

‘Net neutrality’ reading list

Science guidance for policymakers

I have been writing and speaking on the subject of broadband science and policy for a decade. Here are key articles or presentations that capture the most important messages, together with further reading for those with a deeper interest.

#1 [Beyond ‘neutrality’: How to reconnect policy to reality?](#)

This summarises the basic issue: that the policy-making process has disconnected from the science, and thus is ignoring the constraints of technology. Why is this? It is because there is widely-ignored [‘labyrinth of luck’](#) that joins traffic management to the user experience. Ignoring the stochastic nature of broadband is like ignoring the electromagnetic nature of radio. It doesn’t result in good policy!

A more detailed exposition of the problem of this ‘science gap’ can be read in [why telecoms regulators must ignore ‘lawgeneers’](#). Also see [the real reason why network ‘neutrality’ is impossible](#).

This misplaced focus on local traffic management, rather than global end-to-end quality means that [‘neutrality’ is too weak to protect broadband buyers](#). Indeed, network ‘neutrality’ is somewhere between a [fantasy and a folly](#) for regulators.

An example of how a US Supreme Court justice got his technology wrong is in [Packets are not pizzas: Why ISPs are content, not carriage](#). The FCC also managed to issue [‘net neutrality’ rules that are technically unworkable](#).

If you want some amusement from me venting my frustration at this issue of insufficient scientific understanding, read [How is network neutrality like pigeons playing chess?](#)

I have written a [critique of BEREC proposed guidelines](#).

#2 [Essential science for broadband regulation](#)

So what's real about the science and technology? Ofcom made the effort to get their science in order before making any rules. The above presentation summarises the key findings from the study they commissioned on traffic management detection. It also offers a framework in which to consider the problem. An additional in-depth summary is [here](#).

To understand the technology's key properties, see [Three under-appreciated facts about broadband](#). Remember we construct these networks and set the rules: see [The unnatural nature of networks](#). If you want to dig deeper, read about the [illusion of benevolent broadband teleology](#) to see why there's a widespread false assumption of intentionality to what are random processes.

#3 [How the broadband farmers and cowmen can be friends](#)

What should policymakers do instead of 'neutrality'? The above article outlines a solution to the policy problem. See ['Net neutrality' died today. So what else, instead?](#) to also get a sense of why a 'quality floor' is the necessary alternative to 'neutrality'.

If we are to have a quality floor, it begs the question of [how should regulators measure broadband quality?](#) The answer is simple: [ΔQ is the ideal network metric](#). To measure this property, see [how to X-ray a telecoms network](#).

About Martin Geddes



I am a computer scientist, telecoms expert, and writer. I collaborate with other leading practitioners in the communications industry.

Together we create game-changing new ideas, technologies and businesses.

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