Spotlight 5.1

How the COVID-19 pandemic has recalibrated expectations of reasonable data consumption and highlighted the digital divide

Massive increases in data traffic herald greater use of online platforms and underscore the importance of including currently excluded users.

Around the world, the COVID-19 pandemic has resulted in millions of people using videoconferencing for working and learning from home and other activities. The three main platforms reported around 700 million daily users in March–April 2020. Adding in other platforms, the number of users was equal to roughly one-tenth of the world's population. Zoom's average number of users jumped from 10 million in December 2019 to 300 million in April 2020.[1] Cisco's Webex recorded 324 million users in March 2020, doubling from January 2020.[2] Microsoft Teams had 75 million daily users in April 2020.[3] Being homebound also resulted in more use of social media, video streaming, and online gaming.[4]

These online activities have driven massive increases in data traffic. In Spain, internet traffic increased 40 percent in the week following the shutdown, while mobile data traffic rose 25 percent.[5] The German internet exchange DE-CIX, one of the world's largest, recorded a 10 percent increase in traffic during the first two weeks in March, when shelter-at-home was implemented in the country, breaking the world record for data throughput. Videoconferencing traffic on DE-CIX rose 50 percent, and gaming and social media traffic grew 25 percent.[6]

For the most part, telecommunications networks have stood up well to this massive increase in traffic. Networks are engineered to handle peak traffic, resulting in large parts of the day where capacity is more than sufficient. Similar to flattening the curve

for COVID-19, telecommunications operators worked to smooth fluctuations in traffic flows during the height of the pandemic in spring 2020. Widespread deployment of high-capacity fiber-optic backbone and access networks has proved vital for dealing with the surge in traffic. During COVID-19, regulators have increased mobile data capacity by releasing spectrum,[7] and streaming video services have reduced traffic 25 percent by using compression technology.[8] Some telecommunications operators have increased their data allowances, and some have provided free data and smartphones to health workers.

Telecommunication networks have thus far proved up to the task in the new social distancing world for those who already have access, but limitations have prevented the transition of vital public services, such as education, to the online space, with major repercussions for schooling. Many predict that videoconferencing will continue to be used more after the pandemic, though not at the same high level.

The ability to use Web conferencing tools has shone a spotlight on the digital divide. Many students around the world have been excluded from online learning because they lack broadband access and computers. Concerns about security surround video conferencing[9] and data privacy for big data analytics used during the pandemic.[10] Telecommunication companies have also been criticized for waiting for a crisis to offer pro-consumer data allowances.

Notes

1. Zoom (2020).
2. Mukherjee (2020).
3. Spencer, Nadella, and Hood (2020).
4. Sandvine (2020).
5. See Telefónica (2020).
6. DE-CIX (2020).
7. GSMA (2020).
8. Florance (2020).
9. Paul (2020).
10. OECD (2020).

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