



QoS and a personal perspective on semantic routing

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Speaking in a personal capacity

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Semantic routing

Differentiated forwarding behaviour and differentiated paths (routing)

Inter domain as well as intra domain

Hop-by-hop and packet-by-packet

“QoS on steroids”

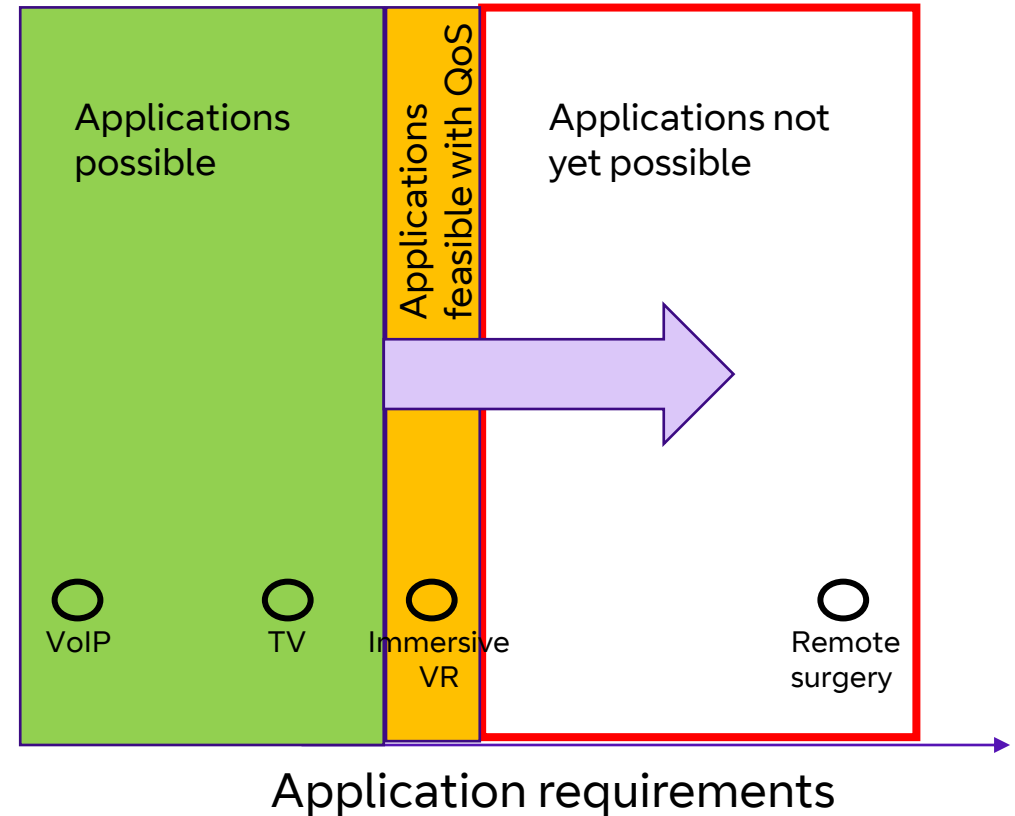
QoS buys you a time advantage

Bandwidth is the basic requirement

QoS enables you to fulfil the requirements of a subset of applications with slightly less bandwidth

Bandwidth growing fast (both demand and capacity) - cutting edge moves to the right

So QoS potentially gives a slight time advantage



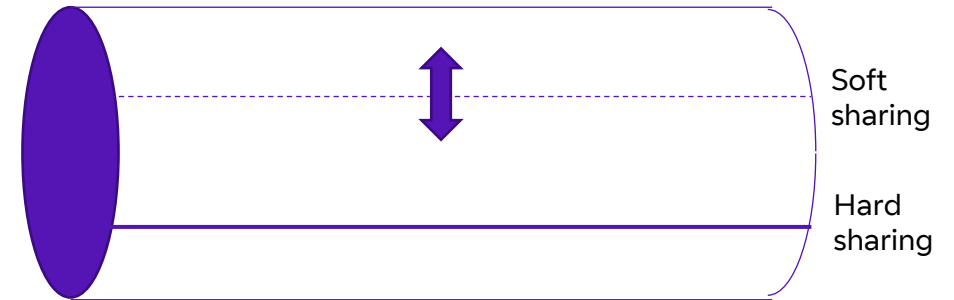
QoS doesn't create capacity

Laws of Thermodynamics: you can't win and you can't even break even

Laws of QoS: you can't create capacity and you can't break even

There are lots of things you can improve:

- Latency
- Reliability
- Energy
- Security
- Multipath
- Automation



QoS needs to be aligned to a commercial model

Lesson of RFC3869

Examples where it is aligned with commercials: QoS within a customer's contract; Wholesale QoS

Other related considerations:

- Additional security /DoS risk
- Additional complexity
- Incrementally deployable and beneficial to the party deploying (RFC5218)



https://bobbriscoe.net/presents/0801cfp/briscoe0801cfp_delusions.pdf

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<https://www.piccolo-project.org/>



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