

Comments about the FISE White Paper

Comments about A Healthy Internet Ecosystem

I'm not sure if you can really argue that the Internet does not promote enough competition at the interconnection level. Of course things can be improved, but lets do a reality check: the cost of Internet access for most of the world is very low. In the same order of magnitude as cable TV or phone subscriptions. There are exceptions, but these generally are related to access technology or regulatory situation. Out of the common access costs, say for DSL, the amount of money for interconnection does not appear to be a very significant one; my guess is that DSL equipment cost and labor is the biggest factor within consumer prices.

I think the issues with today's Internet sharing technologies are actually even more fundamental. The question is whether statistical multiplexing is a viable model now that there are a lot of applications that run 24x7 at high bit rates: p2p, iptv, video surveillance

I am not sure about whether the claim about weak incentives for network expansion is really true. Capacity at subscriber and core level has been at a steep increase for a couple of decades now. I'm not claiming there are no problems, but I think one should talk more about the specifics. For instance, the DPI mess has been caused by the fact that service providers were caught unaware of the great shift in the applications. They have sold 10M subscriber links assuming statistical multiplexing, which no longer holds. But at the end of the day, the providers and subscribers have a common goal: to provide a service that the subscribers are interested in, at a cost which covers the ISP's investments. Whatever the service may be... p2p is not inherently bad, nor does this situation necessarily point out any technical problems. The main technical issue is separation between interactive and non-interactive and the ability of the SPs to offer some smooth way to throttle bandwidth in those cases where the agreement does not allow 100% utilization of the subscriber link.

It should also be mentioned that P2P users themselves are also hurt by queues building up in, e.g., their own DSL router. This is why efforts like Bittorrent TANA at the IETF are interesting for everyone and not just for the ISPs.

The paper suggests that network operators should deploy congestion signalling. But recent discussion indicates that such an approach would face deployment problems -- we've not seen a lot of QoS technology deployment over the last two decades. This is why the Bittorrent self-throttling approach is promising.

Introducing replacements for TCP with network charging/control in place is probably coming (content delivery networks) but the thorny issue of how to pass off the cost fairly is not discussed except for P2P delivery - the VoIP battle is about destroying the markets for PTT elephants, not technology.

Comments about Internet Governance

The Chinese government is singled out as wanting control, but there is no deep discussion about reigning in the desires of the ISPs to monopolize the vertical delivery chain, e.g. not allowing the physical providers to filter content by also acting as (access network, virtual network) operators. All attempts by Viviane Reding have apparently met a wall of steel from the operator community (no space for competition here...).

Comments about One or Many Internets

I think the plan to keep the Future Internet separated to stimulate competition is too simplistic. In reality there's no way around having competing ideas, and that's actually a good thing. Of course we should evaluate and compare the ideas in joint efforts. However, it would be bad to design the future Internet as a concept exercise. The true merits are only shown by implementation, experiments, real life deployment interest.

Additional Ideas

The paper is silent on the possibility of introducing ideas discovered in the FI process to the current Internet (which IMHO is a quite likely outcome).

The paper is silent on how we can get the users to be interested in FI; the socio-economic aspects of deploying new things would have been very interesting addition to the paper.