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# 1AC

## 1AC---SSO’s

### 1AC---Innovation ADV

#### Advantage 1 is Innovation:

#### The Ninth Circuit’s recent decision in *FTC v. Qualcomm* permits information technology firms to engage in innovation-stifling conduct with antitrust impunity. Firms have been given free reign to license standard-essential patents (SEP’s) at a surcharge and evade commitments to license on Fair, Reasonable, and Non-Discriminatory (FRAND) terms.

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Standards can enhance competition and consumer choice, but they also massively inflate the value of patents deemed essential to the standard, and give their owners the power to sue companies that implement the standard for money damages or injunctions to block them from using their SEPs. When standards cover critical features like wireless connectivity, SEP owners wield a huge amount of “hold-up” power because their patents allow them to effectively block access to the standard altogether. That lets them charge unduly large tolls to anyone who wants to implement the standard.

To minimize that risk, standard-setting organizations typically require companies that want their patented technology incorporated into a standard to promise in advance to license their SEPs to others on fair, reasonable, and non-discriminatory (FRAND) terms. But that promise strikes at a key tension between antitrust and patent law: patent owners have no obligation to let anyone use technology their patent covers, but to get those technologies incorporated into standards, patent owners usually have to promise that they will give permission to anyone who wants to implement the standard as long as they pay a reasonable license fee.

Qualcomm is one of the most important and dominant companies in the history of wireless communication standards. It is a multinational conglomerate that has owned patents on every major wireless communication standard since its first CDMA patent in 1985, and it participates in the standard-setting organizations that define those standards. Qualcomm is somewhat unique in that it not only licenses SEPs, but also supplies the modem chips used by a wide range of devices. These include chips that implement wireless communication standards, which lie at the heart of every mobile computing device.

Although Qualcomm promised to license its SEPs (including patents essential to CDMA, 3G, 4G, and 5G) on FRAND terms, its conduct has to many looked unfair, unreasonable, and highly discriminatory. In particular, Qualcomm has drawn scrutiny for bundling tens of thousands of patents together—including many that are not standard-essential—and offering portfolio-only licenses no matter what licensees actually want or need; refusing to sell modem chips to anyone without a SEP license and threatening to withhold chips from companies trying to negotiate different license terms; refusing to license anyone other than original-equipment manufacturers (OEMs); and insisting on royalties calculated as a percentage of the sale price of a handset sold to end users for hundreds of dollars, despite the minimal contribution of any particular patent to the retail value.

In 2017, the U.S. Federal Trade Commission [sued](https://www.ftc.gov/news-events/press-releases/2017/01/ftc-charges-qualcomm-monopolizing-key-semiconductor-device-used) Qualcomm for violating both sections of the Sherman Antitrust Act by engaging in a number of anticompetitive SEP licensing practices. In May 2019, the U.S. District Court for the Northern District of California agreed with the FTC, identifying numerous instances of Qualcomm’s unlawful, anticompetitive conduct in a comprehensive [233-page opinion](https://www.eff.org/document/ftc-v-qualcomm-district-court-opinion). We were pleased to see the FTC take action and the district court credit the overwhelming evidence that Qualcomm’s conduct is corrosive to market-based competition and threatens to cement Qualcomm’s dominance for years to come.

But this month, a panel of judges from the Court of Appeals for the Ninth Circuit unanimously [overturned](https://www.eff.org/document/ninth-circuit-opinion-ftc-v-qualcomm) the district court’s decision, reasoning that Qualcomm’s conduct was “hypercompetitive” but not “anticompetitive,” and therefore not a violation of antitrust law. To reach that result, the Ninth Circuit made the patent grant more powerful and antitrust law weaker than ever.

According to the Ninth Circuit, patent owners don’t have a duty to let anyone use what their patent covers, and therefore Qualcomm had no duty to license its SEPs to anyone. But that framing requires ignoring the promises Qualcomm made to license its SEPs on reasonable and non-discriminatory terms—promises that courts in this country and around the world have consistently enforced. It also means ignoring antitrust principles like the essential facilities doctrine, which limits the ability of a monopolist with hold-up power over an essential facility (like a port) to shut out rivals. Instead, the Ninth Circuit held rather simplistically that a duty to deal could arise only if the monopolist had provided access, and then reversed its policy.

But even when Qualcomm restricted its licensing policies in critical ways, the Ninth Circuit found reasons to approve those restrictions. For example, Qualcomm stopped licensing its patents to chip manufacturers and started licensing them only to OEMs. This had a major benefit: it let Qualcomm charge a much higher royalty rate based on the high retail price of the end user devices, like smartphones and tablets, that OEMs make and sell. If Qualcomm had continued to license to chip suppliers, its patents would be “exhausted” once the chips were sold to OEMs, extinguishing Qualcomm’s right to assert its patents and control how the chips were used.

Patent exhaustion is a century-old doctrine that protects the rights of consumers to use things they buy without getting the patent owner’s permission again and again. Patent exhaustion is important because it prevents price-gouging, but also because it protects space for innovation by letting people use things they buy freely, including to build innovations of their own. The doctrine thus helps patent law serve its underlying goal—promoting economic growth and innovation. In other words, the doctrine of exhaustion is baked into the patent grant; it is not optional. Nevertheless, the Ninth Circuit wholeheartedly approved of Qualcomm’s efforts to avoid exhaustion—even when that meant cutting off access to previous licensees (chip-makers) in ways that let Qualcomm charge far more in licensing fees than its SEPs could possibly have contributed to the retail value of the final product.

It makes no sense that Qualcomm could contract around a fundamental principle like patent exhaustion, but at the same time did not assume any antitrust duty to deal under these circumstances. Worse, it’s harmful for the economy, innovation, and consumers. Unfortunately, the kind of harm that antitrust law recognizes is limited to harm affecting “competition” or the “competitive process.” Antitrust law, at least as the Ninth Circuit interprets it, doesn’t do nearly enough to address the harm downstream consumers experience when they pay inflated prices for high-tech devices, and miss out on innovation that might have developed from fair, reasonable, and non-discriminatory licensing practices.

We hope the FTC sticks to its guns and asks the Ninth Circuit to go en banc and reconsider this decision. Otherwise, antitrust law will become an even weaker weapon against innovation-stifling conduct in technology markets.

#### Qualcomm’s ability to evade its FRAND commitment can be traced to a failure on the part of Standard Setting Organization’s (SSO’s) to reasonably define and enforce their IPR policies. Patent holdup is real, and antitrust enforcement is necessary to manage it.

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C. A Limited Role for Antitrust in Promoting, Not Impeding, Competition

We favor an important but limited role for antitrust to control patent holdup. One of the authors has previously expressed skepticism of broad antitrust enforcement against patent holdup.129 But the critical point Lemley made there is that, for the most part, we do not need antitrust if patent and contract law effectively enforce the private solutions SSOs have developed to the holdup problem.130 In his more temperate moments, Delrahim adds an important caveat that, if taken seriously, might align him more with us: “[A]ntitrust law should play no role in policing unilateral FRAND commitments where contract or common law remedies would be adequate.”131 Unfortunately, he seemed to drop that caveat in the joint December 2019 statement with the PTO abandoning long-standing policy on FRAND commitments. There, the Division and the PTO took the position that patentees should be entitled to a full range of patent remedies, explicitly including injunctions, even if they had committed to license the patents on FRAND terms.132 As Herbert Hovenkamp has noted, the Justice Department’s position contradicts established law on injunctive relief and FRAND.133

Even the more limited version of the statement is problematic. If courts effectively enforce FRAND commitments, most of the holdup problem can be solved without resort to antitrust. But antitrust still has an important role to play when contract law and anti-fraud laws fail to fully address the patent holdup problem.134

The FTC’s case against Qualcomm provides a good example of why antitrust is needed. In that case, the District Court found that Qualcomm had breached its FRAND commitment and used its monopoly power over modem chips to pressure its customers (Original Equipment Manufacturers, or “OEMs”) to pay a royalty surcharge for Qualcomm’s SEPs on top of the reasonable royalty rates that Qualcomm would otherwise have been able to obtain. Qualcomm imposed this surcharge when Qualcomm’s customers purchased modem chips from Qualcomm’s rivals.135 The District Court correctly found that Qualcomm’s royalty surcharge acted like a tax when Qualcomm’s customers purchased modem chips from Qualcomm’s rivals.136 Based on this reasoning, the District Court correctly found that Qualcomm’s “no-license/no-chips” policy harmed competition by raising rivals’ costs and thereby excluding them, and that this same conduct also harmed Qualcomm’s customers.137

The Ninth Circuit reversed, making basic errors of both economics and law.138 On the economics, the Ninth Circuit mistakenly concluded that “Qualcomm’s royalties are ‘chip-supplier neutral’ because Qualcomm collects them from all OEMs that license its patents, not just ‘rival’s customers.’”139 This is flatly incorrect, because the royalty surcharge reduces the gains from trade between an OEM and a rival modem-chip supplier but does not reduce the gains from trade between the OEM and Qualcomm.140 Based on this error, the Ninth Circuit states incorrectly: “The FTC identifies no such harm to competition.”141

On the law, the Ninth Circuit rejects the well-established principle that harming customers can be a way of harming competition: “[T]he primary harms the district court identified here were to the OEMs who agree to pay Qualcomm’s royalty rates—that is, Qualcomm’s customers, not its competitors. These harms were thus located outside the ‘areas of effective competition’—the markets for CDMA and premium LTE modem chips.”142 The notion that harms to customers in the relevant market are outside the scope of the antitrust laws is simply bizarre.

In any event, as noted above, the District Court also found harm to Qualcomm’s rivals in both of the relevant markets it identified. The Ninth Circuit further erred by stating that “the district court’s ‘anticompetitive surcharge’ theory fails to state a cogent theory of anticompetitive harm.”143 The Ninth Circuit’s logic at this point assumes that Qualcomm’s royalties reflect the value of its SEPs, but that is directly contrary to the District Court’s finding that Qualcomm used its monopoly over modem chips to obtain a royalty surcharge, above and beyond the royalties Qualcomm could obtain based on its SEPs.144 One cannot dismiss findings regarding the effects of a royalty surcharge by assuming away that very surcharge. Hopefully the Supreme Court will correct these blatant errors.

Qualcomm’s use of its separate monopoly power over modem chips to evade its FRAND commitment couldn’t be remedied in contract, making antitrust enforcement a necessity for reasons beyond simply enforcing the FRAND deal.145 In the standard-setting context, if a SEP owner breaches its FRAND commitment and is thereby able to charge unreasonably high royalties to device manufacturers, those royalties are likely to be passed through in large part to final consumers. Antitrust enforcement can protect consumers from these overcharges.146

But to the extent that antitrust can step back in some settings, that is only possible because the market participants have recognized and responded effectively to the patent holdup problem by requiring reasonable licensing terms, and because the courts have enforced that requirement in contract or patent law. The second prong of the Antitrust Division’s attack on FRAND commitments therefore undermines whatever merit there might be to the first prong. While on the one hand Delrahim says that we don’t need antitrust because contract and equity will solve the patent holdup problem, on the other hand he is advocating policies that make it harder for contract and patent law to solve that very problem. Threatening SSOs with liability—maybe even per se liability—for trying to stop SEP holdup undermines the very contractual solution on which Delrahim purports to rely. So too do Delrahim’s periodic claims that holdup is a good thing, or at least something we should accept,147 his incorrect claim that patent holdout is a bigger problem than patent holdup,148 and his advocacy for undoing or avoiding eBay and giving a patent owner the right to an automatic injunction.149 Indeed, under Delrahim, the Antitrust Division evidently objects even to voluntary commitments by patent owners not to seek an injunction as part of the standard-setting process.150 Ironically, this assault on SSOs and FRAND policies may actually necessitate more antitrust intervention in standard-setting. If the DOJ encourages companies like Qualcomm to ignore their FRAND commitments, and if the DOJ discourages SSOs from trying to solve the SEP holdup problem, or impedes their efforts to do so, antitrust may ultimately have to step in to protect a functioning market from SEP holdup.

CONCLUSIONS AND RECOMMENDATIONS

The theory of holdup is well-supported by a substantial body of empirical evidence. For valid conceptual and practical reasons, this empirical literature has not involved showing that large-scale actual holdups are common. Rather, the evidence generally comes in the form of efforts by private parties to contract around holdup.

The same types of evidence and the same standards regarding empirical work should be applied when testing the theory of patent holdup.

When such standards are applied, it is clear that the problem of patent holdup is substantial. Indeed, patent holdup, and especially SEP holdup, are very difficult strains of holdup to manage. Furthermore, the problem of patent holdup is quite common, since it arises whenever the efficient development of new products and services involves substantial investments that may turn out to be specific to another party’s patent portfolio. Not surprisingly, therefore, virtually all players in the high- tech industries affected by holdup participate in voluntary organizations where they agree to limit everyone’s rights (including their own) in an effort to pre-commit to avoid holdup.

Both the theory and the empirical work relating to patent holdup indicate that market participants have strong incentives to devise institutions to limit patent holdup. Considerable progress was made between 2006 and 2016 in controlling patent holdup in the United States, primarily through the courts, but also through competition policy enforcement. Unfortunately, some of that progress is now at risk due to a drastic shift in policy at the Antitrust Division of the Department of Justice. That shift is based on faulty economics, relies on flawed arguments, and is contrary to both patent law and the empirical evidence.

Rather than go backward, more forward progress is needed to manage and control patent holdup in general and SEP holdup in particular.

The costs caused by the problem of SEP holdup can be reduced if more SSOs follow the lead of the IEEE by clarifying and strengthening their patent policies. The SEP policies of many SSOs are certainly valuable, but efforts by Qualcomm and others to ignore or game their FRAND commitments show the necessity of SSOs being more explicit about just what their FRAND commitments entail.

The costs of SEP holdup can be reduced if the ITC joins the policy mainstream by recognizing that exclusion orders based on FRAND- encumbered SEPs are normally not in the public interest, provided the SEP owner has another available legal venue through which it can secure reasonable royalties. The White House reined in the ITC in 2013 when it sought to grant exclusion orders despite the patentee’s commitment to license the patents. The ITC should affirmatively apply that policy.

Most importantly, the courts should enforce reasonable SSO policies that target SEP holdup. Courts have been doing this as a matter of contract law, but patent owners seeking to engage in holdup have strong incentives to ignore or find ways to undermine, avoid, or evade their FRAND obligations. When they do so, antitrust must be willing to step in to protect competition and consumers by stopping patent holdup.

#### Anticompetitive conduct is escalating---weakened antitrust enforcement emboldens firms to follow Qualcomm’s lead, which collapses the integrity of standard-setting.

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While the FRAND process has been highly productive, it is also fragile. Firms are tempted to make commitments at the beginning when the incentive to join is large, but renege on them later when they can profit by doing so. At least in this particular case, private FRAND enforcement had not worked very well. Qualcomm had been able to violate FRAND commitments in order to exclude rivals and obtain higher royalties than FRAND would permit, largely with impunity. Other firms will very likely follow Qualcomm’s lead. If that happens the FRAND system will fall apart, doing irreparable injury to the modern wireless telecommunications network or, at the very least, diminishing the leadership role of the United States in preserving effective network competition.

While governments can be heavily involved in standard set-ting,9 the implementation of technical standards in information technologies is largely the work of private actors. Government involvement is limited mainly to enforcement of contract, intellectual property, or antitrust law. As private actors, those involved in standard setting or compliance are fully subject to the federal antitrust laws.

This Article addresses one question: when is an SSO participant’s violation of a FRAND commitment an antitrust violation, and if it is, of what kind and what are the implications for remedies? It warns against two extremes. One is thinking that any violation of a FRAND commitment is an antitrust violation as well. In the first instance FRAND obligations are contractual, and most breaches of contract do not violate any antitrust law. The other extreme is thinking that, because a FRAND violation is a breach of contract, it cannot also be an antitrust violation. The question of an antitrust violation does not de-pend on whether the conduct breached a particular agreement but rather on whether it caused competitive harm. This can happen because the conduct restrained trade under section 1 of the Sherman Act, was unreasonably exclusionary under section 2 of the Sherman Act, or amounted to an anticompetitive condition or understanding as defined by section 3 of the Clay-ton Act.10 The end goal is to identify practices that harm com-petition, thereby injuring consumers.

The Ninth Circuit’s Qualcomm decision will make antitrust violations in the context of FRAND licensing much more difficult to prove, even in cases where anticompetitive behavior and consumer harm seem clear.11 Indeed, in this case the court itself acknowledged the harm to consumers but appeared to think that they were not entitled to protection.12 If this decision stands, FRAND obligations will to a larger extent have to be settled through private litigation and the federal antitrust enforcement agencies will have a diminished role. Anticompetitive behavior by one firm that is not effectively disciplined will lead others to do the same thing.

#### A trusted and credible system for ICT innovation is vital for rapid tech diffusion and economic growth---absent FRAND, the system will collapse.

Bauer et al. 17, \*Matthias Bauer is Senior Economist at ECIPE; \*Fredrik Erixon is a Swedish economist and writer. He has been the Director of the European Centre for International Political Economy (ECIPE) ever since its start in 2006; (October 2017, “Standard Essential Patents and the Quest for Faster Diffusion of Technology”, https://ecipe.org/publications/standard-essential-patents/)

It is easy to take a pessimistic view about whether the system will break. If the current trend continues, the system is likely to break at some point for the simple reason that companies will not trust it anymore. The series of legal disputes witnessed over the past years – sometimes referred to as the “smartphone patent wars” – has been fodder for a pessimistic reading of “the two tales of SEPs”. While it is common in the business world that disputes over patents and licenses are settled in courts, various SEP disputes have revealed problematic aspects of the SEP market that are different from those disputes that follow the normal stream of business and contracts. Often, the SEP disputes are less concerned about the rights and boundaries of patents, and more about antitrust limits to market behavior: they concern market abusive practices and restrictions to competition as much as they are about intellectual property.

If the SEP system actually does break at some point, the consequences would be felt throughout the economy. SEPs have been a critical part of the ICT revolution. SEPs have allowed for the fast rates of innovation diffusion that the world has witnessed over the past quarter of a century. All the computer and Internet related products and services that people are now dependent upon for their private and professional lives are intricate webs of intellectual property. As many as 250,000 patents can be used to claim ownership of some technical specification or design element in a single smartphone (NYT 2012). A laptop, suggests one calculation, implements more than 250 interoperability standards (Biddle et al. 2010), and the number of SEP holders for 3G and 4G standards grew from 2 in 1994 to 130 in 2013 while the number of SEPs rose from fewer than 150 in 1994 to more than 150,000 in 2013 (Galetovic and Gupta 2016). The standardization-body ETSI has registered more than 150,000 declarations of SEPs from companies, and ETSI is just one of many bodies in the world of ICT standardization. For the 3G standard, the same body has about 24,000 patents that have been declared essential. Now, with the economy yet again on the threshold of big technological change, a trusted and credible system for creators and users of technology to standardize proprietary technology would be a boon for innovation, interoperability and – ultimately – the consumers.

And there are reasons for optimism. Although many of the problems in the SEP regimes need to be addressed, the numbers above indicate that the SEP system is in fact attractive to patent holders and SEP implementers. It is easy to see why: neither holders nor implementers are presented with alternative options that on the face of it would be far more profitable for them. In other words, there simply would not be as many patents declared as essential if both creators and users of technology believed the SEP system worked to their disadvantage or was grossly unfair. While the reality for some companies may be that legal disputes and unpredictability prompt them to find other ways than SEPs to get access to key technologies for their products, it remains the case that most stakeholders have strong economic incentives to maintain a balanced SEP system that is trusted.

First, standard essential patents are an asset for creators of technology because, by becoming essential to a standard, their volumes of sales for technologies that users value rise significantly. As many holders want to raise more revenues for their SEPs and – ideally – have the freedom to contract with buyers on their terms, they can expand their customer base when they agree to sell patented technology in accordance with a set of rules that are designed to prevent SEP holders exploiting the weakness of a customer that has grown dependent on having access to their technology.

Second, SEPs are hugely beneficial also to those that buy the licenses – the implementers or users. Through the SEP system, they can access technologies that are interoperable and work with different products and functionalities – and they can do it under conditions that, if history is a guide, in most cases give them stable and predictable terms of contract. As a consequence, both creators and users can focus on their competitive advantages and profit on the economies of scale and specialization. Downstream firms do not need to develop their own upstream technology and upstream firms do not need to package their technologies in end-customer products in order to make their products valuable.

Third, standard-setting organisations (SSOs) also have a big stake in an SEP system that works well – and, like creators and users of technology, they would stand to lose significantly if the SEP system were to collapse.

Lastly, the biggest beneficiaries are individual consumers – those who buy the end products using FRAND-conditioned SEPs. The advent of SEPs and the rules represented by FRAND have enabled a development of fast technology creation and contributed to the rapid diffusion in ICT goods and ICT-based services. The SEP system has also allowed for new competition, both between existing technologies and brands, and from new ones that have stepped into the market with the ambition to disrupt it, again to the benefit of the consumer. It is difficult to imagine that the ICT and digital development would have been as fast as it has been if SEPs had not been a central feature of the market.

The changing fortunes of companies operating in the cellular and smartphone market would not have been possible if there had not been an SEP system that supported competition. Now that the world economy is on the doorstep of new innovations that are dependent on a great number of input technologies – e.g. the Internet-of-Things, transport connectivity and intelligent vehicles – it is crucially important for the consumer that a balanced and functioning SEP system is maintained and that actors in the system converge towards it – which would ultimately meet their economic interests.

#### Growth solves nuclear war.

Henricksen 17, \*Thomas H., emeritus senior fellow at the Hoover Institution; (March 23rd, 2017, “Post-American World Order,” Hoover Institution, <http://www.hoover.org/research/post-american-world-order>)

What Is To Be Done?

The first marching order is to dodge any kind of perpetual war of the sort that George Orwell outlined in  “1984,” which engulfed the three super states of Eastasia, Eurasia, and Oceania, and made possible the totalitarian Big Brother regime. A long-running Cold War-type confrontation would almost certainly take another form than the one that ran from 1945 until the downfall of the Soviet Union.

What prescriptions can be offered in the face of the escalating competition among the three global powers? First, by staying militarily and economically strong, the United States will have the resources to deter its peers’ hawkish behavior that might otherwise trigger a major conflict. Judging by the history of the Cold War, the coming strategic chess match with Russia and China will prove tense and demanding—since all the countries boast nuclear arms and long-range ballistic missiles. Next, the United States should widen and sustain willing coalitions of partners, something at which America excels, and at which China and Russia fail conspicuously.

There can be little room for error in fraught crises among nuclear-weaponized and hostile powers. Short- and long-term standoffs are likely, as they were during the Cold War. Thus, the playbook, in part, involves a waiting game in which each power looks to its rivals to suffer grievous internal problems which could entail a collapse, as happened to the Soviet Union.

Some Chinese and Russian experts predict grave domestic problems for each other. They also entertain similar thoughts about the United States, which they view as terminally decadent and catastrophically polarized over politics, ethnicity, and the future direction of the country. So, the brewing three-way struggle also involves a systemic contest, which will test the competitors’ economic and political institutions.

At this juncture, the world is entering a standoff among the three great and several not-so-great powers. Averting war, while defending our interests, will prove a challenge, calling for deft policy, political endurance, and economic growth, as well as sufficient military force to keep at bay aggressive states or prevail over them if ever a war breaks out.

#### Absence of domestic 5G competition cedes leadership in technical standards to China.

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There is little doubt today that American superiority in the next generation of mobile communications, commonly called 5G, is a matter of extraordinary national concern. There is also little doubt that China is a strong competitor, already having outspent the United States by [$24 billion](https://www2.deloitte.com/content/dam/Deloitte/us/Documents/technology-media-telecommunications/us-tmt-5g-deployment-imperative.pdf#page=3) and planning [$411 billion](https://www.scmp.com/tech/china-tech/article/2098948/china-plans-28-trillion-yuan-capital-expenditure-create-worlds) in 5G investment over the next decade. The Chinese government has also laid out multiple national plans for establishing the country as a leader in mobile technology, and the Chinese firm Huawei is poised to be the [top smartphone manufacturer](https://www.cnbc.com/2018/11/16/huawei-aims-to-overtake-samsung-as-no-1-smartphone-player-by-2020.html) by 2020.

And what are United States companies doing about this? Bickering over patents.

For years, the leading American supplier of advanced mobile communications chips has been the San Diego-based Qualcomm. The company has been an innovator of mobile technology, but it has also been a remarkable innovator of convoluted legal strategies. As an ongoing Federal Trade Commission [lawsuit alleges](https://www.ftc.gov/news-events/press-releases/2017/01/ftc-charges-qualcomm-monopolizing-key-semiconductor-device-used), Qualcomm has used its dominant position as a chip supplier and its extensive patent holdings to weave an intricate web of patent licensing across the mobile industry. The effect of that complex licensing scheme, the FTC claims, has been to force competitor chipmakers out of the market and to extract concessions and high patent royalties from smartphone and mobile-device makers.

Qualcomm today faces only one major U.S. competitor—Intel, whose chips Apple recently [started using](https://www.cultofmac.com/484250/intel-reaping-rewards-apples-scrap-qualcomm/) instead of Qualcomm’s. Not surprisingly, Qualcomm has leveraged its patents to force a retaliatory investigation against Apple, the effect of which could be, as an administrative judge [recently determined](http://www.fosspatents.com/2018/10/itc-judge-didnt-buy-testimony-for-which.html), to boot Intel out of the mobile-chip market and leave Qualcomm as a monopoly.

It is hard to imagine that this infighting among Apple, Intel and Qualcomm is getting the United States very far in 5G, and it is harder to imagine that Qualcomm’s desired outcome would do so, either. The best path, instead, is the obvious one: allowing competition and expanding the number of firms working on 5G.

Competition encourages companies to out-innovate each other in order to grab market share. Of particular importance to 5G, competition leads to [better cybersecurity](https://morningconsult.com/opinions/in-the-race-to-5g-monopoly-considered-harmful/) in products, making them less vulnerable to hacking or misuse.

Competition is especially crucial when it comes to the technical standards that define how 5G works. These standards are the work of 3GPP, an international consortium of technology companies in the field. Chinese players such as Huawei and ZTE are major participants in 3GPP. Ensuring that 3GPP’s standards reflect American values requires having as many American companies at the negotiating table as possible—which is harder to achieve when those companies are trying to sue each other out of business.

Certainly patents themselves, as rewards for new inventions, are a driver of innovation in areas such as 5G. The problem, though, is not the existence of a patent system but the ever-expanding power of the patent laws, which encourage companies to pour dollars into complex patent licensing and assertion schemes—as companies like Qualcomm have done—rather than to perform the hard work of building new technologies. When innovation in patent strategy is more profitable than actual innovation, we lose the race to 5G and other technologies.

But don’t take my word for it. [Multiple members of Congress](https://www.patentprogress.org/2019/01/11/congress-weighs-in-on-qualcomm-and-apple-at-the-itc/), from both sides of the aisle, have denounced the use of patents to kick companies like Intel out of 5G development, predicting that such actions would “dampen the quality, innovation, competitive pricing, and in this case the preservation of a strong U.S. presence in the development of 5G and thus the national security of the United States.”

Or look to what China itself is doing. The Chinese government is handing out rewards left and right to encourage technology research and development. Indeed, it grants subsidies and financial benefits (ranging from the [ordinary](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2818503) to the [imperfect](https://funginstitute.berkeley.edu/wp-content/uploads/2013/12/patent_subsidy_Zhen.pdf) to the [bizarre](https://www.scmp.com/news/china/article/1681850/how-get-out-jail-early-china-buy-inventors-idea-and-patent-it)) to encourage its citizens to file for patents. But while China specifically encourages filing for patents, it does little to encourage using them: Patent infringement awards in court are peanuts—often only [five figures](https://scholarship.law.berkeley.edu/btlj/vol33/iss2/2/)—and most Chinese patent owners drop their patents [within five years](https://www.bloomberg.com/news/articles/2018-09-26/china-claims-more-patents-than-any-country-most-are-worthless) of getting them. The message in China is clear: You will be rewarded for innovating, but not for quibbling over patents.

The United States should take the same tack if it wants to match China in 5G. Ever-stronger patent rights encourage counterproductive disputes that are a drag on industry, a drag on research and development, and ultimately a drag on domestic competitiveness on the global stage. If America wants to lead in 5G, then it must clear the path for strong competition among leading American technology companies.

#### Standards leadership allows China to export digital authoritarianism.

Drew et al. 21, \*Dr Alexi Drew, Research Associate, The Policy Institute, King’s College London; (May 7th, 2021, “The Critical Geopolitics of Standards Setting”, https://www.transatlantic-dialogue-on-china.rusi.org/article/the-critical-geopolitics-of-standards-setting)

However, this previously ‘western’ domain is challenged by a Chinese bloc of private industry actors with centrally directed, strategic motivations for their efforts who have managed to leverage the flaws of this system for political and economic advantage.  The market-driven self-regulation model of technical standards has proven itself unsustainable given the geopolitical power achievable through the control of these standards. The marketised approach is easily abusable by a technologically developed nation-state with geopolitical intentions firmly in mind.

Obscurity Through Complexity

Technical standards have the immediate appearance of being both apolitical and ethically neutral. This seems to set them apart from the debate over standards of state behaviour in [cyber space concerning espionage and actions below the threshold of armed conflict](https://www.cfr.org/blog/unexpectedly-all-un-countries-agreed-cybersecurity-report-so-what). Yet, technological standards are unequivocally connected to normative practices of international behaviour and ethics. The extremely complex nature of the standards under consideration in bodies such as the International Organization for Standardization, the International Electrotechnical Commission (IEC), the International Telecommunications Union (ITU), and the Third Generation Partnership Project (3GPP) obscures the very tangible real-world impact that the standards they set have. The 3GPP is responsible for standards setting for mobile telecommunications. It covers everything from 5G through to autonomous vehicles and the Internet of Things. These are the bodies defining how the modern world is constructed.

On the one hand they appear quite benign, responsible for such banalities as the use of Universal Serial Bus (USB) connectors versus proprietary standards. This hardly seems a matter of national security importance. But the same process is responsible for what ultimately shape the basic operating parameters of facial recognition technology in closed circuit television systems, the level of centralised state control at the technical foundations of the internet, and the protections of personally identifiable data. These generate profound implications for international policy and ethics.

Internal Competition vs Strategic Direction

Technical standards setting processes have, historically, been dominated by private sector actors who have had both the capacity to develop a particular technology to the point of holding a significant market share, and the ability to use that market share to advocate for the standardisation of the technology in line with their own production. The market led approach has continued to be the prevailing model by which American companies have globalised the technical standards behind US dominated technological innovation. This privatised form of self-regulation for technology companies is only partially influenced by the approach taken within the EU where [some licensing of standards are controlled by state or EU led institutions.](https://www.ui.se/globalassets/ui.se-eng/publications/ui-publications/2019/ui-brief-no.-2-2019.pdf)

In contrast to this approach the Chinese model has involved a high level of state-oriented direction, oversight, and direct engagement on the creation and signing off technical standards. Efforts to harmonise and centralise technical standards domestically have become increasingly internationalised as the CCP takes this centralised, strategic approach to technical standards setting bodies such as the ITU, 3GPP, and IEC. Technical standards have also become an increasingly central component of the Digital Silk Road with the openly expressed goal of increasing uptake of Chinese technical standards in partner countries.

The implications of this clash between a system of technical standardisation that is driven by the market versus one driven by an authoritarian government subsidised model are a direct challenge to the development of free, open, and ethical technology. Standardisation mechanisms have become political, or rather there has been a gradual realisation of the political power to be gained from the control of technical standards. While the PRC might have come to this awareness first, the US and Europe have since had a rude awakening about the missed opportunity. The privatised model of technical standards setting favoured by European and US markets relies upon the dynamics of financial competition to regulate behaviour. This is in stark contrast to the statist Chinese model.

#### Causes global backsliding.

Kendall-Taylor et. al 20 \*Andrea Kendall-Taylor, senior fellow and director of the Transatlantic Security Program at the Center for a New American Security, co-author of Democracies and Authoritarian Regimes; Erica Frantz is Assistant Professor of Political Science at Michigan State University; Joseph Wright is Professor of Political Science at Pennsylvania State University; (March/April 2020, “The Digital Dictators,” Foreign Affairs, <https://www.foreignaffairs.com/articles/china/2020-02-06/digital-dictators>)

The risk that technology will usher in a wave of authoritarianism is all the more concerning because our own empirical research has indicated that beyond buttressing autocracies, digital tools are associated with an increased risk of democratic backsliding in fragile democracies. New technologies are particularly dangerous for weak democracies because many of these digital tools are dual use: technology can enhance government efficiency and provide the capacity to address challenges such as crime and terrorism, but no matter the intentions with which governments initially acquire such technology, they can also use these tools to muzzle and restrict the activities of their opponents.

#### Democracy solves a litany of existential threats.

Diamond 19, Professor of Political Science and Sociology at Stanford University, Senior Fellow at the Hoover Institution, Senior Fellow at the Freeman Spogli Institute for International Studies, PhD in Sociology from Stanford University, (Dr. Larry, Ill Winds: Saving Democracy from Russian Rage, Chinese Ambition, and American Complacency, p. 199-202)

The most obvious response to the ill winds blowing from the world’s autocracies is to help the winds of freedom blowing in the other direction. The democracies of the West cannot save themselves if they do not stand with democrats around the world. This is truer now than ever, for several reasons. We live in a globalized world, one in which models, trends, and ideas cascade across borders. Any wind of change may gather quickly and blow with gale force. People everywhere form ideas about how to govern—or simply about which forms of government and sources of power may be irresistible—based on what they see happening elsewhere. We are now immersed in a fierce global contest of ideas, information, and norms. In the digital age, that contest is moving at lightning speed, shaping how people think about their political systems and the way the world runs. As doubts about and threats to democracy are mounting in the West, this is not a contest that the democracies can afford to lose. Globalization, with its flows of trade and information, raises the stakes for us in another way. Authoritarian and badly governed regimes increasingly pose a direct threat to popular sovereignty and the rule of law in our own democracies. Covert flows of money and influence are subverting and corrupting our democratic processes and institutions. They will not stop just because Americans and others pretend that we have no stake in the future of freedom in the world. If we want to defend the core principles of self-government, transparency, and accountability in our own democracies, we have no choice but to promote them globally. It is not enough to say that dictatorship is bad and that democracy, however flawed, is still better. Popular enthusiasm for a lesser evil cannot be sustained indefinitely. People need the inspiration of a positive vision. Democracy must demonstrate that it is a just and fair political system that advances humane values and the common good. To make our republics more perfect, established democracies must not only adopt reforms to more fully include and empower their own citizens. They must also support people, groups, and institutions struggling to achieve democratic values elsewhere. The best way to counter Russian rage and Chinese ambition is to show that Moscow and Beijing are on the wrong side of history; that people everywhere yearn to be free; and that they can make freedom work to achieve a more just, sustainable, and prosperous society. In our networked age, both idealism and the harder imperatives of global power and security argue for more democracy, not less. For one thing, if we do not worry about the quality of governance in lower-income countries, we will face more and more troubled and failing states. Famine and genocide are the curse of authoritarian states, not democratic ones. Outright state collapse is the ultimate, bitter fruit of tyranny. When countries like Syria, Libya, and Afghanistan descend into civil war; when poor states in Africa cannot generate jobs and improve their citizens’ lives due to rule by corrupt and callous strongmen; when Central American societies are held hostage by brutal gangs and kleptocratic rulers, people flee—and wash up on the shores of the democracies. Europe and the United States cannot withstand the rising pressures of immigration unless they work to support better, more stable and accountable government in troubled countries. The world has simply grown too small, too flat, and too fast to wall off rotten states and pretend they are on some other planet. Hard security interests are at stake. As even the Trump administration’s 2017 National Security Strategy makes clear, the main threats to U.S. national security all stem from authoritarianism, whether in the form of tyrannies from Russia and China to Iran and North Korea or in the guise of antidemocratic terrorist movements such as ISIS.1 By supporting the development of democracy around the world, we can deny these authoritarian adversaries the geopolitical running room they seek. Just as Russia, China, and Iran are trying to undermine democracies to bend other countries to their will, so too can we contain these autocrats’ ambitions by helping other countries build effective, resilient democracies that can withstand the dictators’ malevolence. Of course, democratically elected governments with open societies will not support the American line on every issue. But no free society wants to mortgage its future to another country. The American national interest would best be secured by a pluralistic world of free countries—one in which autocrats can no longer use corruption and coercion to gobble up resources, alliances, and territory. If you look back over our history to see who has posed a threat to the United States and our allies, it has always been authoritarian regimes and empires. As political scientists have long noted, no two democracies have ever gone to war with each other—ever. It is not the democracies of the world that are supporting international terrorism, proliferating weapons of mass destruction, or threatening the territory of their neighbors.

#### Emergence of smart cities depends on IoT applications of 5G interoperability standards---absent FRAND, excessive royalties will undermine sustainable development.

Schwartz 18, \*Matt Schwartz, Privacy Fellowship Coordinator at ACT, App Association; (March 2nd, 2018, “It’s Smart to be FRANDly: How the FRAND Commitment Will Determine the Future of Smart Cities”, https://actonline.org/2018/03/02/its-smart-to-be-frandly-how-the-frand-commitment-will-determine-the-future-of-smart-cities/)

In December, we [outlined](https://actonline.org/2017/12/18/smart-cities-connecting-your-community-through-technology/%5d) the emergence of Smart Cities – cities that harness technological innovations like internet of things (IoT) devices and data analytics to improve essential infrastructure in growing urban centers. The technological foundation of Smart Cities aims to improve public safety, better allocate resources, and meet the needs of citizens more quickly.

A central element to Smart Cities is the comprehensive network of sensors and devices implemented within buildings, roads, traffic signs, and parking meters that allows them to interact with public, and potentially private-owned, infrastructure. These sensors will “speak” to one another, communicating information about energy usage, traffic density, or other elements of city management that have traditionally either been analyzed separately or not tracked at all. The potential of Smart Cities allows data to flow from previously disconnected branches of the city and be processed in real-time, unlocking previously unknown insights.

The powerful interoperability of Smart Cities will rely heavily on standardized technologies developed in organizations like the IEEE, which is responsible for standardizing the wi-fi technology we use every day. Standardized technologies often include standard-essential patents (SEPs), which, like their name suggests, are patents declared essential to an industry standard by a standards-setting organization. In simple terms, one cannot implement the standardized technology without using the patent.

Like regular patents, the users of SEPs must pay royalties or licensing fees to the patent owner before they may use it. For example, if a manufacturing company wants to make an IoT device interoperable with a 5G network, the manufacturer must pay a licensing fee to the owner of the SEP that is essential to the 5G standard. SEPs play a vital role in the new innovations we enjoy and have come to expect, and because of the value of these patents, SEP holders have the ability to demand high license fees from those who wish to implement the standard. To offset this competition issue, many SEP holders voluntarily agree to license their SEPs to any willing licensee under fair, reasonable, and non-discriminatory (FRAND) terms.

While wi-fi and LTE are standards that will be vital to Smart City deployment, countless new standardized technologies are being developed that will be integral to any fully-operational Smart City. With reasonable access to SEPs, assured by the FRAND commitment, innovators can enjoy the legal and business certainty they need to compete. While the meaning of the FRAND commitment continues to be refined – as evidenced by the development of SEP best practices recently launched by the App Association in Europe – its foundations are well-established.

But what happens when SEP holders do not abide by the FRAND licensing commitment, or simply refuse to license at all? Sadly, small and medium-sized companies would be forced to accept untenable licensing terms, but more realistically, they would be priced out of using the standard altogether. As a result, it would impose a barrier to innovation that would result in fewer products offered to consumers or cities eager to implement IoT technologies. For example, many hope the rise of autonomous vehicles will be seamlessly integrated into the Smart City network. But how beneficial would it be if only some autonomous vehicle brands are able to license the technology needed to communicate with traffic lights, simply because of the market power of a chipmaker? The FRAND commitment is an important backstop to that unfortunate possibility.

It is vital for SEP holders to honor FRAND licensing terms, if not for small and medium-sized innovators, then for the sustainability of future Smart Cities. FRAND creates a platform for innovation, providing a floor on which companies can stand, innovate, and compete. If the foundation of the FRAND commitment is reneged, American innovators pay a steep price – not only do they lose a key component of product development and market entry, but they are also left with years of expensive negotiations and litigation if they choose to challenge the licensing practice. What’s more, the confidence developed in the open standards development system is shaken, and Smart Cities have fewer choices in IoT solutions for their future.

To achieve the promise of Smart Cities, a balanced standards ecosystem is essential. We must allow small and medium-sized developers to leverage industry standards for innovation and prevent cost-prohibitive royalty structures and negotiating practices that are detrimental to competition, while also ensuring that SEP owners can protect their intellectual property and be fairly compensated for its use. The FRAND commitment continues to be the best framework to achieve this balance, and adherence to its principles will determine the future and success of Smart Cities.

#### Climate change is anthropogenic and causes extinction---5G-enabled smart cities are critical for mitigation and adaptation.

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Currently, the entire planet is at risk due to continual climate change [1–3]. The recorded increase in average temperature across the world in the past hundred years, and the associated changes attributed to this, are known as global warming. Many scientists are convinced by the published evidence that this change is anthropogenic and resulted from the elevated emission levels of global greenhouse gases (GHGs) [4,5]. Gases such as water vapor, carbon dioxide, methane, nitrous oxide, and ozone are responsible for the absorption and emission of thermal radiation. These changes in the relative quantities of the GHGs induce a proportional change in the amount of preserved solar energy. Presently, the accepted indicator for global warming is the sustained rise in the mean temperature worldwide. This definition is designed to account for the fact that there may be some localized exceptions to this rise. For example, there may be cooling experienced in a region while the global temperature may increase altogether, hence the need for average temperature. A key concern with the GHGs trapping of more heat in the atmosphere is that it affects both climate and short scale weather patterns. Consequently, it results in greater numbers of adverse weather events such as storms, heat waves, cold snaps, droughts, and fires [6]. Climate-related risks to health, livelihoods, food security, water supply, human safety, and economic growth are projected to increase with global warming of 1.5 ◦C [7] and further increase further at 2 ◦C, as shown in Figure 1. In addition, the risks to global aggregated economic growth due to the climate change impacts are projected to be lower at 1.5 ◦C than at 2 ◦C by the end of this century.

Carbon dioxide has the most substantial effect on global warming [8]. Although it was once assumed to have an ~100 year lifespan in the atmosphere, careful studies revealed that the situation is far worse, with three-quarters of the gas expected to remain for a time in the region of up to ~1000 years, with the remainder lasting for an indefinite period of time [9]. It was indicated that the present impacts of humanity on the atmosphere can certainly cause a long term problem [10]. Carbon dioxide is released when oil, coal, and other fossil fuels are burnt for the energy we use to power our homes, cars, and smartphones. By lessening its usage, we can curb our own contribution to climate change while saving money. The first challenge is eliminating the burning of coal, oil, and, eventually, natural gas. Oil is the lubricant of the global economy as it is hidden inside such ubiquitous items as plastic and corn, fundamental to the transportation of both consumers and goods. Coal is the substrate, supplying roughly half of the electricity worldwide, a percentage that is likely to grow according to the International Energy Agency (IEA). In fact, buildings contribute up to 43% of all the greenhouse gas emissions worldwide [11], even though investing in thicker insulation and other cost-effective as well as temperature-regulating strategies can save money in the long run. Investment in new infrastructures, or radical upgradation of the existing highways and transmission lines, may help to reduce greenhouse gas emissions, yielding economic growth in the developing countries.

Nations across the globe have kept very high targets to reducing their GHG discharges [12,13]. In order to meet these goals, considerable reductions in city energy usage is required. At a global scale, urban communities represent over half (55%) of the population, which is predicted to reach 68% by the middle of this century [14]. Urban areas claim ownership of the highest levels of energy use, gas emission, and also the largest local economy. As such, it is crucial for urban areas to reduce their consumption and utilize renewable sources wherever available to reduce their gas discharge levels. Smart cities often utilize digital sensors to measure and transmit data about the levels of GHGs in the city at that moment, as a means of tackling them [15]. The efficacy of such a system is thus reliant on the network used to collate and analyze the data collected as an extant network. The mobile telecommunications networks offer a convenient solution to this desire, as their pre-existence has the clear benefit of reducing costs compared to the design and implementation of a novel system. It is recognized that smart cities will certainly act as the key players meeting these ambitious targets [16,17]. In this study, we focused primarily on the potential applications of 5G network technology to control climate change in Singapore. In addition, a clear overview of the sustainability benefits of introducing 5G technology compatible smart cities, buildings, and farms in all aspects of urbanization is provided. Herein, the main purpose is to tackle the negative outcomes associated with anthropogenic climate change, with a particular focus on the contributions that are best made by the telecoms network operators.

Climate change is one of the most challenging problems that humanity has ever faced. Presently, hundreds of millions of lives, innumerable species, entire ecosystems, health, economy, and the future habitability of this planet are at risk. Fortunately, climate change is solvable, we just need to wisely exploit the existing technologies and sciences. Climate change mitigation is a pressing international need in which many management actions are required. The development of 5G technology has been largely driven by smart mobile devices and advanced communication technologies. It may thus serve as a technical enabler for a whole new range of business opportunities, energy, and facilities management, together with industrial applications. Moreover, it may enable different devices to work together seamlessly. Definitely, the 5G cellular network technology is expected to revolutionize the global industries with profound effects on the savings of energy, waste generation and recycling, and water resources management, thus reducing the climate change impacts.

### 1AC---Cybersecurity ADV

#### Advantage 2 is Cybersecurity:

#### Aggressive patent strategies create structural flaws in 5G standardization that imperils domestic cybersecurity---market competition reduces the incidence of vulnerability and severity of attacks.

Duan 20, \*Charles Duan is a senior fellow and associate director of tech & innovation policy at the R Street Institute, where he focuses his research on intellectual property issues; (2020, “OF MONOPOLIES AND MONOCULTURES: THE INTERSECTION OF PATENTS AND NATIONAL SECURITY”, Santa Clara High Technology Law Journal, 36(4), 369-405. Retrieved from <https://www2.lib.ku.edu/login?url=https://www.proquest.com/scholarly-journals/monopolies-monocultures-intersection-patents/docview/2442966690/se-2?accountid=14556>)

III. COMPETITION AND CYBERSECURITY

In addition to the historical review done so far, another approach to understanding the relationship among patents, competition, and national security is to consider the role of cybersecurity. There is little doubt that computer system vulnerabilities that enable hacking and spread of computer exploits are a threat to the nation’s defenses, so better cybersecurity is a key part of national security strategy.155

Strong competition can thus complement national security by enhancing domestic cybersecurity, and patent assertion that unduly weakens competition detracts from cybersecurity.156 Competition promotes better cybersecurity in at least two ways. First, multiple studies show that competition encourages firms to improve their products on multiple vectors including cybersecurity. Second, competition avoids a situation that security experts call a “monoculture,” which increases vulnerability to severe cyberattacks. As former Secretary of Homeland Security Michael Chertoff wrote recently, “We need competition and multiple providers, not a potentially vulnerable technological monoculture,” to guarantee national security.157 Thus, cybersecurity provides a useful lens for understanding how unfettered patent assertion and licensing can detract from national security.

A. Cybersecurity as Competitive Value-Add

Competition enhances national security by reducing the incidence of technical vulnerabilities. That effect is especially important for security sensitive systems such as mobile telecommunications.

Intuitively, a causal chain from competition to cybersecurity makes logical sense. Computer security is a value-added benefit to consumers, so firms in competitive markets are likely to use security to gain an edge over their competitors.158 In monopolized markets, though, there may be less external impetus to test products for flaws, and the monopolist may choose to focus less on security and more on new product features or increased product quality.

Economic research confirms these hypotheses about competition leading to better cybersecurity. A 2009 empirical study of web browsers considered the impact of market concentration on the amount of time that vendors took to fix security vulnerabilities as they were discovered.159 The study found that the presence of more competitors correlated with faster cybersecurity response—a reduction of 8–10 days in response time per additional market rival.160 Similarly, business researchers in 2005 modeled incentives for firms to engage in sharing of cybersecurity information, and concluded that the “inclination to share information and invest in security technologies increases as the degree of competitiveness in an industry increases.”161 Another study found that, where two software firms are in competition, at least one will be willing to take on some degree of risk and responsibility for cybersecurity, whereas a monopoly software firm will consistently fail to accept such responsibility.162 To be sure, an unpublished study from 2017 found that some market concentration can make firms more responsive to cybersecurity issues, but only to a point: “being in a dominant position reduces the positive effect of having less competitors on the responsiveness of the vendor,” and indeed the “more dominant the firm is, the less rapid it is in releasing security patches.”163 This research confirms that competition is more conducive to cybersecurity.

It is not hard to see how this applies to emerging communication technologies markets. In the absence of competition, the above research suggests that device manufacturers, chip makers, and software developers will lack incentives to respond to vulnerabilities, to share information about cybersecurity practices and issues, and to take responsibility for security matters. Mobile phone chips have had their share of cybersecurity failures already.164 The best way to flush out ongoing and future cybersecurity issues is to maintain competitive pressure at all levels of the supply chain.

B. Vulnerabilities of “Monocultures”

A second reason why monopoly undermines cybersecurity is that monopoly leads to a “monoculture” of single-vendor products, opening the door to massive systemic failure in the case of a cyberattack. Computer researchers developed the theory of software monocultures in the early 2000s, in response to the regular phenomenon of computer viruses and other attacks spreading rapidly by exploiting flaws in the dominant operating system at the time, Microsoft Windows.165 Where a computer system such as Windows has a commanding share of users, a virus that exploits a flaw in that system can quickly spread to infect a whole interconnected ecosystem. An operating system monopoly thus enables fast and easy spread of cyberattacks, and better cybersecurity would be achieved through greater diversity in online systems.166 As one research group posited, “a network architecture that supports a collection of heterogeneous network elements for the same functional capability offers a greater possibility of surviving security attacks as compared to homogeneous networks.”167

There has been considerable study of the theory that computer monocultures are naturally more vulnerable to attacks.168 In one study, computer science researchers reviewed a catalog of 6,340 software vulnerabilities recorded in 2007, to compare whether comparable software would share the same flaws.169 Of the 2,627 vulnerabilities applicable to application software (as opposed to operating systems, web scripts, and other software components), only 29 (1.1%) applied to substitute products from different vendors but providing the same functionality.170 By contrast, different versions of a single software product were found to share vulnerabilities 84.7% of the time.171 Thus, software monocultures share exploitable flaws even when there is some variation in versions across the monoculture; by contrast, diversity in software is almost guaranteed to prevent a single flaw from affecting all users.

In the case of 5G and wireless mobile communications, a monoculture is an especially concerning possibility. To the extent that systems such as smart city sensors or communication networks are widely deployed in a monoculture fashion, a widespread attack could have devastating consequences, potentially blacking out a region and affecting essential services such as 911.172 A monoculture that is vulnerable to so-called “rootkits” or “backdoors”—maliciously installed software that enable bad actors to commandeer systems—could also enable mass surveillance or spying by private hackers or foreign governments.173 The presence of systems from multiple vendors would mitigate these possibilities.

#### Insecure technical standards cause inevitable systemic grid collapse---extinction.

DeNardis 21, \*Dr. Laura DeNardis, PhD in Science and Technology Studies from Virginia Tech, Dean of the School of Communication at American University, and Gordon M. Goldstein, Adjunct Senior Fellow at the Council on Foreign Relations, (March 1st, 2021, “The Real Lesson of the Texas Power Debacle”, Lawfare, 3/1/2021, https://www.lawfareblog.com/real-lesson-texas-power-debacle)

The infrastructure was essential, ubiquitous and providing basic functionality for everything in daily life from water to heat and transportation. And in an instant it was gone, plunging tens of thousands of residents into a life-threatening crisis. This is, of course, the narrative of the recent debacle in Texas, where a winter storm overwhelmed the state’s electrical grid and brought the state to a near-total blackout. But it should also be interpreted as a preemptive warning of what Americans will face from the next generation of the internet and the new realm of cybersecurity risk it will dramatically amplify.

Both forms of infrastructure—a state-run electrical grid and the 5G and “internet of things” future to which we are rapidly hurtling—share three attributes. First, their construction reflects a lack of imagination about the danger that can quickly coalesce when seemingly remote threat scenarios become real. Second, compounding a lack of analytic imagination is an absence of preparedness. Third, for both the Texas electrical grid and the emerging internet, public policy protections are either meager or completely absent.

In planning for the resilience of its electrical grid, public officials in Texas discounted the potentially devastating disruption that could occur from unpredictable events—whether related to climate change or just a once-a-century anomaly. They also eschewed precautions other states take seriously by allowing for the interconnection of electrical grid supply chains across their borders, ostensibly because of their ideological rejection of federal regulatory oversight governing such arrangements.

As the United States builds out a new national 5G cyber-physical communications network through private service providers, Americans similarly discount the risks—myriad in their diversity and severity—that are orders of magnitude more significant than what Texas confronted recently. More physical things than people are already connected. The super empowered internet of tomorrow, known among some in the field as the “internet of everything,” will exceed by tens of billions of devices the number of connections between individuals simply communicating via social media or digital screens.

This confronts policymakers with an imminent threat: A cyber outage is no longer about losing digital communications but about losing basic societal functioning and even human life. The failure of imagination is to think of the SolarWinds attack on U.S. federal agencies and tech companies as a worst-case scenario. The failure of imagination is to think of cybersecurity through a content-centric lens rather than as possible attacks on the material world. The emergence of internet-connected cardiac devices, digitally dependent cars, and internet-connected agriculture systems portend the stakes of a cyberattack to health care, economic and social functioning, and food security.

The United States should be prepared for, and certainly not be caught by surprise by, such cyberattacks. Yet, the internet of everything is notoriously insecure. Internet-connected physical objects are not necessarily upgradeable. Nor do they come with adequate default security and encryption. The 5G infrastructure that helps connect digital objects has been at the center of debates over Chinese espionage. Industrial cyber-physical systems are based on technical standards that have not been collaboratively vetted for security and interoperability. One of the most infamous cyberattacks—the so-called Mirai botnet that took down major media sites and corporations—hijacked these insecure objects in homes to carry out the assault. The United States is not yet prepared.

Finally, in the race to conceive and deploy effective public policy responses, the U.S. government as a whole is hardly more anticipatory or synthesized in its response to potential calamity than the state of Texas. The focus of U.S. cyber policy remains on information policy issues such as disinformation, manipulation and violent speech rather than securing the digital world that now powers our material day-to-day lives. The Biden administration confronts an enormous challenge in crafting a comprehensive strategy to the cybersecurity risks foreshadowed by the ruinous experience in Texas and its management of vital infrastructure. While the digital world has leapt from two-dimensional to three-dimensional space, cyber policy has not at all jumped from 2D to 3D.

This failure of imagination, preparedness and policy protection must not be America’s cyber future; the stakes are far too high and the costs are far too great. The Texas disaster is a potent illustration of what has always been true: Our digital society and economy are extremely vulnerable and grow more porous and subject to penetration day by day. As digital sensors and cyber control systems become further embedded in physical infrastructure like energy systems, agriculture and transportation, there is no longer a separation between security of the “real” world and security of the online world. They are entangled and increasingly enmeshed—and policy has yet to catch up to either envisioning or mitigating the looming threats the U.S. confronts.

If the energy grid cannot weather a winter storm, how can it be expected to withstand a major cyberattack? What other vital forms of national infrastructure—ranging from water, bridges, highways and roads, and ultimately our day-to-day financial system—are comparably at risk? As Texas dramatizes, it is neither hyperbolic nor exaggerated to assert that our survival could now depend on securing the inevitable cyber-physical future that is accelerating with stunning rapidity.

#### Actors have the means and motivations to strike critical infrastructure.

Wintch 21, \*Timothy M. Wintch, an active-duty Major in the United States Air Force. He is currently a graduate student at the Oettinger School of Science & Technology Intelligence, National Intelligence University, in Bethesda, Maryland. Mr. Wintch has over 11 years of experience in command-and-control operations as an Air Battle Manager. He holds a Bachelor of Arts in Politics from the University of California, Santa Cruz, and a Master of Arts in Military Studies from American Military University. (April 20th, 2021, “PERSPECTIVE: Cyber and Physical Threats to the U.S. Power Grid and Keeping the Lights on”, https://www.hstoday.us/subject-matter-areas/infrastructure-security/perspective-cyber-and-physical-threats-to-the-u-s-power-grid-and-keeping-the-lights-on/)

Among critical infrastructure sectors in the U.S., energy is perhaps the most crucial of the 16 sectors defined by the Department of Homeland Security. This sector is so vital because it provides the energy necessary to run every other critical infrastructure sector. However, the U.S. power grid, the backbone of the energy sector, is built upon an aging skeleton that is becoming increasingly vulnerable every day. Whether from terrorists or nation-states like Russia and China, the power grid is susceptible to not just physical attacks, but also to cyber intrusion as well. However, much of this threat can be mitigated if the U.S. takes the appropriate steps to safeguard the power grid and avoid a potential catastrophe in the future.

Since Sept. 11, 2001, terrorism on U.S. soil has been at the forefront of American consciousness. Critical infrastructure provides an appealing target because of the disproportionally large impact even a small attack can have on the sectors. In particular, the power grid represents a particularly lucrative target, both in terms of the ease of access and the large impact it can make. The National Research Council stated that the U.S. power grid is “vulnerable to intelligent multi-site attacks by knowledgeable attackers intent on causing maximum physical damage to key components on a wide geographical scale.”[[1]](https://www.hstoday.us/subject-matter-areas/infrastructure-security/perspective-cyber-and-physical-threats-to-the-u-s-power-grid-and-keeping-the-lights-on/" \l "_ftn1) Additionally, the physical security of transmission and distribution systems is difficult due to the dispersed nature of these key components, which in turn is advantageous to attackers as it reduces the likelihood of their capture.[[2]](https://www.hstoday.us/subject-matter-areas/infrastructure-security/perspective-cyber-and-physical-threats-to-the-u-s-power-grid-and-keeping-the-lights-on/" \l "_ftn2) From 2002-2012, approximately 2,500 physical attacks occurred against transmission lines and towers worldwide and approximately 500 attacks against transformer substations.[[3]](https://www.hstoday.us/subject-matter-areas/infrastructure-security/perspective-cyber-and-physical-threats-to-the-u-s-power-grid-and-keeping-the-lights-on/" \l "_ftn3) Terrorists have the motivation to attack the U.S. power grid but the very nature of the grid makes it highly vulnerable. The power grid is not only at risk from physical attacks, but also nation-state cyberattacks.

One nation that has shown both the capability and intent to use attacks against critical energy infrastructure is Russia, as demonstrated in their 2015 annexation of Crimea from Ukraine. A Russian cyber threat group known as Sandworm, which used its BlackEnergy malware, attacked Ukrainian computer systems that provide remote control of the Ukraine power grid.[[4]](https://www.hstoday.us/subject-matter-areas/infrastructure-security/perspective-cyber-and-physical-threats-to-the-u-s-power-grid-and-keeping-the-lights-on/" \l "_ftn4) This attack, and another in 2016, each left the capital Kiev without power, prompting cyber experts to raise concern about the same malware already existing in NATO and the U.S. power grids.[[5]](https://www.hstoday.us/subject-matter-areas/infrastructure-security/perspective-cyber-and-physical-threats-to-the-u-s-power-grid-and-keeping-the-lights-on/" \l "_ftn5) In any conflict between Russia and NATO, not only would similar cyberattacks pose a threat, but so would potential physical attacks severing fuel oil and natural gas lines to Western Europe. Russia has both the capability and intent to attack critical infrastructure, particularly power grids, during future conflicts in their “hybrid warfare” approach.

Another nation that has the capability to attack critical energy infrastructure is China, representing a threat to not just the U.S. energy infrastructure but also that of our allies whose support would be vital in a major conflict. A recent NATO report highlighted this threat from China’s Belt and Road Initiative, stating that “[China’s] foreign direct investment in strategic sectors [such as energy generation and distribution] …raises questions about whether access and control over such infrastructure can be maintained, particularly in crisis when it would be required to support the military.”[[6]](https://www.hstoday.us/subject-matter-areas/infrastructure-security/perspective-cyber-and-physical-threats-to-the-u-s-power-grid-and-keeping-the-lights-on/" \l "_ftn6) Like Russia, China has been active with cyber intrusions in U.S. energy infrastructure. The Mission Support Center at Idaho National Laboratory characterized these as attacks as “multiple intrusions into US ICS/SCADA [Industrial Control Systems/Supervisory Control and Data Acquisition] and smart grid tools [that] may be aimed more at intellectual property theft and gathering intelligence to bolster their own infrastructure, but it is likely that they are also using these intrusions to develop capabilities to attack the [bulk electric system], as well.”[[7]](https://www.hstoday.us/subject-matter-areas/infrastructure-security/perspective-cyber-and-physical-threats-to-the-u-s-power-grid-and-keeping-the-lights-on/" \l "_ftn7) China, therefore, has both the capability and intent to conduct cyber intrusions and attacks for myriad reasons.

Another arm of this threat is the reliance the U.S. energy industry has on imports from China, especially transformers. In early 2020, federal officials seized a transformer in the port of Houston that had been imported by the Jiangsu Huapeng Transformer Company before sending it to Sandia National Laboratory in Albuquerque. Sandia is contracted by the U.S. Department of Energy for mitigating national security threats.[[8]](https://www.hstoday.us/subject-matter-areas/infrastructure-security/perspective-cyber-and-physical-threats-to-the-u-s-power-grid-and-keeping-the-lights-on/" \l "_ftn8) The Wall Street Journal reported that “Mike Howard, chief executive of the Electric Power Research Institute, a utility-funded technical organization, said that the diversion of a huge, expensive transformer is so unusual – in his experience, unprecedented – that it suggests officials had significant security concerns.”[[9]](https://www.hstoday.us/subject-matter-areas/infrastructure-security/perspective-cyber-and-physical-threats-to-the-u-s-power-grid-and-keeping-the-lights-on/" \l "_ftn9) Previously destined for the Washington Area Power Administration’s Ault, Colo., substation, the transformer is believed to have been seized due to “backdoor” exploitable hardware emplaced by the Chinese prior to shipment.[[10]](https://www.hstoday.us/subject-matter-areas/infrastructure-security/perspective-cyber-and-physical-threats-to-the-u-s-power-grid-and-keeping-the-lights-on/#_ftn10) Shortly after these events, President Trump issued Executive Order 13920, “[Securing the United States Bulk-Power System](https://trumpwhitehouse.archives.gov/presidential-actions/executive-order-securing-united-states-bulk-power-system/),” essentially limiting the import of Chinese-built critical energy infrastructure components due to concerns about cybersecurity.[[11]](https://www.hstoday.us/subject-matter-areas/infrastructure-security/perspective-cyber-and-physical-threats-to-the-u-s-power-grid-and-keeping-the-lights-on/#_ftn11) Interestingly, Jiangsu Huapeng “boasted that it supported 10 percent of New York City’s electricity load.”[[12]](https://www.hstoday.us/subject-matter-areas/infrastructure-security/perspective-cyber-and-physical-threats-to-the-u-s-power-grid-and-keeping-the-lights-on/#_ftn12)

Franklin Kramer, the former Assistant Secretary of Defense for International Security Affairs, testified before a U.S. House of Representatives Energy and Commerce subcommittee during an energy and power hearing in 2011 and said that a “highly-coordinated and structured cyber, physical, or blended attack on the bulk power system, however, could result in long-term (irreparable) damage to key system components in multiple simultaneous or near-simultaneous strikes.” He added that “an outage could result with the potential to affect a wide geographic area and cause large population centers to lose power for extended periods.”[[13]](https://www.hstoday.us/subject-matter-areas/infrastructure-security/perspective-cyber-and-physical-threats-to-the-u-s-power-grid-and-keeping-the-lights-on/#_ftn13) Even the inclusion of features such as smart grids to the overall grid structure poses new vulnerabilities through their connectivity. Kramer stated that “such connectivity means that the distribution system could be a key vector for a national security attack on the grid.”[[14]](https://www.hstoday.us/subject-matter-areas/infrastructure-security/perspective-cyber-and-physical-threats-to-the-u-s-power-grid-and-keeping-the-lights-on/#_ftn14)

#### Those attacks cause accidental nuclear escalation.

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Yet another pathway to escalation could arise from a cascading series of cyberstrikes and counterstrikes against vital national infrastructure rather than on military targets. All major powers, along with Iran and North Korea, have developed and deployed cyberweapons designed to disrupt and destroy major elements of an adversary’s key economic systems, such as power grids, financial systems, and transportation networks. As noted, Russia has infiltrated the U.S. electrical grid, and it is widely believed that the United States has done the same in Russia.[12](https://www.armscontrol.org/act/2019-11/features/cyber-battles-nuclear-outcomes-dangerous-new-pathways-escalation#endnote12) The Pentagon has also devised a plan known as “Nitro Zeus,” intended to immobilize the entire Iranian economy and so force it to capitulate to U.S. demands or, if that approach failed, to pave the way for a crippling air and missile attack.[13](https://www.armscontrol.org/act/2019-11/features/cyber-battles-nuclear-outcomes-dangerous-new-pathways-escalation#endnote12)

The danger here is that economic attacks of this sort, if undertaken during a period of tension and crisis, could lead to an escalating series of tit-for-tat attacks against ever more vital elements of an adversary’s critical infrastructure, producing widespread chaos and harm and eventually leading one side to initiate kinetic attacks on critical military targets, risking the slippery slope to nuclear conflict. For example, a Russian cyberattack on the U.S. power grid could trigger U.S. attacks on Russian energy and financial systems, causing widespread disorder in both countries and generating an impulse for even more devastating attacks. At some point, such attacks “could lead to major conflict and possibly nuclear war.”[14](https://www.armscontrol.org/act/2019-11/features/cyber-battles-nuclear-outcomes-dangerous-new-pathways-escalation#endnote14)

These are by no means the only pathways to escalation resulting from the offensive use of cyberweapons. Others include efforts by third parties, such as proxy states or terrorist organizations, to provoke a global nuclear crisis by causing early-warning systems to generate false readings (“spoofing”) of missile launches. Yet, they do provide a clear indication of the severity of the threat. As states’ reliance on cyberspace grows and cyberweapons become more powerful, the dangers of unintended or accidental escalation can only grow more severe.

#### Cyber-compromised NC3 causes nuclear war.

Klare 19, \*Michael T. Klare is a professor emeritus of peace and world security studies at Hampshire College and senior visiting fellow at the Arms Control Association; (November 19th, “Cyber Battles, Nuclear Outcomes? Dangerous New Pathways to Escalation”, <https://www.armscontrol.org/act/2019-11/features/cyber-battles-nuclear-outcomes-dangerous-new-pathways-escalation>)

The Nuclear-Cyber Connection

These links exist because the NC3 systems of the United States and other nuclear-armed states are heavily dependent on computers and other digital processors for virtually every aspect of their operation and because those systems are highly vulnerable to cyberattack. Every nuclear force is composed, most basically, of weapons, early-warning radars, launch facilities, and the top officials, usually presidents or prime ministers, empowered to initiate a nuclear exchange. Connecting them all, however, is an extended network of communications and data-processing systems, all reliant on cyberspace. Warning systems, ground- and space-based, must constantly watch for and analyze possible enemy missile launches. Data on actual threats must rapidly be communicated to decision-makers, who must then weigh possible responses and communicate chosen outcomes to launch facilities, which in turn must provide attack vectors to delivery systems. All of this involves operations in cyberspace, and it is in this domain that great power rivals seek vulnerabilities to exploit in a constant struggle for advantage.

The use of cyberspace to gain an advantage over adversaries takes many forms and is not always aimed at nuclear systems. China has been accused of engaging in widespread cyberespionage to steal technical secrets from U.S. firms for economic and military advantages. Russia has been accused, most extensively in the Robert Mueller report, of exploiting cyberspace to interfere in the 2016 U.S. presidential election. Nonstate actors, including terrorist groups such as al Qaeda and the Islamic State group, have used the internet for recruiting combatants and spreading fear. Criminal groups, including some thought to be allied with state actors, such as North Korea, have used cyberspace to extort money from banks, municipalities, and individuals.[4](https://www.armscontrol.org/act/2019-11/features/cyber-battles-nuclear-outcomes-dangerous-new-pathways-escalation#endnote04) Attacks such as these occupy most of the time and attention of civilian and military cybersecurity organizations that attempt to thwart such attacks. Yet for those who worry about strategic stability and the risks of nuclear escalation, it is the threat of cyberattacks on NC3 systems that provokes the greatest concern.

This concern stems from the fact that, despite the immense effort devoted to protecting NC3 systems from cyberattack, no enterprise that relies so extensively on computers and cyberspace can be made 100 percent invulnerable to attack. This is so because such systems employ many devices and operating systems of various origins and vintages, most incorporating numerous software updates and “patches” over time, offering multiple vectors for attack. Electronic components can also be modified by hostile actors during production, transit, or insertion; and the whole system itself is dependent to a considerable degree on the electrical grid, which itself is vulnerable to cyberattack and is far less protected. Experienced “cyberwarriors” of every major power have been working for years to probe for weaknesses in these systems and in many cases have devised cyberweapons, typically, malicious software (malware) and computer viruses, to exploit those weaknesses for military advantage.[5](https://www.armscontrol.org/act/2019-11/features/cyber-battles-nuclear-outcomes-dangerous-new-pathways-escalation#endnote05)

Although activity in cyberspace is much more difficult to detect and track than conventional military operations, enough information has become public to indicate that the major nuclear powers, notably China, Russia, and the United States, along with such secondary powers as Iran and North Korea, have established extensive cyberwarfare capabilities and engage in offensive cyberoperations on a regular basis, often aimed at critical military infrastructure. “Cyberspace is a contested environment where we are in constant contact with adversaries,” General Paul M. Nakasone, commander of the U.S. Cyber Command (Cybercom), told the Senate Armed Services Committee in February 2019. “We see near-peer competitors [China and Russia] conducting sustained campaigns below the level of armed conflict to erode American strength and gain strategic advantage.”

Although eager to speak of adversary threats to U.S. interests, Nakasone was noticeably but not surprisingly reluctant to say much about U.S. offensive operations in cyberspace. He acknowledged, however, that Cybercom took such action to disrupt possible Russian interference in the 2018 midterm elections. “We created a persistent presence in cyberspace to monitor adversary actions and crafted tools and tactics to frustrate their efforts,” he testified in February. According to press accounts, this included a cyberattack aimed at paralyzing the Internet Research Agency, a “troll farm” in St. Petersburg said to have been deeply involved in generating disruptive propaganda during the 2016 presidential elections.[6](https://www.armscontrol.org/act/2019-11/features/cyber-battles-nuclear-outcomes-dangerous-new-pathways-escalation#endnote06)

Other press investigations have disclosed two other offensive operations undertaken by the United States. One called “Olympic Games” was intended to disrupt Iran’s drive to increase its uranium-enrichment capacity by sabotaging the centrifuges used in the process by infecting them with the so-called Stuxnet virus. Another left of launch effort was intended to cause malfunctions in North Korean missile tests.[7](https://www.armscontrol.org/act/2019-11/features/cyber-battles-nuclear-outcomes-dangerous-new-pathways-escalation#endnote07) Although not aimed at either of the U.S. principal nuclear adversaries, those two attacks demonstrated a willingness and capacity to conduct cyberattacks on the nuclear infrastructure of other states.

Efforts by strategic rivals of the United States to infiltrate and eventually degrade U.S. nuclear infrastructure are far less documented but thought to be no less prevalent. Russia, for example, is believed to have planted malware in the U.S. electrical utility grid, possibly with the intent of cutting off the flow of electricity to critical NC3 facilities in the event of a major crisis.[8](https://www.armscontrol.org/act/2019-11/features/cyber-battles-nuclear-outcomes-dangerous-new-pathways-escalation#endnote08) Indeed, every major power, including the United States, is believed to have crafted cyberweapons aimed at critical NC3 components and to have implanted malware in enemy systems for potential use in some future confrontation.

Pathways to Escalation

Knowing that the NC3 systems of the major powers are constantly being probed for weaknesses and probably infested with malware designed to be activated in a crisis, what does this say about the risks of escalation from a nonkinetic battle, that is, one fought without traditional weaponry, to a kinetic one, at first using conventional weapons and then, potentially, nuclear ones? None of this can be predicted in advance, but those analysts who have studied the subject worry about the emergence of dangerous new pathways for escalation. Indeed, several such scenarios have been identified.[9](https://www.armscontrol.org/act/2019-11/features/cyber-battles-nuclear-outcomes-dangerous-new-pathways-escalation#endnote09)

The first and possibly most dangerous path to escalation would arise from the early use of cyberweapons in a great power crisis to ~~paralyze~~ undermine the vital command, control, and communications capabilities of an adversary, many of which serve nuclear and conventional forces. In the “fog of war” that would naturally ensue from such an encounter, the recipient of such an attack might fear more punishing follow-up kinetic attacks, possibly including the use of nuclear weapons, and, fearing the loss of its own arsenal, launch its weapons immediately. This might occur, for example, in a confrontation between NATO and Russian forces in east and central Europe or between U.S. and Chinese forces in the Asia-Pacific region.

Speaking of a possible confrontation in Europe, for example, James N. Miller Jr. and Richard Fontaine wrote that “both sides would have overwhelming incentives to go early with offensive cyber and counter-space capabilities to negate the other side’s military capabilities or advantages.” If these early attacks succeeded, “it could result in huge military and coercive advantage for the attacker.” This might induce the recipient of such attacks to back down, affording its rival a major victory at very low cost. Alternatively, however, the recipient might view the attacks on its critical command, control, and communications infrastructure as the prelude to a full-scale attack aimed at neutralizing its nuclear capabilities and choose to strike first. “It is worth considering,” Miller and Fontaine concluded, “how even a very limited attack or incident could set both sides on a slippery slope to rapid escalation.”[10](https://www.armscontrol.org/act/2019-11/features/cyber-battles-nuclear-outcomes-dangerous-new-pathways-escalation#endnote10)

What makes the insertion of latent malware in an adversary’s NC3 systems so dangerous is that it may not even need to be activated to increase the risk of nuclear escalation. If a nuclear-armed state comes to believe that its critical systems are infested with enemy malware, its leaders might not trust the information provided by its early-warning systems in a crisis and might misconstrue the nature of an enemy attack, leading them to overreact and possibly launch their nuclear weapons out of fear they are at risk of a preemptive strike.

“The uncertainty caused by the unique character of a cyber threat could jeopardize the credibility of the nuclear deterrent and undermine strategic stability in ways that advances in nuclear and conventional weapons do not,” Page O. Stoutland and Samantha Pitts-Kiefer wrote in 2018 paper for the Nuclear Threat Initiative. “[T]he introduction of a flaw or malicious code into nuclear weapons through the supply chain that compromises the effectiveness of those weapons could lead to a lack of confidence in the nuclear deterrent,” undermining strategic stability.[11](https://www.armscontrol.org/act/2019-11/features/cyber-battles-nuclear-outcomes-dangerous-new-pathways-escalation#endnote11) Without confidence in the reliability of its nuclear weapons infrastructure, a nuclear-armed state may misinterpret confusing signals from its early-warning systems and, fearing the worst, launch its own nuclear weapons rather than lose them to an enemy’s first strike. This makes the scenario proffered in the 2018 NPR report, of a nuclear response to an enemy cyberattack, that much more alarming.

### 1AC---Solvency

#### Plan: The United States federal judiciary should substantially increase prohibitions on private sector conduct that is more restrictive of competition than reasonably necessary to enable creation of information technology standards.

#### The plan requires SSO’s to administer reasonable action to prohibit ex post opportunism---that strengthens FRAND effectiveness while enabling SEP holders to capture appropriate royalties---which is the best competition-innovation balance.

Melamed & Shapiro 18, \*A. Douglas Melamed is Professor of the Practice of Law at Stanford Law School; \*Carl Shapiro is the Transamerica Professor of Business Strategy at the Haas School of Business at the University of California at Berkeley; (May 2018, “How Antitrust Law Can Make FRAND Commitments More Effective”, https://www-cdn.law.stanford.edu/wp-content/uploads/2018/05/How-Antitrust-Law-Can-Make-FRAND-Commitments-More-Effective.pdf)

3. Application of the Basic Legal Principles

The antitrust principle is straightforward: industry-wide collaboration through SSOs to establish procompetitive standards is permitted only if it is no more restrictive of competition than reasonably necessary to enable creation of the standards. When standard setting predictably creates technology monopolies that, if unrestrained, will enable anticompetitive ex post opportunism that would otherwise not occur, an SSO that does not take effective measures to prevent or minimize such ex post opportunism engages in conduct that is more restrictive of competition than necessary. In that case, the SSO and, in appropriate cases, its members, may well violate Section 1 of the Sherman Act.

Under this principle, SSO procedures and FRAND rules should be evaluated based on whether they lead to reasonable SEP royalties, using the competitive ex ante licensing standard discussed above, which has been adopted by the courts in patent law. Put differently, FRAND rules should be evaluated based on their ability to prevent SEP holders from obtaining more than the ex ante value of their technology from implementers.

This limitation would not prevent a SEP holder from proﬁting, perhaps greatly, from participating in the SSO and having its patented technology included in the standard. The SEP holder continues to be rewarded for its technology because the inclusion of its technology in the standard can still greatly increase the volume of licensing opportunities available to the SEP holder.

Whether a particular set of FRAND rules are sufficiently effective in preventing ex post opportunism will depend on the particular circumstances. The procedural unfolding of the case will also depend upon the circumstances. As a general matter, the case would probably be structured as an ordinary Rule of Reason case.82

First, the plaintiff would have to demonstrate harm to competition as a result of the collaboration of the SSO’s members, many of which compete with one another. In this case, the harm to competition would stem from the ability of the SEP holder to exercise monopoly power by obtaining royalties in excess of the competitive, ex ante level. The decision to include patented technologies in the standard would be the allegedly unlawful agreement. Notably, the court need not determine what a FRAND royalty is; it would suffice to determine that market power has been created or exercised, and that existing SSO rules and policies were not adequate to prevent the competitive harm. The defendant, which could be the SSO or perhaps one or more SSO members, would win at this point if the plaintiff failed to show harm to competition. If might fail if the standard faces substantial competition and the court concludes that the SEP holder therefore does not have market power or if the SSO’s rules and policies are found to be effective in preventing ex post opportunism, even if the plaintiff or even the court thinks that other rules and policies would be preferable.

Second, if the plaintiff makes the requisite showing of harm to competition, the defendant(s) would then have to show some procompetitive justiﬁcation— in this case, the beneﬁts of the standard. These two initial steps should be straightforward.

Third, if as is likely the defendant is able to show a procompetitive justiﬁcation, the plaintiff would have to show that the SSO could have used available, reasonable alternatives to realize the efficiency beneﬁts with less or none of the competitive harms. The plaintiff might identify reasonable alternatives that would have led to a different standard, based on including unpatented technology in the standard or perhaps involving fewer SEPs or fewer owners of SEPs, which would be less subject to patent holdup. More likely, the plaintiff could suggest alternative SSO rules that would not change the standard, but would reduce the likelihood or extent of ex post opportunism. For example, the plaintiff might suggest more rigorous FRAND-type rules, such as rules that set forth more precise principles on which FRAND royalties are to be determined and the circumstances under which SEP holders might seek injunctions.

Fourth, the burden would then shift to the defendant(s) to show that the beneﬁts of the standard could not have been realized if the SSO had adopted any of the proffered alternatives or that those alternatives were unrealistic.83 The plaintiff would be entitled to judgment if the court concludes that those beneﬁts could have been realized with less competitive harm if the SSO had adopted the standard with different IPR rules or policies.

Our overall sense, based on experience and the empirical literature, is that the extant FRAND rules are generally useful, but tend to be inadequate because they are imprecise and leave unresolved such critical issues as (a) the meaning of a reasonable royalty, even conceptually; (b) the meaning of “non-discriminatory;” (c) to whom licenses must be offered; and (d) under what circumstances may a SEP holder obtain an injunction.84 These imprecise FRAND commitments are therefore not sufficient to adequately prevent ex post opportunism. The recent revisions to IEEE’s FRAND policy represent a signiﬁcant step in the right direction, but even this advance leaves important questions unanswered.85 If FRAND rules are inadequate in these ways, litigation involving extant FRAND rules would likely be resolved only at the ﬁnal, fourth step. The defendant would be able to demonstrate the beneﬁts created by the standard; the plaintiff would be able to demonstrate the creation of market power and that other reasonable and practical rules or policies would ameliorate the problem. The case would thus turn on whether the defendant is able to demonstrate that signiﬁcant beneﬁts associated with standardization could not have been realized if the SSO had adopted those other rules or policies.

The court would have available a variety of possible remedies if the plaintiff prevails. Implementers that paid supracompetitive royalties or were unlawfully excluded in whole or in part from product markets as a result of the inadequate FRAND policies would be entitled to damages and, in some cases, to treble damages.86 If the unlawful SSO conduct is regarded as the collective action of the SSO and its members, which is likely to be the case in most instances, SSO members would be jointly and severally liable for the damages. Forward-looking injunctive relief aimed at restoring competition would need to be fashioned to the requirements of the individual case. For example, a court could order the SSO to adopt a new rule or policy proposed by the plaintiff. If the court is reluctant to take on that governance role, it might give the SSO a period of time—maybe ninety days—to develop a rule, subject to the court’s ultimate approval, which would adequately ameliorate the competitive problem created by the SSO. Alternatively or in addition, the court might order the parties to attempt to negotiate a rule or policy on which they can agree. And, depending on the circumstances, the court might order SEP holders, including at least those that were defendants in the case, to comply with the new SSO rules and policies.

#### Alleviating patent holdup begins by permitting consumer challenges to SSO misconduct, which necessitates antitrust. SSO’s cannot be counted on to self execute FRAND.

Melamed & Shapiro 18, \*A. Douglas Melamed is Professor of the Practice of Law at Stanford Law School; \*Carl Shapiro is the Transamerica Professor of Business Strategy at the Haas School of Business at the University of California at Berkeley; (May 2018, “How Antitrust Law Can Make FRAND Commitments More Effective”, <https://www-cdn.law.stanford.edu/wp-content/uploads/2018/05/How-Antitrust-Law-Can-Make-FRAND-Commitments-More-Effective.pdf>)

2. Why Antitrust Enforcement Is Necessary

Some SSO members have an interest in ensuring that the SSO takes steps to minimize the potential harms from the SEP holders’ monopoly power, and this undoubtedly explains in part why most SSOs have adopted FRAND policies or similar requirements. But, as shown in the economic model in the Appendix,73 SSOs cannot in general be counted on to adopt effective FRAND policies. The bases for this conclusion, which is central to our argument for the applicability of Section 1 to SSO FRAND rules, can be summarized as follows.74

First, the SSO members collectively have an interest in permitting SEP holders to charge supracompetitive royalties that elevate the downstream price of compliant devices to the monopoly level. Doing so will enable the members in aggregate to collect increased revenues from consumers, and thus to generate increased profits that in theory could be shared by all the members. In other words, supracompetitive royalties can enrich industry participants as a group at the expense of final consumers. This fact alone should serve as a clear and strong signal regarding the dangers of counting on SSOs to implement effective FRAND policies: if the SSO members negotiate efficiently, the outcome will be just as bad for consumers as if the members agreed to fix downstream prices.75 The fundamental problem is that final consumers are not at the table when the SSO rules are negotiated.

Second, SSO members that own SEPs but earn little or no profits as implementers have a powerful self-interest in being able to exercise the ex post monopoly power associated with their SEPs. Because SSO policies are usually determined by a consensus process, these members will likely be able to block the adoption of fully effective FRAND policies. Moreover, these SSO members often have the greatest interest in SSO patent policies. Since much of their income may be attributable to patent licensing, they can be expected to devote substantial resources to block the adoption of FRAND policies that effectively prevent patent holdup.

Third, even SSO members that earn significant profits as implementers may have mixed incentives if they also own SEPs, which can also lead to weak or in-effective FRAND rules. In the Appendix, we show that, if the requisite share of votes in the SSO are cast by firms whose share of SEP royalties is at least as large as their share of downstream profits, and if these firms can coordinate their voting over the FRAND rules, then an SSO unconstrained by antitrust laws will establish FRAND rules leading to an outcome no better for consumers than would result from an integrated monopolist controlling all SEPs and all downstream sales.76

Fourth, even SSO members that are downstream implementers and own few, if any, SEPs may have only a modest interest in promoting effective policies to restrict ex post opportunism. Because all implementers will be subject to the opportunism, all of them will face increased licensing costs, and therefore will likely be able to pass on most or all of the increased costs to their customers.77 Furthermore, these implementers might not be especially active or effective in the standard-setting process for free-riding or public-good reasons, especially if SEP royalties constitute only a relatively small portion of the costs of their standard-implementing products. Public choice theory predicts that the highly motivated SEP holders are likely to have the greatest influence over patent policies.

Empirical evidence bears out these concerns. As a starting point, we find it striking that SSO FRAND rules are almost always quite vague.78 Notably, SSOs in which SEP holders are more prevalent tend to have weaker FRAND rules.79 Further, to our knowledge, SSOs have made almost no effort to enforce their FRAND rules and have, instead, left enforcement efforts to others.80 This evidence raises serious doubts about the effectiveness of the existing FRAND rules in preventing ex post opportunism.

The problem is exacerbated by the fact that most SSOs put IPR rules in place long ago, when SEP-holder opportunism was much less of a problem. Proponents of new, stricter IPR rules to prevent SEP-holder opportunism thus face the daunting task of persuading an SSO that makes decisions by consensus to change an existing policy over the often-intense opposition of SEP holders. The dispute over the recent changes to the IPR rules at the Institute of Electrical and Electronics Engineers (IEEE) illustrates how difficult and contentious that process can be.81

Thus, effective prevention of ex post opportunism by SEP holders requires antitrust enforcement to overcome the SSO problems associated with (a) attenuated incentives (implementers that also own SEPs); (b) the public good aspect of stronger FRAND rules (the danger that implementers will free ride on others rather than expend resources to implement strong FRAND rules); and (c) externalities (the harm to consumers that results when implementers pass through higher royalties in the form of higher prices).

#### Indicting systemic holdup is a fruitless academic exercise. Be cautious of neg studies---they rely on deeply flawed methodologies, don’t address relevant hypotheses, and in all likelihood are funded by Qualcomm.

Shapiro & Lemley 20, \*Carl Shapiro is the Transamerica Professor of Business Strategy Emeritus at the Haas School of Business, University of California at Berkeley; \*Lemley is the William H. Neukom Professor at Stanford Law School and a partner at Durie Tangri LLP; (2020, “THE ROLE OF ANTITRUST IN PREVENTING PATENT HOLDUP”, https://faculty.haas.berkeley.edu/shapiro/patentholdup.pdf)

C. Actual Patent Holdups Are Very Difficult to Measure

As with holdup in general, quantifying the frequency and magnitude of actual patent holdups is very difficult as a practical matter and not a useful way of assessing the importance of the patent holdup problem. Rarely can researchers observe the ex post price, because patent licensing terms are normally confidential. Even when researchers can observe the license fees, they are often embedded in a complex agreement. And even in those rare cases where researchers can accurately observe the ex post price, they are unlikely to observe the ex ante price, making it difficult if not impossible to measure the magnitude of the holdup.

Litigated cases also are problematic as a source of data to quantify the magnitude of actual patent holdups. A litigated case resulting in an award of reasonable royalties may well involve attempted holdup, but by definition it cannot provide smoking-gun evidence of actual holdup, at least if one accepts that the royalties awarded by the court are reasonable.64 Rather, at least since the Supreme Court eliminated the automatic entitlement to an injunction, litigation to judgment (which is rare) often reflects a refusal to give in to holdup by a defendant willing to take its chances in court. And the vast majority of patent cases settle. The terms of a settlement are rarely observable, so it is impossible to know whether those settlements reflected the value of holdup.

Notwithstanding these points, a number of authors have pointed to a lack of empirical evidence to argue that patent holdup either does not exist or is not a significant problem.65 Even taken on their own terms, many of these papers are deeply flawed. One such paper, which has often been cited by those who downplay the importance of patent holdup, purports to offer empirical evidence inconsistent with the hypothesis that SEP holdup has slowed innovation or harmed consumers.66 The conclusion to this Qualcomm-funded paper states, “[w]e cannot reject the hypothesis of no SEP holdup.”67 How do these authors reach this conclusion? They compare rates of change of quality-adjusted prices in “SEP- reliant” industries with “similar” non-SEP-reliant industries, primarily over the 1997-2013 period.68 For example, they show that quality-adjusted prices of cellular phones have fallen faster than the quality-adjusted prices of automobiles.69 This exercise does not address the relevant hypothesis: whether SEP holdup increased the price of cellular phones from what it otherwise would have been.70 The quality- adjusted prices of pharmaceuticals have risen much faster than automobiles over the same period of time, but that similarly is not proof that pharmaceuticals are subject to a patent holdup problem.

Beyond the obvious and fatal flaws in this empirical work,71 the whole line of inquiry is of limited relevance for the purpose of measuring the social costs of holdup or designing institutions to limit patent holdup, because it only looks for instances of actual patent holdup. As explained above, these instances are very difficult to detect and are only the tip of the iceberg in terms of the social costs of patent holdup.72 So far as we can tell, the vast majority of these papers have been funded by Qualcomm and other patent holders seeking to weaken the institutions designed to control patent holdup, increase their leverage in licensing negotiations, and thus increase their ability to monetize their patents.73

Despite the difficulties of observing the incidence and magnitude of actual patent holdups, we are able to observe the telltale signs of actual patent holdup. Transaction cost economics, and simple bargaining theory for that matter, tell us that actual patent holdup can be expected to occur when three conditions are present: (1) a firm has developed a new product independently; (2) that firm has made significant investments that are specific to one or more patents asserted against that product; and (3) the firm is not protected from patent holdup.74 As discussed above, conditions (1) and (2) are common in the high-tech sector, placing considerable weight on the institutions that protect firms from patent holdup.

The presence of those institutions is itself evidence that the patent holdup problem is real and significant. As we noted in Part I, companies try to structure their transactions to avoid holdup, developing institutions for that purpose. As we have seen, the traditional market solutions do not work well for patents. In most industries, the central mechanisms limiting patent holdup come from patent law, namely the rules governing injunctions and patent damages. In the high-tech sector, companies have overwhelmingly turned to SSOs in an effort to obtain global commitments to an ex ante royalty, which appear in the form of FRAND commitments. The near-universal recognition in the industry of the need for such a mechanism is strong evidence that companies view holdup as a problem they must build institutions to avoid.

# 2AC

## Advantage---Innovation

### 2AC---Indict

#### Don’t trust authors from GMU’s Mercatus Institute (or Global Antitrust Institute).

McLaughlin 21, Bloomberg, (David, March 12th, 2021, “One Tech-Funded University Helped Shape FTC’s Hands-Off Approach”, <https://www.bloomberg.com/news/articles/2021-03-12/how-george-mason-university-shaped-ftc-s-hands-off-approach-to-tech>)

* Alden Abbott, Jonathan Barnett are both fellows at George Mason University’s Center for Intellectual Property and Innovation Policy (funded by Qualcomm)
* Joshua Wright is a former FTC commissioner who taught at the institute and lobbied for Qualcomm

The [Tech Transparency Project](https://www.techtransparencyproject.org/) (TTP), a watchdog group in Washington, details in a new report an unusually close relationship between the law school at Virginia’s George Mason University and the Federal Trade Commission. By helping shape the workforce of the FTC, the group claims, the school infused it with a laissez-faire philosophy favorable to the school’s tech donors.

[The report](https://www.techtransparencyproject.org/articles/big-techs-backdoor-ftc) throws a harsh light on the FTC’s hands-off approach to tech companies over the past decade. As the agency prepares to argue the lawsuit against [Facebook Inc.](https://www.bloomberg.com/quote/FB:US) that it filed late last year, seeking to break up the social media giant, it must contend with an inconvenient fact: It approved Facebook’s acquisitions of Instagram in 2012 and WhatsApp in 2014—the very mergers it now seeks to undo. The FTC’s consent to those deals is cited by critics as evidence of a permissive attitude that allowed tech companies to grow into leviathans.

One explanation for its lenience, the TTP report charges, is that the industry used a corner of academia to capture the agency. According to the report, which was published on March 12, Silicon Valley donated substantial sums to George Mason’s Antonin Scalia Law School, which built a pipeline of professors and graduates who went to work at the FTC. Dozens of people went from the school to the regulator—commissioners, bureau heads, attorney-advisers, legal interns—during the Obama and Trump administrations.

Under President Trump alone, professors and graduates of Scalia Law, and heads of affiliated programs at George Mason, served as the FTC chair, general counsel, policy planning head, and leaders of its three main divisions: the bureaus of competition, consumer protection, and economics.

Katie Paul, who heads the TTP, says an investigation is needed into “whether George Mason University has effectively become Big Tech’s back door into the FTC, giving the companies an undisclosed way to sway its decision-making and hobble enforcement action.”

Revolving Door

Large tech companies have donated to two programs affiliated with Scalia Law, the Global Antitrust Institute and the Law & Economics Center. From January 2018 to the end of last year, [Google](https://www.bloomberg.com/quote/GOOGL:US) donated $900,000, [Amazon.com Inc.](https://www.bloomberg.com/quote/AMZN:US) contributed $925,000, and Facebook Inc. gave $675,000, according to documents obtained by Bloomberg Businessweek through a public records request. Google, Amazon, and Facebook declined to comment on their donations.

The law school says the ties between its faculty and the FTC aren’t unusual. Alison Price, a senior associate dean, says it’s common for professors to work for federal agencies and then return to their teaching jobs. “Since Scalia Law has special expertise and a relatively large faculty in antitrust, it’s logical that our faculty is called to serve with frequency,” she says. “But faculty don’t set policy; administrations do.”

The Tech Transparency Project is part of a larger watchdog group, [Campaign for Accountability](https://campaignforaccountability.org/). The TTP website cites several philanthropists as donors, including George Soros’s Open Society Foundations. Oracle Corp. had been a donor to a TTP predecessor group that focused mostly on Google, but the TTP says it no longer accepts corporate funding.

Both George Mason programs, which host conferences and offer training for judges and antitrust enforcers, promote the consumer-welfare standard articulated by Robert Bork, the late federal judge and Yale Law School professor. That standard, the guidepost for regulators and courts since the 1980s, looks to price increases as a gauge of competitive harm. It is blamed by some antitrust experts for handcuffing enforcers when it comes to policing tech companies.

The tech companies’ donations are drawing scrutiny. At a hearing on Feb. 25, New York Democratic Representative Mondaire Jones called Abbott “Tad” Lipsky, a former FTC official now at the [Global Antitrust Institute](https://gai.gmu.edu/), “a wolf in sheep’s clothing.” As he testified against proposals to give the antitrust laws more teeth, Lipsky drew Jones’s scorn. Programs such as the GAI “have worked to teach judges and regulators to let their guard down as corporate funders like yours came to dominate our economy,” Jones said. Lipsky responded that his antitrust views predated “any of these digital technology companies.”

A key figure in the law school-to-regulator pipeline is Lipsky’s boss, Joshua Wright, an FTC commissioner from 2013 to 2015. He now teaches antitrust law at George Mason while also running the GAI.

Wright wielded outsize influence at the agency, pushing through a 2015 policy statement in an attempt to rein in the agency’s enforcement power. After he left he improperly lobbied the agency on behalf of Qualcomm Inc., one of the law school’s largest donors, according to a report by the FTC inspector general that was obtained by TTP and verified by Bloomberg Businessweek. His name was redacted in the report, but Wright confirmed it was about him. He says he did nothing wrong.

The New York Times last year [reported that tech companies bankrolled the work of the GAI](https://www.nytimes.com/2020/07/24/technology/global-antitrust-institute-google-amazon-qualcomm.html) and that Wright had worked with corporate donors to fend off critics. The extent of the revolving door between the FTC and the law school, and Wright’s alleged violation of ethics laws, haven’t been previously reported.

Many companies support higher education, and many universities send professors and graduates to Washington. But George Mason is unique in cultivating a specific regulator, says Jeff Hauser, executive director of the [Revolving Door Project](https://therevolvingdoorproject.org/), which tracks government officials’ corporate ties.

“In terms of feeding directly into a government agency, I’m not aware of any equivalent at the SEC or the EPA or anything else,” he says, referring to the Securities and Exchange Commission and the Environmental Protection Agency.

A public university in the northern Virginia suburbs of Washington, George Mason is home to the free-market think tank the [Mercatus Center](https://www.mercatus.org/). It is a leader in the study of applying economic analysis to the law, emphasizing that markets work best when government regulates less. The university became known as a haven for conservatives at the end of the Reagan administration in 1988. Even Bork taught there after stepping down from the bench in 1988.

The George Mason conduit was steady and robust, according to the TTP, which details dozens of examples of people moving between the FTC and the law school over the past decade. One is James Cooper, who directs an economics and privacy program at the Law & Economics Center. He simultaneously taught at the school and served as a deputy director for the FTC’s Bureau of Consumer Protection.

Cooper was among the academics who urged House lawmakers last year to reject proposals to break up tech companies and make merger approvals more difficult. George Mason’s Wright, Lipsky, and John Yun, a professor at the law school who was an economist at the FTC, joined the filing. Cooper didn’t respond to a request for comment, and Yun declined to comment.

But Wright, the former FTC commissioner, perhaps best embodies the ties linking the FTC to the law school and its donors. After leaving the agency in 2015, Wright simultaneously taught at George Mason, ran the GAI, and worked for the Wilson Sonsini Goodrich & Rosati law firm, where he represented Qualcomm.

The FTC sued Qualcomm in January 2017 in a monopoly case that was developed while Wright was an FTC commissioner. Wright tried to broker a settlement about four months after the case was brought. He met Lipsky, then the acting director of the FTC’s competition bureau, for lunch at a steakhouse in Washington and tried to set up an additional meeting with agency officials, according to the inspector general’s report.

In doing so, Wright violated an ethics law that bans officials for life from lobbying on issues they worked on “personally and substantially,” according to the inspector general. Those findings were referred to the Department of Justice’s public integrity section. The Justice Department, which decided not to prosecute, declined to comment.

Lipsky resigned two months after his lunch with Wright, who then hired him at the GAI. Lipsky didn’t respond to a request for comment.

“I never made any appearance at the FTC involving its enforcement action against Qualcomm or discussed the merits of the case with any FTC official,” says Wright, who declined to elaborate on the specifics of the investigation. “I immediately complied when the FTC ethics office informed me that I should not make any appearance based upon a single preliminary vote I had cast years before the case was filed.”

Qualcomm contributed almost $5.8 million to the George Mason law school programs from 2016 through 2020. Less than two months before Wright met with the FTC to try to settle the Qualcomm case, the company gave $525,000 to the GAI. The company didn’t respond to requests for comment.

Tech companies that donate to George Mason collaborate with the school’s professors on projects, according to emails obtained through a public records request.

### 2AC---LD---Antitrust

#### Turn---antitrust intervention strengthens incentives for innovation by protecting companies from market failures---that’s 1AC Melamed and Shapiro and…

Cary et al. 11, \*Messrs. George Cary and Alex Sistla are members of the California and District of Columbia Bars. Mr. Mark Nelson is a member of the New York and District of Columbia Bars. Mr. Steven Kaiser is a member of the New Jersey and District of Columbia Bars; (2011, “THE CASE FOR ANTITRUST LAW TO POLICE THE PATENT HOLDUP PROBLEM INSTANDARD SETTING”, <https://www.clearygottlieb.com/~/media/organize-archive/cgsh/files/publication-pdfs/the-case-for-antitrust-law-to-police-the-patent-holdup-problem-in-the-standard-setting.pdf>)

Other commentators believe that there are strong policy arguments against employing antitrust law to police the conduct of SSOs because it will undermine the incentives of SSO participants to innovate. For example, David Teece and Edward Sherry have argued that “antitrust intervention” could “re-duce the clarity of [SSO] rules thereby making participation in SSOs more risky and reducing the willingness of firms with valuable IP (and which there-fore presumably have much to contribute to selecting the appropriate standard) to participate.”44 As a result, they contend that there is a “significant risk of slowing down the standards-setting process, thus delaying the adoption of new standards and new products made in accordance with those standards, to the detriment of consumers and of society generally.”45 In effect, Teece and Sherry’s concern is one of delay—antitrust enforcement could delay innovation. In a commentary accompanying Teece and Sherry’s article, Michael Carrier found their claims to be overstated because they failed to engage in any serious antitrust analysis.46 We agree. But more importantly, Teece and Sherry make empirical claims without any evidence. In particular, they do not even offer anecdotal evidence that firms are discouraged from participating in SSOs because of the prospect of antitrust enforcement. Indeed, the opposite could be equally argued: participation in SSOs would be discouraged to the extent that participants could not rely on the commitments of their fellow participants to disclose and abide by other commitments intended to preclude opportunism. Teece and Sherry’s argument sounds a familiar refrain against antitrust: antitrust enforcement discourages procompetitive behavior and therefore should be limited. The conclusion rings hollow without facts.

## Advantage---Cybersecurity

### 2AC---AT: NC3 Not Online

#### The entire NC3 system is being modernized.

Lin 21, \*Herbert Lin is senior research scholar for cyber policy and security at the Center for International Security and Cooperation and Hank J. Holland Fellow in Cyber Policy and Security at the Hoover Institution, both at Stanford University; (Summer 2021, “Cyber Risk Across the U.S. Nuclear Enterprise”, https://tnsr.org/2021/06/cyber-risk-across-the-u-s-nuclear-enterprise/)

Substantial efforts are being and will be made to modernize the NC3 system. According to the Congressional Research Service, NC3 modernization is likely to include new early-warning radars, new infrared early-warning satellites, new communications satellites, and replacements for the E4-B airborne command posts and E6-B communications relay aircraft.[17](https://tnsr.org/2021/06/cyber-risk-across-the-u-s-nuclear-enterprise/" \l "_ftn17) But just as importantly, new nuclear delivery systems and platforms will be “much more like all systems today, network connected. They’ll be cyber enabled” and will have “some level of connectivity to the rest of the warfighting system,” according to Werner J. A. Dahm, chair of the Air Force Scientific Advisory Board.[18](https://tnsr.org/2021/06/cyber-risk-across-the-u-s-nuclear-enterprise/" \l "_ftn18) The significance of being “cyber-enabled” is hard to overstate. Adm. Cecil Haney, former commander of U.S. Strategic Command, testified in 2014 that “We are working to shift from point-to-point hardwired systems to a networked IP-based national C3 architecture.”[19](https://tnsr.org/2021/06/cyber-risk-across-the-u-s-nuclear-enterprise/" \l "_ftn19) The shift to “cyber-enabled” connectivity will mean a higher degree of interoperability among NC3 components, which will no longer be as constrained by hardware restrictions.

## AT: T---Prohibit = Ban

### 2AC---AT: T---Prohibit = Ban---TL

#### Prohibit can mean ‘severely hinder’---doesn’t necessitate a ban.

Washington Court of Appeals 19 (KORSMO-judge. Opinion in State v. Kimball, No. 35441-5-III (Wash. Ct. App. Apr. 2, 2019). Google scholar caselaw. Date accessed 7/13/21).

His argument runs counter to the meaning of the word "prohibit." It means "1. To forbid by law. 2. To prevent, preclude, or severely hinder." BLACK'S LAW DICTIONARY 1405 (10th ed. 2014). As "severely hinder" suggests, a "prohibition" need not be an all or nothing proposition.

Our court reached that same conclusion, rejecting a similar argument, in Dejarlais. There the court stated, "nothing in the statute prevents drafting a protection order which allows some contact, for instance, by telephone or through a third party. There is no requirement that all contact be prohibited." State v. Dejarlais, 136 Wn.2d 939, 945, 969 P.2d 90 (1998).

RCW 26.50.110 does not apply only to orders that prohibit all contact. Accordingly, the statute was properly applied to Mr. Kimball's behavior.

#### 2---they don’t solve limits---antitrust prohibitions can include exemptions.

Frederick 89 (Donald A. Frederick-Attorney-Adviser. “MANAGING COOPERATIVE ANTITRUST RISK” , United States Department of Agriculture, Agricultural Cooperative Service, Cooperative Information Report 38, <https://www.rd.usda.gov/files/cir38.pdf>, 1989, date accessed 9/5/21)

This exposes farmers to considerable antitrust risk unless their joint marketing activity is conducted in a manner exempt from antitrust prohibitions. As one judge phrased it:

“It is clear that if individual agriculturalists, through the medium of a cooperative, jointly fixed prices, reasonably or otherwise, without statutory authorization, they would be subject to prosecution.” (emphasis added) 14/

## AT: T---Expand Scope

### 2AC---AT: T---Expand Scope

#### We meet---the plan expands the scope of the Sherman Act to hold SSO’s liable for unreasonably restricting commerce.

Wright 9 (University Professor Joshua D. Wright is the Executive Director of the Global Antitrust Institute and holds a courtesy appointment in the Department of Economics. On January 1, 2013, the U.S. Senate unanimously confirmed Professor Wright as a member of the Federal Trade Commission (FTC), following his nomination by President Obama to that position. He rejoined Scalia Law School as a full-time member of the faculty in Fall 2015. “INTELLECTUAL PROPERTY, STANDARD SETTING, AND THE LIMITS OF ANTITRUST” , <https://laweconcenter.org/resource/intellectual-property-standard-setting-and-the-limits-of-antitrust/> , 22 OCTOBER 2009, date accessed 9/4/21)

One of the most significant challenges facing competition policy today is defining the appropriate role of antitrust law within the context of intellectual property right licensing by standard-setting organizations (“SSOs”). Many commentators believe it is necessary to apply the full force of the antitrust laws, and sometimes special rules that would increase the scope of antitrust, to the standard-setting process in order to adequately oversee what they perceive as a unique opportunity for anticompetitive behavior. Indeed, antitrust agencies both in the United States and around the world have expressed agreement with the notion that the standard setting process requires strong enforcement of antitrust liability rules in order to ensure efficient outcomes that benefit consumers. However, this view largely fails to consider the costs of antitrust. In particular, it fails to recognize the limits of antitrust when the marginal benefit of antitrust enforcement is slight and the potential for erroneous enforcement (“false positives”) and thus, the likelihood that procompetitive behavior will be deterred, is high. The Supreme Court itself has emphasized repeatedly that the scope of the antitrust laws should be responsive to such a cost-benefit analysis.

#### Counter-interp---court decisions change the scope of antitrust prohibitions.

Turner 90 (DONALD F. TURNER- was an American antitrust attorney, economist, legal scholar and educator who spent most of his career teaching at Harvard Law School. “The virtues and problems of antitrust law” , The Antitrust Bulletin/Summer 1990, Hein accessed online via KU Libraries , date accessed 9/6/21)

However, unsound interpretations of antitrust laws have adverse economic effects. Court-formulated rules have varied from time to time over the years since antitrust statutes were passed, and the scope of antitrust prohibitions were either enlarged or reduced. While there are extensive disputes as to what the precedents' defects have been and are, it is generally recognized that antitrust law has had and still has some undesirable features that the courts or Congress should correct.

#### Court decisions also change the law.

California Supreme Court 88 (PANELLI-judge. Opinion in Jolly v. Eli Lilly & Co., 751 P. 2d 923 - Cal: Supreme Court 1988. Google scholar caselaw, date accessed 9/13/21)

At a less legalistic but more fundamental level, plaintiff argues, with some persuasive force, that prior to Sindell she could not have prevailed on her 1116\*1116 suit. She notes that during the time that defendants argue her action would have been timely, McCreery v. Eli Lilly & Co., supra, 87 Cal. App.3d 77 (overruled by Sindell, supra, 26 Cal.3d 588), effectively barred her claim. In McCreery, the Court of Appeal held that a plaintiff who could not identify the precise manufacturer of the pills ingested by her mother did not allege a cause of action. Plaintiff undoubtedly fell into this group. (6a), (5b) The response to plaintiff's contention is that a change in the law, either by statute or by case law, does not revive claims otherwise barred by the statute of limitations.

#### The term ‘law’ alone includes court decisions.

Olson 18 (OLSON-judge. Opinion in Commonwealth v. Robertson, 186 A. 3d 440 - Pa: Superior Court 2018. Google scholar caselaw, date accessed 9/2/21).

Furthermore, the word "law" is generally regarded as including court decisions. The relevant definition of "law" in Black's Law Dictionary is, "The aggregate of legislation, judicial precedents, and accepted legal principles; the body of authoritative grounds of judicial and administrative action; esp[ecially], the body of rules, standards, and principles that the courts of a particular jurisdiction apply in deciding controversies brought before them[.]" Black's Law Dictionary, 1015 (10th ed. 2014) (emphasis added). Hence, "law" is not only "legislation" but also "judicial precedents." Birchfield was a judicial precedent which was the law of this Commonwealth at the time of Appellee's arrest. Cf. U.S. Const. art. VI, cl. 2 (the Constitution is the supreme law of our nation). Accordingly, the presumption that an individual is aware of the law includes not just statutory compilations but also judicial decisions. Thus, the trial court erred in finding that Appellee was presumed to believe she was subject to enhanced criminal penalties because of the unconstitutional provision of the Motor Vehicle Code.

#### Expand includes clarification, not amendment.

Washington Court of Appeals 4 (HOUGHTON, J. Opinion in State v. Cannon, 84 P. 3d 283 - Wash: Court of Appeals, 2nd Div. 2004. Google scholar caselaw. Date accessed 7/12/21).

In 2002, the House and Senate introduced two identical bills, House Bill 1512 and Senate Bill 6346, to alter the definition of "photograph." The Final Bill Report on House Bill 1512 states, "The term `photograph' in the child pornography statutes is expanded to include digital images and both tangible and intangible items." H.B. REP. on HB 1512, 57th Leg., Reg. Sess. (Wash.2002). Cannon argues that by using the word "expand," the Legislature indicates that it amended rather than clarified the statute. We disagree.

## AT: CP---Regulations

### 2AC---AT: Minnesota CP---TL

#### 1---patent law can’t “regulate”. The federal role in mitigating patent holdup is non-existent aside from antitrust, and no regulatory body exists for patent law.

Cary et al. 11, \*Messrs. George Cary and Alex Sistla are members of the California and District of Columbia Bars. Mr. Mark Nelson is a member of the New York and District of Columbia Bars. Mr. Steven Kaiser is a member of the New Jersey and District of Columbia Bars; (2011, “THE CASE FOR ANTITRUST LAW TO POLICE THE PATENT HOLDUP PROBLEM INSTANDARD SETTING”, <https://www.clearygottlieb.com/~/media/organize-archive/cgsh/files/publication-pdfs/the-case-for-antitrust-law-to-police-the-patent-holdup-problem-in-the-standard-setting.pdf>)

B. IMPLIED PREEMPTION DOCTRINE DOES NOT APPLY TO PATENT HOLDUP

Even accepting the idea of implied preemption in the face of substantial regulatory regimes, the case for preempting the antitrust laws in the SSO-patent holdup context has not been made. Put simply, there is no regulatory oversight in the case of SSO-patent holdup. Although the Patent and Trade-mark Office (PTO) regulates patents in the sense of deciding what patents to issue, there is no connection between that role and the patent holdup issue. Indeed, almost every dispute involving a patent—whether patent abuse, infringement, or licensing quarrels—is ordinarily resolved through some form of private litigation or dispute resolution.79

It is of course true that there is a specialized patent court (the Federal Circuit), and that certain doctrines (laches, equitable estoppel, and misuse) have been developed to address “opportunistic behavior” by patentees. But this simply means that there is an independent body of patent law that certain private parties may enforce. The government does not actively police the behavior of patent holders in the way the SEC enforces the securities laws or the states enforce their laws in the state-action context.80 Although the PTO imposes certain duties upon patent applicants,81 it lacks the authority to impose any such similar duties upon patentees participating in a standard-setting process. SSOs impose their own disclosure obligations without any interference or oversight by the PTO. In sum, we think it is a stretch to argue that a competing regulatory scheme governs all of patent law. Many patent law defenses, such as those recognized under 35 U.S.C. § 282, are borrowed from the common law.

#### 2---patent law isn’t intended to forcefully compel patentholders to honor FRAND.

Leslie 20, \*Christopher R. Leslie, Chancellor’s Professor of Law, University of California Irvine School of Law; (2020,“The DOJ’s Defense of Deception:   
Antitrust Law’s Role in Protecting the Standard-Setting Process”, https://scholarsbank.uoregon.edu/xmlui/bitstream/handle/1794/25382/1\_Leslie\_FNL.pdf?sequence=1&isAllowed=y)

Third, like patent law itself, the eBay test does not provide for any remedy for misconduct by the patentholder. Patent law is neither intended nor designed to compel patentholders to honor their contractual relations. Most of the patent statute is concerned with the standards for patentability, the process of securing patents, and the enforcement of patents, not constraining the actions of patentees.194 Although some patent doctrines, such as inequitable conduct, penalize certain misconduct by a patent applicant committed during the application process, FRAND violations have nothing to do with the patent application process. Instead, the misdeeds happen after the patent has been issued.

#### At worst it implicates solvency, because you’ve no idea what the counterplan does.

Leslie 20, \*Christopher R. Leslie, Chancellor’s Professor of Law, University of California Irvine School of Law; (2020,“The DOJ’s Defense of Deception:   
Antitrust Law’s Role in Protecting the Standard-Setting Process”, https://scholarsbank.uoregon.edu/xmlui/bitstream/handle/1794/25382/1\_Leslie\_FNL.pdf?sequence=1&isAllowed=y)

Patent law’s only major post-issuance constraint on a patentee’s misconduct is the equitable doctrine of patent misuse.195 To date, however, courts have held that FRAND violations do not constitute patent misuse.196 Moreover, patent law does not provide monetary remedies to those who are injured by the misconduct of patentholders.197 Antitrust remedies are needed to penalize patent holdup, in part because antitrust remedies can deter misconduct in ways that patent law does not.198

In sum, arguments that antitrust law is unnecessary or inappropriate to address the issue of FRAND violations because patent law is better equipped to handle the problem are flawed. Such vague gestures toward patent law betray a lack of understanding about this body of law and its ability to corral misconduct by patentees.

### 2AC---AT: Patent Law CP

#### Three deficits:

#### 1---Targeting---faulting the entire SSO is key to curtail monopolization---targeting individual SEP holders fails.

Melamed & Shapiro 18, \*A. Douglas Melamed is Professor of the Practice of Law at Stanford Law School; \*Carl Shapiro is the Transamerica Professor of Business Strategy at the Haas School of Business at the University of California at Berkeley; (May 2018, “How Antitrust Law Can Make FRAND Commitments More Effective”, https://www-cdn.law.stanford.edu/wp-content/uploads/2018/05/How-Antitrust-Law-Can-Make-FRAND-Commitments-More-Effective.pdf)

Antitrust enforcement aimed only at SEP holders is not sufficient to prevent or remedy ex post opportunism. First, as described in Part I, that kind of enforcement must be implemented separately for each patent holder, and for many standards, there are hundreds or even thousands of SEP holders. Second, some of the most common kinds of opportunism are arguably beyond the reach of antitrust claims against SEP holders. 61 Moreover, enforcement aimed at SEP holders is not directed at the basic problem: the failure of the SSOs to take adequate steps to prevent the ex post opportunism that the SSOs’ conduct enabled.

#### 2---Private rights of action beneath antitrust are key---beneath patent law, only implementers have standing---which categorically excludes consumers as plaintiffs.

Cary et al. 11, \*Messrs. George Cary and Alex Sistla are members of the California and District of Columbia Bars. Mr. Mark Nelson is a member of the New York and District of Columbia Bars. Mr. Steven Kaiser is a member of the New Jersey and District of Columbia Bars; (2011, “THE CASE FOR ANTITRUST LAW TO POLICE THE PATENT HOLDUP PROBLEM INSTANDARD SETTING”, <https://www.clearygottlieb.com/~/media/organize-archive/cgsh/files/publication-pdfs/the-case-for-antitrust-law-to-police-the-patent-holdup-problem-in-the-standard-setting.pdf>)

One final point about patent remedies concerns standing: it is not just the type of harm that matters to antitrust, but whether anyone has a remedy to address it. Antitrust fills the gap left open by patent law by providing a remedy to those “outsiders”—consumers, competitors and others—who lack standing to seek relief under the patent laws. Consider Qualcomm: The use of equitable estoppel there was only available as a defense asserted by the alleged infringer. The elements of the defense discussed above, moreover, require that the infringer either be involved in the SSO process or have a specific basis for claiming that it was affirmatively misled by the patentee. No consumer injured by the wrongful acquisition of monopoly power in this context would meet these criteria, nor would other firms that have been excluded from the market due to the deception at issue. There is no government enforcement agency to protect such plaintiffs, because patent law has no provision for government enforcement intended to protect consumers from harm to competition.

In sum, the limitations of patent law would exclude many of the categories of potential plaintiffs suffering antitrust injury as a result of standard-setting abuse. We conclude that equitable estoppel is unequal to the task of policing monopolization through fraudulent conduct in the standard-setting process.

#### Deterrence deficit---antitrust law trebles private damages, which creates a legitimate cost to misconduct---but the loss of a patent lawsuit wouldn’t change an SEP holder’s calculus.

Tsilikas 17, \*Haris Tsilikas is an IP and Antitrust Consultant, a Doctoral Candidate and Visiting Research Fellow at the Max Planck Institute for Innovation and Competition, Munich; (2017, Antitrust Enforcement and Standard Essential Patents: Moving beyond the FRAND Commitment”, https://www.jstor.org/stable/pdf/j.ctv941t01.9.pdf?refreqid=excelsior%3A92dc720d1ebc7088811b40032a60f575)

Antitrust could play a meaningful role.165 The most important contribution of antitrust enforcement against abuses of SEPs is its deterrent effect.166 Although patent law reforms or contractual binding of subsequent SEPs-holders to FRAND licensing would provide to victims of hold-up useful defences in court, they do not sufficiently deter abusive assertion of SEPs in the first place. For instance, the contractual binding to FRAND could raise counterclaims of breach of contract or/and contractual performance; however, the opportunistic SEP-holder will, in case it loses on such grounds, be left no worse than with a licence on FRAND terms. In the end, a patent hold-up is indeed precluded, but contractual constraints can do little to prevent opportunistic assertion of SEPs in the first place. The victims still suffer the costs of uncertain and resource-draining litigation; most importantly, the reliability of the standards-setting process might still be at risk.

Antitrust enforcement on the other hand, in imposing tortfeasors positive monetary losses in the form of fines, alters the profit-cost calculus of opportunistic behaviour in the first place; opportunistic assertion of SEPs will come at a cost. Of course, a too-heavy-handed approach could have a chilling effect on legitimate patent assertions against implementers that are reluctant to pay FRAND royalties, thus leading to false positives. Antitrust enforcement should carefully examine the specificities of each case, such as the particular PAE conduct, the relationship between PAEs and practicing entities, the structure of downstream markets.167 More importantly, an economically informed antitrust analysis focusing on the actual and potential anticompetitive effects of opportunistic SEPs assertion should prohibit behaviour that is truly harmful to consumers. Safeguarding the inclusive and efficient character of the standards-setting process is a competition law problem. Informed antitrust analysis could provide adequate responses to opportunistic PAE behaviour and privateering.

## AT: CP---Contract Law

### 2AC---AT: Contract Law CP

#### All patent law deficit apply to this counterplan.

Cary et al. 11, \*Messrs. George Cary and Alex Sistla are members of the California and District of Columbia Bars. Mr. Mark Nelson is a member of the New York and District of Columbia Bars. Mr. Steven Kaiser is a member of the New Jersey and District of Columbia Bars; (2011, “THE CASE FOR ANTITRUST LAW TO POLICE THE PATENT HOLDUP PROBLEM INSTANDARD SETTING”, <https://www.clearygottlieb.com/~/media/organize-archive/cgsh/files/publication-pdfs/the-case-for-antitrust-law-to-police-the-patent-holdup-problem-in-the-standard-setting.pdf>)

2. Contract Law

The argument that antitrust should step aside because contract law “out-perform[s] antitrust when it comes to the successful identification and regulation of ex post opportunism associated with patent hold-up”127 fails for much the same reasons. A contract can only be enforced by its parties and by other to whom the parties clearly and explicitly intended to give enforcement rights.128 The victims of anticompetitive patent holdup, however, are also consumers and potential competitors who may not have been part of the SSO. Moreover, contracts can be modified and third parties generally have no enforcement rights as to the original contract. In implementing an industry-wide standard, the parties to the contract may actually prefer high royalty levels that hurt consumers. For example, if participants in the standard-setting process, who agreed collectively to support one technology over all others, mutually agree to license on FRAND terms but then, after the standard is adopted, each independently chooses to increase its royalty significantly, no party to the FRAND “contract” may have incentive to bring a breach of contract action, while implementers of the standard and users of standard-compliant products ultimately pay the bill. Antitrust should be available in such circumstances as a remedy for the parties harmed by the anticompetitive agreement.

#### Contract deficit---enforcing FRAND via contract is a nightmare.

Contreras 14, \*Jorge L. Contreras teaches in the areas of intellectual property law, property law and genetics and the law at the University of Utah. He has recently been named one of the University of Utah's Presidential Scholars, and won the 2018-19 Faculty Scholarship Award from the S.J. Quinney College of Law. Professor Contreras has previously served on the law faculties of American University Washington College of Law and Washington University in St. Louis, and was a partner at the international law firm Wilmer Cutler Pickering Hale and Dorr LLP, where he practiced transactional and intellectual property law in Boston, London and Washington DC; (September 14th, 2014, “Why FRAND Commitments are Not (usually) Contracts”, https://patentlyo.com/patent/2014/09/commitments-usually-contracts.html)

Nevertheless, as I discuss in [a forthcoming article](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2309023), common law contract is a poor fit for the enforcement of most FRAND commitments, and relying too heavily on it is likely to have unwelcome results.  Contract law fails as a general-purpose FRAND enforcement theory on several grounds.  First, the simplified offer-acceptance-consideration model laid out above does not reflect the actual manner in which most FRAND commitments are made.  Most of these commitments are not set forth in an agreement between the patent holder and the SDO.  Rather, they are contained in SDO policies, bylaws and other types of statements.  In addition, many of these policies (including those adopted by leading SDOs such as IEEE) do not actually require the patent holder to commit to license its patents on FRAND terms, but only to disclose to the SDO the terms on which it will, or on which it intends to, license its essential patents.  Moreover, FRAND commitments are typically a sentence or two in length, and fail to set forth any of the relevant details of the promised license agreement, whether they be royalty rates, grant-back requirements, terms on which the license may be suspended or terminated, and the like.  As such, whatever “contract” is formed is likely void for want of detail, a mere “agreement to agree”.  Finally, the attempt to extend third party beneficiary rights to every product vendor in the world, whether or not it competed in the relevant business, or even existed, when the promise was made, stretches this venerable doctrine beyond any sensible boundaries.  As a result, except perhaps in a few cases in which standards are developed by small groups of firms that have actual contractual arrangements amongst themselves, common law contract is a poor choice as a general enforcement mechanism for FRAND commitments.

At least one Administrative Law Judge at the International Trade Commission has recently come to the same conclusion in the ITC’s case against Interdigital (337-TA-868, June 18, 2014), expressly ruling that the FRAND policy adopted by the European telecom SDO ETSI “is not a contract”, and merely “contains rules to guide the parties in their interactions with the organization, other members and third parties.”  I couldn’t agree more.

## AT: CP---WTO

### 2AC---AT: WTO CP---TL

**“Should” means desirable or recommended, not mandatory.**

**Words and Phrases 2** (“Words and Phrases: Permanent Edition” Vol. 39 Set to Signed. Pub. By Thomson West. P. 372-373)

Or. 1952. Where safety regulation for sawmill industry providing that a two by two inch guard rail should be installed at extreme outer edge of walkways adjacent to sorting tables was immediately preceded by other regulations in which word “shall” instead of “should” was used, and word “should” did not appear to be result of inadvertent use in particular regulation, use of word “should” was intended to convey idea that particular precaution involved was desirable and recommended, but not mandatory. ORS 654.005 et seq. – -Baldassarre v. West Oregon Lumber Co., 239 P.2d 839, 193 Or. 556. – Labor & Emp. 2857

**Doesn’t mean immediate**

**Dictionary.com 10** Dictionary.com, http://dictionary.reference.com/browse/should

should    /ʃʊd/ Show Spelled[shood] Show IPA –auxiliary verb 1. pt. of shall. 2. (used to express condition): Were he to arrive, I should be pleased. 3. must; ought (used to indicate duty, propriety, or expediency): You should not do that. 4. would (used to make a statement less direct or blunt): I should think you would apologize. Use should in a Sentence See images of should Search should on the Web Origin: ME sholde, OE sc ( e ) olde; see shall —Can be confused:  could, should, would (see usage note at this entry ). —Synonyms 3. See must1 . —Usage note Rules similar to those for choosing between shall and will have long been advanced for should and would, but again the rules have had little effect on usage. In most constructions, would is the auxiliary chosen regardless of the person of the subject: If our allies would support the move, we would abandon any claim to sovereignty. You would be surprised at the complexity of the directions. Because the main function of should in modern American English is to express duty, necessity, etc. ( You should get your flu shot before winter comes ), its use for other purposes, as to form a subjunctive, can produce ambiguity, at least initially: I should get my flu shot if I were you. Furthermore, should seems an affectation to many Americans when used in certain constructions quite common in British English: Had I been informed, I should (American would ) have called immediately. I should (American would ) really prefer a different arrangement. As with shall and will, most educated native speakers of American English do not follow the textbook rule in making a choice between should and would. See also shall. Shall –auxiliary verb, present singular 1st person shall, 2nd shall or ( Archaic ) shalt, 3rd shall, present plural shall; past singular 1st person should, 2nd should or ( Archaic ) shouldst or should·est, 3rd should, past plural should; imperative, infinitive, and participles lacking. 1. plan to, intend to, or expect to: I shall go later.

## AT: CP---States

### 2AC---Preemption

#### The Ninth Circuit imposed court-order limitations on antitrust law to preserve its balance with patent law.

Martino et al. 20, \*[Matthew M. Martino](https://www.skadden.com/professionals/m/martino-matthew-m) [Tara L. Reinhart](https://www.skadden.com/professionals/r/reinhart-tara-l) [Steven C. Sunshine](https://www.skadden.com/professionals/s/sunshine-steven-c) [Julia K. York](https://www.skadden.com/professionals/y/york-julia-k), works with clients at Skadden, Arps, Slate, Meagher & Flom LLP; (August 14th, 2020, “Ninth Circuit Strikes Down Sweeping Injunction Against Qualcomm and Reins In Expansive Interpretation of Sherman Act”, https://www.skadden.com/insights/publications/2020/08/ninth-circuit-strikes-down-sweeping-injunction)

In its highly anticipated decision, the Ninth Circuit panel unanimously rejected the lower court’s reasoning, vacating the judgment and reversing the worldwide injunction against Qualcomm. The panel concluded that the district court had erroneously imposed the antitrust duty to deal on Qualcomm, had impermissibly looked outside the relevant antitrust market in order to infer an anticompetitive act and had relied on outdated evidence of agreements that were terminated before the suit was filed to justify a broad, forward-looking global injunction. The Ninth Circuit further rejected the argument that a SEP holder’s violation of FRAND commitments could independently create antitrust liability, instead pointing to patent and contract law as sources for potential remedies. The decision reflects a considered effort to rei

n in the district court’s expansive interpretation of general antitrust principles and their specific application to SEP holders, as well as recognition that the antitrust laws aim to preserve companies’ incentives to innovate and compete. Recognizing that while “[a]nticompetitive behavior is illegal under federal antitrust law[,]” the panel was adamant that “[h]ypercompetitive behavior is not.”[7](https://www.skadden.com/insights/publications/2020/08/ninth-circuit-strikes-down-sweeping-injunction" \l "ftn7)

Rejection of District Court’s Expansive Interpretation of Antitrust Laws

The Ninth Circuit decision contains several notable conclusions regarding the scope of Section 2 of the Sherman Act and what constitutes cognizable antitrust harm.

#### State efforts to impose greater antitrust liability than established by federal courts will be preempted to protect that balance.

Samp 14, \*Richard A. Samp is the chief counsel for Washington Legal Foundation (WLF), a non-profit, public interest law firm in Washington, D.C. WLF filed an amicus brief in support of Love Terminal Partners. (2014, “The Role of State Antitrust Law in the Aftermath of Actavis”, https://scholarship.law.umn.edu/cgi/viewcontent.cgi?article=1062&context=mjlst)

V. ACTAVIS’S PREEMPTIVE EFFECT

Application of state antitrust law to reverse payment settlements is not merely a hypothetical possibility. There are a fair number of pending lawsuits that challenge reverse payment settlements on state-law grounds. The California Supreme Court has agreed to review one such suit.74 In seeking affirmance of the appeals court’s dismissal of the suit, the defendants argue inter alia that the suit is preempted by federal law.75

As noted above, there is precedent for a finding that state antitrust law is preempted to the extent that it conflicts with the policy underlying a federal statute.76 Moreover, in the context of patent law, federal courts have not hesitated to preempt state laws that the courts deem to stand as an obstacle to accomplishing Congress’s objectives (i.e., encouraging efforts to develop new and useful products).77 To the extent that any portions of Actavis’s holding can be deemed to reflect the Court’s perception of Congress’s new-product-development objectives, a state law is preempted if it is inconsistent with that holding and seeks to impose a greater degree of antitrust liability on the parties to a reverse payment settlement.

Actavis’s treatment of settlements involving a compromise entry date appears to meet that description. Actavis held that federal antitrust liability could not arise from a settlement in which the generic manufacturer agrees not compete for a number of years and in return is rewarded with an exclusive license to market its product several years in advance of the patent’s expiration date.78 Accordingly, states are not permitted to impose antitrust liability under similar circumstances because doing so would upset the balance that, according to Actavis, Congress sought to achieve between antitrust and patent law.

Other issues left open by Actavis are likely to be answered in the years ahead. For example, the Supreme Court did not specify whether noncash benefits received by a generic manufacturer in connection with a patent settlement can ever serve as the basis for federal antitrust liability. If the Supreme Court eventually answers that question by stating: “No, federal antitrust law will not examine settlement benefits other than cash that flow to the infringing party,” then it is likely that state antitrust law would be required to conform to that rule. The potential grounds for such a ruling (a desire both to promote settlement of patent disputes and to uphold reliance interests in existing patents) are based largely on values embedded in federal patent law.

There is little reason to believe, however, that the Court would prevent application of state antitrust law to patent settlement agreements where state law is fully consistent with federal antitrust law. Even in areas subject to extensive federal regulation, the Supreme Court has upheld the authority of states to engage in parallel regulation that is not inconsistent with the federal regulation.79 Unless the Court were to determine, as in Connell,80 that states could not be trusted to properly accommodate the objectives of the federal statute at issue (here, federal patent law), there is no reason to conclude that Congress would not have wanted states to be permitted to police the same sorts of anticompetitive conduct that is policed by federal antitrust law. Moreover, states are likely free to impose greater penalties on the proscribed conduct than is available under federal law. As the Court explained in California v. ARC America Corp., state antitrust law is not required to adhere to the same set of sanctions imposed by federal antitrust law.81

It seems reasonably clear, however, that Actavis prohibits states from adopting the procedural devices rejected by the U.S. Supreme Court—either a per se condemnation of reverse payment settlements or a presumption of illegality accompanied by “quick look” review. The Supreme Court rejected those approaches because it determined that in many cases there might well be pro-competitive economic justifications for reverse payment settlements and that presuming their illegality could result in the suppression of economically useful conduct.82 State antitrust laws that adopted the FTC’s proposed presumption of illegality would be subject to similar criticism, and thus would likely be impliedly preempted as inconsistent with the careful balance between antitrust and patent law established by Actavis.

CONCLUSION

Because Actavis left so many questions unanswered regarding the application of federal antitrust law to patent settlement agreements, the extent to which federal law preempts the application of state antitrust law to such agreements remains similarly unsettled. One can be reasonably confident that if private plaintiffs become dissatisfied with the results of pending litigation under federal antitrust law, they will turn with increasing frequency to state antitrust law as an alternative remedy. Even if state law ends up doing no more than “parallel” federal antitrust law, defendants are likely to incur substantial litigation costs fending off such state claims in the years to come.

## AT: DA---Midterms

### 2AC---AT: DA---Filibuster

#### Biden’s already taken his stance on SEP’s.

Love 21, \*Bruce Love, writer at the National Law Journal; (June 15th, 2021, “As DOJ Confirms a Change in Antitrust Patent   
Policy, Lawyers Prepare for Shifting Demand”, https://www.mckoolsmith.com/assets/htmldocuments/2021%2006%2016%20As%20DOJ%20Confirms%20a%20Change%20in%20Anittrust%20Patent%20Policyk%20Lawyers%20Prepare%20for%20Shifting%20Demand%20-%20The%20National%20Law%20Journal.pdf)

The Justice Department has confirmed it is looking to develop new policies surrounding how standard-essential patents might be used as tools for anticompetitive practices. The change in policy will mean big business for law firms that can combine highly technical IP advice with their antitrust and litigation practices, with one lawyer likening the demanding skill set to “three-dimensional chess.” Standard-essential patents, or SEPs, are a fundamental piece of intellectual property for business and innovation because they are used under license so frequently by manufacturing companies other than the patent owners. The policy change was hinted at during an online event in late May, when Richard Powers, the acting attorney general of DOJ’s antitrust division, gave an indication that the government might be walking back the relaxed approach implemented by the DOJ under the Trump administration. A DOJ spokesperson confirmed in an email Tuesday to Law.com that it will change its policy on SEPs and antitrust behavior, with the agency still working out the details. The new administration, said the DOJ spokesperson, is rethinking what policies at the intersection of IP and anti- trust will best serve competition and consumers. “New Department leadership is working with career staff on developing a more balanced approach,” said the DOJ spokesperson. “The department wants to develop neutral and balanced policies in this area that recognize the importance of both antitrust enforcement and JUNE 15, 2021 As DOJ Confirms a Change in Antitrust Patent Policy, Lawyers Prepare for Shifting Demand BY BRUCE LOVE U.S. law has often shied away from enforcing essential patent obligations. That’s set to change. The result could be “a significant change in the volume and nature of business for IP trial lawyers and their clients,” one lawyer said. Office of the Attorney General at the U.S. Department of Justice in Washington, D.C. June 6, 2020. THE NATIONAL LAW JOURNAL JUNE 15, 2021 intellectual property protection to our economy and that do not favor one set of interests over others.” Such policy changes could result in a swell of business for law firms with deep, technical IP benches and strong experience representing the industry in enforcement actions, lawyers said. Trump’s DOJ had “taken its foot off the gas” when it came to SEPs as the focus of anti-competitive behavior, said one Washington-based lawyer, speaking on the condition of anonym- ity because he currently has active cases that involve both SEP enforcement and defense. “It didn’t mean we weren’t busy as litigators. There was a lot of work enforcing SEPs against infringers and defending against infringement allegations,” he said. “But we weren’t busy in the antitrust arena. A greater focus on SEPs—not just by the DOJ but also other agencies—might mean more litigation, but it will also mean a more transparent field of play. It doesn’t do companies any good for there to be unfettered SEP enforcement.”

#### Filibuster repeal inevitable.

Blake 10-26-2021, senior reporter @ Wa Po (Aaron, “The anti-filibuster effort is winning,” *Washington Post*, <https://www.washingtonpost.com/politics/2021/10/26/anti-filibuster-effort-is-winning/>)

The filibuster took another small-but-significant step last week toward what some experts believe is its inevitable demise. President Biden, in a CNN town hall, expressed an openness to getting rid of it for narrow issues — specifically the debt ceiling and voting rights. The evidence is pretty clear that the anti-filibuster forces are increasingly winning the argument within the Democratic Party. More and more, the question seems to be when the filibuster will be significantly scaled back or eliminated — and who will be in charge when it happens. The comments from Biden were significant, because, as a presidential candidate in 2020, he rejected the idea of nixing the filibuster. Then earlier this year, he began talking about reforming it to make it more difficult for the would-be filibusterers. Then a few weeks ago, he floated eliminating it for the debt ceiling. Now he’s talking about doing it for a specific issue area — voting rights, on which Republicans blocked Democrats’ bill last week — that could logically presage a rather swift further rolling-back of the filibuster. Not that the filibuster is going anywhere imminently. After all, it’s hardly up to Biden. Senate Democrats would need all 50 of their votes to make it happen, and a significant number of Democratic senators (beyond just Joe Manchin III and Kyrsten Sinema) aren’t on board. But the idea of a narrower carve-out is an interesting one. That’s because it could not only theoretically allow Democrats to pass a key bill on something like voting rights, but also because it might very logically hasten the filibuster’s overall demise. After all, once one side or another nixes the filibuster for an issue they deem to be that important, what’s to stop the other side (or future Senates from the same side) from offering the same justification? There are and have been significant carve-outs to the 60-vote threshold, as the Brookings Institution’s Molly E. Reynolds detailed in her 2017 book, “Exceptions to the Rule.” (For a good rundown on what they are, see here.) These include the limited instances in which bills can be passed via reconciliation, as Democrats are attempting to do with their infrastructure/spending bill and as Republicans did with their tax-cut package (and attempted to do with their Obamacare replacement) during the Donald Trump administration. The threshold was also lowered to majority votes in 2013 for non-Supreme Court judicial and executive-branch nominees (by Democrats) and then in 2017 for Supreme Court nominees (by Republicans). In each case, the stated reason was obstruction by the minority party. But even as those were significant events in the progression and potential elimination of the filibuster, one could make an argument that getting rid of it for nominees wasn’t that drastic — especially given that they involved filling out a government in ways that didn’t used to be so contentious. One could also seemingly make such an argument about eliminating the filibuster for the debt ceiling, given that it basically amounts to Congress agreeing that the U.S. government should merely pay the bills it has already racked up. Even Senate Minority Leader Mitch McConnell (R-Ky.) once proposed letting a president unilaterally raise the debt limit, with Congress being allowed to vote its disapproval. Doing this kind of thing for a specific legislative issue area would change things significantly, leading to questions about why this thing would be exempt but that thing wouldn’t. Advocates of this approach have sought to build into their argument the idea that this wouldn’t necessarily be the case. They argue that voting rights could be carved out not necessarily because they are deemed to be important, but because they are a constitutional issue. “We allow a simple majority in the Senate to advance legislation during budget reconciliation to protect the country’s financial security,” House Majority Whip James E. Clyburn (D-S.C.) and Rep. Mondaire Jones (D-N.Y.) wrote in a July op-ed, citing the 1974 law that provided for expedited consideration of such things. “We ought to make the same exception when people’s constitutional rights are in question.” Advertisement A logical question from there is whether other such issues that could be construed as constitutional might suddenly be exempt. Could Republicans then pass laws restricting abortion rights, for instance, with just a majority vote? Clyburn has indicated abortion rights would indeed meet this test. But even aside from what other issues this might immediately ensnare, there’s the fact that it would be a big ratcheting-up of filibuster rollback. Democrats effectively argue that voting rights are this significant, so what happens when other issues are deemed to be of such import. Rolling back the filibuster rules in a significant way for the third time in a decade would also speak volumes about the direction in which this is heading. Another effect that I have referenced and I don’t think has gotten enough attention is the impact of merely talking about such things — and getting some buy-in from the likes of Biden. Even if Democrats aren’t ultimately able to actually roll back that filibuster, it suggests they would be more likely to do so if they get more than 50 votes. It could also instill a belief in Republicans that Democrats are likely to do this eventually, meaning they might as well just nix the filibuster themselves when it’s necessary and convenient. It’s this progression that some filibuster experts have long pointed to as the most likely path for the demise of the rule — not one swift action, but rather a series of smaller ones. “We will see more and more attempts to whittle it down through carveouts and exceptions, since senators don’t seem to be able to find a majority for outright abolition,” the University of Miami’s Gregory Koger recently said. “So when the filibuster ends, it will be through a thousand cuts.” Reynolds agreed that the concept of increasing exemptions pointed in one direction. “I do think that each targeted application of majority cloture hastens the full abolition of the filibuster,” she told me, “but I also think that we are on the road to full abolition anyway, and the real question is how quickly we get there.”

#### No civil war---wealth and military power erase challenges

Hanania 20, research fellow at Defense Priorities, and a postdoctoral research fellow at the Saltzman Institute of War and Peace Studies at Columbia University. (Richard, 10-29-2020, "Americans hate each other. But we aren’t headed for civil war.", *Washington Post*, https://www.washingtonpost.com/outlook/civil-war-united-states-unlikely-violence/2020/10/29/3a143936-0f0f-11eb-8074-0e943a91bf08\_story.html)

But scholars now prefer the opportunity model, thanks to large-scale studies that examine political violence worldwide with cutting-edge statistical methods. Grievances and societal cleavages exist everywhere, waiting to be exploited. What distinguishes the countries that descend into civil war from those that do not is the lack of state capacity to put down rebellion — for reasons rooted in politics, economics or geography.

You might expect, for instance, states that lack democracy, that have diverse populations or that discriminate against minorities would be at the highest risk of internal conflict, because such conditions foment bitter grievances. But in fact, those qualities are at most loosely correlated with civil war, as scholars like the Stanford University political scientists James Fearon and David Laitin and the University of California at San Diego’s Barbara F. Walter have shown.

Rather, civil wars happen where the state is weak. Lower levels of wealth predict civil war, because poor countries lack the law enforcement and military capability to put down armed rebellions. That helps to explain recent conflicts in such varied countries as Yemen and Congo. Power vacuums, as occurred during and after decolonization, after American regime-change wars and after the collapse of the Soviet Union, create uncertainty about who is in charge and can inspire those who seek power to take up arms. There are other factors, too: States that are rich in oil see more civil war because the potential payoffs of a successful rebellion are higher — but this applies only up to a certain level of income, after which point the government is often able to buy off or destroy any potential challengers.

The Balkans offer a ready example of how grievance based on ethnic tension must be intertwined with the collapse of order for groups to take up arms against one another. While various ethnolinguistic communities there long eyed each other with suspicion, going back to the days of the Ottoman and Austro-Hungarian empires, those tensions did not lead to violence for most of the region’s history, including during the nearly half-century of communist rule. But when the Soviet empire fell and communist governments were discredited, parts of Yugoslavia began to declare independence. Serbs, Bosnians, Croats and Albanians, incited by political opportunists and demagogues, fought wars against one another for a decade, drawing in the international community, until sovereign states emerged with new, widely accepted borders.

In one influential 2006 study representative of the new school of thought — one that examined 172 countries from 1945 to 2000 — the political scientists Havard Hegre, of the Center for the Study of Civil War, and Nicholas Sambanis, of Yale University, used advanced statistical tools to determine which of 88 factors most consistently predicted civil war. Grievance-based measures like authoritarian government and ethnolinguistic diversity ranked low or had no discernible effect (although the latter did predict internal conflict when the analysis included the lowest level of conflict measured, defined as 25 or more deaths in a year). In contrast, Hegre and Sambanis found that measures of opportunity like a small military establishment and rough terrain — which offers a base from which rebels can strike — had a much stronger and more consistent effect.

Geography is a surprisingly potent variable in predicting civil war — and can confound even moderately strong states. During such conflicts, governments usually control the cities, and rebels form bases in relatively inaccessible regions like mountains, forests and swamps. Countries that have had problems with mountain-based minorities include Russia, which has confronted rebels in Chechnya, and Turkey, which is still fighting Kurds in the southeast of the country. (Until the 1990s, the Turkish government even referred to Kurds as “Mountain Turks,” denying their identity while acknowledging the geographical nature of the problem.)

Even with the most difficult geographic conditions, however, wealth and government power tend to erase opportunities for rebellion. Consider that in 1948 and 1949, South Korea faced a communist-led uprising on Jeju Island — which lies in the Korea Strait, about 60 miles from the mainland — in a conflict that cost as many as 30,000 lives, mostly civilian. A poor, newly independent South Korea had difficulty bringing that island under control and relied on brutal tactics to do so, including summary executions. But now that South Korea has joined the club of modern, industrialized states with advanced militaries, the idea of a region like Jeju rebelling has become unthinkable.

Wealth and military power explain why, in the United States, civil war is likely to remain a metaphor. Its per capita gross domestic product is about $62,000 a year, among the highest in the world, and its military is clearly capable of wiping out any challenges to state power. (The U.S. Civil War occurred when the nation had a per capita GDP comparable to that of a developing nation today, and when military technology was limited to rifles and cannon.) The Pentagon has 1.3 million active-duty personnel, can find terrorists on the other side of the world and wipe them out with the push of a button, and boasts a command-and-control structure with no recent history of factionalization. There is no swamp or mountain peak that is beyond the easy reach of the U.S. military.

A recent survey by Nationscape revealed that 36 percent of Republicans and 33 percent of Democrats thought that violence was at least somewhat justified to accomplish political goals. The opportunity model suggests that while a survey result like this reveals disturbing things about our political culture, it does not presage civil war.

To be sure, riots and general discord can happen as long as leaders lack the political will to respond (or if, as today, leaders disagree about the line dividing peaceful protest from lawlessness). But as soon as the authorities perceive a serious enough problem, they can move quickly and decisively, a lesson learned by the anarchists who recently took over part of Seattle, declaring it the Capitol Hill Autonomous Zone. They were tolerated for just over three weeks until they were cleared out by local police in partnership with the FBI. Law enforcement at the local and national levels, from police to the military, remains united and under civilian control, willing and able to put down potential threats to our governing system or territorial integrity.

The wide availability of guns does make the American situation unique among developed countries — and leads to more horrific low-level violence, such as the 2019 El Paso shooting, in which a White racist angry about immigration is accused of targeting innocent Hispanics, killing 23 people. (He had apparently sought, but failed, to provoke a larger conflict.) But that is not civil war — and using such hyperbolic language may actually lead to more violence, as radicals come to believe that true civil war is possible and undertake copycat attacks.

In fact, the situation in Michigan suggests how intoxicating the idea of civil war can be. Had the recently arrested anti-government extremists not been under close federal surveillance — itself a reassuring sign of state capacity — they might have committed hideous political violence. Yet their goal of inciting civil war would have remained out of reach.

Those predicting civil war have correctly identified serious problems in American society: Ever-widening divisions based on factors including race, geography and partisanship make it difficult to respond to such varied threats as pandemics, economic crises and climate change.

But our problem remains bitter polarization and distrust, not the literal disintegration of the country. The United States faces monumental challenges in the coming months and years, from a rancorous election (and its aftershocks) to difficult racial issues to continuing environmental calamity. Extreme partisanship and political discord will absolutely make everything harder. But the sooner we realize that civil war is highly unlikely, the sooner we can focus on real problems.

## AT: DA---Chilling

### 2AC---AT: Chilling DA---TL

#### Case turns the DA---China’s standard-setting leadership enables them export 5G infrastructure globally.

Thayer & Han 21, \*Bradley A. Thayer is the co-author of “[How China Sees the World: Han-Centrism and the Balance of Power in International Politics](https://www.amazon.com/How-China-Sees-World-International/dp/1612349838).”; \*Lianchao Han is vice president of [Citizen Power Initiatives for China](https://www.citizenpowerforchina.org/). After the Tiananmen Square massacre in 1989, he was one of the founders of the Independent Federation of Chinese Students and Scholars. He worked in the U.S. Senate for 12 years, as legislative counsel and policy director for three senators; (April 16th, 2021, “We cannot let China set the standards for 21st century technologies”, https://thehill.com/opinion/technology/548048-we-cannot-let-china-set-the-standards-for-21st-century-technologies?rl=1)

The information and biotechnology revolutions have changed our world and will heavily inform the future of society. Whoever controls these technologies controls the future, and whoever controls their standardization controls the technologies. China understands this well. For two decades, it has been working to take over international standardization rulemaking bodies to serve the goals advanced in “[Made in China 2025](https://www.pbs.org/wgbh/frontline/article/made-in-china-2025-the-industrial-plan-that-china-doesnt-want-anyone-talking-about/)”  — that is, to dominate world manufacturing and then transition to become the center of the world’s technological innovation.

The dangers to the United States are already present, and in forms that are not obvious. These include, first, [direct-to-consumer genetic testing](https://medlineplus.gov/genetics/understanding/dtcgenetictesting/directtoconsumer/). China may be using such testing to gain genetic information that permits the identification and tracking of Americans, including U.S. military and intelligence community personnel or their relatives. Second, health monitoring apps are able to provide geolocation data to Chinese entities, which means to the Chinese Communist Party (CCP) and its security services. This provides location data that is valuable on its own and might be compared with data from other sources to reveal key information about Americans. Third, the CCP, in cooperation with Chinese industrial entities on international bodies, are developing and setting international standards for emerging technologies. China’s influence has grown over the past two decades, and Beijing now possesses leadership roles in standards-drafting technical committees, which means it could shape outcomes to its benefit.

China has formulated a four-step strategy to seek dominance in this area: plan, track, participate and take over. Beijing has boasted that it completed the first three steps and is on the last, which is to “[develop indigenous standards](https://saiscsr.org/2019/10/29/setting-a-new-standard-implications-of-chinas-emerging-standardization-strategy/) and to lead international standardization.” This means China may be replacing international standards with its own standards, in order to control technologies and the market. In 2017, China revised its [standardization law](https://share.ansi.org/Shared%20Documents/News%20and%20Publications/Links%20Within%20Stories/China%20Standardization%20Law_English%20translation_SESEC_5.17.2017.pdf), almost 30 years after its adoption in 1989.  It also set up the [Standardization Administration of China](http://www.sac.gov.cn/sacen/) to implement its strategy in the early 2000s. China’s standardization strategy also has been incorporated into the [Belt and Road Initiative](https://www.beltroad-initiative.com/belt-and-road/) so that, as countries are weaved into this network, they adopt China’s standards.

Beijing essentially has had the three primary standard-setting international organizations — the [International Organization for Standardization](https://www.iso.org/home.html) (ISO), the [International Telecommunication Union](https://www.itu.int/en/ITU-T/about/Pages/development.aspx) (ITU) and the [International Electrotechnical Commission](https://www.iec.ch/homepage) (IEC) — under its influence. Two Chinese government officials currently serve as president of ITU and IEC, and placed China’s proxy as the [head of the ISO](https://www.oxebridge.com/emma/latest-iso-president-has-ties-to-china-too/) after the organization was led by a Chinese official for many years. Meanwhile, Beijing has taken leadership or other influential positions in the [International Accreditation Forum](https://www.iaf.nu/) (IAF), [United Nations Industrial Development Organization](https://www.unido.org/) (UNIDO), [International Civil Aviation Organization](https://www.icao.int/Pages/default.aspx) (ICAO), [American Society for Quality](https://asq.org/) (ASQ) and perhaps others.

China’s strategy to determine the world’s standards appears to be working. In 2019 alone, China submitted [830 standards proposals to the ITU](https://www.ft.com/content/858d81bd-c42c-404d-b30d-0be32a097f1c). According to [Zhang Xiaogang](https://www.chinadaily.com.cn/m/qingdao/2017-06/23/content_29862586.htm), former president of the ISO, China planned to initiate 395 international standards by 2020 but, in actuality, [it set 495](https://www.sohu.com/a/412713490_362042#:~:text=%E5%A4%AE%E5%B9%BF%E7%BD%91%E5%8C%97%E4%BA%AC8,%E5%87%BA%E6%9C%80%E5%A4%A7%E8%B4%A1%E7%8C%AE%E7%9A%84%E5%9B%BD%E5%AE%B6%E3%80%82). Zhang claims that “China has made the greatest contribution in the field of international standardization in the past five years.” Indeed, China has dominated 5G standard-setting, for example, in the [3rd Generation Partnership Project](https://www.3gpp.org/) (3GPP), an organization to develop mobile broadband standards, and 90 percent of standard proposals in the 5G super uplink field is done by China Telecom.

Unfortunately, Western countries fail to see the importance of China’s strategic move. Zhang states, “Whoever leads in standard-setting will be the leader of the technology and the controller of the market.” China’s dominance in 5G standards-setting enables it to avoid the West’s sanctions against its tech giants such as Huawei, continue to expand globally, and to dominate the market. This could be a paramount communication-security problem for the U.S.

Of particular importance is China’s standardization strategy — as identified in “[China Standards 2035](https://www.cfr.org/blog/china-standards-2035-and-plan-world-domination-dont-believe-chinas-hype)” — on international bodies engaged in developing and setting standards for select emerging technologies. These include advanced communication technologies and cloud computing and cloud services. The United States and its allies must ensure that international standards for emerging technologies are not being designed to promote the interests of China. If China is successful, it would lead to the exclusion of other participants; China would be the architect, builder and maintainer of the 21st century’s information technology infrastructure.

#### Prior approval thumps.

Edwards 10-26-2021, (Jane, “FTC to Require Acquisitive Firms to Obtain Prior Approval Before Closing Any Future Deal,” https://www.govconwire.com/2021/10/ftc-issues-prior-approval-policy-statement-to-prevent-anticompetitive-mergers)

The Federal Trade Commission has issued a new policy statement that seeks to restore into standard practice the use of prior approval authority to restrict future acquisitions for companies pursuing anticompetitive merger transactions. Under the Prior Approval Policy Statement, companies seeking to make acquisitions should secure prior approval from FTC before closing any future deal in an affected market where violation is alleged to occur for a minimum period of 10 years, the commission said Monday. FTC will look at the nature of the deal, degree of pre-merger market power, evidence of anticompetitive market dynamics, history of acquisitiveness of merging parties, the level of market concentration and other factors as it works to determine the coverage of a prior approval provision.

#### Statement creates confusion and timing uncertainty.

Schwarts et. al 10-28-2021, Akin Gump Strauss Hauer & Feld LLP. (Haidee Schwartz , Corey W. Roush , Ed Pagano and Taylor Daly, “FTC Makes Major Changes To Expand Prior Approval In Merger Consents, Creating Greater Risk For Merging Parties Subject To FTC Merger Review,” https://www.mondaq.com/unitedstates/antitrust-eu-competition-/1125562/ftc-makes-major-changes-to-expand-prior-approval-in-merger-consents-creating-greater-risk-for-merging-parties-subject-to-ftc-merger-review)

On Monday, October 25, the Federal Trade Commission (FTC or "Commission") issued a policy statement announcing that the Commission will require all parties that enter into a merger consent agreement to agree that the parties will for at least ten years seek and obtain prior approval from the FTC before closing any future transaction affecting each relevant market for which a violation was alleged. Unlike reviews under the Hart-Scott-Rodino Antitrust Improvements Act of 1976 ("HSR Act") that provide a statutory timeline for U.S. antitrust agency review of proposed transactions and thus some timing certainty for merging parties, the prior approval provisions anticipated by the FTC will have no statutory or other timeline for transactions to receive prior approval. Thus, any company with a transaction subject to prior approval will face much greater timing uncertainty. The FTC policy statement also states that the FTC may require companies entering into merger consent orders to agree to a prior approval provision that covers product and geographic markets beyond those impacted by the merger. When making such determinations of additional relief in the future, the Commission's policy statement indicates that the agency will consider several factors, including (1) the nature of the transaction; (2) the level of market concentration; (3) the degree to which the transaction increases concentration; (4) the degree to which one of the parties had market power pre-acquisition; (5) the parties' history of acquisitiveness; and (6) evidence of anticompetitive market dynamics. Further, in the policy statement, the FTC announced it will require buyers of divested assets subject to a merger consent order to agree to seek prior approval of any future sale of those assets for a minimum of ten years. This will discourage some divestiture buyers and likely will decrease the value of divested assets. Finally, the Commission policy statement stated that in cases in which the Commission issues a complaint and the parties subsequently abandon the transaction, the agency will make a case-specific determination as to whether it will pursue a prior approval order. This would require a court order or party agreement. The Antitrust Division of the Department of Justice (DOJ) did not join the FTC's announcement on its prior approval policy, creating an additional area of divergence between the DOJ's and FTC's merger review policies and practices—a divergence that could have a significant impact on transactions.

#### Impacts all markets.

Litvack and Vooris 10-26-2021, (Douglas E Litvack is co-chair of the firm’s Antitrust and Competition Law Practice. He represents both plaintiffs and defendants in complex antitrust litigation and appeals, Lee K Van Vooris is co-chair of the firm’s Antitrust and Competition Law Practice and a member of the Corporate and Private Equity Practices, “Client Alert: FTC Reverses Quarter-Century of Enforcement Policy,” https://www.jdsupra.com/legalnews/client-alert-ftc-reverses-quarter-8487547)

In a move widely expected after the Federal Trade Commission’s Democratic majority rescinded a 1995 policy in July, the FTC issued a policy statement yesterday requiring prior approval provisions for settlements in future transactions affecting any relevant market for which they alleged a violation. The 1995 policy was not to require prior approval provisions as part of a consent decree, settlement, or enforcement order absent extraordinary circumstances (typically where one of the parties to the decree had a history of doing anticompetitive transactions below the HSR threshold). Now, the FTC will require a prior approval provision for all merging parties that resolve antitrust issues subject to a Commission Order. The FTC also appears likely to pursue a prior approval order even when the parties abandon a transaction after substantially complying with a Second Request. Under a prior approval provision, the party must obtain the FTC’s permission before consummating any transaction subject to the provision. As the statement suggests, the FTC could simply reject the transaction without having to provide a court with sufficient evidence to show the transaction violates the law. Styled as a measure to “preserve Commission resources,” the overall effect of the policy on transactions may not be that clear. However, this new policy will certainly add additional risk to any transaction that could be resolved with a divestiture because the parties will need to give the FTC veto power over future deals in that relevant market – and perhaps even beyond that market, as the FTC bragged about in a consent decree also released yesterday. The new Commission policy states that in certain cases where “stronger relief is needed,” the prior approval order may include geographic and product markets beyond those in the instant transaction. Because of the veto power and the threat of an expansive prior approval provision, parties may be more likely to litigate a transaction’s legality rather than settle with the FTC and accept a provision that will hamstring their ability to do future deals. It therefore appears that this policy may inadvertently incentivize more costly merger litigation for both the FTC and defendants, opening the question of whether the policy change might actually cost more in Commission resources than the former policy, which did not penalize companies in this way for settling antitrust disputes with the FTC.

# 1AR

## Contract Law CP

### 1AR---Deficit---Deterrence

#### No trebling sinks the counterplan---SEP holders would engage in holdup even if they could be held liable.

Farrell et al. 07, \*Joseph Farrell is Professor of Economics, University of California at Berkeley and a Senior Consultant at CRA International; \*John Hayes is a Vice President at CRA International; \*Carl Shapiro is the Transamerica Professor of Business Strategy at the Haas School of Business at the University of California at Berkeley and a Senior Consultant at CRA International; Theresa Sullivan is a Senior Vice President at Competition Policy Associates. (2007, “STANDARD SETTING, PATENTS, AND HOLD-UP”, https://faculty.haas.berkeley.edu/shapiro/standards2007.pdf)

Proper enforcement of FRAND terms may restore the competitive outcome but is unlikely to deter attempts at hold-up. Worse, a remedy that allowed the patent holder to charge its ex ante inherent advantage VA would typically be inadequate even to restore the competitive outcome (since this is an upper bound on what that the patent holder might have achieved ex ante), and encourages patent holders to engage in deception even if they were sure to be caught.

## Chilling DA

### 1AR---Thumper

#### Prior approval creates uncertainty and triggers fear of enforcement.

Loughlin and Oliver 10-28-2021, (Chuck Loughlin, Leigh Oliver, “FTC establishes broad policy to require prior approval provisions in all merger divestiture orders,” https://www.jdsupra.com/legalnews/ftc-establishes-broad-policy-to-require-6917794)

Analysis

The FTC’s Prior Approval Statement explains that the FTC is hoping that the more liberal use of prior approval provisions will discourage companies from moving ahead with “facially anticompetitive” deals, preserve Commission resources, and flag anticompetitive deals that fall below the Hart-Scott-Rodino (HSR) thresholds and do not trigger federal reporting requirements. Certainly, demanding prior approval provisions—which may extend beyond the relevant markets affected by the merger—will create uncertainty and increase the burden on merging parties. The effect could be that parties take more cases to litigation rather than agree to consent decrees with prior approval provisions that go beyond the scope of the challenged transaction. Moreover, the Commission’s suggestion that it may seek prior approval provisions even when parties abandon a merger would necessarily require the FTC to continue a litigation even after the parties abandoned the deal, using up important Commission resources on expensive litigation that is no longer needed to block the transaction at issue that allegedly has an imminent threat of harming competition. This provision, and others that stretch beyond the transaction at issue, could push more parties to litigate mergers that they would otherwise abandon. After all, if the FTC is going to litigate the issues in the case in order to secure a prior approval provision, then parties may be less willing to abandon the deal in the first place. The Commission appears to hope that these requirements result in less deal activity to begin with, but that is not at all certain.

#### Apple case thumps and disproves their narrative---the court ruled in favor of anti-trust and the case has “ripple effects.”

Albertgotti 9/10/21, \*[Reed Albergotti](https://www.washingtonpost.com/people/reed-albergotti/), Washington Post; (September 10th, 2021, “Judge’s ruling may take a bite out of Apple’s App Store, but falls short of calling the iPhone maker a monopolist”, https://www.washingtonpost.com/technology/2021/09/10/apple-epic-decision-judge-market-monopoly/)

A federal judge fundamentally altered Apple’s App Store business model on Friday in a landmark ruling that accused the iPhone maker of illegal anticompetitive behavior and is likely to have ripple effects across the U.S. antitrust landscape.

In a decision on an antitrust lawsuit brought by Fortnite maker Epic Games, U.S. District Judge Yvonne Gonzalez Rogers ruled that Apple must allow app developers to “steer” customers to alternatives to the tech giant’s payment processing service, which collects a 30 percent fee on most digital transactions. That was previously not allowed by the company, and marks a major victory for developers which have long complained of the tight grip the tech giant holds over its App Store on the roughly one billion iPhones currently in use.

[The blockbuster trial between Apple and the maker of ‘Fortnite’ goes out with a ‘hot tub’ session](https://www.washingtonpost.com/technology/2021/05/24/apple-epic-trial-hot-tubbing/?itid=lk_interstitial_manual_5)

Gonzalez Rogers also found that Apple was in violation of California state competition laws because of the way it forces developers into using Apple’s payment processing service without allowing them to tell customers there are alternatives, which are often cheaper.

She stopped short of ruling in favor of Epic‘s claims that Apple is a monopolist, although she left the door open by suggesting more evidence could have changed her decision.

“The court does not find that it is impossible; only that Epic Games failed in its burden to demonstrate Apple is an illegal monopolist,” she wrote.

Epic spokeswoman Elka Looks said the company plans to appeal the ruling. Tim Sweeney, chief executive of Epic, said in a tweet that, “Today’s ruling isn’t a win for developers or for consumers.”

Apple did not respond to requests for comment.

The ruling, one of the first major legal actions taken against a tech giant in a new era of antitrust scrutiny, is sure to echo loudly both in Washington, where a legislative effort to rein in the power of Big Tech is underway, and in the courts, which are facing the biggest test of existing antitrust laws in decades. Tech giants have come under the microscope in recent years as it became clear that current antitrust law does not effectively address their power, and regulators and lawmakers have been pushing to change that.