

Is the transition to IPv6 a “market failure” ?

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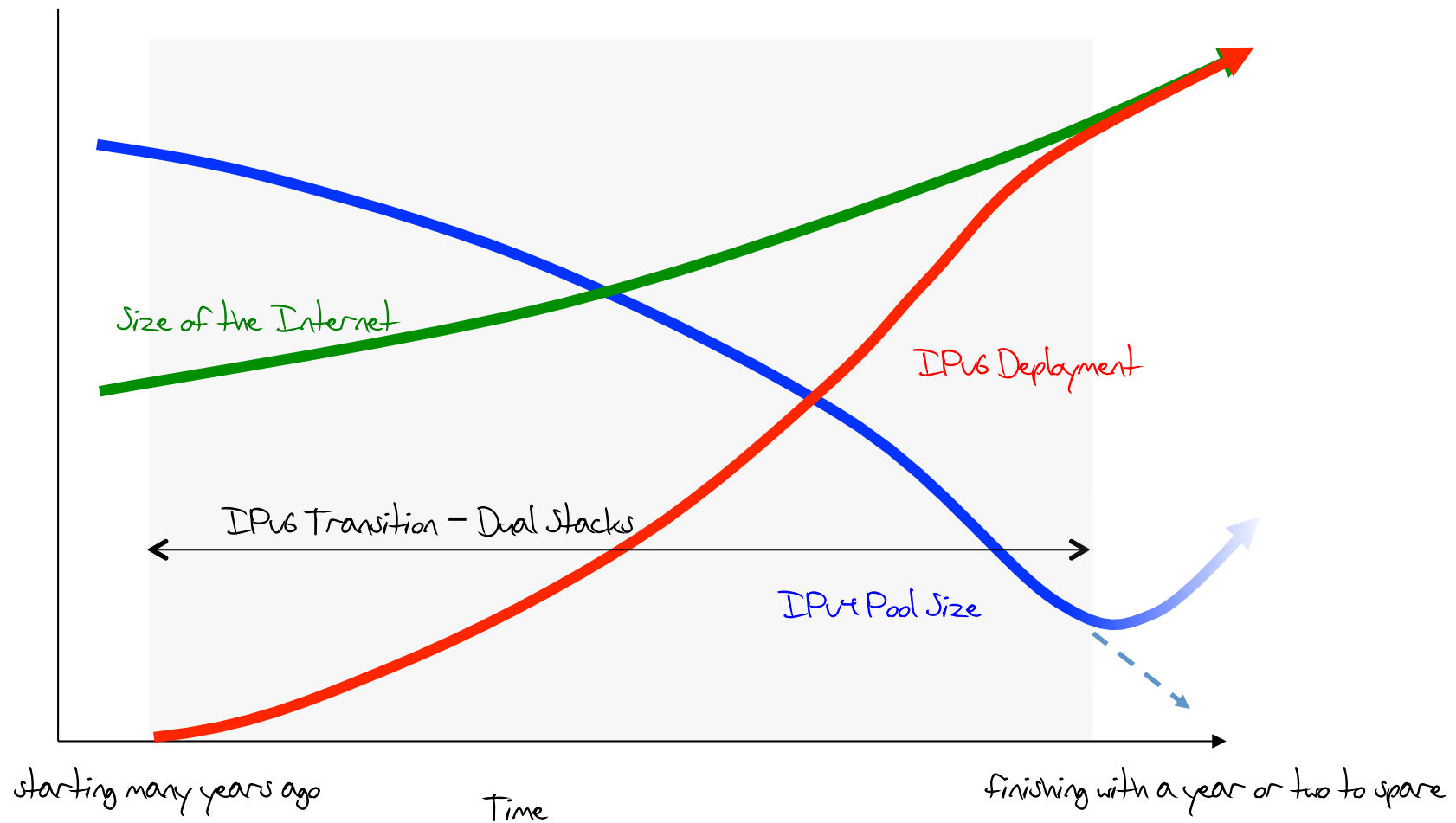
APNIC

The Fine Print: I am not a economist in terms of my professional qualifications or by virtue of my work experience. Worse still, I think I fit in to the category of amateur economic dilettante! So most of what I offer here I do so tentatively, as it probably needs a little more rigor and precision in basic economic terms than I am able to provide! Geoff

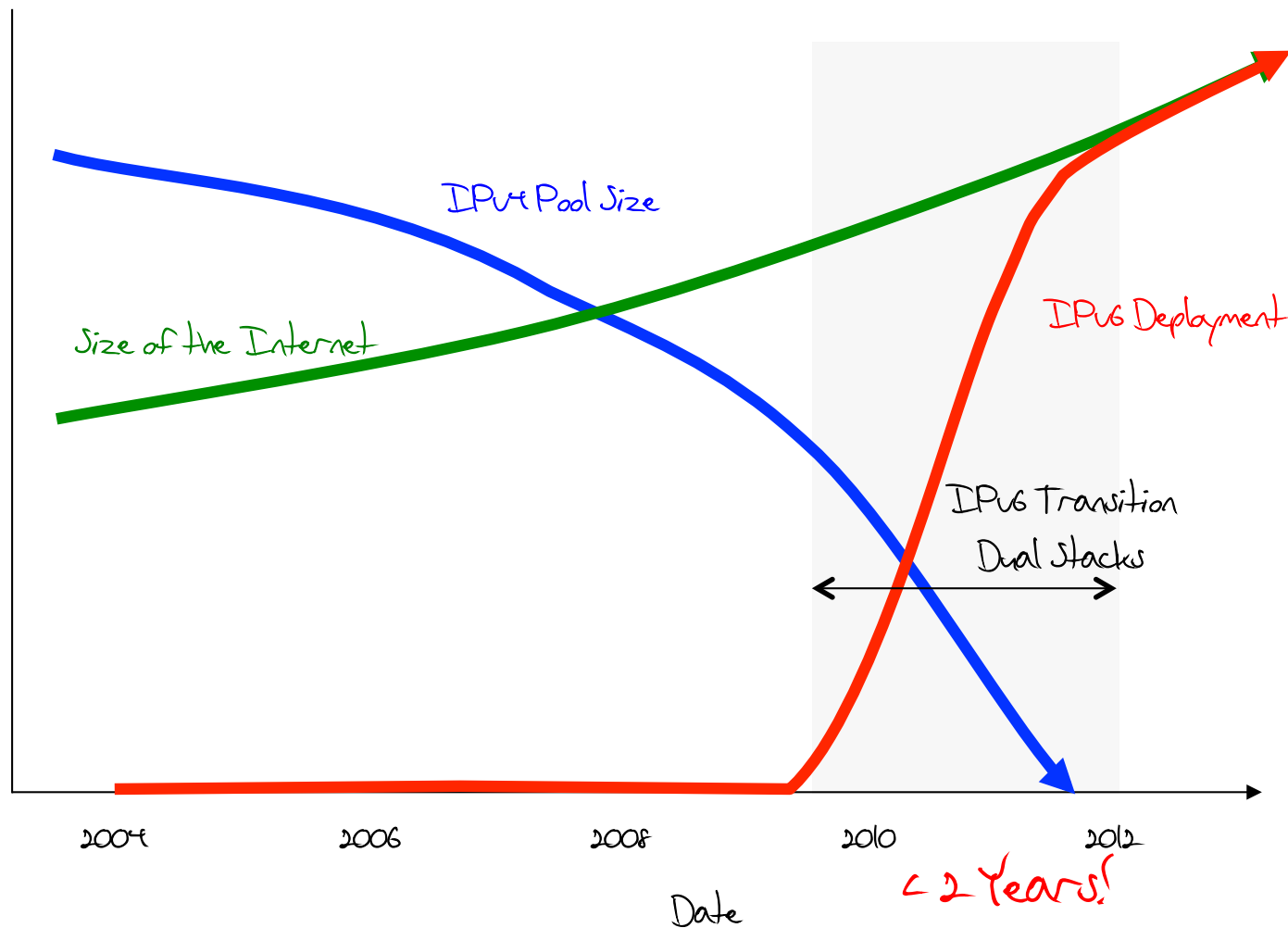
“The minister for communications and information technology does not believe that regulatory intervention is appropriate. Adoption of IPv6 needs to be lead by the private sector. The private sector must recognise that adopting IPv6 is in their own best interests to protect their investment in online capabilities into the future. Issues of advantages and disadvantages, costs, risks, timing, methodology etc, have to be for each enterprise to assess for itself.”

Statement by the New Zealand Minister for Communications
24 August 2009

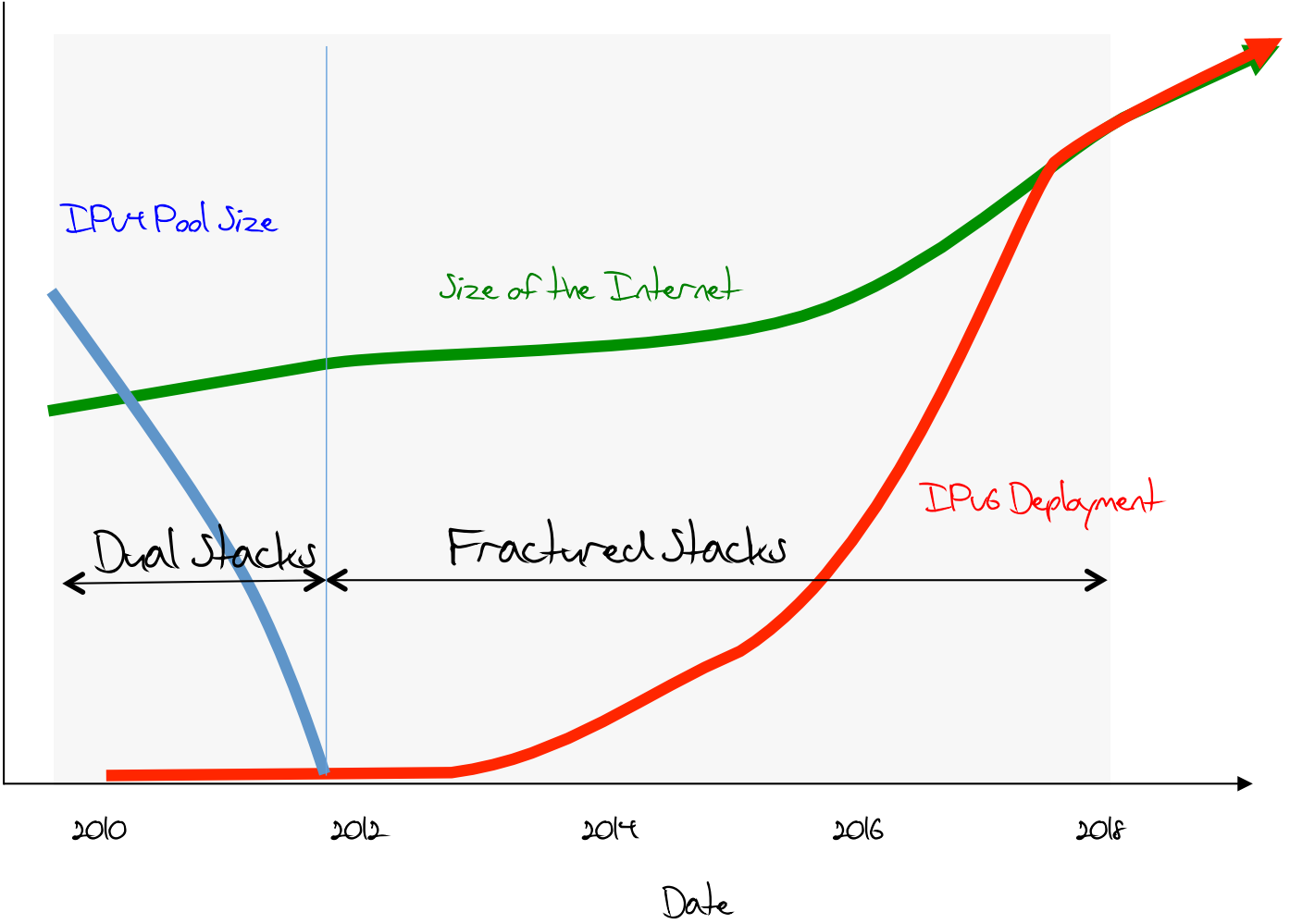
Theoretical IPv6 Deployment



Theoretical IPv6 Deployment V2.0



Practical IPv6 Deployment



The Transition to IPv6

We did not undertake this transition over the last 10 years - when this could've been achieved without undue pain and over a far smaller network base

So given that we've left it so late in terms of the scale of the transition, and the added degree of difficulty with running dual stacked networks in an IPv4 exhaustion mode, will it happen at all without additional impetus?

The Transition to IPv6

Is this transition an instance of a *market failure*?

Individual self-interest leads to inefficient supply outcomes, as self-interest does not lead the installed base of consumers and suppliers to underwrite the cost of dual stack operation

IPv6 Transition as a Public Good?

Is the transition to IPv6 is *non-excludable* and *non-rivalrous*?

In which case this transition issue parallels that of a *public good* with an implication that conventional market dynamics in a deregulated environment will not lead to this transition being undertaken

and a corollary that if this transition is considered to be necessary or essential then some form of public good solution needs to be considered

Public Good “solutions”

One or more of:

- Assurance contracts
- Coasian solutions
- Government enterprise provisioning
- Tariffs
- Subsidies
- Taxation remedies
- Regulatory impost