

# Piling on Intel: The FTC's Radical Application of Section 5

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## ABOUT THE AUTHOR

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## 1. Introduction

By all accounts, Intel's ever-more-powerful microprocessors have driven incredible advances in computing over the past two decades. That sliver of silicon in your computer that used to contain about 1.2 million transistors now contains roughly 2 billion. Processing power that used to cost \$175 now costs about \$1. Today, some of the world's most powerful supercomputers run on Intel's famous "x86" architecture CPUs.

The economic benefits from these advances are staggering. A series of studies has shown that more powerful microprocessors and related semiconductors accounted for more than half of the improvements to productivity growth during the 1990s.<sup>1</sup> Intel has been a leader in those technological advances. Moreover, Intel and microprocessor competition continue to generate substantial productivity improvements, as reflected in the lasting applicability of "Moore's Law."<sup>2</sup> One study estimated that Intel's extraordinary (and arguably unmatched) record of innovation single-handedly improved the average income of *every American* during 2001 – 2007 by over \$1,000!<sup>3</sup>

Despite the unquestioned economic and social benefits from Intel's many and continued innovations, Intel is under attack in the U.S. and elsewhere for alleged violations of antitrust laws. In the U.S., the Federal Trade Commission has charged Intel with "stand-alone" violations of Section 5 of the FTC Act, a little-used antitrust statute with a thin jurisprudential record, which the FTC asserts prohibits conduct that is not necessarily illegal under the Sherman Act, America's principal antitrust law.

For example, the FTC alleges that Intel violated Section 5 by, among other things, *failing* to "cooperate with its competitors," a charge that would not plausibly appear in a Sherman Act case, and is fundamentally inconsistent with bedrock antitrust principles which take a

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1 Dale Jorgenson, "Information Technology and the U.S. Economy," *American Economic Review*, Vol. 91, No. 1, March 2001, pp. 1-32; Robert Gordon, "Does the 'New Economy' Measure Up to the Great Inventions of the Past?" *Journal of Economic Perspectives*, Vol. 14, No. 4, Fall 2001, pp. 49-74; Steven Oliner and Daniel Sichel, "The Resurgence of Growth in the Late 1990s: Is Information Technology the Story?" *Journal of Economic Perspectives*, Vol. 14, No. 4, Fall 2000, pp. 3-22 See also, Dale Jorgenson and Kevin Stiroh, "Raising the Speed Limit: U.S. Economic Growth in the Information Age," *Brookings Papers on Economic Activity*, The Brookings Institution, Vol. 31, No. 1, 2000, pp. 125-236.

2 Gordon Moore, co-founder of Intel, predicted that the number of transistors on a microprocessor would double approximately every two years. More recently, the number of transistors on a chip has been doubling approximately every 18 months.

3 IHS Global Insight, "The Economic Impact of Intel Corporation in the United States and European Union, 2001 – 2007," January 2009. The study also estimated that Intel's innovation increased the average income of EU residents by \$375 during the same period. The study did not consider the substantial additional effects of Intel's innovation on average incomes outside the US and EU.

skeptical view of cooperation among *competitors*.<sup>4</sup> If allegations such as these are accepted by the Courts, the FTC will have accomplished a radical and sweeping re-interpretation of this nation's antitrust laws, with potentially grave implications for private incentives to innovate and compete.

Perhaps the most worrisome implications of the FTC's actions are apparent in its Contemplated Relief, which goes far beyond proscriptions against Intel's alleged unlawful conduct. These proposed remedies subject Intel's pricing to external review and require the company to share its key intellectual property with competitors on terms set by the Commission. In effect, the FTC's remedies would transform Intel into a regulated utility, notwithstanding the increasingly competitive markets in which the company operates. Indeed, to my knowledge, even regulated public utilities are not forced to share their intellectual property with competitors. The microprocessor market is far from the kind of natural monopoly that might conceivably warrant this kind of heavy-handed regulation.

Moreover, the FTC's proposed remedies go well beyond anything that was imposed on Microsoft, a company with a far more dominant position than Intel. The proposed conditions are even more onerous than the breakup of Microsoft that the government sought in the 1990s.<sup>5</sup> At least if Microsoft had been broken into two companies, as the Justice Department initially urged, the resulting entities would have been free to compete without the kind of potentially crippling restrictions that the FTC seeks against Intel.

Anyone concerned about future innovation in this country should be troubled by the FTC's case against Intel, even if the Commission's conduct allegations are proven true (and the company vigorously denies those allegations). If a company as innovative as Intel – and it is difficult to think of *any* U.S. company that has been more innovative over the past three decades – can be turned into the functional equivalent of a regulated utility, then no successful enterprise is safe from such a fate. The FTC's Contemplated Relief goes well beyond simply prohibiting conduct found to be illegal, and it would leave Intel with a much reduced incentive to innovate. That is not an outcome that will help put the U.S. economy back on the path toward sustained growth that all of us now so ardently want.

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4 In contrast, the law does not generally discourage cooperation by parties in a "vertical" relationship, such as between manufacturers and their suppliers. Such cooperation can be essential to the development of new products and ways of making or delivering them.

5 The Court of Appeals struck down the government's proposed breakup of Microsoft, saying the evidence in the record did not support such an intrusive remedy and sending the case back to the District Court for additional remedy proceedings.

## 2. COMPETITION IN THE MICROPROCESSOR INDUSTRY

Intel is a leader in a highly dynamic, innovative industry that has been and continues to be one of the world's most important engines of growth. Data from the U.S. Bureau of Labor Statistics show that quality-adjusted microprocessor prices declined 41% per year during the period covered by the Complaint, *faster than any of the other 1,200 products that the Bureau tracks*. Sales of x86 microprocessors grew from 136.5 million units in 1999, at the beginning of the period covered by the Complaint, to 341.5 million in 2009. During this same period, Intel and AMD invested billions of dollars in new products and manufacturing technologies. These investments have produced scores of important new products and technologies, such as

- Small and light mobile computers with wireless connectivity and extended battery life;
- dual- and multi-core processors that combine multiple microprocessors on a single chip at lower prices than their single-core predecessors; and
- remote diagnosis technologies and tools that enable IT departments to identify problems even when PCs are turned off.

Intel has enjoyed considerable success in the microprocessor industry. Intel's Centrino technology was instrumental in stimulating the mobile wireless revolution and causing a shift in computing from desktops to notebooks. More recently, Intel innovations have enabled the emergence of a new computing platform – netbooks – which offers small, light and fully functional computers for less than \$300.

Intel has also led in developing, adopting, and investing in new semiconductor manufacturing technologies that cram more transistors into smaller pieces of silicon, significantly reducing manufacturing costs. Industry analyst In-Stat, for example, concluded that "Intel has been the most consistent semiconductor company, when it comes to continuing to make investments in new capital equipment, even during recessionary periods ...." And Bank of America described Intel's high-k metal gate technology as "a major breakthrough in transistor technology."

AMD has also enjoyed periods of considerable success. Its Opteron CPUs were enthusiastically received and contributed to a rapid increase in AMD's market share. For example, AMD's share of sales in the server segment increased from 3% to 22% in the first three years after Opteron was released in 2003. AMD's share later declined when its Barcelona CPUs had problems and when it experienced supply chain difficulties as it tried to expand its distribution to new customers. Such ups and downs are expected in markets where technology is changing rapidly and customers can easily switch to a rival supplier if the incumbent fails to perform at a consistently high level.

Within this dynamic environment, the FTC's contention that Intel has behaved like a monopolist – causing *higher* prices, *reduced* output, and *less* innovation – seems at war with the facts. Given the extraordinary pace of innovation in the markets in which Intel competes and the company's own past record, the FTC's apparent belief that it can improve upon these market outcomes by second-guessing and micro-regulating Intel's behavior should, at the very least, be viewed with great skepticism. This is especially so when considering that Intel clearly is not like other dominant firms that have been brought to account in past government-led anti-monopoly litigation – pursued, by the way, under the statute that was specifically designed to combat monopolistic practices, Section 2 of the Sherman of Act, and not under the much more amorphous antitrust standards of Section 5 of the FTC Act.

Consider the quintessential monopolist, the former AT&T. That company, before it agreed to a breakup in 1982, had a regulated *monopoly* in most of the local telephone markets and a near monopoly in the unregulated long-distance market.<sup>6</sup> Although AT&T owned Bell Labs, the source of the transistor, the company itself could hardly be said to be a leader in telephonic innovation. The fiber optic cable revolution, which laid the physical foundation for today's Internet, was ushered in by AT&T's *competitors*, MCI and Sprint, only after AT&T agreed to its breakup.

Or consider the multiple anti-monopoly investigations of Microsoft by the Justice Department in the 1990s.<sup>7</sup> During this period, Microsoft was the *only* supplier of operating systems for x86-based PCs, with no realistic prospect of a competing supplier.<sup>8</sup> Moreover, prices for Microsoft's Windows operating system had been steadily increasing when the government brought its case, taking an ever larger share of the cost of a PC, despite only modest advances in the features and capabilities of Windows.

Contrast the facts in these prior cases with Intel, which competes directly with AMD, a rival whose share has sometimes exceeded Intel's in the U.S. retail segment. But even in segments where Intel has retained a large share, it has nothing like the 95+% market shares that AT&T and Microsoft had prior to the government's lawsuits.

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6 At the time, Internet telephony and other marvels of modern communications had not yet rendered these geographic distinctions superfluous.

7 I spent a good portion of my personal career during this period on Microsoft matters, first as Deputy Assistant Attorney General in the Antitrust Division (1993-95), overseeing the initial investigation and participating in the negotiation of the consent decree that the company signed in 1994; and then later as the co-author of two amicus briefs in the follow-up investigation, urging a different kind of breakup of the company. Several years later, I filed an expert report on behalf of Real Networks before the European Commission in its investigation of Microsoft's embedding its own media player in Windows, excluding competing media players. This case resulted in an order by the Commission to give consumers a choice of media players.

8 To be sure, Linux later began to challenge Microsoft in some segments of the server operating system market, but it remains very much a marginal player in the PC operating system market.

The sheltered market environments that Microsoft and AT&T operated in when the government's cases were brought are not comparable to Intel's market environment. Intel has felt the hot breath of actual and potential competition since the company's inception. Indeed the very ethos of the company was captured in the title to former CEO Andrew Grove's best-selling book, *Only The Paranoid Survive*, which could only have been written by a chief executive who was constantly worried about competitive threats. This concern with competition has led Intel to introduce a new, doubly more powerful microprocessor every two years, despite mounting research and development costs for manufacturing technologies that now easily exceed \$1 billion for each generation of chips, on top of additional billions for R&D to design the products.

In short, the FTC's case against Intel is not like the prior government cases against Microsoft and AT&T. Intel's market presence and record of innovation mark a stark contrast to the two major, successful anti-monopoly investigations over the past 25 years.

Perhaps knowing all this, the FTC advances two allegations that nonetheless seem squarely inconsistent with market realities. First, it claims that the x86 market has been insufficiently competitive. This assertion conflicts with the Complaint's emphasis on the considerable competition from AMD and the new competition from general purpose graphics processors ("GPUs").<sup>9</sup> In fact, the core allegations in the Complaint focus on Intel's discounts to meet competition from AMD (especially in the high-priced server segment of the market where AMD has been taking share from Intel) and the emergence of general purpose GPU computing (which involves the migration of some computational functions from the microprocessor to the GPU). In addition to these rivals highlighted in the Complaint, Intel faces challenges from microprocessors built using the ARM architecture, which are being incorporated into netbooks and other mobile computing devices, like Apple's new tablet computer, which reportedly runs on a new ARM-based processor developed by Apple called the A4. This is an important development that heralds a potentially disruptive era in which a rival architecture competes for PC sales.

Second, the FTC contends that AMD and not Intel has become the technological leader in the CPU market, thus leaving the impression that Intel's market dominance in most of its markets is due somehow to its alleged unlawful conduct. Although it is true that for a few years AMD was ahead of Intel in the high-performance computing segment of the server business, it has consistently been far behind Intel in the notebook and commercial segments. Notebooks have been the fastest growing segment of the industry, in part because Intel invested heavily in promoting wireless and other technologies crucial to mobile computing, whereas AMD was "late with a competitive product[] in the mobile space" according to AMD's then Chairman

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<sup>9</sup> Apple's 2006 decision to migrate its PCs from microprocessors based on IBM's PowerPC architecture to x86 CPUs is also at odds with this claim, as Apple plainly benefits from a highly competitive microprocessor market. Indeed, Apple's decision reflects the on-going price and performance advantages delivered by the highly competitive x86 market, where innovation and cost reduction are progressing at an aggressive pace.

Hector Ruiz.<sup>10</sup> And only Intel has offered a stable computing platform with the reliability and manageability features desired by the commercial segment.<sup>11</sup> Reflecting this gap, a 2004 internal communication by AMD Executive Vice President Henri Richard chastised AMD for “selling processors rather than platforms and exposing a partial story, particularly in the commercial segment, that is clearly inferior to Intel’s, if we want to be honest with ourselves.”

### 3. THE FTC’S RADICAL VIEW OF ANTITRUST

Chairman Leibowitz and Commissioner Rosch have emphasized that the FTC sued Intel for “stand-alone” violations of Section 5 of the FTC Act. The Commission has deliberately eschewed relying exclusively on Section 2 of the Sherman Act, the antitrust statute traditionally used in monopolization cases brought by the Justice Department and FTC. Whereas the Sherman Act is clear on its face in proscribing conduct “that monopolizes or attempts to monopolize a market,” and furthermore has a long record of jurisprudence interpreting its language, Section 5 of the FTC Act instead contains only a vague prohibition on “unfair” competition with a thin jurisprudential record. It is apparent that by pursuing this action the Commission wants to establish such a record, but in an unbounded way. Indeed, the first paragraph of the Complaint implies as much when it refers to the FTC as a “court of equity,” suggesting that the FTC is prepared to challenge all manner of conduct not traditionally reached by the antitrust laws. Indeed, one might question whether the FTC’s novel application of Section 5 to conduct that would not be challenged under settled law is itself unfair, since Intel had legitimate reason to believe that its conduct would not be held to this new, and ill-defined, standard.

Chairman Leibowitz and Commissioner Rosch nonetheless have argued that application of Section 5 is appropriate because courts have restricted the reach of the traditional antitrust statutes out of concern over costly treble damage actions in private antitrust litigation. This view misrepresents the relevant court decisions, which scarcely mention a concern for treble damages.<sup>12</sup> To the contrary, in a number of key decisions that bear on Intel’s alleged misconduct, the courts have expressed concerns about overreaching and deterring conduct

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10 Thus, in reporting on Intel’s strong profits in the fourth quarter of 2009, the *Wall Street Journal* (January 15, 2010, p. B1) noted that the results were “largely driven by strong consumer demand for laptop computers, a market where its [Intel’s] technology has enjoyed an edge over rival Advanced Micro Devices, Inc.” (emphasis added).

11 System reliability is important to corporations that want assurances the standard corporate software will work on every system they buy.

12 Furthermore, the Commissioners’ claim that suing under Section 5 will lessen Intel’s exposure to treble damages seems improbable, since private plaintiffs will be free to use evidence presented in the FTC’s administrative action in private treble damages litigation against Intel and can use the FTC case as a roadmap for future actions (which would impose additional costs – in time of Intel employees and legal expenses – even if, as the company would surely argue, the allegations are baseless).

seen as essential to effective competition. The Supreme Court has cautioned against interfering with discounting not because of the threat of treble damages but because the threat of *any* antitrust liability inhibits one of the most desirable aspects of business competition – price cutting. And it has weighed in against compulsory sharing of assets not because of the threat of treble damages but because the threat of *any* antitrust liability inhibits investment in assets that improve efficiency and produce innovations. Certainly, the forced sharing of assets that the FTC seeks to enforce can be as ruinous to a business (and perhaps more so) than damages liability. It is also out of step with the views of leading antitrust scholars and practitioners, as expressed in the 2007 Report and Recommendations of the Antitrust Modernization Commission. This Report, which was requested by Congress, found that no major changes to the antitrust laws were needed to adequately protect competition from anticompetitive conduct by dominant firms.

The FTC's use of Section 5 is especially troubling given the harsh relief it seeks. The court in *Microsoft* held that relief should reflect the strength of the causal link between the illegal conduct and harm to competition. Because the court found that the causal link between Microsoft's illegal conduct and harm to competition was weak, it overturned the breakup and remanded the remedy for further proceedings.<sup>13</sup> Here, the FTC apparently seeks to avoid proving harm to competition under the established standards of Section 2 because the causal link between the conduct it challenges and any conceivable harm to competition is weak. At a minimum, therefore, the relief sought by the FTC should reflect the tenuous connection between the conduct it challenges and the potential for harm to competition. Yet that so far is not the case.

### 3.1. THE COMMISSION'S CASE ENCOURAGES HIGHER PRICES

Intel, for instance, is accused of discounting "selectively" to its customers and of "threatening" to increase prices to customers that purchased less from Intel and more from AMD. That some customers get larger discounts than others is hardly surprising – and certainly not sinister – given the huge and widely varying volumes purchased by the major PC manufacturers. And standard volume discounts, which are used widely throughout the U.S. economy by many sellers, involve the "threat" of higher prices only if the customer purchases less. Such pejoratives do not alter the basic economic reasons why courts have expressed concern with sanctioning above-cost discounting: *customers benefit from discounts and accordingly seek them, while an equally efficient rival can profitably match an above-cost volume discount and win the sale.* For these reasons, traditional antitrust jurisprudence views volume discounting, whether selective or not, as the essence of competition, and the courts

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<sup>13</sup> As noted in an earlier footnote, the amicus briefs that I filed on the remedy issues in the second *Microsoft* case urged a different form of breakup than Justice initially proposed. I (and my co-authors) argued that Microsoft's anti-competitive conduct did warrant the alternative breakup remedy we outlined. But we never contested the fundamental principle that the Court of Appeals later announced – that there must be a causal connection between anti-competitive conduct and harm to competition.

have repeatedly held that above-cost discounting is lawful.<sup>14</sup> The public interest in promoting effective competition is well-served by encouraging vigorous, above-cost volume discounting. Accordingly, the FTC's attempt to challenge Intel's above-cost discounting under Section 5 should be viewed with considerable skepticism.

The FTC's Contemplated Relief also seeks to prohibit discounts that "foreclose" rivals from a customer, and such foreclosure would be presumed if Intel's discounts enabled it to win more than 60% of the customer's business. This provision is deeply troubling for four reasons.

First, the proposed provision does not state that only *below-cost* discounts are prohibited. As noted, above-cost discounts generally benefit customers and do not exclude rivals in an antitrust sense. Prohibiting above-cost discounts is therefore likely to harm consumers through higher prices with no offsetting benefit.

Second, discounts that successfully win additional business for a supplier necessarily "foreclose" rivals from sales. Competition is a two-sided coin, with both winners and losers. One cannot prohibit *all* discounts that foreclose competitors without also preventing beneficial above-cost discounts.

Third, eliminating "selective" discounting could facilitate coordinated outcomes, resulting in *higher* prices. At present, competition in the microprocessor industry involves negotiated discounts off list prices. Replacing this competition with posted prices might cause Intel and AMD to act upon their mutual interest in higher prices by competing less aggressively. Such an outcome would contravene the purposes of the antitrust laws, but it is one which the FTC's case could turn into reality.

Fourth, Intel's historic market share is roughly 75-85%. If discounts that win more than 60% of a customer's business are presumed exclusionary, then this provision will prohibit Intel from offering volume discounts to most of its customers. On balance, it is hard to see how this provision could plausibly enhance consumer welfare. To the contrary, it would have the extraordinary, and to my knowledge unprecedented, result of effectively placing a ceiling on Intel's market share. Knowing this to be the case, both Intel and its rivals will be able to charge *higher* prices on their products in the future, an outcome that undermines market forces and is directly inconsistent with the purpose of the antitrust laws.

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<sup>14</sup> *Atl. Richfield Co. v. USA Petroleum Co.*, 495 U.S. 328, 339 (1990) (making clear that "in the context of pricing practices, only predatory pricing has the requisite anticompetitive effect."); *Brooke Group Ltd v. Brown and Williamson Tobacco Corp.*, 509 U.S. 209, 223 (1993) (quoting *Atl. Richfield* 495 at 340) (this principle applies "regardless of the type of antitrust claim involved.").

### 3.2. THE COMMISSION WOULD DISCOURAGE INNOVATION

Intel is also accused of changing its policy toward interoperability with graphics processors to forestall a competitive threat from such processors. There are logical and factual problems with this allegation. Because GPUs are an economic complement to CPUs, Intel sells more CPUs and earns greater profits when its CPUs work well with GPUs. Intel would likely lose sales to AMD if its CPUs did not interconnect effectively with GPUs. Intel therefore has powerful economic incentives to *support* efficient interconnection with GPUs. The Complaint does not explain how it could be in Intel's interest to deny or degrade interoperability with GPUs given the losses to Intel's profitability such conduct would engender.

Moreover, the interoperability issue is intimately bound up with an ongoing intellectual property dispute between Intel and Nvidia, a leading GPU producer. Intel has licensed Nvidia to certain technologies used to interconnect Nvidia's chipsets to Intel's CPUs. The license specifies a field of use, a limitation often used in technology licenses. Intel believes the licensed field of use does not cover its newest CPUs, which involve new and improved technologies. Nvidia disagrees, and the dispute is pending in a Delaware court.

Regardless of the merits of that private dispute over contract terms, it does not belong in a federal antitrust suit. There is no doubt that Intel's new CPU design takes another step forward in computational capability. AMD touts its own version of the technology as a significant advance. The courts have traditionally shielded such technological advances from antitrust scrutiny because they rightly believe that judges and lawyers cannot effectively second-guess highly technical design decisions and because such scrutiny would likely deter welfare-enhancing innovation. The FTC's Complaint eschews this widely accepted view and challenges Intel's decision to seek compensation for its innovation as an antitrust violation.

The FTC's Contemplated Relief takes the notion that Intel cannot be trusted to manage its intellectual property a stunning step further when it proposes that Intel's technology must be made available to rivals on terms and conditions set by the FTC. The provision sets no bounds on the FTC's authority to give away Intel's inventions. Nor would Intel know in advance the terms under which its IP would be licensed. Instead, the proposed relief would give the FTC the extraordinary authority to come in *after the fact* and impose licensing terms on any new IP that Intel may develop. No company can make reasonable plans for future R&D, whose outcomes (technological and economic) are highly uncertain in any event, under this roulette wheel kind of legal environment.

Compare all this to the court-approved relief in the second Microsoft investigation, which requires Microsoft to license only a limited number of applications programming interfaces. In contrast, in this matter the FTC seeks broad authority to decide, after the fact, which of *Intel's future innovations* must be made available to rivals. This astounding proposal threatens to eliminate Intel's incentive to innovate and endangers the tremendous benefits those inventions contribute to consumer welfare.

Furthermore, the attack on Intel's use of its intellectual property does not stop there, as the Contemplated Relief would also prohibit Intel from suing its competitors' third-party fabricators. This provision, for example, would prevent Intel from suing a rival that infringes its semiconductor manufacturing technology. It would also hamper Intel's ability to defend itself in a patent lawsuit, since Intel could not use its own IP portfolio to file a counterclaim.

The Contemplated Relief would further prohibit Intel from including or enforcing standard change-of-control provisions in its x86 licenses. Change-of-control provisions restrict a license to its original owner. Like most companies, the terms and conditions that Intel negotiates with licensees reflect the value of its intellectual property to each licensee. For example, Intel might seek a small royalty on a license to a firm with a limited market opportunity, even though that royalty would not adequately compensate Intel for a larger market opportunity. Change-of-control provisions are intended to prevent a firm that acquires a license with a small royalty, for instance in a merger, from opportunistically using the license to pursue a much larger market opportunity available to the merged entity. Because the small royalty was negotiated in the context of a limited market opportunity, allowing the acquirer to use the license in the larger market opportunity would deny the inventor adequate compensation. By prohibiting change-of-control provisions, the Contemplated Relief is likely to reduce Intel's return on investment and so could have the perverse effect of discouraging Intel from inventing and licensing x86 technologies.

The Contemplated Relief also contains restrictions on Intel's design decisions. One provision, for instance, prohibits Intel products that "unreasonably" exclude rivals' products, and another prohibits products that impair the actual or "apparent" performance of rivals' products. In each case, the provision applies regardless of the benefits provided by Intel's new products or even whether those benefits could be achieved without excluding or impairing rivals. These provisions seem virtually certain to prevent inventions that would be in the public interest, as they would apply even to innovations which greatly improve the performance of Intel products.

An additional concern is that the vague language in these provisions could be abused to require Intel to design products that *benefit* its rivals. Suppose, for example, that Intel develops new software tools that help suppliers extract the highest performance from Intel microprocessors. Is Intel obligated to design its software to provide comparable performance from AMD microprocessors?

The FTC even complains about design decisions taken by third parties, blaming Intel for relying upon those decisions. For example, the Complaint alleges that Intel deceived customers about the relative performance of its CPUs when it reported results from standard industry benchmarking exercises in its marketing materials. In one instance, Intel is accused of describing the results of a benchmarking exercise as informative about "user-driven workloads," and the FTC objects that the test did not sufficiently "reflect a typical user experience." This curious allegation apparently faults Intel for relying on the allegedly flawed

technical judgments of an *independent performance testing organization*, a complaint that seems better directed at the benchmarking organization than Intel.

Nonetheless, the FTC's Contemplated Relief would restructure the industry to address this perceived problem. Intel would be prohibited from making performance representations not backed by "reliable scientific evidence." Since the established benchmarking tests apparently fall short of this standard, Intel would presumably need to develop costly new, more rigorous performance tests to provide customers with this information. Yet where is the Commission's expertise or authority for deciding whether the performance tests of an established industry benchmarking organization are scientifically reliable?

#### 4. INTEL AS A REGULATED UTILITY

Viewed as a whole, the FTC's Complaint and Contemplated Relief present a vision of a market where competition has failed and drastic action is needed to prevent further harm. This view contrasts with the huge decrease in prices during the period covered by the FTC Complaint, with AMD's vigorous rivalry and continued success, and with the dynamic record of innovation in microprocessors. In its place, we are offered a market where Intel will effectively be forced to become a regulated utility, subject to oversight by the FTC's lawyers and economists, who will be charged with second-guessing Intel's pricing, marketing, design, and licensing decisions, and with setting prices for some of the most valuable intellectual property in the world.

The FTC's Contemplated Relief goes far beyond the remedy typically sought in a government antitrust case. A typical case seeks an order to cease and desist the offending behavior along with "fencing in" provisions designed to prevent a repeat of the challenged conduct. For example, the government sought provisions designed to prevent extraordinary volume discounts in the first Microsoft consent agreement. In this case, however, the FTC has asked for much broader and more intrusive authority to intervene in crucial decisions regarding the pricing, marketing, design, and licensing of Intel's products.

The FTC's proposed remedies are also more far-reaching and more worrisome in a fundamental respect than even the structural relief the government initially sought against Microsoft in its second investigation. Even if Microsoft had been broken up into separate operating system and applications software companies, the two resulting new companies would not have been subject to the kind of extensive government oversight the FTC now seeks over Intel. In particular, the government would not have exercised anything like the broad scrutiny over pricing decisions that is sought here, effectively limiting the companies' market shares, nor would the government have the power to compel the companies to share their IP with rivals. Yet each of these extraordinary conditions can be found in the FTC's Contemplated Relief against Intel.

If the FTC prevails in this litigation, it will set a terrible precedent for successful, innovative companies in other industries. With the FTC using the broad powers of Section 5 to force winners to share their secrets and cooperate with competitors, many successful companies could be at risk. Such greatly expanded enforcement of Section 5 will almost certainly have unfortunate, unintended consequences on investment in new technologies and economic growth. Surely this state of affairs is not in the public interest, especially now of all times, when policy makers should be doing all they can to *encourage* innovation to help our economy return to sustainable long-term growth.