

Module 107

[The following is a transcript of the recorded lecture for Module 107 of the PatentX course. The recording of the lecture itself is available through <https://ipxcourses.org>. Stripped of the accompanying slides and other visual materials, the transcript will likely be hard to follow. It is not intended to be a free-standing document. Rather, its purpose is to assist students, who have already watched the lecture, when reviewing the material.]

A. Damages and Penalties

Hello. I'm Terry Fisher. This is one of a series of 12 lectures on patent law. The series as a whole is accessible through the website, PatentX.org.

The topic for today is the set of remedies that are available to a patentee who succeeds in establishing in infringement litigation that a defendant has violated one of the provisions of the patent statute.

I will devote the majority of my time to analysis of the relevant rules and practices in the United States, but will also sketch how the systems in some of the other major patent jurisdictions differ.

The lecture is divided into two parts. In the first I will consider forms of monetary relief -- both compensatory damages and penalties. In the second I will consider equitable relief -- the most important example of which is an injunction.

The key statutory provisions in the US are set forth on your screen. Section 284, as you can see, provides that, upon finding for the claimant the court shall award damages adequate to compensate for the infringement.

This phrase refers to traditional compensatory damages -- of the sort you would see in a contract case or a torts case.

The provision continues: But in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the court

Section 286 (which you have already encountered in a previous lecture) limits the period of time for which a patentee can collect damages to six years prior to the filing of the complaint.

Toward the tail end of this lecture I will consider the practical implications of that limitation.

Finally, Section 287a provides a strong incentive for patentees to mark products embodying their inventions with some insignia indicating that they're covered by the patents. The incentive is that failure to do so may prevent them from collecting damages unless the infringer, prior to the infringement, had actually been notified of the presence of the patent.

OK. Those are the relevant statutory provisions.

One aspect of these provisions is misleading. They appear to be providing instructions to "a court" -- meaning a judge -- concerning how to determine the magnitude of damages. Before the 1990s, that would have made sense. However, as you will recall from previous lectures, today the large majority of patent cases in the US are tried to juries. The result is that the rules set forth in these

provisions are not typically applied to the facts of a case by judges. Rather, judges' instructions to juries embody these rules, but both the determination of the underlying facts and the application of the instructions to the facts are typically done by those juries. As the second sentence of 284 indicates, only if the jury does not determine the amounts is the court to set them.

To review, the current US patent statute identifies two alternative measures of damages: compensatory damages and reasonable royalties. Typically, patentees prefer compensatory damages, but may not be able to satisfy the requirements for obtaining them.

The basic principle underlying compensatory damages is that the patentee is entitled to enough money to put her back into the same position she would have occupied in the absence of infringement – sometimes described as being “made whole.”

The primary way in which a patentee proves compensatory damages is by showing that she lost sales as a result of the infringer's activities.

That, in turn, requires the patentee to show 4 things:

first that there was demand for the patented product. This is usually the easiest of the requirements to establish.

Second that there were no acceptable non-infringing substitutes for the patented product.

This is often harder to prove because there are various escape hatches that enable an infringer to avoid paying damages. For example, the infringer can escape if he can identify a product produced by a third party that was similar to the patented product, on sale for the same price and equally attractive to consumers.

Alternatively, the infringer can escape by demonstrating that he was ready and able to produce a non-infringing substitute but didn't do so because the infringing product was cheaper to produce.

Third, the patentee has to show that she had the capability of exploiting consumer demand -- either by producing authorized products or by licensing the technology to others. In other words, in some way the patentee must show that she had manufacturing capability.

Finally, the patentee must show the amount of profit that she would have made had the infringing product not been on the market.

As you might imagine this is typically done by first establishing the amount of revenue that the patentee would have earned on the sales that she would have been able to make in the absence of infringement – and then subtracting the costs of those additional sales.

In addition, the patentee is at least in theory permitted to augment the measure of damages produced by this calculus by showing that she was forced, by the presence of the infringer in the market, to lower the price of the products that she did sell and therefore suffered additional injury because of the price erosion.

On occasion the patentee is able to go further and supplement damages from lost profits with so-called consequential damages. You can think of these as indirect damages resulting from the infringement.

So for example the patentee is permitted to recover the profits she would have made from sales of components or supplies -- provided that those components or supplies function together with patented components to produce a desired result.

A few patentees have tried also to recover as consequential damages the injury they suffered because of a decline in their stock price as a result of the presence in the market of infringing substitutes – but the Federal Circuit has consistently rejected this maneuver.

OK, that's a brief review of the law in the US governing compensatory damages. As I've indicated, this is typically the form of damages that the patentee would prefer to recover.

The alternative source of monetary relief is a so-called a reasonable royalty. Although typically this is less good in the eyes of the patentee, frequently it's the only avenue available to her.

I already mentioned the statutory basis of this approach. It's in section 284. To remind you, the crucial paragraph in that provision indicates that the court shall award the claimant damages adequate to compensate for the infringement but in no event less than a reasonable royalty.

What's a "reasonable royalty"? The conventional explanation is that it's the "amount 'which a person, desiring to manufacture and sell a patented article, as a business proposition, would be willing to pay as a royalty and yet be able to make and sell the patented article, in the market, at a reasonable profit.'"

One circumstance in which the "reasonable royalty" approach to damages is almost always employed is when the patentee is a non-practicing entity. In other words when the plaintiff holds the patent but doesn't actually produce products embodying it. As you know by now, plaintiffs of this sort are sometimes referred to pejoratively as patent trolls. The less loaded term is "non practicing entity" or NPE.

There are two methods employed by US courts when ascertaining the measure of a reasonable royalty. The more common one is sometimes referred to as the "hypothetical negotiation" approach. It seeks to determine the amount of money that would have been negotiated between a willing patentee and a willing licensee, on the day the infringement started, to authorize the activities in which the defendant subsequently engaged.

And how, exactly, is this amount determined? At least ostensibly, it's usually done by considering a list of 15 factors – commonly known as the Georgia-Pacific factors, after the case in which they were first announced.

Those factors are listed on your screen. The subsidiary branches associated with each factor identify glosses that have been added by subsequent courts.

I do not suggest that you try to memorize these factors. That would be both difficult and unrewarding. You'll of course have to pay close attention to each of the factors in the list if you ever encounter a case requiring determination of a reasonable royalty. But for present purposes,

it's probably sufficient to have a sense of how encompassing is the analytical net.

Although the list of factors is long, it's not unlimited. There are a couple of things that usually are excluded from the calculation of the reasonable royalty. The first is how much money the infringer actually made by selling the infringing product. The standard view is that the magnitude of the infringer's actual profits are irrelevant (in sharp contrast to the way in which defendants' profits are handled in US copyright law.)

However, as you can see, in the Lucent case the Federal Circuit backed away from that position a bit.

The second of the excluded factors is the likelihood that the patent would be upheld if challenged in litigation. As you might imagine, the defendant typically contends, plausibly, that he would not have agreed to a generous royalty because he would have taken into account the likelihood that the patent in question (or the claims in question) would have been struck down. When calculating a reasonable royalty, the courts do not give any weight to such arguments. Because, as we have seen, the probability of invalidation is often quite high, the courts' refusal to consider it when setting a reasonable royalty represents a substantial thumb on the scale for patentees.

With these important exclusions, the Georgia-Pacific method directs courts, who in turn direct juries, to consider a very wide array of factors when calculating a reasonable royalty. This method is now deeply rooted in US case law. The Federal Circuit has repeatedly referred to it approvingly, and there is little chance that it will be abandoned soon. This is somewhat puzzling, because most scholars and many lower-court judges think that it is a clumsy and even misleading way of determining what the parties would have agreed upon. Among its defects:

First, It's redundant. For example, #3 and #7 are slight variations on the same theme.

Next, Frequently, some of the factors will be irrelevant to a particular case.

Next, Some of the factors make no sense. For example, #14 – “the opinion testimony of qualified experts” is pointless. To be sure, it is common for both plaintiff and defendant to hire experts – usually economists – to testify concerning the magnitude of the reasonable royalty. But what those experts usually opine about are the preceding 13 factors.

Finally, #15 isn't really a factor at all; it's the goal of the entire enterprise.

In practice, the Georgia-Pacific approach leaves a great deal to the discretion of the jury, makes it hard for the judge or an appellate court to determine if the jury followed the instructions, and reduces the predictability of damage awards.

Scholars have proposed a variety of simpler analyses. Two of the reform proposals are listed on your screen.

In 2010, Daralyn Durie and Mark Lemley suggested distilling the 15 factors into 4 variables:

- (1) whether the patentee in fact produces a product in the market;
- (2) the contribution made by the patented technology compared to the next best alternative;
- (3) the number and importance of other inputs necessary to make that technology work; and

(4) evidence of how the market has actually valued the patent, to the extent it differs from the outcome of (1), (2), and (3).

More recently, a group of scholars headlined by Tom Cotter proposed an even simpler method:

“When applying a “bottom-up” approach to estimating reasonable royalties, courts should replace the Georgia-Pacific factors (and analogous factors used outside the United States) with a smaller list of considerations, specifically:

(1) calculating the incremental value of the invention and dividing it appropriately between the parties;

(2) assessing market evidence, such as comparable licenses; and

(3) where feasible and cost-justified, using each of these first two considerations as a “check” on the accuracy of the other.”

Either of these proposals would significantly streamline and clarify the analysis. Neither, unfortunately, is likely to be adopted in the foreseeable future.

The second of the two methods of calculating a reasonable royalty is the so-called analytical approach. This technique first appeared in the case law in the 1970s as a gloss on or variation of the hypothetical negotiation approach, but then gradually, under the management of the Federal Circuit, assumed the status of an entirely separate method.

When applying this method, you begin by measuring the infringer’s anticipated net profit margin on the sale of its infringing products. Next, you subtract from that amount either the profit margin enjoyed by the infringer on its noninfringing products – or, in more recent cases, the profit margin that is conventional in the industry in question when selling noninfringing products. The resultant incremental profit margin is a reasonable royalty.

I share the view of Mark Glick and David Mangum that the analytical approach makes some sense as a factor in ascertaining what a willing patentee and a willing licensee would have agreed upon, but not as a standalone methodology. But that’s how the Federal Circuit currently treats it.

It’s used much less often than the Georgia-Pacific approach.

This concludes our review of the two main alternative measures of damages: compensatory and reasonable royalty. On occasion, some other things may be recoverable by a patentee. One is prejudgment interest. The amount of money paid to the patentee may be augmented by interest payments from the date of the last infringement to the date on which the payment is actually made.

Finally, the patentee may be able to recover some provisional remedies. The most important of these concerns activities engaged in by the defendant prior to the issuance of the patent. To see how this works, we’re going to turn back to the slides.

You will recall, I hope, that when in a previous lecture I was discussing the scope of patents I indicated that, nowadays, a patent by default remains in force until 20 years after the date of the

patent application, but the patent doesn't come into force until the patent is actually granted – which typically doesn't occur until somewhere between two and three years after the patent application.

During the period between the application and the patent grant, the person or company who will ultimately become the patentee cannot object to behavior of third parties that would constitute infringement after the patent issues.

There is, however, a qualification of that principle. Even though unauthorized activities during this period may not be prevented, after the patent is granted, the patentee may be able to recover a so-called provisional remedy for behavior by the infringer between

the date of publication (that's typically 18 months after the patent application)

and the date of the grant – so long as the infringer had actual notice of the patent application. The measure of such provisional remedies is a reasonable royalty, not compensatory damages.

The net effect of this rule is to allow the ultimate patentee to reach back a little further than the start of the patent grant when exacting tribute from competitors.

What we've been discussing thus far is the topic of damages -- in other words, money that a patentee who succeeds in establishing infringement can collect -- at least in theory in order to make her whole. In addition, the patentee is sometimes able to collect money designed, not to make her whole, but to punish the infringer. There are three such mechanisms in US law -- of which the most important is the system of enhanced damages.

The relevant statutory provision is section 284, which provides the court may increase the damages up to three times the amount found or assessed. The standard used to determine when enhanced damages of this sort are available has fluctuated a great deal over time. If you want to explore the early history of this issue, follow the links in the full-blown version of the map, which is available on the home page for this course.

The sector of this history that matters most for our purposes begins in 2007, when, in the *Seagate* case, the Court of Appeals for the Federal Circuit raised the bar quite a lot. In other words, in *Seagate*, the Federal Circuit made it significantly harder for patentees to establish the preconditions for obtaining enhanced damages.

To get enhanced damages after *Seagate*, the patentee had to prove, by clear and convincing evidence, both of two things.

First, that there was an objectively high probability that the defendant's conduct was infringing. This is sometimes referred to as objective recklessness.

Second, a particular state of mind – specifically, that the defendant knew or should have known of that objectively high risk.

Some nuances: As you can see from the map, appellate review of Step 1 was *de novo*. In other words, the appellate courts reviewed District Court findings on this issue without any deference. By contrast, appellate review of district courts findings with respect to step two was more

deferential.

In addition, the Federal Circuit held that adverse inferences concerning the willfulness of the defendant's behavior could not be drawn from the defendant's failure to obtain an opinion of counsel prior to engaging in the conduct at issue.

As you might imagine the effect of this decision was to make it significantly harder for patentees to get enhanced damages.

In 2016, the Supreme Court in the Halo case rejected the Seagate doctrine altogether. The most important holding of Halo is that proof of objective unreasonableness or recklessness is no longer necessary to get enhanced damages. A patentee need only show that the defendant's conduct was egregious.

A couple of quotations from the opinion suggest what egregious might mean: willful, wanton, malicious, bad faith, deliberate, consciously wrongful, flagrant, and, most interestingly, characteristic of a pirate.

Not only did the Supreme Court in Halo alter for the benefit of patentees the relevant substantive standard, but it also ruled that the patentee must demonstrate that the standard has been met, not by clear and convincing evidence, but only by a preponderance-of-the-evidence. In other words, the patentee need only show that these conditions were more likely than not to have obtained.

Since the Halo decision, district courts have been presenting to the juries more favorable instructions concerning the availability of enhanced damages than they used to use. Not surprisingly, juries in turn are finding willfulness more often than they were before Halo. And finally in cases in which juries find willfulness, judges are exercising their discretion to enhance damages much more often.

You might be curious to see some examples of the jury instructions on this issue.

Shown on the screen are a few that were collected by the law firm of Fish and Richardson. Here's one from the Northern District of California.

One from the Central District of California.

And a more detailed one from another judge in the Central District.

In combination, these instructions provide a good and interesting window into the ways in which language in Supreme Court opinions percolate down through the judiciary to the district courts.

So what has been the net impact? A recent empirical study by Veena Tripathi, published in the Minnesota Law Review, demonstrates that, while before Halo, losing defendants were found to have engaged in willful infringement 28% of the time, after Halo, that number jumped to 55%.

The percentage of cases in which, at the end of the day, enhanced damages were awarded has also risen sharply. Before Halo, it was 10%. Afterward (meaning, between the ruling in Halo and the end of 2018), it was 29%. This is a huge shift in favor of patentees.

After Halo it remains the case that a significant line of defense for a prospective possible infringer is to obtain, before engaging in the conduct in question, an opinion of counsel. The way this typically works is that the general counsel of a firm that is considering engaging in questionable behavior hires an unaffiliated lawyer to analyze both the relevant patent and the nature of the conduct in which the firm plans to engage. The unaffiliated lawyer then provides the firm an analysis of whether the proposed behavior would run afoul of the claims of the patent and whether the claims would stand up in litigation. Even if the lawyer is wrong in predicting that the firm's conduct would not give rise to liability, such a letter helps immunize the firm against enhanced damages.

A firm considering obtaining such an opinion letter should keep two things in mind. First, a conclusory opinion won't help you at all. It has to be based on a reasoned analysis.

Second, communications between the firm and the outside counsel will not be shielded by attorney client privilege. So the general counsel who solicits the letter has to be careful to avoid memorializing potentially damaging exchanges with outside counsel.

This is especially true if what the general counsel wants is not simply an opinion concerning whether a particular course of conduct would be lawful, but a more complex analysis of which, among various courses of conduct the company is considering, would be least legally risky. Both the general counsel and the outside lawyer have to be quite careful, when soliciting or providing opinions of that sort, not to include in letters or email exchanges, statements of opinion that could be damaging rather than helpful to the company in the long run.

The award of enhanced damages is the most important of the kinds of penalties that can supplement actual damages. There are two others, however. First there are court costs.

In patent law there's a presumption that the prevailing party gets costs -- but that's not a big deal because usually the costs are not large.

Much more important are attorneys fees. Like the rule governing enhanced damages, the US rule governing when the losing litigant must pay the winner's fees has changed recently.

The relevant statute has not changed. Section 285, shown on your screen, has long provided that the court in exceptional cases may award reasonable attorney's fees to the prevailing party. Notice that the phrase "prevailing party" means that such fees are available both to victorious patentees and to victorious defendants.

But the interpretation of that provision has shifted. Prior to 2014, the Federal Circuit defined the circumstances that would allow a victorious litigant to collect fees narrowly. The prevailing party had to establish by clear and convincing evidence one of two things. Either the loser had engaged in some material inappropriate conduct, or the litigation had been brought in subjective bad faith and was objectively baseless. As you might imagine, it was hard to establish either of these things and therefore attorneys-fees awards were not common.

In 2014 the Supreme Court in the Octane Fitness case liberalized the rules but also made them vaguer. The key passage in the Supreme Court's opinion is set forth in your screen: ""We hold,

then, that an “exceptional” case is simply one that stands out from others with respect to the substantive strength of a party’s litigating position (considering both the governing law and the facts of the case) or the unreasonable manner in which the case was litigated. District courts may determine whether a case is “exceptional” in the case-by-case exercise of their discretion, considering the totality of the circumstances.”

Not only did the Supreme Court alter the substantive standard in favor of the winners in infringement suits, but it also lowered the burden of proof -- rejecting the Federal Circuit's former requirement that proof of exceptional status be by clear and convincing evidence.

As you might expect the effect of *Octane Fitness* has been a significant expansion both of the set of circumstances in which victorious parties ask for fee awards and of the set of circumstances in which they get them.

[Switch to Slides]. Here are a few fruits of empirical research documenting those predictions. As you can see, in the years since the Supreme Court's decision in *Octane Fitness*, the total number of requests for attorney fees has gone way up, and the set of cases in which those requests been granted, have increased significantly.

This is true not just overall, but in the jurisdictions that, as you know from the first lecture, are most commonly chosen venues for plaintiffs:

The Northern District California;

the District of Delaware, where corporations are commonly chartered;

and, for the odd reasons that I discussed in the first lecture, the Eastern District of Texas.

One of things you can tell from these charts is that it's still relatively unusual for a victorious party to get an attorney's fee award -- but not as unusual as it was four years ago.

So that’s how monetary awards are currently handled in the US. What about other jurisdictions?

As you might imagine, every other country also permits a patentee who prevails in an infringement suit to recover damages for the defendant’s conduct. Most are roughly similar to the US regime – and the overall historical trend is toward increased similarity among the major patent jurisdictions.

Take Japan, for example. Prior to 1998, awards of damages for patent infringement in Japan were dramatically lower than in the US. Amendments to the Japanese patent statute that year sharply reduced the difference.

To be sure, the Japanese system is still not identical to that of the US. For instance, in Japan to obtain damages a patentee must prove either negligence or intent to infringe on the part of the defendant – a requirement seemingly at odds with the US approach, which as we have seen is based on strict liability. However, the difference is more apparent than real, because Article 103 of the Japanese statute establishes a presumption of negligence. Although in theory rebuttable, in practice that presumption almost always carries the day.

Perhaps the most important difference between the US and Japanese regimes is that, in Japan, patentees in civil suits cannot recover any form of punitive damages – on the theory that punishment of defendants should be left to criminal or administrative proceedings, whereas, in

the US, as we have seen, enhanced damages are available in egregious cases.

As in the US, successful patentees in Japan can opt for a reasonable royalty instead of lost profits, and such a royalty should mimic the amount that the patentee and the defendant would have entered into. A very recent amendment to the statute makes clear that, as in the US, the likelihood that the relevant claims would be deemed invalid is not taken into account when determining that amount; rather, the fictional bargaining between the patentee and the defendant is presumed to take place in a world in which the claims are valid and the defendant's product or process infringes them. As we've seen, that methodology tends to push reasonable royalty awards upward.

This change, along with some other aspects of the 2019 statutory reform, are likely to reduce further the difference between the amounts recoverable in the US and Japan.

Korea, like Japan, makes damages contingent upon proof of either intentional infringement or negligent infringement – but also, like Japan, has a statutory presumption of negligence.

Unlike Japan, Korea as of 2019 permits the imposition of punitive damages – up to 3 times the amount of the compensatory damages. This brings it more into alignment with the system in the United States.

We could continue examining differences among patent systems, but by now it should be apparent that the major patent jurisdictions differ significantly in how they calculate awards – and are likely to continue to do so for the foreseeable future.

This concludes my analysis of monetary awards in successful patent infringement litigation. Monetary awards, as you have seen, include compensatory damages, reasonable royalties, and (in some countries) various forms of penalties. In the second portion of this lecture, I will turn to the rapidly changing rules governing the availability to successful plaintiffs of equitable relief – in other words, their ability to restrict future behavior by the defendants.

B. Equitable Relief

Hello. I'm Terry Fisher.

This is the second of two parts of a recorded lecture that examines the remedies that are available to a patentee who has established that someone else has engaged in patent infringement. In the first portion of the lecture, I examined monetary forms of relief – specifically, compensatory damages and penalties. In this portion, I'll begin by discussing the rapidly changing laws governing the availability of injunctive relief and then, toward the end, try to summarize how damages and injunctive relief dovetail today. I'll concentrate on the relevant rules in the United States, but will also briefly describe how the rules in some other countries differ.

An injunction, as you probably know, tells a party – almost always a defendant – to do something or more commonly not to do something. In the context of patent law, an injunction typically orders the defendant to stop engaging in the conduct that has been determined to be infringing – although sometimes the instruction is more narrowly tailored – in other words, differentiates more precisely what the defendant henceforth is forbidden to do from what he is permitted to do.

What happens if the defendant does not obey the order? In most countries including the US, the court can find the defendant in contempt, for which there are, in turn, a variety of additional sanctions: fines, additional injunctive relief, and even imprisonment. These sanctions are sufficiently powerful that defiance of an injunction is rare.

The statutory provision that governs injunctive relief in the United States is quite open ended. As you can see, section 283 empowers the courts having jurisdiction of patent cases to grant injunctions in accordance with the principles of equity, to prevent the violation of any rights secured by the patent, on such terms as the court deems reasonable. This language would appear to give courts a great deal of latitude in fashioning equitable relief.

Two types of injunctions can be issued by courts relying on this provision. Permanent injunctions, as their name suggests, are issued after entry of Final Judgment in a case. They last -- typically although not invariably -- indefinitely. Preliminary injunctions, by contrast, are ordinarily granted before entry of final judgment if victory by the patentee looks likely.

Recently, the law with respect to both types of injunction has changed dramatically in ways that have important implications for the overall shape of the patent system.

Before the formation of the Federal Circuit -- in other words, before 1982 -- it was reasonably common for judges exercising the discretion they enjoyed under 283 to deny injunctions when, in their judgment, issuance of one would impair the public interest.

So what kinds of circumstances did the courts think might implicate the public interest? One was public health. For example, if entry of a permanent injunction would, by forcing the defendant to shut down, deprive the public of access to medicines or to devices that would be helpful in addressing public health challenges, a judge would be likely to deny it.

Another, less obviously socially desirable variant on this theme involved economic loss by the defendant. Prior to 1982, some judges were sensitive to circumstances in which infringers, if forced to shut down, would have to sacrifice lots of sunk costs. Denial of injunctive relief in such circumstances was especially likely if the patentee and the defendant were not competitors.

The Federal Circuit, when it was formed, cut back sharply on this doctrine. In other words, the new court tilted the rules governing the availability of permanent injunctions in favor of patentees and against losing defendants. Between 1982 and 2006 one finds in US case law a strong presumption that a patentee successful in litigation is entitled to injunctive relief. To be sure, on occasion a judge's sensitivity to potential adverse impacts on public health or welfare still would prompt him or her to deny an injunction to a prevailing patentee. But during this period it was unusual. And if the only adverse impact of granting an injunction would be economic injuries to the infringer, it was very unlikely that a court would deny it.

The decision by the United States Supreme Court in the eBay case changed all this. The facts of the case are not particularly interesting or important. If you are interested in those facts, follow the links in the map. What's important for our purposes is the holding of the decision and the thrust of the associated concurring opinions.

The principle established by the Supreme Court in eBay is that trial courts, when considering whether to grant injunctions in patent cases, should apply the traditional rules of equity that are

applicable to all other kinds of disputes. In other words, patent cases should not be treated as unusual.

Those traditional rules of equity, emphasized by the Court, are listed on your screen:

In considering whether a successful plaintiff should be granted an injunction the court should consider:

1. whether the plaintiff has suffered an irreparable injury;
2. whether monetary damages would be inadequate to compensate for that injury;
3. whether the balance of hardships favors the plaintiff; and (most ambiguously):
4. whether the public interest would not be adversely affected by a permanent injunction.

If and only if the answers to all four questions are yes, then the court should grant an injunction.

This traditional approach, as you can see, is significantly less favorable to patentees than the one the Federal Circuit previously had been tacitly employing.

There were two concurrences in the eBay case, which reveal that not all of the justices were on the same page.

Three of the justices, in an opinion by Chief Justice Roberts, took the position that, while the traditional rules of equity should apply to request for injunctions in patent cases, when exercising the discretion that the traditional approach affords them judges should take into account the fact that, in the past, injunctions had issued in the vast majority of successful patent suits. In other words, Roberts and his colleagues tried to keep the law in this area close to the position that previously had been taken by the Federal Circuit.

Justice Kennedy, joined by three colleagues, moved in the opposite direction. They emphasized that injunctions should not be automatic. They were especially skeptical of injunctive relief in three contexts:

first, when the plaintiff is a non practicing entity;

second, when the patent covers only one component of a complex product, and finally

when the patent at issue is a business method patent. Kennedy made clear that he thought business method patents were often unusually weak -- and perhaps pernicious from a social policy standpoint even when they were strong.

So that's eBay. It worked a transformation of the law in this area. Roughly speaking, it dramatically decreased the frequency with which permanent injunctions were sought and granted in the United States. A more precise description of the impact of the decision will require differentiating among types of dispute. I'll do that in a minute. But first, I want to describe the corresponding shift in the standards governing preliminary injunctions and the fruits of some empirical studies.

Prior to eBay, the law governing awards of preliminary injunctions was tilted toward patentees in much the same way as the law governing permanent injunctions. In considering whether to grant a preliminary injunction, the district court was required to consider:

first the likelihood that the patentee would succeed eventually on the merits;

next, whether the patentee would suffer irreparable harm if a preliminary injunction were denied;

third the balance of hardships.

and finally the impact of a preliminary injunction on the public interest.

In practice, courts, when applying this rubric, gave disproportionate weight to the first factor. A demonstration that the plaintiff was likely eventually to win the case typically gave rise to a pretty strong presumption that irreparable harm would result from denial of preliminary injunctive relief.

The only major exceptions to this pattern were that the courts would be less likely to grant preliminary injunctions if the patentee had sat on her rights – in other words, had waited a long time to bring suit -- or had in the past engaged in a pattern of licensing the patent.

After eBay, patentees were much less likely to be given preliminary injunctions. The Federal Circuit took the position that the standard for a preliminary injunction is more or less the same as the standard for a permanent injunction except that the plaintiff must also prove a likelihood of success on the merits.

Several empirical studies have sought to determine the magnitude of the impact of the eBay ruling. They all come to the same conclusion: the impact was huge.

The most illuminating of those studies was conducted by Kirti Gupta and Jay Kesan in 2016. The next eight slides in this presentation here are all drawn from their article. The first thing you notice is that the solid line in the middle of this graph -- which charts the total number of district court patent cases filed per year between 2000 and 2012 -- shows an increase over time -- indeed between 2009 and 2012 a sharp increase. The top dotted line shows the total number of cases per year in which the plaintiff asked the court for a preliminary injunction, and the bottom dotted line shows the total number of cases in which the plaintiff asked the court for a permanent injunction. Prior to the eBay ruling, the former was declining gradually, while the latter was relatively stable. After eBay, both drop sharply.

The next slide converts these numbers into percentages. As you can see, Gupta and Kesan found that, as a percentage of the total number of cases, requests for both types of injunction have declined sharply since eBay. The only thing surprising about this graph is how low those percentages were even before the eBay decision.

This slide shows the percentages of all cases filed in which injunction of the two sorts were granted. As you can see, the rates are tiny – and declining.

This graph, also from their article, breaks down the cases by type. The left two columns pertain to cases in which the defendants were operating entities, the right two columns to cases in which the defendants were NPEs.

As you can see, after the eBay ruling, NPEs got the message of Justice Kennedy's concurrence and

asked for both preliminary injunctions and permanent injunctions much less often.

The courts also seem to have gotten Justice Kennedy's message, granting both preliminary injunctions and permanent injunctions to NPEs rarely.

Here's a slide from a different study – this one by Christopher Seaman – showing that the rates at which motions for permanent injunctions are granted varies significantly by the field of technology to which the patent pertains. As you can see, it's highest in the related fields of biotechnology and pharmaceuticals – the context in which, as we have seen, patents are most important. And lowest in software, one of the fields in which patents are widely thought to be least economically significant.

So what happens if an injunction is denied? Does the defendant continue to engage in the behavior that has now been deemed wrongful? Usually no. Instead, on request, the court will determine an "ongoing royalty" – an amount of money that the defendant has to pay the patentee if it wishes to continue. The criteria used by courts to set such fees are still in flux, and as a result the amount of such fees vary sharply. Almost always, the amount will be higher than the amount that a jury has concluded is a reasonable royalty for past behavior. But how much higher is hard to predict.

Gregory Sidak recently studied the set of cases in which such ongoing royalties were ordered. Here are his principal findings.

First, as you can see the frequency with which this procedure is used is increasing.

This slide – and the next two -- all from Sidak's paper, compare the amount of the ongoing royalty ordered by the judge in each case with the amount of the reasonable royalty ordered by the jury for the defendant's past infringing conduct.

As you can see, the ongoing royalty ranges from equal to the reasonable royalty, to 11 times the reasonable royalty.

The average is 1.66 – but that number masks a lot of variation.

The system I've just described is thus far peculiar to the United States. Only in the US are injunctions granted to prevailing patentees so infrequently – and court-ordered ongoing royalties used so commonly – to govern relations between patentees and infringers. Most countries in the world with mature patent regimes are much more likely to grant injunctions to prevailing patentees who request them.

In Japan and most countries in continental Europe, for example, injunctions are rarely denied to prevailing patentees who request them.

Indeed, in Germany, injunctions not only are routinely ordered by the trial court upon entry of judgment, they are not stayed pending appeal. Recall that it is not uncommon for defendants to secure on appeal reversal of a trial court's ruling. But in Germany, until that happens, the defendant has to cease the conduct in question. Lawmakers are currently considering tempering the harshness of that system, but not the availability of injunctive relief in general.

The contrast between the United States and China is especially striking. China is widely thought to be less protective of intellectual property rights than the United States. But, at least with respect to the availability of injunctive relief, the opposite is now true. A recent empirical study by Renjun Bian found that victorious Chinese patentees are now being granted injunctions in 90% of the cases in which they are sought – and patentees from other countries are being granted injunctions in 92% of the cases. The comparison with the graphs I showed you a few minutes ago showing the low and declining rates of injunction in the US is eye-opening.

For the time being, the United Kingdom is still part of the EU. As a result, it, like Germany, is bound by Article 3 of the so-called Enforcement Directive, which provides, in part, “Member States shall provide for the measures, procedures and remedies necessary to ensure the enforcement of the intellectual property rights.” But the courts in the UK, like the courts in the US, are steeped in the common-law tradition, in which an injunction is considered a form of “equitable” relief and thus subject to the discretion of the court asked to issue it. Partly as a result, UK courts issue injunctions less automatically than the courts in other EU countries – although much more commonly than in the US.

So, which of these various systems is best? Which jurisdiction, in other words, manages injunctive relief most sensibly?

That’s a difficult question. I’m going to try to answer it as follows. First, I will use a simplified, hypothetical case to show how, in the United States today, the various remedies for patent infringement interlock.

Next, I’ll summarize the principal arguments that some scholars have developed in defense of the peculiar US system – and against the system used in most other countries.

I’ll then summarize the criticisms of those arguments by another group of scholars.

On the basis of that analysis, I’ll offer a tentative judgment concerning the optimal regime.

Here’s the simplified, hypothetical case.

Suppose that Paula develops a promising new technology and, in 2005, applies for a US patent on it.

In 2008, a patent is granted. (As you know from lecture #1, this is a bit slower than usual, but not implausible.)

Paula immediately goes into business, selling products embodying her invention.

Two years later, Ian, impressed by Paula’s success, begins selling similar products.

Paula, the patentee, tolerates Ian’s competition for a while but finally, in 2016, files an infringement suit in a US District Court.

Absent circumstances justifying an extension, the patent will last until 2025, 20 years from the date of filing.

Suppose, plausibly, that for the first 6 months, the patentee's business loses money, but then profits steadily increase.

Capitalizing on the demand stimulated by the patentee's now established business, Ian's business makes money from the start.

Because, starting in 2010, some of the customers that would have bought the patentee's products buy Ian's instead, the growth of the patentee's sales is impaired.

Eventually the patentee brings suit.

And a year later – we'll assume for the sake of simplicity – prevails. In other words, the relevant claims in the patent are deemed valid, and Ian is held to have infringed.

It's at this point that the remedial rules we have been studying kick in. To review, here's how things currently work in the US.

With respect to damages for past behavior, the patentee can and likely will argue that, if it were not for the infringer's wrongful conduct, her sales would have been greater, and thus her profits would have been greater. If the patentee is able to establish this, she will be allowed to recover all of her lost profits from the infringer,

Except for the losses she incurred more than 6 months before filing suit.

If she is unable to demonstrate such lost profits, she will still be able to recover a reasonable royalty for the relevant period – which, as we have seen, will usually consist of a component of the infringer's profits.

If the infringement had been especially bad – the current standard is “egregious” – the patentee may be able to persuade the court to award enhanced damages, over and above the award of lost profits or the reasonable royalty. But such awards are relatively unusual, so we will put them to one side. With respect to future conduct by the infringer, the patentee might be inclined to ask for an injunction, forbidding him from continuing to manufacture and distribute products embodying the technology at issue.

If the court grants such an injunction, the infringer will be forced to shut down this aspect of his business,

The patentee's sales will likely jump, and her profits will increase.

Alternatively, armed with this injunction, the patentee might allow the infringer to continue its operation, in return to a freely negotiated license fee.

Whether the patentee chooses the first or the second option is likely to be influenced by the combination of strategic factors we discussed in lecture 1. Which of the two paths is will provide her the most revenue directly will of course be an important consideration in her calculus, but, if she is shrewd, not the only one.

Suppose, instead, that the court refuses to issue an injunction – or that its refusal is so predictable

that the patentee doesn't even ask for one. What happens then? The infringer could, of course, just continue to engage in the behavior that has now been deemed to be unlawful.

But if it did, the patentee could bring a second suit, in which she would likely recover not just another pot of lost profits or reasonably royalties, but also likely enhanced damages triggered by the infringer's deliberate illegality.

So the infringer is unlikely to do this. Instead, he is likely to seek a license from the patentee, in return for payment of a royalty in the future.

If the infringer asks that court to determine the amount of such a royalty, the court will most likely begin by telling the parties to try to negotiate such a deal on their own.

But if they fail to come to agreement, the court, as we have seen, will likely determine the amount of money that the infringer must pay the patentee if it wishes to continue.

Typically, that fee is somewhat larger than the amount determined by the court to be a reasonable royalty for past behavior,

but substantially smaller than the amount that the patentee could have extracted from the infringer in voluntary licensing negotiations.

Anticipating this outcome, if the parties are able to negotiate a license without relying on the judge, the patentee is likely to agree to a lower amount than she would otherwise. In other words, the threat of a judicially imposed license reduces the amount of an ostensibly voluntary license. You thus might refer to this as a semi-voluntary license.

To summarize,

If an injunction is granted, the outcome is usually this.

Or this. In an injunction is not granted, The outcome is usually this, Or this.

In most countries in the world, successful patent litigation typically leads to one or the other of the two outcomes on the left side of this page. In the US, by contrast, it now usually results in one or the other of the outcomes on the right side of the page.

With this review in mind, we can now return to the question of which regime is better.

If a grant of an injunction would result in scenario A, in the top left of this diagram, then a variety of reasons can be imagined for rejecting it – i.e., for preferring the current US regime. Almost certainly, the infringer will suffer more under scenario A than in scenario C – for example, by forfeiting lots of sunk costs. And we might consider that outcome unfair – for example, if D was genuinely and reasonably ignorant of P's patent when D launched its business, or perhaps if the technology covered by P's patent is only a small component of D's product and changing the product now would be prohibitively costly.

More plausibly, there are various reasons why the public at large might be worse off under scenario A than under scenario C. For example, in A, the patentee might use her monopoly power to raise the price of the product sufficiently high to place it out of the reach of a significant

number of consumers. If the product in question is life-saving, such as a drug uniquely capable of curing a fatal disease, then grant of an injunction might cause some people to die.

In the US, prior to the formation of the Federal Circuit, and to some extent in the UK today, case-specific arguments of these sorts sometimes caused court to deny injunctive relief.

It is impossible, however, to justify the extreme hostility toward injunctions in the US today on the basis of a comparison between scenario A and scenario C – because, commonly, a grant of injunction will lead to scenario B, not A. If so, none of the harms just mentioned will arise.

To justify the current US regime, one has to argue that C is better than B. The primary difference between those two outcomes is the amount of money that the defendant has to pay the patentee if it wishes to carry on. So, to justify the US regime, one has to argue that the license fee payable in B can be predicted to be “excessively high” – in other words, higher than the amount that would be socially optimal.

An important group of scholars and judges make exactly that claim. Why? What would cause that fee to be too high? They point to one or more of 4 factors.

First, the patentee may be able to use its holdup power to squeeze an extortionate amount out of D – i.e., more than is justified by the social value of P’s invention;

Second, in a significant subset of cases, the patent at issue may be of a type that is not socially beneficial at all. The clearest example, in the judgment of many scholars, is business method patents. In effect, this argument seeks to achieve, indirectly and partially, what reformers have thus far been unable to achieve directly, namely elimination of the patents altogether

Third, the patentee may fall into a category that we consider socially pernicious. A sharply contested example of such a category is non practicing entities.

Finally and most importantly, some scholars predict that, if more than one patentee is able to demand from the defendant a freely negotiated license fee, the aggregate amount of those fees may be excessively high because of what is commonly called “royalty stacking.” The basic idea is that the sum of the various fees maybe higher than is warranted by the total social value of the inventions at issue. A somewhat different variant of this argument asserts that the sum of the fees will be greater than is necessary to induce the socially optimal levels of innovative activity in the industry – and consequently will inhibit the growth and development of the industry.

The principal root of several of these arguments – and the last one in particular -- is an influential set of articles by Mark Lemley and Carl Shapiro. Their analysis of the danger of royalty stacking seems to have had a significant impact on Justice Kennedy’s concurrence in the eBay case – and subsequently on US courts’ hostility to injunctions, particularly in fields like cell phones, where each product contains technology covered by hundreds or thousands of patents.

So, are they right? In my judgment, probably not as a general matter.

The Lemley/Shapiro argument has been subjected to two lines of attack, one theoretical, the other empirical. Both critiques are complex. I’ll give you thumbnail versions here and point you toward the relevant scholarship if you want to explore them further.

The theoretical critique makes two points. First, a persuasive claim that the fees charged in scenario B will be above the socially optimal levels requires identification of the socially optimal level. As you know by now, determining that level is both extremely difficult and likely highly context specific.

Scholars who encounter this difficulty in related contexts commonly fall back on the contention that, in the absence of better evidence, we can presume that the socially optimal level of monetary incentive for productivity is whatever the patent statute currently prescribes. Whatever you think of that maneuver, it won't work here, because the relevant statutes – in the US as well as in other jurisdictions – seem pretty clearly to contemplate that courts will issue injunctions much more often than, in the US, they currently do.

The second of the points made by the theorists is that there are good reasons to think that royalty stacking will not occur. My colleague, Einer Elhauge, makes an especially compelling argument concerning why we can expect sophisticated patentees and licensees to avoid this outcome. Among Elhauge's contentions:

Licensees need not negotiate with patentees en masse and once and for all. Rather, they can secure more modest aggregate fees by negotiating and then renegotiating separate short-term licenses;

When negotiating licenses, licensees have an informational advantage, because they have confidential information concerning their own profit margins, need for the technology, and so forth, while the corresponding information that bears on the probability that the patent will be deemed valid is public and thus accessible to the licensee;

Finally, the capacity of the patentees to extract exorbitant fees will be curtailed by well-known limitations on the willingness of bargainers to acquiesce in agreements they consider unfair – even when refusal to acquiesce hurts them financially.

The empirical line of criticism reveals that, in some industries, these strategies and some others are indeed used – and royalty stacking seems to be avoided. In the cell phone industry, for example, cross-licenses among major manufacturers seem to have mitigated or even eliminated entirely the problem.

Finally, there is little evidence that industries characterized by patent thickets – in other words, industries in which each product implicates myriad patents owned by different patentees – have suffered from unusual or undesirable levels of innovation.

This is not to suggest that royalty stacking is never a risk; rather that its presence in an industry is not inevitable.

The legal implication of the insight is that, to the extent denial of an injunction is justified on the basis of this hazard, it ought to rest upon some kind of demonstration that, in this particular setting, injunctive relief might well result in stacking.

Which of the national patent regimes comes closest to incorporating these insights? Probably the current system in the United Kingdom. The US is probably too reluctant to grant injunctions to

patentees who prevail in litigation, while Japan, China, and Germany grant such patents too automatically. The UK's current practice is closer to the approach I have suggested. But, given the instability in the UK's political status, it's far from clear that its position on this issue is stable. We'll see.

This concludes my summary of the remedies available to patentees who prevail in litigation. In the next lecture, you will hear from Bill Lee, a leading patent litigator, concerning how to maximize one's chances of succeeding in litigation.