



CRTC Exhibit 1 - Telecom Notice of Consultation CRTC 2024-318

Oversubscription Ratio

Why is the CRTC examining oversubscription ratios?

1. Based on its review of the record of this Hearing (Telecom Notice of Consultation 2024-318) as of 20 May 2025, the Canadian Radio-Television and Telecommunications Commission (CRTC) will examine, amongst other things, the potential benefit of using oversubscription ratios as an indicator for consumers when they shop for Internet services.

As defined in Telecom Regulatory Policy CRTC 2016-496: the oversubscription ratio is equal to the combined service capacity that a group of end-users have subscribed to, divided by the network capacity provisioned to support those end-users.

2. In simpler terms, the oversubscription ratio compares how much Internet capacity has been made available to subscribers at a certain point in a network with how much capacity that network can actually deliver. If too many people use the service at the same time, it can cause congestion, which is experienced by subscribers as a slowdown in speed—the oversubscription ratio helps to understand the degree of that slowdown and congestion that a subscriber can expect.
3. Subscribers are also most likely to experience slowdowns when congestion occurs at the neighbourhood level ¹.
4. As such, for the purpose of finding a metric that is most relevant to subscribers' experiences, **the CRTC is of the preliminary view that the oversubscription ratio of network bandwidth at the neighbourhood level (i.e., at the access node) should be provided to consumers** in addition to other Internet service performance metrics (such as typical speeds during peak periods).
5. Given above, the CRTC requests that, during their appearance at the Hearing:
 - All parties share their views as to whether oversubscription ratios would be a useful service quality metric for consumers and to describe its limitations, if any.
 - Industry parties discuss what would be involved in providing information related to oversubscription ratios to consumers.
 - Academics and parties representing consumer perspectives discuss how oversubscription ratios could be effectively explained and communicated to consumers.

What is the oversubscription ratio?

6. For the purposes of this proceeding, an oversubscription ratio is how much network bandwidth (i.e. speed) an ISP has available to subscribers in an area, like a neighborhood, divided by how much capacity the network at that location is able to offer at all times.
7. For example, if an Internet Service Provider has made available (i.e. provisioned) 1 Gbps service to 10 subscribers in a neighbourhood, those 10 subscribers use the same 1 Gbps uplink to the Internet Service Provider's network. In this example, the oversubscription ratio would be expressed as 10:1. The higher the ratio, the greater the chance for subscribers to experience congestion during peak usage (e.g. video buffering, loss of resolution).
8. Different oversubscription ratios exist at different points in a network, but the oversubscription ratio at the neighbourhood or access node is of particular interest to the CRTC because congestion at this location would be most noticeably felt by subscribers (See Figure 1).

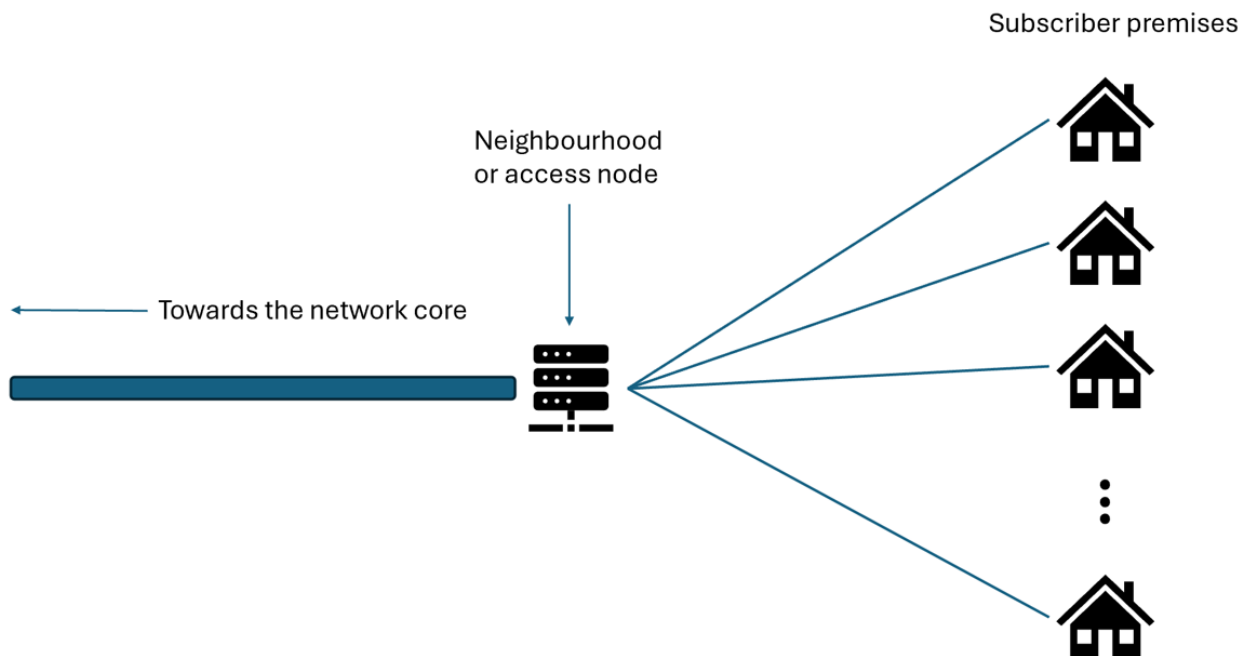


Figure 1: A simplified network diagram showing the location of the neighbourhood or access node

Why would oversubscription ratios be relevant to consumers?

9. Subscribers start to experience congestion (i.e. slowdowns) during peak usage periods when other subscribers are using the Internet at the same time and the speed required to support the activities of all users drops below what the Internet Service Provider is able to provide.
10. An analogy for the oversubscription ratio is checkout counters at grocery stores. A store with fewer checkout counters may be able to serve customers at a reasonable rate during calmer periods, but when there is a rush, customers may end up waiting a long time in the line. Having more checkout counters would allow the store to serve customers quicker during these busier periods (e.g. peak times). See Figure 2.
11. In this checkout counter example, if a customer knew which stores had more checkout counters, they could choose to go to a store with more counters when they know it is going to be a peak period.
12. In a similar manner, consumers may choose to subscribe to an Internet service offering with a lower oversubscription ratio because a higher ratio indicates that a particular Internet service offering is more susceptible to congestion, particularly during peak periods.

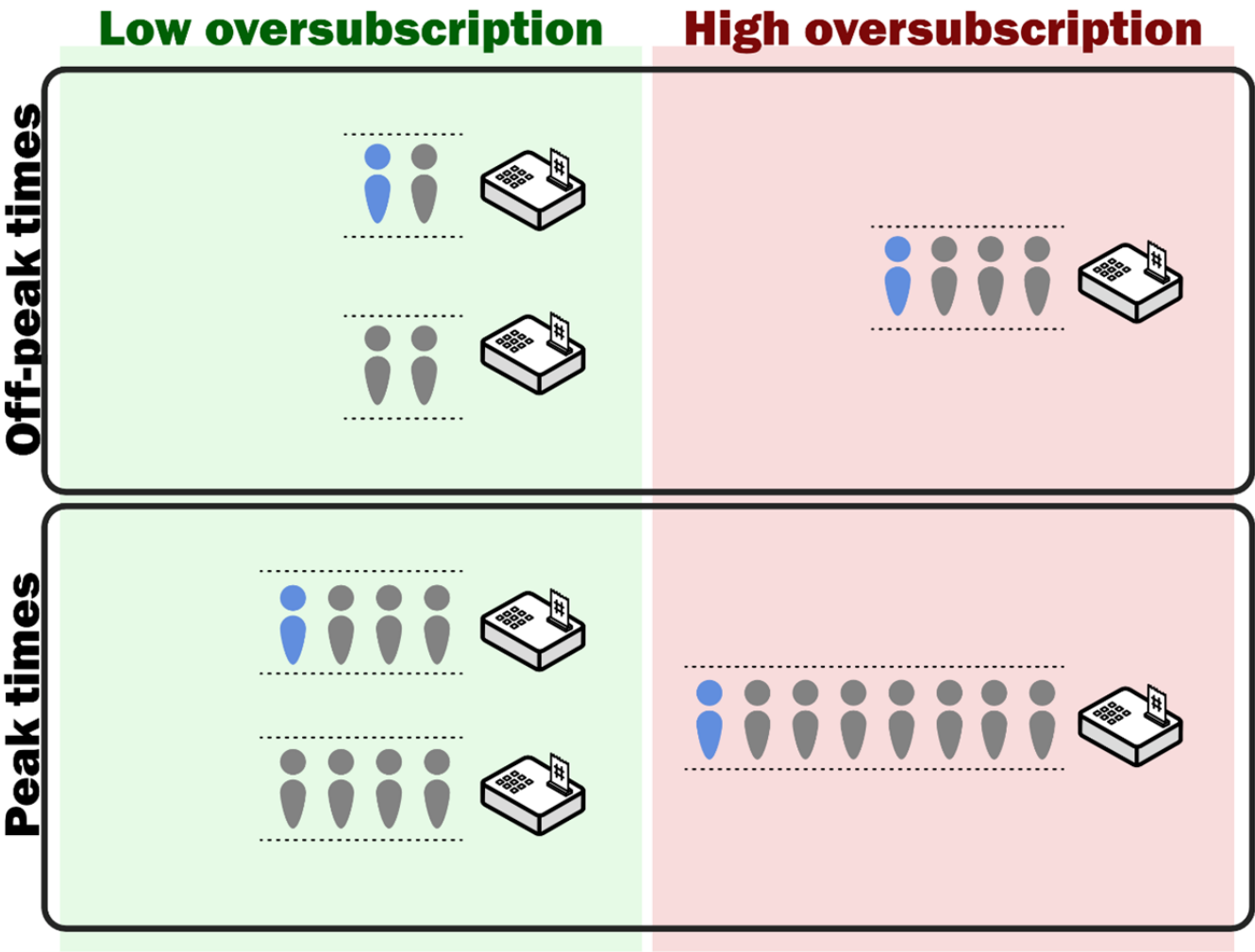


Figure 2: An illustration of the oversubscription ratio using store checkouts as an example

Footnotes

1 For the purposes of this proceeding, the CRTC is referring to the access node when discussing the network at the neighbourhood level.

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