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 2018

The Overview presents the data for the fourth quarter of 2018 along with comparative data for the three previous 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 2017 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 over 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, whereas as of the first quarter 2018, the Agency started to collect data from virtual mobile operators.

Quarterly electronic communications market indicators referring to Internet services 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 2017 collected in the annual questionnaires.

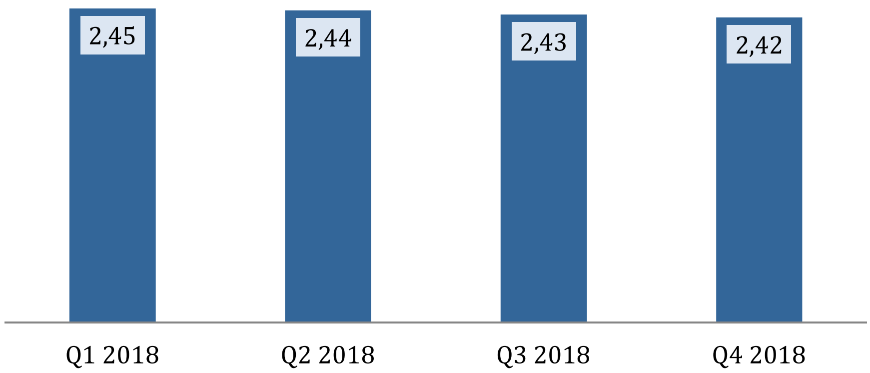
Quarterly electronic communications market indicators referring to media content distribution include the data for the leading operators that make up approximately 93% of the market, in terms of the number of subscribers, whereas the data for the remaining 7% of the market were estimated based on the data for 2017 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 2017 collected in the annual questionnaires.

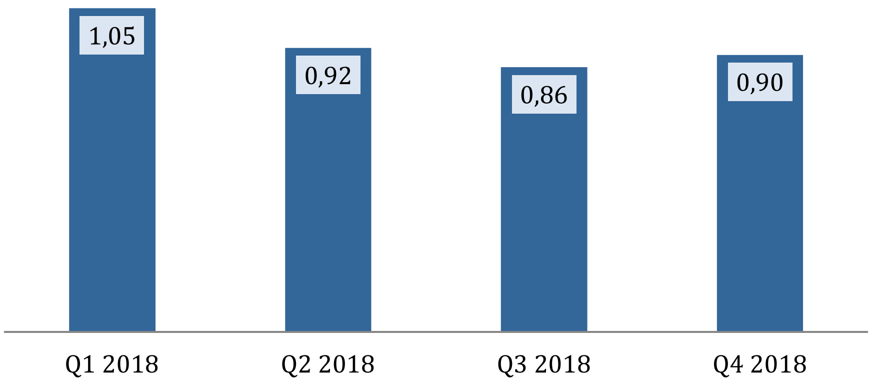
Public Fixed Telecommunications Networks and Services

The number of fixed telephony subscribers continued to drop in Q4 2018, while the generated traffic slightly increased compared to the previous quarter. Approximately 2.42 million fixed telephony subscribers generated approximately 900 million minutes of traffic in the last observed quarter, which means that a fixed telephony subscriber on average has spent 4.1 minutes a day on calls.

Number of fixed line subscribers (million)

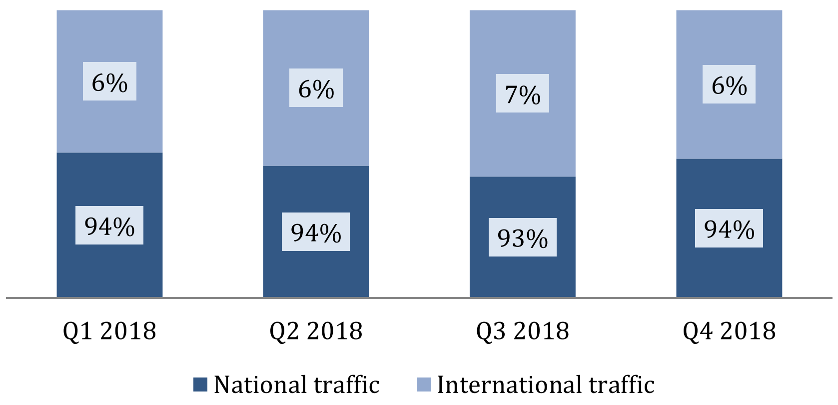


Total fixed telephony traffic (billion minutes)



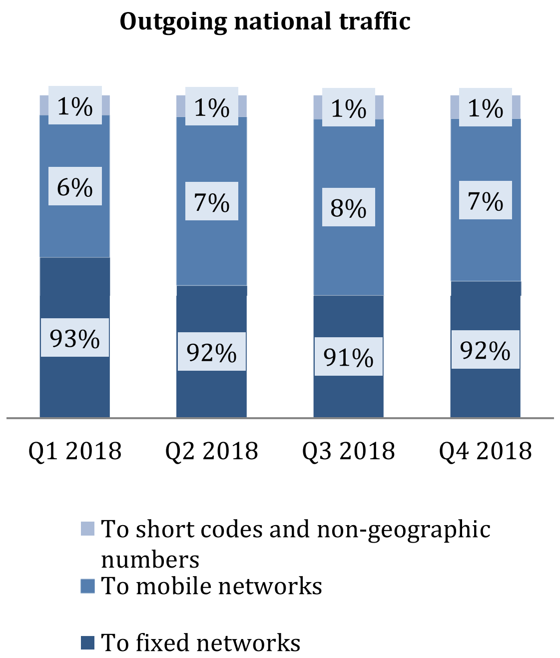
88% of the fixed telephony subscribers are natural persons, i.e. private users, while the subscriber structure remains unchanged in the analyzed quarters. In all observed quarters, the largest share of the fixed telephony traffic is accounted for by the national traffic, with 94% in Q4 2018.

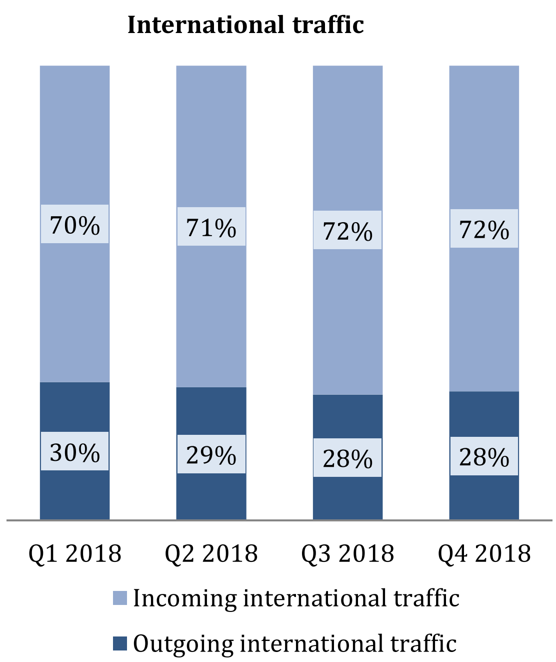
Fixed telephony traffic structure



The outgoing calls from fixed network are mostly directed towards other fixed networks, while the international traffic is dominated by incoming calls.

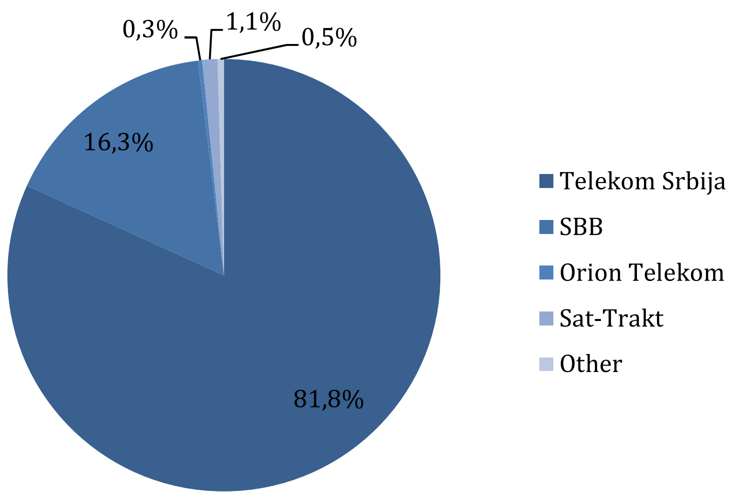
Structure of national and international traffic in fixed telephony





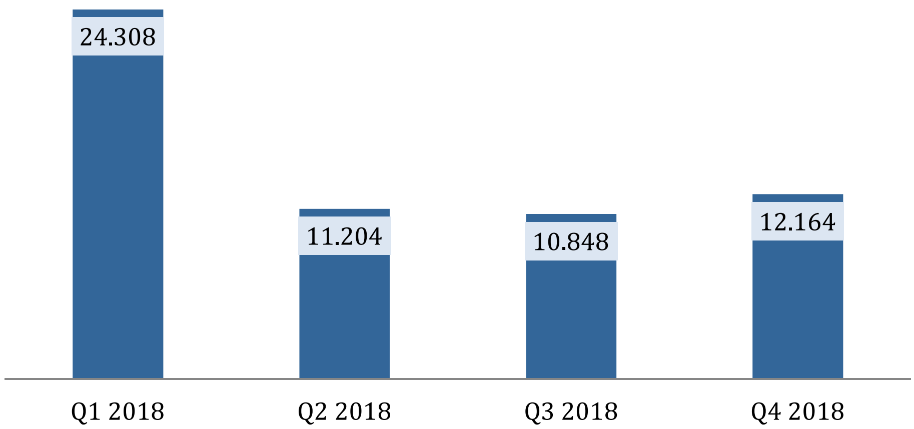
Below is shown the leading operators' market share according to the number of subscribers in Q4 2018.

Operators' market share according to number of subscribers in Q4 2018



The number of portings in the fourth quarter of 2018 was approximately 12.2 thousand (around 4.1 a month), showing a slight increase compared to the previous quarter.

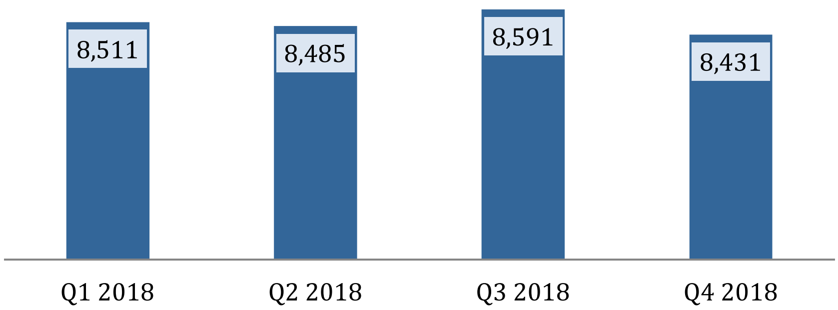
Fixed telephony number portings per quarter



Public Mobile Telecommunications Networks and Services

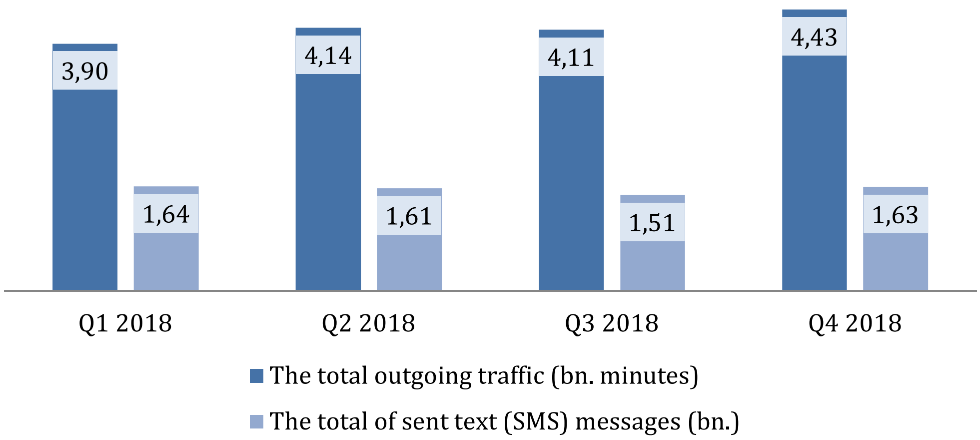
In Q4 2018, there were 8.4 million active mobile telephony subscribers, that generated approximately 4.4 billion minutes of national and international voice traffic and sent approximately 1.6 billion SMS messages. On average, a mobile user spends 5.8 minutes a day on calls and sends 2 text messages. On the mobile networks market, a slight decrease in the number of active mobile telephony subscribers has been observed in Q4 2018, by approximately 1.9%.

Total number of active mobile telephony subscribers (million)



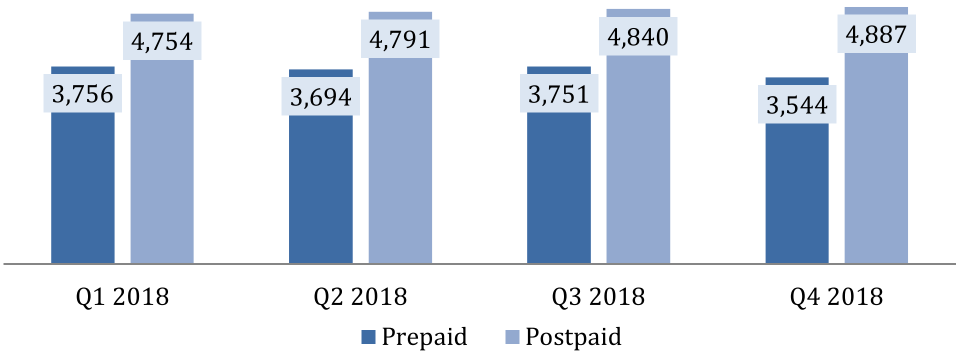
Compared with the previous quarter, the generated voice traffic in mobile telephony has increased by approximately 8%. SMS traffic also increased in Q4 2018, by approximately 8%.

Generated voice and SMS mobile telephony traffic



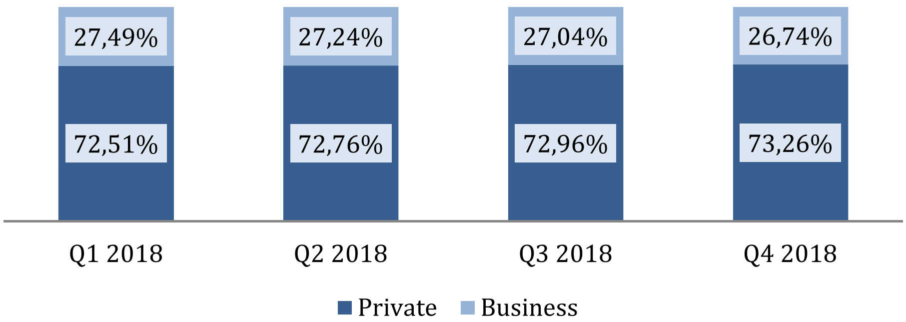
The number of postpaid users has shown a moderate increase in Q4 2018, whereas that of prepaid users decreased slightly, compared with the third quarter 2018.

Number of prepaid and postpaid subscribers (million)



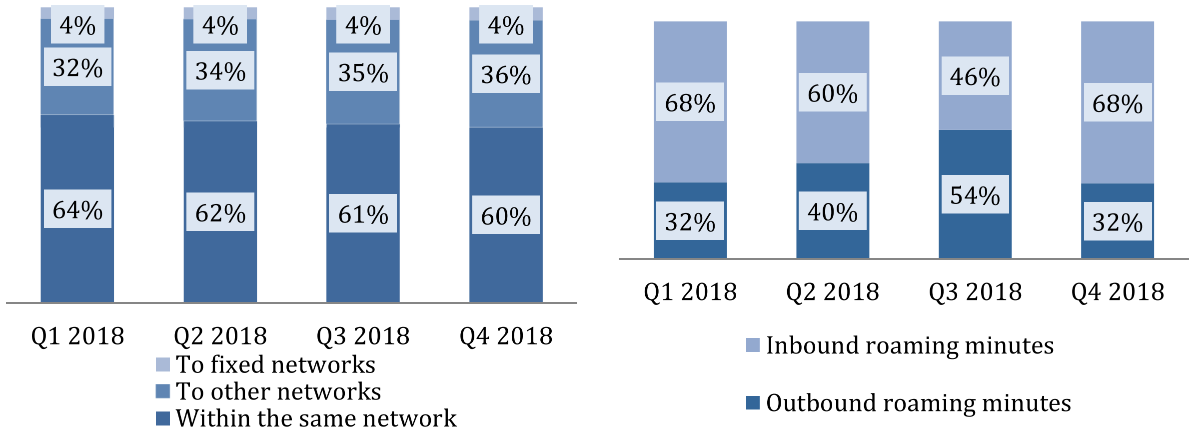
The majority of postpaid subscribers are natural persons, accounting for around 73%, the same as in other observed quarters.

Postpaid subscriber structure



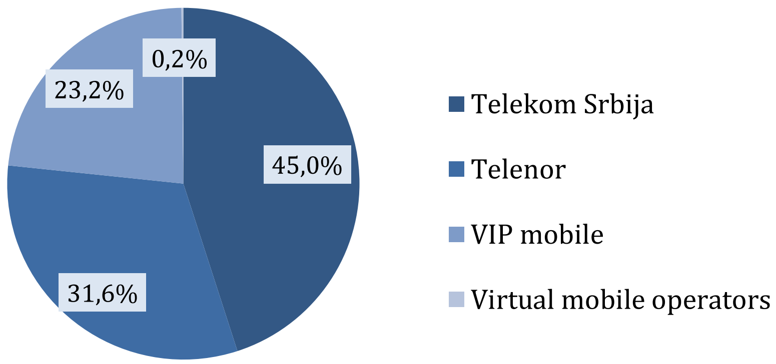
Most of the outgoing traffic has been generated within the same network (60% in Q4 2018). As for the roaming, the subscribers of foreign networks generated more roaming traffic than the subscribers of national networks abroad.

Structure of mobile networks outgoing traffic



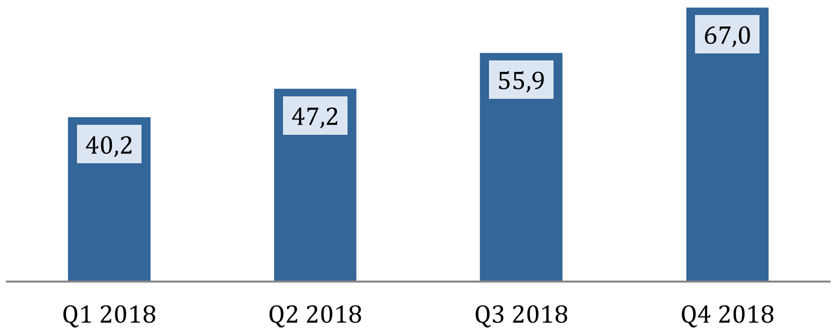
There haven't been any significant changes in market shares in terms of the number of users, compared with the previous quarter.

Market share in terms of number of users in Q4 2018



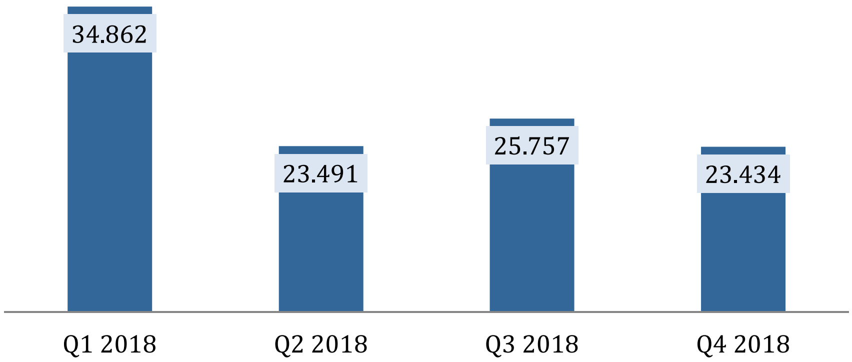
Data transmission over mobile network has showed growth in the analyzed period, amounting to 67 million GB in Q4 2018, which means that a mobile broadband subscriber used on average 131 MB daily, or almost 4 GB a month. The average quarterly growth of mobile Internet traffic in 2018 was around 19%.

Mobile Internet traffic (million GB)



The number of mobile telephony number portings was approximately 23.4 thousand in the fourth quarter 2018, or around 7.8 thousand per month, which is a slight decrease compared to the previous quarter.

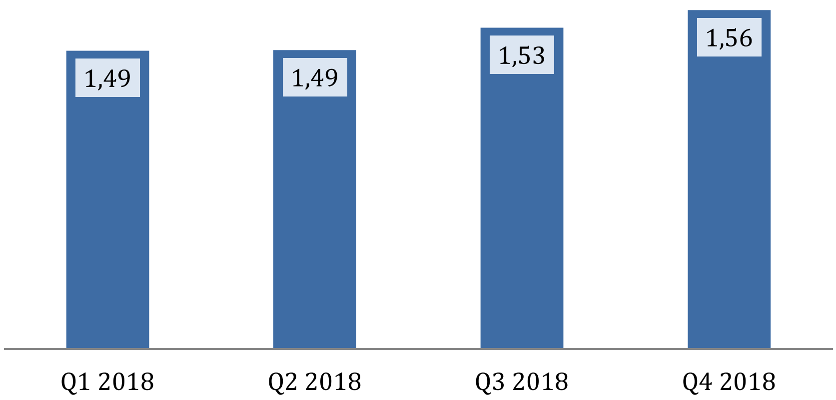
Mobile telephony number portings per quarter



Broadband Internet Access

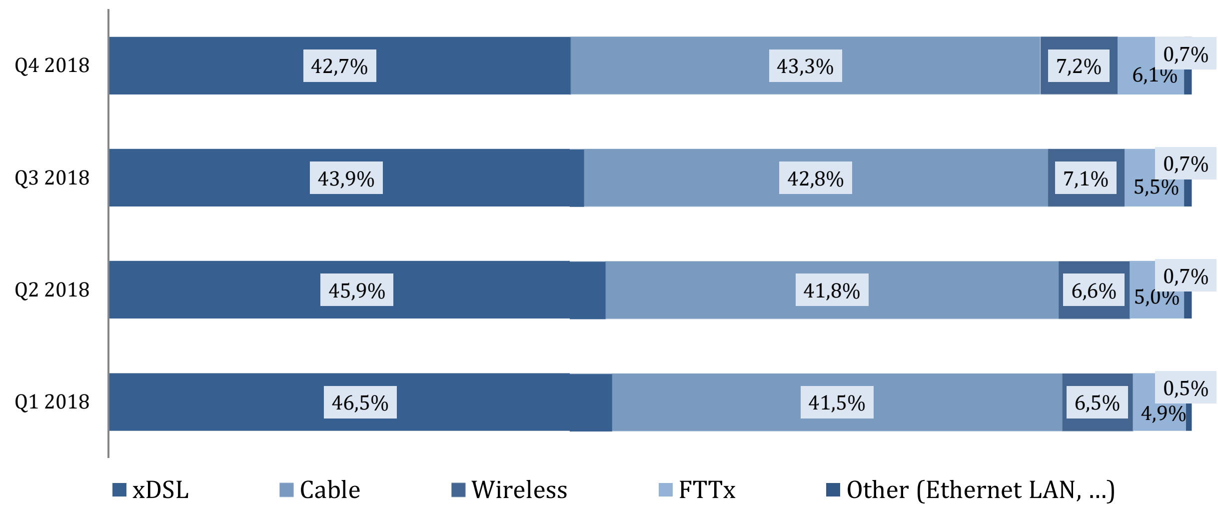
Compared to the previous quarter, the number of fixed broadband Internet access users in Q4 2018 increased by around 2%, amounting to approximately 1.56 million subscribers.

Number of fixed broadband Internet subscribers (million)



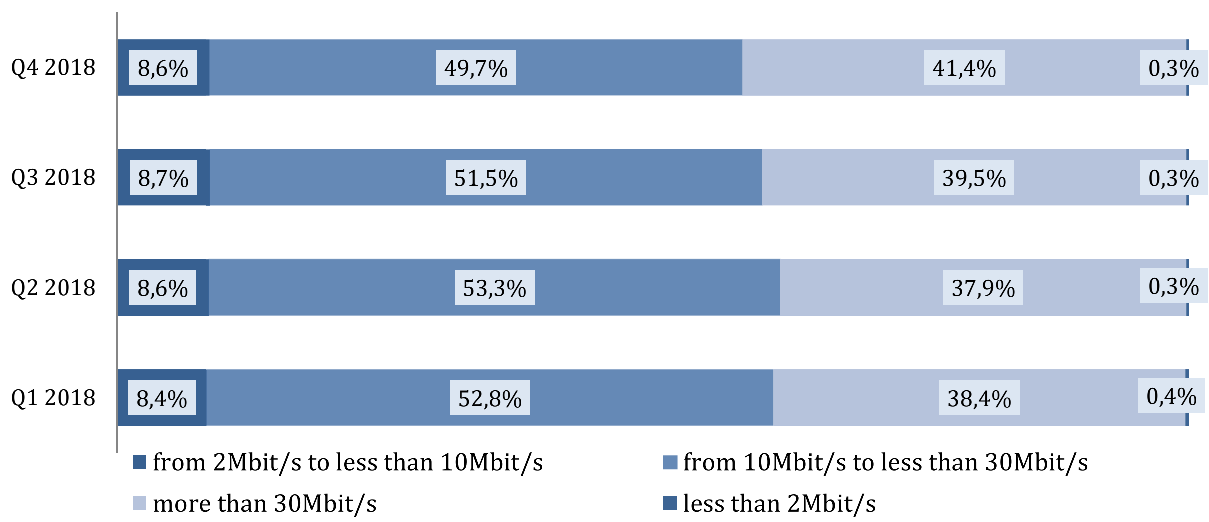
The majority of fixed broadband subscribers have xDSL or cable access. The number of xDSL subscribers is marked by a slight drop, whereas the cable access has somewhat increased in the analyzed period.

Number of subscribers according to type of access



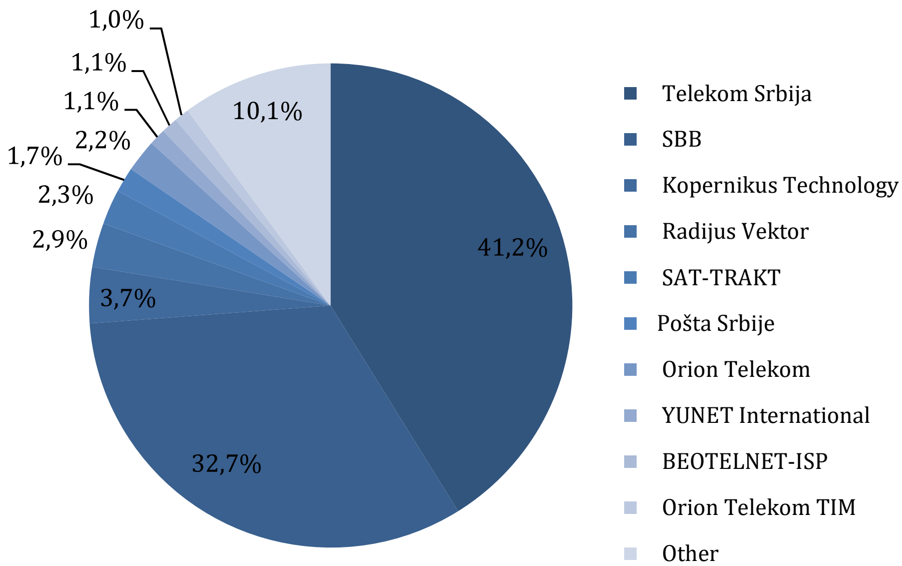
The majority of subscribers has had Internet access rates between 10 Mbit/s to less than 30 Mbit/s, while the number of subscribers using access rates of over 30 Mbit/s has shown a slight growth during the whole 2018.

Number of fixed broadband Internet subscribers according to access rate



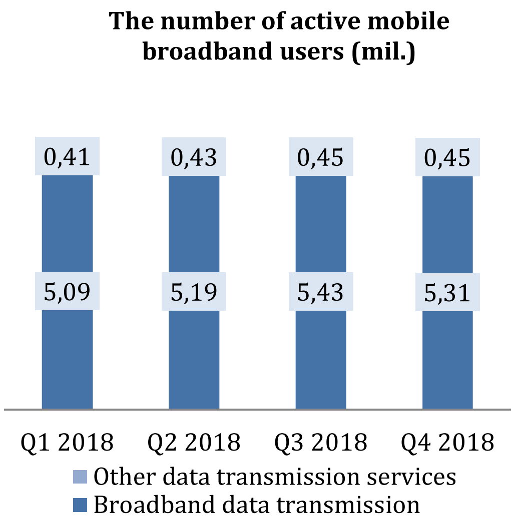
In Q4 2018, there haven't been any significant changes in the leading operators' market shares, in terms of the number of subscribers, compared with the previously observed quarters.

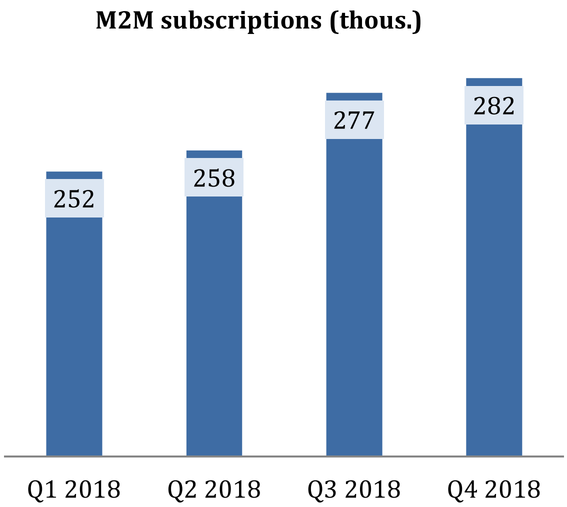
Market share in terms of number of fixed broadband subscribers in Q4 2018



The number of active mobile broadband subscribers in Q4 2018 has slightly decreased compared to the previous quarter, amounting to approximately 5.8 million. In addition, dominant share goes to the mobile broadband data transfer users (around 92%). The number of M2M subscriptions is on the rise, reaching around 282 thousand in Q4 2018.

Number of active mobile broadband subscribers* and M2M subscribers



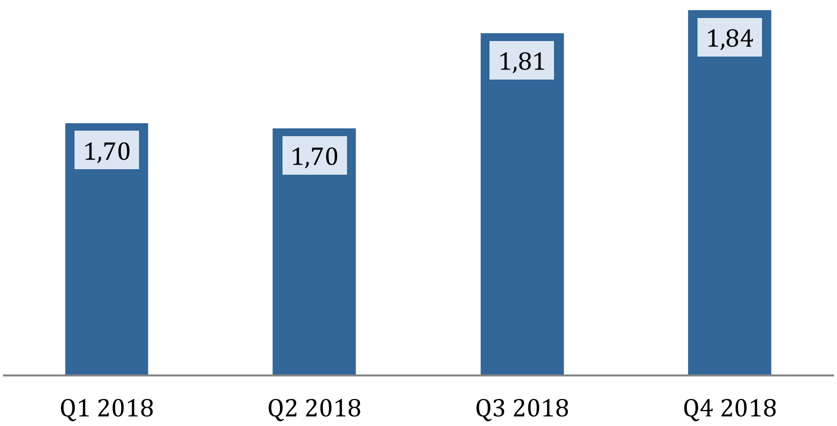


** Active mobile broadband subscribers include subscribers of data transmission services contracted together with voice services, or as an additional package to the voice tariff plan, whereas subscribers of other data transmission services* *represent mobile broadband transfer users with single service agreement, separate from voice service (data card subscriptions, USB modem/dongle subscriptions, tablet subscriptions and similar).*

Media Content Distribution

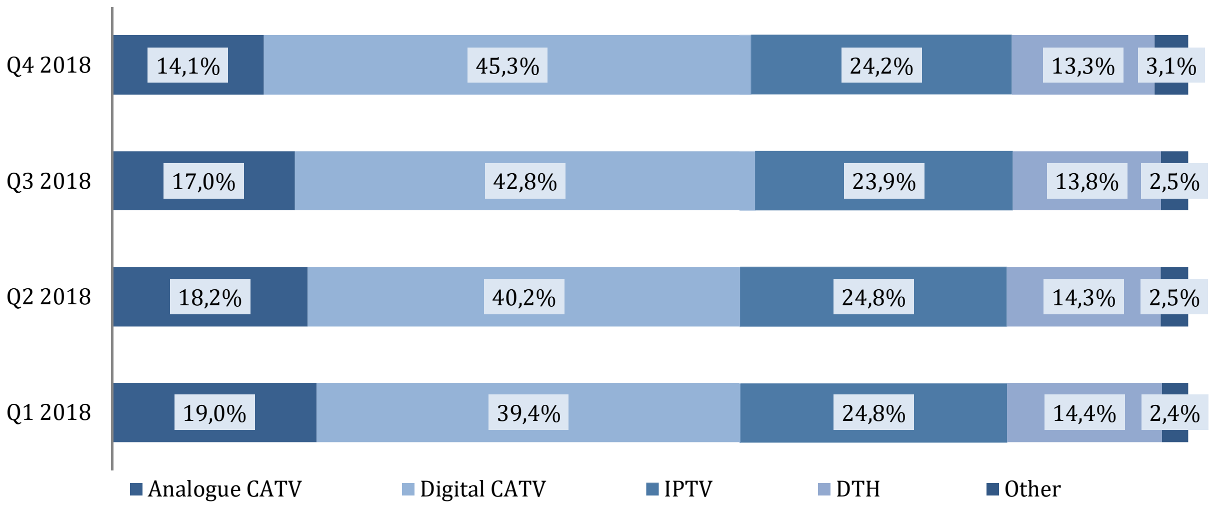
The number of media content distribution service subscribers has increased in the observed period, amounting to approximately 1.84 million in Q4 2018.

Number of media content distribution service subscribers (million)



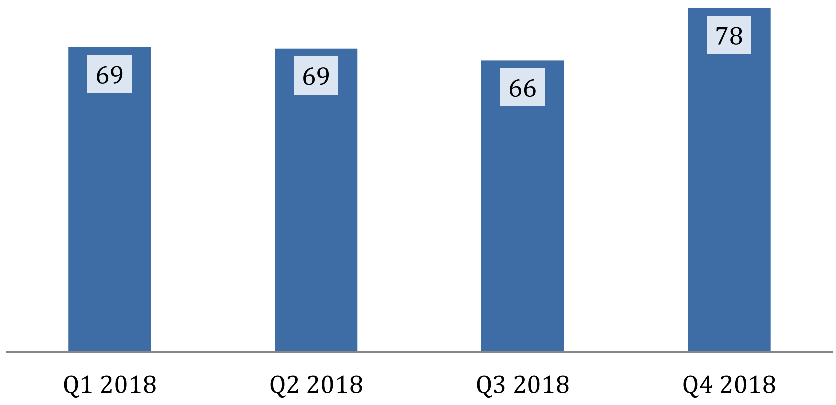
In Q4 2018, the majority of subscribers used CATV distribution, either analogue or digital (almost 60%). The number of IPTV has also been slightly rising, whereas wireless network or Internet content distribution were the least used.

Media content distribution subscribers by type of distribution



The number of met requests for additional services, including video on demand (VoD), content recording, TV on mobile devices, playback etc, marked an increase compared to Q3 2018, amounting to approximately 78 million requests, or around 20 requests a month per user. The number of met VoD requests in Q4 2018 was around 3.2 million.

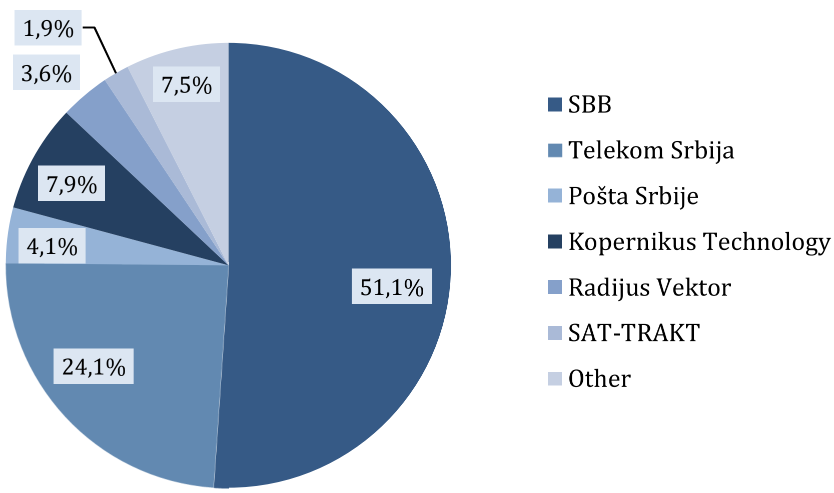
Number of met requests for additional services (million)



In Q4 2018, around 28% of media content distribution subscribers with the possibility to have additional channels, subscribed to such programmes.

As for market shares of the leading operators, in terms of the number of subscribers, there haven't been any significant changes compared to the previous quarter. The market shares of the leading operators account for approximately 93% of the analyzed market.

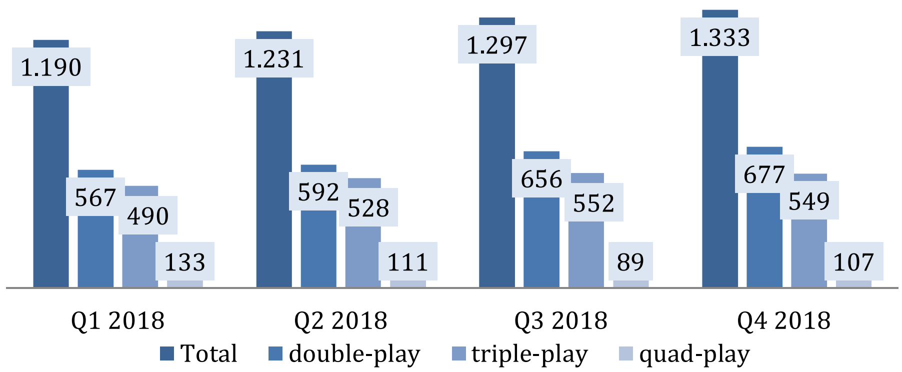
Operators' market share in terms of number of subscribers in Q4 2018



Bundled Services

The number of bundled service subscribers in Q4 2018 increased slightly, compared to the previous quarter, amounting to, 1.33 million. Packages offering two services were most used, whereas least used were quad-play packages that additionally include mobile telephony.

Number of bundled service users (thousands)

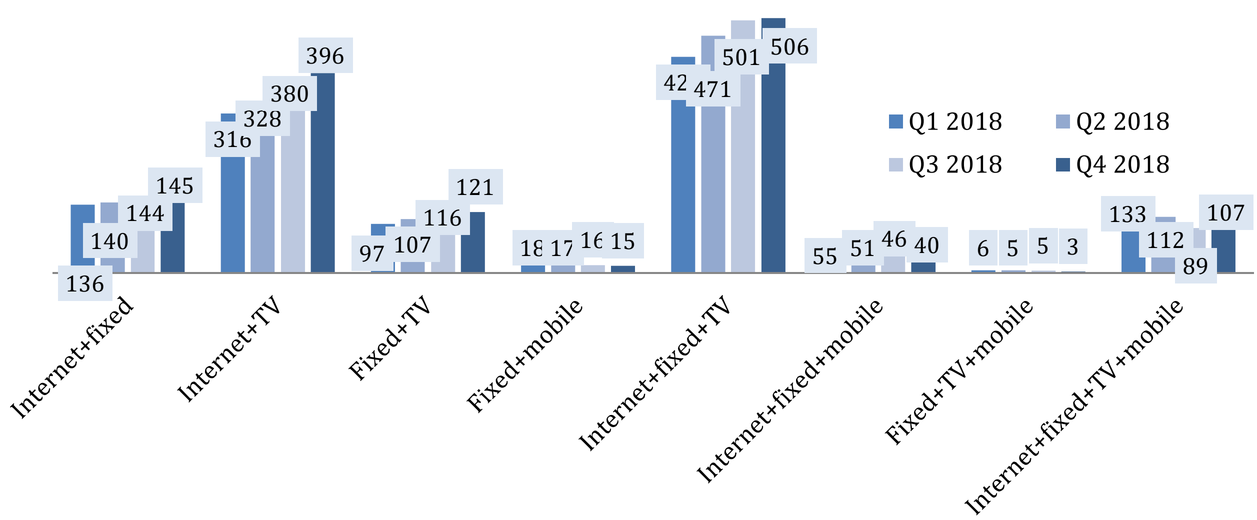


Most subscribers of double-play bundles used packages offering broadband Internet and media content distribution (around 59%), whereas the most popular triple-play package included broadband Internet, fixed telephony and media content distribution (around 92%). In Q4 2018, the quad-play packages including broadband Internet access, fixed telephony, media content distribution and mobile telephony became available again for new users, causing the number of subscribers to rise.

The highest absolute subscriber growth is due precisely to quad-play services, despite their share in the total number of subscribers being on a relatively low level. Double-play package services are also on the rise, among which the most popular is the package offering broadband Internet and media content distribution (around 4%).

Packages offering broadband Internet access, fixed telephony and mobile telephony experienced the highest drop in the number of subscribers in Q4 2018 (around 14%), while the other tiple-play packages are on the rise.

Number of bundled service users by type of service (thousands)



Broadband Internet access is mostly purchased as a bundled service, whereas mobile telephony is generally purchased as a stand-alone service.

Share of bundled and stand-alone services purchased in Q4 2018