REPUBLIC OF SERBIA

RATEL

REGULATORY AGENCY FOR ELECTRONIC COMMUNICATIONS AND POSTAL SERVICES

AN OVERVIEW OF THE ELECTRONIC COMMUNICATIONS MARKET IN THE REPUBLIC OF SERBIA

The Fourth Quarter of 2017

The Overview presents the data for the fourth quarter of 2017 along with comparative data for other quarters.

The presented data reflect the overall market status for each given quarter, including the actual quarterly data for the leading electronic communications operators in the Republic of Serbia, whereas the data for the rest of the market were estimated based on the data for 2016 collected in the annual questionnaires. Therefore, the total quarterly report may show discrepancies with respect to the data collected in the regular annual questionnaires. The Agency shall not be held responsible for the correctness of the data submitted by the operators in the quarterly questionnaires.

Quarterly electronic communications market indicators referring to fixed telephony include the data on the operators that make up 99% of the market, in terms of the number of subscribers. The data on the market situation include CDMA subscribers and the effectuated traffic.

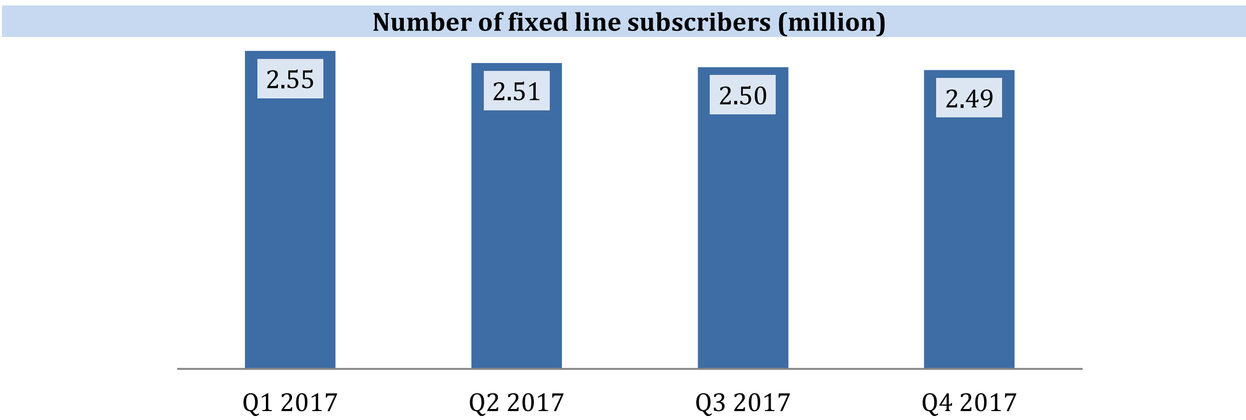
Quarterly electronic communications market indicators referring to mobile telephony include the data on three mobile operators. In 2017, two virtual mobile operators were also registered in the operators' register, however only one provided services in 2017. As of the first quarter next year, the Agency will start collecting and publishing the data on virtual mobile operators, as well.

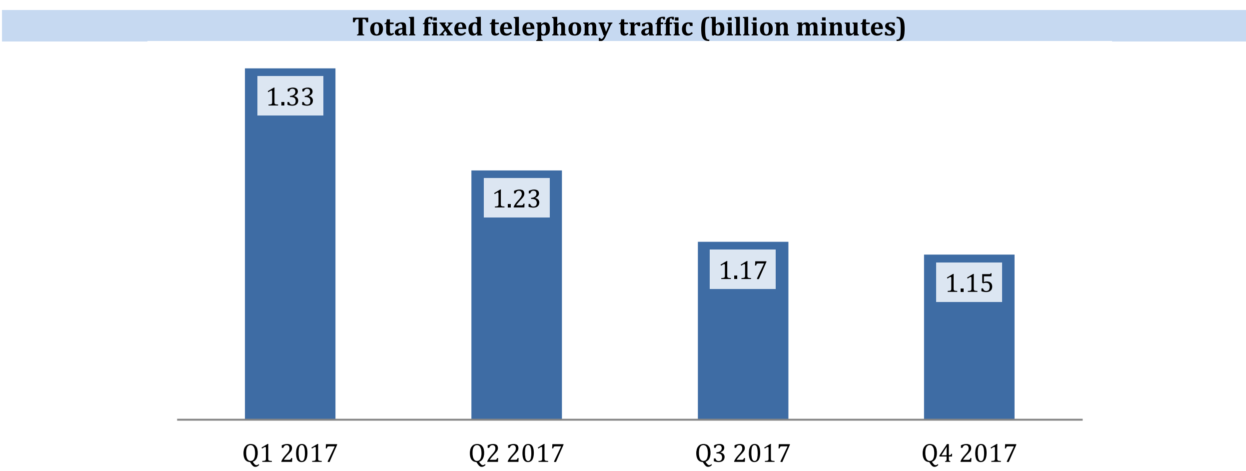
Quarterly electronic communications market indicators referring to Internet services and media content distribution include the data for the leading operators that make up approximately 91% of the market, in terms of the number of subscribers, whereas the data for the remaining 9% of the market were estimated based on the data for 2016 collected in the annual questionnaires.

Quarterly electronic communications market indicators referring to bundle services include the data for the leading operators that make up approximately 98% of the market, whereas the data for the remaining 2% of the market were estimated based on the data for 2016 collected in the annual questionnaires.

Public Fixed Telecommunications Networks and Services

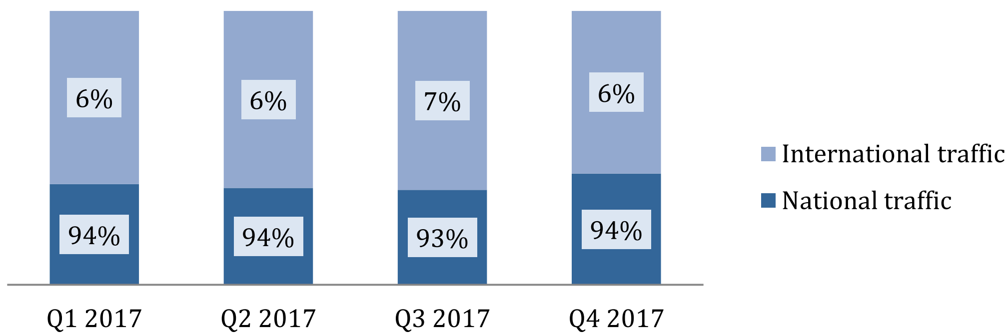
The number of fixed telephony subscribers and the generated traffic show a slight decrease in the fourth quarter compared to the previous one. A little less than 2.5 million fixed telephony subscribers generated approximately 1.15 billion minutes of traffic in the last observed quarter, which means that a fixed telephony subscriber on average spends 5 minutes a day on calls.





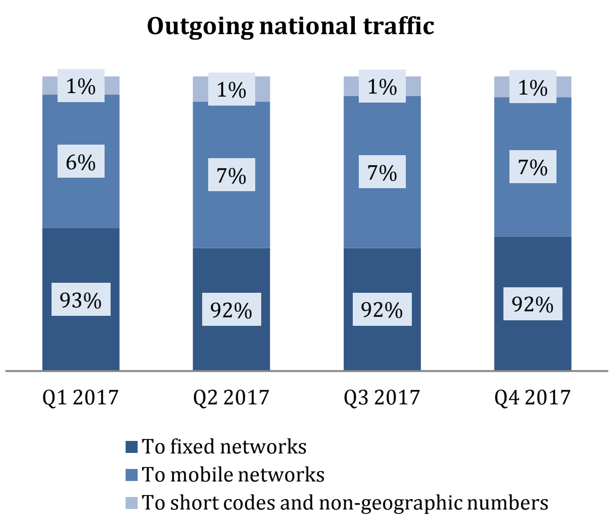
89% of the fixed telephony subscribers are residential users, i.e. natural entities, and the subscriber structure remains constant in the analyzed quarters. The largest share of the fixed telephony traffic is accounted for by the national traffic, with 94% in Q4 2017.

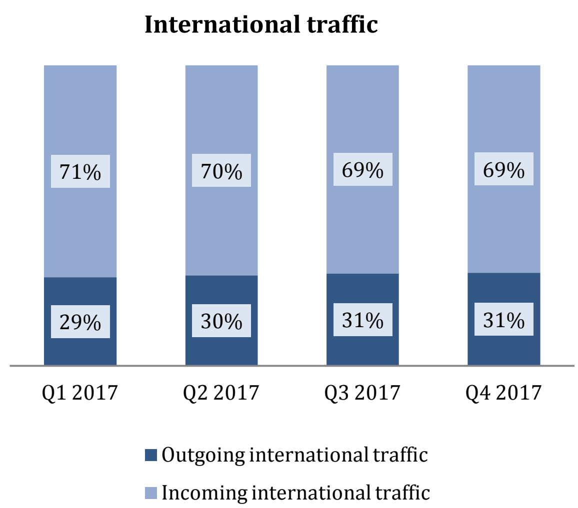
Fixed telephony subscriber structure



The outgoing telephone calls are mainly directed towards other fixed networks, while the international traffic is dominated by incoming calls.

Structure of the national and international traffic in fixed telephony





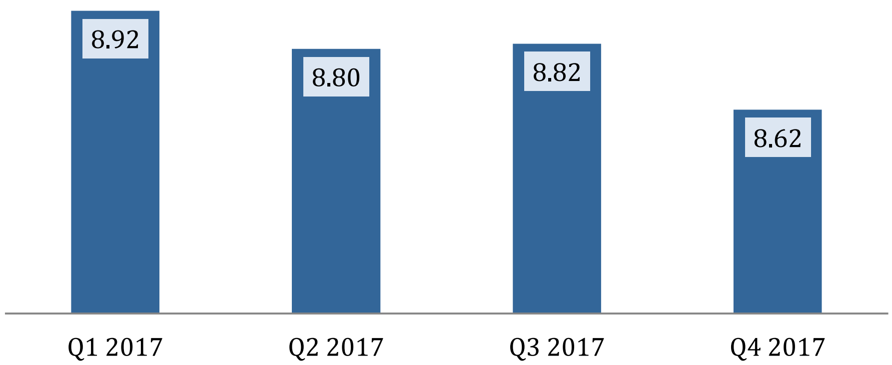
The number of portings in the fourth quarter of 2017 was approximately 12,700 (around 4,200 monthly), showing an increase compared to the previous quarter.

Fixed telephony number portings per quarter

Public Mobile Telecommunications Networks and Services

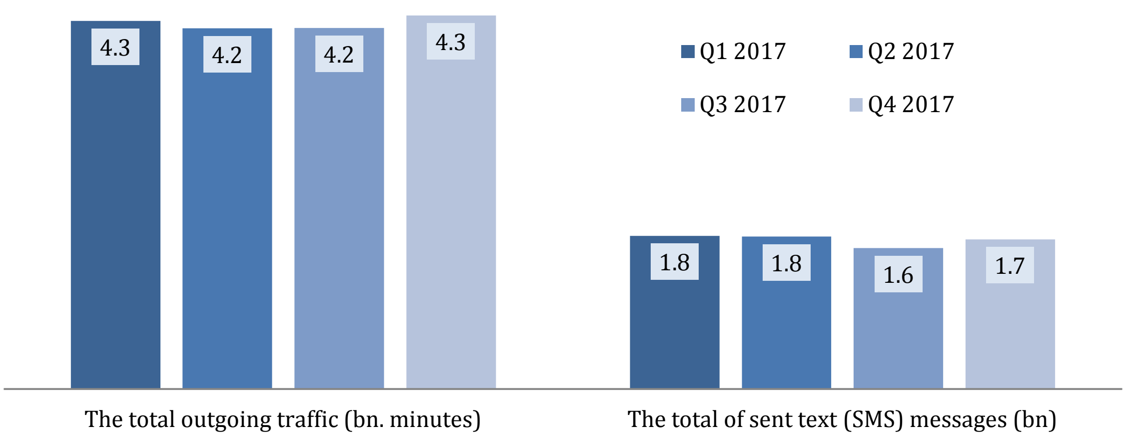
In Q4 2017, there were 8.6 million active mobile telephony subscribers, which generated approximately 4.3 billion minutes of national and international voice traffic and sent approximately 1.7 billion SMS messages quarterly. On average, a mobile user spends 5.5 minutes a day on calls and sends 2 text messages. On the mobile networks market a decrease in the number of active mobile telephony subscribers has been observed, mostly due to the decrease in the number of prepaid users, whose number declines faster than the number of postpaid users.

Total number of active mobile telephony subscribers (million)



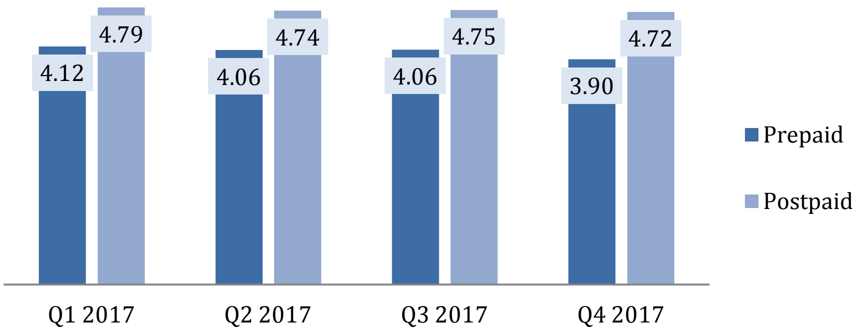
Despite the decrease in the number of active users, generated voice and SMS mobile telephony traffic increased in the last quarter of 2017, compared to the previous quarter.

Generated voice and SMS mobile telephony traffic



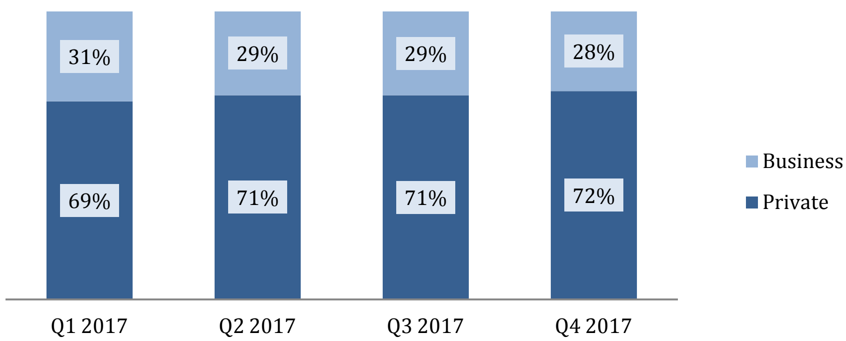
The number of prepaid subscribers has decreased during all four quarters of 2017, with the total of approximately 166 thousand prepaid subscribers less (in the last quarter) than in Q3 2017.

Number of prepaid and postpaid subscribers (million)



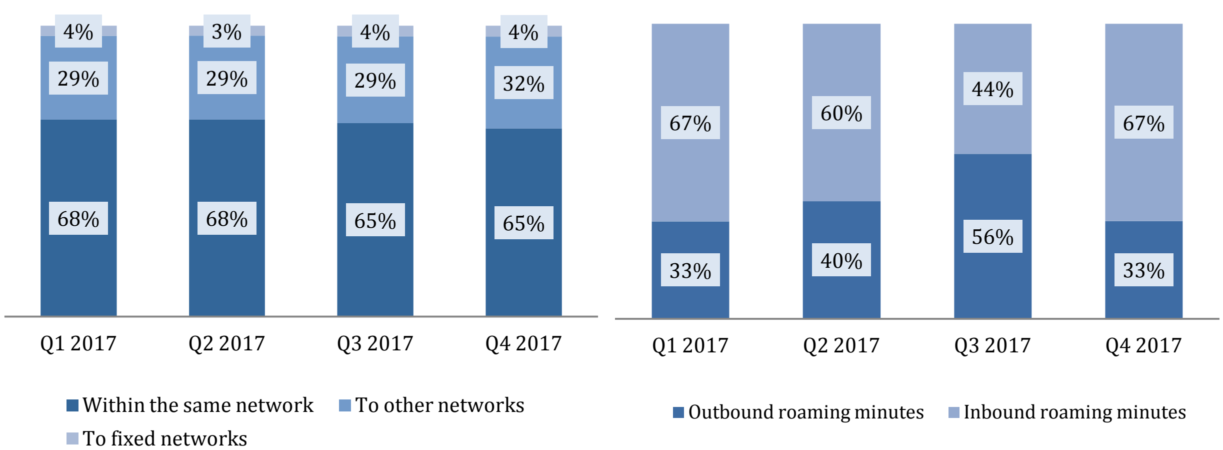
In the postpaid subscriber structure, private entities with an increasing share during all four observed quarters of 2017 are dominant.

Postpaid subscriber structure



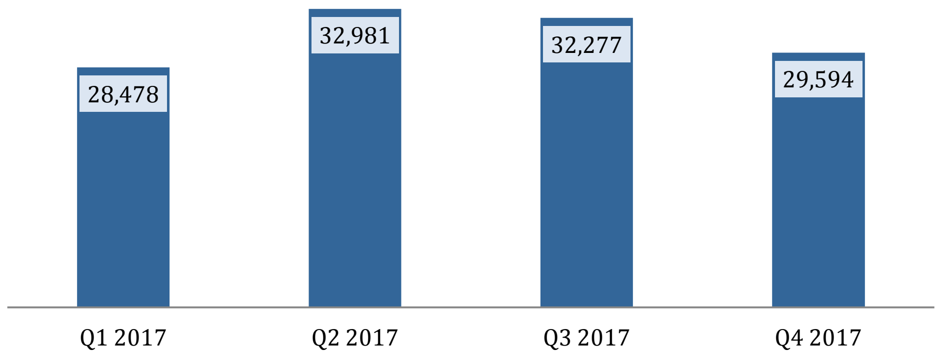
Most outgoing traffic is generated within the same network (65% in Q4). As for roaming, the subscribers of foreign networks generated more roaming traffic than the subscribers of national networks abroad.

Mobile networks outgoing traffic structure



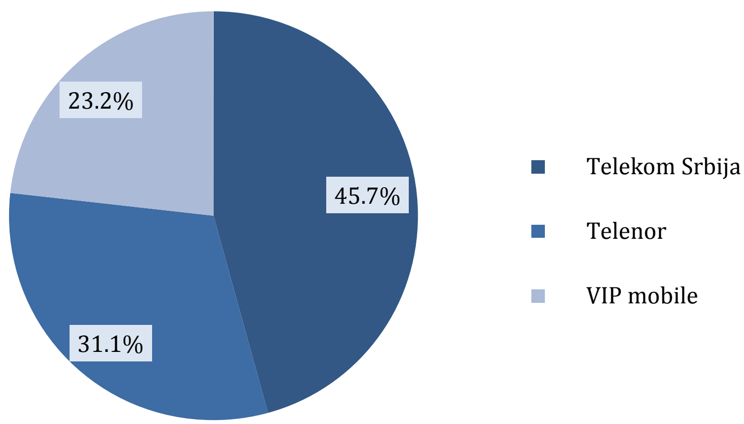
The number of mobile telephony number portings was over 29 thousand in the fourth quarter, or around 10 thousand per month, which is a decrease compared to the previous quarter.

Mobile telephony number portings per quarter



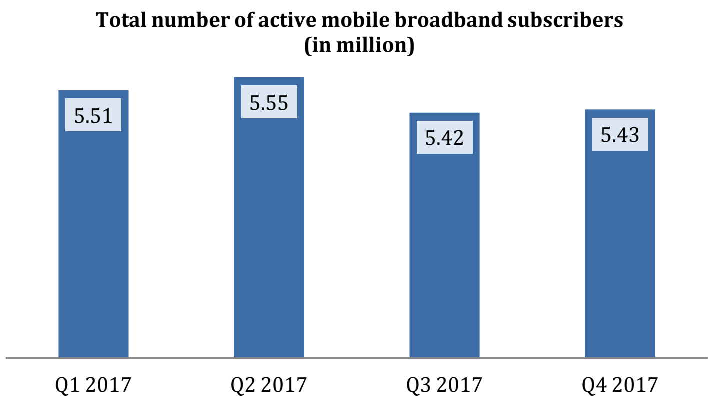
There haven't been any significant changes in market shares in the analyzed year, in terms of the number of users.

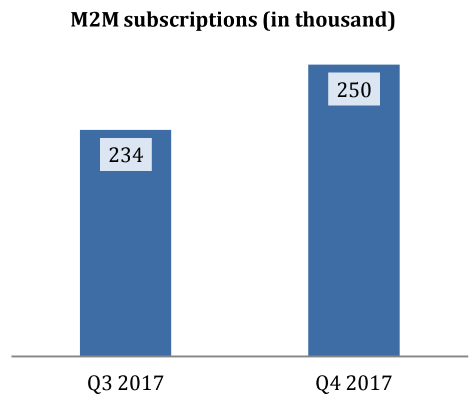
Market share in terms of the number of users – Q4 2017



The number of active mobile broadband subscribers in the two previous quarters of 2017 was approximately 5.4 million. The number of M2M subscriptions has increased in the observed period, reaching approximately 250 thousand M2M subscribers in Q4.

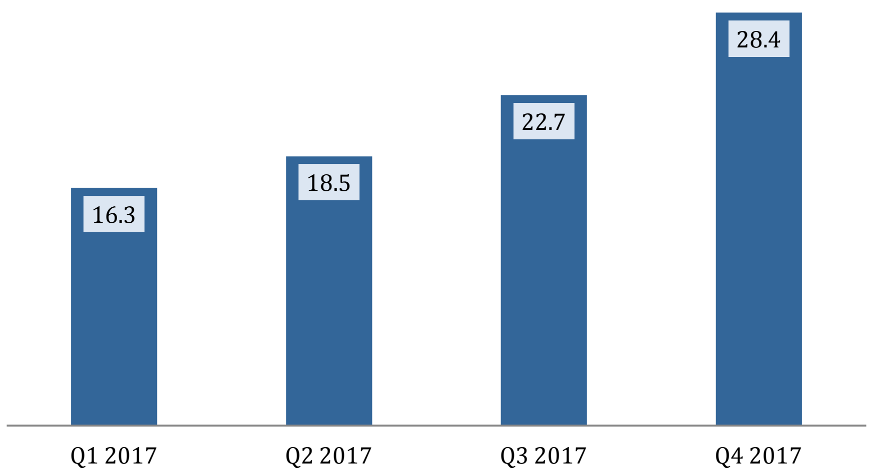
Number of active mobile broadband subscribers[1] and M2M subscribers





Data transmission over mobile network showed growth in the analyzed period, amounting to over 28 million GB in Q4 2017, which means that a mobile broadband subscriber used on average 61MB daily, or approximately 1.9 GB a month.

Mobile Internet traffic (million GB)

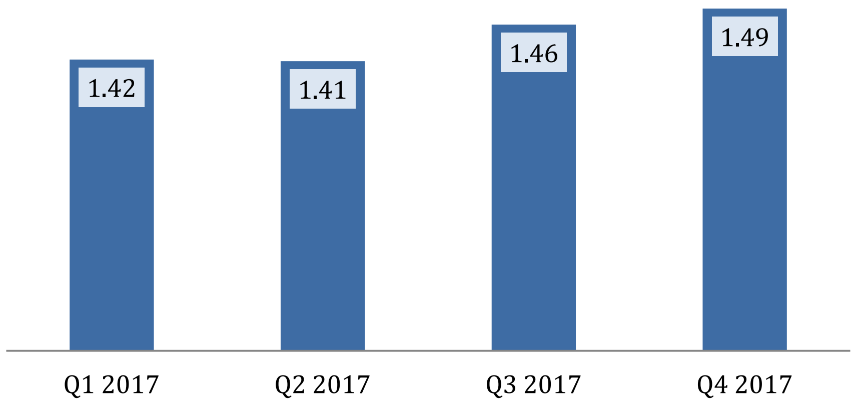


[1] Active mobile broadband subscribers include subscribers of data transmission services contracted together with voice services, or as an additional package to the voice tariff plan, as well as subscribers of data transmission services contracted as single services, separately from voice service (data card subscriptions, USB modem/dongle subscriptions, tablet subscriptions and similar).

Internet Services

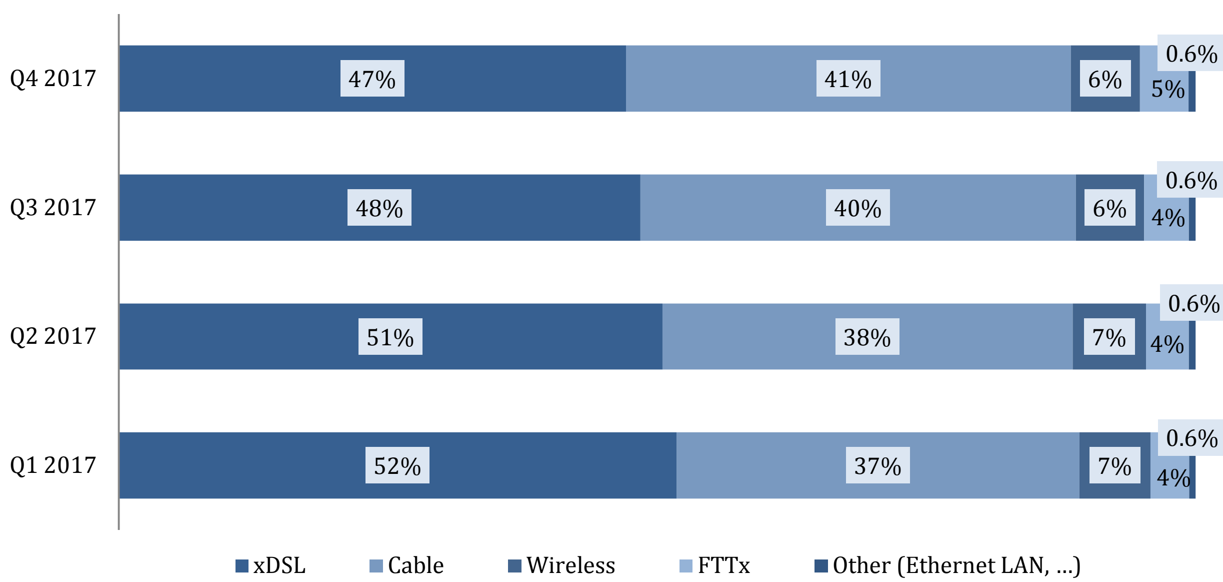
The number of fixed broadband Internet access subscribers was on a slight increase in the two previous quarters of 2017, only to reach approximately 1.5 million in Q4 2017.

The number of fixed broadband subscribers (million)



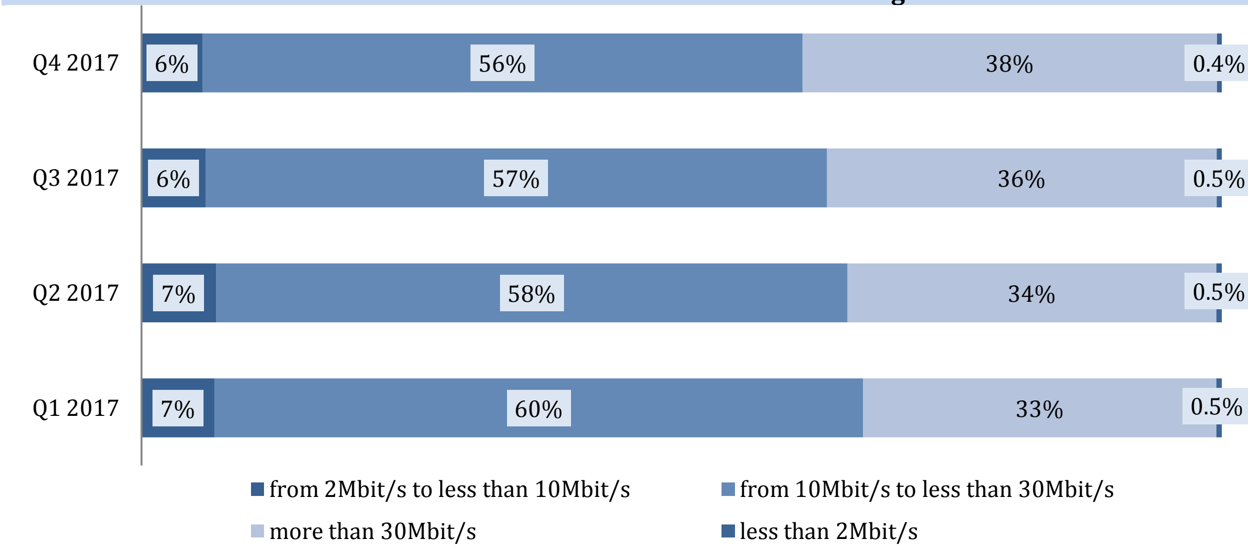
XDSL and cable access users are dominant in the fixed broadband Internet subscribers' structure. The number of xDSL subscribers showed a slight drop and the cable access a slight rise in the analyzed period.

Number of subscribers according to type of access



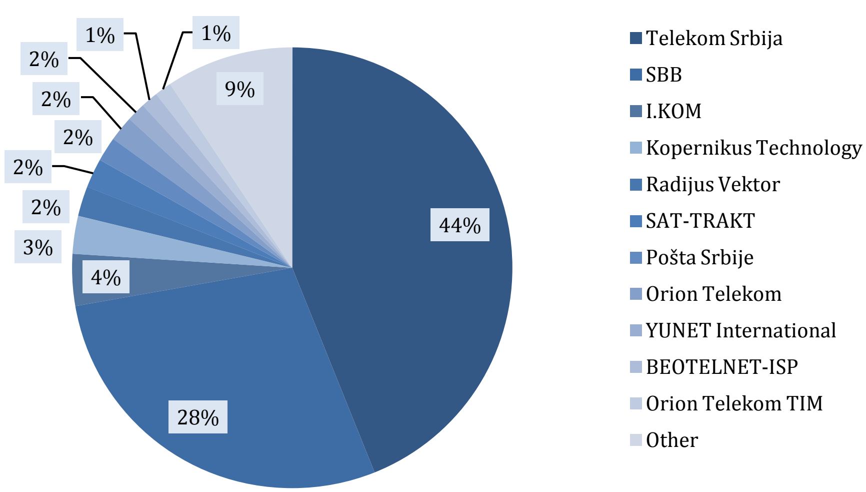
The majority of subscribers in all four analyzed quarters had Internet access rates between 10 Mbit/s and less than 30 Mbit/s, while the number of subscribers with access rate of over 30 Mbit/s is constantly rising.

Number of fixed broadband Internet subscribers according to access rate



There haven't been any significant changes in the market shares over the analyzed quarters, in terms of the number of subscribers.

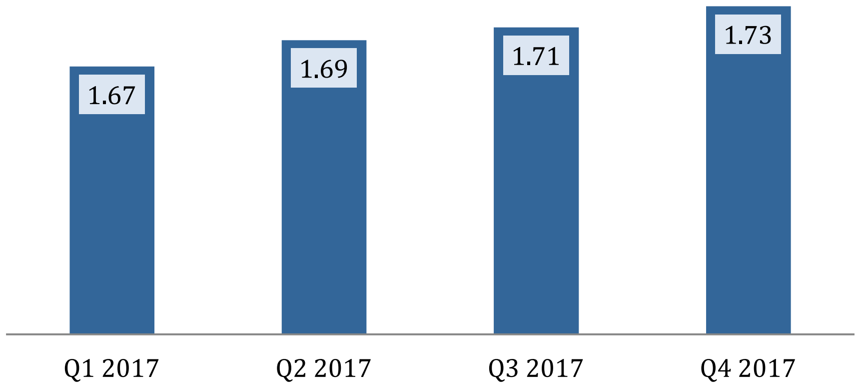
Market share in terms of number of fixed broadband subscribers – Q4 2017



Media Content Distribution

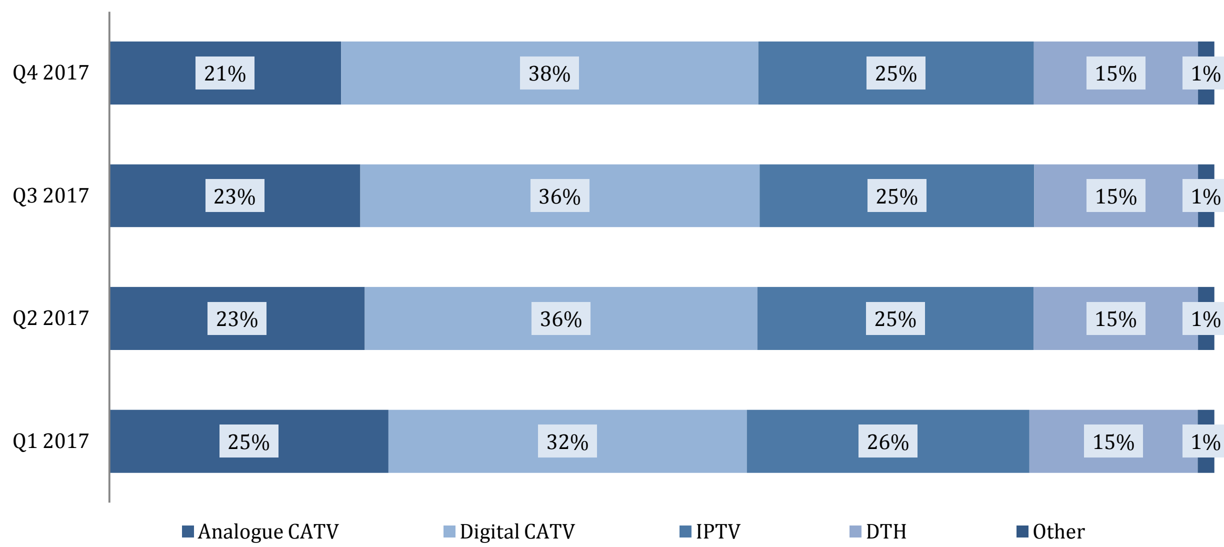
The number of media content distribution service subscribers was on the rise in the observed period, amounting to 1.73 million in Q4 2017.

The number of media content distribution service subscribers (million)



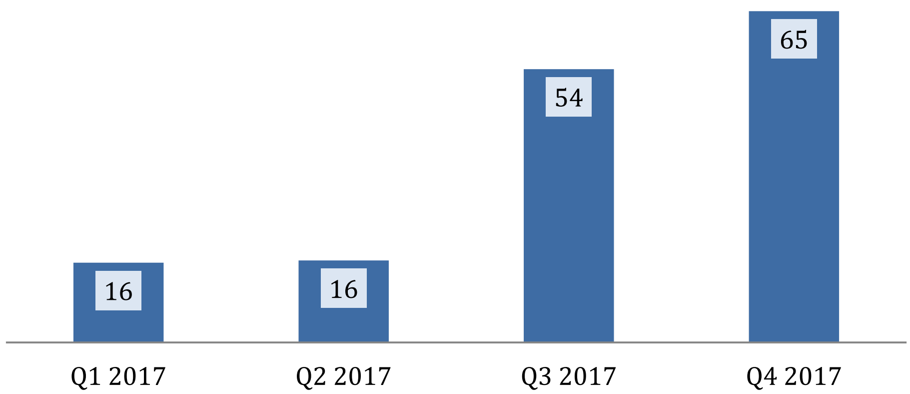
In Q4 2017, the majority of subscribers used CATV distribution, either analogue or digital (almost 60%), whereas the smallest number of subscribers used wireless network or Internet content distribution (around 1%).

Media content distribution subscribers by type of distribution



The number of subscriber requests for additionally charged channels, including video on demand, content recording, viewing of TV content on mobile devices, content rewinding etc, has been on the rise throughout 2017, only to reach, in the last quarter, approximately 65 million of requests, i.e. approximately 17 requests per subscriber a month. The number of realized requests for the video on demand service in Q4 2017 was around 2 million.

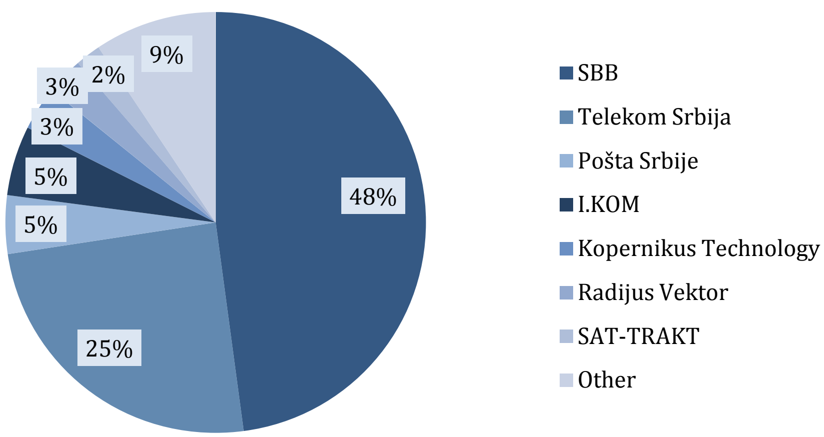
Number of subscribers of the additionally charged channels (thousand)



In Q4 2017, around 38% of media content distribution subscribers with the possibility to have additional channels (with film, sports, children programmes etc.) paid for such programmes.

There haven't been any significant changes in market shares over the three-month period, in terms of the number of subscribers. The leading operators make up approximately 91% of the media content distribution market.

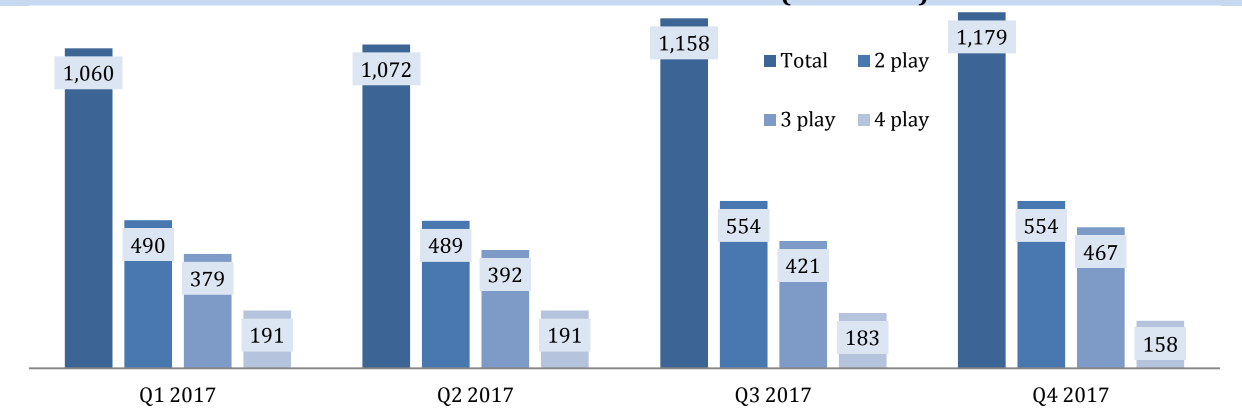
Market share in terms of the number of subscribers in Q4 2017



Bundled Services

The number of bundled service subscribers in Q4 2017 was almost 1.2 million. Packages offering two services were the most used, whereas the least used were quad-play packages that include mobile telephony.

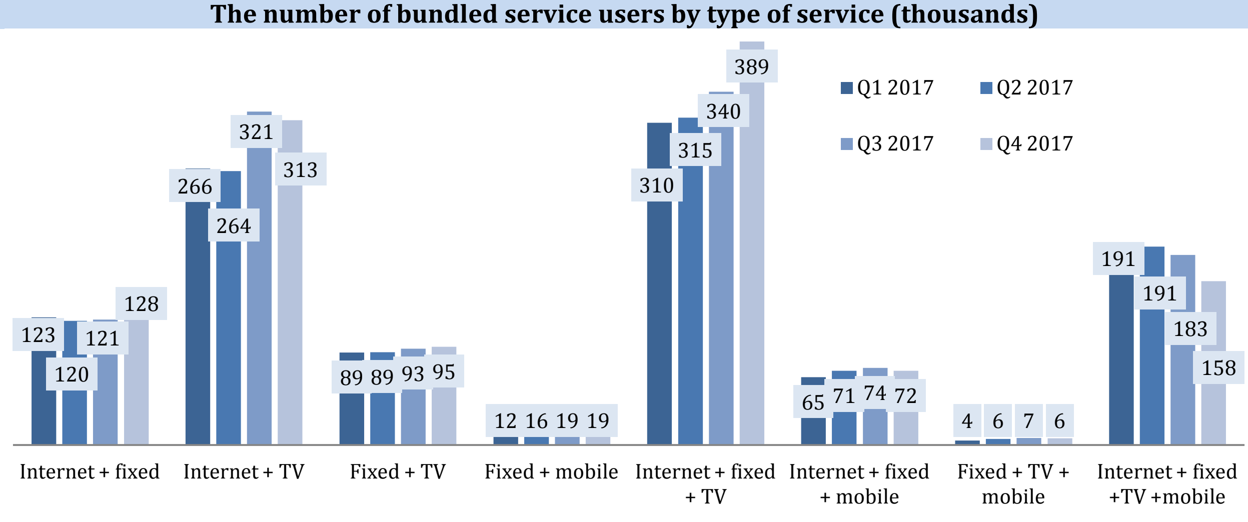
The number of bundled service users (thousands)



Most subscribers of two-play bundles used the packages offering broadband Internet and media content distribution, whereas the most popular triple-play package included broadband Internet, fixed telephony and media content distribution. The number of quad-play users was in decline in the observed period, which was expected, taking into account that this service package has not been available on the market to new subscribers since the second half of 2017.

In terms of type of service, the number of subscribers of triple-play packages, containing Internet, fixed telephony and media content distribution has grown the most, while the mobile network bundled services have dropped – as expected, since they have not been available on the market to new subscribers since the second half of 2017.

The number of bundled service users by type of service (thousands)



The most popular bundled service is the Internet access, whereas mobile telephony is generally purchased as a stand-alone service.

The share of bundled and stand-alone services purchased in Q4 2017