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## Regulation of Municipal Wi-Fi

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Over the last two decades, cellular telephones have become a mainstay of the U.S. telecommunications industry. They already almost outnumber traditional land lines,<sup>1</sup> and may exceed them in the near future — a situation which has encouraged a substantial amount of new entrance.<sup>2</sup>

Another, less familiar, and somewhat untested form of wireless is “wi-fi,”<sup>3</sup> which primarily transmits broadband data among computers. Although wi-fi has been in existence for a decade,<sup>4</sup> its applications generally have been confined to small businesses — i.e., waiting rooms and coffee shops — or homes. Only over the last few years has there been any impetus to offer it to the population at large.

The logical initial entrants into wi-fi might have been the existing cellular operators, which had operating experience, antenna sites, and customers. Instead, local governments were the first to show a significant interest in the wi-fi market — albeit usually with private sector partners. This has provoked considerable legal and policy backlash on both the state and federal levels, which does not seem close to resolution.

## I. BACKGROUND

As indicated, wi-fi is a radio frequency service, operating above UHF television and below satellite television.<sup>5</sup> Unlike most other radio frequency services, use of wi-fi requires no license from the Federal Communications Commission (“FCC”), but instead compliance with general requirements to avoid interference with existing operations.<sup>6</sup> While compliance with several different technical standards is acceptable, the most common one is the “802.11 Protocol” and its

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1. U.S. Telecomm. Ass’n, Telecom Statistics, [http://www.usta.org/index.php?urh=home.news.telecom\\_stats](http://www.usta.org/index.php?urh=home.news.telecom_stats) (last visited Aug. 27, 2006). For residential users, at of the end of 2005, 107 million households had one or more telephone lines, while 203.7 million individuals had cellular service. These statistics exclude business customers. The attraction is obviously not limited to the United States. See Damien Cave, *Must Haves: Cellphones Top Iraqi Cool List*, N.Y. TIMES, Aug. 8, 2006, at A1 (noting that one-third of the Iraqi population has cellular telephones, and the market is growing quickly).
  2. Matt Richtel & Ken Belson, *Cable and Satellite TV Set Their Sights on Airwaves*, N.Y. TIMES, Aug. 7, 2006, at C8.
  3. The acronym derives from nothing, though after the fact it was claimed to come from “wireless fidelity” — a completely meaningless term. See *A Brief History of Wi-Fi*, ECONOMIST, June 10, 2004, at 27.
  4. Backgrounder, Inst. of Electrical and Electronic Engineers, Inc., The IEEE 802 LAN/MAN Standards Committee (Feb. 18, 2005), [http://standards.ieee.org/announcements/bkgnd\\_802stds.html](http://standards.ieee.org/announcements/bkgnd_802stds.html) [hereinafter IEEE Standards]. In 1997, the IEEE promulgated the first of several standards for the wireless transmission of data. Since the IEEE is a private non-profit body, its action did not by itself allocate any radio frequency spectrum for wi-fi. Ultimately, however, the Federal Communications Commission (“FCC”) set aside two frequency bands for wi-fi use under a variety of standards — primarily the IEEE’s. 47 C.F.R. § 15.247 (2006).
  5. In 1989, the FCC created two new bands for shared communication without the usual license required by broadcast or telecommunications entities. After the IEEE’s adoption of the first wi-fi standards — known as the “802.11 Protocol” — the FCC accepted that as one of several different technical configurations for use in the 2.4 and 5.0 gigahertz bands. See IEEE Standards, *supra* note 4.
  6. 47 C.F.R. § 15.247 (2006).

successors, adopted by the Institute of Electrical & Electronic Engineers, Inc. (“IEEE”).<sup>7</sup> In 1999, a number of telecommunications companies formed the Wi-Fi Alliance, which runs a “certification program” to approve compatible and secure wi-fi technologies.<sup>8</sup>

As discussed later, wi-fi can transmit video and voice, as well as data.<sup>9</sup> For the moment, however, its primary application is data transmission, usually between computer users and internet service providers or data bases.

Wi-fi has increasingly become part of a national communications policy debate over the extent of broadband telecommunications development in the United States. Some observers argue that the country has fallen behind both developed and developing countries in deployment of broadband, thus ultimately impairing its international competitiveness.<sup>10</sup>

This became a major issue as a result of a report of the Organisation for Economic Co-operation and Development (“OECD”).<sup>11</sup> In December of 2005, an OECD study found that the United States ranked twelfth out of its thirty member states — mainly developed nations — in terms of percentage of broadband penetration among inhabitants.<sup>12</sup> The United States had an average penetration of 16.8%, as compared to 26.7% for Iceland, 25.4% for Korea, 25.3% for the Netherlands, 23.1% for Switzerland, and 22.5% for Finland.<sup>13</sup> This has caused considerable consternation in U.S. financial as well as political sectors.<sup>14</sup>

Although the OECD’s statistics were technically correct, the reactions to them may have been unduly dire. In most of its member states, broadband is delivered by a digital subscriber line (“DSL”), a digital connection offered by local telephone companies. In the United States, however, most residential broadband services traditionally have been offered by cable modems over cable television systems. Traditionally, cable penetration has been much lower than telephone

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7. See IEEE Standards, *supra* note 4. The IEEE has a program for creating standards in a variety of electronic technologies. IEEE, IEEE Standards, <http://www.ieee.org/web/standards/home/index.html> (last visited Aug. 29, 2006).

8. Wi-Fi Alliance, Get to Know the Alliance, [http://www.wifialliance.com/about\\_overview.php](http://www.wifialliance.com/about_overview.php) (last visited Aug. 28, 2006).

9. See *infra* text accompanying note 34.

10. See, e.g., 151 CONG. REC. S7296, 98 (daily ed. June 23, 2005) (statement of Sen. Lautenberg for himself and Sen. McCain). Senator McCain’s comments related to his co-sponsorship with Senator Frank Lautenberg of New Jersey of the Community Broadband Act of 2005, S. 1294, 109th Cong. § 1 (1st Sess. 2005), which is discussed *infra* note 69 and accompanying text.

11. The OECD is an intergovernmental organization consisting of thirty countries, including the United States, which develops economic and social policies for use by governments as a way to make progress in the globalized economy. See Org. for Econ. Co-Operation & Dev., <http://www.oecd.org> (last visited Aug. 28, 2006) [hereinafter OECD].

12. OECD, BROADBAND STATISTICS TO JUNE 2006 (2006), <http://www.oecd.org/sti/ict/broadband>.

13. *Id.*

14. See *supra* note 10 (discussing S. 1294).

subscription (about sixty-five percent as opposed to more than ninety percent).<sup>15</sup> Moreover, a cable modem is generally more expensive than a digital subscriber line. Thus, it is less than surprising that broadband penetration is lower in the United States than in many other countries.<sup>16</sup> This situation is likely to change in the relatively near future, however, if the remaining major Regional Bell Operating Companies (“RBOCs”) are successful in deploying fiberoptics to the home — AT&T’s “Lightspeed” and Verizon’s “FIOS”; both of these systems have broadband capability.<sup>17</sup>

Although the OECD report has been a bit of a *cause celebre* recently, the availability of broadband does seem to have a substantial impact on economic growth. A recent econometric study by four leading economists indicates the availability of broadband leads to faster economic growth, higher employment, and increased real estate value.<sup>18</sup> The researchers used U.S. Census data on business activity from the 1990s through 2002 with a “broadband availability indicator” based on information derived from the FCC’s Form 477 reports, on a zip-code basis. There was an extremely positive correlation between broadband deployment and levels of employment — although not wages. The same results basically pertained to rent (as a measurement of real estate values) and local increase in information-technology based business.

The OECD study<sup>19</sup> may understate the competitiveness of U.S. broadband industries — and hence of dependent businesses — simply because it is always difficult to measure competitiveness on an international level, and particularly with quickly developing industries such as telecommunications.<sup>20</sup> Nevertheless, it makes a point worth considering. Similarly, the economic analysis of broadband’s

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15. U.S. cable penetration is nevertheless much higher than in other nations, except for some of the Northern Countries in Europe. See OECD, *supra* note 11.

16. In fact, one of the ongoing puzzles here is that the U.S. telephone and cable companies had committed in the early 1990s to implement a new “National Information Infrastructure” — more commonly known as the “electronic superhighway.” For possibly technological or economic reasons, they never moved in that direction. See Michael Botein, *The Demise of the Electronic Superhighway*, 11 MEDIA L. & POL’Y 85 (2003).

17. E.g., Linda Haugsted, *Phone Key to Bundle*, MULTICHANNEL NEWS, July 20, 2006, at 24; David Kocieniewski, *New Jersey to Let Phone Companies Become Pay Television Providers*, N.Y. TIMES, Aug. 5, 2006, at B1.

18. William H. Lehr, Carlos A. Osorio, Sharon E. Gillett & Marvin A. Sirbu, *Measuring Broadband’s Economic Impact*, BROADBAND PROPERTIES, Dec. 2005, at 12, available at <http://www.broadbandproperties.com/2005issues/dec05issues/dec2005.php>. An earlier and lengthier version of the piece was presented at the 33rd Research Conference on Communication, Information, and Internet Policy (TPRC), Sept. 23–25, 2005, in Arlington, VA.

19. See OECD, *supra* note 12.

20. See, e.g., Michael Botein & Alan Pearce, *The Competitiveness of the U.S. Telecommunications Industry: A New York Case Study*, 6 CARDOZO ARTS & ENT. L.J. 233 (1988).

economic impact does not pretend to be definitive, but rather it tends to confirm intuitive notions that broadband enhances a variety of economic factors.<sup>21</sup>

## II. LOCAL GOVERNMENT IMPLEMENTATION OF WI-FI

These concerns about the competitiveness of U.S. industries in terms of broadband led to a perhaps unexpected response from city governments. After the telecoms and cable industries declined to move forward with the “electronic super-highway” during the 1990s,<sup>22</sup> city governments undertook the role of creating their own wi-fi networks. There were several reasons for this.

First, wi-fi was the least expensive form of broadband to build, as it did not require extensive underground fiberoptic and other conduits. In most cases, the radio frequency antennas can simply be attached to existing street lamps, which provide electric power. For example, the city of Taipei, Taiwan has extended broadband wi-fi to more than ninety percent of its geographic area.<sup>23</sup> The same strategy naturally also applies to U.S. cities, and a number have followed a similar technological approach.

Second, this alternative catered to partnerships with private sector entities. From the beginning, cities recognized they lacked the expertise and capital to build wi-fi networks by themselves. They almost universally have struck deals with telecommunications companies to build and operate systems for them on an exclusive basis. Examples of these partnerships include Earthlink in Philadelphia, SBS Communications as well as Cisco Systems in Milwaukee,<sup>24</sup> and Uni-President, Inc., in Taipei.<sup>25</sup>

This approach is somewhat similar to traditional municipal franchising of cable television. In those situations, however, the local government usually does not attempt to operate a system at all, but instead chooses a private entrepreneur.<sup>26</sup>

This environment might be attractive to private telecommunications companies, since it allows them to participate fully in wi-fi’s economic development.

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21. A similar study used a smaller study to reach much the same conclusion as to economic impact. George S. Ford & Thomas M. Loutsky, *Broadband and Economic Development: A Municipal Case Study from Florida*, 17 REV. URB. & REGIONAL DEV. STUD. 216 (2005), available at <http://www.aestudies.com/library.econdev.pdf>. Aside from the size of the sample, it relied almost exclusively on state-level data.

22. See Botein, *supra* note 16, at 85–89.

23. Taipei City Government, Growing an Intelligent Community, <http://english.taipei.gov.tw/ICF/index.jsp?catid=5311> (last visited Oct. 17, 2006).

24. COMM. ON TECH. IN GOV'T & COMM. ON PARKS & RECREATION, N.Y. CITY COUNCIL, OVERSIGHT: WIRELESS INTERNET SERVICE IN PUBLIC PARKS 4 (2006), available at <http://webdocs.nycouncil.info/attachments/72530.htm?CFID=1130470&CFTOKEN=70214294>. The City Council had begun limited wi-fi deployment in a few city parks with a small company, Wi-Fi Salon, because it was the only respondent to a June 2003 request for proposals. *Id.* at 5.

25. Taipei City Government, *supra* note 23.

26. MICHAEL BOTEIN, FEDERAL REGULATION OF THE ELECTRONIC MASS MEDIA 181 (3d ed. 1998).

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Nevertheless, it immediately drew opposition from the two largest remaining RBOCs, Verizon<sup>27</sup> and AT&T.<sup>28</sup> There are at least two possible reasons for their positions.

First, as the “legacy” U.S. local telecommunications carriers, Verizon and AT&T may view wi-fi as just an extension of their existing local service — such as DSL. The puzzling aspect of this analysis, however, is that in the past, neither company showed much interest in the broadband market, with DSL almost as an afterthought in light of the cable modem’s success. As noted before, despite their promise to participate in the Clinton Administration’s “electronic superhighway,”<sup>29</sup> none of the RBOCs played an active role. One observer noted that this resulted from the “monopolistic structure, entrenched management, and political power” of the RBOCs.<sup>30</sup> As the New York City Council recently noted, both the telecommunications and cable industries have been less than aggressive in marketing DSL or cable modems.<sup>31</sup> The reasons for the RBOCs’ traditional lack of interest in broadband may range from marketing inexperience to limited capital,<sup>32</sup> particularly in light of recent test deployment of Verizon’s FIOS and AT&T’s Lightspeed systems.<sup>33</sup>

A second explanation may be that even if the RBOCs are not particularly interested in developing wi-fi, they may fear that the new medium will poach on their cellular radio businesses. These have been enormously profitable — in many cases making the difference between profit and loss for RBOCs. As noted before,<sup>34</sup> so far wi-fi has been used only to transmit data. At least in theory, however, it also can accommodate video and voice. This would allow cities and their commercial partners to offer cellular services in direct competition with the RBOCs — from an RBOC’s perspective using an extension of its local telecommunications legacy.

Regardless of the reasons, municipal wi-fi entry has touched off a full-scale conflict. To date, it has involved state legislatures, the Congress, and the federal courts. There is little likelihood of a resolution in the near future.

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27. Verizon is comprised primarily of the old NyNex and New Jersey Bell.

28. By far the largest of the remaining RBOCs, AT&T is an amalgam of SBC and BellSouth.

29. Botein, *supra* note 16.

30. Charles H. Ferguson, *The U.S. Broadband Problem*, BROOKINGS INST. POL’Y BRIEF (Brookings Institution, Washington, D.C.), July 2002, at 1. The author goes on to note that the RBOCs “engage in virtually no research and development . . . . However, their political spending has increased sharply . . . .” *Id.* at 3.

31. COMM. ON TECH. IN GOV’T & COMM. ON PARKS & RECREATION, *supra* note 24.

32. *See id.*

33. *See* Kocieniewski, *supra* note 17.

34. *Id.*

### III. STATE AND FEDERAL LEGISLATIVE POSTURING

The legal issues first arose in the context of state legislation, when wi-fi opponents attempted to secure laws forbidding local governments from offering the service. Cities naturally countered with judicial challenges — essentially non-starters — and later with a possibility more effective approach of preemptive federal bills. The following discussion is somewhat summary in nature, and attempts to sketch out only general trends — for the simple reason that everything is likely to change.

#### A. State Legislation: A Brief Overview

##### 1. Constitutional Basis

The juridical status of state legislative restriction or regulation of municipally operated wi-fi systems is quite straightforward, as a result of a recent U.S. Supreme Court decision. In *Nixon v. Missouri Municipal League*,<sup>35</sup> the Court upheld a Missouri state prohibition on a municipal offering of any type of “telecommunications service or telecommunications facility.”<sup>36</sup>

In 1998, Petitioner Missouri Municipal League and others had requested the FCC to preempt the Missouri statute, under section 253(a) of the recently passed Telecommunications Act of 1996. This provides that the Commission “shall preempt” any state law which “may prohibit or have the effect of prohibiting any entity to provide [sic] any interstate or intrastate telecommunications service.”<sup>37</sup> After three years of consideration, the FCC ultimately decided not to preempt the Missouri statute, even though three out of the five commissioners separately stated the law “disserved” the 1996 Act’s policies by decreasing the overall amount of competition in the telecommunications market.<sup>38</sup>

Although a lengthy discussion of the *Missouri League* reasoning is not necessary here,<sup>39</sup> Justice Souter’s majority<sup>40</sup> opinion raises some substantial ques-

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35. *Nixon v. Missouri Mun. League*, 541 U.S. 125, 128–29 (2004), *aff’g* 299 F.3d 949 (8th Cir. 2002) (analyzing the scope of MO. REV. STAT. § 392.410(7)). *Missouri Mun. League* was one of two conflicting circuit court decisions involving local governmental delivery of telecommunications services. *See also* *Abilene v. FCC*, 164 F.3d 49 (D.C. Cir. 1999) (upholding a Texas statute that barred municipalities from providing telecommunications services); Adam Christensen, ‘*Wi-Fight Them When You Can Join Them? How the Philadelphia Compromise May Have Saved Municipally-Owned Telecommunications Services*, 58 FED. COMM. L.J. 683 (2006) (providing an excellent discussion of this line of cases).

36. MO. ANN. STAT. § 392.410(7) (West 2006).

37. 47 U.S.C.A. § 253(a) (2006).

38. *Missouri Mun. League*, 16 FCC Rcd 1157, 1158 (2001). Separate statements were issued by Chairman Kennard as well as commissioners Tristani and Ness. *Id.* at 1172–73. Had these commissioners voted in accordance with their statements, the Commission’s decision thus would have been 3–2 in favor of preempting the Missouri statute.

39. *See* Christensen, *supra* note 35, at 691–95 (providing a thorough discussion).

40. *Missouri Mun. League*, 541 U.S. at 125–41 (Scalia, J. and Thomas, J., concurring) (Stevens, J., dissenting).



tions. Its basic thrust is that without state approval, a local government lacks either the financial ability or legal authority to run any type of operation. It thus concludes that to preempt a state limitation would be “to set off on . . . uncertain adventures,”<sup>41</sup> since a state government would be forced to continue authorizing and funding a local telecommunications service even if it disagreed with it. “The result, in other words, would be the federal creation of a one-way ratchet. A state or municipality could give the power, but it could not take it away later.”<sup>42</sup>

Justice Souter certainly is correct that federal legislation does not and probably would not provide either financial support or legal authorization for a local governmental telecommunications facility.<sup>43</sup> But this does not necessarily end the discussion.

In terms of funding, Justice Souter does not consider the availability of private sources. As is the case with local franchising of cable television, all of the funding comes from the private entrepreneurs. As noted before,<sup>44</sup> at present most municipal wi-fi systems involve a partnership of the public and private sectors, precisely because local governments — from New York to Taipei — know perfectly well that they lack both the capital and expertise to implement wi-fi. Moreover, use of private funds to build publicly approved facilities is quite common in a variety of contexts, ranging from sports arenas to public broadcasting. It is thus unclear that a state’s financial involvement is essential to building and operating a local governmental wi-fi system.

As to legal authorization, it is equally unclear that a state’s involvement is necessary in order to make a project feasible. After all, a number of state constitutions grant local governments “home rule” powers directly, thus obviating the need for a city to seek legislative authorization for a variety of functions.<sup>45</sup> To be sure, this can result in different results from one state to another — referred to by Justice Souter as a “national crazy quilt.”<sup>46</sup> This country’s federalist nature always has resulted in heterogeneous results, however, in areas outside of exclusive federal jurisdiction. Indeed, the creation of federal diversity jurisdiction was predicated upon just such considerations.<sup>47</sup>

To some extent, the result in *Missouri League* may have been driven by traditional custom and usage on the federal level. The Court long has recognized

41. *Id.* at 134.

42. *Id.* at 136.

43. *Id.* at 133–38.

44. See *supra* text accompanying notes 23–25.

45. For example, the New York State Constitution gives expansive home rule powers to municipalities. In the early days of cable television franchising — long before the State legislature passed a detailed cable regulatory framework — cities relied upon these general powers in regulating cable. *E.g.*, *City of New York v. Comtel*, 293 N.Y.S.2d 599 (Sup. Ct. N.Y. County 1968).

46. *Missouri Mun. League*, 541 U.S. at 136.

47. See FLEMING JAMES, JR. ET AL., *CIVIL PROCEDURE* 167 (5th ed. 2001).

that Congress reserves the ability to limit the operations of agencies which it creates — sometimes explicitly to prevent what might be perceived as unfair competition to private companies. For example, section 15(d) of the Tennessee Valley Authority Act of 1933 explicitly provides for this,<sup>48</sup> and the Court has not questioned it.<sup>49</sup> To a certain extent, the *Missouri League* Court may have felt that states were entitled to the same deference within their areas of competence as the federal government was within its. The Court noted that “regulation can turn into a public provider’s weapon against private competitors,”<sup>50</sup> although it took pains to exclude this from the merits.

States thus are constitutionally free to restrict or regulate local governments’ entry into wi-fi. So far, they have done so in a variety of different fashions. As will be seen in Part 2(B), however, the lack of consistency is characteristic of reactions to a new and basically unknown technology.

## 2. *Types of State Regulation*

Current state wi-fi legislation tends to fall into three main categories: (1) prohibitions on municipal operation; (2) limitations on types of systems; and (3) procedural prerequisites for local governmental market entry. Since states have been passing, amending, and repealing these laws on a regular basis, it is impossible to create a definitive list of state legislation.<sup>51</sup> Instead, a sampling of each of the three approaches may be useful.

Pennsylvania was one of the early battlegrounds between state and local regulation. Verizon and the City of Philadelphia — as well as a number of other telecommunications companies and cities — engaged in extensive lobbying throughout 2003 and 2004.<sup>52</sup> This resulted in both a legislative and a practical compromise. The parties ultimately agreed upon a statute preventing a local government from offering “advanced or broadband services” unless it had “submitted a written request for the deployment of such service to the local exchange telecommunications company,” the latter had not agreed to provide the requested services on its own within two months, and the services were not available within “14 months of the receipt of the request.”<sup>53</sup> Although on its face this might not seem like much of a compromise, the theory was that the time constraints on

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48. 16 U.S.C. § 831n-4.

49. *Hardin v. Ky. Util. Co.*, 390 U.S. 1, 6 (1968) (noting that one of the Act’s purposes was “to protect private utilities from TVA competition”).

50. *Missouri Mun. League*, 541 U.S. at 131.

51. Probably the best ongoing catalog of state wi-fi legislation is available from the Baller Herbst Law Group, which updates lists of current and pending laws on a regular basis. See The Baller Herbst Law Group, Community Broadband, [http://www.baller.com/comm\\_broadband.html](http://www.baller.com/comm_broadband.html) (last visited Aug. 28, 2006).

52. Christensen, *supra* note 35, at 695–700.

53. 66 PA. STAT. ANN. § 3014 (2006).

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the local carrier were sufficiently stringent to prevent it from exploring a possible wi-fi system indefinitely — as carriers have done throughout the world.<sup>54</sup> More pragmatically, Verizon apparently made a deal with Philadelphia, its most vocal opponent, not to apply for that city's market.<sup>55</sup>

A second and somewhat less stringent form of legislation may involve a less sweeping form of limitation on local governments. For example, Nebraska legislation prohibits cities from selling telecommunications services generally, but allows them to sell and lease “dark fiber”<sup>56</sup> — that is, optical fiber which has not been activated and is incapable of carrying information. The rationale behind this approach is less than clear, since it involves a city in constructing, but not operating, a broadband medium. It may rest on the assumption that the logical buyer for dark fiber usually will be a private carrier, and that the partial restriction still prevents a local government from competing for data transmission and software support.

Somewhat similarly, a Tennessee statute prohibits local governments from providing “telecommunications services,” but explicitly allows them to offer “cable service, two-way video transmission, video programming, Internet services, or other like service . . .”<sup>57</sup> Both the meaning and the reasoning of this provision are less than clear. A restriction to video services presumably might make some sense, by excluding local governments from data transmission markets and restricting them to video. Moreover, as noted before,<sup>58</sup> cable franchises almost universally involve a city merely in a supervisory role, with the technological and financial benefits accruing to a private entrepreneur. Operation of a modern cable system, however, inevitably includes offering cable modem service,<sup>59</sup> and the statute specifically allows local governments to offer “Internet service,” which would be totally consistent with cable modems. The statute thus appears to be internally inconsistent, and not to accomplish its apparent goal of excluding cities from the broadband market.

The third type of restriction is procedural in nature, and may take several different forms, the most common of which is a referendum. For example, a Colorado statute allows a local government to offer broadband service only after “an election . . . on whether or not the local government shall provide the pro-

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54. For example, the Australian carrier Telstra spent years planning a national broadband network — much like the formerly proposed U.S. “electronic superhighway,” — and ultimately dropped the whole project. See Botein, *supra* note 16; *Telstra Drops Plan for Australia Network, Dealing a Blow to Alcatel*, WALL ST. J., Aug. 8, 2006, at B3.

55. Christensen, *supra* note 35, at 700.

56. NEB. REV. STAT. §§ 86-593 to -599 (2006).

57. TENN. CODE ANN. § 7-52-601(a) (2006).

58. See *supra* text accompanying note 43.

59. See OECD, *supra* note 12. The Organisation for Economic Co-operation and Development's broadband study found that nine million U.S. cable subscribers had cable modems.

posed . . . service . . . .”<sup>60</sup> Louisiana similarly requires “an election . . . before engaging or offering to engage in performing such services . . . .”<sup>61</sup> By contrast, Florida requires a local government to hold two or more “public hearings” before offering a “communications service.”<sup>62</sup> This statute is somewhat more substantive than a traditional election or referendum, since it requires a local government to make public a “business plan,” addressing technological feasibility, capital as well as operating costs, and sources of investment and ongoing revenues. This presumably imposes more of a burden upon a city than a referendum, but may produce information of use to the government, local public interest groups, and potential private operators.

As this brief review indicates, substantial variations exist in state restrictions on municipal wi-fi. This is largely the result of fact that the whole issue is new, really only dating from the beginning of the millennium — just like the underlying technology.<sup>63</sup> States thus are floundering, particularly when caught — as in the Philadelphia story — between industry and city lobbies. To this extent, Justice Souter’s concerns in *Missouri League* about a “national crazy quilt” of state regulatory schemes may have some validity.<sup>64</sup>

The uncertain nature of state regulation has brought with it a similarly disparate set of reactions from the Congress. Disappointed lobbyists on the state level have sought to get some relief from federal authorities. As discussed below, this has resulted in a variety of bills pending in the Congress, to confirm, undo, or modify state legislation.

### B. Federal Legislative Initiative

As of the end of its 2006 session, Congress was considering measures ranging from a ban on municipal wi-fi to preemption of all state limitations on municipal wi-fi. Once again, trying to create a definitive taxonomy is impossible because of the situation’s tentative status and the possibilities of political changes during the midterm as well as presidential elections. Some examples may be most useful.

At one end of the spectrum is an outright federal ban on any local governmental provision of telecommunications — including “telecommunications service, information service, or cable service . . .” if a private entity supplies any “substantially similar service.”<sup>65</sup> Other than protectionism for commercial operators, it is difficult to see a basis for this type of measure.

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60. COLO. REV. STAT. §§ 29-27-101 to -304 (2006).

61. LA. REV. STAT. ANN. §45:844.56 (2006).

62. 2005 Fla. Laws ch. 132.

63. See *supra* text accompanying note 4.

64. *Missouri Mun. League*, 541 U.S. at 135.

65. Preserving Innovation in Telecom Act of 2005, H.R. 2726, 109th Cong. § 2 (1st Sess. 2005).

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A slightly less draconian approach would prohibit cities from using their regulatory powers to exclude private entrepreneurs. This would involve requirements of public notice as to any proposed communications service, “a detailed accounting” of any inherent advantages for a municipal service, “open bids” for provision of any service, and a legal “preference for non-governmental entities” in the event of “identical bids” — which naturally is quite unlikely with these types of high-technology services.<sup>66</sup> Like some of the previously discussed state statutes,<sup>67</sup> this approach imposes some procedural burdens on local governments, but it is much less onerous than an outright prohibition. To a real extent, it amounts to nothing more than a particularization of traditional competition policy, by preventing a monopolist (here of governmental authorizations) from refusing to deal.<sup>68</sup>

Other proposals would limit state legislatures’ activities more directly, by preventing them from “prohibiting any public provider . . . from providing . . . advanced telecommunications capability or any service . . . .”<sup>69</sup> This approach usually also includes a ban on any local governmental activity with the effect of discriminating against private entrepreneurs.<sup>70</sup> As discussed above,<sup>71</sup> this closely tracks traditional competition policy and would apply in any event under existing antitrust law.<sup>72</sup>

A final approach has been to strengthen the FCC’s powers to preempt state laws for policy grounds, such as finding “substantial and clear efficiencies to be gained by preempting the regulatory approach of such State . . . .”<sup>73</sup> This language is somewhat more sweeping than the current section 253(a) of the Communications Act, which was at issue in the *Missouri League* case — and which Justice Souter found to be an insufficient basis for preempting the state law at issue there.<sup>74</sup> It thus is less than clear that just a few years afterwards the Court

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66. Broadband Investment and Consumer Choice Act, S. 1504, 109th Cong. § 15 (1st Sess. 2005).

67. See *supra* text accompanying notes 53–62.

68. *E.g.*, *Associated Press v. United States*, 326 U.S. 1 (1945).

69. Community Broadband Act of 2005, S. 1294, 109th Cong. § 1 (1st Sess. 2005); see OECD, *supra* note 12. Interestingly enough, in his remarks introducing the legislation, Mr. McCain referred to the OECD study, and argued that municipal provision of broadband services was essential to preserving the United States’ competitive position on a global level. 151 CONG. REC. S7298 (daily ed. June 23, 2005). This was precisely the same argument used by many opponents of local governmental provision of wi-fi and other telecommunications services.

70. Community Broadband Act of 2005, S. 1294, 109th Cong. § 1 (1st Sess. 2005); Communications, Consumer’s Choice and Broadband Deployment Act of 2006, S. 2686, 109th Cong. § 501 (2d Sess. 2006). Section 501 of S. 2686 is almost identical with section 1 of S. 1294. A bill with very similar language passed the House during the Spring of 2006 but showed no signs of life thereafter. See Communications, Opportunity, Promotion and Enhancement Act of 2006, H.R. 5252, 109th Cong. § 401 (2d Sess. 2006).

71. See *supra* text accompanying note 65.

72. 15 U.S.C. § 2 (2000).

73. Digital Age Communications Act, S. 2113, 109th Cong. § 407 (1st Sess. 2005).

74. See *supra* text accompanying notes 41–42.

would give a more generous interpretation to a broader statute; presumably Justice Souter's concerns about a "national crazy quilt" of regulation<sup>75</sup> would not hinge upon the language of a particular statute.

As with state legislatures, the Congress shows no particular trend towards any consensus. Individual legislators appear to be reacting to a variety of pressures from cities, the RBOCs, and other potential wi-fi players. Time must pass before any meaningful trends surface on the federal as well as state level.

#### IV. CONCLUSION

As is often the case in dealing with new technologies, the proposed legal solutions seem to have outrun the available knowledge. Less than a decade from wi-fi's rather humble origins,<sup>76</sup> many questions remain unanswered.

Is there a viable economic market for wi-fi in the first place, in light of how much consumers may be willing to pay for yet another data stream?<sup>77</sup> To what extent does wi-fi compete with wired broadband, such as cable modems and DSL? Do municipal wi-fi operators have an unfair competitive advantage over private entrepreneurs? What is the model for partnerships between cities and private entrepreneurs in providing wi-fi?

Simply because wi-fi is so new, it may be wise to keep in mind the early history of somewhat similar medium: cable television. Although the first cable systems began operations in the late 1940s, the FCC did not even consider regulating the industry until the 1960s.<sup>78</sup> After the Commission asserted jurisdiction in the mid-1960s, in 1968 the Supreme Court approved only a very watered-down version.<sup>79</sup> It took almost two more decades before Congress gave the FCC anything resembling a statute with plenary power over cable, in the Cable Act of 1984.<sup>80</sup> By comparison, both litigation and legislation as to municipal wi-fi have been moving at a breakneck pace.

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75. *Missouri Mun. League*, 541 U.S. at 136.

76. *See supra* text accompanying note 4.

77. For example, when the City of Taipei originally launched its municipal wi-fi service on a free basis, it had several hundred thousand subscribers within a few months. After imposing a relatively modest monthly fee of US\$12, however, that number plummeted by ninety percent. The City and its private partner are unsure as to maintaining, lowering, or subsidizing the subscription rate. Interview with Hon. Ying-jeou Ma, Mayor, City of Taipei, in Taipei, Taiwan (June 29, 2006).

78. Charles Ferris, Frank Lloyd & Thomas Casey, *Cable Television Law: Video Communications Practice Guide* Sec. 5.03-5.05.

79. *United States v. Sw. Cable Co.*, 392 U.S. 157 (1968) (holding that the FCC had jurisdiction over cable only to the extent that it was "reasonably ancillary" to its regulation — and presumably protection — of broadcast television).

80. Cable Communications Policy Act of 1984, Pub. L. No. 98-549, 98 Stat. 2779 (1984) (codified as amended in scattered sections of 47 U.S.C.); *see* Joseph R. Fogarty & Marcia Spielholz, *FCC Cable Jurisdiction: From Zero to Plenary in Twenty-Five Years*, 37 FED. COMM. L.J. 113 (1984).

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Like everything else in this field, the analogy between wi-fi and cable still is less than clear. To the extent that the analogy has any relevance, however, it argues strongly for a hands-off approach to municipal wi-fi in the near future.





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