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# Restraints on technology advances

..... The US Antitrust Division's new case against Microsoft and the Federal Trade Commission's new case against Intel focus on restraints on technology advances. In both cases, the government's attorneys allege that the company charged with anticompetitive conduct has abused its dominant market position to extend its monopoly power from a first market to a second market. They also allege that part of the anticompetitive market-extension conduct involves hindering or suppressing other companies' technological innovation.

In the *Microsoft* case, the Antitrust Division contends that Microsoft is abusing its economic monopoly power over the Windows PC operating system to acquire a further monopoly or monopolies in related markets. The first monopoly is based largely on copyright, which prevents other companies from simply appropriating the Windows operating system or using it in a way contrary to Microsoft's license agreements.

The license agreements themselves limit computer manufacturers (OEMs) from differentiating their computer systems from each other and cutting their own deals with electronic commerce vendors. If Microsoft would let them, the OEMs would provide their respective customers with a choice among different OEMs' different "front doors" (opening screens and interfaces). The OEMs would also like to cut their own deals with vendors in markets where Microsoft has contracts with "partners" to build direct access to them into the Win 98 front door. Like Henry Ford who told customers they could have their cars any color they wanted as long as it was black, Microsoft tells computer OEMs to give customers any front door they like as long as it's the Microsoft standard format. A further issue in this antitrust case is Microsoft's effort to supplant Netscape in the browser market (discussed in the Nov.-Dec. 1997 and Jan.-Feb. 1998 Micro Law columns).

In the *Intel* case, the FTC contends that Intel is abusing its economic monopoly power over X86 microprocessor chips or a high-performance subset of them. The FTC says that Intel is exploiting this power to maintain the first monopoly and/or to acquire a further monopoly in related hardware markets. Intel's first monopoly is based largely on two things. The first is Intel's patents, which prevent other companies from simply cloning X86 microprocessors. The second is technical

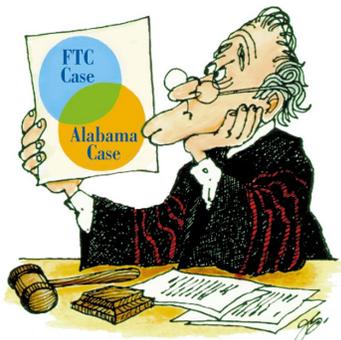
information about X86 "interrupts" and other microprocessor features that companies need to know about to make their products compatible with the all-pervasive X86 chips. The related hardware market appears to be a workstation (high-performance PC) market or boards (such as graphics boards) for use in workstations.

The FTC's later-filed *Intel* case is in many ways more interesting than the Antitrust Division's current *Microsoft* case. The FTC's case raises more unusual questions. It specifically addresses a practice that Microsoft also uses, that the current Antitrust Division case fails to challenge. The practice is depriving other parties of needed technical information unless they comply with restrictive demands.

In Microsoft's case, this has involved API manipulation and denial of information about APIs (see Micro Law, Jan.-Feb. 1998, pp. 83-84) to stymie applications software competitors. (The Antitrust Division does not seem to be pressing a challenge to this.) The FTC's complaint against Intel zeroes in on several incidents in which Intel sought to blackjack other companies into turning over to Intel their intellectual property rights in their technology. Intel threatened to deny needed technical information about X86 chips to coerce the other companies.

## The DEC incident

Digital Equipment Corp. markets computer systems (boxes) that incorporate



Intel microprocessor chips. In fact, DEC buys \$250 million in Intel microprocessors each year and incorporates them into \$2 billion in DEC boxes. DEC has developed the Alpha microprocessor, which enjoys only a small market share at this time but has significant performance superiority over all of Intel's microprocessors. Alphas are considered the highest performing general-purpose microprocessors on the market at this time, and they are the only competition against Intel microprocessors for Windows NT hardware platforms.

Intel decided it had to catch up with DEC, and in 1995 it introduced the Pentium Pro microprocessor to close up some of the performance gap. DEC examined the Pentium Pro and concluded that it infringed some of DEC's microprocessor patents. DEC therefore sued Intel in May 1997 for patent infringement. Intel responded by publicly denying DEC any further access to technical information needed to develop boxes that use new Intel microprocessors. As part of a FUD (fear, uncertainty, and doubt) program, Intel publicly ejected a DEC employee from an Intel-sponsored industry meeting. According to the FTC, Intel also "otherwise engaged in [FUD] conduct to create a perception in the computer industry" that DEC "was no longer capable of bringing to market in a timely manner" new boxes incorporating new Intel chips.

The result was to coerce DEC into granting Intel royalty-free licenses under the patents for infringement of which DEC had sued Intel.

### The Compaq incident

Compaq is now the world's largest PC manufacturer. It buys \$2 billion a year in Intel microprocessor chips for its boxes. In 1994, Compaq sued Packard Bell (now a part of NEC) for infringing some Compaq patents. Intel intervened in the suit as Packard Bell's supplier and thus indemnitor for the infringement. Intel then cut off the flow of technical information to Compaq. Compaq then knuckled under, just as DEC had.

### The Intergraph incident

Intergraph markets workstations using Intel Pentium microprocessors and Windows NT operating systems. By 1996, 100% of Intergraph's boxes used Intel microprocessors.

Intergraph also owns some patents (on Clipper chip microprocessor technology). By 1996, Intergraph had concluded that Intel was incorporating technology in its microprocessor chips that used this patented technology (or that the equipment resulting from incorporation of the chips into boxes used the technology). Intergraph then demanded that some of Intel's chip customers take licenses from Intergraph under the patents. The customers demanded indemnification agreements from Intel.

Intel then demanded that Intergraph give it (or its customers) a royalty-free license under the Intergraph patents. (Intel proposed a royalty-free cross-license of patents between the two companies, but Intergraph was not making products that used the patents. It therefore was not interested in the cross-license.)

When Intergraph declined to give away its patents, Intel began to cut off technical information on the Intel microprocessor chips that Intergraph used. Intel took these retaliatory steps:

- Intel cut off all technical information to Intergraph. For example, it withheld information on the 333-MHz Pentium II. (One of the things that clearly irked the judge in the civil action between Intergraph and Intel was that Intel's official refused even to disclose to Intergraph the URL for the Web site where Intel had posted information about the chip. The judge said this was an example of how Intel "plays 'hard ball' with those who cross it.")
- Intel failed to advise Intergraph about a bug in an Intel chip that Intergraph was buying and using. The bug prevented the computer from being turned off.
- After Intergraph itself discovered the bug, Intel interfered with Intergraph's attempts to buy bug-fix test

equipment from Tektronix.

- Then Intel started up a FUD campaign like the one it used against DEC.

Intergraph responded in late 1997 by suing Intel. In April 1998, a US district court in Alabama (where Intergraph is located) issued a preliminary injunction order against Intel, requiring it to resume the flow of needed technical information. The district court held that Intel had a monopoly over microprocessor chips and was an "essential facility" because of its control over information that was crucial for Intergraph to stay in business. In such circumstances, the district court said, Intel cannot lawfully use its intellectual property power to extend its monopoly from microprocessors to other products (here, NT workstations). Nor can Intel use this power as a club to bully other companies into surrendering their intellectual property to Intel.

### Intel appeals and the FTC sues

Almost simultaneously in June 1998, Intel appealed the Alabama district court's ruling, and the FTC sued Intel. Intel's position in both proceedings is that federal antitrust laws do not strip Intel of its intellectual property rights. Intel also says that it is not monopolizing the workstation or graphics subsystem (graphics boards) market, and has no dangerous probability of succeeding in doing so. The reason is that Intel's present market share (in the latter markets, as contrasted with microprocessor chips in general) is so small—10% or less—that there is no foreseeable risk of a further monopoly.

The legality of what Intel tried to do to Intergraph (and actually did do to DEC and Compaq) will therefore be litigated before two different tribunals at the same time, and under somewhat different legal tests. The FTC's suit covers the same ground in the main as Intergraph's suit, although the FTC treats the Intergraph incident as only one of at least three similar abusive incidents. Intergraph has other grievances against Intel that it is airing as well (alleged breach of contract, fraud, and other tortious conduct). Moreover, the

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FTC may challenge Intel's conduct on grounds that the FTC Act goes beyond the reach of antitrust laws. So, a Venn diagram of the cases would show a pair of overlapping circles. This month's *Micro Law* explores some of the conceptual parts of that Venn diagram—in particular, how the FTC's case might cover ground that Intergraph's case doesn't.

**The antitrust case**

Intergraph's antitrust case is an essential facilities and attempted monopolization case. (At least part of the FTC's case is the same.) According to the Alabama judge's ruling, high-performance Slot 1 microprocessor chips compatible with NT are a distinct relevant market, and Intel has 100% of that market. The court said that a 100% market share "clearly exceeds the legal threshold for presumptive monopoly power," since cases say that 80% or more is a clear monopoly. These microprocessor chips and technical information about them, the judge said, are essential facilities comparable to the only bridge across the Mississippi River at St. Louis. According to the judge, a monopolist (here, Intel) that owns an essential facility cannot refuse access to the facility as a way to coerce others (here, Intergraph) to yield to its demands.

But Intel has trade secret and patent rights in the essential facility. Intel therefore argues that its ownership of intellectual property rights gives it an absolute legal right to refuse to deal with someone it dislikes. Here, Intel dislikes Intergraph, which has annoyed Intel by asserting its own patents against Intel. The Alabama court rejected that contention, responding that ownership of intellectual property rights does not immunize the owner from antitrust laws. It regarded Intel's invocation of its intellectual property rights as a mere pretext, since Intel had allowed Intergraph access to the intellectual property until Intergraph had the effrontery to assert its own intellectual property rights against Intel's misappropriation of them.

The court observed that Intel's use of its monopoly power over microprocessor

chips to foreclose or restrain Intergraph's competition in the graphics subsystem market as part of a program to monopolize the latter market was familiar. It was like Microsoft's use of its monopoly over Windows to foreclose or restrain Netscape's competition in the browser market as part of a program to gain a browser monopoly.

The Alabama judge then quoted the statement of the district judge in the pending *Microsoft* case that such "practices should be abated until it is conclusively established that they are benign." (The District of Columbia Court of Appeals later reversed this ruling against Microsoft.) Accordingly, he entered a preliminary injunction that while the antitrust case is pending in court Intel must give Intergraph access to these vital facilities on a nondiscriminatory basis (that is, to the same extent that it gives other companies such access).

**Intel's appeal**

Intel has appealed the preliminary injunction to the US Court of Appeals for the Federal Circuit, in Washington, D.C. (This is the court that handles appeals from all federal cases involving patent law. This case began as a suit in which Intergraph claimed that Intel had infringed Intergraph's patents.)

Intel's appeal raises several points. Perhaps the most important point is Intel's contention that the court's order unlawfully strips Intel of its intellectual property rights. Intel's position is that intellectual property laws give it the right to grant or withhold access to its intellectual property as it chooses. If a company sues Intel for patent infringement, as Intergraph did, Intel is entitled to refuse to deal with that company as a self-defense tactic or may refuse even for no reason. Intel's CEO, Craig Barrett, and other Intel spokesmen have responded to the antitrust charges of the FTC and Intergraph in these terms:

The issue of what we did is not under dispute. When companies such as DEC and Intergraph have

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sued us, our response has been that we will not share our intellectual property with them any more. Whether or not that's a legal action is the question. Intel believes that the FTC's suit is based on a mistaken interpretation of the law. The FTC's suit signals that they want to change the existing laws.

(For an elaboration on this, see <http://www.intel.com/pressroom/archive/releases/>.)

Intel's contentions assume, without explanation, that Intel has intellectual property rights in the withheld information. The remainder of this column will proceed on that assumption too. However, it is not clear that Intel in fact has any intellectual property rights (under US law) in the technical information at stake. The information does not appear to be patented since Intel has not explicitly claimed that it is. Perhaps, trade secrets are involved, but that too is questionable.

For example, how can a URL and information posted on the Web site with that URL be trade secrets? Indeed, it may be doubtful that any information about how users should properly use a microprocessor chip that Intel sells them can be a trade secret. Surely, the example of the withheld advice that a chip had a serious bug cannot be a legitimate trade secret. But at this stage of this case we ought to take Intel's word that it has intellectual property rights, and act on the assumption that the emperor has some clothes—unless and until someone shows that all the motherhood and apple pie talk about intellectual property is a sham. (But the truth is out there, Scully.)

Barrett, in a Tokyo speech in June, criticized the FTC case on a second ground, which doubtless will figure also in the appeal of the *Intergraph* case to the Federal Circuit. Barrett pointed out that the alleged victims of Intel's alleged abusive

conduct are Intel's customers, not its competitors. Intel has a negligible market share (less than 10%) in the relevant markets in which the alleged victims operate. Accordingly, it is unlikely that any adverse effect on the vigor of competition in general will result from Intel's conduct. The harm is to competitors, Barrett says, not to competition itself: "I don't think this lawsuit has much to do with competition in the marketplace." Barrett also denied that there would be any impact on the health of the microprocessor market.

### Has Intel an absolute right to refuse to deal?

The main legal issue is whether there is an absolute right to refuse to deal with others regarding one's intellectual property rights. In the case of unpatented goods and services that are an essential facility, the US courts have made considerable inroads on any absolute right to refuse to deal. They have found refusal to be an antitrust violation and have required the monopolist to allow access to the facility when these facts apply:

- a monopolist controls an essential facility (but what is an *essential* facility is controverted and murky),
- others cannot readily duplicate the facility for themselves,
- it is feasible to allow the desired access, and
- the monopolist denies access to its competitor.

It is much less clear that the same doctrine applies, however, when the essential facility is an intellectual property right and when the parties are not competitors in the same market. (Some decisions have applied the doctrine to downstream markets and customers, but typically there the "customer" has been a customer in one market and a competitor in another impacted market—a hybrid competitive situation. Most decisions refuse to apply the doctrine when the customer and seller do not compete at all—as in the case of an airport and an airline or a directory publisher and a listee.)

Still, as the Alabama judge pointed out in his opinion, the many statements in court decisions that Intel quoted about a patent owner's right to refuse to license a patent are usually qualified to some extent. They are usually qualified by some remark to the effect that a patentee has an absolute right to refuse to license when the conduct is unilateral (is not done by agreement with others) and is not for an anticompetitive purpose.

In 1988, the patent laws were amended to add a specific provision (sec. 271(d)(4)) that it is not an "illegal extension of patent rights" to refuse to grant a license. However, this provision too is generally understood to mean that it is not an illegal extension when the refusal occurs unilaterally and not as an integral part of (or in furtherance of) a larger monopolistic scheme. The case law is murky, because courts have tended to conflate a variety of different fact patterns under one glittering generality. When the fact patterns are parsed, different rules for different situations may emerge.

Let's start with as close to a "plain vanilla" case as we can get, and then move to more complicated situations.

The simplest case would be this. Say Intel has a patent on some new central feature of microprocessors. Say it invents and patents pipelining. Say at this point Motorola wants a license. (Assume that there is no previous history of cross-licensing between the two companies.) Intel says no.

This is a pure vanilla case of refusing to share intellectual property rights—the kind that may well be per se lawful. Perhaps, without pipelining Motorola cannot market the next generation of microprocessors. But probably Motorola will have to take its lumps. To this extent, at least, intellectual property rights have a preferred position in our legal system. This is because federal policy promotes innovation by granting intellectual property rights to inventors of new technology.

Even this kind of case is not free from all doubt, though. Consider a subsidiary or external feature of the chip, such as an

interface, as contrasted with an internal feature. Imagine that Intel replaced socket pinouts on chips with another, incompatible electrical interface means, say, a patented bus or slot interface. Imagine that PC OEMs considered it economically infeasible to build boxes with both interface means, and therefore all used only the higher-volume means, the bus.

Would this drive AMD and all other X86 chip manufacturers out of business? Would this destroy the independent core-logic chipset manufacturers? Would it be an antitrust violation if Intel refused to share its patent with them? Would it make a difference if the new interface did not substantially improve microprocessor functional performance? Would it make a difference if Intel let box makers use the interface for a zero or low royalty, but charged chip competitors a very high or "prohibitive" royalty? Of course this is just a farfetched hypothetical case. Nothing like the real world. Anyway, we have it on the authority of microprocessor guru Michael Slater that "the government can't get involved in what bus interface is appropriate."

As soon as you deviate from the plain vanilla case (such as the pipelining example), the situation becomes unclear. A past history of cross-licensing may alter the picture. Outside the patent context, a past history of allowing cross-access to property has made refusal to deal illegal whenever the facility was essential, even though the case would likely have gone the other way without such a past history. (The Supreme Court so ruled in a case involving multiple-mountain ski lift ticket packages in Aspen.)

In the *Data General* case, the federal court of appeals in Boston refused to hold that a copyright owner had an absolute right to refuse a license on its computer program. It held instead that the copyright owner (Data General) was *presumptively* entitled to refuse to share its rights in its computer program. However, it also held that the other company (Grumman) could try to prove that the presumption of legitimacy was overcome by the particular fact pattern. In that case, Grumman could not show any likelihood of harm to the public

as a result of Data General's refusal to license its software. The court therefore rejected Grumman's antitrust claim.

Grumman also argued that Data General's refusal to supply its computer equipment schematics was preventing Grumman from developing technological advances in competing diagnostic software. The court rejected that claim. The court acknowledged that if Grumman could prove that Data General was preventing technological advances, that would overcome the presumption of legitimacy. The court said the evidence, however, simply showed no attempt by Data General to subvert the development of competing software. The court therefore ruled against Grumman.

That result may be prophetic of the ultimate outcome in the antitrust case against Intel. Unless Intergraph can show actual or likely harm to the competitive process, in microprocessors or in graphic subsystems, Intel's hard-ball tactics are likely to get a pass. The Alabama court noted that Intel had been supplying microprocessors and technical data to Intergraph and others in the past. It therefore concluded that there was no legitimate basis for Intel now to refuse to do so— simply because Intergraph sued it for infringing Intergraph's patents. The court said that Intel's claimed desire to protect its intellectual property rights was a pretext for trying to force Intergraph to submit (as DEC and Compaq apparently did) to Intel's confiscation of patent rights.

But it may well be that Intel does not have to show that it has a legitimate reason to refuse to deal. The Federal Circuit may hold that the shoe is on the other foot, as in the *Data General* case. Intergraph may prevail only if it establishes two crucial points. The first point is that Intel's hard-ball tactics are part of a deliberate program by Intel to acquire a monopoly of the graphics subsystem market. The second point is proving that the program may well succeed in the near future even if Intel now has only 10% or less of that market. If the Federal Circuit decides that the record does not show such a likelihood (Intel argues that it does-

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## Technology as a relevant market

There is another market in which Intel and Intergraph are arguably direct competitors: microprocessor technology. Intergraph's Clipper microprocessor technology is a competitive substitute for some of Intel's microprocessor technology (and perhaps a complement to other aspects of Intel's microprocessor technology). The Antitrust Division has recently argued that technology markets should be considered for purposes of antitrust analysis, just as product and service markets should. However, there is very little precedent thus far supporting competition in technology markets as a factor in antitrust analysis. In any event, no one involved in these cases has thus far contended that Intel's conduct should be evaluated in terms of its impact on a technology market as such.

n't), the appeals court may grant Intel's appeal and vacate the preliminary injunction.

## What's a mere pretext?

The Alabama court gave as one reason for rejecting Intel's attempted reliance on its stated desire not to share intellectual property rights that this explanation was merely pretextual. It was pretextual because Intel had no problem with allowing Intergraph to use Intel's intellectual property until the patent infringement controversy arose. In this regard, the court echoed a recent California court of appeals opinion saying the same thing. Kodak attempted to rely on patent rights as a reason not to let a repair service competitor have access to Kodak's patented photocopier parts. The court said this was a pretext and Kodak just wanted to suppress its competition in the repair business.

But what does it mean to say that such a refusal to deal is pretextual? Apparently, it means that the court does not believe that the patentee is emotionally attached to its intellectual property rights, and *on that ground* refuses to share them,

but rather simply doesn't want to face added competition. But isn't that always so, unless the patentee is a nut case? That is why people apply for patents. To keep out competition, not to facilitate it.

Does it make a difference whether the competition being kept out is competition in the same market as the patent (diagnostic software in *Data General* and parts as such in *Kodak*)? Or instead it is competition in a different, vertically related market (repair services, in both of those cases)? Is one kind of refusal a pretext and the other not? In other words, must a patent in one market be used as a lever to keep out competition in another? Under this theory, Kodak might be justified in refusing to license a parts manufacturer competitor and Data General justified in refusing to license a diagnostic software seller competitor. However, neither might be justified in keeping out competitors in the repair service business.

What would give the concept of a pretextual refusal a reasonable significance? One might argue that it should be limited to situations in which the motive is to compel the other party to yield to a demand that the patentee has no right to make. (But what's that?) Indeed, perhaps the term should be limited to situations in which the patentee seeks to coerce the other party to yield to an illegal demand. (Examples might be to fix prices or to join a boycott—in the case of a monopolist, a demand for exclusive dealing would be illegal.)

In any event, the concept of what is pretextual needs more refinement than it has received so far in the *Intel* cases or in the *Kodak* case. The Federal Circuit may well have something to say about that when it decides Intel's appeal. (It may say that refusing to deal with a company that sues you for patent infringement or threatens to sue your customers is legitimate.)

### What about the FTC case?

Does all of this apply equally to the FTC's case? No, for several reasons. The first reason is that the FTC may put together a fact record in its case that shows a risk that Intel will dominate the graphics subsystem market, in time. (Or

the FTC might show that Intel is engaging in the challenged conduct to maintain a monopoly in the general microprocessor chip market or some subset of it.)

The second reason is that the FTC Act, unlike federal antitrust laws, is designed to reach incipient antitrust violations. The incipency doctrine is that the FTC is supposed to nip antitrust violations in the bud before they reach full bloom as antitrust violations or even get close to it. Less evidence will support an FTC case than is needed in a private antitrust action in district court (or an Antitrust Division case in district court). Accordingly, Intel's mere 10% market share may provide a potent defense argument in a monopolization law case in district court. However, Intel will have no defense under the FTC Act if the FTC finds an incipient tendency toward monopoly is budding here.

The third reason is a clincher. The Supreme Court has held that the FTC can enter a cease-and-desist order against a business practice simply because the practice is unfair. It is not clear what "unfair" means, but the Supreme Court says that the FTC is entitled to considerable leeway in defining that concept. Certainly, that a practice is unfair to the public in that it deprives the public of something it "ought" to have is one such concept. Immorality and oppressiveness are other possibilities. In any case, clearly, unfairness has an even lower evidentiary standard than anticompetitive incipency does. The only requirement is that the FTC must give a well-reasoned explanation of why a challenged practice is unfair and will tend to harm the public or victims.

As an aside, I spent ten years on and off working on the only case of this type—the *S&H* case—that ever got to the Supreme Court on the merits of what "unfair" means under the FTC Act. That case involved whether a dominant trading-stamp company could refuse to let consumers swap different brands of trading stamps with one another and could refuse to let retailers redeem customers' trading stamps for the retailers' own merchandise. The Supreme Court held that the FTC had the power to find that con-

duct unfair, but the FTC's opinion did not adequately explain the FTC's reasoning. The Supreme Court therefore sent the case back to the FTC for it to write a more informative explanation of what it was up to. At that point the trading-stamp company decided to throw in the sponge and move on to more rewarding endeavors.

But what would it mean in this case to say that Intel's conduct is unfair, even if not an incipient antitrust violation? Can unfairness have any sensible content in a commercial setting of this kind? Perhaps it can.

Intergraph and the other companies that Intel beat up all owned patent rights that Intel was apparently misappropriating. Patent rights exist to promote the progress of science and useful arts. Intergraph and the other victims (and Intel, too) participated in the US patent system by creating and disclosing their technological innovations in return for a patent grant. Without the fuel of such incentive, the fire of invention would burn slower. The public could see a slower pace of innovation. In sum, public policy favors the victims' being "incentivized" by the patent system and disfavors a thuggish patent infringer beating them up so badly that they opt out of it. Why spend on R&D if Intel will confiscate the results?

What Intel is doing is at least arguably contrary to the public interest and contrary to public policy. Its long-run effect is to discourage what the patent system tries to encourage. Stealing other people's patent rights is therefore unfair to the public and competitors, within the meaning of the FTC Act. By the same token, using coercive refusals to deal in accomplishing theft of other people's patent rights is unfair. (Perhaps the words "stealing" and "theft"—common parlance in intellectual property litigation!—are too highly colored for your taste. Then, substitute "patent infringement followed by a demand for royalty-free licensing of the infringed patents.")

There is considerable force to the argument, and at least a hint of it in the FTC's complaint against Intel. Thus, the FTC states:

A natural and probable effect of Intel's conduct is to diminish the incentives of firms that are Intel customers or otherwise commercially dependent upon Intel—to develop new innovations relating to microprocessor technology. Intel's coercive business tactics effectively undermine the patent rights of such firms and reduce their incentives to develop new technologies relating to microprocessors. The nature and effects of Intel's conduct are illustrated [by the DEC, Compaq, and Intergraph incidents].

Because patent rights are an important means of promoting innovation, Intel's coercive tactics to force customers to license away such rights diminishes the incentives of any firm dependent on Intel to develop microprocessor-related technologies. Because most firms who own or are developing such technologies are vulnerable to retaliation from Intel, the natural and probable effect of Intel's conduct is to diminish the incentives of the industry to develop new and improved microprocessor and related technologies. Consequently, Intel's conduct entrenches its monopoly power in the current generation of general-purpose microprocessors and reduces competition to develop new microprocessor technology and future generations of microprocessor products.

Arguably, the FTC is setting itself up as a defender of patent rights when it attacks Intel's refusal to license its intellectual property. The patent rights that the FTC is championing, however, are those of Intel's alleged victims as contrasted with those of Intel itself. Or perhaps it would be better to say that the FTC is defending the patent system as a whole (and its policy goals) against one abusive patentee.

Intel's CEO is right in saying this attempt to vindicate the patent system by means of antitrust enforcement is unprecedented. There are some steps in this direction in the past, however. In the late 1940s, the Antitrust Division challenged GE's licensing practices by which GE entrenched two different GE monopolies—one in electric lamps and the other in carbaloy abrasives. In each of these cases, GE had required its licensees, as a condition of patent licenses, to agree to grant back to GE licenses on their own future technological innovations.

The result was to discourage further technological innovation by the licensees, who testified in court that they decreased their R&D efforts and expenditures. They said it was not economically worthwhile for them to spend money on innovation if they had to let GE have the benefit of any innovations they developed. GE's "grant back" practices were therefore enjoined in both cases.

In the 1970s, the Antitrust Division challenged several industrywide patent pools that required all members to share any inventions at zero or very low royalty rates. Again, the claim was that the patent-sharing requirement discouraged innovation in the industries. The industry pools were broken up by consent orders.

But the FTC's challenge against Intel goes well beyond these cases. It is apparently the first antitrust challenge against what amounts to predatory patent infringement, backed up by coercive refusals to license industry-dominating intellectual property. It is far too soon to tell how these cases will develop. It would not be surprising, however, if the FTC's greater powers under the more flexible FTC Act will make it more successful than Intergraph litigating under the more circumscribed antitrust laws.

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