DOWNED LINES: Best Practice for Improving Wireless Telecommunications Disputes

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Cellular communication technologies help to safeguard the public, fuel economic growth and satisfy a basic human need – to stay in touch. The statistics are startling. In June of 1998, 60 million people were subscribed to cellular communications services. Now, nearly eight years later, the number is nearing 200 million – more than half the U.S. population.[1]

Rocketing demand for cellular service and the subsequent push for infrastructure development can lead to tangled public disputes. In the case of the telecommunications industry, development of communications infrastructure, such as cell towers, often requires placement of equipment on land where there are competing interests and fear of negative health and land value impacts. In an attempt to address these interests and fears, industry stakeholders have engineered new and creative sites to place their towers and antennas. Today, it is common to find cell towers located in church steeples or flag poles and disguised as trees, chimneys and even barns. However, even creative solutions such as these do not always get to the root of the problem.

While acknowledging the convenience of wireless technology, many citizens oppose the siting of wireless facilities in their neighborhoods and petition their local governments to take protective action. In response, local governments may use incentives, regulatory tools, alternative dispute resolution or legal action to resolve the conflicts with industry stakeholders. In some cases, disputing parties collaborate to address differences, but more often than not, the disputes end in protracted, costly and adversarial litigation.

These conflicts impact all stakeholders. Indeed, many of today's dead spots in the nation's wireless system persist, not from technological limitations, but from ongoing community resistance to wireless facilities placement. In 2005, there were estimated to be more than 500 cell tower disputes in the U.S. court system.[2]

In this article we take closer look at cell tower siting disputes, including the relevant stakeholders, the conflict dynamics and contributing contextual factors. We then describe a history of approaches to preventing and resolving these disputes. Finally, we will look ahead, sharing stakeholder observations as well as our own recommendations for handling telecommunications disputes in more effective and efficient ways.

SECTION I – ASSESSING CELL TOWER CONFLICTS

Diverse Stakeholders, Diverse Concerns

The demand for wireless communications, combined with the many concerns and interests relating to cell tower impacts, gives rise to conflict in local communities. To understand this stakeholder dynamic, we begin by describing the range of diverse stakeholders and the characteristics of their involvement.

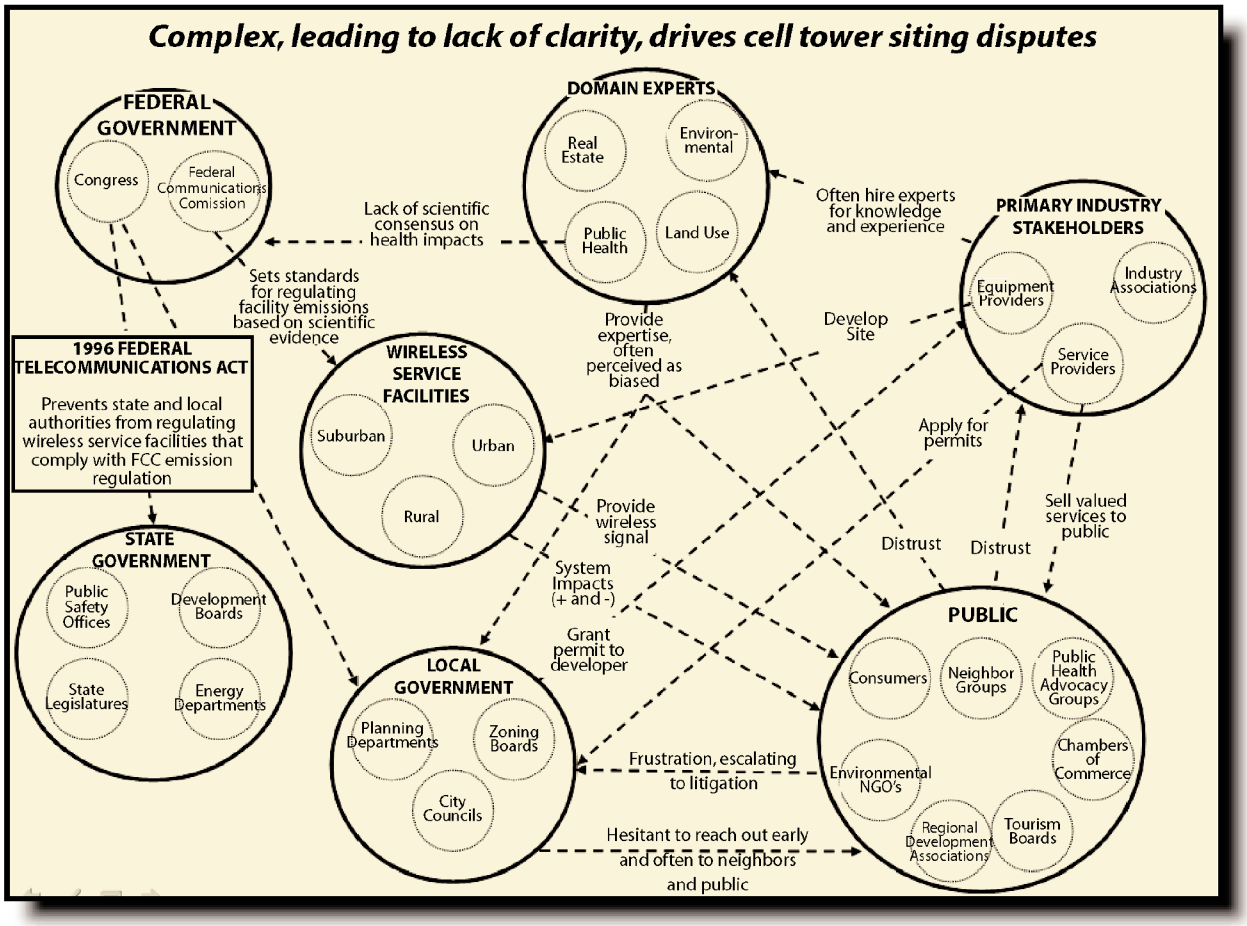
Varied Interests and Decision-Making Authority

The diagram below illustrates the diversity of public and private stakeholders that are often involved in disputes over cell tower sitings. First, there are a broad range of government actors – from local planning boards, state legislatures and agencies, to federal agencies, notably the Federal Communications Commission (FCC) and Congress – each with different levels of regulatory authority over wireless telecommunications. The diagram also portrays the wide range of telecom industry stakeholders, including both large and small telecommunications companies, wireless telephone service providers, independent engineers, real estate evaluators, and technical sub-contractors. Finally, there are a variety of citizen stakeholders that may be involved in cell tower disputes as either advocates or opponents of a particular project based on their view of the benefits or threats that cell towers may represent. The interests of these stakeholder groups vary significantly – from ensuring public safety and service provision, to profit maximization and job security, to protecting land values and personal health, among others.

Complex Processes and Decision-Making Authority

Cell tower conflicts are also complicated by additional contextual dynamics – most notably the variation land use planning process across the country, complex legislative authority, and ongoing knowledge gaps regarding cell tower impacts.

Across the U.S., the authority to manage and influence local cell tower regulations is designated by the U.S. Constitution and the 1996 Federal Telecommunications Act. This power is bestowed upon an assortment of government bodies, from planning boards and city councils to state legislatures, regional councils and federal agencies. These authorities must work to balance the need to modernize communication systems with citizens' concerns about cell towers. The complexity of organizational and procedural structures of local governments across the country often makes this work challenging. In most situations, the authority to approve cell tower sitings is given to the local zoning or planning board at the municipal level. These boards tend to vary in composition and scale. Some municipalities have professional boards with staff attorneys and planners that meet frequently and have access to financial resources and technical expertise. Other boards are comprised of volunteers with varying levels of capacity, time and access to technical and financial resources. Additionally, the levels and opportunities for citizen participation fluctuate across jurisdictions.



A Mini-Case Study: Vermont

Valued for its natural beauty, Vermont enforces stringent state environmental laws, developed a Model Telecommunication Facilities Ordinance for cities and towns, and requires a dual level permitting process that involves both state and local approval for proposed facilities. Despite these regulatory procedures, disputes over wireless facilities proposals are frequent. One resident commented that a telecommunication company operating in Vermont budgets nearly double what it expends in other states for anticipated litigation expenses.

Within a single community, authority may shift depending on whether the tower is developed for public use, such as emergency service provision, or private cell phone customers. For example in Marin County, CA, decision making authority over siting of cell towers for emergency communications is handled by Marin Emergency Radio Authority (MERA), a regional public safety agency with jurisdiction over 26 agencies. Throughout Vermont, proposed cell towers (emergency or other) must pass a bi-level approval process, first with the local government authority and then with a state level Vermont Public Service Board. This disparity in decision-making structures is reflective of distinctions in local land use law, community demographics, economic and political environments, and differences in processes across jurisdictions.

As networks expand and begin to cover more residential areas, many local governments respond by seeking to set placement conditions or moratoria on cell tower placement. These efforts are having mixed results. Citizens are frequently angered by the lack of information they receive from local governments about proposed facilities and protest their exclusion from negotiated siting and dispute resolution processes. Communities have often found themselves under prepared and out-resourced when attempting to defend themselves. Most cities have zoning ordinances that address building or structural height limitations, set back requirements, and divisions between commercial and residential areas. However, since cell towers are still relatively new, existing zoning ordinances may not specifically address them. Some companies use this gap in ordinances to establish a tower, and often are forced to spend additional money to deal with local resistance.

Power: Legislative Authority and Participation

While cities and towns have local decision-making authority, the 1996 Federal Telecommunications Act also checks their power. The act was designed to improve industry competition, subsequently paving the way for the growth of cellular communications by reducing the barriers to firms obtaining tower permits from local communities.[3] While the Act affirms the authority of local governments' to control siting, construction and modification of cell towers, it does not allow local governments to deny a petition over concerns of radio frequency emissions on human health.[4]

Along with protection from health-based petition denials, the Act also 1) protects industry stakeholders from unreasonable discrimination among providers of functionally equivalent services; 2) blocks the prohibition of the provision of personal wireless services; and 3) guarantees state or local government action within a reasonable period of time. In a recent case, community stakeholders attempted to prevent construction of a cell tower by claiming it adversely impacted a prominent "view-shed". The California Court of Appeals, however, ruled that under the 1996 Act a community could not deny a petition for a cell tower for its potential aesthetic impacts.[5]

The Act does include an option to use a negotiated process to resolve conflicts over the siting of wireless facilities after conflict has erupted --- primarily arbitration or state sponsored mediation. Stakeholders noted that resource-strapped governments often elect the negotiated settlement option after legal action has been filed against them. While the option is available through the Act, assisted negotiation is rarely used before conflict erupts. This may be attributable to the power, perceived or otherwise, of the telecom industry. The impact wireless telephone services have on telephone industry revenues has grown significantly, from an estimated $32,951 million out of $231,180 million total in 1997 to $100,808 million out of $289,052 million in 2004.[6] As this subset of the industry has grown , many communities have expressed feelings of being overwhelmed and "out-gunned" by the industry's increasing power.

In response to this pressure, some public stakeholders, including many neighborhood and "citizen action" groups are forming grassroots organizations or ad-hoc movements to advocate for their interests. Others, including many public health advocacy, environmental or neighborhood groups, pursue legal action by filing law suits against service providers claiming cell towers have an adverse impact on the environment, their health or property values. Still others, including local businesses or development organizations, work multiple channels to pressure government representatives to prioritize their interests or propose legislative changes.

As often is the case in public conflicts, power issues contribute to conflicts. In the case of telecom conflicts, issues of power are complicated by the strength of the 1996 Act and inconsistent opportunities for public input into cell tower siting decisions.

Knowledge Gaps and Uncertainties

Delving further, some stakeholders point to concerns about the impacts of wireless technology on human health, uncertainty about economic impacts on local communities, and objections to "view-shed" alterations.

Health Impacts: Health concerns remain a priority for many neighbors and community groups. Though the FCC has found no conclusive scientific links between wireless technologies and adverse public health impacts,[7] concerned citizen groups continue to argue that there is no absolute proof that cell towers do not cause public health problems. In response, industry stakeholders continue to support research on the potential health impacts of wireless technologies, and until a deleterious impact is found, they will stand by the FCC's determination.

Aesthetic Impacts: For citizen and government stakeholders, the aesthetic impacts of cell towers are closely linked to economic concerns, including property devaluation, business development, and character preservation. The move to place cell towers on prominent lands and in residential areas often drives community opposition. This is complicated by high demand for reliable coverage, which requires certain height, size and proximity dimensions on largely unobstructed areas of land. Inevitable tension between community impact and meeting real communication needs is compounded by the need for reliable emergency communication networks, which are moving toward a system of integrated wireless technologies that require the proliferation of cell towers.[8]

Developing Credible Knowledge: Many individuals and communities lack the technical, medical and legal knowledge to manage the complex issues around cell towers. To address these uncertainties, communities often rely on expert consultants. Yet as one technical expert noted, expert consultants are often stigmatized for having worked for the "other side" and, as a result, their information is often discounted by skeptical stakeholders. Reliance on outside expertise has ironically widened the gap of understanding amongst parties, fostering further mistrust on all sides.

Don't Ruin My View!
When asked about the siting of a wireless tower atop a local hill, a Marin, CA resident noted "In my neighborhood the hill was a prominent feature of our community, there would be too much visual impact, and we didn't think that this was a good use of the land".

The Costs: For industry and government stakeholders, the economic costs associated with fighting proposed cell towers can be prohibitive. Often, the magnitude of fees associated with litigation, including independent experts, attorneys and legal fees leaves local governments feeling out-resourced by their industry counterparts and forced to accept unpopular industry proposals. In one cell tower conflict in Marin County, CA , over $2M was spent in litigation between 1999 and 2005, amounting to approximately 12% of the total project budget. The emotional toll was equally, if not more, costly to those involved given the level of exasperation felt by the community.

Miscommunication: As in many public conflicts, miscommunication between stakeholders is frequent, and perceptions about other stakeholders' behaviors often serve to perpetuate conflict. Throughout our research, we found many citizens claiming that industry and governments have excluded them from decision-making processes, noting that industry is often seen as "pushing" its way into their communities and government officials "giving in" or making deals without adequate public consultation. Meanwhile, local governments were perceived by industry stakeholders as employing "stalling tactics" and using bureaucratic hassles without good reason. Citizen groups were criticized for not viewing proposed plans in larger, regional contexts. There is also some perceived irony regarding the public demand for cellular service while opposing cell tower plans on a "not in my back yard" basis.

Inherent Technical and Legal Complexities
According to one citizen activist, "the complexity of law and science brings out certain issues that the larger community cannot relate to… people don't believe (the independent contractors) because they feel they have an investment in [the outcome}."

In all, this dynamic has sparked intense disputes across the US in recent years often leading to drawn out lawsuits which are financially and socially costly, dividing neighbors, splitting communities, and damaging industry and client relationships.

SECTION II: Preventing and Resolving Cell Tower Disputes

Many of us take for granted reliable cell phone coverage -- whether traveling in our cars, working from home or just catching up with family. In fact, the cellular system that allows us to communicate is the result of a long and often complex government approval process. A review of conventional approaches to cell tower siting helps clarify opportunities for preventing and resolving conflict.

Conventional Approaches

The cell tower siting process typically begins with an industry stakeholder identifying an existing or expected need in cellular coverage in a particular region. After conducting its own technical and business analysis, the industry stakeholder identifies a suitable site for a tower and files a petition with the appropriate local government authority. As described in the previous section, the "appropriate authority" varies from community to community, but the general process for evaluating a proposal tends to be similar across communities. Local governments use commonly accepted criteria based on FCC standards including a visual impact assessment, an environmental impact assessment, a health and hazard assessment, and some form of public notification.

The most common visual impact test is the "balloon test." This is used to judge how a new facility in a given location might impact the aesthetic value of the community and surrounding areas. Environmental impact and health and hazard assessments are generally contracted out to third party experts. As mentioned earlier, stakeholders sometimes question the neutrality of third party assessments, yet those same stakeholders must depend on third parties to measure and interpret complicated technical, economic and legal data.

While some form of public notification is required in most jurisdictions, forms vary greatly depending on the size of the region, local zoning and planning ordinances and the timeliness of the petition. Some decision-making agencies hold workshops and public hearings about proposed cell towers while others publish announcements in the local newspapers. The public notification processes do not always satisfy all stakeholders because they are often viewed as not timely or well-placed.[9] While such perceived breaches are not unique to cell tower sitings, the procedural issue is relevant because small process missteps often have significant impact on public trust.

Petition Denial and its Affects

When a cell tower plan fails local feasibility tests, some government authorities may deny the petition outright. In other cases, they might obstruct permission for a new facility by placing restrictions on the physical location of the proposed tower through zoning regulations and ordinances or by changing the approval process for the siting (for example, requiring a public hearing instead of a notification in the newspaper). In reaction, the industry stakeholder will often file a lawsuit against the local government authority on the grounds that their rights under the 1996 Federal Telecommunications Act have been violated.

After a lawsuit is filed, the disputing parties will sometimes pursue mediation or arbitration to resolve the conflict, as is recommended by the 1996 act. Other times local governments, buoyed by support from citizens groups, will proceed with the lawsuit and allow the courts to adjudicate the conflict. In either case, the conflict resolution process is often protracted and costly, and may leave citizens and governments feeling bullied by industry stakeholders.

Collaborative Processes

While conflict over the siting of wireless facilities is common, there are examples where groups have worked toward collaboration. The Vermont League of Cities and Towns (VLCT), for instance, offers local and regional planning boards a model telecommunications facility ordinance that outlines procedures for addressing petitions for facility siting. When the VLCT first drafted the model ordinance in 1998, it went through several review stages and solicited input from both regional planning agencies and industry representatives.

In other communities, some local planning boards are anticipating the need for wireless coverage and conducting site assessments in advance of petitions from industry stakeholders. Some are pre-identifying sites that they feel will be appropriate for cell towers and zone them accordingly, so that when they receive petitions for sitings they can present a list of recommended sites and fast-track the approval process. A few municipalities in Massachusetts and New Hampshire, as well as several regions in Vermont have taken this approach to cell tower siting using community grant blocks and Homeland Security funding. There is promise in this approach, but stakeholders noted that not all communities can fund such initiatives, and it is yet to be determined if it will produce fewer lawsuits in the long run.

We also found that some of the incorporated citizen action groups, like the San Francisco Neighborhood Antenna Free Union, publicly advocate for the inclusion of mediation, consensus building and other assisted negotiation tools into siting processes. But since most citizen groups are organized on an ad-hoc basis, they are generally more focused on changes to the imminent threat and less on the longer-term process. In a few cases, citizen actions groups have refused to engage in mediation believing that they can accomplish results on their own, primarily through lobbying and litigation.

In short, most conflicts over the siting of cell towers are resolved by regulatory means, litigation or concentrated citizen protest and pressure. Many stakeholders see value in avoiding prohibitively costly litigation and expediting the siting processes, yet mediation, consensus building and assisted negotiation are used infrequently. Indeed, while the 1996 Federal Telecommunications Act provides stakeholders the option to manage cell tower siting process through negotiated or mediated avenues, the option is rarely exercised in the early stages of cell tower siting processes.

Section III: Dispute Resolution Opportunities and Best Practices

Given the complex dynamics of disputes over cell tower siting processes, we believe that there are opportunities for professional dispute resolution assistance. A range of tools commonly used by professionals in the dispute resolution field can help reduce the cost, time and aggravation experienced by stakeholders on all sides of the conflict.

Comprehensive Stakeholder Assessments

Nearly all stakeholders suggested that communities could benefit by conducting more upfront comprehensive impact assessments that illuminate the issues and consider the social, economic and environmental impacts of a proposed development. Cell towers can trigger economic impact (costly litigation), social impact (environmental justice concerns) and environmental concerns (view-shed and sensitive land impact). As noted earlier, officials and community members in Marin County, CA were surprised and disappointed that approximately 12% of their project budget for emergency communications system improvements was allocated

towards litigation. In reflecting on this, they wished they had done more upfront assessment and outreach that could have "flesh[ed] out potential for costly and wasteful community dispute and litigation." On the industry side, a company that allocates double the amount for anticipated litigation expenses in Vermont would likely be grateful for the cost savings and would enjoy additional revenues that will come with expanded coverage.

The dispute resolution field has helped to define the practice of conflict (or situation) assessment to identify key stakeholders and their issues in a given situation or conflict, and, if consensus building is appropriate, to map an appropriate process design for resolving the dispute (i.e. work plan and ground rules).[10] In a professional conflict assessment, a facilitator would be able to identify the range of appropriate stakeholders and address some of the challenges associated with diverse groups. The cost savings and benefits of such an approach can be significant. As one stakeholder noted "probably in retrospect we would have spent a lot less money by starting a larger process up front and doing more than what was mandated by CEQA."

Assisted Negotiation

Mediation, consensus building and other forms of assisted negotiation provide conflicting stakeholders opportunities to use proven methods and tools to manage public conflicts more effectively. In cell tower conflicts in particular, such third party assistance can help stakeholders to communicate their interests, link issues (such as tourism goals, environmental resource concerns, or other infrastructure interests), and generate options for siting and compensation alternatives.

Numerous stakeholders we spoke with identified poor communication as a significant obstacle in these disputes, noting that "basic communication and outreach efforts are essential to success." In nearly all cases, stakeholders advised that cell tower citing processes should go above and beyond legal mandates when it comes to outreach and communication early on in the development process. One local elected supervisor remarked: "While it's scary for public agencies to expose themselves so early, it is important to get beyond this fear and engage with your community early on…some will ask, 'Why invite this fear and anxiety at the front end?' My answer: In the end it's short-sighted to think you'll avoid this, so be active at the front end: it saves money, can prevent conflict and lead to better results faster."

Additionally, there is extensive third party neutral experience mediating and building consensus around land use conflicts, ranging from National Forest access issues to Superfund clean-ups. Alternatively, interested citizens can be trained to become community mediators themselves. Through negotiation and mediation trainings, the dispute resolution field offers tools for government officials, planners, industry representatives and citizens to improve their negotiation and mediation skills. Participants learn how to effectively manage conflict and produce mutually agreeable resolutions. The bottom line is that given the dynamics of cell tower conflicts, stakeholders with more knowledge and skill will be better prepared to manage conflicts and will likely find more efficient and long-term solutions to conflicts.

The Role of Exploratory, Non-Binding Discussions

A major contributing factor in ongoing disputes is the lack of opportunities for citizens and governments to communicate with industry representatives about local concerns and constraints. A means to address this dilemma could be exploratory and non-binding discussions about cell tower proposals between industry, government and citizen stakeholders to help identify interests, constraints and opportunities for compromise.

Creating Shared Knowledge through Joint Fact-Finding

Stakeholder interviewees across the country emphasized the challenges associated with technical and scientific information that prevails in wireless disputes. Mistrust about the validity of economic impact evaluations, potential health risks and technical explanations often lead to unyielding positions and the escalation of conflicts in a context of misunderstanding. A comprehensive joint fact-finding effort implies that stakeholders address technical questions in a collaborative manner so that information is gathered, analyzed, and incorporated into decisions that are credible for all decision makers. If stakeholders can accomplish these fact-finding steps jointly, they are more likely to reduce the amount of time and effort spent on debating scientific issues, build a shared understanding of the range of uncertainty where there are few definitive factual answers, and create a firm scientific and technical foundation for the standards that they recommend. This process not only helps build shared understanding, but can also enhance and collaboration among all stakeholders, ultimately facilitating the building of trust.

Joint Fact Finding

Health and costs concerns remain prevalent in cell tower disputes. As one interviewee noted: "Everyone is talking about health hazards. On one project two-thirds of public recorded public comment were all health-related. But there is no conclusive evidence. Someday there might be, but not now." Another interviewee expressed uncertainty about the cost of a cell tower proposal: "We're just getting into the fake tree stuff . . . I hear that they cost $1000 foot … and no one knows how long they last."

Joint fact-finding asserts that it is possible to structure dialogue that builds a shared basis of credible knowledge, clarifies best practices and can develop model standards before conflicts arise. In turn, this can reduce potential conflict and build trust between the telecom industry and concerned communities.

More information on the joint fact-finding framework can be found at the MIT-USGS Collaborative website. http://web.mit.edu/edu/dusp/epp/music

Joint fact finding can also help public agencies, companies and industry groups work together to better organize and translate information into a format more easily understood by the concerned citizen and layman. Experts in the field of dispute resolution design joint fact finding processes to help stakeholders narrow the scientific questions that need to be answered, select appropriate methods of inquiry, interpret findings and decide how to handle assumptions and uncertainties inherent in these findings.

In cell tower disputes, many interviewees identified the process of getting publicly credible information to the table as a significant challenge. A facilitated joint fact finding process may help stakeholders clarify the relevant information on health, economic and technical aspects of cell towers and allow for a more comprehensive discussion of the policy implications of relevant scientific and technical input. In many cases, such understanding can diffuse mistrust and confrontations and ultimately save all stakeholders the money and resources spent in litigation.

The Road Ahead

Cellular and other wireless communication technologies will continue to proliferate in the telecommunications field, as cell phones supplement or even replace landlines in homes and businesses in both rural and urban settings. Increasing focus on homeland security, at both the federal and local levels, will also likely lead to reforms in emergency communication systems which, in many communities, do not currently allow for easy communication between different emergency services.[11] Likewise, as cellular infrastructure moves closer to residential areas, concerns are also likely to become more vocal. Health agencies in both the U.S. and abroad express publicly their commitment to ongoing studies examining the effects of wireless technologies on human health, but until it is proven otherwise, the FDA and other public agencies stand by the safety of cell phone technologies.[12]

On the legislative front, the 1996 Federal Telecommunications Act is up for reauthorization in 2006. Current drafts reinforce the power of the telecommunication industry to site cellular and other wireless facilities. Local government organizations, including the National League of Cities, U.S. Conference of Mayors, National Association of Counties, National Association of Telecommunications Officers and Advisors (NATOA) and the Government Finance Officers Association, have expressed their concern with potential changes and cite "managing local rights of way" as a priority for local government.[13] With domestic industry competitiveness and national security near the top of the federal agenda, many observers believe that the 1996 Act reauthorization will continue to support the telecommunications industry to the detriment of local government authority.

While conflicts over cell tower sitings can be costly, time consuming and hostile, our research shows there are significant opportunities for improving the ways in which stakeholders resolve their differences. Citizens across the country (and the world) will continue to use cell phones to conduct business, safeguard their communities and communicate with their friends and families, and they will inevitably be faced with the problem of where to site cell towers. The time is ripe for considering new ways in which these downed lines of public communication and planning can be resurrected.

For more information on the Consensus Building Institute, please visit www.cbuilding.org.

End Notes

1. "U.S. Census Bureau. 2004-2005 Statistical Abstract http://www.census.gov".
2. Hafner, K, "First Come Cellphone Towers, Then the Babel;" New York Times, May 1, 2005. Accessed from http://www.nytimes.com/2005/05/01/business.
3. Telecommunications Act of 1996, Pub. LA. No. 104-104, 110 Stat. 56 (1996).
4. § 704(a): No states or local government or instrumentality thereof may regulate that placement, construction and modification of personal wireless service facilities on the basis or the environmental effects of radio frequency emissions to the extent that such facilities comply with the commission's regulations concerning such emissions. Telecommunications Act of 1996, Pub. LA. No. 104-104, 110 Stat. 56 (1996).
5. U.S. Court of Appeals, for the Ninth Circuit. SPRINT PCS v. LA CAÑADA FLINTRIDGE January 17, 2006.
6. Federal Communications Commission (FCC) December 2005 Monitoring Report http://www.fcc.gov/wcb/iatd/recent.html.
7. The Federal Communications Commission (FCC) regulates and monitors the safety of wireless facilities. FCC determined that the available scientific evidence does not show that public health problems are associated with wireless phones or antennas.
8. Since the terrorist attacks of September 11, 2001, flaws in the inter-agency emergency communication systems have become a priority for the Department of Homeland Security, which provides communities grants to upgrade their emergency communications systems using wireless technologies.
9. One interviewee in Tiburon, CA noted that their town ran a notice about a proposed wireless facility on page 52 of the local newspaper in a little box. Most people did not see the notice and didn't learn about the plan until after it was approved.
10. For a more detailed explanation of stakeholder conflict assessments and examples, see http://www.resolvinglandusedisputes.com.
11. Modern technologies that allow for integrated emergency communication systems depend on reliable, universal wireless telecommunication infrastructure.
12. Several collaborative studies about the health impact of telecommunications technology are ongoing and sponsored by European Commission, the World Health Organization, the U.S. Food and Drug Administration with the Cellular Telecommunications and Internet Association and other European research labs.
13. National League of Cities and Towns. Press release, "NLC Lobbies Against Telecommunications Draft Bill" November 14, 2005. http://www.nlc.org/issues/telecommunications_technology