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Hold the Phone: Why Arizona Doesn't Need a Cellphone Users' Bill of Rights

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EXECUTIVE SUMMARY

In 2008, the Arizona Legislature will consider whether to enact the "Cellphone Users' Bill of Rights" to regulate wireless phone service in the state. Provisions include a ban on wireless contracts with an initial term over one year and several letting consumers rescind their contracts more easily.

The legislation was inspired by a legislator's disappointing experience with his wireless phone company. Supporters argue that wireless providers can comply with the law without significant costs.¹ But the Cellphone Users' Bill of Rights will not help consumers. The deregulation of wireless service by the U.S. Congress in 1993 has brought consumers a 40 percent price drop in six years, better and less expensive equipment, and an amazing array of service options.²

Wireless companies must design their contracts to protect their investments in new networks. More regulation is likely to raise prices, even if the effect is hard to see, because, with the demand for nationwide pricing, it would not be isolated to one state. Even with that demand, nationwide pricing might not be offered in Arizona because wireless carriers would be forced to comply with Arizona regulations. But hidden costs are still real. The bill is likely to reduce consumer choice and lead to higher prices and less investment in new networks.

Legislators should recognize that competition gives consumers the choices they need. Existing laws already control fraud and deception and apply to every business, including wireless carriers. Instead of proposing legislation that could stifle competitive forces, legislators should encourage competition by reducing regulatory delays such as those involved in siting cell phone towers.

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The Rise of Wireless Telecommunications

Even though the astounding economic gains wireless and other technologies have generated are relatively recent, they have been around long enough to be taken for granted. The Federal Communications Commission (FCC) delayed the introduction of cellular phones for 10 years, at a cost to the economy estimated at \$85 billion.³ Decades of experience with telecommunications regulation teach a simple lesson: Regulation stifles competition and growth.

By the 1990s, federal regulators began to recognize the need for deregulation. The result provided astounding benefits for consumers and the economy. Freed from public-utility style regulation in 1993, the use of wireless phones took off. Meanwhile, never-regulated computers and software had become one of the most innovative parts of the economy. By the mid-1990s, private and commercial investment in the Internet (at first forbidden or discouraged) had soared. Even Congress got the message and in 1996 further deregulated some aspects of the telecommunications industry.

The contribution of wireless phone networks is noteworthy. Wireless leads the charge to bring competition to the long-monopolized telephone industry.

Other economic benefits arose from the rollback of regulation:

- Overall job growth: between 1970 and 2004, the number of employed in the United States nearly doubled.⁴
- Many home-based businesses were started, especially by women.⁵
- From 1990 to 2000, telecommuting grew by 23 percent,⁶ drastically reducing time spent in traffic.⁷

The contribution of wireless phone networks is noteworthy. Wireless leads the charge to bring competition to the long-monopolized telephone industry. Consumers in the United States can choose among five national wireless carriers and many regional services; there are at least eight carriers in Arizona. Competition led to technical and business innovations that quickly made wireless communications affordable. Cell phones spread through the population rapidly. Television took 26 years to reach one-quarter of the population and the personal computer 16 years, but the cell phone took only 13.⁸

Wireless today remains one of the most competitive and innovative technology sectors. Most wireless devices in use today are second or third generation (2G or

3G). Roughly speaking, 3G is faster and better than 2G and supports a wider range of services, such as voice, data, and multimedia, while 2G only supports voice services. 3G services include CDMA or TDMA phone networks,⁹ and Wi-Fi¹⁰ and WiMAX.¹¹ The next generation, with pre-4G services such as UMB (Ultra Mobile Broadband), is expected in 2008 and 2009. In 2012, the advent of 4G devices is anticipated. The 4G devices will be all-Internet Protocol, capable of supporting about 1 Gbps stationary and 100 Mbps mobile, and are expected to make mobile broadband an even more affordable mass-market service.

For business and residential consumers, and to some emergency services as well,¹² wireless phones brought significant gains in productivity, convenience, and safety.¹³ Wireless phone services have sometimes been criticized for poor customer service,¹⁴ but with this much competition, they must strive to improve or they will lose revenues.¹⁵ Pro-customer refinements begin with the trivial, for example, with carriers altering tiny phone keypads so they could more easily be used by those with longer nails. Other changes have major implications: Nokia is advertising its N-series phones as “open to anything,” hoping customers will want a range of carrier choices greater than that offered by the iPhone, which supports only AT&T wireless service. T-Mobile and Sprint Nextel, along with device manufacturers and software companies, recently announced the Open Handset Alliance with a goal to “be the first open, complete, and free platform created specifically for mobile devices.”¹⁶ Subsequent to the formation of the Alliance, Verizon Wireless announced that it too will open its phones to work with any network, and the chief executive officer of AT&T’s wireless business announced that a subscriber could use “any handset on our network you want”¹⁷ (excepting the iPhone for contractual reasons).

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Still-new products like the iPhone have already led competitors to respond with offerings like Verizon’s Voyager, which uses a touch screen similar to the iPhone’s. One of Nokia’s new 3G phones combines navigation, a high-end camera, and multimedia computer capabilities with now-familiar features such as games. The federal introduction of wireless local number portability, which allows consumers to keep their phone number when they switch carriers, is enhancing competition further because consumers can more easily change carriers and keep their phone numbers.

Into this happy competitive chaos was introduced the idea of a wireless phone users’ bill of rights. In 2004, the California Public Utility Commission adopted rules that, among other things, gave consumers a 30-day window to cancel a contract without penalty; those rules were later suspended.¹⁸ Other states have considered similar legislation, including Massachusetts, Minnesota, New Jersey, and New York. Minnesota is the only state to have actually enacted consumer-

related legislation, which was later struck down by the U.S. Court of Appeals for the Eighth Circuit.¹⁹

The Minnesota legislation proposed to disallow carriers from making contract changes that could result in rate increases without the consent of subscribers and to require that carriers deliver copies of contracts to subscribers with the proposed changes and their effect on rates disclosed. The legislation's sponsor remarked that the bill "could turn into something that ends up costing everybody more money and it does kind of complicate the whole process."²⁰ The court ruled that the Minnesota law was preempted by federal statute, which disallows state or local regulation of rates.²¹

The Arizona Cellphone Users' Bill of Rights

The number of wireless subscribers in Arizona has grown from about 1.85 million in 2000 to 4.4 million as of December 2006.²² Wireless providers employ about 4,000 people in Arizona, with wages well over the statewide and national median.²³ Although it sometimes seems as if everyone who wants a wireless phone already has one, there is still room for growth in Arizona, especially in remote or tribal areas.

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Arizona's high growth rate is one of the fastest in the country, at 3.6 percent,²⁴ which, along with the state's rural population, poses challenges for service providers.²⁵ Building new networks is expensive.²⁶ Although wireless may be a low-cost option for difficult terrain or sparse populations compared with wires, it still requires substantial investment.²⁷ In 2006, for example, AT&T, then operating as Cingular Wireless, invested about \$105 million in Arizona to expand cell sites and retail outlets.²⁸ Many wireless companies are working on even more costly wireless broadband upgrades. Ultimately, networks will not thrive if the underlying economics do not make sense.²⁹ Returns are not guaranteed, as the city of Tempe learned when take-up of its municipal Wi-Fi network was poor.³⁰ Further, regulatory delays and other factors add risk.³¹

The proposed Arizona Cellphone Users' Bill of Rights is similar to legislation elsewhere. It would

- require cell phone companies to provide detailed coverage information, including maps at the "maximum practicable level of granularity"³²
- limit the term of cell phone contracts to one year³³
- allow customers to cancel contracts for any reason within 30 days of

- contracting with carriers without penalty³⁴
- allow users to rescind contracts if providers violate any provision³⁵
- require providers to give customers an itemized bill without additional charge³⁶
- forbid companies from giving out customer information to others without specific prior written consent³⁷
- bar wireless carriers from requiring customers whose phones break during the warranty period to sign contract extensions, and require that the phone be replaced with a new phone rather than a rebuilt phone.³⁸

Such legislation is a marked departure from the deregulatory approach that has generated enormous technological and economic gains for Arizonans.

Arguments for Legislative Action on Wireless Are Weak

This section reviews the arguments for and against a wireless consumer bill of rights.

Claim #1: Markets have failed to protect consumers. One argument in favor of regulation is that competition in the wireless phone industry has failed to protect consumers.³⁹ Either there is not enough competition, or competition doesn't really work as advertised. One group supporting the idea of a bill of rights claims that, "Since 2004, mergers have reduced cell phone industry competition. Four companies—Verizon Wireless, Cingular [now AT&T Mobility], Sprint-Nextel and T-Mobile-control 80 percent of the U.S. cell phone market."⁴⁰

Response: Competition can and does work to protect consumers. The history of the wireless phone discussed previously shows very clearly that competition in the wireless industry is alive and well. Consumers have reaped enormous gains from this, valued by one estimate at \$50 billion nationally for the first generation of cellular service alone.⁴¹ Prices for service have continuously fallen, dropping 40 percent between 2000 and 2006.⁴² Wireless phone equipment is constantly improving, with the average amount paid for a cell phone dropping from \$103 in 2002 to \$93 in 2007, even as popular features like cameras and speakerphones were added.⁴³

Companies continuously vie with one another to offer better deals, often including free phones as an incentive. Verizon Wireless now gives consumers 30 days to cancel without paying termination fees, provided they return their phones when they cancel the service.⁴⁴ AT&T, Sprint, and T-Mobile have also introduced more flexible contract terms, including clearer billing statements and

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coverage look-up services.⁴⁵ Increasingly, major wireless carriers are prorating their termination fees, depending on how much time is left in the contract.⁴⁶ Although the result is not perfection--an expectation that is not realistic--the big picture is overwhelmingly positive.

Wireless phone providers began to consolidate into national firms because consumers demanded nationwide coverage and billing and because the economics of nationwide networks made more sense. Consolidation allowed prices to drop even more dramatically than they already had.⁴⁷

Claim #2: Wireless form contracts are inherently unfair to consumers. Advocates of regulation sometimes refer to form contracts as “contracts of adhesion” and argue that these contracts should be regulated more closely because consumers cannot renegotiate the terms of the contract.⁴⁸

Response: The bill would actually reduce consumer choice as to contract terms. The proposed legislation would prohibit consumers from choosing between a two-year contract for one price and a one-year contract (most likely at a higher price). Because the proposal does not allow one’s initial contract with a cell phone provider to extend for a longer term than one year, consumers would be restricted to one-year contracts.

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The use of form contracts by wireless companies has many benefits for consumers. The theory that consumers do not really consent to contract terms when they have not negotiated each term individually is mostly ivory tower nonsense. No one thinks that a grocery store forces us to pay unfair prices for apples because the store manager refuses to haggle with each consumer over the price. Form contracts make sense because similarly situated customers have similar needs. Nor is there need for customers to renegotiate contract terms to protect their interests. Competition ensures that, over time, businesses offer more favorable deals. Theories that stigmatize standardized contracts as “contracts of adhesion” neglect the fact that competition benefits consumers with respect to prices paid, quality, service, and other terms.

Claim #3: The proposed regulation would not be too costly. Concerns about the costs of wireless phone users’ bills of rights have halted legislation in other states. For example, economists estimated that the rules proposed in California would cost more than \$1 billion a year.⁴⁹ They predicted higher prices,⁵⁰ lost jobs, and other consequences as a result of the proposed rules.

Advocates of the rules, though, note that they have not noticed phone prices rising in states whose attorneys general have asked carriers to adopt more consumer-

friendly policies in response to consumer complaints.⁵¹ The implication is that wireless firms are opposing the legislation only because they are shortsighted; the costs they are concerned about are not real. For example, an Arizona state legislator recently said, “it appears that the companies can enact change, keep costs where they are and provide increased consumer protection.”⁵²

Response: The costs of this regulation would be real and substantial but may be hidden. The argument that the proposed rules would impose only trivial costs is extremely shortsighted. Nor does it account for the fact that the changes carriers made were implemented on a national basis, not state-by-state. It indicates, among other things, that advocates of the regulation have not considered how wireless pricing works.

- Several provisions of the bill of rights severely affect wireless firms’ ability to limit the risk of high customer turnover (known as “churn”) long enough to recover their investments in costly infrastructure. These provisions include
 - limits on contract terms
 - allowing customers to cancel almost at will
 - disallowing termination fees, customary and familiar to most consumers who cancel hotel rooms at the last minute or who are prepared to pay more for the right to change or cancel airline tickets.
- If nationwide pricing were still offered in multiple states that enacted differing and conflicting regulations, high regulatory costs in one state would not only affect prices in that state but also the providers’ nationwide service area.
- Costs would not necessarily take the form of easily detectable price hikes. They might take the form of lower rates of price decline, reduced rollout rates, less research and development in innovation, or any number of other forms. Experience suggests that companies invest when the regulatory climate is favorable and when regulation is being rolled back or limited.⁵³
- The provision restricting trade in consumer information will *reduce* competition by making it harder for new entrants and new firms to identify who might be interested in wireless-related services; the provision adds little or nothing to users’ security, since risks come mainly from unauthorized access, not commercial data handlers.

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- Insofar as the costs of the regulations affect rollout, they are likely to affect broadband as well as voice service, because many of the firms affected by the regulation of the latter are also involved in the rollout of wireless broadband. According to the FCC, more than 60 percent of new broadband lines nationally were mobile wireless.
- The implication of some advocates that wireless firms oppose the regulation simply because they are mean-spirited has no more basis in reality than a teenager's conviction that her parents refuse to hand over the car keys because they are bent on "ruining her life."⁵⁴ It suggests that advocates have no comprehension of the complexities of running a cutting-edge, high-tech, job-producing business.

Wireless carriers, representing 95 percent of the wireless customer marketplace, adhere to the same consumer code of conduct, which ensures at least a 14-day trial period for service, service maps, clear billing, and protects consumer privacy.

Claim #4: Wireless class actions suits show that consumers need more protection in Arizona. Another argument in favor of the consumer bill of rights points to complaints against wireless carriers brought to the attention of attorneys general in a number of states, resulting in changes in carriers' policies (Alabama, Arkansas, Colorado, Delaware, Georgia, Hawaii, Idaho, Illinois, Iowa, Kansas, Maine, Maryland, Massachusetts, Michigan, Mississippi, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, South Dakota, Tennessee, Texas, Virginia, Wisconsin, and Wyoming). Some lawsuits have also gone forward based on a variety of claims, from billing practices to taxes. The fact that some claims have been settled could be taken as evidence that the wireless companies need more regulation.⁵⁵ As State Senator Jim Waring recently wrote, "Why should citizens in Arizona be afforded fewer protections than those in other states? The answer, of course, is that they shouldn't"⁵⁶

Response: First, wireless firms have responded to complaints and lawsuits concerning customer service by changing their practices nationwide. Wireless carriers, representing 95 percent of the wireless customer marketplace,⁵⁷ adhere to the same consumer code of conduct, which ensures at least a 14-day trial period for service, service maps, clear billing, and protects consumer privacy.⁵⁸ Because of the demand for nationwide pricing plans, Arizonans feel the impact of these changes in policy just as citizens of any other state.

Second, the settlement of the occasional lawsuit against a wireless carrier does not point the way to real problems for consumers, let alone good solutions. Because it is so expensive to defend against lawsuits claims, firms often settle when the case alleging wrongdoing is negligible. The settlement of some suits brought against a

wireless carrier does not show that wireless consumers need regulatory protection. Indeed, out of many suits, customers get little more than vouchers worth a few dollars, while the attorneys involved get millions.⁵⁹

Claim #5: Legislators' personal experience gives them expertise in this area. Some lawmakers have been inspired in their advancement of the Cellphone Users' Bill of Rights by personal experience, such as a phone shorting out because of moisture.⁶⁰

Response: Anecdotes do not substitute for expertise. Moreover, anecdotes are not a good basis for legislation. Take as a test case the problem of a short caused by moisture. The problem is apparently peculiar to one type of older phone; it is most commonly experienced by users with young children who put the phone in their mouths, and by users who drop the phones into sinks or toilets.⁶¹

This single problem illustrates the difficulties of bootstrapping scattered anecdotes into legislation. When a user brings a short-circuited phone to the wireless companies' attention, how is the customer service person to know that the user didn't drop it in the sink or toss it in on purpose to get a new phone? Some phone companies may choose to always and automatically give the consumer the benefit of the doubt, but legislating such a practice is unfair and naïve.

Legislators should legislate with the public benefit in mind, looking at the big picture. Limited personal experience does not always translate into real expertise.

Regulation has not served telephone consumers well in the past. Competition is not perfect, but it works to spur service improvements far better than regulation does.

Conclusion and Guidelines for State Legislators

Arizona consumers do not need more regulations. Consumers are best served by competition and by general laws that restrict fraud and deception.

Going forward, state legislators should consider these guidelines when assessing other similar proposals:

Learn from history. Regulation has not served telephone consumers well in the past. Competition is not perfect, but it works to spur service improvements far better than regulation does. A comprehensive understanding of this big picture will help legislators avoid overreacting to anecdotes.

Enhance competition by reducing state regulatory barriers and taxes. Legislators can help competition help their constituents by reducing delays in

regulatory approvals for siting cell phone towers and other regulatory costs, and by making sure that wireless customers are not taxed more than other consumers.

Treat competing services alike. Presently, wireless firms compete with wireline traditional phone companies and software-based services such as VoIP (Voice over Internet Protocol); these firms will potentially converge with broadband. Legislation that discriminates against one type of technology for special treatment is usually not good public policy (although achieving equal treatment by expanding regulation of traditional wireline phone service to cover new services is not a good idea; rather, regulation should be minimized across the board).

Respect the complexity of running real businesses. Most people would predict disaster if the state decided to take over the design of wireless networks and the drafting of phone service contracts completely. A partial top-down redesign of service contracts is not likely to go much better for consumers or anyone else. Entrepreneurs have an interest in serving the customers well, together with a real understanding of the trade-offs and risks involved in offering one type of benefit over another.

Avoid state regulation of national markets. What can states do to build up communications infrastructure and support competition, without impeding interstate commerce? Keep communications law minimal, so that consumers and businesses are not overwhelmed with complexity; reform state public utility commissions to reduce their broad discretion to introduce uncertainty into communications rules; and reduce state taxes on wireless service, which makes it more expensive than it needs to be. In fact, states have effectively acted when the federal government has failed to deregulate fast enough. When Congress and the FCC failed to reform municipal franchise laws, many states stepped in to enact the reforms.

The deregulation of wireless phone service has brought enormous benefits to consumers and to the economy as a whole. Taking these gains for granted in Arizona by ramping up regulation would be a mistake. Wireless providers need the flexibility to meet risks and costs of new investment in infrastructure by designing their own business plans and networks. Legislators should not be in the business of telling consumers what term of cell phone service they can or cannot buy. Markets are working well here; there is no reason to change course.

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NOTES

1. See, e.g., Sen. Jim Waring, “Cell Phone ‘Bill of Rights’ Will Protect Arizonans,” *Arizona Capitol Times*, November 30, 2007: “it appears that the companies can enact change, keep costs where they are and provide increased consumer protection.”

2. Robert W. Crandall and Jerry Ellig, Texas Public Policy Foundation, *Texas Telecommunications: Everything’s Dynamic Except the Pricing* 10 (2005), <http://www.texaspolicy.com/pdf/2005-01-telecom.pdf>.

3. See Paul H. Rubin and Hashem Dezhbakhsh, “Costs of Delay and Rent-Seeking Under the Modification of Final Judgment,” 16 *Managerial & Decision Econ.* 385, 389-92 (1995).

4. U.S. Department of Labor, “Household Data; Civilian Labor Force Data,” *Employment and Earnings* (May 1, 2005).

5. Dick Falcone, AT&T Vice President of Sales for the Small Business Market, quoted in National Federation of Women Business Owners, *Research Summary*, November 16, 1995.

6. Ted Balaker, “The Quiet Success: Telecommuting’s Impact on Transportation and Beyond,” Reason Foundation, November 2005, p. 6.

7. Balaker, p. 4.

8. Federal Reserve Bank of Dallas, “The Economy at Light Speed,” in 1996 Annual Report, p. 14.

9. CDMA stands for “code division multiple access,” and TDMA stands for “time division multiple access.” These competing technologies allow multiple users to share the same wireless channel without interference.

10. A wireless technology capable of connecting a network within a relatively small area to the Internet or a private network. Wi-Fi uses the Institute of Electrical and Electronics Engineers’ (IEEE’s) 802.11 standards.

11. WiMAX (Worldwide Interoperability for Microwave Access) provides wireless broadband up to 75 Mbps (fixed) and 15 Mbps (mobile) over longer distances than Wi-Fi. The technology uses the IEEE’s 802.16 standard for wireless metropolitan area networks.

12. See “Wireless Communications Critical to Firefighters Battling Wildfires; First Responders Across U.S. Turn to Verizon Wireless for Communications Support,” PR Newswire, June 1, 2007, which describes using of wireless equipment to fight wildfires in Arizona and elsewhere).

13. A 2005 Verizon survey of wireless users in Iowa found that 27.6 percent of women thought cell phones increased safety and security, compared with 12.6 percent of men. Men rate convenience and mobility higher than women—72 percent compared with 54.5 percent. Verizon Wireless, “Iowans Love ‘Em and Can’t Leave ‘Em,” press release, October 12, 2005, available at <http://news.vzw.com/news/2005/10/pr2005-10-12a.html>.

14. It is difficult to draw any conclusions from data about consumer complaints concerning wireless. Some surveys show a high number of complaints. But the industry is changing and expanding rapidly, and one might expect more difficulties with consumer service in this context. FCC complaint data show a falling rate of complaints, but some states have not shared this experience. Better Business Bureau lumps complaints about wireless hardware, service, and contracts together; by contrast, it breaks out other complaints, such as those related to automobiles, out by category. If the 38 different auto-related categories were lumped together, there would be far more of these than wireless complaints.

15. See W. David Gardner, "Verizon Wireless Captures Top Rank in Customer Survey," *Information Week*, May 15, 2007 (quoting Professor Claes Fornell, director of the University of Michigan's National Quality Research Center: "Companies don't have much pricing power unless there is shrinking supply or higher customer satisfaction.... There are no signs of the former in most industries, so the latter becomes more critical. Companies may begin to see narrowing profit margins unless there is further improvement in customer satisfaction.")

16. Open Handset Alliance, "Overview," webpage, http://www.openhandsetalliance.com/oha_overview.html.

17. Leslie Cauley, "AT&T Flings Cellphone Network Wide Open," *USA Today*, December 5, 2007.

18. Joelle Tessler, "California Weighs Cell User's Bill of Rights," *Mercury News*, March 17, 2003.

19. *Cellco Partnership et al. v. Mike Hatch*, No. 04-3198, 8th Circuit, December 4, 2005.

20. *Cellco Partnership*, p. 12.

21. USC 47 Section 332(c)(3)(A) ("no State or local government shall have the authority to regulate the entry of or the rates charged by any commercial mobile service or any private mobile service, except that this paragraph shall not prohibit a State from regulating the other terms and conditions of commercial mobile services.")

22. Federal Communications Commission, Industry Analysis and Technology Division, Wireline Competition Bureau, "Local Telephone Competition: Status as of December 31, 2006," December 2007.

23. Bureau of Labor Statistics Data, <http://data.bls.gov/PDQ/outside.jsp?survey=en>.

24. Center for Digital Government, "Arizona Broadband Initiative and Framework," April 2007.

25. See, e.g., Dianna M. Nández, "Carriers Scramble to Improve S. Chandler Cell Service," *Arizona Republic*, December 14, 2007, which describes the coverage in S. Chandler, carriers' plans for expanded coverage, and 18-month delays to site new cell towers.

26. See, e.g., Ryan Randazzo, "The First Landline Won't Be the Last,"

Arizona Republic, November 16, 2007, p. 1, which describes the \$450,000 in expenses to connect one Arizona ranch using microwave link and a \$21 million loan to offer access to the remote region.

27. See, e.g., Ryan Randazzo, “Speak Up, That Saguaro Might Be Listening: Rising Cellphone Traffic Leads to Creative Towers,” *Arizona Republic*, August 13, 2007, p. 12, which describes the \$500,000 investment over six years by Verizon in expanded cell coverage.

28. “Cingular Invests Nearly \$105 Million in Its Arizona Network in 2006; New Cell Sites, Enhanced Voice/Data Quality and Capacity, Expanded Retail Outlets,” PRNewswire, April 13, 2006.

29. Thomas W. Hazlett, *Is Federal Preemption Efficient in Cellular Phone Regulation?* 56 *Federal Communications Law Journal* 155, 171 (2003). (“Wireless network owners commit very substantial resources to establishing infrastructure; these assets will only prove profitable where long-run economic viability is maintained.”)

30. Stephen Lawson, “Tempe Wi-Fi Network on the Block: An Early Municipal Wi-Fi Network in Tempe, Arizona, Has Only 500 Subscribers, But It May Have a Buyer,” IDG News Service, December 11, 2007, available at http://www.infoworld.com/article/07/12/11/Tempe-Wi-Fi-network-on-the-block_1.html.

31. See, e.g., Nájuez, “Carriers Scramble to Improve S. Chandler Cell Service.”

32. “Cellphone Users’ Bill of Rights,” S.B. 1010, Section 44-1799.72 (C).

33. “Cellphone Users’ Bill of Rights,” S.B. 1010, Section 44-1799.73.

34. “Cellphone Users’ Bill of Rights,” S.B. 1010, Section 44-1799.73 (C).

35. “Cellphone Users’ Bill of Rights,” S.B. 1010, Section 44-1799.73 (D).

36. “Cellphone Users’ Bill of Rights,” S. B. 1010, Section 44-1799.74 (D).

37. “Cellphone Users’ Bill of Rights,” S.B. 1010, Section 44-1799.75 (A).

38. “Cellphone Users’ Bill of Rights,” S.B. 1010, Section 44-1799.76 (A).

39. Editorial, “Cell Phone Protection: Lawmakers Should Support Regulating Providers,” *Grand Rapid Press*, June 17, 2006, p. A14. (“The state cannot rely solely on competition and market forces to protect users.”)

40. “87 Percent of Voters Want 30 Days to Cancel a Cell Phone Contract Without Penalty,” PR Newswire, May 3, 2006 (reporting Consumer Federation of California’s press release).

41. See Jerry A. Hausman, “Valuing the Effect of Regulation on New Services in Telecommunications,” in Martin N. Baily et al., eds., 1997 *Brookings Papers on Economic Activity (Microeconomics)*, No. 2 (1998), p. 2.

42. Crandall and Ellig, Texas Public Policy Foundation, “Texas Telecommunications: Everything’s Dynamic Except the Pricing.”

43. Joseph Palenchar, “Cellphone Purchasing Patterns, Satisfaction Levels Change,” *Twice (This Week in Consumer Electronics)*, June 4, 2007, p. 16.

44. “United Telecom Communications Opens New Store in Queens,” PR Newswire, December 6, 2007.

45. AT&T press release, October 16, 2007 (30-day return policy and rollover minutes); Sprint press release, November 7, 2007 (30-day return policy, overage notifications, handset upgrades); Sprint press release, November 5, 2007 (announcing membership in Open Handset Alliance); T-Mobile press release, November 7, 2007 (announcing coverage check service, and FlexPlay, which allows access to latest deals and handsets without deposits or long-term contracts).

46. Evangeline Mitchell, "Cell Phone; Swapping Contracts Pays Off," *Houston Chronicle*, November 19, 2007 (describing carriers plans to prorate fees and service that allow customers to swap cell phone contracts when the service that one is subscribed to suits another better).

47. Hazlett, "Is Federal Preemption Efficient in Cellular Phone Regulation?"

48. Testimony of Patrick Pearlman, Deputy Consumer Advocate, Consumer Advocate Division, Public Service Commission of West Virginia, Before the Communications Subcommittee, Senate Commerce, Science, and Transportation Committee, October 17, 2007, p. 12 ("Under most wireless contracts, all the benefits flow in one direction (i.e., to the carrier), and for residential and small business customers there is no real prospect of negotiating over these terms. Such contracts are adhesionary, especially when one considers that virtually all wireless carriers make use of such terms and conditions.")

49. See, e.g. Eve Mitchell, "PUC Proposal Could Bring Higher Bills," *Oakland Tribune*, Apr. 16, 2003 (quoting professor Debra Aron, anticipating that California's proposed wireless regulations would cost the top 15 cell phone carriers in California about \$1.1 billion a year to carry out, resulting in job losses of between 13,500 to and 15,500 in the first year alone.)

50. See "California Adopts Cell Phone 'Bill of Rights,'" MSNBC.com, May 27, 2004 (warning of possible price hikes from \$4 to 17 per month). See also Declaration of Professor Jerry Hausman, February 11, 2004, in the Superior Court of the State of California in and for the County of Alameda, In Re: Cell phone Termination Fee Cases, at 10 (predicting higher prices if termination fees are disallowed); Eve Mitchell, "PUC Proposal Could Bring Higher Bills," *Oakland Tribune*, April 16, 2003 (quoting professor Debra Aron, anticipating that California's proposed wireless regulations would cost the top 15 cell phone carriers in California about \$1.1 billion a year to carry out, resulting in job losses of 13,500 to 15,500 in the first year alone); see also Debra Aron, "The Financial and Public Policy Implications of Key Proposed Telecommunications Consumer Protection Rules on California Wireless Carriers and Customers: Economic Analysis," Pacific Research Institute, February 2003, available at <http://liberty.pacificresearch.org/docLib/AronPaper.pdf>; Thomas Hazlett, "Regulating Wireless Phones in California: An Economic Analysis," Pacific Research Institute, April 9, 2003, available at <http://liberty.pacificresearch.org/docLib/HazlettPaper.pdf>; Mark Lowenstein, "The Wireless Industry: Vibrant and Competitive," Pacific Research Institute, August 2002, available at <http://liberty.pacificresearch.org/docLib/LowensteinPaper.pdf>.

51. See, e.g., Sen. Waring, “Cell Phone ‘Bill of Rights’ Will Protect Arizonans.”

52. See, e.g., Sen. Waring, “Cell Phone ‘Bill of Rights’ Will Protect Arizonans.” (“[I]t appears that the companies can enact change, keep costs where they are and provide increased consumer protection.”)

53. In more than a dozen states that have reformed the franchise rules for the provision of cable television, there has been substantial investment in infrastructure as a direct result of the roll back in regulatory requirements and the opening up of the market.

54. See “California Adopts Cell Phone ‘Bill of Rights’” (quoting advocate as saying, “The wireless industry has made it clear they would rather spend millions on lobbyists and public relations campaigns than on implementing a few common sense rights that would ultimately keep their customers happy”).

55. See, e.g., Sen. Waring, “Cell Phone ‘Bill of Rights’ Will Protect Arizonans” (“Why would [the carriers] agree to such a payment if no abuses of customers had occurred?”).

56. Sen. Waring, “Cell Phone ‘Bill of Rights’ Will Protect Arizonans.”

57. CTIA-The Wireless Association, Research Department, January 2007.

58. CTIA, “Consumer Code of Conduct,” available at <http://files.ctia.org/pdf/ConsumerCode.pdf>.

59. See Dee Klees, “Words to the Wise,” *The Post-Standard*, November 20, 2006, p. 2 (describing Verizon Wireless settlement of \$15 to \$30 vouchers), and Paul A. Long, “Class-Action Phone Suit Settled,” *Cincinnati Post*, March 2, 2007, p. A20 (describing settlement for 20 minutes of free service).

60. Howard Fischer, “Irrked at Cell Phone Service, Senator Seeks ‘Bill of Rights,’” *Arizona Star*, November 19, 2007, available at <http://www.azstarnet.com/metro/212339> (describing state senator’s experience with phone had shorted out because of moisture).

61. See Digital Dad, “The Car Kit Phenomenon,” http://www.digitaldad.com/digitaldad/2005/03/the_car_kit_phe.html.

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