

University of Colorado Law School

## Colorado Law Scholarly Commons

---

Articles

Colorado Law Faculty Scholarship

---

2008

### Property Rights in Spectrum: A Reply to Hazlett

Philip J. Weiser

*University of Colorado Law School*

Dale N. Hatfield

*University of Colorado*

Follow this and additional works at: <https://scholar.law.colorado.edu/articles>



Part of the [Communications Law Commons](#), [Property Law and Real Estate Commons](#), and the [Science and Technology Law Commons](#)

---

#### Citation Information

Philip J. Weiser and Dale N. Hatfield, *Property Rights in Spectrum: A Reply to Hazlett*, 15 GEO. MASON L. REV. 1025 (2008), available at <https://scholar.law.colorado.edu/articles/310>.

#### Copyright Statement

Copyright protected. Use of materials from this collection beyond the exceptions provided for in the Fair Use and Educational Use clauses of the U.S. Copyright Law may violate federal law. Permission to publish or reproduce is required.

This Article is brought to you for free and open access by the Colorado Law Faculty Scholarship at Colorado Law Scholarly Commons. It has been accepted for inclusion in Articles by an authorized administrator of Colorado Law Scholarly Commons. For more information, please contact [lauren.seney@colorado.edu](mailto:lauren.seney@colorado.edu).

# HEINONLINE

Citation: 15 Geo. Mason L. Rev. 1025 2007-2008

Provided by:

William A. Wise Law Library



Content downloaded/printed from [HeinOnline](#)

Tue Mar 21 14:47:17 2017

- Your use of this HeinOnline PDF indicates your acceptance of HeinOnline's Terms and Conditions of the license agreement available at <http://heinonline.org/HOL/License>
- The search text of this PDF is generated from uncorrected OCR text.
- To obtain permission to use this article beyond the scope of your HeinOnline license, please use:

[Copyright Information](#)

## PROPERTY RIGHTS IN SPECTRUM: A REPLY TO HAZLETT

*Philip J. Weiser\* and Dale N. Hatfield\*\**

### INTRODUCTION

As the many citations to his prior article, *Spectrum Policy Reform and the Next Frontier of Property Rights*,<sup>1</sup> indicate, Thomas Hazlett is a pre-eminent scholar of the law and economics of wireless spectrum. Given that our inspiration for the article was to highlight some key shortcomings in the scholarly debate (and in the policy arena), we are encouraged that Professor Hazlett has engaged our argument with a very thoughtful and interesting response.<sup>2</sup> From our vantage point, however, Hazlett's response does not contradict, but rather underscores and sharpens some of the key points that we made in our article. By so doing, it brings into focus the critical issues that scholars and policymakers need to wrestle with in the years ahead. To frame our response, we will first address issues related to the development of spectrum property rights and remedies, then discuss the need to "zone" the spectrum, and conclude by discussing the optimal institutional strategy for managing spectrum property rights.

### I. SPECTRUM PROPERTY RIGHTS AND REMEDIES

Let us begin by highlighting a few key points where we agree with Hazlett's cogent analysis of spectrum regulation. First, we heartily agree with Hazlett that the Federal Communications Commission's ("FCC") models for specifying property rights in spectrum will necessarily be and should be incomplete and imperfect.<sup>3</sup> As Hazlett puts it, policymakers should not let the "ideal be[] the enemy of the good" when defining spectrum property rights.<sup>4</sup> Rather, the FCC should focus on developing a reasonably sound basis for parties to assess the limits on their right to use spec-

---

\* Professor of Law and Telecommunications, University of Colorado. We thank John Bergmayer for first rate research assistance.

\*\* Adjunct Professor of Telecommunications, University of Colorado.

<sup>1</sup> Philip J. Weiser & Dale Hatfield, *Spectrum Policy Reform and the Next Frontier of Property Rights*, 15 GEO. MASON L. REV. 549 (2008).

<sup>2</sup> Thomas W. Hazlett, *A Law & Economics Approach to Spectrum Property Rights: A Response to Weiser and Hatfield*, 15 GEO. MASON L. REV. 975 (2008).

<sup>3</sup> See *id.* at 982-84.

<sup>4</sup> *Id.* at 984.

trum and not attempt to specify that right precisely. In fact, as we note, entitlements that are muddy around the edges have a salutary benefit—they create an incentive for parties to reach reasonable agreements with one another.<sup>5</sup>

Second, we are sympathetic to Hazlett's critique of the "interference temperature" proceeding<sup>6</sup> and thus recognize the reasons why this effort failed.<sup>7</sup> Notably, the effort to create a new measurement system out of whole cloth and not to base it on the existing uses was highly questionable as both an economic and political matter.<sup>8</sup> In stressing the FCC's decision to close the proceeding, we do not quarrel with the judgment that the model proposed by the FCC was flawed.<sup>9</sup> Rather, we find telling and unfortunate that the agency acted without evincing any concern about the existing legal framework that governs "harmful interference."<sup>10</sup> Moreover, as a result of its inaction, the FCC has left in place a framework whereby firms like Qualcomm can afford to pursue lengthy and expensive ad hoc proceedings to define their rights more sharply, but upstarts do not have the resources to do so, thereby ensuring inefficient uses of spectrum and less innovation.<sup>11</sup> In that light, Hazlett's praise for the FCC's ability to provide a more specific ruling in that case in less than two years time<sup>12</sup>—again, a ruling that less well-heeled firms could not obtain—only underscores that the current failings of the spectrum policy regime have led commentators to define success downward in this area.

Third, building on the important insight that the right to use spectrum will necessarily be somewhat uncertain, we agree with Hazlett that the patent law analogy is instructive in a number of ways.<sup>13</sup> First, like the patent system, we believe that spectrum regulation should employ some form of a front-end system to give parties a level of assurance about their use of spectrum.<sup>14</sup> In particular, instead of applying the Patent and Trademark Office's ("PTO") model of patent-application review or even a post grant challenge procedure, we suggest that the FCC can develop models that provide a level

---

<sup>5</sup> Weiser & Hatfield, *supra* note 1, at 607 n.282 (citing Ian Ayres & Eric Talley, *Solomonic Bargaining: Dividing a Legal Entitlement to Facilitate Coasean Trade*, 104 YALE L.J. 1027, 1095-96 (1995)).

<sup>6</sup> Hazlett, *supra* note 2, at 995-96.

<sup>7</sup> See Establishment of an Interference Temperature Metric to Quantify and Manage Interference and to Expand Available Unlicensed Operation in Certain Fixed, Mobile and Satellite Frequency Bands, 22 F.C.C.R. 8938, 8938 (May 4, 2007), available at 2007 WL 1306800.

<sup>8</sup> See Weiser & Hatfield, *supra* note 1, at 558-67.

<sup>9</sup> Hazlett, *supra* note 2, at 995-96.

<sup>10</sup> See Weiser & Hatfield, *supra* note 1, at 565-66.

<sup>11</sup> *Id.* at 566-67.

<sup>12</sup> Hazlett, *supra* note 2, at 999 ("[T]he FCC accommodated Qualcomm's request in less than two years, a fairly timely response.").

<sup>13</sup> See *id.* at 983, 997-98.

<sup>14</sup> Weiser & Hatfield, *supra* note 1, at 591.

of front-end assurance to users of spectrum.<sup>15</sup> Second, like the patent system, we believe that such a front-end assurance should not be absolute<sup>16</sup>—parties should use actual litigation to evaluate whether, in fact, interference exists.<sup>17</sup> The possibility of such litigation over uncertain rights, however, means that the available remedies must be tempered to avoid granting a broad injunction that would give a party far more leverage than necessary to compensate it for the relevant harm.<sup>18</sup>

As for a core area of disagreement, we believe that Hazlett understates greatly the nature of the concern we identify in our Denver TV station hypothetical.<sup>19</sup> In his view, the possibility of interference beyond an identified boundary—traditionally, the Class B contour where signals can be reached 50% of the time at 50% of the areas along the contour<sup>20</sup>—is “occasional” when “radiation skips over close-in areas to swamp distant receivers . . . .”<sup>21</sup> This depiction (of a “stochastic” episode, as Hazlett puts it<sup>22</sup>) misstates the nature of the challenge. Indeed, beyond the Class B boundary, say, to a contour where 20% of the areas along the contour will receive the signal 20% of the time, the signal still may well create interference with another user licensed in that location. Our point, moreover, is not that the FCC’s current policy of a widely spaced allocations table is appropriate or that wide swaths of terrain should be left as so-called “white spaces.” To the contrary, we emphasize that, given the inevitable conflicts—especially with services like AM radio broadcasting—the legal response must impose more tailored remedies.<sup>23</sup> It should not, by contrast, call for relatively onerous demands (e.g., a requirement not to “trespass” again) that would make operating a particular service far more expensive.<sup>24</sup>

---

<sup>15</sup> *Id.* In particular, we proposed a safe-harbor based on an engineering-based predictive model of signal strength (at least for some period of time). *Id.* at 591-95. Alternatively, and like the patent system, the use of a predictive model could also provide the basis for a conclusion that a particular use of spectrum was presumptively lawful. *See id.* at 592.

<sup>16</sup> *Id.* at 595-98 (“[T]h[ese safe-harbor] requirements should not be inviolate . . . .”).

<sup>17</sup> *See id.* at 600-02.

<sup>18</sup> *See Weiser & Hatfield, supra* note 1, at 582; Mark A. Lemley & Philip J. Weiser, *Should Property or Liability Rules Govern Information?*, 85 TEX. L. REV. 783, 795 (2007).

<sup>19</sup> *See Hazlett, supra* note 2, at 986-88.

<sup>20</sup> Weiser & Hatfield, *supra* note 1, at 559.

<sup>21</sup> Hazlett, *supra* note 2, at 986.

<sup>22</sup> *Id.*

<sup>23</sup> *See Weiser & Hatfield, supra* note 1, at 591 (“[The] new system should ensur[e] that remedies are calibrated to address only actual harms . . . .”).

<sup>24</sup> *Id.* at 557, 591.

## II. THE IMPORTANCE OF ZONING THE SPECTRUM

The current uses of the wireless spectrum reflect past decisions far more than current demands for the resource. Thus, we cannot disagree with Hazlett's argument that the spectrum used by broadcast TV stations (particularly in the UHF band) could be put to higher value uses in many cases.<sup>25</sup> Under our proposal, spectrum licensees, such as TV broadcasters, could continue operating as they do currently as well as make the type of trades Hazlett identifies.<sup>26</sup> By contrast, a regime that either allows injunctions of the kind used in trespass law (as opposed to patent or nuisance law) or imposes a unitary property right of the kind used in the cellular bands (which, as a practical matter, require low powered, cellularized uses) would effectively make the existing broadcast service unsustainable.<sup>27</sup>

In calling for a zoning of the spectrum, we must emphasize that we envision an approach that is not service specific. Our proposed system would not, for example, specify TV broadcasting and rule out services like Qualcomm's MediaFLO.<sup>28</sup> Rather, it would simply create different levels of flexibility that would allow higher powered services with more spillover in some bands and lower powered services with less spillover in others.<sup>29</sup> Consequently, a service like MediaFLO (which is lower powered than traditional TV broadcasting) could be introduced in a band authorized for TV broadcasting, but not vice versa.<sup>30</sup>

A central dividing line, between the approach suggested by Professor Hazlett and ours, is our view that certain industry facts are more complex or open to change than he suggests. Hazlett maintains, for example, that the most productive use of "[t]he 25 MHz of cellular bandwidth used by Verizon Wireless to provide wireless phone service in Phoenix is the same 25 MHz the Verizon network uses in Portland, Oregon. Both frequency spaces are far more valuable as 25 MHz bands controlled by one network than as small slices owned by thousands of different entities . . . ."<sup>31</sup> This claim is potentially misleading on at least three scores. First, for reasons we discussed at length, Hazlett's choice of case study—wireless telephone service—may well differ from other uses of spectrum, ranging from a broadcast TV service to a railroad's internal network to an air-to-ground system

---

<sup>25</sup> Hazlett, *supra* note 2, at 990-91, 1014-15.

<sup>26</sup> See Weiser & Hatfield, *supra* note 1, at 603-04. As we note, however, we do not address whether such trades would be subject to a windfall tax that would address concerns about the increased flexibility granted to licensees originally granted spectrum for free provided they offered only the authorized service. *Id.* at 554 n.27.

<sup>27</sup> *Id.* at 581, 595.

<sup>28</sup> See *id.* at 593-94.

<sup>29</sup> *Id.*

<sup>30</sup> See *id.*

<sup>31</sup> Hazlett, *supra* note 2, at 979.

by a private airport.<sup>32</sup> In each of these other cases, the use of a particular band of spectrum is likely to differ considerably more dramatically than in the wireless telephony case study.<sup>33</sup> Second, even in the wireless telephony context, the identity of the owners of particular spectrum bands is likely to be more dispersed than Hazlett suggests. Consider, for example, the AWS auction, where a number of different entities purchased the same set of licenses within the same state.<sup>34</sup> Finally, even if Hazlett's conclusion is true for a particular point in time—say, today—it quite possibly may not be true at other points, raising the question whether the legal system should lock in or privilege particular uses.

### III. THE OPTIMAL INSTITUTIONAL STRATEGY FOR MANAGING SPECTRUM PROPERTY RIGHTS

We are, as we readily acknowledge, uncomfortable with the FCC's legacy of public choice sins.<sup>35</sup> Our response, however, differs from Hazlett's condemnation of all administrative agencies as doomed to making too few Type I errors<sup>36</sup> (i.e., protecting against interference unnecessarily or, as we put it, viewing interference as a virus<sup>37</sup>). In fact, the PTO is an administrative agency widely condemned for making the opposite mistake—allowing too much interference, in the form of overlapping patent rights, by failing to reject more patent applications.<sup>38</sup> The problem, we submit, is that the FCC has historically viewed its mandate as industry protectionism in return for public interest obligations,<sup>39</sup> whereas the PTO has viewed its mandate as “granting more patents.” In establishing an agency to manage spectrum property rights, be it a standalone one or in the FCC, the essential challenge will be to charter its mission as ensuring the most effective use of spectrum to maximize the welfare of consumers.<sup>40</sup>

---

<sup>32</sup> Weiser & Hatfield, *supra* note 1, at 588-91 (“[The success of property rights in the cellular bands] rests on a particular set of circumstances that is unlikely to exist across the board.”).

<sup>33</sup> *Id.*

<sup>34</sup> See FCC, Advanced Wireless Services Auction: Winning Bids (Sept. 18, 2006), [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DA-06-1882A2.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-06-1882A2.pdf) (showing that the winners of licenses covering Colorado were Hemingford Coop. Tel. Co., SpectrumCo, Union Tel. Co., AWS Wireless, Command Connect, Atlantic Wireless, Cingular AWS, T-Mobile License, and Red Rock Spectrum Holdings).

<sup>35</sup> See Weiser & Hatfield, *supra* note 1, at 555, 561-67.

<sup>36</sup> Hazlett, *supra* note 2, at 993.

<sup>37</sup> Weiser & Hatfield, *supra* note 1, at 558-61.

<sup>38</sup> See Gerard N. Magliocca, *Blackberries and Barnyards: Patent Trolls and the Perils of Innovation*, 82 NOTRE DAME L. REV. 1809, 1827 (2007) (“Today, anti-troll forces are also claiming that the Patent Office issues far too many low quality patents.”).

<sup>39</sup> Weiser & Hatfield, *supra* note 1, at 555.

<sup>40</sup> *Id.* at 591.

We do not believe that prescribing the charter of a new agency or a new mandate within the FCC to manage spectrum property rights will be a simple matter. To the contrary, it is likely the most important challenge in making a reformed system of spectrum policy work effectively. Consider, for example, our discussion of why certain would-be win-win transactions (i.e., Coasian bargains) may not take place and why agency oversight and regulation may be necessary to facilitate progress.<sup>41</sup> The margin for mischief in such matters is enormous. At the same time, any regime that would refuse to empower an agency (or court) to oversee the upgrading of legacy equipment to ensure more efficient and technically advanced uses of spectrum would, in effect, allow the past to veto the future.

## CONCLUSION

Spectrum policy is as difficult as it is important. The press and even many policymakers are intimidated by spectrum policy reform because “spectrum is an invisible resource with apparently mysterious and even magical properties.”<sup>42</sup> In the scholarly arena, a tempting response is to suggest that if only spectrum were “propertyized” and left to the market, the sins of administrative regulation would be remedied. Those sins are real, but the challenges in defining, enforcing, and managing property rights cannot be addressed with a simple analogy to land and the law of trespass.

Going forward, policymakers and scholars must focus on how to define rights and remedies tailored to this unique medium, address what models of interference protection (e.g., zoning) are warranted, and design (as well as implement) an institutional strategy that can oversee the uses of wireless spectrum. We appreciate the time and care that Professor Hazlett took to engage these questions and begin to launch this important debate that many industry players would rather not have. After all, many of the existing incumbents are comfortable with and protected by the current system of regulation. It is thus up to scholars, policymakers, the press, and the public to question the premises of our current system and pave the way for reform.

---

<sup>41</sup> *Id.* at 573 n.133 (explaining the role of an agency in imposing certain cooperative arrangements on parties unable to come to an agreement).

<sup>42</sup> J.H. Snider, *Is the Spectrum Just Too Complex For Reporters?*, NIEMAN WATCHDOG, Feb. 21, 2008, [http://www.niemanwatchdog.org/index.cfm?fuseaction=ask\\_this.view&askthisid=327](http://www.niemanwatchdog.org/index.cfm?fuseaction=ask_this.view&askthisid=327).