

## **The BDAC, 5G and Cities: The Power and Perils of Asymmetry**

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The most significant meta-theme about governance in the United States today is that the federal government is dysfunctional and disrespected but that local governments are responsive, pro-active, effective and respected in building communities that improve the lives of their residents.

I see that not just in the press and academic writings, but also in my own experience in dealing with the federal and scores of local governments.

It also shows up in the polling data. More than two-thirds of members of both parties [express trust](#) in local governments while the number of Americans expressing trust in the federal government is [below 20%](#). Arguably, as former Indianapolis Mayor and now Harvard Professor Stephen Goldsmith [argues](#), such numbers understate the trust citizens should place in local governments. No one is saying the same for the federal government.

This causes me to believe, both as a philosophical and practical matter, that a key to moving this country forward is to give local governments more authority and freedom.

This puts me at odds with my twice-former employer, the FCC.

Today I am going to discuss the relationship between the FCC and cities and make several policy suggestions for accomplishing goals stated by both sides. I will also describe why cities should just ignore the FCC—other than to sue it—but that cities should develop a more productive relationship with carriers in helping accelerate the deployment of next generation networks to their residents and enterprises.

But what I am really going to discuss is the power and perils of asymmetry.

Before I get to that, I would like to note two historic achievements of the current FCC.

First, this the first FCC that has defined joke writing as an integral part of the deliberative policy process.

You might think I am joking.

But this FCC has, not once but [twice, denied Freedom of Information requests](#) for information about joke videos involving Chairman Pai on the grounds that the providing the information would impair the FCC's, and I quote, "deliberative process."

I have a personal conflict here, having participated in writing jokes for five different Chairmen.

I would hate for early drafts to ever go public. You can't really write good jokes without writing a bunch of bad ones. Believe me. My personal ratio of bad to good is at least 50:1.

Nonetheless, despite many hours in the writers' rooms' session, I don't recall any deliberative policy process.

Of course, my memory might have been impaired. As the gospel of the writers' rooms note, the jokes don't write themselves. Jim Beam does.

So while I am sympathetic to the FCC trying to keep those emails private, I wish the FCC lawyers had come clean and responded to the FOIA requests by admitting the videos were really not very funny. Therefore, it simply is not in the public interest that unbelievably even lamer, earlier drafts of bad jokes ever become public.

But this FCC either believes that joke writing is actually part of its deliberative process or, like the Queen in Alice in Wonderland, it believes that words mean whatever they want them to mean.

Which brings us to the second historic accomplishment of this FCC: it is the first FCC to interpret its statutory mandate to say it doesn't have much legal authority or policy rights to regulate broadcasters, telephone companies, cable companies, or wireless companies. Instead, its principal regulatory mandate is to regulate another set of enterprises: local governments.

Well, if you have the talent to classify joke writing as part of the deliberative policy process, you certainly have the talent to argue that FCC stands for Federal Constraints on Cities.

And that, in turn, brings us to the FCC's Broadband Deployment Advisory Committee (BDAC) process.

Its stated, and worthy, goals are to accelerate and broaden deployment of next generation broadband networks, and reduce the digital divide.

Will the process help achieve those goals?

If one ignores the DC rhetoric and focuses on market incentives, the analysis suggests probably not. Instead, the primary result of the process will likely be to transfer wealth from the public to private enterprises.

If the FCC wanted to, as I will discuss at the end, it could take action to assure that the wealth transfer would not occur unless the deployment and digital divide goals were met. Instead, however, the BDAC and the FCC will likely adopt a framework in which industry gets all the benefits with no obligations and municipalities get all the costs and no guaranteed benefits.

Before discussing how the BDAC process detoured from its stated goals, it is important to understand three positive things about BDAC.

First, it is a good idea. It is valuable to have a multi-stakeholder group evaluate how to improve deployment incentives, with a focus on municipal policies, as those policies will have a significant economic impact on the cost of deployment of these networks, much more than traditional state or federal policy.

As our country builds out next-generation networks, including fifth generation (5G) mobile, the Internet of Things (and particularly the Civic Internet of Things that provides intelligence to various networks run by local governments, such as traffic, water, and sewer), and networks to serve big data needs for institutions whose mission involves analyzing and transmitting huge amounts of data, all communities will need fiber deployed deeper throughout a community policies and attaching devices, such as radios and sensors, to poles, buildings and other facilities. Municipal policies provide the principal governmental framework for these activities, including rules governing siting, construction, rights of way, pole access, and building codes and access.

Second, the economics of these networks are daunting. I have a lot of sympathy for the wireless industry. They have poured enormous capital into their networks and will have to do so again. Anyone who follows their ups and downs on Wall Street, as I do, understands that the companies face a series of challenges ahead that are not easy. Given the difficult economics, it is important that all stakeholders evaluate different approaches that balance—and I emphasize the word balance--the companies' desire to lower their capital and operating costs and the cities' desire to achieve certain policy outcomes, such as public safety, minimal construction based disruptions, and ubiquitous deployment.

Third, a lot of well-meaning people did a lot of hard work in the BDAC. We should honor them for doing so. The process did lead to some recommendations likely to serve its goals, such as recommending governments adopt a [one-touch make ready policy](#), that will speed and lower the cost for new fiber deployments. I am sure there is language in the model codes that has some value. I am not sure I understand why

the FCC is so focused on developing rules for cities and states instead of figuring out what it should do but be that as it may, there may be some value that comes from it.

Unfortunately, the value of BDAC was undercut by three high-level errors.

First, no multi-stakeholder process can be successful if the views of critical stakeholders are discounted to near zero.

Unfortunately, that is what happened here. Instead of treating cities as the legitimate representatives of the constituencies that elected them, FCC officials argue as if they or their favored parties know better than elected representatives about what is best for the residents.

Responding to the complaint that BDAC was composed almost entirely of industry representatives, with only a couple municipal participants, a key FCC official admitted that the FCC didn't really care about what cities thought, [saying](#) "we didn't want to choose someone from, say, a municipality that needs a blueprint, because they're not going to be the ones to help design that blueprint." An FCC Commissioner justified preemption of cities on the grounds that cities were trying to ["impose their will"](#) on carriers, which is a little odd as a federal agency preempting elected local officials is pretty much the textbook definition of imposing one's will, but without an electoral mandate. Among the people BDAC relied on was Gary Jabara, CEO of Mobilitie LLC, one of the nation's largest operators of cell towers, who [said](#) local officials opposing the changes didn't give "a s--t about their constituents."

That is hardly the way to build support among a key stakeholder group. In my experience, people whose names have been on the ballot don't take kindly to unelected staff or company executives saying they know better about what's best for their constituents.

Many in industry understood this. Referring to lack of municipal representation, the cable representative to the BDAC [wisely noted](#) that "We have a lot of groups who are concerned that they're not at the table...And if they don't feel included, not only are they outside throwing [darts] at this process, but then in the end it's those groups that we want to adopt these model codes." The CEO of a tower company and former head of the Illinois Wireless Association offered a similar assessment, [writing](#) "The push to bypass local control will damage this industry's credibility and reverse a lot of the positive movement this industry has achieved."

BDAC, if it had included a fair representation of local officials and if it had began with an open mind about how best to proceed, would have been far more persuasive to cities than the 'my way or the highway' approach it appears to have taken. And it would have considered many issues that were largely ignored, such as the cities' concerns over the engineering, public safety, aesthetic, property-value, rate-design, and other significant consequences of small cell facility siting. It also would have

considered more carefully the discrepancy between what the industry describes as a small wireless facility being no larger than a pizza box and many examples of state legislation that defines a small wireless facility as a 6 cubic feet.

6 cubic feet is to pizza boxes what joke writing is to the deliberative policy process. You have to have a particular talent to see them as equivalent.

The FCC may have succeed in reinforcing a political narrative about cities but it certainly did not succeed in building political capital among cities that would have, in practice, actually result in faster, better, cheaper broadband.

Second, BDAC started from the false assumption that industry did not have the leverage to negotiate the deals they needed to make the investments in new networks.

It is true that in decades past, such as when Verizon was building out its FIOS networks, cities had significant leverage over the carriers. Some argue that they used that leverage to stunt deployment with demands that made activity in some areas non-economic.

But to whatever extent it was true in the past, it significantly changed with Google Fiber, which began in 2011. Google tied its willingness to build a next-generation fiber broadband network to the willingness of cities to adjust their policies to lower the cost of construction and operations. When 1100 communities indicated their willingness to do so, it was evident the leverage had shifted. Google adroitly used the scarcity value of the limited build-out as a way of changing local government incentives. The deal that Google struck with Kansas City became a model for how other cities could address the needs of those wanting to build gigabit capable fiber networks. That model improved as it was incrementally revised when Google struck deals with additional cities.

Google was not the only beneficiary. AT&T and CenturyLink used a similar method for their fiber efforts, as did some smaller providers. The Gig.U project I worked on helped facilitate a number of deals between providers and college towns, each building on the lessons learned from the prior deals.

Verizon is now able to negotiate acceptable deals with communities like Boston for policies to lower deployment costs. As Verizon's CEO Lowell McAdam recently [noted](#) "Cities are embracing us to come in and provide this broadband service for the citizens...More and more people are moving into cities and they need to have smart city applications, including smart transportation, smart lighting, and smart parking services so they're embracing us coming into their communities."

5G does have differences from fiber deployments, such as Google Fiber, as by necessity, it needs to be built in more places. But initially, it has the same scarcity advantage and indeed, the 5G carriers appear to have the same kind of leverage

Google and others building out fiber enjoyed. For example, while Verizon said it will consider every market for a 5G build, [McAdam said](#) it will walk away from cities that want too many concessions, adding, “there’s no market that’s not on the table.”

If the carriers were going to build in a compressed timetable, there would be a good argument for a national, standardized approach. But that is not what is going on. The deployment will likely be slow and targeted. For example, Verizon went from [having 11 test cities](#) in 2017 to [announcing a launch of three to five cities](#) in 2018. AT&T will only be building out to [a dozen cities](#) in 2018.

Given the limited number of cities and the pace of the rollout, the companies will continue to have leverage for some time to come. As those trials, hopefully, prove successful, other cities will be more anxious for having such networks and be willing to reach reasonable accommodations to make the economics more attractive. And the power of best practices, as Larry Downes and I discussed in a [piece we did in the Washington Post](#), should help all sides come to a reasonable accommodation.

Thought experiment. What if the FCC in 2011 had mandated that every city should give Google Fiber the same deal Kansas City gave Google? I expect that there would have been a huge uproar with all saying that is crazy, unnecessary and a clear usurpation of local power to benefit a large private enterprise. That is, however, what the BDAC/FCC process appears to be moving to—a single federal mandate for how cities should manage local construction for the benefit of a select group of companies.

The FCC’s biggest mistake, however, is how they approach asymmetry.

I am often a big fan of asymmetry. In ten years of practicing corporate law, as well as in being involved with dozens of deals between cities and next generation network providers during the heart of the Gig.U effort, I saw how every successful deal involves asymmetric value creation.

That is, the two sides don’t want the same thing.

So the trick is to find the things that cost side A very little that create a lot of value for side B with side B doing the same for side A. Both, in this way, get more than they give.

That asymmetry of value creation is hugely powerful. The BDAC, however, ignored this kind of value creation.

But there is also a peril to asymmetry and you can see it how the BDAC creates a complete asymmetry of rights, obligations and risk allocation.

Under the FCC framework, cities will bear significant costs, having to lower their prices for rights of way and other permits while also having to bear the cost of

higher administrative capacity for accelerated permitting. By contrast, the carriers will get the benefit of lower costs but will not have any obligation to deploy anything. And others who use similar public property will also likely obtain rate reductions without doing anything new in the public interest.

Some argue that the lower costs for carriers will lead to greater deployments.

Only in Washington do otherwise intelligent people believe that lower costs automatically lead to commensurate capital investment. The FCC is a bit like for National Economic Council head [Gary Cohn who appeared surprised](#) when a group of CEOs indicated they were not going to use their tax cuts primarily for new investment, which is exactly what happened. While a few billion of bonuses have received media attention, [sober Wall Street analysis](#) shows that the overwhelming use of the savings will go to stock buy backs (which this year are more than double that of last year) and other benefits for stockholders, not employees.

Carriers have the same incentives as other corporate entities. As one can see with [Verizon's own statements](#), stock-buy backs, debt reduction, or dividend support are [probably higher priorities](#) than investments in 5G networks. Nothing the FCC is doing will change those incentives.

What are those incentives? Right now, the economic incentives are such that carriers are only likely to build 5G networks in higher density areas with access to low cost fiber. That is far from everywhere. [Deloitte estimates](#) it will take a new \$130-\$150 billion to provide the necessary fiber for universal 5G. Accenture [pegs the number](#) at \$275 billion. As it is not clear the use case to repay those new expenditures, the networks are likely to be deployed as an initial matter, and maybe permanently, only in areas with existing fiber. Which is exactly the pattern a study by [Next Century Cities already found](#) with small cell deployments overwhelmingly going to larger cities with pre-existing fiber and far less in smaller cities without fiber.

DC is full of rhetoric about the unlimited possibilities of 5G. I wish I could agree. But when one looks at the broader spectrum of evidence, one sees a number of clouds. [Wall Street is skeptical](#) about the economic returns of 5G. So are the companies. Look how AT&T articulated the justification for spending nearly \$100 billion to buy content in the antitrust trial. While mobile is important to them, the upgrade to 5G is not nearly as important as the direct content connection to the customer. Another data point was AT&T's CFO John Stephens [comments to Wall Street](#) the other day about the prospects for 5G: "We're not as excited about the business case—it's not as compelling yet, for us, as it may be for some." In their merger announcement yesterday, T-Mobile and Sprint basically laid out a case that the economic case for investing in 5G today is not viable but only would be if the government allows concentration that it did not deem wise in the 3G and 4G markets. Another data point: FCC has set the 5G spectrum reserve price at 5% of the 4G price for bands of what the engineers consider to be comparable from a

functionality standpoint. None of these alone give us an accurate sense of what will be the future of 5G. Nor should any of this suggest that we should abandon efforts to facilitate 5G deployment. But these data points are at odds with the picture the FCC is painting to justify its takeover of local government management of rights of way and construction.

So while the FCC keeps talking about spectrum and cities as barrier to next generation deployments—and I acknowledge there is some truth to that—the FCC seems to ignore the two barriers I hear about most on Wall Street: the construction costs of deepening the fiber network and the lack of a significant new revenue stream that will not just cannibalize existing 4G revenues.

Further, the economics of 5G work best where there are multiple places to place transmitters. This is true of areas with tall rooftops and towers, such as downtown areas or those with lots of persons living in apartments. It is not true of single-family home suburbs, exurban and rural areas. In short, 5G deployments are not likely to be universal, including within cities.

Take, for example, where I live in Montgomery County, Maryland. Mobilitie LLC, the largest privately held wireless infrastructure provider in the United States, [submitted to the county](#) an unofficial plan for small-cell sites. Of Mobilitie's 215 proposed small cells in the plan, only 11 are in areas with fewer than 1,000 people per square mile. More than 94 percent are proposed for areas with higher population densities.

So when FCC officials say that its regulation of cities will lead to 5G being deployed everywhere, I think, hey you guys need to get out of your bubble.

Officials at the FCC and carrier representatives will say I am wrong. Actually, they may be right. After all, we are talking about the future. No one has a perfect crystal ball. And I would not mind being wrong; competitive 5G networks everywhere sounds awfully good to me.

Let's not, however, commit the sin of confusing aspiration for reality.

Here is how you will know if I am wrong; if industry executives, in meetings with Wall Street, say that as a result of the FCC rules our company is increasing our capital budgets by billions, if not tens of billions, and further, we commit to building out 5G to a large defined area by a date certain.

They haven't said that and I doubt they will. I would certainly advise against it. After all, why say something that would crash their stocks when the FCC has already signaled it will give them everything they have asked for and ask for nothing in return.



So while I may be wrong, I have found that I am more likely to understand future market behavior if I listen to what is said on Wall Street and basically ignore what folks in and around the FCC say.

Like most pundit commentary in and about DC, and in distinction to Wall Street commentary, there is no penalty for making predictions that prove wrong. By the time it becomes clear that the FCC decisions were simply directed at wealth transfers, the decision makers will have moved on and no one will have noticed.

In this way, the FCC is the archetypical bad actor of the problem discussed in Nassim Nicholas Taleb's new book, "Skin in the Game: Hidden Asymmetries in Daily Life." Taleb is the thought-provoking author of the Black Swan, which came out in 2007. All of Wall Street read it in 2008, which was a shame, because if we had read it in 2007, we would have understood the asymmetric risk that created the financial meltdown before it was evident to everyone and we too would have shorted the subprime market.

The fundamental message of the new book is that it's morally wrong to enjoy the benefits of something while leaving others to accept all the risks.

Which is exactly what the FCC is doing to cities.

Taleb makes many observations that I think are relevant here, such as "Do not pay attention to what people say, only what they do, and to how much of their necks they are putting on the line."

Of course, here, the FCC is putting nothing on the line; it is only requiring that the cities put their funds and property on the line.

Another relevant line is "the most egregious contributor to inequality is the condition of a high-ranking civil servant or tenured academic, not that of an entrepreneur."

I like civil servants. I used to be one. I worked with many and found them to be honest, hard working and talented. I am not sure I agree with Taleb on this point but it does make me think. And the analysis certainly applies when a high-ranking federal civil servant tells 10,000 duly elected local officials words to the effect that "I know better than you what is good for your community and even though I am risking nothing, you must risk what I command you to."

Sadly, the BDAC process fails to recognize the power and wisdom of asymmetric value creation and falls in the trap of asymmetric risk allocation.

So what will happen? BDAC will make its recommendations, the FCC will adopt them and we will enter a phase of litigation in which cities and carriers do what litigants do---figure out ways around the rules (like [states are doing](#) with the FCC's

net neutrality framework) and ways to gain leverage over the other instead of focusing on collaborating on common goals. In some communities, carriers may deploy a bit more and a bit faster than they would have otherwise, but the primary use of the new dollars will be, as it is with the tax cuts, to service balance sheet, not deployment, objectives.

An additional potential downside is that the now frosty relations between the carriers and the cities may result in a slow-down on other fronts such as [Verizon](#) and [AT&T's](#) welcome efforts to enter the smart city market. There are some very exciting products and services that the wireless industry is in the best position to offer cities. My friends in the wireless industry argue that cities, when buying such services, should ignore the role the industry played in advocating an anti-city agenda in DC. All I can say is that hoping that the cities will adopt a 'let bygones be bygones' approach might work but it is contrary to every bit of my experience of how people in the real world act when they feel they are being stabbed in the back.

I obviously favor the FCC not preempting cities. Again, while there are some counter-examples, over all, cities have shown that they have been accommodating when there is a guarantee that the desired build out will occur. But here, there is no guarantee.

If, however, the FCC were to be analytically coherent about its stated goals on deployment and overcoming the digital divide, it would have included provisions to assure the wealth transfer it is mandating at least guarantees the desired public benefit, instead of just guaranteeing benefits to private enterprises.

It could easily do so with two provisions. First, it could require that carriers seeking to take advantage of the any benefit of the preemption must commit to an enforceable obligation to build out everywhere in the jurisdiction within a reasonably short period of time.

In addition, or in the alternative, the FCC could have ruled the preemption shall not apply to communities have their own plan to address the digital divide where those plans are inconsistent with preemption.

As to the first, and much to the consternation of some of my progressive friends, I have loudly opposed [build-out requirements](#), as they make it difficult for new entrants and service improvements. I admit, I am even opposed to my own idea here.

But I am even more opposed to one side giving the other side money based on a non-enforceable promise. If I had ever done that while practicing law, my client should have, and would have, fired me.

Here the FCC is supposed to represent the public yet it takes money from the public without any guarantee the public will benefit. So, if the FCC adopts a framework

preempting cities, then I have to abandon my opposition to build out requirements, as the only way to assure an actual deployment under these market conditions is to have some kind of build out requirement.

As to the second idea, I have been in discussions with a number of cities that wish to provide an attractive investment climate for 5G networks but also seek to assure that under-adopting communities receive the benefit of the new services. They are exploring a number of techniques, such as pricing permits in less attractive areas significantly less than the more attractive areas, or prioritizing permitting requests that are in areas of under adoption.

The BDAC recommendations would make such efforts to address the digital divide ineffective if not illegal. I cannot predict with confidence how many cities would undertake such efforts. I can predict with confidence that any such local led efforts are more likely to narrow the digital divide than the current BDAC recommendation which provides an economic incentive to cherry pick the area.

An interesting market example is [what happened](#) in 2015, in Lincoln, Nebraska. There, officials were negotiating with Verizon Communications Inc. over how much the city would charge the company to attach small cells to municipal property. The city said it would charge the carrier an annual \$95 fee — if the carriers would commit to deploying broadband in rural areas in Nebraska. Over the next two years, Lincoln offered the same deal to other carriers and builders.

The companies, understandably, said they couldn't commit to anything. So, Lincoln went ahead with an agreement that have the companies paying \$1,995 a year to attach small cells to city poles, more than 20 times as much. But if the FCC had had its way, Lincoln would have gotten less money and the rural communities would have received no new deployments anyway.

While my proposals would actually provide incentives to achieve those stated goals of the FCC, I am under no illusion that this Commission will adopt them. Unfortunately, the BDAC process suggests instead that FCC's itself is under the illusion that it has perfect foresight as to how best to deploy networks, utilize municipal assets and manage construction, and further that there is one way that fits all situations.

It is a bit odd to hear from unelected officials who [preach regulatory humility](#) telling elected officials how to do their job. It is also unwise. We actually don't know the many ways, not to mention the best way, for these networks to be built.

What we do know is that competition between cities, such as with Google Fiber and similar efforts, has lead to improvements in how cities interact with carriers. Encouraging such competition, studying the results, and shining a spotlight on what works best for all stakeholders will over time drive better results.

A top down, one-size fits all approach won't. As the conservative political analyst Yuval Levin wrote in his book Fractured Nation "The absence of easy answers is precisely a reason to empower a multiplicity of problem-solvers throughout our society, rather than hoping that one problem-solver in Washington gets it right."

Yuval Levin not only has a great last name; he also has it right.

Unfortunately, the FCC does not apparently understand that conservative wisdom.

In that light, my advice to the cities is two-fold.

As to the cities relationship with the FCC, I would advise basically ignoring it other than to, as the ancient Romans would say, "*ad petendam nothi.*" The FCC majority has said they don't care about you and don't consider your interests legitimate. They are happy to spend your money and make your policies without any understanding of the consequences for your communities and constituents.

Just a guess here, but in light of such comments and actions, I don't think negotiating with them will work.

As to your relationship with the carriers, I do think you should establish your own working group to establish best practices, work collaboratively to find solutions to new problems, and generally lower the cost of deployment. The carriers are your policy opponents at the FCC but they are not your enemies, just as you are not theirs. They have the potential to bring enormous benefits to your communities but the path is not easy for either of you. You should walk that path together.

It is unfortunate that the federal BDAC did not effectively do the job it should have done in driving a multi-stakeholder consensus. But a city-organized effort would likely be more legitimate, more practical and could actually be an important catalyst for asymmetric value creation in driving new deployment and addressing the digital divide. Indeed, you already have a lot to work with as cities from Sacramento to Lincoln to Boston have already developed models that have lead to deployments. In contrast to the BDAC model, these are models that attempt to create benefits for both sides, not just one.

Let me close with one more thought experiment. Imagine if a city currently vying for Amazon HQ2 were to say to Amazon, we will give you everything you want—tax savings, grants, property rights, etc.—even if you don't come to our city.

I would imagine that the residents of the city would think that this was a very, very bad joke.

But then suppose the federal government steps in and mandates that all cities vying for the project have to turn over all the benefits, no matter where Amazon chooses to go.

I think we would regard that as an even worse joke.

But tell me—and seriously, I'd like the FCC majority to take a break from their current deliberative joke writing process to tell us—how is that really different than what the FCC is proposing to do with the property and funds of 10,000 American cities?

I look forward to the answer.

Thank you and enjoy the conference.