



Google comments on [BEREC's draft Report on the IP Interconnection ecosystem](#)
26 July 2024

Google welcomes the opportunity to submit comments regarding the Body of European Regulators for Electronic Communications (BEREC) BEREC draft BEREC Report on the IP Interconnection ecosystem.

Introduction: Google's interaction with IP interconnection

Google maintains uncongested transit connections to a number of different transit providers to be able to provide universal reachability to all users almost anywhere on the Internet. The vast majority of traffic demanded by users is exchanged via direct interconnections between our network and partner networks around the world via peering or using our Content Delivery Network platform "Google Global Cache," a mutually supportive program requested by and deployed with over 4500 ISPs in over 1600 locations worldwide. We are present on over 90 Internet exchange points (IXPs) and at over 100 interconnection facilities in 28 countries. Google has an open, free and voluntary peering policy, subject to a few technical, commercial and legal requirements. This means we will interconnect with almost any ISP of any size at any of the Internet Exchanges or interconnection facilities we are present at worldwide.

Comments on BEREC's draft report

Google largely concurs with BEREC's analysis that the IP interconnection ecosystem remains a good example of a well functioning, competitive market in the digital economy. It is a dynamic market made up of thousands of entities whose active market practice has been mutually beneficial, driving prices and costs down, and helping to extend the reach and quality of experience of the Internet, to the ultimate benefit of consumers.

An interconnection arrangement in the vast majority of cases reflects a technical discussion among the network engineers of the two interconnecting parties about finding a mutually beneficial and acceptable solution to minimize costs for both parties and provide the best technical solution. This collaborative behaviour exhibited over the past three decades has provided inspiring benefits to users and to the entire Internet ecosystem and looks set to continue to do so in future.

It is important to note that peering and interconnection is a mutually beneficial arrangement of a primarily technical nature rather than commercial: the network engineers who are the main actors in interconnection do not construe these arrangements as 'services' but rather as technical cooperation. They are generally of the view that the volume of traffic does not actually matter, because the interconnection relationship is based on inherent mutual interest to connect. It matters for both networks to be connected directly so that end users get better quality and that operators can both make cost savings compared with alternative routes for exchanging traffic, and these are to the paramount benefit of both sides, regardless of the amount of traffic exchanged.

When it comes to the question of volume of traffic and its potential growth, we continue to observe a flattening of the curve for data growth. In fact, recent research even points to a likely “overproduction in bandwidth” as consumer demand remains flat while network provisioning is more than adequate ([‘A crisis of overproduction in bandwidth means that telecoms capex will inevitably fall’](#), Analysys Mason, July 2024). We are also glad that Google’s and other technology companies’ efforts to invest and innovate in data compression techniques mean that the data traffic growth rate for applications such as video streaming are decreasing. Overall, as noted by BEREC, this means that the costs of transporting data are broadly stable, as technological advances and efficiencies balance any growth in data traffic.

We therefore commend BEREC in particular for noting that:

- *“pricing and cost trends showing that competition and technological progress continue to exert downward pressure on these trends”*
- *“the IP-IC ecosystem continues to be driven by effective market dynamics and the cooperative behaviour of market players”.*

When it comes to disputes we recognise that there have been a handful, but they remain a very small minority of cases and have most often in common the same type of actors involved: larger telecommunication operators. While they remain rare, these issues are not new. The concept of “access power peering” was being discussed over a decade ago¹ - and the European Commission has in the past recognised potential issues of large access providers leveraging their access user bases to force payment from CAPs. For example, remedies were included in the Vodafone/Ziggo merger that required the merged entity to maintain three uncongested transit providers to enable CAPs to have alternative routes to deliver traffic to their customers. See EC COMP cases [M.7000](#) and [M.8864](#).

In our view, the existing regulatory frameworks are sufficient to address these rare cases of dispute in the IP-interconnection market, as demonstrated with these previous cases. There is no systemic market failure in evidence which would justify further regulatory involvement beyond the regular market studies that BEREC has helpfully conducted over the past decade.

Concerning the bargaining situation between CAPs and internet access service providers: ISPs have termination monopoly power; CAPs do not.

The handful of disputes witnessed in this market have largely involved access ISPs, particularly in markets with limited competition, who may use congestion on peering and transit interconnects for commercial leverage.

This is directly related to the question of the bargaining power balance between ISPs and CAPs. Put simply, ISPs maintain the single route to end-users and, as BEREC has previously observed, are well positioned to leverage their termination monopoly to extract rent from content providers. On the other hand, while CAPs can make use of a range of options to deliver their content to end-user networks, they

¹ See Communications Chambers: ‘The attack on settlement-free peering and the risk of ‘access power’ peering’ (2013); <http://ccianet.org/wp-content/uploads/2013/08/Access-Power-Peering.pdf>

are ultimately dependent on ISPs to access end-users. If there is any imbalance in bargaining power, it is the ISPs who operate from a position of strength.

BEREC has rightly raised concerns already over these sorts of practices, as early as in 2012 and again as recently as in 2023 in response to the EC's exploratory consultation on the future of the electronics communications sector and its infrastructure (BoR(23)131b).

These concerns remain today, as there are still the same potential incentives and prevailing market conditions (including the 'termination monopoly' enjoyed by ISPs vis-a-vis end-consumers) that may motivate a handful of telecommunications market actors to behave in this way, despite the damage to their commercial relationships and to their subscribers' quality of experience.

We commend BEREC for its interest in these matters, and look forward to continued engagement with BEREC on these questions in future.