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Saving Mt. Wilson – and Increasing Spectrum Efficiency

by

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Early last month the great Los Angeles "Station" fire threatened the summit of Mt. Wilson, home to a huge antenna farm that includes seven TV transmitters serving the LA basin. Firefighters and aerial bombers dropping retardant fought to save the antennas, which pump out over 700,000 watts of power, transmitting TV signals to millions of Los Angeles residents, the vast majority of whom don't own a single rooftop antenna or rabbit ear. Most TV viewers today receive their signals via cable or satellite. The handful that still use rooftop antennas probably don't spend much time watching TV. But on Mt. Wilson, and across the nation, hundreds of TV stations continue to pump out megawatts of mostly wasted power on frequency bands that are reserved for the exclusive use of over-the-air TV broadcasts.

Meanwhile, the demand for mobile broadband frequencies has skyrocketed, partly because users are accessing the Internet, and even starting to watch TV, on their cell phones. We are shortly going to be up against a capacity constraint in mobile frequencies, even as the TV broadcast spectrum is mostly wasted. In developing the National Broadband Plan, the FCC's broadband task force already has indicated that finding more spectrum for mobile broadband is a top priority. And, according to Kim McAvoy at TVNewsCheck, Blair Levin, the Coordinator and Executive Director of the FCC's Omnibus Broadband Initiative, reportedly met with a group of television broadcasters to suggest that

"broadcasters might want to consider returning their spectrum in exchange for a share in the billions of dollars that would come from the auction of the spectrum to the wireless industry."

The use of spectrum today is mostly determined by dead people. Right now, all spectrum users, even those who paid billions for their licenses in FCC auctions or by purchasing from prior licensees, must continue to use their slices of spectrum as originally intended. If someone holds a radio broadcast license first awarded in 1936, or a TV license from 1950, that's all it can be used for today—radio or TV broadcasting at a given frequency at a certain location with a specified number of watts, and so on. Never mind that the spectrum assignment could be used far more productively for cell phone service, wireless Internet access, or something else without causing interference with other users. The licensee today can sell its spectrum assignment to anyone it wishes (except felons or foreigners), but the new owner can only run a broadcast station. This makes no sense. There actually is an ancient principle in trust and estate law called the "Rule Against Perpetuities," that limits the ability of dead people to control the use of property from the grave.

The historical reason for this really bad rule is the assumption that now-deceased FCC engineers and commissioners got it right when they decided in the 1930s and 40s how much of the then-usable spectrum should be used for broadcasting as opposed to taxicab radios. Common sense tells us that the decisions they made, even if sound at the time, cannot possibly still be correct today. But the FCC sticks with the status quo, meaning that any potential improvements in the efficiency of spectrum use must take place, willy-nilly, only as new technology opens up room at higher and higher frequencies, and others cannot take place at all.

There is a very simple solution, one used in one form or another in every other form of communications except broadcasting: *Permit licensees to use or sell their spectrum for any purpose that does not interfere with others*. The benefits of this initiative go far beyond efficiency in spectrum use. A major economic benefit is that anywhere suppliers of communications service are overcharging customers, entrants can get the spectrum they need to build new capacity, driving down the prices consumers have to pay for service. A major political benefit is that industry participants with existing licenses are no longer bound to spend millions to block reform; now they can put their spectrum to its most valuable use. Even federal government spectrum users, such as the Department of Defense, for which huge swaths of spectrum are now reserved, would benefit. The department could sell off its unused spectrum to help fund other defense communications activities, and it could buy spectrum for any new needs that arise, just as it procures other goods and services.

What's not to like about eliminating the waste that FCC policy has made of our valuable frequencies? Many will immediately complain that any compensation paid to broadcasters for giving up their licenses is another government giveaway to big corporations. But this "equity" objection is much less

serious than it sounds. The truth is that that from the very beginning of broadcast licensing in the 1930s the FCC has permitted licenses to be bought and sold. Very few of the original licensees, or their owners, are still around today; they have sold their licenses and moved on, taking the money with them. Yes, those original licensees got a big windfall, thanks to nearsighted FCC policy. But today's broadcasters paid lots of money to obtain their licenses from prior license holders. In no reasonable economic sense did they obtain their licenses for free. There is no equity argument for appropriating what the government, for practical purposes, has always treated as the current licensees' property, in spite of the legal fiction that ownership of the spectrum lies with the government. And anyway, trying to take this spectrum back without compensation, even if that were equitable, is politically impractical.

The only other obvious problem is the interference issue. Suppose someone claims that interference is taking place. How will we deal with such disputes? It turns out that we already have a solution. Engineers can (and already do) measure interference — it is nothing more than the profile of the licensee's signal (frequency, power, etc.) at specific locations. To achieve optimal levels of interference (which are not zero), simply set the level of interference that currently exists as the norm. More interference than that requires the licensee either to stop the interference or to negotiate a deal with anyone who complains. A right to be free of interference could be enforced by civil proceedings at the FCC or in the courts, using the existing tools for real property rights. The vast majority of interference claims would be settled out of court.

There were lots of good reasons to protect the summit of Mt. Wilson. But preserving TV service in LA was not foremost among them. The need for additional spectrum for wireless broadband is great. Blair Levin was on the right track in talking to the broadcasters. One way or another, the government should adopt a new policy that at least allows, if not encourages, the broadcasters to sell some or all of their spectrum to those who believe they can put it to a higher value use.

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