

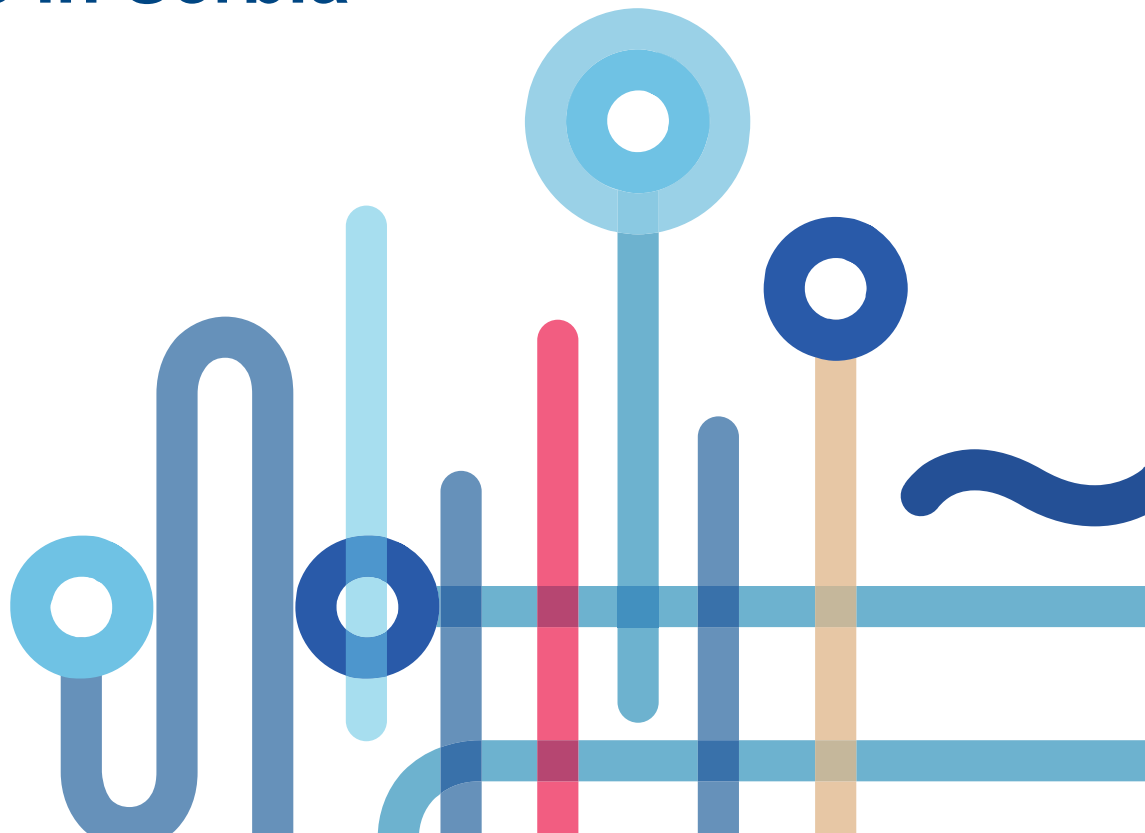
RATEL

Quality of Service in Serbia

Maja Mitić



REPUBLIKA SRBIJA
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RATEL QoS Monitoring

The Rulebook

Rulebook on quality parameters for publicly available electronic communication services and monitoring of electronic communication activity (Official Gazette of RS no. 73/11 and 3/14)

& Guidelines for the Open Internet

Field measurements



Mobile network
service



Broadband IAS



Media distribution
service

Tools



Mobile network drive test in Serbia since 2017

More than 270 measurement hours

6 000 voice calls

100 000 data sessions

47 cities

All national roads of category one (IA and IB)

Railways

Hot spots

More than 10 000 km of drive test route

More than 50% of population in Serbia

Population and roads data based on:

- ✓ The 2011 census of the Republic Institute of Statistics
- ✓ Regulation on categorization of national roads in the Republic of Serbia

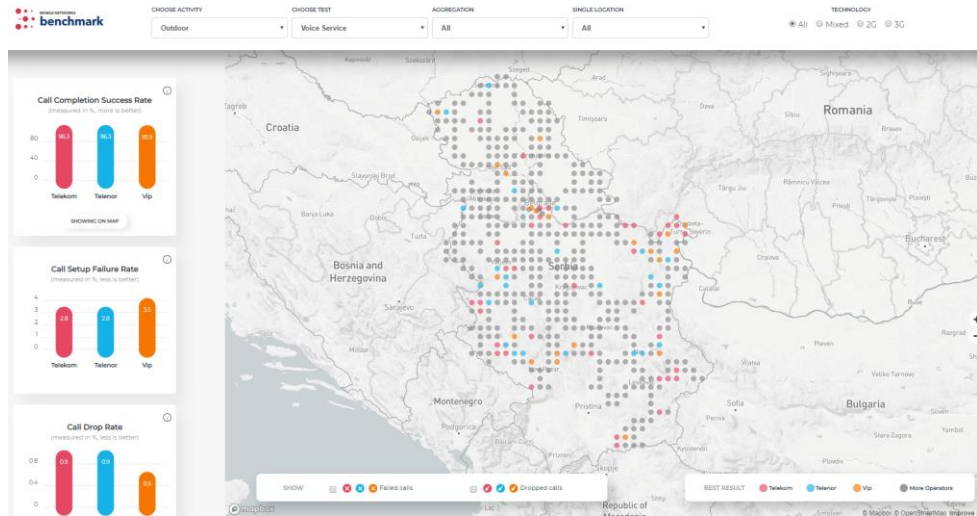


<http://benchmark.ratel.rs>

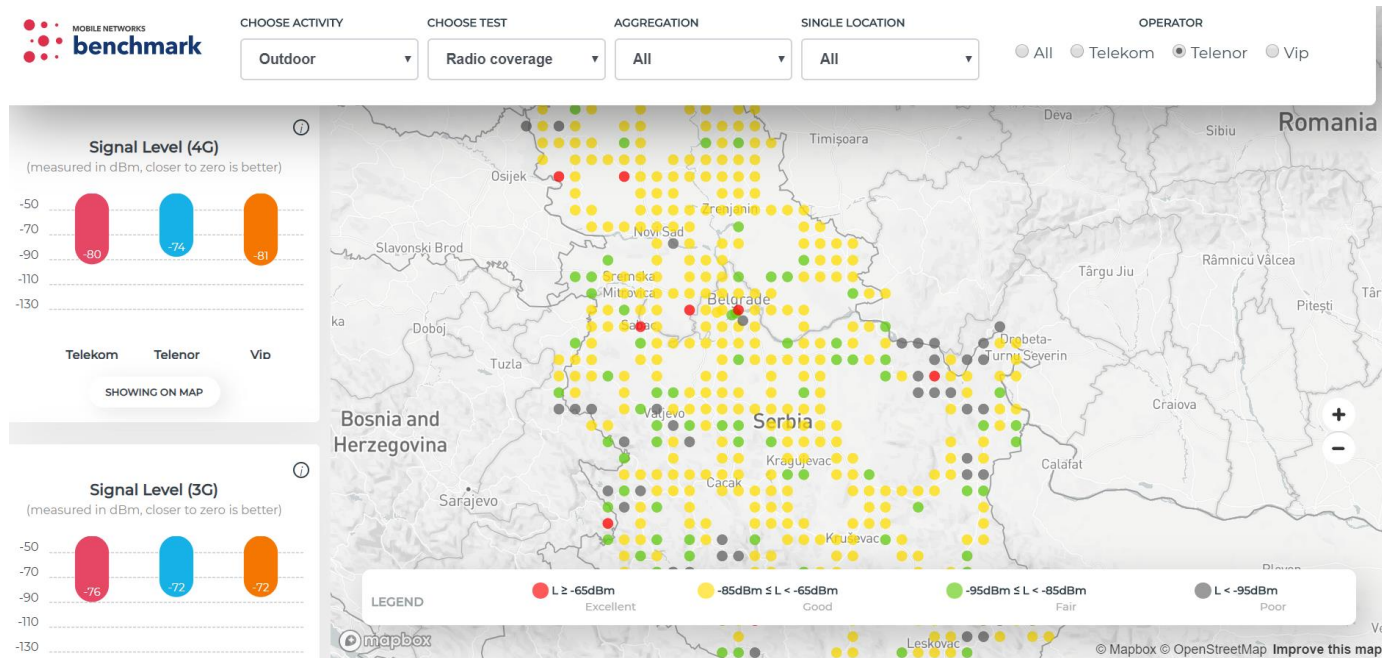


CHOOSE ACTIVITY: Outdoor
CHOOSE TEST: YouTube
AGGREGATION: All
SINGLE LOCATION: All
TECHNOLOGY: All (selected), Mixed, 2G, 3G, 4G

- Publicly available website
- Available for desktop, laptop and mobile devices
- Available in Serbian and English language
- Selectable filter criteria
- Zooming down to the street level, 10 zoom levels
- Comparative operators results



Radio coverage

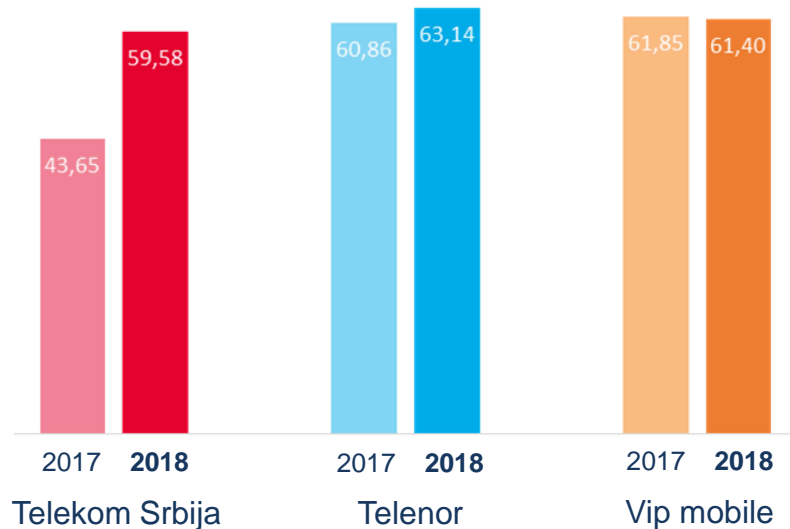


Trend analysis

<http://benchmark.ratel.rs>



Comparative overview of the results achieved in 2017 and 2018



RATEL NetTest

Measuring the quality of Internet connection

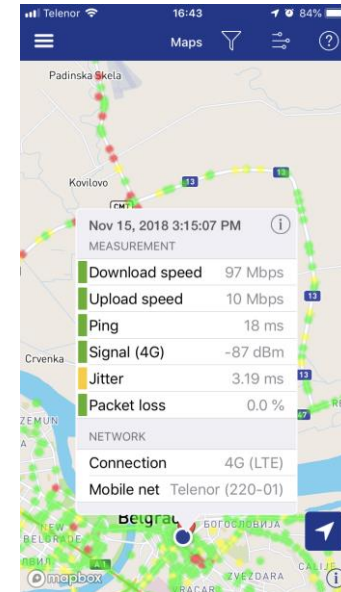
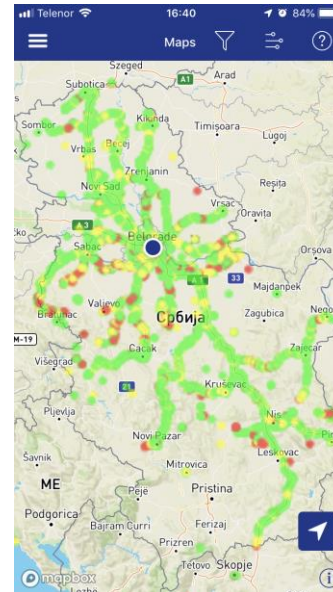
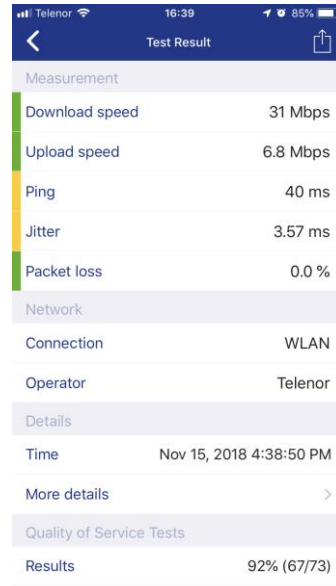
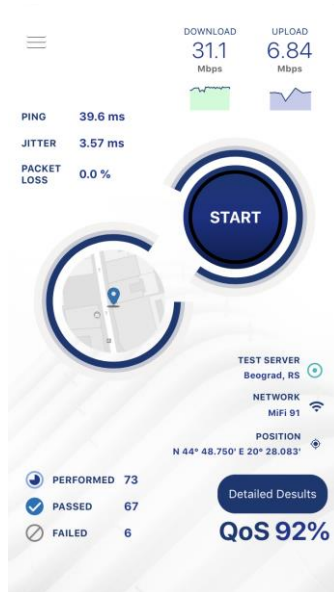
<http://nettest.ratel.rs>

- Tool available since 2016, upgraded in 2018
- Google Play & App Store
More than 30 000 app users
- QoS measurements in the context of net neutrality
- Zero measurements
- GDPR: Data anonymization when displaying measurement results
- Results in the open data format (csv, xml, json)



RATEL NetTest: Measurements and results

<http://nettest.ratel.rs>



Thank you

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