Position paper for Silicon Flatirons'

Looking Back to Look Forward: The Next Ten Years of Spectrum Policy

The Promise and Problems of Strategic Plans: From the Spectrum Policy Task Force to the PCAST Report

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The basic problem of strategic planning for spectrum in the US is that the US spectrum regulatory entities do not seem to have a historic interest in maintaining *any* consistent policy program. FCC has adopted a variety of spectrum policy statements/strategies in the past several decades, but seems to prefer in general *ad hoc* decision making on items on its docket.

While NTIA appears to have the President's Section 305 power to regulate federal users, the anomalous position of the head of NTIA as an assistant secretary of Commerce effectively puts *most* federal spectrum decisions in the hands of the IRAC membership - whose focus is not necessarily the *overall* national interest. (The realities of current federal budget processes are a key factor in discouraging individual IRAC member agencies from pursuing broader interests.) While attempts have been made to bring more Silicon Valley-style "adult supervision" to the IRAC process little visible progress has been made to date although implementation of the PCAST spectrum report's Section 5 recommendations would be a great step in that direction.

By contrast, other countries have been able to adopt spectrum strategies and stick with them while gradually revising them in view of changing circumstances. Institutionally FCC has had little interest in this, especially in recent years. Spectrum has been the stepchild of Commission policy although the recent focus on mobile broadband has increased its priority in that context. Discussions with former FCC commissioners reveal that none of those contacted had been asked about spectrum issues at all during the selection and confirmation processes. While Chmn. Powell had a great interest in all aspects of spectrum policy, his immediate successor from the same party had minimal interest. Comm. Ness had a great interest in spectrum but that has never been equaled since her departure in 2001. In recent memory, FCC has not had any commissioner with actual experience in the ICT industry – a fact accepted by many as inevitable. The decrease of the number of commissioners from 7 to 5 in the 1980s may have had the unintentional effect of decreasing interest in long range problems such as spectrum.

John Robinson's outstanding 1985 history of FCC spectrum policy (OPP Working Paper 15) lists many policy statements over the FCC's first 4 decades. In 1999 FCC adopted a Spectrum Policy Statement. Then in 2002 it released the Spectrum Policy Task Force reports and started several related rulemakings. While the TV whitespace rulemaking is

nominally completed as of today, the reality is that there is no significant commercial use these provisions and there is no clear schedule of when white space device use will even be permitted in most of the country due to the messiness of implementing the Commission's chosen solution of how to protect wireless microphones that use dated technology.

It is somewhat straightforward to pick a long term spectrum plan. The really complicated thing is implementing that plan so that spectrum use evolves from the present to the desired plan. This needs transition plans that recognize the externalities that some spectrum users might have to incur transition costs that are of no direct benefit to them. In DTV for example, this was eased by using spectrum auction revenues subsidize the "NTIA boxes" to ease the transition for households who were not early DTV adopters.

Innovative and efficient wireless technology does not develop through "spontaneous generation" independent of regulatory policy. Wireless R&D must attract private capital to translate new concepts into workable systems. Uncertain and changing spectrum policy discourages that capital formation as financial markets finds industries with less regulatory certainty to be more attractive for R&D investment. State capitalism is a major issue in most other countries' spectrum policy. The US can compete successfully but only if spectrum policy becomes more transparent and stable. Otherwise we will end up focusing on technologies designed in Europe to be made in China.