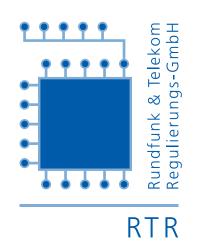
# **RTR** Telecom Monitor Annual Review 2011









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## Preface

#### Dear readers,

RTR's Telecom Monitor, which has been published on a quarterly basis for several years now, presents and discusses the most recent data available on developments in the Austrian telecommunications markets. With this special edition of the RTR Telecom Monitor, the Austrian Regulatory Authority for Broadcasting and Telecommunications (RTR) aims to expand the quarterly reports (published in German) and to provide a more in-depth view of statistics on the telecommunications sector. In addition to the periodic data comparisons, this annual report also includes a more detailed discussion of developments over the entire year.

The Austrian market is placed within a larger context by way of international comparisons, and specific data from the field of ICT are covered in more detail. This enhances the report's information content for the interested public.

#### Subject areas and structure

The content of the quarterly Telecom Monitor is essentially included (with some adaptations) in chapters 1 to 6 of this report, which present and explain statistics on individual sectors of the market: fixed networks, mobile networks, broadband, leased lines and business indicators as well as a number of comparisons across these sectors.

Chapter 7 contains various international comparisons of data from the areas listed above. The data used in those comparisons were largely derived from the European Commission's Digital Agenda Scoreboard. In chapter 8 we present the RTR Telecom Index, which serves as an indicator for price developments on the telecommunications markets. In addition, that chapter includes explanations of statistics from the field of ICTs, in particular the recently revised Networked Readiness Index.

#### **Communications Survey Ordinance (KEV)**

Under the Communications Survey Ordinance (KEV, Federal Law Gazette II No. 365/2004), which entered into force on October 1, 2004, RTR is required to conduct statistical surveys on communications services on a quarterly basis and to draw up statistics. The data collected are to be made available to the public in such a way that information on the data of specific companies cannot be deduced. Principally, the KEV has two objectives: Firstly, it aims to enhance RTR's efficiency in collecting and publishing the key market figures on a quarterly basis. This ensures for all market participants (companies and consumers alike) that the regulatory body acts in a transparent, competitive and future-oriented way and that it promotes and guarantees growth, investments and innovation in the sector. Secondly, the interested public receives current information, i. e. market data on the development of the telecommunication markets. RTR also provides KEV data to Statistics Austria.

#### **Data collection**

In order to reduce the burden on the individual operators, RTR specified the sample in line with Art. 4 Par. 1 KEV in such a way that, on the basis of the statistical population of the most recent market analyses, a market share of some 90% is covered for each cluster (fixed networks, mobile networks, leased lines and broadband), which provides a representative picture of the market situation. From this sample, RTR extrapolates the data for the statistical population.

In addition to its own surveys, RTR also relies on data from other institutions, including Statistics Austria, Eurostat, the European Commission, etc., in order to provide a uniform picture of the telecommunications sector and to enable international comparisons. In such cases, the data definitions and collection methods are aligned with those of the relevant institutions and organisations.

#### Statistical analyses and data

In line with the disclosure requirements laid down in Art. 7 Par. 2 KEV, the statistics explicitly mentioned in this paragraph are, in accordance with RTR's cluster approach, presented separately for the fixed network, mobile network, leased lines and broadband clusters. The retail revenues referred to in the Telecom Monitor are always net revenues. Due to occasional post-hoc data corrections, the values in the charts presented here may differ slightly from the information provided in earlier issues of the Telecom Monitor. Where major deviations (> 5%) arise in individual data values, a comment to this effect is provided for the figure in question.

Where percentage values which add up to 100% are presented, slight differences may arise due to the rounding of figures.

In spring 2011 RTR carried out a survey among operators that may have caused changes to the KEV data collected. Major deviations of data compared to values collected at an earlier point of time may hence be caused by the specific operator's changes in the analysis and are not necessarily due to market developments. This should be borne in mind when interpreting the data.

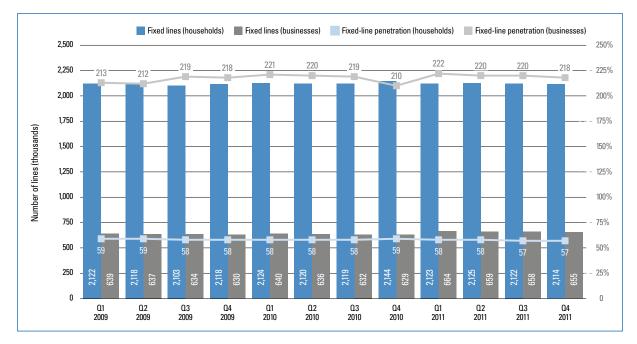
We sincerely hope that this publication provides you with interesting and informative reading!

Georg Serentschy Managing Director RTR Telecommunications and Postal Services Division

## Section 1 | Fixed network



## Fixed lines and penetration



#### ➡ LITTLE CHANGE IN FIXED LINES

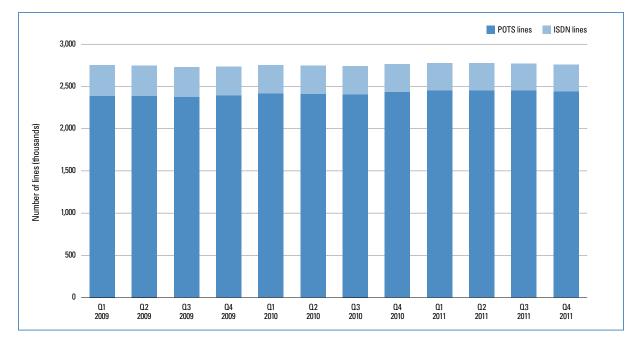
Source: RTR, Statistics Austria (number of households and businesses)

The figure above shows the total number of fixed telephone lines in households and businesses, regardless of the infrastructure on which those lines are based (e.g. copper-wire pairs, coaxial cable, optical fibre).

In addition, the figure shows fixed-network penetration rates among households and businesses. The higher penetration rate for businesses is due to the – in most cases – greater number of fixed lines per business and is therefore not strictly comparable with that of households (further information on penetration rates can be found in the Glossary on page 85.

- At the end of 2011 household lines numbered 2,114,000 and business lines amounted to 655,000. These figures have fluctuated only very little in the course of time. Compared to Q4 2010 the number of fixed lines in households fell by a mere 1.4% and rose in businesses by 4.1%.
- Accordingly, no major changes in penetration rates can be observed in the period under review. The fixed line penetration for households in Q4 2011 stood at 57%. This figure has remained virtually unchanged in recent years. The penetration rate for businesses has likewise fluctuated only very slightly. While the penetration rate in the previous year was lower due to the fact that the number of businesses was updated, changes in the course of 2011 were again only minimal. Every business in Austria still has an average of two fixed lines.

## Development of fixed lines



#### ➡ POTS LINES STABLE, SLIGHT FALL IN ISDN

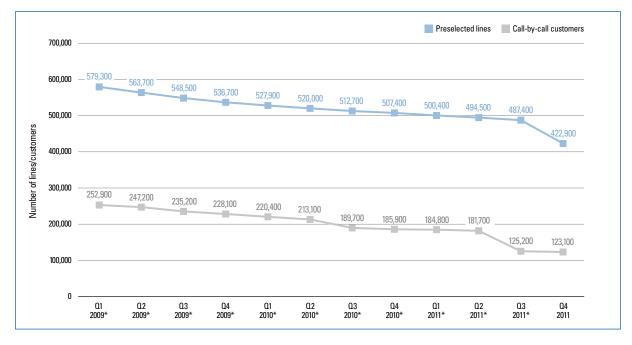
The figure above shows the number of fixed lines in Austria broken down by type (POTS, ISDN and ISDN lines). Including multi-ISDN lines in the chart is pointless as there are very few of them, so they have been omitted. Further information concerning ISDN lines is given below. A POTS ("plain old telephone service") line is a conventional telephone line as found in most households. An ISDN line provides two channels so two calls can be held at the same time. In the case of multi-ISDN lines, which are almost exclusively used by businesses, more than two channels are available at the same time.

The data underlying this figure can be found in the Appendix (see page 87).

- Adding together the lines for households and businesses, the total at the end of 2011 was 2.77 million fixed lines in Austria. The vast majority of these fixed lines (88%) is accounted for to date by conventional telephone lines (POTS). This is followed by some 320,000 ISDN lines or about 12% of all lines.
- The number of POTS lines remained virtually unchanged last year (up 0.3%) in comparison with Q4 2010. The number of ISDN lines fell over the same period (down 3%).
- Multi-ISDN lines about 10,000 of them account for only about 0.4% of all fixed lines in Austria and are used almost exclusively by businesses. The number of multi-ISDN lines varies hardly at all.

## Preselected lines and call-by-call customers

#### ➡ MARKED FALL IN CPS AND CBC CUSTOMERS



The figure above shows the number of lines on which carrier pre-selection (CPS) is used as well as the number of call-by-call (CbC) customers in Austria.

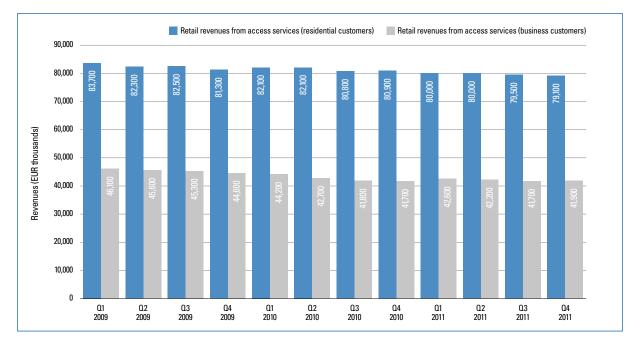
Carrier pre-selection refers to a pre-set carrier network code (10xx) which routes all of a subscriber's traffic (except for calls to value-added services and public service numbers) via the pre-selected carrier network.

In contrast, call-by-call carrier selection makes it possible to route individual telephone calls via a service provider other than the network which provides the subscriber line. In this case, the subscriber is required to enter the carrier network code (10xx) before each call. The figure above shows the number of customers who used CbC at least once in each quarter.

- The use of CPS and CbC as a means of routing calls via service providers other than the network which provides the subscriber line is used by customers less and less. Preselected lines were used by 422,900 people in Q4 2011, equivalent to a decline of 16.7% since the fourth quarter of 2010.
- This trend is even more marked among CbC customers: the number of CbC customers in Q4 2011 was 123,100, making the number at the end of 2011 about one-third lower than in the same quarter of 2010.

<sup>\*</sup> Due to a post-hoc data correction, the deviation in the number of call-by-call customers from the figure reported in previous issues of the Telecom Monitor is greater than 5%.

## Retail revenues from access services



#### ➡ NO CHANGES IN REVENUES FROM ACCESS SERVICES

Retail revenues from access services include base fees and setup charges.

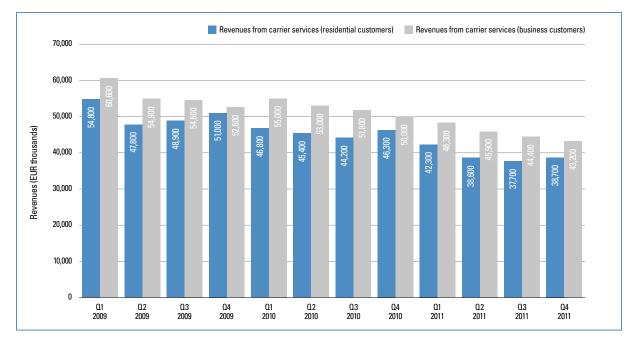
Base fees refer to revenues collected at regular intervals that do not depend on the actual use of the subscriber line. They also include revenues from monthly flat rates (e.g. packages which include a certain number of minutes), but such rates do not play a significant role in fixed-network services.

Setup charges for subscriber lines include revenues generated by the setup, transfer and disconnection of fixed lines.

- As for fixed line numbers, which have shown no substantial change in the last three years (see page 8), no great changes are evident in revenues from access services, which do not depend on call traffic volumes. Total revenues from base fees and setup charges for households and businesses amount to EUR 121 million in Q4 2011, of which two-thirds were generated by residential customers, one-third by businesses.
- A comparison of revenues in Q4 2011 with Q4 2010 shows no significant changes in either households or businesses. And the numbers scarcely varied during the year under review.

## Retail revenues from carrier services 1/2



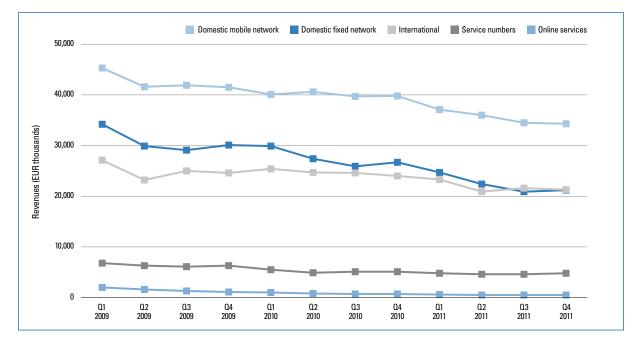


Retail revenues from carrier services depend on the number of call minutes used, i.e. the more telephone calls a fixed subscriber makes, the higher their bill normally is.

The revenues shown above include the retail fees charged by operators for calls to the domestic fixed network, domestic mobile networks, international destinations, online services and service numbers. Revenues from fixed monthly flat rates (e.g. packages including a certain number of minutes) are not included in the figures above.

- The (variable) revenues from carrier services reveal a very different picture compared to the (fixed) revenues from base fees and setup charges. Both for residential and business customers revenues continued to decline in the course of 2011, as they had done the previous year. Revenues from residential customers did rise slightly in Q4 (up 2.7%), the fourth quarter being traditionally a high-volume period for this segment, but nevertheless there was a fall in revenues compared to Q4 2010 of over EUR 7 million to EUR 38.7 million (down 16.4%). The decline in business revenues was similarly steep (down 13.6%).
- This continues a trend which has been observable for some time: revenues from carrier services have fallen continuously over the period. Comparing the latest figures with those at the start of the period shown here, revenues from Q4 2011 for residential and business customers alike are only just over 70% of the initial values recorded in Q1 2009.

## Retail revenues from carrier services 2/2



#### ➡ REVENUES FOR ALL DESTINATIONS DOWN

The figure above shows the revenues earned by operators from calls from fixed networks to various destinations (national fixed network, national mobile networks, international destinations, online services and service numbers). Revenues from fixed monthly flat rates (e.g. packages including a certain number of minutes) are not included in the figures above. The data underlying this figure can be found in the Appendix (see page 87).

- The figure above shows revenues from carrier services by destination, that is, by the type of numbers called from the fixed network. The majority are calls to mobile networks: some 40% (EUR 34.3 million) was generated in Q4 2011 by calls to mobile networks. EUR 21.3 million was produced by international calls and EUR 21.2 million from calls to fixed networks. This means international calls and calls to fixed networks contributed about 26% each to retail revenues from carrier services. Calls to service numbers (5.8%) and online services (0.6%) played only a minor part.
- The general trend for revenues to all destinations is declining, albeit not with uniform steepness. Revenues from calls to fixed networks fell by 20.6% compared to Q4 2010. Revenues from calls to mobile networks were down 13.8% and from international calls down 11.2%. Revenues from service numbers were down by 5.9%. The largest fall of all was in revenues from connections to online services (down 28.6%), so, as anticipated, narrowband dial-up Internet services continue to lose ground heavily over the period.

## Breakdown of retail revenues (residential customers)

#### Access services Carrier services Other 100 90 80 70 60 Share (%) 55.8 50 40 30 20 10 ٥ Q1 02 03 Q4 Q1 02 03 Q4 02 03 01 Q4 2009 2009 2009 2009 2010 2010 2010 2010 2011 2011 2011 2011

#### SHARE OF CARRIER SERVICES IN LONG-TERM DECLINE

Retail revenues from residential customers include the following service categories:

Access services: Revenues from base fees and setup charges and fixed flat-rate charges

**Carrier services:** Revenues from carrier service charges

**Other services**: Revenues from calling cards, remuneration pursuant to the Telecommunications Fee Subsidies Act and miscellaneous charges such as billing, additional services, etc.

The data underlying this figure (absolute values) can be found in the Appendix (see page 88).

- Revenues from residential customers in 2011 were worth some EUR 520 million. Of this 61.5% (EUR 319 million) was accounted for by access services, 30.1% (EUR 157 million) by carrier services and 8.5% (EUR 44 million) were generated by other sources.
- Total revenues from fixed-link residential customers were thus down by some 6% in 2011 compared with 2010. The breakdown into the three revenue categories has thus changed over the period in that the share of total revenues accounted for by carrier services is tending to decline, while the share of access services is increasing.

## Breakdown of retail revenues (business customers)

#### Access services Carrier services Other 100 ٩N 80 70 60 Share (%) 50 40 30 20 10 ٥ Q1 02 Q3 Q4 Q1 02 03 Q4 02 03 Q1 Q4 2009 2009 2009 2009 2010 2010 2010 2010 2011 2011 2011 2011

#### SHARES OF ACCESS SERVICES RISING STEADILY

Retail revenues from residential customers include the following service categories:

Access services: Revenues from base fees and setup charges and fixed flat-rate charges

Carrier services: Revenues from carrier service charges

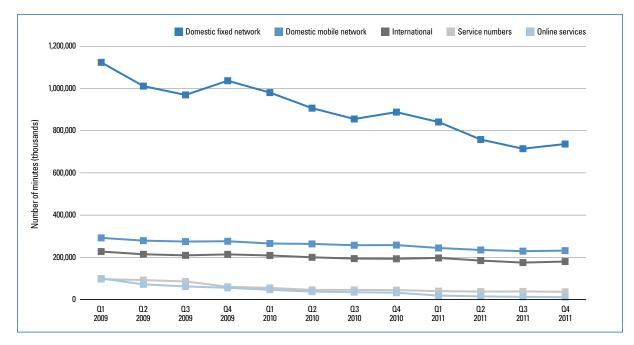
**Other services**: Revenues from calling cards, remuneration pursuant to the Telecommunications Fee Subsidies Act and miscellaneous charges such as billing, additional services, etc.

The data underlying this figure (absolute values) can be found in the Appendix (see page 88).

- Total revenues from fixed-link business customers amounted to EUR 365 million in 2011. In contrast to residential customers, the carrier services in this case continued to account for the major share of revenues (EUR 182 million), but that proportion is falling steadily. While revenues from carrier services still accounted for just over half (52.4%) of total business revenues in Q4 2010, this percentage fell to just 48.6% in Q4 2011. The share of access services, on the other hand, is rising steadily. In 2011 46% of the annual revenue was generated by access services (EUR 168 million). Other revenues accounted for 4% (EUR 15 million).
- In the business segment too, the breakdown of revenues across service categories remains relatively stable with a slight shift away from carrier services.

## Call minutes on the retail market

➡ DECLINE IN CALL MINUTES FOR ALL DISTANCES



The figure above shows the number of call minutes (technical measurement) in the fixed network broken down by destination. These minutes refer to the actual duration of calls made by retail customers from the fixed network.

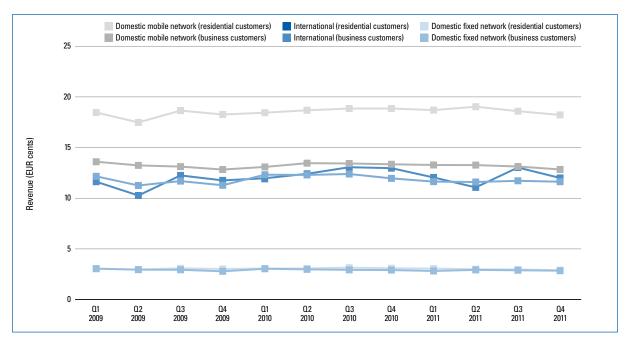
In contrast, billed call minutes (not shown) indicate the number of minutes actually charged to those customers. The main factors accounting for the difference between these two figures are the number of free minutes included in the base fee (which is not as significant as it is in mobile networks) and the pulse rate used for calls.

The data underlying this figure can be found in the Appendix (see page 89).

- In the year 2011, a total of 4.94 billion outgoing call minutes from the fixed network were registered. Compared to 2010 (5.81 billion minutes), this means a sharp decline (minus 15%).
- The majority of them were accounted for by domestic calls to fixed networks, which showed however a 16% drop in 2011 from 2010. There are also marked declines in calls to service numbers (down 20%), which accounted for 153 million minutes in 2011. The same applies to online services (58 million minutes), which showed a dramatic fall of 60% over the previous year.
- Fixed-link customers made outgoing calls totalling 940 million minutes to mobile networks (down 10% compared to 2010) and totalling 737 million minutes (down 7%) to international destinations.

### Revenue per call minute

#### ➡ DECLINE FOR ALL DESTINATIONS

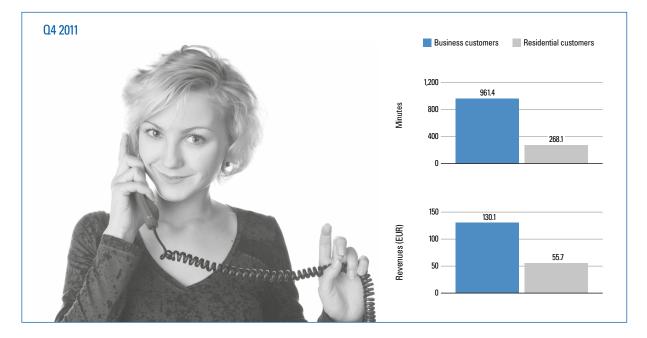


The figure above shows retail revenues from carrier services (see page 12), divided by the number of call minutes (see page 16) for telephone calls from fixed networks to various destinations, classified by residential and business customers. The data underlying this figure can be found in the Appendix (see page 89).

- The highest revenues per call minute are accounted for by residential customers with calls to mobile networks where the annual average was 18.6 euro cents per minute. Business customers paid much less for calls to mobile networks (13.1 euro cents/minute). So it is calls to mobile networks that show the greatest difference in revenues per call minute between residential and business customers.
- For international calls residential customers paid an average of 12 euro cents/minute, while business customers had to pay somewhat less for international calls (11.7 euro cents/minute). Calls to domestic fixed networks cost euro 3 cents per call minute for residential customers and 2.9 euro cents for business customers.
- Comparing 2011 with 2010 the average annual revenues per call minute to all destinations fell between 0.4% (residential customers to mobile networks) and 4.8% (business customers to international destinations).

## The average fixed network subscriber (Q4 2011)

#### ➡ FEWER MINUTES, LOWER REVENUES



The figure above shows the average number of outgoing call minutes on the fixed network for residential and business customers and the average revenues generated by fixed network operators from residential and business customers in the current quarter. These values were calculated on the basis of the total revenues from access and carrier services and the total number of call minutes, each divided by the corresponding overall number of fixed lines.

- In Q4 2011, the average fixed residential network subscriber made outgoing calls totalling 268 minutes (4 hours, 28 minutes), paying a total of EUR 55.7 for this service.
- Unsurprisingly, the average figure for a business customer was higher at 961 minutes (16 hours, 1 minute), for which EUR 130.1 was paid.
- In the same quarter of 2010 outgoing calls for residential customers took 51 minutes longer, while outgoing calls for business customers were 3 hours, 22 minutes longer. Revenues per residential customer were up by about EUR 4 and per business customer by about EUR 16.

# The average fixed network subscriber (year-on-year comparison)

Year	Revenues (EUR) Residential customers	Minutes Residential customers	Revenues (EUR) Business customers	Minutes Business customers
2009*	251.6	1,553.6	636.7	5,460.2
2010*	239.2	1,291.0	599.2	4,837.2
2011	224.3	1,077.5	531.5	4,025.6

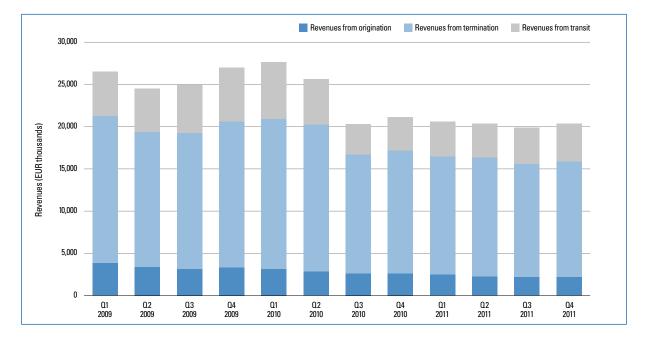
#### ➡ MINUTES AND REVENUES DOWN YEAR ON YEAR

The table above provides a year-on-year comparison of the average number of call minutes as well as the average revenues generated per fixed residential and business customer in Austria. These values were calculated on the basis of the total annual revenues from access and carrier services and the total annual number of call minutes, each divided by the corresponding overall number of fixed lines.

- The average fixed-line residential customer made calls in 2011 totalling 17 hours, 57 minutes, generating a revenue of EUR 224.3. This is equivalent to a reduction of 16.5% in outgoing call minutes for the average residential customer compared with 2010. Revenues per residential customer line declined slightly less steeply (down 6.2%), explained by the fact that more than half of the fixed network revenues were generated by income from base fees and setup charges (see page 14).
- The average number of outgoing call minutes by fixed-network business customers also decreased. Their calls totalled only 67 hours, 6 minutes in 2011, making a 16.8% reduction from the previous year. Revenues fell by 11.3% to EUR 531.5 per business line.

<sup>\*</sup> Due to post-hoc data corrections, the data for the years 2009 and 2010 differ from those of the RTR Telecom Monitor Annual Review 2010.

## Wholesale revenues



#### ➡ REDUCED REVENUES ON THE WHOLESALE MARKET

The fixed wholesale market for voice telephony includes three sub-services: origination, termination and transit services. Revenues from **origination** services arise when a network operator routes one of its own subscriber's calls to an interconnected carrier network operator (which itself has no directly connected subscribers) or routes a call to a service number subject to destination network charges.

Revenues from **termination** services are generated when a network operator routes a call from an external network to a subscriber connected to its own (fixed) network.

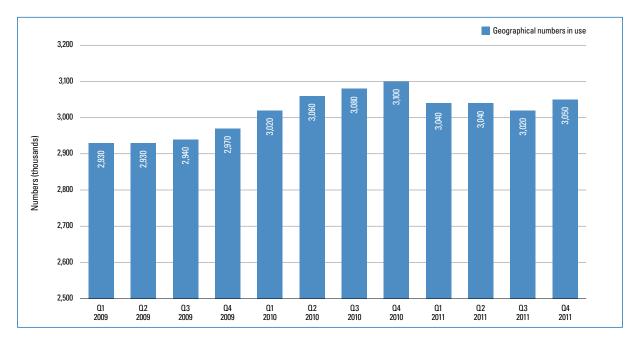
Revenues from transit services arise when a call is (re)routed between two networks by a third operator.

Origination, termination and transit services are not charged to the customer directly, but to other network operators at the wholesale level.

The data underlying this figure can be found in the Appendix (see page 90).

- In 2011 the fixed wholesale market generated total revenues of EUR 81.2 million, of which the majority (68%) was accounted for by termination charges with revenues of EUR 55 million; 20.9% was accounted for by transit charges (EUR 17 million) and 11.1% by origination charges (EUR 9 million).
- Total wholesale revenues fluctuated only slightly throughout 2011, although they fell by 14.3% compared with 2010. The striking reduction from the second to the third quarter of 2010 is due partly to the merger between Telekom Austria and mobilkom austria in mid-2010.

## Geographical numbers in use



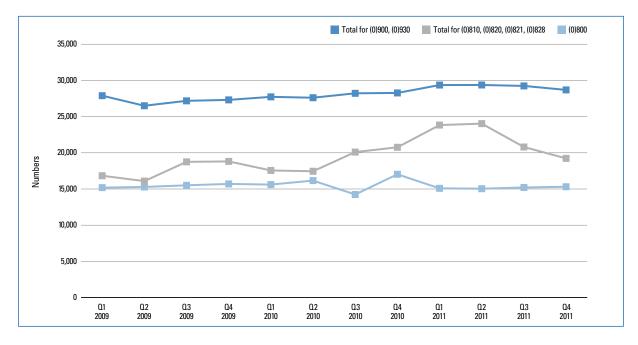
#### ➡ NUMBER OF GEOGRAPHICAL NUMBERS DOWN

Geographical numbers are domestic telephone numbers with a local area code (e.g. 01 for Vienna). As more than one number may be assigned to a single line, the number of geographical numbers is not identical to the number of fixed subscriber lines.

- At the end of Q4 2011, 3.05 million geographical numbers were in use throughout Austria. Compared to one year earlier, this represents a fall of 1.6%.
- This is the first decline observed since the continuous rise throughout 2009 and 2010.

# Service numbers in use: (0)800, (0)810, (0)820, (0)821, (0)828, (0)900, (0)930

#### ➡ DECLINE IN TOLL-FREE AND (0)810, (0)820, (0)821, (0)828 NUMBERS



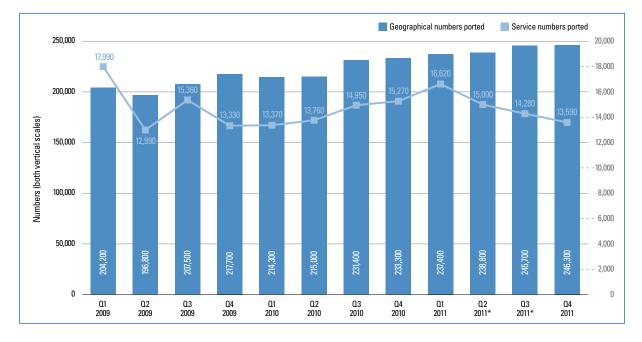
The figure above shows the number of service numbers in use in the following ranges:

- (0)800 range: toll-free services
- (0)810 range: max. EUR 0.10 per minute or text message
- (0)820 range: max. EUR 0.20 per minute or text message
- (0)821 range: max. EUR 0.20 per call or text message
- (0)828 range: text messages only; standard charges apply
- (0)900 range: max. EUR 3.64 per minute or max. EUR 10.00 per text message
- (0)930 range: max. EUR 3.64 per minute or max. EUR 10.00 per text message (erotic hotlines)

The data underlying this chart can be found in the Appendix (see page 90).

- In Q4 2011 there was a total of 15,310 numbers in use in the toll-free range, and at 19,230 somewhat more in the (0)810, (0)820, (0)821, (0)828 ranges. The largest number of service numbers used 28,690 are the (0)900 and (0)930 numbers.
- The number of toll-free (0)800 numbers fell by 10.1% compared with Q4 2010. Numbers in the ranges (0)810, (0)820, (0)821, (0)828 also show a decline (down 7.4%).
- However, use of service numbers in the (0)900 and (0)930 ranges rose slightly between the end of 2010 and the end of 2011 (up 1.5%).

# Ported geographical numbers and service numbers



#### ➡ MARKED DECLINE IN PORTED SERVICE NUMBERS

Number porting allows customers to retain their telephone numbers when they switch service providers.

This means that customers can keep their original geographical telephone numbers (within the same local area code) when they switch to a new provider.

The figure above shows the total number of geographical telephone numbers and service numbers ported (which is not equal to the total number of porting procedures carried out, as a single number may be ported multiple times).

- In Q4 2011 a total of about 246,300 geographical numbers and 13,590 service numbers were ported.
- Ported geographical numbers show a growth of 5.6% compared with Q4 2010.
- The number of ported service numbers declined continuously throughout 2011, amounting at the end of the year to a fall of about 11% since the end of 2010. This trend runs counter to that of 2010.

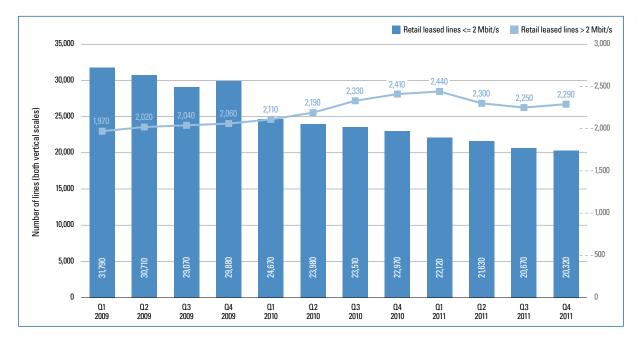
\* Due to a post-hoc data correction, the deviation in the number of service numbers ported from the figure reported in previous issues of the Telecom Monitor is greater than 5%.

## Section 2 | Leased lines



## Number of retail leased lines in Austria

#### ➡ NUMBER OF LEASED LINES IN BOTH BANDWIDTH CATEGORIES DECLINING

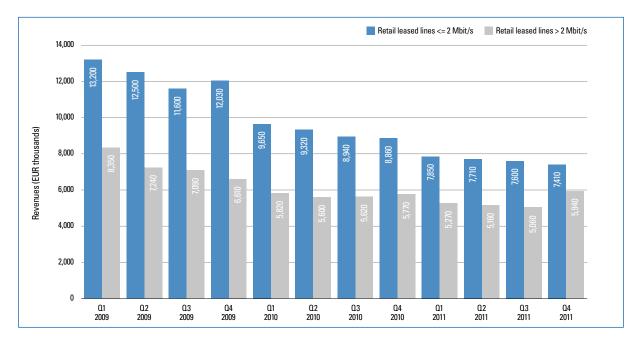


Retail leased lines refer to leased lines (see Glossary, page 84) which are not provided for operators or providers of communications networks or services (i.e. holders of general approvals), but for companies outside the telecommunications sector (e.g. banks, insurance companies, retail stores, etc.).

The figure above shows the number of retail leased lines broken down by data transmission rate (<= 2 Mbit/s versus > 2 Mbit/s).

- 2011 saw a decline in both the number of retail leased lines with a capacity of 2 Mbit/s or less and lines with a capacity exceeding 2 Mbit/s. In Q4 2011, the number of retail leased lines with a capacity of 2 Mbit/s or less decreased by 2,650 lines or 11.5% (compared to Q4 2010). This trend had already become evident for leased lines of this category in the year before.
- While the number of retail leased lines with a capacity exceeding 2 Mbit/s had risen in the previous years, this trend reversed in 2011. In Q4 2011 the number of retail leased lines with a capacity exceeding 2 Mbit/s totalled 2,290, which represents a decrease by 120 lines, or minus 5% over Q4 2010, despite the fact that Q4 2011 saw an increase in leased lines with a capacity exceeding 2 Mbit/s compared to the previous quarters of 2011.

## Revenues from retail leased lines in Austria



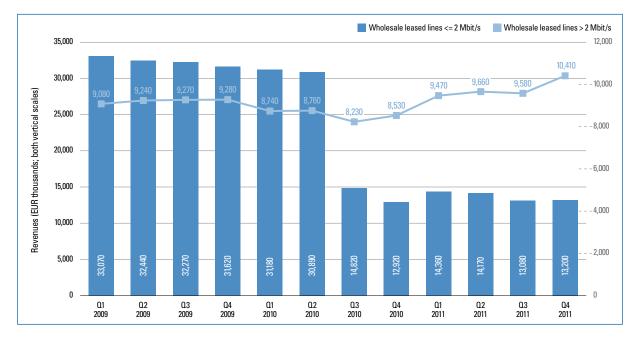
#### ➡ ANNUAL REVENUES FOR BOTH BANDWIDTHS DECLINING

Retail leased lines refer to leased lines (see Glossary, page 84) which are not provided for operators or providers of communications networks or services (i.e. holders of general approvals), but for companies outside the telecommunications sector (e.g. banks, insurance companies, retail stores, etc.).

The figure above shows the revenues from retail leased lines in Austria broken down by data transmission rate (<= 2 Mbit/s versus > 2 Mbit/s).

- In 2011 retail leased lines generated total revenues of EUR 52 million, with leased lines with a capacity of 2 Mbit/s or less accounting for a share of 59% and leased lines with a capacity exceeding 2 Mbit/s holding a 41% stake.
- Like the number of retail leased lines, revenues from these lines have also declined compared to 2010. Revenues from retail leased lines with a capacity of 2 Mbit/s or less dropped by 17% (EUR 30.6 million). Revenues from leased lines with a capacity exceeding 2 Mbit/s recorded a slighter decline of 6% (EUR 21.4 million), a trend also reflected by the number of leased lines.

## Revenues from wholesale leased lines in Austria



#### ➡ INCREASE IN REVENUES FOR HIGH BANDWIDTHS

Wholesale leased lines are leased lines which are only provided for other operators or providers of communications networks or services (i.e. holders of general approvals), e.g. for mobile network operators (see Glossary, page 84). The figure above shows the total revenues from wholesale leased lines broken down into lines with a capacity of 2 Mbit/s or less and lines with a capacity exceeding 2 Mbit/s.

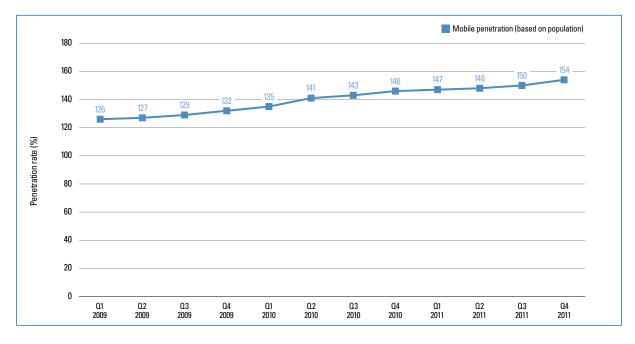
- In 2011, the wholesale segment generated total revenues of EUR 93.9 million. Leased lines with a capacity of 2 Mbit/s or less generated EUR 54.8 million in revenues, leased lines with a capacity exceeding 2 Mbit/s EUR 39.1 million. Hence the 2011 annual revenues from leased lines with a capacity of 2 Mbit/s or less dropped by 39% compared to 2010, while the 2011 figure for leased lines with a capacity exceeding 2 Mbit/s rose 14% in a year-on-year comparison.
- Compared to Q4 2010, revenues for both categories increased. In Q4 2011 revenues from leased lines with a capacity of 2 Mbit/s or less were up 2% compared to Q4 2010, while revenues of leased lines with a capacity exceeding 2 Mbit/s even jumped by 22% year on year.
- The slump in revenues in the middle of the time series depicted above is attributable, amongst others, to the merger of Telekom Austria and mobilkom austria in June 2010.

## Section 3 | Mobile communications



## Mobile penetration

#### ➡ THREE SIM CARDS ON AVERAGE FOR TWO PERSONS



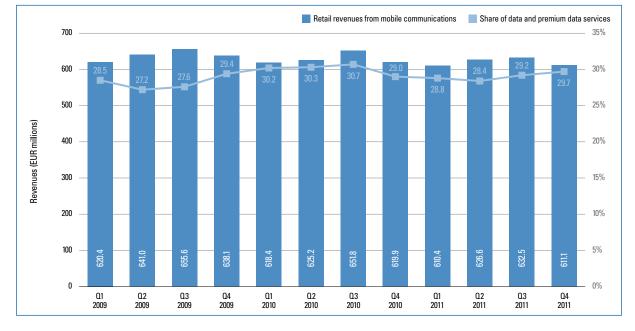
Source: RTR, Statistics Austria (population figures)

The mobile penetration rate is calculated as the number of activated SIM cards divided by the country's population. Therefore, this indicator shows the (notional) average number of SIM cards used by each resident of Austria; however, these figures also include SIM cards used by businesses.

- A steady rise in mobile penetration can be observed over time. This trend also continued in Q4 2011. In concrete terms, the penetration rate stands at 154%, which is an increase of four percentage points over the previous quarter.
- In absolute figures, there are about 13 million SIM cards for 8.44 million residents, i.e. two persons own three SIM cards on average.
- This trend is expected to continue in 2012 as SIM cards will be increasingly used in machine-to-machine ("M2M") applications.

## Retail revenues from mobile communications





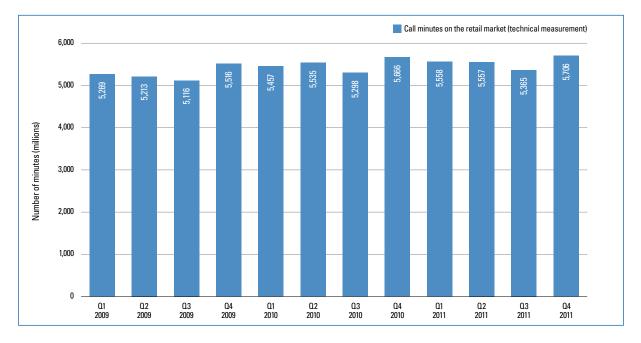
The retail revenues from mobile communications shown above include the following categories:

- Connection charges for voice calls
- Base fees
- Activation fees
- Text messaging charges
- Tariffs for data services and value-added data services
- Compensation for special coverage obligations and fees pursuant to the Telecommunications Fee Subsidies Act
- Other charges

The percentage of overall revenues attributable to data services and value-added data services (including text messaging and multimedia messaging) is shown separately above.

- Retail revenues from mobile communications are subject to repeated seasonal fluctuations over time. For instance, the revenues generated in Q4 2011 declined compared to the previous quarter. In Q4 2011 revenues totalled EUR 611.1 million, which represents a decline of 3.4% compared to Q3 2011.
- In the course of 2011 revenues worth EUR 2.48 billion were generated. This is a decline of 1.4% compared to 2010.
- The percentage of data services and value-added data services rose from 29% at the end of 2010 to 29.7% (up 0.7 percentage points) at the end of 2011.

## Call minutes on the retail market



#### CONTINUED RISE IN CALL MINUTES IN 2011

The figure above provides an overview of technically measured call minutes in mobile networks. These minutes refer to the actual duration of calls made by retail customers.

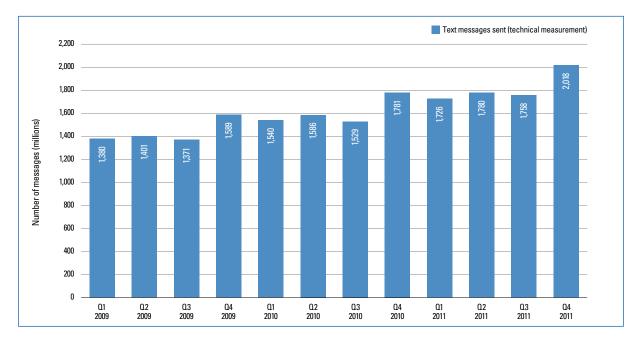
In contrast, billed call minutes (not shown) indicate the number of minutes actually charged to those customers. The main factors accounting for the difference between these two figures are the number of free minutes included in the base fee and the pulse rate used for calls. This difference can be especially large in cases where flat rate packages are offered.

The figure above includes voice services only (i.e. without data services, video telephony, etc.).

- Unlike the revenues from mobile communications, the number of call minutes rose significantly in the fourth quarter of 2011. 5.7 billion minutes represent an increase of 6.4% compared to the previous quarter. The comparatively strong rise from Q3 to Q4 was already observed in the years before and can be explained by the increased call traffic volumes before Christmas.
- The trend of rising call minutes and declining revenues, which has recently been observed, can be attributed to the fact that, among other things, more and more flat rate packages are being offered. These tariffs include a certain number of free minutes, which encourages users to make more and longer phone calls.
- A total of 22.2 billion minutes were recorded in 2011, which is an increase by 1% over 2010.

### Text messages

#### ➡ TWO BILLION TEXT MESSAGES IN ONE QUARTER FOR THE FIRST TIME



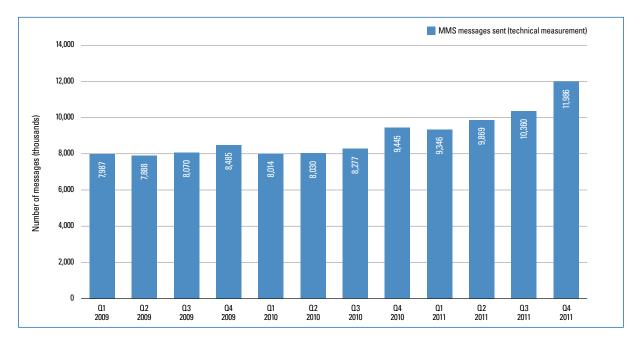
The values in the figure above include all text messages sent in each quarter, including value-added text messaging services (technical measurement).

As in the case of call minutes, the term "technical measurement" means that the figure also includes text messages which are not charged individually to the retail customer (e.g. text messages included in the base fee or flat rate). Multimedia messages are not included in these figures.

- Similar to call minutes, the number of text messages sent tends to rise significantly in the fourth quarter of each year. For instance, in Q4 2011 a clear 14.8% increase in text messages can be observed compared to Q3 2011. Thus more than two billion text messages were sent in one quarter for the first time.
- The trend towards sending text messages can also be observed in a year-on-year comparison. In 2011 about 7.3 billion text messages were sent, which signifies an increase of 13.1% compared to 2010. Apart from the above-mentioned flat rate packages with text messages included, this trend can be attributed to the increasing use of M2M applications.

## Multimedia messages

#### ➡ MULTIMEDIA MESSAGES AT A RECORD HIGH AT THE END OF 2011



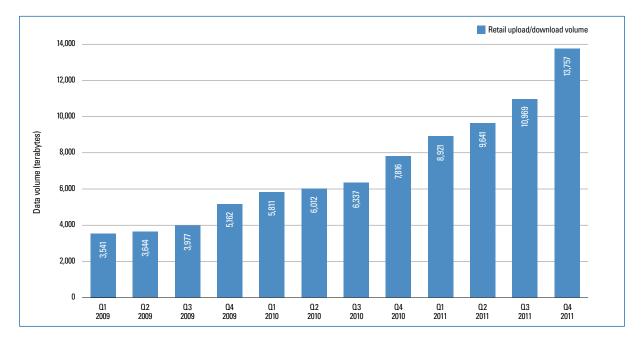
The values in the figure above indicate all multimedia messages sent in each quarter, including value-added multimedia messaging services (technical measurement).

As in the case of call minutes, the term "technical measurement" means that the figure also includes multimedia messages which are not charged individually to the retail customer (e.g. messages included in the base fee or flat rate). Text messages are not included in these figures.

- At 11.99 million multimedia messages, the 12-million threshold was narrowly missed. However, never before were so many multimedia messages sent as in Q4 2011 (a rise of 15.7% over the previous quarter).
- In 2011, a total of 41.6 million multimedia messages were sent, which is a rise of 23.1% compared to 2010. It is obvious that multimedia messages are becoming increasingly popular.
- The future will show what impact the increasing use of data products such as "WhatsApp" will have on the development of multimedia messages and text messages.

## Data volume (retail market)

#### ➡ ANNUAL DATA VOLUME INCREASES BY ABOUT TWO-THIRDS

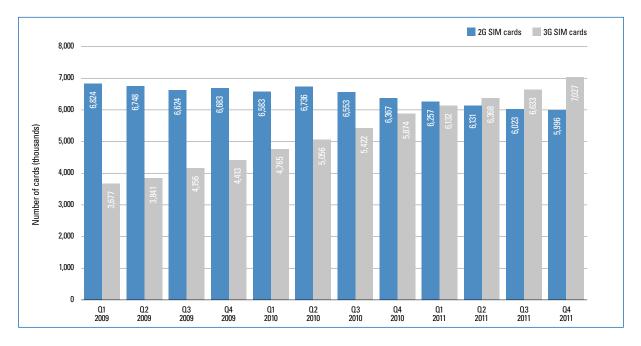


The figure above shows the data volume used for uplink and downlink transmissions on the retail mobile communications market in terabytes (1 terabyte = 1,000 gigabytes). These figures do not include text messages or multimedia messages.

- Since the start of the time series depicted, the data transfer volume has nearly quadrupled and it continues to constantly rise with every quarter. In Q4 2011, for instance, 13,757 terabytes were used. This represents an increase of 25.4% compared to the previous quarter.
- When comparing the years 2009 to 2011, it seems that there are no limits for the growth of the data transfer volume used. From 2009 to 2010 the data transfer volume rose by nearly 60% to 25,976 terabytes, and from 2010 to 2011 this figure again grew by two-thirds to 43,288 terabytes.

## SIM cards in use

#### ➡ INCREASE OVER 2010

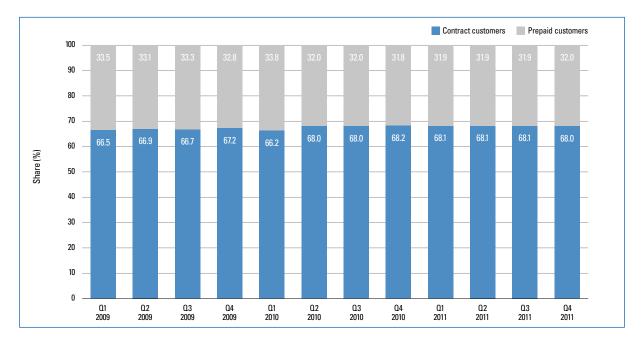


The figure above shows the number of SIM cards activated and in use, broken down into 2G (GSM) and 3G (UMTS) cards.

- At the end of 2011 a total of 13 million SIM cards were in use. Seven million of these were 3G cards and the remaining 6 million were 2G cards. Thus, the number of data enabled 3G cards grew by 5.9% compared to the previous quarter, while the number of 2G cards declined by 0.4%.
- In the course of the year, the number of 3G cards exceeded the number of 2G cards, which had been used predominantly before. In Q2 2011 the number of 3G cards was for the first time larger than 2G cards. The number of all SIM cards in use rose by 6.8% over 2010.
- With the increasing use of LTE enabled 4G cards (with download rates of up to 150 Mbit/s), fewer 2G and 3G cards are expected to be used over the coming years.

## Prepaid vs. postpaid SIM cards

#### ➡ STABLE DISTRIBUTION BETWEEN CONTRACT AND PREPAID CUSTOMERS

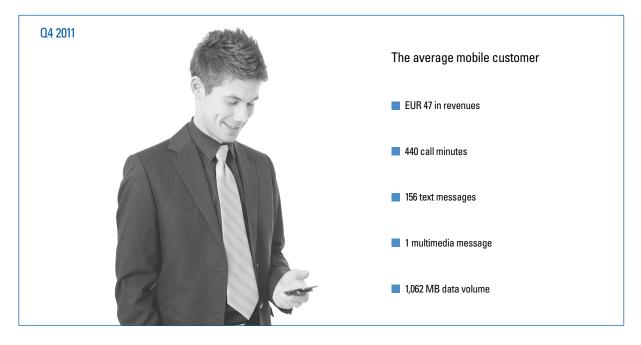


The figure above shows the share of prepaid and contract customers in the mobile communications market. Prepaid customers use SIM cards on which a certain amount of credit (in the form of minutes, text messages, data volume or the like) is stored. Thus the customer pays for the service in advance. In the case of contract customers (also known as postpaid customers), a bill for the service is sent after it has been used (usually on a monthly basis). An international comparison of the share of prepaid and postpaid customers can be found in Section 7 (see page 61). The data underlying this figure (absolute values) can be found in the Appendix (see page 91).

As can be seen from the figure, the distribution between prepaid and postpaid customers did not change significantly. For instance, there were still about two contract customers for one prepaid customer on average in Q4 2011.

### The average mobile customer (Q4 2011)

#### ➡ LESS REVENUES, MORE TRAFFIC



The figure above shows the average number of call minutes, the average number of text and multimedia messages sent, as well as the average revenues generated and data volume used (in MB) per mobile customer each quarter. The values were calculated on the basis of retail revenues, call minutes, numbers of text and multimedia messages as well as the total data volume used, each divided by the current total number of mobile customers.

- Mobile customers generated an average of EUR 47.2 in revenues for their network operators in Q4 2011.
- The number of call minutes per mobile customer rose in Q4 2011. With 440 call minutes on average, this is an increase of 4% over the previous quarter.
- The number of text messages sent also rose. In Q4 2011, mobile customers sent nearly 156 text messages on average, an increase by 12.2% compared to the previous quarter. Multimedia messages showed a similar trend, growing by 13.1%.
- The most significant rise was recorded for the data transfer volume used: customers used a volume of 1,061.5 MB each in Q4 2011. This represents an increase of 22.6% compared to the previous quarter.

## The average mobile customer (year-on-year comparison)

#### ➡ DATA AND MESSAGES RISING, MINUTES AND REVENUES DECLINING

Year	Revenues (EUR)	Minutes	Text messages	Multimedia messages	Data volume (MB)
2009*	230	1,903	517	2.9	1,468
2010*	211	1,843	540	2.8	2,176
2011	196	1,752	575	3.3	3,411

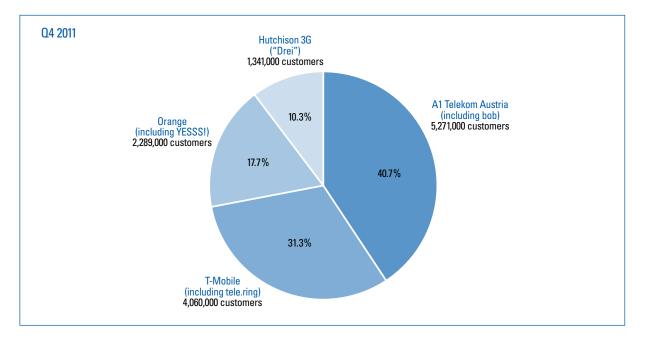
The table above shows the average revenues generated, the average number of call minutes, the average number of text and multimedia messages sent, and the average data volume used (in MB) by each mobile customer in comparison to the previous years. The values were calculated on the basis of retail revenues, call minutes, numbers of text and multimedia messages as well as the total data volume used, each divided by the current total number of mobile customers.

- This table extends the information provided on page 38 by providing annual totals based on the quarterly figures as well as a comparison with the two previous years. Here it is clear that the use of data services has become increasingly popular. In 2011, every customer used an average volume of 3,411 MB. This represents an increase of 56.7% year on year. The data transfer volume used has increased fivefold since 2008. The reasons behind this rapid increase were already discussed above. This trend does not appear likely to end in the foreseeable future.
- In contrast, the average customer used fewer outgoing call minutes in 2011 (minus 4.9%). The total of 1,752 minutes means that outgoing calls averaged about 2.5 hours per month.
- The trend towards text messaging has continued apace: The average mobile customer sent 575 text messages in 2011, which is an increase of 6.5% year on year. At 15.8%, multimedia messages also showed strong growth; however, they still lag far behind text messages in absolute terms.

<sup>\*</sup> Due to a post-hoc data correction, the data for the years 2009 and 2010 differ from those of the RTR Telecom Monitor Annual Review 2010.

## Market shares of mobile operators in Austria

#### ➡ NO MAJOR CHANGES (YET) IN THE MOBILE MARKET



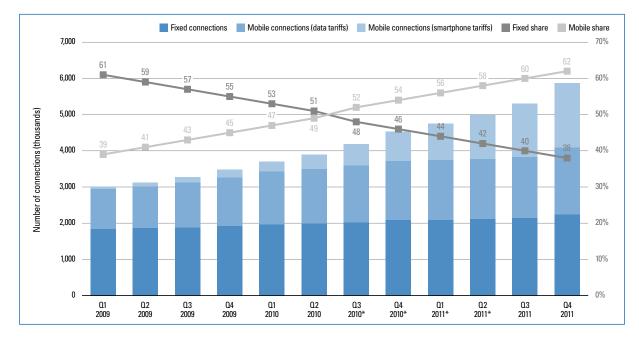
The figure above shows the market shares of mobile network operators in Austria based on their respective numbers of subscribers. Subscribers who use the services of resellers are included in the figures for the respective "home" network (e.g. YESSS! subscribers are included in the figures for Orange). The figure above only includes data from mobile network operators, including resellers affiliated through legal ownership.

- In Q4 2011, A1 remained the undisputed market leader among Austria's mobile network operators with 5.27 million customers (a plus of 71,000 customers). This market share comprises 40.7% of all mobile operators. However, compared to the previous quarter, A1's share of the market declined by 0.3 percentage points.
- T-Mobile ranked second, with 4.06 million customers and a market share of 31.3% in Austria. T-Mobile won 126,000 new customers, or 0.3 percentage points in market share, compared to the previous quarter.
- Orange (including YESSS!) has 2.29 million subscribers (minus 29,000), and thus holds a market share of 17.7%. The market share of this operator thus declined by 0.6 percentage points compared to the previous quarter.
- Hutchison 3G has 1.34 million customers (an increase by 121,000) and a market share of 10.3%, which represents a rise of 0.7 percentage points.

## Section 4 | Broadband



## Fixed and mobile broadband connections



#### ➡ NUMBER OF SMARTPHONE TARIFFS DOUBLED IN A YEAR

The figure above shows the total number of fixed and mobile broadband connections in Austria. Fixed broadband connections here include services with a download rate of at least 144 kbit/s and realised using:

- Copper-wire pairs in A1 Telekom Austria's network
- Unbundled lines (see Glossary, page 84)
- Coaxial cable
- Other infrastructure. This includes FWA services (fixed wireless access, e.g. WLAN, WiFi, WLL for "fixed" access, not via hot spots), leased lines, FTTH (fibre to the home), PLC (powerline carrier broadband) and broadband connections via satellite.

Mobile broadband connections include pure data tariffs (no voice/text messaging) and products not based on a fixed monthly charge. Smartphone tariffs represent a separate category (see Glossary page 85).

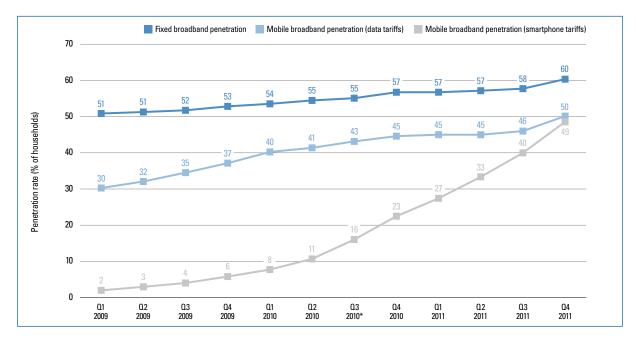
The figure also shows the ratio of fixed and mobile broadband connections (both categories totalled) as a percentage. The data underlying this figure (absolute values) can be found in the Appendix (see page 91).

- The total number of broadband connections in Q4 2011 was about 5.9 million. At 21.4%, smartphone tariffs (1.8 million connections in Q4 2011) show the strongest growth. There is no end in sight to this rise; the number of connections has more than doubled in one year.
- The number of mobile data tariffs in Austria at the end of 2011 was comparable to smartphone tariffs. 1.85 million subscribers represents a 13.5% increase within one year.
- Fixed broadband connections are still the most widely used at the end of 2011 in absolute terms. However, the rate of increase over the previous quarter at 4.5% (up 7.4% year on year) is less than that of mobile connections.
- This means the ratio of fixed to mobile is shifting ever further in favour of mobile subscribers. At the end of 2011 the proportion of fixed to all broadband connections was 38%. This means a decline of two percentage points over the previous quarter.

\* Due to a post-hoc data correction, the deviation in the number of mobile connections (data tariffs) from the figure reported in previous issues of the Telecom Monitor is greater than 5%.

## Broadband penetration

#### **EVERY SECOND HOUSEHOLD NOW HAS A SMARTPHONE TARIFF**



Source: RTR, Statistics Austria (number of households)

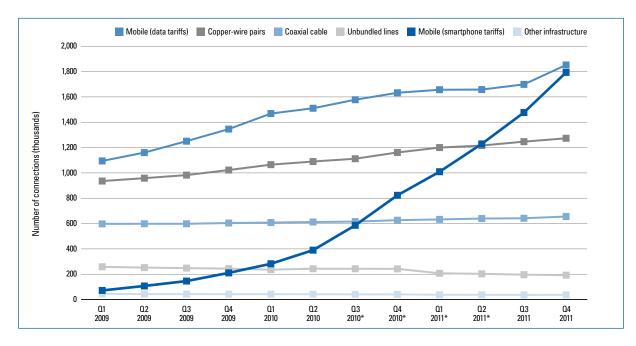
Broadband penetration refers to the ratio of the number of fixed and mobile broadband connections to the total number of households in Austria. Calculation of the penetration rate includes broadband connections used in businesses. Due to a post-hoc data correction, there are deviations smaller than 5% in several data values from the figures reported in previous issues of the Telecom Monitor.

- In statistical terms, 60.3% of Austrian households had a fixed broadband connection at the end of 2011. This is an increase of 3.6 percentage points compared with the end of 2010.
- For mobile data tariffs the penetration rate is 50.1%, which is an increase of 5.5 percentage points over the last quarter of the previous year.
- The penetration rate for smartphones also continues to rise dramatically: in Q4 2011 almost half of all households had a smartphone tariff. This means the penetration rate, currently standing at 48.6% as indicated above has more than doubled since last year.

<sup>\*</sup> Due to a post-hoc data correction, the deviation in the mobile penetration rate (data tariffs) from the figure reported in previous issues of the Telecom Monitor is greater than 5%.

## Retail broadband connections by type of infrastructure

#### ➡ STAGNATION OR DECLINE IN "CONVENTIONAL" BROADBAND CONNECTIONS



The number of retail broadband connections includes all connections with a download bandwidth of more than 144 kbit/s. Mobile broadband connections are differentiated in the chart by type: "Mobile (data tariffs)" and "Mobile (smartphone tariffs)" (see Glossary, page 85).

The data in the chart are broken down by infrastructure:

- Copper-wire pairs in the A1 Telekom Austria network (including Telekom Austria's retail broadband connections and broadband connections realised by means of bitstreaming)
- Unbundled lines (see Glossary, page 84)
- Coaxial cable
- Mobile data tariff connections and smartphone tariff connections
- Connections on other infrastructure (for definition see page 42).

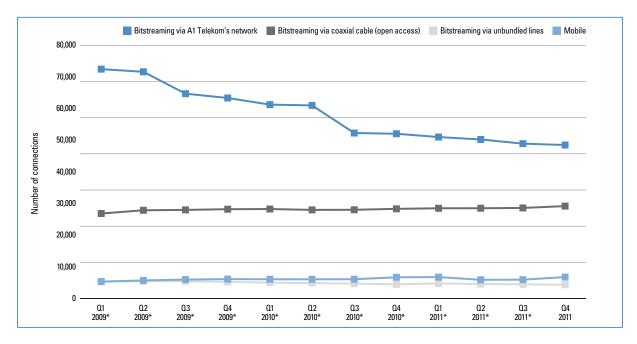
The data underlying this chart (retail broadband connections in absolute figures) can be found in the Appendix (see page 92).

- The most striking trend since the beginning of the time period depicted above is without doubt the rise in smartphone tariffs, which has been emphasised before.
- The trends for "conventional" connections are less dramatic: copper-wire pair connections rose compared to Q4 2010 by 9.6% (1.27 million in Q4 2011). Coaxial cable increased in the same period by 4.6% to 655,500. Unbundled lines decreased year on year by 20.5% to 192,600. Lines on other infrastructure also show a decline (down 9.6%). The number of these other-infrastructure connections was 36,900 at the end of 2011.

<sup>\*</sup> Due to a post-hoc data correction, the deviation in the number of mobile connections (data tariffs) from the figure reported in previous issues of the Telecom Monitor is greater than 5%.

## Wholesale broadband connections





The chart above shows the number of (wholesale) broadband connections made available to other communications service providers in wholesale offers.

In terms of infrastructure, the figures are subdivided as follows:

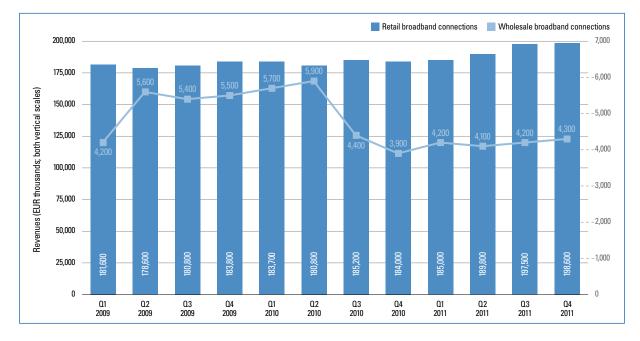
- Bitstreaming via A1 Telekom Austria's network
- Bitstreaming via unbundled lines (see Glossary, page 84)
- Bitstreaming via coaxial cable networks (open access)
- Wholesale mobile broadband connections.

The data underlying this chart can be found in the Appendix (see page 92).

- All types of wholesale broadband connections show a very stable trend. Bitstreaming via the A1 Telekom Austria network (down 6.9%) and bitstreaming on unbundled lines (down 2.8%) show a slight fall since the end of 2010.
- However, the number of wholesale broadband connections on coaxial cable rose slightly in the same period (up 3.1%) some 25,500 new connections were made on this infrastructure in Q4 2011.
- Mobile wholesale broadband connections have changed hardly at all since the end of 2010; 5,930 connections mean a slight rise of 0.9%.

<sup>\*</sup> Due to a post-hoc data correction, the deviation in the number of mobile connections from the figure reported in previous issues of the Telecom Monitor is greater than 5%.

## Total revenues from broadband connections



#### ➡ MARKED RISE IN REVENUE IN SECOND HALF-YEAR

This figure shows the revenues from retail and wholesale fixed and mobile broadband connections (in contrast to page 48, where the broadband category only includes fixed broadband).

Total retail revenues are calculated from

- Ongoing monthly charges (periodic base fee and access charges for connections > 144 kbit/s download bandwidth),
  Data volume charges and
- Other retail revenues (e.g. installation charges, setup charges and activation charges).

Total wholesale broadband revenues are calculated from

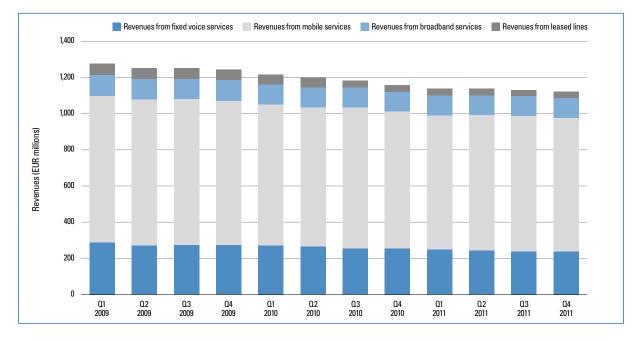
- One-off setup charges (one-off technical and administrative setup fees charged to the ISP),
- Ongoing monthly charges,
- Ongoing monthly retail related charges (charges billed to ISPs on a wholesale basis depending on the number of retail subscribers),
- Data volume charges and
- Other revenues generated in connection with wholesale offers (e.g. setup charges to retail customers, changes of provider, product changes, modem changes, etc.).
- Retail broadband connections earned revenues of about EUR 771 million in 2011. This is equivalent to a rise of 5.1% against 2010. Revenues in the second half of 2011 rose sharply, due not least to the increasing volume of smartphone tariffs.
- Revenues from wholesale broadband connections fell by 15.6% compared to 2010, accounting in 2011 for some EUR 16.8 million.

## Section 5 | Comparisons across sectors



## Revenues from fixed, mobile, broadband and leased line services

#### **TOTAL REVENUES DOWN**



The chart above includes revenues from the following categories:

**Fixed network (voice telephony)**: Revenues from residential and business customers as well as public pay telephones (phone booths), retail revenues from periodic base fees, setup charges and connection charges, wholesale revenues from origination, termination and transit services, revenues from additional services, other fees and remuneration pursuant to the Telecommunications Fee Subsidies Act or for special coverage obligations.

**Mobile networks:** Retail revenues from periodic base fees, activation fees, connection charges (voice and broadband) and data services, remuneration for special coverage obligations and remuneration pursuant to the Telecommunications Fee Subsidies Act; wholesale revenues from termination, origination, international roaming (see Glossary, page 84), national roaming, and the sale of airtime to resellers (see Glossary, page 84).

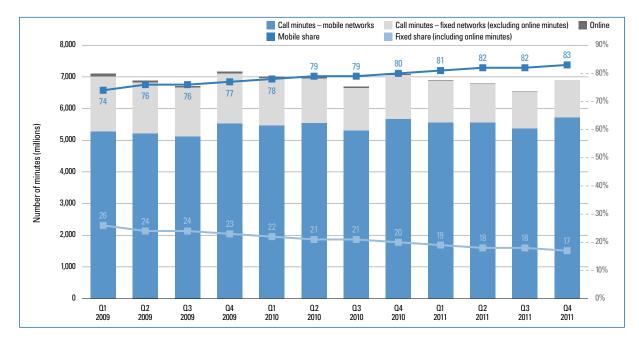
**Broadband (fixed)**: Retail revenues from periodic base fees, setup charges and volume-based charges; wholesale revenues from setup charges, ongoing charges and volume-based charges.

**Leased lines**: Retail revenues from periodic base fees and setup charges for domestic retail leased lines (see Glossary, page 84); wholesale revenues from periodic base fees and setup charges for terminating and trunk segments (see Glossary, page 86).

The data underlying this chart can be found in the Appendix (see page 93).

- Total revenues fell year on year from EUR 4.75 billion in 2010 to EUR 4.53 billion in 2011 (down 4.8%).
- Fixed broadband revenues show a slight decline from EUR 443.2 million in 2010 to EUR 438.6 million in 2011 (down 1%).
- Leased line revenues fell by 20.6% from 2010 (EUR 183.7 million) to 2011 (EUR 145.9 million). One reason for this is the merger of A1 Telekom and mobilkom Austria in mid-2010, resulting in the loss of a major part of the wholesale revenues between the two companies.
- Mobile network revenues fell from EUR 3.08 billion in 2010 to EUR 2.98 billion in 2011 (down 3.5%).
- Revenues from fixed voice telephony also dropped: from EUR 1,044 million in 2010 to EUR 966 million in 2011 (down 7.4%).

## Technical minutes in fixed and mobile networks



#### **→** TOTAL MINUTES DOWN OVER THE YEAR

The chart above shows the number of minutes in the following segments:

**Mobile networks**: Call minutes to the domestic fixed-link network, domestic mobile networks, international numbers, service numbers and directory assistance services.

**Fixed network**: Call minutes to the domestic fixed network, domestic mobile networks, international numbers, service numbers and directory assistance services.

Online: Call minutes for online services (i.e. narrowband dial-up Internet).

Moreover, the chart shows the percentage of minutes attributable to the fixed network (including online services) and to mobile networks. An international comparison of these percentages can be found in Section 7 (see page 63). The data underlying this chart can be found in the Appendix (see page 93).

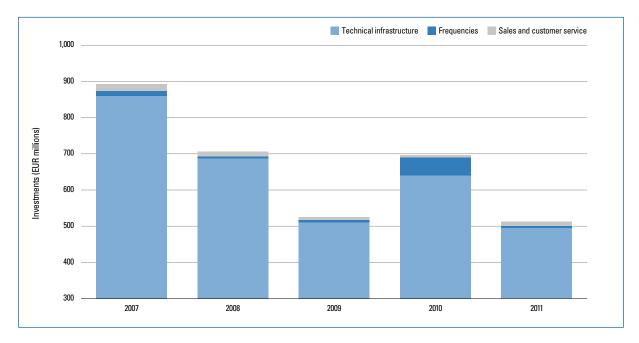
- Total call minutes on fixed and mobile networks in Q4 2011 were 6.9 billion, up 5.6% on the previous quarter. This is due to the sharp rise in mobile telephony minutes: 5.71 billion minutes are an increase of 6.4% over Q3 2011. Total minutes fell year on year, however, by 2.3% to 27.12 billion.
- The majority of call minutes are telephone calls from Austrian mobile networks. In Q4 2011 some 83% percent of call minutes were accounted for by mobile services. This is an increase of one percentage point over the previous quarter. So the ratio continues to shift as a whole further in favour of mobile telephony.
- Narrowband dial-up Internet ("Online") has virtually disappeared altogether. Its proportion of total call minutes in 2011 was only 0.2%.

# Section 6 | Business indicators



### Investments

#### ➡ INVESTMENTS REGAIN 2009 LEVELS



The chart above shows the development of investments in frequencies, technical infrastructure as well as sales and customer service on an annual basis. In this context, it is important to note that the values reported here are partly based on estimates and extrapolations from individual quarters for entire years. As a result, the exact figure for total investments cannot be calculated reliably.

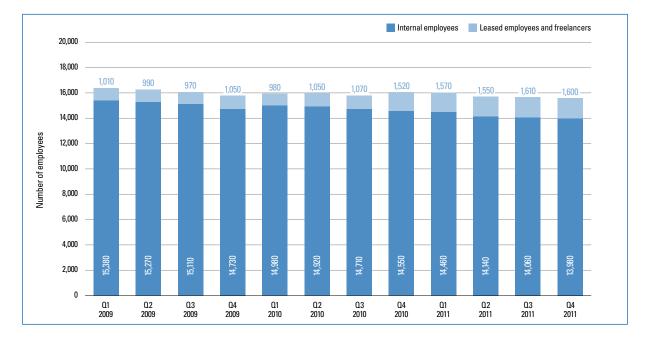
The investment volumes shown above only include those investments made directly by telecommunications enterprises. They do not include investments by upstream or downstream industry sectors.

The data underlying this chart can be found in the Appendix (see page 94).

Due to a post-hoc data correction, there are deviations smaller than 5% in several data values from the figures reported in previous issues of the Telecom Monitor.

- In 2010, investment activity recovered in the telecommunications sector, and after two consecutive years of declining investment levels, telecom operators invested more heavily in technical infrastructure. In total, the volume of investments in this field amounted to EUR 696.8 million in 2010. As in previous years, a vast majority of that amount (91.9%) was invested in the expansion of technical infrastructure, while 7.0% was devoted to acquiring frequencies and 1.1% to sales and customer service.
- Investment in 2010 was mainly influenced by the auction of LTE frequencies for the next generation of mobile services and the associated development of the technical infrastructure. It is not therefore surprising that the investment volume declined again in 2011.
- Total investment in 2011 was EUR 512.1 million. The majority of this (96.5%) related to technical infrastructure. The remaining 3.5% (EUR 17.8 million) was allocated to acquiring frequencies and to sales and customer service.

## Employees in the telecommunications sector



#### ➡ SLIGHT DROP IN THE NUMBER OF EMPLOYEES

The chart above shows the number of employees in the telecommunications sector, broken down into internal employees, leased personnel and freelancers, and expressed in terms of full-time equivalents (FTEs). When interpreting these figures, please note that they only include staff employed directly by telecommunications enterprises. The figures do not include employees in supplier industries, external call-centre employees or outsourced positions.

- Compared to the previous quarter Q4 2011 shows a slight drop in the number of permanent employees. 13,980 employees represents a drop of 0.6%. Average employee numbers in the telecommunications industry were 14,790 in 2010 and 14,160 in 2011, i.e. 4.3% fewer.
- In Q3 2011 a correction concerning a major operator was made for leasing personnel and freelancers for the whole time period. A year-on-year comparison therefore does not give a conclusive picture. Leased personnel amounted to 1,600 in Q4 2011.

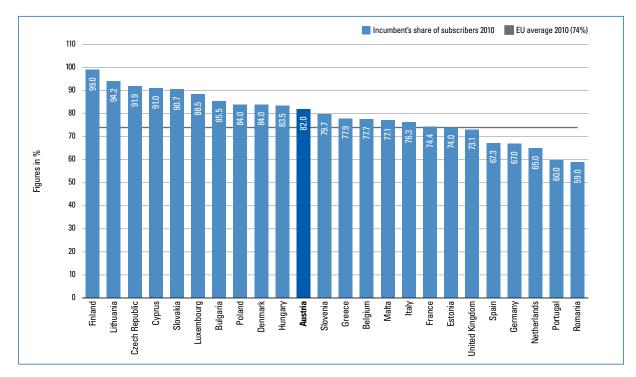
# Section 7 | International comparisons



This Section contains a series of comparisons of European data on major aspects of the telecommunications sector. The statistics given here are an extended and more in-depth analysis of the data on the Austrian market discussed in Sections 1 to 6. The data presented in this section are taken mainly from the Digital Agenda Scoreboard (formerly the Progress Report) of the European Commission. It includes about 60 indicators for the principal parameters of the information society.

## Share of subscribers using the incumbent for direct access

### ➡ AUSTRIA IN MEDIAN POSITION AMONG EU COUNTRIES

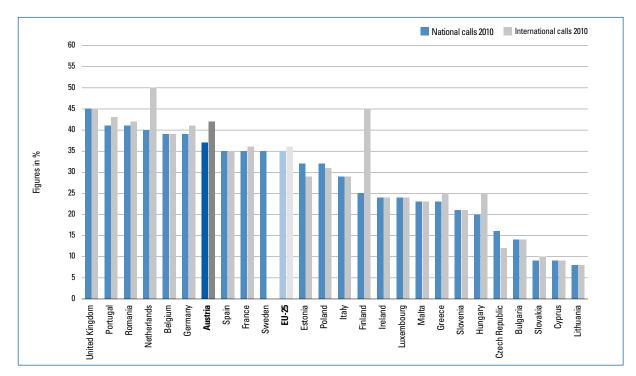


Source: Digital Agenda Scoreboard - Electronic Communications Market Indicators

The chart above provides an international comparison of the share of subscribers who use the incumbent operator for direct access, expressed as a percentage of the total number of lines (as of July 2010). No data are available for Ireland, Latvia and Sweden.

- In July 2010 a total of 82% of all fixed subscribers in Austria used the market leader A1 Telekom Austria for direct access. This means Austria remains more or less in the median position across the EU, with the average figure being 74%.
- The largest share of lines provided by one of the incumbent operators (in this case there are multiple incumbents) is found in Finland with 99%; while in Romania, Portugal and the Netherlands less than two-thirds of subscribers use the former monopolist for direct access.

## Subscribers using an alternative provider for fixed voice telephony services



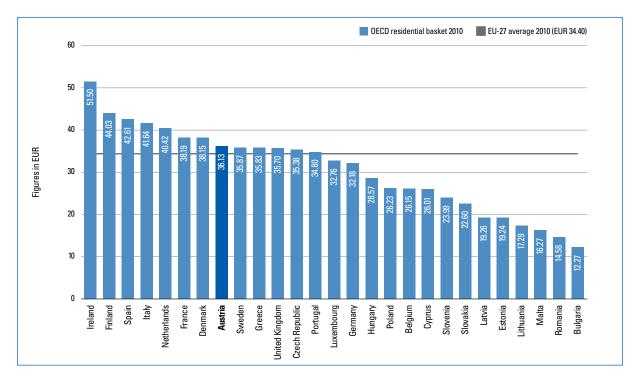
### ➡ FREQUENT USE OF ALTERNATIVE PROVIDERS IN AUSTRIA

Source: Digital Agenda Scoreboard - Electronic Communications Market Indicators

The chart above provides an international comparison (as of July 2010) of the percentage of fixed subscribers who do not use the incumbent but an alternative provider for calls to national and international destinations. No data are available for Denmark and Latvia. For Sweden only data for national calls are available. The data underlying this chart can be found in the Appendix (see page 94).

- In Austria, 37% of fixed subscribers use an operator other than the former monopolist for national calls. Austria is therefore above the average EU figure (35%). The highest proportion is found in the United Kingdom, where 45% of fixed subscribers use an alternative provider for national calls. Alternative fixed service providers are hardly used at all in eastern European countries, where only between every tenth and every fifth subscriber uses alternative providers.
- Alternative providers are used more frequently for international calls. In Austria, 42% of fixed subscribers use an alternative provider for this purpose. What is striking here are the values for the Netherlands and Finland, where alternative providers are chosen much more frequently than for national calls. Half of the fixed subscribers in the Netherlands use a service provider other than the incumbent for international calls, and in Finland this share is 45%.

## Monthly expenditure for fixed telephony: OECD residential composite basket



#### ➡ AUSTRIA IN MEDIAN POSITION IN EUROPE

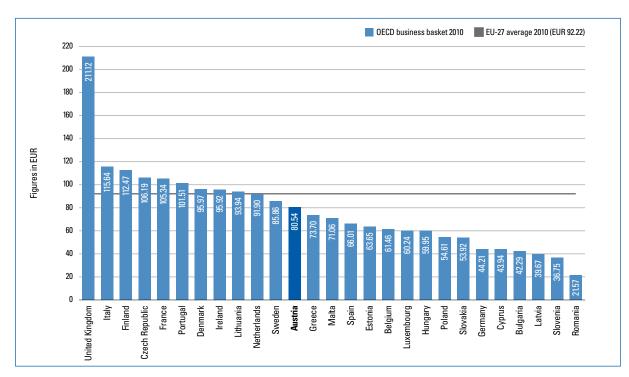
Source: Teligen Report on Telecoms Price Developments from 1998 to 2010

The chart above provides an international comparison of the average household's monthly expenditure on fixed telephone services (as of September 2010; including VAT). The calculations are based on a basket which includes the periodic base fee, the connection setup charge, national calls over various distances, international calls as well as calls to mobile networks. The underlying demand behaviour and weighting factors are designed to reflect a "standard European residential user."

When interpreting international price comparisons, it is also necessary to consider the purchasing power in each country (see Glossary, page 84).

- On average, fixed telephony in Europe costs EUR 34.40 per month. Austria is slightly above the EU average with monthly expenditure on this item being EUR 36.13.
- The highest monthly expenditure by residential customers is found in Ireland, where an average of EUR 51.50 is spent on telephone services, exceeding the EU average by 50%. The costs in eastern European countries are relatively low. In Bulgaria residential customers only pay EUR 12.27 monthly. When interpreting these statistics, however, the lower purchasing power in eastern Europe must be borne in mind.

## Monthly expenditure for fixed telephony: OECD business composite basket



#### ➡ AUSTRIA BELOW THE EU AVERAGE

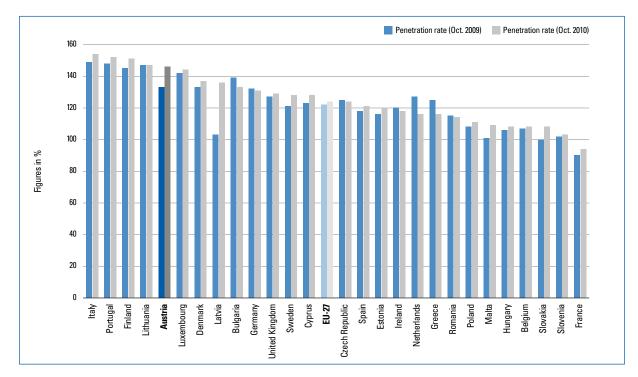
Source: Teligen Report on Telecoms Price Developments from 1998 to 2010

The chart above provides an international comparison of a business customer's average expenditure on fixed telephone services (as of 2010; including VAT). The calculations are based on a basket which includes the periodic base fee, the connection setup charge, national calls over various distances, international calls as well as calls to mobile networks. The underlying demand behaviour and weighting factors are designed to reflect a "standard European business user." When interpreting international price comparisons, it is also necessary to consider the purchasing power in each country (see Glossary, page 84).

- The monthly expenditure of a standard business subscriber in Austria is EUR 80.54, making it 13% below the EU average.
- An international comparison shows that the highest monthly expenditure is found in the United Kingdom, where business customers spend more than double the EU average. Business subscribers in Romania pay only one-tenth of this amount by comparison. As already mentioned, however, it is important to remember the respective purchasing power of the individual countries.

## Mobile penetration rate (2009 to 2010)

### ➡ MORE MOBILE PHONES THAN INHABITANTS IN EUROPE



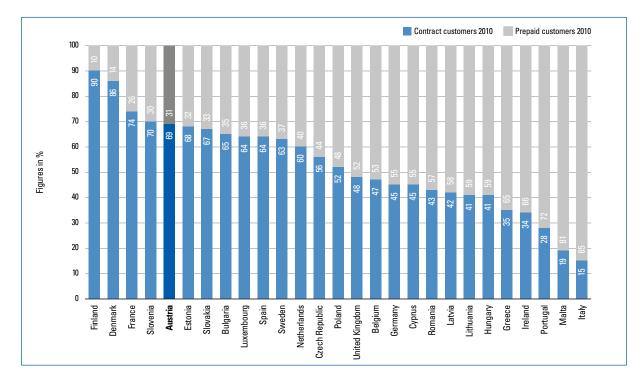
Source: Digital Agenda Scoreboard - Electronic Communications Market Indicators

The chart above provides an international comparison of mobile penetration rates (as of October 2009 and October 2010). The penetration rate shown here (see Glossary, page 85) is based on the number of SIM cards per 100 inhabitants. The data underlying this chart can be found in the Appendix (see page 95).

- The mobile penetration rate in Austria was 146% in 2010. In statistical terms this means there are almost three mobile phones (i.e. three SIM cards) for every two inhabitants. In this regard Austria could be said to be over-provided for.
- This over-provision applies to (almost) all EU nations. The EU average is five SIM cards for every four inhabitants. Top of the ranking is Italy with a penetration rate of 154%. France is notable as the only EU country in which there are more inhabitants than SIM cards. Its mobile penetration rate in 2010 was 94%.

## Prepaid vs. postpaid customers

#### ➡ LARGE SHARE OF CONTRACT CUSTOMERS IN AUSTRIA

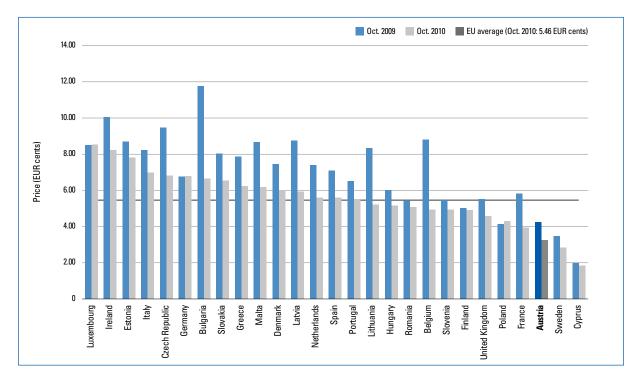


Source: Digital Agenda Scoreboard - Electronic Communications Market Indicators

The chart above provides an international comparison of the share of prepaid and contract customers in mobile networks (as of October 2010). Prepaid customers use SIM cards on which a certain amount of credit (in the form of minutes, text messages, data volume or the like) is stored. Thus the customer pays for the service in advance. In the case of contract customers (also known as postpaid customers), a bill for the service is sent after it has been used (usually on a monthly basis).

- In Austria in 2010 69% of all mobile customers were also contract customers. This puts Austria in fifth place in comparison with other EU countries.
- Finland and Denmark had the highest share of contract customers. In October 2010, 90% of all Finnish and 86% of all Danish mobile customers used mobile services on the basis of a postpaid contract.
- It is interesting to note that in Italy, which has the greatest mobile penetration rate, prepaid cards are by far the most common. Only 15% of mobile subscribers in that country are contract customers.

## Interconnection fees for termination in mobile networks



#### ➡ AUSTRIA WELL BELOW EU AVERAGE

Source: Digital Agenda Scoreboard - Electronic Communications Market Indicators

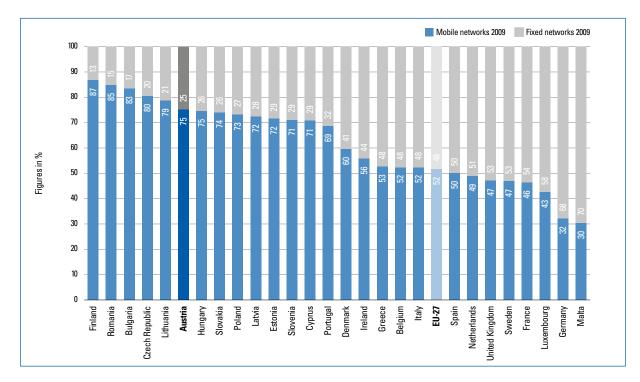
The chart above provides an international comparison of mobile termination charges. Telecommunications service providers charge each other (at the wholesale level) for termination services, that is, the routing of incoming calls to their mobile networks.

The data underlying this chart can be found in the Appendix (see page 96).

- Austria is among the leading countries for termination charges (as of October 2010: 3.26 euro cents per minute); only in Sweden (2.82 euro cents) and Cyprus (1.84 euro cents) are the termination charges lower.
- While in October 2009 Bulgaria still had the highest termination charges, they have since been considerably reduced there. In October 2010 Luxembourg was the country with the highest termination charges, followed by Ireland and Estonia.
- Between October 2009 and October 2010 termination charges were reduced in all EU countries except Luxembourg, Germany and Poland, in some cases very significantly. During this period Austria saw a reduction of about one-quarter (from 4.25 euro cents to 3.26 euro cents).

## Outgoing fixed and mobile traffic minutes

#### ➡ AUSTRIA: 75 OF 100 CALL MINUTES ORIGINATE FROM MOBILE NETWORKS



Source: Digital Agenda Scoreboard - Electronic Communications Market Indicators

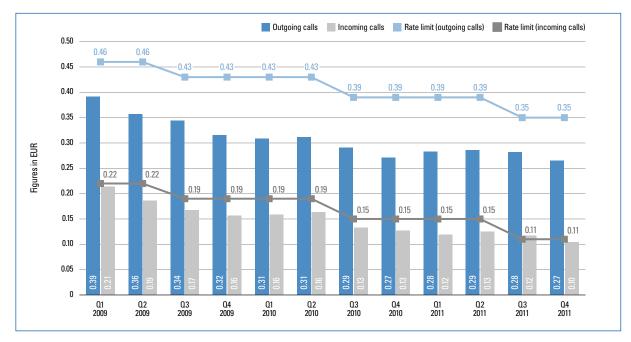
The chart above provides an international comparison of fixed and mobile networks' shares in the overall number of outgoing call minutes (as of 2009)\*. There are no data for Latvia.

- In Austria 75 of 100 of outgoing call minutes were made with mobile phones. This is a relatively high percentage compared with other EU countries.
- In EU countries on average more calls are made with mobile phones than on landlines: 52% of the call minutes originate from mobile networks.
- One especially mobile-friendly country is Finland, where 87% of all outgoing call minutes are generated by mobile phones. The laggards are Malta and Germany where less than one-third of outgoing minutes were made from mobile networks.

<sup>\*</sup> The data for this chart are taken from European Commission statistics and are based on 2009 values. More recent data were not available at the time this report went to press. This applies likewise for the following charts that appeared in the RTR Telecom Monitor Annual Review 2010: Average market share of incumbent operators on the EU voice telephony market; Market concentration (Hirschman-Herfindahl Index); Average price per minute in mobile networks. The updated Progress Report of the Digital Agenda for Europe (Digital Agenda Scoreboard) can be downloaded – probably from June 2012 – from the website of the Digital Agenda for Europe at: http://ec.europa.eu/information\_society/digital-agenda/scoreboard/index\_en.htm

## Average retail roaming rates for calls within the EU/EEA

### ➡ ROAMING CHARGES CONTINUE TO FALL



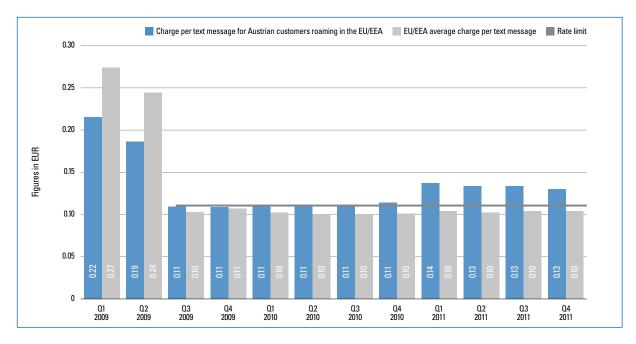
Source: RTR, ERG/BEREC International Roaming Benchmark Data Reports

The chart above shows the average retail roaming rates (excluding VAT) charged to Austrian subscribers for incoming and outgoing calls while roaming (see Glossary, page 84) within the EU/EEA and the price caps prescribed by the Roaming Regulation.

- Roaming charges have been declining steadily in Austria. At the end of Q4 2011 the charges for outgoing calls were EUR 0.27. This is about three-quarters of the maximum price permitted by the Roaming Regulation.
- Incoming roaming charges at the end of 2011 stood at EUR 0.10, making them just under the price cap for incoming calls (EUR 0.11).

## Average retail text message roaming charges within the EU/EEA

#### ➡ TEXT MESSAGE ROAMING CHARGES REGULATED SINCE SUMMER 2009



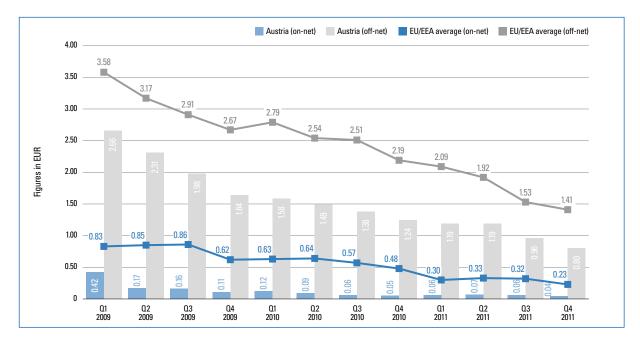
Source: RTR, ERG/BEREC International Roaming Benchmark Data Reports

The chart above shows the average amount (excluding VAT) charged to Austrian and EU/EEA subscribers for sending a text message within the EU/EEA as well as the price cap applicable to text message roaming since the Roaming Regulation was expanded in the summer of 2009 (see Glossary, page 84).

- Since the prices for text message roaming were capped by ordinance in summer 2009, they have fallen sharply: prices for Austrian customers halved as a result in the second half of 2009. Since then prices for text message roaming have been close to the price cap.
- At the end of 2011 Austrian customers paid EUR 0.13 for text messages within the EU/EEA area. The average price per text message within the EEA was EUR 0.10.
- When average text message roaming charges are calculated, they also include tariffs not subject to price regulation, so it is possible that the value for Austria may exceed the stipulated price cap. The prescribed limits are however complied with according to the statutory regulations.

## Average retail data roaming rates within the EU/EEA (per megabyte)

#### ➡ DATA ROAMING IN AUSTRIA WELL BELOW EU/EEA AVERAGE



Source: RTR, ERG/BEREC International Roaming Benchmark Data Reports

The chart above shows the average charges per megabyte (excluding VAT) for data roaming (see Glossary, page 84) within the EU/EEA, broken down into on-net and off-net prices for Austria and the corresponding EU/EEA averages. At present, there is only a legally defined price cap for data roaming at the wholesale level, that is, between mobile network operators (this price cap is reduced on a yearly basis).

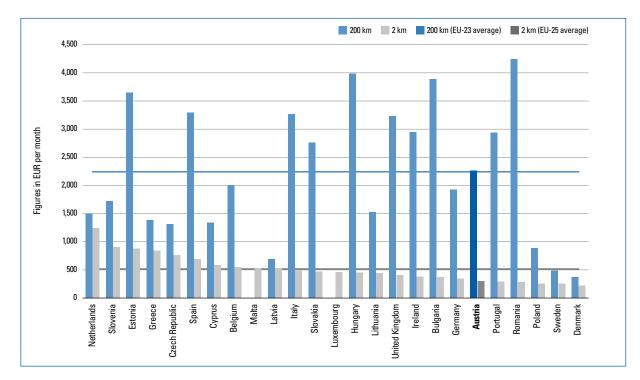
**On-net:** The visited network operator belongs to the same corporate group (majority shareholder) as the home network operator.

**Off-net:** The visited network operator does not belong to the same corporate group (majority shareholder) as the home network operator.

The charges for data roaming (on-net and off-net) have fallen continuously in the last three years. Both the on-net and off-net charges in Austria are well below the EU/EEA average throughout the period under review.

■ In Q4 2011 Austrian subscribers paid EUR 0.04 for on-net data roaming and EUR 0.8 off-net.

## International leased line prices (2 Mbit/s)



#### ➡ SHORT LEASED LINES VERY GOOD VALUE IN AUSTRIA

Source: Teligen Report on Telecoms Price Developments from 1998 to 2010

The chart above provides an overview of international prices for leased lines (see Glossary, page 84) with a bandwidth of 2 Mbit/s in Europe (as of 2010). When interpreting these data, it is important to note that rate packages, billing structures, market structures, etc. are not homogeneous, which may lead to a certain degree of imprecision. As data are not available from all EU member states for all of the categories shown, the EU average may be distorted to a certain extent.

In the 200 km category there are no data available for Malta, Luxembourg, France and Finland, and for the 2 km category there are none for France and Finland.

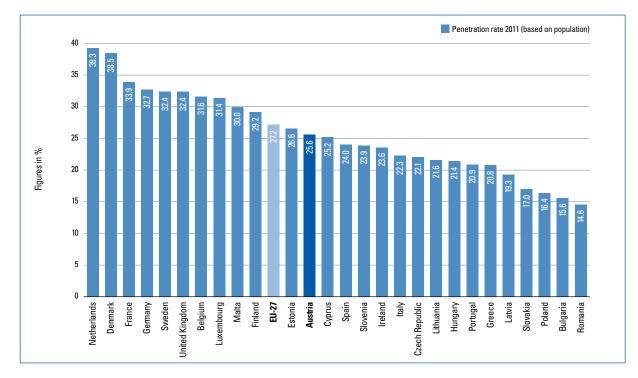
When interpreting international price comparisons, it is also necessary to consider the purchasing power in each country (see Glossary, page 84).

The data underlying this chart can be found in the Appendix (see page 97).

- The chart showing charges for 2 Mbit/s leased lines distinguishes between two different line lengths, "long" 200 km lines and "short" 2 km lines. For 200 km lines Austria is slightly above the EU average: the charge for leased lines in Austria is EUR 2,260 per month, while the average charge in the EU is EUR 2,242 per month.
- However, for 2 km lines the charge in Austria is EUR 300 per month, well below the EU average of EUR 516. Compared with other European countries, therefore, Austria has some of the lowest charges for leased lines.
- The lowest charges for both short and long distance leased lines are found in Sweden and Denmark.

## Fixed broadband penetration

### ➡ EVERY FOURTH AUSTRIAN HAS FIXED BROADBAND ACCESS



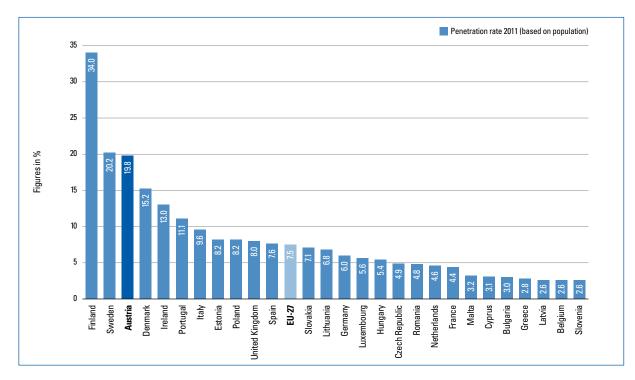
Source: Digital Agenda Scoreboard – Broadband

The chart above provides an international comparison of broadband penetration rates based on fixed infrastructure such as DSL, coaxial cable, unbundled lines (see Glossary, page 84), wireless, etc. (as of July 2011). The penetration rate is calculated from the number of broadband lines per 100 inhabitants (see Glossary, page 85). Mobile broadband connections are not included in these figures.

- In July 2011 broadband penetration in Austria, at 25.6%, was only just below the EU average of 27.2%, which means every fourth Austrian has fixed broadband access.
- At 39.3% and 38.5% respectively, the Netherlands and Denmark have the highest density of fixed broadband lines, while in Bulgaria and Romania there are only about 15 fixed broadband lines per 100 inhabitants.

## Mobile broadband penetration

### ➡ AUSTRIA IN THE FRONT RANK FOR MOBILE BROADBAND



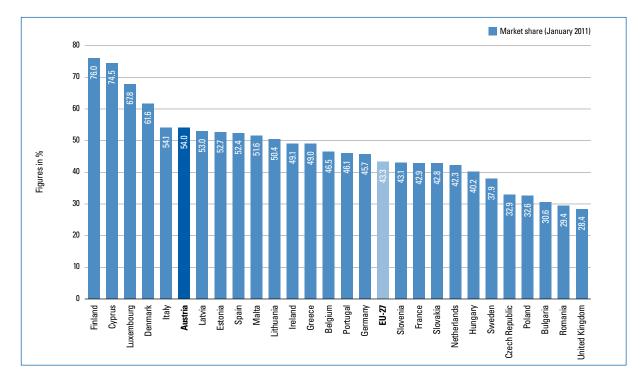
Source: Digital Agenda Scoreboard - Broadband

The chart above provides an international comparison of mobile broadband penetration rates (as of July 2011). The penetration rate is calculated from the number of mobile broadband lines per 100 inhabitants (see Glossary, page 85). Broadband lines on fixed infrastructure (such as ADSL, coaxial cable, etc.) are not included in these figures.

- While Austria is in median position in Europe with regard to the density of fixed broadband connections, the mobile broadband penetration rate is well above the average. One-fifth of Austrians has mobile broadband, while the EU average is 7.5%.
- The only EU countries with higher mobile penetration rates are Finland (34%) and Sweden (20.2%).
- Mobile broadband penetration rates in Slovenia, Belgium, Latvia and Greece are very low with fewer than three mobile broadband lines per 100 inhabitants.

## Incumbent operator's share of broadband market

#### ➡ AUSTRIA'S INCUMBENT OPERATOR HOLDS MORE THAN 50% OF THE MARKET

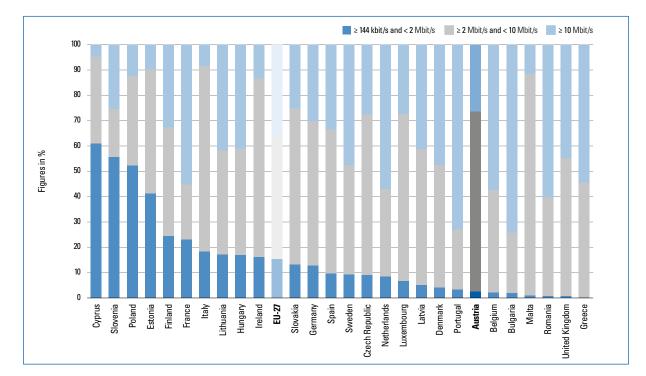


Source: Digital Agenda Scoreboard - Electronic Communications Market Indicators

The chart above shows the market shares of the retail broadband market held by national incumbent operators (as of January 2011). It only includes broadband lines via fixed infrastructure (e.g. DSL, coaxial cable, etc.). Mobile broadband connections are not included.

- Without taking into account mobile broadband connections, the market leader and incumbent operator A1 Telekom Austria had a market share of 54.0% in Austria in January 2011.
- Only in Finland, Cyprus and Luxembourg are more than two-thirds of broadband lines provided by the incumbent. The country where the incumbent operator has the lowest market share is the United Kingdom (28.4%).

## Broadband lines by bandwidth



#### ➡ BIG DIFFERENCES BETWEEN EU COUNTRIES

Source: RTR, Digital Agenda Scoreboard - Electronic Communications Market Indicators

The chart above gives an international comparison of the different bandwidths of broadband lines expressed as percentages. The data given for Austria refer to 1 January 2012, the data for the other countries are for 1 January 2011. The underlying data for the chart can be found in the Appendix (see page 98).

- The majority of broadband lines in Austria (71%) have a bandwidth of between 2 Mbit/s and 10 Mbit/s. Slightly more than a quarter of the lines have bandwidths of 10 Mbit/s or greater. Only 2.4% of broadband connections have bandwidths of less than 2 Mbit/s however.
- The highest proportion of high bandwidths (≥ 10 Mbit/s) can be found in Bulgaria and Portugal, where three-quarters of the lines fall into this category. The largest proportion of bandwidths < 2 Mbit/s (more than 50% of the lines) is found in Cyprus, Slovenia and Poland.
- Taking the EU average, about half of all broadband lines fall into the category of  $\ge 2$  Mbit/s and < 10 Mbit/s, 15% have bandwidths of < 2 Mbit/s, 37% are in the  $\ge 10$  Mbit/s category.

## Section 8 | Telecom Index, information and communications technologies

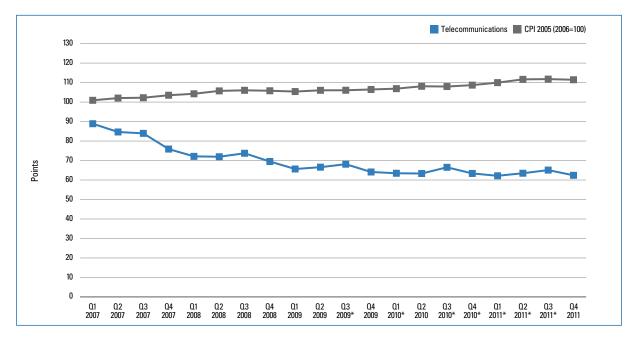


This section essentially consists of two parts: In the first part the RTR Telecom Index is presented and explained. This index shows the calculated revenues per billing unit on retail markets over time and provides a clear general overview of the development of this figure in the telecommunications sector. It also presents some statistics from the information and communications technology (ICT) industry, reflecting the general development and performance of the telecommunications sector. In addition, it discusses various aspects of the adapted Networked Readiness Index (NRI) and Austria's position in it. The NRI measures the extent to which more than 140 countries take advantage of ICT with the aim of encouraging them to participate in advances in the information and communications technology and benefit from them.

Finally, this section presents statistics regarding the general significance of the ICT sector in Austria, measured on the basis of various indicators.

### Telecom Index – Overview

#### ➡ TELECOM INDEX STABLE SINCE EARLY 2009



Source: RTR, Statistics Austria (CPI)

The chart above compares the Telecom Index with Austria's consumer price index (CPI 2005; standardised to 2006). The Telecom Index depicts the development of revenues per billing unit in the retail telecommunications sector. Changes in the Index can therefore be attributable both to changes in the underlying revenues and changes in units used (call minutes, text messages, multimedia messages, data). This means the Telecom Index cannot be taken as a price index for the telecommunications sector.

A full description of the index can be found in the Glossary (page 86).

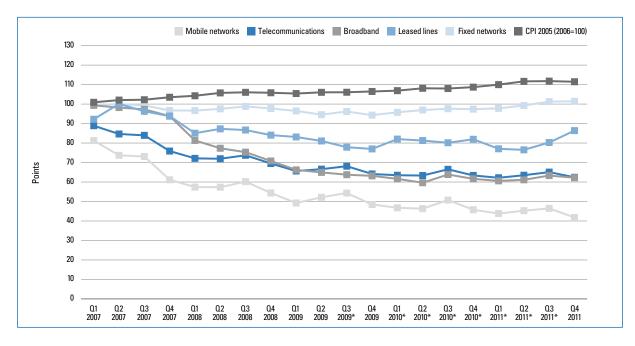
The data underlying this chart can be found in the Appendix (see page 99).

- The Telecommunications Index is calculated from prices and units used in the fixed, mobile, broadband and leased line segments. In the chart above, this index is compared to Austria's CPI (2006 = 100) as an indicator of more general price developments.
- It is evident that the Telecom Index has fallen sharply since 2006, which is due to increasing volumes of units with an unchanging price structure based on bundled tariffs. Distinct peaks are apparent from the third to fourth quarters respectively, because towards the end of the year (Christmas, New Year) consumption volumes increase, thus reducing the revenues per unit.
- The marked divergence of the trends in the two price indices progressively decreased in the course of 2009. Since then the Telecom Index has remained on a slightly downward course.

<sup>\*</sup> Due to a post-hoc data correction, the deviation from the figures reported in previous issues of the Telecom Monitor is greater than 5%.

### Telecom Index – Detailed view

#### ➡ FIXED NETWORKS STEADY, MARKED CHANGES IN MOBILE SERVICES



Source: RTR, Statistics Austria (CPI)

The chart above provides a comparison of the four sub-indices included in the Telecommunications Index (fixed network, mobile networks, broadband, leased lines) with the Austrian Consumer Price Index (CPI 2005, standardised to 2006). The changes in each sub-index over time are described in detail on page 74.

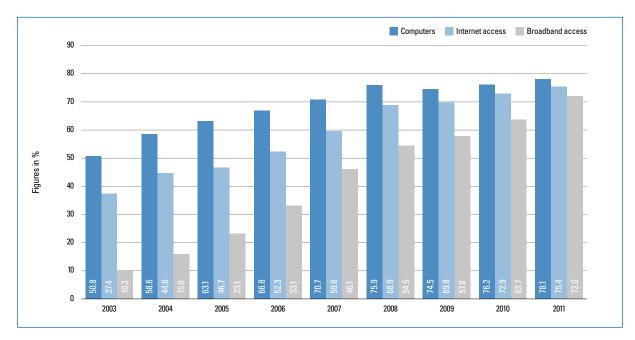
A full description of the index can be found in the Glossary (page 86).

The data underlying this chart can be found in the Appendix (see page 99).

- The fixed-network segment shows the most stable pattern, returning in the course of the year to the level of the base year 2006.
- The leased line index rose clearly in the course of the year. This is due to the fact that in the <= 2 Mbit/s category the number of leased lines declined more than the corresponding revenues, and revenues in the > 2 Mbit/s category were generally rising.
- The mobile index was subject to very marked changes, due to the fact that bundled tariffs with included traffic volumes were much more widely used, with the result that consumption units rose while revenues remained relatively constant.

<sup>\*</sup> Due to a post-hoc data correction, the deviation from the figures reported in previous issues of the Telecom Monitor is greater than 5%.

# Computers, Internet access and broadband in households



#### ➡ CONTINUOUS INCREASE IN BROADBAND ACCESS

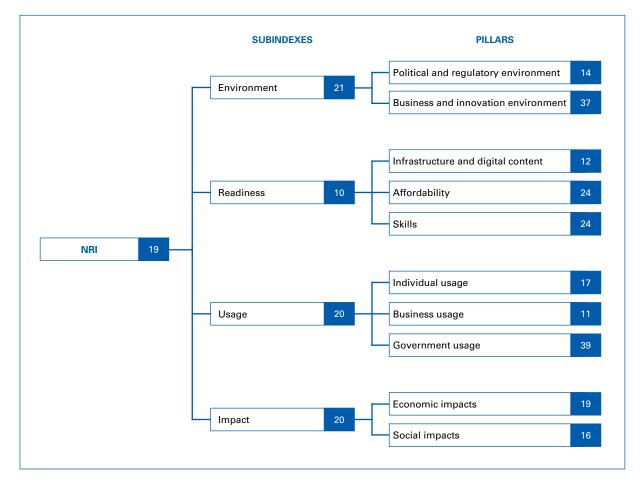
Source: Statistics Austria

This chart shows the percentages of Austrian households with computers, Internet access or a fixed or mobile broadband connection over the years (for information on penetration rates see Glossary, page 85).

- The number of households in Austria which have a computer has increased steadily since 2003. While in 2003 somewhat more than half of all households had a PC or laptop, this had risen to more than three-quarters by the end of 2011. Almost every household also has an Internet connection. With the increasing penetration rate the dynamic growth levelled off from 2010 to 2011.
- The type of Internet access has also changed substantially since 2003: 10.3% of households had broadband in 2003. In 2011 this percentage was at 72.0%. From 2010 to 2011 broadband access increased substantially.

### Networked Readiness Index – Austria

#### ➡ AUSTRIA ADVANCED AGAIN FOR THE FIRST TIME SINCE 2008



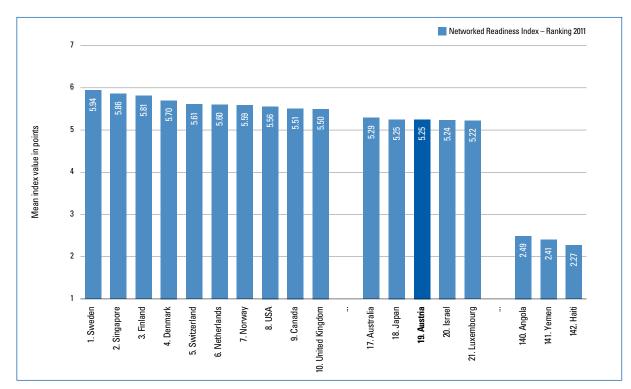
Source: World Economic Forum, The Global Information Technology Report 2011-2012

The Networked Readiness Index (NRI) of the World Economic Forum is one of the most important indices that measures the extent to which a country is equipped with and uses information and communications technologies. The NRI depicts the ICT data of 142 countries based on a total of 53 variables. The structure of the NRI has considerably altered compared with previous years. In addition to the pre-existing sub-indices of "Environment", "Readiness" and "Usage", it includes for the first time the "Impact" factor (economic and social). Moreover, the number of parameters on which these sub-indices are based has been considerably reduced (from 71 to 53). A comparison with previous scores is therefore very difficult.

Austria's position in each category is indicated by the figures in the boxes.

- Compared with the previous year Austria has improved by two places. This is the first time Austria has improved its position in the NRI ranking since 2008 when it advanced from 17<sup>th</sup> to 15<sup>th</sup> position.
- Austria gained a Top 10 ranking in the "Readiness" category, which is due to its excellent scores for "Infrastructure" and "Digital content".
- However, the country needs to catch up when it comes to "Government usage" where it is only in 39<sup>th</sup> place. This is because ICT is of less concern to the Austrian government than it is for other countries.

### Networked Readiness Index – Ranking 2012



#### SCANDINAVIAN NATIONS LEADING THE WAY IN THE ICT FIELD

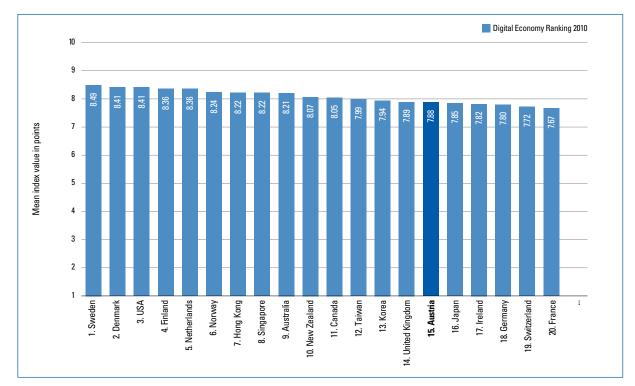
Source: World Economic Forum, The Global Information Technology Report 2011-2012

The NRI assesses performance using a 7-point scale. The better the performance of a country, the higher its score on the scale. The scale ranges from 1 (minimum) to 7 (maximum). By calculating the mean values of all the sub-indices for each country, the Index produces an international ranking of ICT performance.

- The top position in the 2012 NRI ranking is held once again by Sweden, followed by Singapore and Finland, so there is no change from last year in the top 3 ranking. Denmark ranks fourth, while Norway, in seventh place, is the weakest of the Scandinavian nations. The reason for the outstanding ranking of the Scandinavian nations, headed by Sweden, is the high numbers of both retail and business Internet users. Singapore, however, benefits from the fact that government bodies are extremely interested in expanding the use of ICT.
- Austria is in 19<sup>th</sup> place in the latest NRI ranking for 2012, advanced two places since the previous year.

### Digital Economy Ranking 2010

#### AUSTRIA IN 15TH PLACE OUT OF 70



Source: Economist Intelligence Unit, Digital Economy Ranking 2009-2010

The Economist Intelligence Unit (EIU) in collaboration with IBM has published an annual e-readiness index since 2000. The EIU is the scientific arm of The Economist Group, publishers of The Economist magazine. In 2010 the index was renamed as the "Digital Economy Ranking" to reflect the increasing impact of ICT in economic and social progress. The index collects data from 70 countries world-wide.

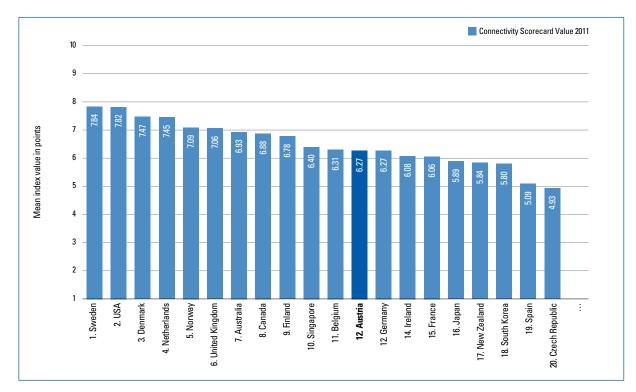
The Digital Economy Ranking is based on several qualitative and quantitative criteria, which are divided into the following categories: Connectivity, business environment, social and cultural environment, legal environment, government policy and vision, and consumer and business adoption.

The scale ranges from 1 (minimum) to 10 (maximum).

- Austria ranked 15<sup>th</sup> out of 70 nations in the Digital Economy Ranking, slightly dropping from 14<sup>th</sup> place the year before. Austria's strength clearly lies in the "Legal environment" category where it was in fifth position, but also in "Government policy and vision", where it was in 11<sup>th</sup> place. Improvement is needed in the areas of "Connectivity" and "Business environment".
- Austria has advanced in the "Government policy and vision" category (from 18<sup>th</sup> to 11<sup>th</sup> position). This can no doubt be seen as the result of Austria's efforts to score among the best ICT nations.

### **Connectivity Scorecard 2011**

#### ➡ DECENT RESULT AS AUSTRIA PARTICIPATES FOR THE FIRST TIME



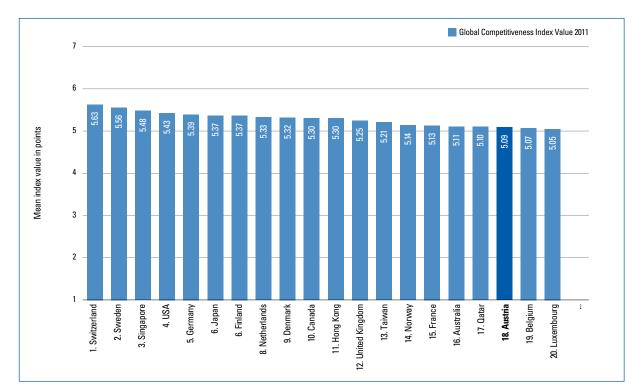
Source: Connectivity Scorecard 2011 by Nokia Siemens Networks

This ranking compares how effectively ICT is used throughout the world. Like the NRI, this index collects infrastructure data, usage data and skills in the target groups of consumers, businesses and government institutions. Nokia Siemens Networks places special importance not just on collecting technology data but on finding out what benefits accrue from the existing technology infrastructure.

The scale ranges from 1 (minimum) to 10 (maximum).

- The top position in the Connectivity Scorecard Ranking by Nokia Siemens Networks is occupied by Sweden, followed by the United States and Denmark.
- Austria participated in this ranking for the first time in 2011 and shared 12<sup>th</sup> place with Germany in the median field of innovation-driven countries. By international comparison Austria performed quite well in mobile services. It needs to make up some ground in fixed broadband Internet connections however.

### Global Competitiveness Index 2011



#### ➡ AUSTRIA AMONG THE MOST COMPETITIVE NATIONS

Source: World Economic Forum, Global Competitiveness Report 2010–2011

The World Economic Forum defines competitiveness as the set of institutions, policies and production factors that determine the level of productivity of a country.

The level of productivity in turn sets the level of prosperity that can be earned by an economy. In other words, the greater a country's competitiveness, the more likely it is that it can produce high incomes. Productivity is by definition an input-output ratio, i.e. it is a measure of the best possible output that can be achieved with the existing production factors.

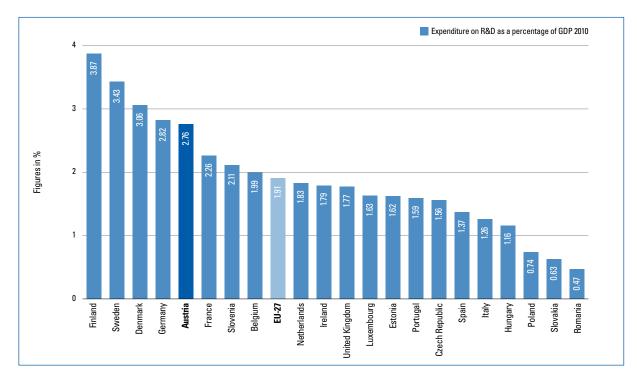
The twelve parameters are measured either by questioning or by observation. The index also takes into account a country's level of development. Accordingly it distinguishes between factor-driven, efficiency-driven and innovation-driven economies. Developing countries are among the factor-driven economies, while western industrial nations represent innovation-driven economies.

The scale ranges from 1 (minimum) to 7 (maximum).

- Top of the ranking for 2011 is Switzerland, followed by Sweden and Singapore.
- Austria also belongs among the innovation-driven industrial economies, coming 18<sup>th</sup> in the global ranking.

# Expenditure on R&D as a percentage of GDP in 2010

#### ➡ AUSTRIA IN THE TOP TIER FOR RESEARCH EXPENDITURE



Source: Eurostat, 2010

Eurostat is the statistical office of the European Union situated in Luxembourg. Its task is to provide the European Union with statistics at European level that enable comparisons between countries and regions. Research and development (R&D) comprises the systematic constructive work involved in expanding knowledge, including knowledge on humanity, culture and society and how it is used in order to find even more potential applications. R&D expenditure includes all expenditure on R&D made by the domestic business and economic sector during a specific period, regardless of the sources of funding.

- Scandinavian nations have the highest proportion of research expenditure relative to the GDP. At the top of the league is Finland with 3.87%, followed by Sweden with 3.43% and Denmark with 3.06%.
- Austria, with a share of 2.76% of GDP, ranks 5<sup>th</sup> and thus well above the average of all 27 EU nations (1.91%).

## Section 9 | Appendix



### Glossary

#### Airtime (mobile communications)

Airtime refers to a service which mobile network operators provide for domestic resellers. A reseller is a communications service provider that offers public mobile services to retail customers but does not provide those services using its own network. This includes all mobile service providers (such as resellers or [enhanced] service providers) that do not operate their own communications network – neither a radio network nor a core network – in providing mobile communications services.

#### Unbundling

In telecommunications, unbundling refers to the separate provision of specific services which were previously only available in conjunction with other services. For example, the unbundling of subscriber lines from fixed network access offered by the incumbent operator gives alternative service providers direct access to the customer without requiring the latter to install the "last mile" themselves, as they can lease the (naked) subscriber line from the incumbent at a regulated price.

#### International roaming

In connection with mobile communications, the term "roaming" refers to the use of a mobile telephone outside the coverage area of one's own network operator (the home network), in which case the mobile phone uses the service of another network (the visited network). In international roaming, the home and visited networks are located in different countries and their coverage areas generally do not overlap.

#### **Purchasing power parity**

Purchasing power is a measure of the value of money. Like the exchange rates between currencies, measures of purchasing power enable inter-currency comparisons between different countries or economic areas. In an international price comparison such as the average price per call minute in mobile communications, it is also necessary to consider the differing levels of purchasing power in individual countries. Hence direct price comparisons are only possible if purchasing power parity actually exists, which it de facto does not.

#### Leased lines

Leased lines provide symmetrical transmission capacity with a guaranteed bandwidth between two points without switching functions. Leased lines may also be referred to as "private circuits" or "data lines".

#### Mobile broadband

Mobile broadband comprises pure data tariffs, data products not based on a fixed monthly charge and smartphone tariffs.

Pure data tariffs (no voice services or text messaging) are mobile services including at least 250 MB in the monthly charges.

Products not based on a fixed monthly charge (e.g. prepaid data products or data/voice products) are products that are used by customers to access the Internet at least one time each quarter.

Smartphone tariffs are all contracts for voice and text messaging services that include at least 250 MB data services in the monthly charges and that are used to access the Internet at least one time each quarter.

#### **Penetration rates**

The data presented in Section 8 on broadband penetration among Austria's households/individuals appear to contradict the penetration rates published in other sections of the Telecom Monitor. The reason for this apparent discrepancy lies in the different survey methods used.

The statistics in the Telecom Monitor are (unless noted otherwise) based on data collected directly from telecommunications service providers. However, one disadvantage of this method is that the companies know their own products (and the related data) very well, but they have very little information about those who buy the products.

Penetration rates thus depend on whether they are calculated using data from the supply or the demand side (among other factors). A customer who indicates that s/he has a broadband connection at home is included in the calculation of penetration rates only once, regardless of how many broadband connections that customer has at home.

In contrast, broadband service providers indicate the number of connections sold, and that figure is divided by the number of households. For this reason, a penetration rate calculated using data from the supply side will, as a rule, always be higher (as each connection is counted as a separate household) than penetration rates determined using demand-side data. This might also yield penetration rates in excess of 100% (e.g. in the case of mobile penetration, as many people have more than one mobile phone).

The broadband penetration rates on pages 43 and 68 were both calculated using supply-side data, but they still differ because of the different reference values used (number of households / population).

Penetration rates calculated on the basis of different data sources can therefore not be compared directly. When interpreting these figures, it is thus important to pay special attention to how the information was collected, what statistical population was used, and which reference values were applied.

#### **Telecommunications Index (Telecom Index)**

The Telecommunications Index is calculated by dividing the revenues by the corresponding trafficrelated figures (e.g. minutes, text messages, MB) or lines. The values computed in such a way both for the base year (2006) and the period under review (quarters, years) are compared to each other. This results in an index value for the period under review, which is eventually weighted on the basis of the base year revenues. The development of these index values is presented over time.

The following sub-indices are computed in the same way: FIXED NETWORK:

- Base fees (residential and non-residential customers)
- Connection fees (residential and non-residential customers): Domestic mobile networks, international calls, online services, domestic fixed network

MOBILE CONNECTION FEES RETAIL BROADBAND CONNECTIONS (FIXED)

LEASED LINES:

- Domestic leased lines in 64 kbit/s equivalents <= 2 Mbit/s
- Domestic leased lines in 64 kbit/s equivalents > 2 Mbit/s

The Telecommunications Index includes only retail data.

#### Trunk and terminating segments (leased lines)

Trunk segments refer to leased lines which link interconnection points in two of 28 specified Austrian towns. Terminating segments refer to all leased lines which cannot be classified as trunk segments.

### Data tables

#### **DEVELOPMENT OF FIXED LINES (PAGE 9)**

			Number of lines (thousands)	
		POTS	ISDN	Multi-ISDN
	Q1	2,386.91	362.76	10.55
2009	Q2	2,387.10	357.36	10.55
2009	Q3	2,372.51	353.71	10.47
	Q4	2,389.78	348.26	10.39
	Q1	2,412.26	341.64	10.23
2010	Q2	2,406.36	339.02	10.14
2010	Q3	2,405.45	335.53	10.16
	Q4	2,431.61	330.92	10.16
	Q1	2,447.33	329.33	10.20
2011	Q2	2,448.48	325.82	10.20
2011	Q3	2,446.55	323.14	10.22
	Q4	2,438.50	320.61	10.26

#### RETAIL REVENUES FROM CARRIER SERVICES 2/2 (PAGE 13)

		Revenues (EUR thousands)					
		Domestic fixed network	Domestic mobile network	International	Service numbers	Online services	
	Q1	34,215.27	45,283.93	27,115.20	6,847.71	1,977.96	
2009	Q2	29,873.45	41,647.85	23,211.93	6,347.50	1,564.95	
2009	Q3	29,141.32	41,948.43	24,991.84	6,122.95	1,287.32	
	Q4	30,108.07	41,485.18	24,618.06	6,258.22	1,143.51	
	Q1	29,897.34	40,076.70	25,419.18	5,482.96	952.14	
2010	02	27,386.50	40,575.87	24,725.66	4,873.63	802.03	
2010	Q3	25,943.52	39,676.95	24,604.53	5,053.87	738.85	
	Q4	26,661.09	39,827.14	24,008.83	5,145.93	658.47	
	Q1	24,700.59	37,146.77	23,333.06	4,801.36	593.70	
2011	Q2	22,440.60	35,979.27	20,949.65	4,616.36	528.55	
2011	Q3	20,892.95	34,545.47	21,609.49	4,611.22	501.68	
	Q4	21,161.24	34,256.79	21,269.30	4,770.24	459.14	

	]		Revenues (EUR)	
		Access services	Carrier services	Other
	Q1	83,713,466	54,814,635	11,554,744
2009	Q2	82,343,289	47,757,874	11,365,622
2009	Q3	82,452,180	48,860,450	11,380,652
	Q4	81,337,252	50,998,955	11,226,761
	Q1	82,091,927	46,834,178	11,330,927
2010	Q2	82,091,204	45,369,609	11,330,827
2010	Q3	80,829,849	44,220,899	11,156,726
	Q4	80,856,200	46,300,506	11,160,363
	Q1	79,999,295	42,255,757	11,042,087
2011	Q2	79,962,790	38,628,491	11,037,048
2011	Q3	79,476,994	37,746,381	10,969,995
	Q4	79,070,711	38,681,584	10,913,917

#### BREAKDOWN OF RETAIL REVENUES (RESIDENTIAL CUSTOMERS) (PAGE 14)

#### BREAKDOWN OF RETAIL REVENUES (BUSINESS CUSTOMERS) (PAGE 15)

		Revenues (EUR)					
		Access services	Carrier services	Other			
	Q1	46,061,125	60,625,447	4,090,090			
2009	Q2	45,577,196	54,887,796	4,047,118			
2009	Q3	45,339,993	54,631,402	4,026,055			
	Q4	44,569,140	52,614,081	3,957,606			
	Q1	44,178,382	54,994,144	3,922,908			
2010	Q2	42,680,706	52,994,080	3,789,919			
2010	Q3	41,767,990	51,796,823	3,708,872			
	Q4	41,656,848	50,000,950	3,699,003			
	Q1	42,589,234	48,319,729	3,781,796			
2011	Q2	42,185,613	45,885,938	3,745,956			
2011	Q3	41,740,193	44,414,435	3,706,404			
	Q4	41,946,580	43,235,136	3,724,730			

				Minutes (thousands)		
		Domestic fixed network	Domestic mobile network	International	Service numbers	Online services
	Q1	1,123,554.66	292,217.27	227,414.92	97,031.87	99,837.10
2009	Q2	1,011,125.31	279,111.06	214,543.05	92,521.41	72,045.41
2009	Q3	969,293.16	274,653.56	209,420.11	85,785.97	62,234.97
	Q4	1,036,625.17	276,277.22	214,021.38	60,715.82	55,573.95
	Q1	980,361.16	265,649.08	208,897.85	55,433.72	46,514.95
2010	Q2	906,729.79	263,593.00	200,234.39	45,897.42	37,644.74
2010	Q3	855,276.82	257,274.37	194,024.01	45,835.92	34,691.06
	Q4	887,873.00	258,120.47	193,150.13	44,592.69	32,304.66
	Q1	840,966.65	244,331.49	197,079.46	40,096.99	18,915.07
2011	Q2	758,026.63	234,890.54	184,676.52	37,839.76	15,104.53
2011	Q3	714,523.30	229,417.62	175,216.28	38,465.68	13,020.06
	Q4	736,665.28	231,842.77	179,957.41	36,798.25	11,224.50

#### CALL MINUTES ON THE RETAIL MARKET (PAGE 16)

#### **REVENUE PER CALL MINUTE (PAGE 17)**

		Revenue (EUR cents)						
		Domestic fixed network (residential customers)	Domestic mobile network (residential customers)	International (residential customers)	Domestic fixed network (business customers)	Domestic mobile network (business customers)	International (business customers)	
	Q1	3.04	18.46	11.63	3.05	13.60	12.16	
2009	Q2	2.96	17.48	10.27	2.95	13.24	11.26	
2009	Q3	3.08	18.65	12.25	2.94	13.12	11.69	
	Q4	3.02	18.26	11.76	2.79	12.83	11.28	
	Q1	3.06	18.44	11.97	3.04	13.09	12.32	
0010	Q2	3.07	18.68	12.41	2.98	13.46	12.30	
2010	Q3	3.15	18.85	13.06	2.93	13.43	12.39	
	Q4	3.09	18.85	12.97	2.91	13.35	11.96	
	Q1	3.06	18.70	12.05	2.82	13.28	11.64	
2011	Q2	2.99	19.03	11.07	2.93	13.27	11.60	
2011	Q3	2.97	18.59	13.03	2.89	13.13	11.72	
	Q4	2.89	18.22	12.00	2.85	12.84	11.63	

			Revenues (EUR thousands)	
		Revenues from origination	Revenues from termination	Revenues from transit
	Q1	3,817.10	17,427.28	5,255.08
2009	Q2	3,388.37	15,976.60	5,124.28
2009	Q3	3,148.53	16,084.37	5,726.15
	Q4	3,323.34	17,282.27	6,414.41
	Q1	3,146.08	17,763.19	6,736.72
2010	Q2	2,797.70	17,439.32	5,409.52
2010	Q3	2,621.19	14,039.86	3,648.36
	Q4	2,618.71	14,512.66	3,971.53
	Q1	2,470.41	13,998.41	4,142.16
2011	Q2	2,239.15	14,100.75	4,035.03
2011	Q3	2,170.13	13,389.32	4,320.18
	Q4	2,159.02	13,725.66	4,452.75

#### WHOLESALE REVENUES (PAGE 20)

#### SERVICE NUMBERS IN USE: (0)800, (0)810, (0)820, (0)821, (0)828, (0)900, (0)930 (PAGE 22)

		Numbers in use					
	Î	(0)800	Total for (0)810, (0)820, (0)821, (0)828	Total for (0)900, (0)930			
	Q1	15,189	16,826	27,893			
2009	Q2	15,277	16,090	26,495			
2009	Q3	15,509	18,747	27,184			
	Q4	15,696	18,809	27,310			
	Q1	15,611	17,558	27,727			
0010	Q2	16,160	17,450	27,609			
2010	Q3	14,243	20,095	28,216			
	Q4	17,033	20,757	28,273			
	Q1	15,094	23,825	29,356			
0011	Q2	15,042	24,026	29,374			
2011	Q3	15,208	20,799	29,237			
	Q4	15,311	19,228	28,688			

	ſ	Number of	customers
	-	Contract customers	Prepaid customers
	Q1	6,978,440	3,522,788
2009	Q2	7,086,985	3,501,318
2009	Q3	7,190,012	3,590,247
	Q4	7,453,938	3,641,692
	Q1	7,517,329	3,830,200
2010	Q2	8,019,450	3,772,371
2010	Q3	8,142,077	3,833,250
	Q4	8,344,419	3,896,666
	Q1	8,433,436	3,955,343
2011	Q2	8,513,940	3,984,899
2011	Q3	8,621,693	4,033,857
	Q4	8,854,952	4,167,626

#### PREPAID VS. POSTPAID SIM CARDS (PAGE 37)

#### FIXED AND MOBILE BROADBAND CONNECTIONS (PAGE 42)

		C	connections (thousands	3)	in percent	
		Fixed connections	Mobile connections (data tariffs)	Mobile connections (smartphone tariffs)	Fixed share	Mobile share
	Q1	1,839.33	1,094.52	72.05	61.2%	38.8%
2009	Q2	1,854.75	1,160.41	107.27	59.4%	40.6%
2009	Q3	1,874.19	1,250.40	146.10	57.3%	42.7%
	Q4	1,914.81	1,345.92	210.60	55.2%	44.8%
	Q1	1,953.74	1,468.49	282.51	52.7%	47.3%
2010	Q2	1,989.06	1,510.45	389.87	51.1%	48.9%
2010	Q3	2,014.59	1,577.70	586.19	48.2%	51.8%
	Q4	2,076.38	1,632.48	822.95	45.8%	54.2%
	Q1	2,088.47	1,656.55	1,009.25	43.9%	56.1%
2011	Q2	2,106.32	1,657.84	1,228.90	42.2%	57.8%
2011	Q3	2,131.65	1,698.93	1,476.57	40.2%	59.8%
	Q4	2,228.73	1,851.90	1,793.29	37.9%	62.1%

			Number of connections							
		Copper-wire pairs	Unbundled lines	Coaxial cable	Other infrastructure	Mobile (data tariffs)	Mobile (smart- phone tariffs)			
	Q1	935,598	258,621	597,427	45,382	1,094,516	72,053			
2009	Q2	958,373	252,448	598,413	43,250	1,160,408	107,270			
2009	Q3	982,608	248,316	598,148	43,045	1,250,400	146,102			
	Q4	1,022,590	243,767	604,284	42,256	1,345,922	210,602			
	Q1	1,065,037	236,214	607,962	42,422	1,468,494	282,505			
2010	Q2	1,089,687	243,507	612,239	41,777	1,510,449	389,874			
2010	Q3	1,111,868	243,231	615,552	41,235	1,577,699	586,192			
	Q4	1,161,189	242,405	626,738	40,802	1,632,477	822,951			
	Q1	1,199,961	207,287	632,802	37,693	1,656,546	1,009,251			
2011	Q2	1,215,960	203,085	639,576	37,371	1,657,839	1,228,897			
2011	Q3	1,246,684	196,418	641,791	36,584	1,698,930	1,476,573			
	Q4	1,273,183	192,555	655,517	36,930	1,851,899	1,793,289			

#### RETAIL BROADBAND CONNECTIONS BY TYPE OF INFRASTRUCTURE (PAGE 44)

#### WHOLESALE BROADBAND CONNECTIONS (PAGE 45)

		Number of connections					
		Bitstreaming via A1 Telekom's network	Bitstreaming via unbundled lines	Bitstreaming via coaxial cable (open access)	Mobile		
	Q1	63,394	4,693	23,498	4,680		
2009	Q2	62,657	4,785	24,405	5,010		
2009	Q3	56,610	4,750	24,499	5,250		
	Q4	55,417	4,618	24,687	5,380		
	Q1	53,593	4,382	24,736	5,330		
2010	Q2	53,367	4,267	24,501	5,320		
2010	Q3	45,735	4,117	24,534	5,340		
	Q4	45,539	3,934	24,794	5,880		
	Q1	44,629	4,182	24,955	5,940		
2011	Q2	43,965	4,008	24,956	5,190		
2011	Q3	42,805	3,930	25,041	5,220		
	Q4	42,416	3,817	25,545	5,930		

		Revenues (EUR millions)					
		Revenues from fixed voice services	fixed voice Revenues from broadband Revenues from Total rever				
	Q1	287.4	810.2	115.7	63.7	1,277.0	
2000	Q2	270.5	806.7	113.7	61.4	1,252.3	
2009	Q3	271.6	807.7	112.7	60.2	1,252.2	
	Q4	271.7	797.7	113.9	59.5	1,242.8	
	Q1	271.0	777.1	112.4	55.4	1,215.9	
2010	Q2	263.9	769.1	111.3	54.6	1,198.9	
2010	Q3	253.8	779.8	110.6	37.6	1,181.8	
	Q4	254.8	755.9	108.9	36.1	1,155.7	
	Q1	248.6	741.0	110.2	36.9	1,136.7	
2011	Q2	241.8	749.9	108.2	36.7	1,136.6	
	Q3	237.9	749.0	108.3	35.3	1,130.5	
	Q4	237.9	735.5	111.9	37.0	1,122.3	

#### REVENUES FROM FIXED, MOBILE, BROADBAND AND LEASED LINE SERVICES (PAGE 48)

#### TECHNICAL MINUTES IN FIXED AND MOBILE NETWORKS (PAGE 49)

		Minutes (millions)			in percent		
		Online	Call minutes – fixed networks (excluding online minutes)	Call minutes – mobile networks	Fixed share (including online minutes)	Mobile share	
	Q1	99.8	1,740.2	5,268.5	25.9%	74.1%	
2009	Q2	72.0	1,597.3	5,213.0	24.3%	75.7%	
2009	Q3	62.2	1,539.2	5,115.8	23.8%	76.2%	
	Q4	55.6	1,587.6	5,515.7	23.0%	77.0%	
	Q1	46.5	1,510.3	5,456.8	22.2%	77.8%	
0010	Q2	37.6	1,416.5	5,535.2	20.8%	79.2%	
2010	Q3	34.7	1,352.4	5,297.7	20.8%	79.2%	
	Q4	32.3	1,383.7	5,666.2	20.0%	80.0%	
	Q1	18.9	1,322.5	5,557.7	19.4%	80.6%	
2011	Q2	15.1	1,215.4	5,556.7	18.1%	81.9%	
	Q3	13.0	1,157.6	5,364.6	17.9%	82.1%	
	Q4	11.2	1,185.3	5,705.8	17.3%	82.7%	

#### INVESTMENTS (PAGE 53)

	EUR (thousands)				
	Frequencies	Technical infrastructure	Sales and customer service		
2007	13,030	859,670	19,540		
2008	5,810	686,390	13,680		
2009	6,270	510,090	8,720		
2010	48,470	640,410	7,910		
2011	6,390	494,290	11,420		

#### SUBSCRIBERS USING AN ALTERNATIVE PROVIDER FOR FIXED VOICE TELEPHONY SERVICES (PAGE 57)

	in percent		
	National calls	International calls	
United Kingdom	45.0%	45.0%	
Portugal	41.3%	43.4%	
Romania	41.0%	42.0%	
Netherlands	40.0%	50.0%	
Belgium	39.4%	39.4%	
Germany	39.0%	41.0%	
Austria	37.0%	42.0%	
Spain	35.2%	35.2%	
France	35.1%	35.6%	
Sweden	35.0%	n.a.	
EU-25	34.6%	35.7%	
Estonia	32.0%	29.0%	
Poland	31.9%	30.8%	
Italy	29.0%	29.4%	
Finland	25.0%	45.0%	
Ireland	24.0%	24.0%	
Luxembourg	23.6%	23.6%	
Malta	23.3%	23.3%	
Greece	23.0%	25.0%	
Slovenia	20.9%	21.2%	
Hungary	20.0%	25.0%	
Czech Republic	15.7%	11.9%	
Bulgaria	14.2%	14.1%	
Slovakia	9.4%	9.7%	
Cyprus	9.0%	9.0%	
Lithuania	7.8%	8.4%	

#### MOBILE PENETRATION RATE (2009 TO 2010) (PAGE 60)

	in percent		
	October 2009	October 2010	
Italy	149%	154%	
Portugal	148%	152%	
Finland	145%	151%	
Lithuania	147%	147%	
Austria	133%	146%	
Luxembourg	142%	144%	
Denmark	133%	137%	
Latvia	103%	136%	
Bulgaria	139%	133%	
Germany	132%	131%	
United Kingdom	127%	129%	
Sweden	121%	128%	
Cyprus	123%	128%	
EU-27	122%	124%	
Czech Republic	125%	124%	
Spain	118%	121%	
Estonia	116%	120%	
Ireland	120%	118%	
Netherlands	127%	116%	
Greece	125%	116%	
Romania	115%	114%	
Poland	108%	111%	
Malta	101%	109%	
Hungary	106%	108%	
Belgium	107%	108%	
Slovakia	100%	108%	
Slovenia	102%	103%	
France	90%	94%	

#### INTERCONNECTION FEES FOR TERMINATION IN MOBILE NETWORKS (PAGE 62)

	EUR cents		
	October 2009	October 2010	
Luxembourg	8.51	8.53	
Ireland	10.05	8.22	
Estonia	8.69	7.80	
Italy	8.23	6.97	
Czech Republic	9.46	6.80	
Germany	6.76	6.78	
Bulgaria	11.76	6.65	
Slovakia	8.03	6.53	
Greece	7.86	6.24	
Malta	8.66	6.17	
Denmark	7.45	6.00	
Latvia	8.74	5.94	
Netherlands	7.40	5.60	
Spain	7.08	5.59	
Portugal	6.50	5.50	
EU-27	6.58	5.46	
Lithuania	8.34	5.22	
Hungary	6.01	5.16	
Romania	5.44	5.07	
Belgium	8.80	4.94	
Slovenia	5.46	4.92	
Finland	5.02	4.90	
United Kingdom	5.50	4.58	
Poland	4.12	4.30	
France	5.82	3.93	
Austria	4.25	3.26	
Sweden	3.47	2.82	
Cyprus	1.98	1.84	

#### INTERNATIONAL LEASED LINE PRICES (2 MBIT/S) (PAGE 67)

	EUR per month		
	200 km	2 km	
Netherlands	1,497	1,241	
Slovenia	1,723	906	
Estonia	3,647	877	
Greece	1,384	842	
Czech Republic	1,314	761	
Spain	3,288	687	
Cyprus	1,337	584	
Belgium	2,004	547	
Malta	n.a.	531	
Latvia	690	528	
Italy	3,267	486	
Slovakia	2,756	472	
Luxembourg	n.a.	460	
Hungary	3,982	446	
Lithuania	1,526	443	
United Kingdom	3,232	407	
Ireland	2,945	381	
Bulgaria	3,885	368	
Germany	1,925	340	
Austria	2,260	300	
Portugal	2,936	290	
Romania	4,240	283	
Poland	886	257	
Sweden	484	256	
Denmark	369	217	
EU	2,242	516	

#### BROADBAND LINES BY BANDWIDTH (PAGE 71)

		in percent			
	≥ 144 kbit/s and < 2 Mbit/s	≥ 2 Mbit/s and < 10 Mbit/s	≥ 10 Mbit/s		
Cyprus	61%	34%	5%		
Slovenia	56%	19%	26%		
Poland	52%	35%	12%		
Estonia	41%	49%	10%		
Finland	24%	43%	33%		
France	23%	22%	55%		
Italy	18%	73%	9%		
Lithuania	17%	41%	42%		
Hungary	17%	42%	41%		
Ireland	16%	70%	13%		
EU-27	13%	48%	39%		
Slovakia	13%	62%	25%		
Germany	13%	57%	30%		
Spain	9%	57%	34%		
Sweden	9%	43%	48%		
Czech Republic	9%	63%	28%		
Netherlands	8%	35%	57%		
Luxembourg	7%	66%	27%		
Latvia	5%	54%	41%		
Denmark	4%	48%	48%		
Portugal	3%	24%	73%		
Austria	2%	71%	26%		
Belgium	2%	41%	57%		
Bulgaria	2%	24%	74%		
Malta	1%	87%	12%		
Romania	1%	39%	60%		
United Kingdom	1%	55%	45%		
Greece	0%	46%	54%		

		Points					
		Telecommuni- cations	Fixed networks	Mobile networks	Broadband	Leased lines	СРІ
	Q1	88.88	99.61	81.26	99.32	92.20	100.90
2007	Q2	84.65	99.94	73.70	98.20	100.11	102.05
2007	Q3	83.94	99.28	73.09	97.29	96.28	102.22
	Q4	75.88	96.71	61.16	93.83	93.80	103.50
	Q1	72.13	96.66	57.39	81.33	85.05	104.25
2008	Q2	71.94	97.53	57.34	77.32	87.27	105.73
2008	Q3	73.72	98.80	60.19	75.32	86.67	106.03
	Q4	69.50	97.72	54.38	70.80	84.06	105.80
	Q1	65.65	96.49	49.24	66.22	83.11	105.40
2000	Q2	66.59	94.56	52.17	64.94	81.06	106.03
2009	Q3	68.12	96.18	54.34	63.75	77.86	106.06
	Q4	64.12	94.32	48.47	63.16	76.98	106.46
	Q1	63.47	95.76	46.77	61.62	82.02	106.88
2010	Q2	63.33	96.94	46.32	59.62	81.28	108.10
2010	Q3	66.52	97.63	50.74	63.84	80.14	107.97
	Q4	63.37	97.37	45.76	61.62	81.92	108.69
	Q1	62.17	97.79	43.83	60.59	77.05	109.97
2011	Q2	63.48	99.26	45.26	61.13	76.50	111.65
	Q3	65.08	101.26	46.48	63.30	80.28	111.78
	Q4	62.42	101.42	41.79	62.21	86.37	111.45

#### TELECOM INDEX (PAGE 74 AND 75)

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