneous trend towards heavier utilisation of mobile network capacities was observed in 2017. This is reflected in the median download speed in the 4G network as measured by the RTR-NetTest, which dropped from over 40 Mbps to less than 30 Mbps (see figure 29).

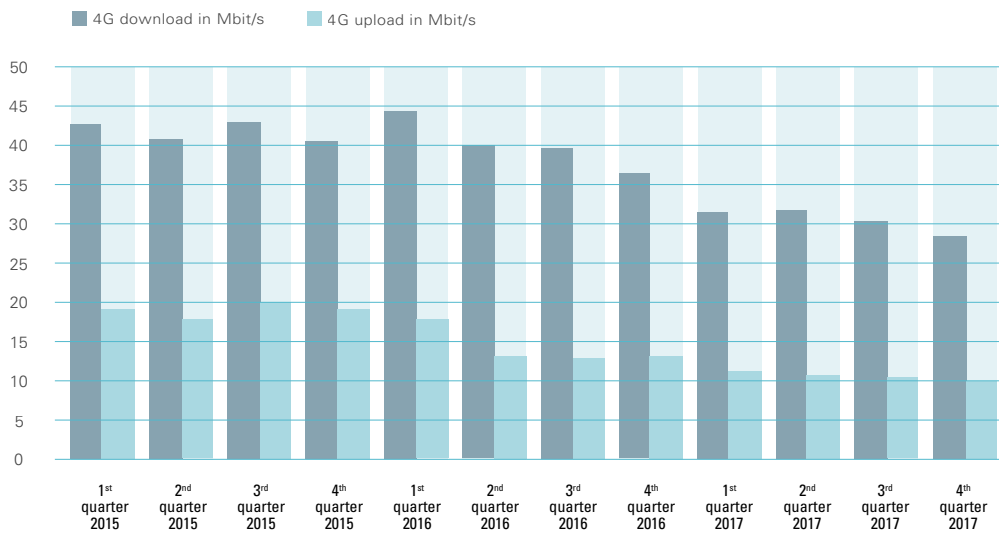
²⁸ Then again, some of the growth in Q4 of 2017 is attributable to category changes required by modified definitions relating to mobile broadband. Specifically, this category now also explicitly includes prepaid cards on a subscription basis, with a fixed amount charged regularly (usually every 30 days and if covered by the balance of the user's account).

FIGURE 28: BROADBAND CONNECTIONS BY TECHNOLOGY



Source: RTR

FIGURE 29: MEDIAN DOWNLOAD AND UPLOAD SPEEDS IN THE 4G NETWORK



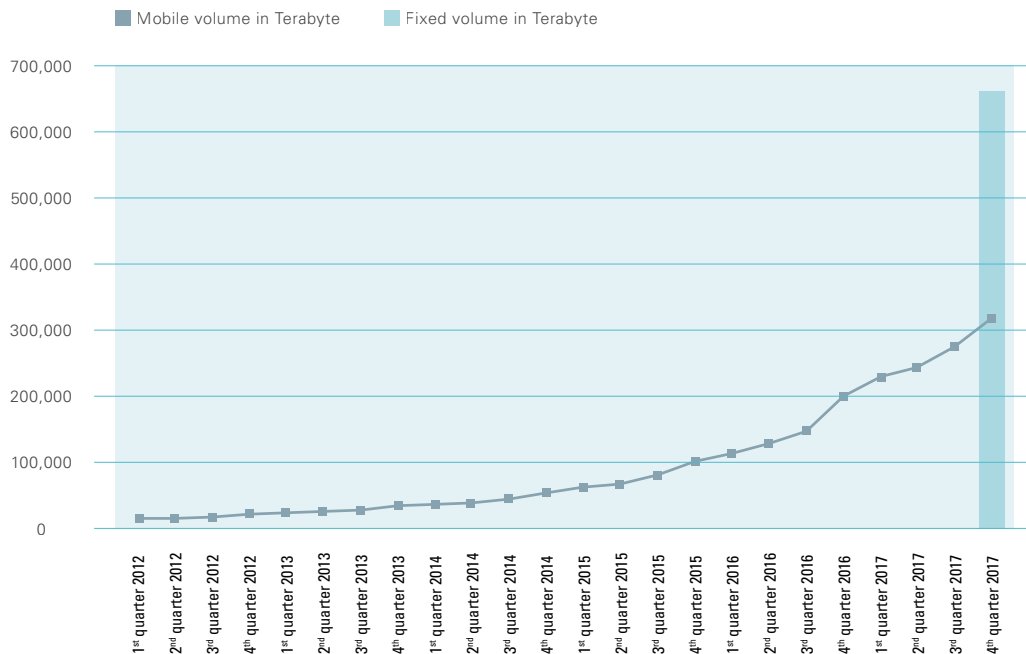
Source: RTR

Mobile data volume rapidly increasing but still less than half the fixed network volume

Mobile data volumes again rose sharply in 2017 (see figure 30) reaching roughly 318,000 terabytes by Q4 2017 (the equivalent of over 50 million HD films)²⁹. This is a growth rate of almost 60% compared with Q4 2016. The main drivers are probably the increasing use of fixed wireless broadband with flat-rate plans (see above) as well as more frequent streaming of videos at increasingly higher resolutions.

Fixed network data volume was also surveyed for the first time in Q4 2017. At 664,000 terabytes it remains considerably higher than the volume carried by mobile networks. All fixed network connections allow in effect unlimited volumes at a flat-rate and usage is often correspondingly ‘unrestrained’. Each broadband mobile connection uses about 51 gigabytes a month, while the figure for the fixed network is roughly 88 gigabytes.

FIGURE 30: MOBILE AND FIXED NETWORK DATA VOLUMES



Source: RTR

²⁹ Based on the assumption that one HD film requires 3 gigabytes per hour and lasts 2 hours.

Convergence of fixed and mobile networks: Hutchison takes over Tele2 – T-Mobile intends to acquire UPC

In 2017 mobile network operator Hutchison (under the brand name of '3') took over Tele2, a provider active mostly in the fixed network segment. In December T-Mobile announced plans to acquire cable network operator UPC. After its triumphant progress through several other European countries, it is clear that the trend towards convergence has now reached Austria. As part of the trend, providers are applying a kind of 'one-stop shop' model, where customers can obtain all of their telecoms products from a single source. This also lets mobile network operators offer fixed network products to reduce the load on their mobile networks, particularly in urban areas. While potentially strengthening the hand of these operators as they compete with A1 in the convergent product market, such takeovers also produce a more concentrated market, with a concomitant and possibly detrimental impact on competition.

T-Mobile launches hybrid products

T-Mobile launched its first hybrid products on the market in late 2017. Such packages provide broadband internet access based on fixed network (DSL) and mobile technology. To do so, T-Mobile uses virtual unbundling, a wholesale product that A1 is required to supply to meet regulatory obligations.³⁰ Virtual unbundling allows alternative providers to offer customers fixed network or (as here) hybrid connectivity using the network infrastructure operated by A1. Connections can be transferred either at the main distribution frame, as previously with copper wire pairs, or, since mid-2017, at regional interconnection points in provincial capitals. Over the next few years, this technology is intended to replace the (physical) unbundling of copper wire pairs, which will be rendered impossible in many cases by the rollout of fibre optics or A1's use of vectoring technology. The decisions issued by the Telekom-Control-Kommission (TKK) in July 2017 markedly improved the conditions governing the use of virtual unbundling (including reduced fees and regional transfer) while lowering barriers to alternative providers by easing market entry and subsequent expansion.

9.2.4 Fixed voice services

Fixed voice services are largely provided by operators with proprietary infrastructure, such as A1 and UPC. In addition, voice services are also provided by companies known as 'indirect access operators', who use unbundled lines or call-by-call and carrier pre-selection services purchase as wholesale products from A1.

The share of fixed network call minutes dropped again in 2017 to a mere 11% (2016: 12.4%).

Deregulation of carrier pre-selection

In the area of carrier services, pressure on fixed networks continues to increase from competing mobile services, while carrier pre-selection continues to dwindle in importance. The TKK responded with a decision on 2 May 2017³¹ resulting in the deregulation of the fixed network origination market. A1 continues to provide the necessary wholesale services, although the origination fee has been increased.

³⁰ Details of TKK decisions published (in German) at: https://www.rtr.at/de/tk/M_1_5_15; https://www.rtr.at/de/tk/M1_6_15

³¹ See https://www.rtr.at/de/tk/M1_7_15_120517 (in German)



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Prospects

5G: the lifeline of the digital society

10 Prospects

5G: the lifeline of the digital society

Both in Austria and throughout Europe, great importance is being attached to the introduction of the new 5G global mobile standard. This can be taken as an indication of the needs of a society in the midst of change. At the same time it can be used as a measure to forecast the scope of changes to be expected in coming years. 5G is not just to be the next generation of mobile telecommunications, enabling even higher data speeds, shorter latency times and a significantly greater number of simultaneous users: 5G is anticipated as nothing less than the lifeline of modern digital society.

Autonomous driving, public transport, healthcare, education, public security, energy supply, industry and trade, or media and entertainment – hardly a sector of the economy appears willing to forgo the high standard of mobile services that 5G will enable in future. The Internet of Things is now just taking off, giving us a first taste of the changes awaiting us in the next few years. And not only that, technological change and the possibilities it is generating have the potential to shake the very foundations of whole sectors, at the same time causing lasting repercussions in the corresponding markets.

Companies active in the telecoms sector face the challenge of making available the infrastructure required by 5G, despite a still unclear picture of the types of services that will be in strong demand and can thus be turned into provider revenues in the next few years. In particular, the verticals within the sectors listed above are expected to emerge in the role of demanding 5G services that meet specialised requirement profiles. The telecoms sector wishes to respond to users' requirements by offering flexible network models as well as options for creating services tailored to specific customer requirements. Currently, the future standards for 5G are still being discussed, with the aim of duly considering the requirements of providers and demand-side parties.

Companies active in the media sector have been impacted by the change process for years. They are confronted with new competitors that have not only made the internet viable as an alternative media distribution channel but even become a serious challenge when compared in terms of usability and the content provided. Technological progress will not stop at streaming, 3D TV or 4K TV. New techniques such as virtual reality (VR) and augmented reality (AR) have already come of age, as demonstrated by the live VR broadcasts of the Pyeongchang Winter Olympics in early 2018. Modern technologies will also enhance our experience at live events, allowing new levels of audience involvement in arenas and concert halls. Thus, the sector as a whole apparently needs to prepare for disruptive radical change.

Regulators have to deal with the varying forces unleashed by this progressive change. In their activities, they need to consider not only technological change and the introduction of 5G as described above but also the growing convergence of telecommunications and media. RTR sees itself as well equipped to take on the expected challenges, having already dealt with the impact of the internet on the telecoms and media landscape for many years. The demands facing regulators in the coming years are considerable nonetheless.

In addition to meeting its primary responsibilities in relation to competition and media diversity, RTR is confronted with the task of implementing a new EU legal framework for the sector. While this legislation is aimed at responding to the changes described above, only with the help of regulators will it come to life. This specifically means coordinating in practice the modified rules relating to technical, legal and economic aspects in such a way as to ensure that developments such as the introduction of 5G result in the greatest possible benefit for the population and the economy while contributing overall to social progress. **RTR will play its part to help reach these goals.**



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