

**FCC Public *En Banc* Hearing at Carnegie Mellon University
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Comments on Broadband by *Rahul Tongia, Ph.D.*
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[Slide – Another Ranking]

I have a suggestion for how to move forward. Instead of issues of public versus private, or even state versus federal, what happens when we consider served versus underserved?

I don't need external rankings or validation to tell me that broadband in the US is lagging. If you'll indulge me, I do want to show another ranking.

If we examine this other ranking on this slide, what do you think it is? Not broadband, but infant mortality, where the US ranks 43 (or, by some sources, worse), in the world! This is not to make social commentary, but to try and gain insights into the situation, including parallels to broadband.

Does this mean that healthcare in the US is awful? No, it is perhaps the best in the world, if you get access to it. It's just that we have a bimodal distribution of services, pretty good or pretty bad. The distribution is not a bell-shaped, "normal" (Gaussian) curve. This has enormous implications for what we should do. Waiting for "trickle-down" either won't work, or will take too long.

So how is it that poorer Latin American countries can do better than the US in infant mortality? By specialized solutions for the underserved, e.g., multiple at-home visits by paramedics to all expectant mothers.

We can think of similar solutions for our underserved areas by broadband, which might be heavily rural, but are also strongly correlated by low income. We need specialized technologies and policies to get affordable broadband into such areas. These include enhanced wireless transmission levels (where is the interference in such areas?), use of white spaces, adaptive radio systems, secondary spectrum, open access policies, shared rights of way, etc. Having studied rural US broadband, it's more feasible than people realize if our aim is to build out the best (cheapest, fastest, etc.) network possible. Worrying about public versus private is a red herring, I feel.

[For further information, please see my website <http://www.cs.cmu.edu/~rtongia>

Available are my [statement](#), personal reactions to the Hearing, and in-depth presentations and publications on network exclusion].