

Standardization skullduggery update: UMTS standard

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.....The latest chapter in the annals of standardization skullduggery—or, so far, *alleged* standardization skullduggery—involves the Universal Mobile Telephone System (UMTS) standard. Broadcom Corp., a manufacturer of semiconductor ICs (chipsets) for communications applications, has sued Qualcomm Inc., another chipset

manufacturer and the owner of patents essential to complying with the standard. Broadcom charges that Qualcomm deceived the US and international standard-setting organizations into incorporating Qualcomm's patented technology into the UMTS standard by making intentionally false representations that it would license

its patents on "fair, reasonable, and nondiscriminatory terms." (Broadcom coins the terms "FRAND" and "FRAND commitment" to describe this.) But once these organizations adopted a standard embodying Qualcomm's patented technology, Broadcom alleges, Qualcomm proceeded to demand unfair, unreasonable, and discriminatory terms (unFRAND terms?) for patent licenses. The purpose, Broadcom says, was to give Qualcomm monopoly power over the sale of chipsets for mobile telephones conforming to the standard. The UMTS standard has come to dominate the mobile telephone market.

Breach of commitment

Broadcom asserts in its complaint, filed 1 July in New Jersey federal district court, that it cannot be too specific about the details of the unreasonable demands of Qualcomm. The claimed reason is that Qualcomm black-jacked would-be licensees such as Broadcom into signing a nondisclosure agreement, to shield the unfair, unreasonable, discriminatory, and anticompetitive UMTS patent licensing practices from scrutiny. In general terms, however, Broadcom asserts that Qualcomm's licensing abuses include charging discriminatory royalties, collecting double royalties, demanding overly broad cross-license rights from its licensees, and coercing would-be UMTS licensees into agreeing to buy chipsets exclusively from Qualcomm. The gist of this pattern of misconduct, Broadcom insists, is that Qualcomm has breached its commit-



ments to standard-setting bodies by using its position as patent holder over much of the technology behind the predominant standard for cell telephony, to dominate the market for chips used in the current generation of cell phones.

Qualcomm described the suit as “meritless” and threatened legal action in retaliation. “Broadcom’s unfortunate preference for the litigation forum rather than the negotiating table will require Qualcomm to proceed with litigation of its own,” said Qualcomm’s general counsel.

To the extent that it is possible to penetrate the haze of lawyerly obfuscation surrounding the facts, it appears that Broadcom might be trying to blaze new trails in the thickets of standardization skull-duggery. Despite the nondisclosure agreement, Broadcom gave some interesting clues as to what the dispute is about.

Qualcomm demanded that Broadcom “agree to pay royalties on components over which Qualcomm has no claim to patent rights.” Although Broadcom does not explain what it means, it may well be that Qualcomm is demanding a fixed percentage of royalty on the total price Broadcom charges for a chipset, regardless of what additional functionality Broadcom is putting into the chipset over and beyond the functionality attributable to Qualcomm’s patented technology.

For example, suppose that I have a patent on a carburetor. If you want to manufacture cars containing carburetors infringing my patent, I insist on a royalty of three percent of the car’s sales price. You argue that some of your cars have power brakes, others have cruise control, and others contain fancy electronic systems. You say that those variable elements of value in the car have nothing to do with my carburetor. I say my carburetor is essential to the car’s running, and my price is three percent of total sales, take it or leave it. It is unclear whether my notional position is unfair, unreasonable, discriminatory, and a violation of the antitrust laws.

Question of mutual convenience

The only close precedent is a 1969 Supreme Court decision (*Zenith v. Hazel-*

tine), which holds that charging a flat royalty rate on the entire product line of a licensee is reasonable when done for the mutual convenience of both parties, because they don’t want to be bothered to go through complicated audits. But it is unreasonable and patent misuse when the licensor coerces the licensee into accepting the arrangement on a take it or leave it basis. The Supreme Court added that such misuse is also an antitrust violation if the other requisites of proving an antitrust violation are satisfied—for example, market power and anticompetitive effect. (Broadcom alleges both in this case.)

The facts here, however, don’t fall within *Zenith*, although there are some similarities. A carburetor in a car and some of the circuitry within a chipset are not the same thing as some items in a product line versus the rest of the product line. In the former case, there can be a serious problem in determining what fraction of the total value that the patented subset gives the superset. In the latter case, it is just an issue of whether the parties want to avoid an auditing headache. It is questionable whether *Zenith* televisions with, say, a patented channel return feature, lend any value to the televisions in the rest of the product line—those without that feature. But allocating contributions to total price based on the subcircuitry within a chipset is much more iffy.

The most that it is possible to conclude about this claim is that it gives standard-setting organizations a reason to ask patent owners in advance what their supposedly reasonable and nondiscriminatory licensing terms will be. The IEEE and ANSI, among other standard-setting organizations, are dead set against doing that, however.

Broadcom charged, second, that Qualcomm acted in an unfair, unreasonable, discriminatory, and anticompetitive manner by demanding nonreciprocal patent rights. Broadcom has many more patents than Qualcomm, and apparently Qualcomm was infringing on some of them. (Broadcom sued Qualcomm earlier for patent infringement.) But Qualcomm demanded of Broadcom, as part of any UMTS patent license, a cross-license on Broadcom’s improvement

patents on any telephony technology—not just those related to the particular UMTS technology that Qualcomm would license to Broadcom. Broadcom argues that “Qualcomm’s insistence on an asymmetrical grant-back has the anticompetitive effect of discouraging innovation by Qualcomm’s licensee-competitors and undermines competition for UMTS chipsets.”

This is another area in which precedent is sparse or nonexistent. Intergraph sued Intel a few years ago for, among other things, insisting that Intergraph give it a license on its technology as part of the quid pro quo for a license from Intel. Intel ultimately prevailed in the US Federal Circuit Court of Appeals. Again, this might be an area in which standard-setting organizations should demand advance disclosure, but they don’t.

Broadcom’s third item on the grievance list is that Qualcomm “demands double royalties.” This means that Qualcomm wants to license and collect royalties from chipset manufacturers and then also from the cell phone manufacturers who buy chipsets and incorporate them into cell phones. Apparently, Qualcomm also requires licensed chipset manufacturers to sell only to those cell phone manufacturers that have a license from Qualcomm, and requires licensed cell phone manufacturers to buy chipsets only from licensed chipset manufacturers. Broadcom says this is a royalty scheme for charging a double royalty.

But Qualcomm may argue that it has patents that both chipset manufacturers and cell phone manufacturers infringe by making and selling their respective products, and that the patents confer different benefits on the different licensees that require different measurements. Courts have sometimes upheld multilevel licensing arrangements of this type in cases where the actions at the respective levels were, so to speak, apples and oranges.

Assume you have a machine for making thread or rolling steel—actual cases from the mid-20th century. The machinery manufacturer charges customers a price based on the nature of the machine sold—a lump sum that can vary with the machine’s size but not with its ultimate use. This makes it

infeasible for the patentee to charge the machinery manufacturer a titrated royalty. Therefore, the patentee charges a royalty to the machinery manufacturer that is essentially a lump sum or is a percentage of the manufacturer's sales price for the machine. However, the patentee then charges the mill operator a running royalty based on how many feet of thread or tons of steel the mill operator manufactures—in other words, a royalty based on the value of the license.

The theory of why this is appropriate is that the price of the machine is necessarily based on factors that do not vary with ultimate usage volume. A user who ultimately makes 100,000 feet of thread and one who ultimately makes 1,000,000 feet pay the machine seller the same thing—the machine seller does not have an effective way to charge the two customers different prices based on their ultimate usage (or value received). This has led shoe machinery manufacturers and mainframe manufacturers to rent rather than sell, and to use other expedients such as tie-ins to effectively put a "meter" on the machine user. Therefore, the patentee only can charge the machinery manufacturer only a one-time price and then stop. On the other hand, it is feasible to charge the machinery users a running royalty based on production volume. Since the courts perceive this as value-related pricing, they have upheld such multitier licensing against legal challenges.

It seems doubtful, however, that the Qualcomm program fits within this concept. The normal rule is that the first authorized sale of a patented product by the patentee or its licensee "liberates" the patent from the scope of the patent monopoly. The patent monopoly is "exhausted" and the product on which a royalty has been paid is "carried outside" the scope of that monopoly. This has been the law for over a century. The multitier licensing in the thread and steel mill cases were exceptions to this rule, permitted because of the different economic relationships at the different tiers. In cases of simple incorporation of one product into another—such as the sale of a lens blank to a lens manufacturer, or a convertible top

unit to a car manufacturer and then to an ultimate consumer, the courts have tended to take the view that the patent is exhausted upon the first licensed sale. Broadcom may therefore have a valid antitrust argument here.

Other charges surface

A related wrong of which Broadcom accuses Qualcomm is threatening licensed cell phone manufacturers with termination of their UMTS technology licenses if they buy chipsets from Broadcom or a competitor of Qualcomm that does not have a chipset license. According to Broadcom, this occurs despite the fact that the cell phone licensee pays its agreed-on royalty to Qualcomm. The only argument that Qualcomm would appear to have here is that it is protecting its patents against infringement by refusing to deal with those who facilitate infringement of its patents. If that were true, the argument might well be sound. But the validity of the argument turns on the preceding point—whether so-called double royalties are improper. If exhaustion occurs, Qualcomm has no genuine patent right to protect.

Broadcom further argues that Qualcomm's royalties are unreasonable in a variety of ways. First, they are unreasonably high, and therefore contrary to its FRAND commitments because of the double royalties. Second, Qualcomm stated that it would charge the same royalty rate until the last licensed patent expires. Third, when the other owners of patents embodied in the standard attempted to form a joint agreement setting a ceiling on total royalties under the essential patents—as the owners of MPEG, CD, and DVD patents have—Qualcomm refused to participate.

These charges are all problematic, to varying degrees, as elements of an antitrust violation. But the conduct may well be unreasonable from the vantage point of a standard-setting organization. How such an organization can deal with this type of problem is unclear. To the extent that Qualcomm made a FRAND commitment to the standard setting organization or its members or prospective UMTS licensees as a whole, however, it may be that the conduct is a

breach of that undertaking—for purposes of contract law or as a defense to any attempt to enforce the patents.

Broadcom insists that Qualcomm's royalties are discriminatory as well. It says Qualcomm charges cell phone manufacturers a higher royalty if they buy chipsets from a manufacturer other than Qualcomm. Further, Qualcomm engages in what Broadcom terms "price netting." This means that Qualcomm permits cell phone manufacturers to deduct the price they pay Qualcomm for a chipset from the royalty base for a cell phone. Hence, if Qualcomm requires a licensed cell phone manufacturer to pay a 5 percent royalty with the cost of a chipset at, say, \$50, and the phone manufacturer's price for a cell phone is, say, \$100, the phone manufacturer pays Qualcomm a \$5 royalty if it buys the chipset from Broadcom (or any licensed chipset manufacturer) but it pays Qualcomm a \$2.50 royalty if it buys the chipset from Qualcomm.

Broadcom has a variety of legal theories. First, it charges Qualcomm with monopolization of the market and attempted monopolization. Then, Broadcom charges that the agreements between Qualcomm and cell phone manufacturers are in unreasonable restraint of trade. Next, it characterizes the whole complex of pricing arrangements as a tie-in between chipsets and patent licenses. The next claim, count V of the complaint, is one rarely seen any more in antitrust cases—for reasons that I find unclear. This is a charge of violation of section 3 of the Clayton Act. Among other things, section 3 prohibits sales of goods on the agreement, condition, or understanding that the purchaser will not deal in the goods of another seller, if the effect might be to substantially lessen competition.

An interesting further charge that Broadcom makes is that Qualcomm committed breach of contract. The argument is that Qualcomm entered into expressed or implied contracts with standard-setting organizations that it would offer licenses on FRAND terms if the organizations would incorporate Qualcomm-patented technology into the standard, and that Broadcom was an intended third-party beneficiary of the contracts. Hence Broadcom has a right

to recover for breach of contract.

Finally, in homage to the *Rambus* case, Broadcom charges Qualcomm with common-law fraud. Broadcom maintains that Qualcomm made a FRAND commitment knowing that this would induce reliance on its representations and intending not to license on FRAND terms.

This is a pretty large bagful of allegations and legal theories. It interestingly differs from prior standardization skulduggery cases in that they typically involved a nondisclosure or false representation as to

patent coverage, while here Qualcomm disclosed its patents and promised FRAND (or what other people call RAND) terms. The skulduggery is that Qualcomm allegedly then proceeded to insist on unFRAND terms. This case therefore raises novel issues for the court.

In addition, it might bring home to standard-setting organizations (such as the IEEE) the serious problems that result from their policy against making any inquiry into, or requiring disclosure of, what a patentee means by FRAND licensing

terms. Perhaps this case will focus attention on the need to address this issue and develop an approach that will better serve the public interests at stake, yet without impairing the viability of the standard setting process.

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